DESY-HERA 70-1
23 September 1970

COMPILATION OF PHOTOPRODUCTION DATA ABOVE 1.2 GEV

Peter Joos
Deutsches Elektronen-Synchrotron DESY

Abstract

A compilation is presented of 3477 existing data from 243 references on experimental photoproduction above 1.2 GeV.

CONTENTS

For each reaction

σ_{tot}

$\frac{d\sigma}{dt}$, $\frac{d\sigma}{d\Omega}$ listed in order of k

$\frac{d\sigma}{dt}$ listed in order of t

$\frac{d\sigma}{du}$ for backward angles

Polarization measurements

Introduction

The increasing number of measurements in high-energy physics makes it desirable to have on hand compilations of the published experimental results. By the initiative of D.R.O. Morrison at CERN, the HERA group was formed for organizing and issuing data compilations of high-energy reactions.

This compilation includes those measurements on photoproduction which were available to us before September 1, 1970. For single pion photoproduction a lower limit was set at 1.2 GeV. This limit was chosen in order to have an overlap with other compilations, which go up to 1.5 GeV.

Section I lists the data points of cross section measurements, grouped according to reaction type. The code number of the reaction reappears in the list of references. Within each reaction type the cross sections are given in the following order:

- total cross section,
- differential cross section, listed in order of energy k,
- differential cross sections in order of momentum transfer t,
- differential cross sections for backward production,
- ratios of cross sections, and
- polarization measurements.

Differential cross sections are listed twice. In the first list the measurements are in order of increasing gamma energy. The forward cross sections are again listed by increasing momentum transfer (-t) in separate lists for measurements above and below 2 GeV. This division was made because above 2 GeV one is approaching the high energy limit, while below this limit the influence of the resonances is noticeable. For backward measurements the momentum transfer to the baryon (-u) is given in the third list. Cross sections below .1 μb are written in the floating point version; the Fortran conventions were generally adopted.

The laboratory and center-of-mass angles together with the center-of-mass differential cross section $d\sigma/d\Omega$ are given for estimates of counting rates. Where these quantities were given in the publications, they are marked; otherwise t and $d\sigma/dt$ are marked. When only diagrams were available, values were read off those diagrams. Comparison of

those values with numerical values later received showed that errors are not only due to reading uncertainties but also to errors in the diagrams. References from which the measurements were taken are numbered according to the publication list in section II.

Only the latest publication was taken in the case of measurements where it is clear that the latest publication includes the data given in earlier publications. Where a set of data seemed to be independent of earlier data sets, both data sets have been listed.

Values given in published conference proceedings are listed as preliminary, as full publications are to be expected.

Errors quoted are the errors given in the reference. These are mostly statistical errors. Systematic errors are not stated because of their different treatment by different authors. In vector meson photoproduction the fit to the mass distribution is a special problem. Where two fits are given in the reference, the average value is cited. This treatment increases the error bars of a data point, while the significance of this point increases.

For reactions which are not compiled, a literature survey is given. The references are given behind the cross section data.

Section II contains a list of references giving full titles of the publications, their authors, where they are published, as well as an index of the references by the reactions treated. The accelerator where the experiment was performed is stated, these accelerators are listed separately.

There is no system in the ordering of the references. The reason is that additional reactions were later added to the original compilation, and that new publications replaced old preprints or abstracts. Where the same measurements and results were published several times, reference is made to the latest publication only.

Section III consists of diagrams demonstrating the experimental situation. Where it seemed appropriate, the $(S-M^2)^2 = 4\ k^2 \cdot M_p^2$ scaling, with M_p = proton mass and k = photon energy, was used. Measurements which differed violently from the rest of data points were excluded.

Because of insufficient data, more experiments are desirable for the following reactions:

all reactions with two or more π^o, especially the reaction $\gamma+p \to p+2\pi^o$, $\gamma+p \to K+\Lambda(\Sigma^o)$ at small t, $\gamma+p \to p+\eta$ at small u and medium energies, and in general $\gamma+p \to p+\chi^o$, $\gamma+p \to \Delta^o+\pi^+$, $\gamma+p \to \Delta^+ +\pi^o$, $\gamma+n \to n+\pi^o$, $\gamma+n \to n+\eta$, $\gamma+n \to n+\chi^o$, $\gamma+n \to \Sigma^- +K^+$, $\gamma+n \to \Lambda^o(\Sigma^o)+K^o$ and large statistics for $\frac{d\sigma}{dt\ dm}$ in the reation $\gamma+p \to p+\pi^+ +\pi^-$ with angular distribution for the decay products and polarization measurements for all reactions.

Helpful discussions with Dr. Söding and Dr. Wolf, and the drafting work by Herr Knaut are gratefully acknowledged.

G110: GAMMA + PROTON - TOTAL HADRONIC CROSS SECTION

K GEV	E* GEV	E*-M GEV	SIG MU BARN	REF
0.186	1.109	0.171	$ 108.00	115
0.188	1.110	0.172	# 78.80+-41.00	133
0.205	1.125	0.186	# 118.90+-38.00	133
0.216	1.134	0.196	$ 154.00	115
0.223	1.140	0.201	# 168.20+-34.00	133
0.242	1.155	0.217	# 202.40+-31.00	133
0.260	1.170	0.231	$ 344.00	115
0.260	1.170	0.231	# 323.40+-32.00	133
0.279	1.185	0.247	# 387.10+-34.00	133
0.280	1.186	0.247	$ 400.00	115
0.298	1.200	0.262	# 504.20+-37.00	133
0.300	1.201	0.263	$ 496.00	115
0.318	1.215	0.277	# 532.60+-37.00	133
0.337	1.230	0.292	# 542.30+-32.00	133
0.357	1.245	0.307	# 480.80+-30.00	133
0.377	1.260	0.322	# 411.00+-31.00	133
0.397	1.275	0.337	# 311.90+-33.00	133
0.418	1.290	0.352	# 249.60+-31.00	133
0.438	1.305	0.366	# 210.90+-26.00	133
0.459	1.320	0.381	# 174.20+-27.00	133
0.481	1.335	0.397	# 188.80+-26.00	133
0.502	1.350	0.412	# 176.40+-25.00	133
0.524	1.365	0.427	# 167.10+-17.00	133
0.546	1.380	0.442	# 191.20+-17.00	133
0.568	1.395	0.457	# 218.50+-17.00	133
0.590	1.410	0.472	# 209.10+-18.00	133
0.613	1.425	0.487	# 233.50+-16.00	133
0.636	1.440	0.502	# 238.50+-16.00	133
(0.644)				
0.554 - 0.768	1.386 -1.524	0.447 -0.585	# 211.00+-22.00	72
0.659	1.455	0.517	# 245.60+-18.00	133
0.682	1.470	0.531	# 251.40+-18.00	133
0.706	1.485	0.547	# 273.90+-19.00	133
0.730	1.500	0.562	# 289.10+-20.00	133
(0.750)				
0.600 - 1.000	1.416 -1.660	0.478 -0.722	# 291.00+-20.00	209
0.754	1.515	0.577	# 286.60+-19.00	133
0.778	1.530	0.592	# 275.10+-18.00	133
0.803	1.545	0.607	# 258.70+-16.00	133
0.828	1.560	0.622	# 231.60+-17.00	133
0.850+- 0.150	1.573+-0.089	0.635+-0.089	# 230.58+-14.35	112
0.853	1.575	0.637	# 229.90+-17.00	133
0.878	1.590	0.652	# 226.60+-16.00	133
(0.898)				
0.768 - 1.080	1.524 -1.705	0.585 -0.767	# 193.00+-19.00	72
0.904	1.605	0.667	# 199.80+-17.00	133
0.929	1.620	0.681	# 233.60+-18.00	133
0.956	1.635	0.697	# 211.70+-16.00	133
0.982	1.650	0.712	# 221.00+-15.00	133
1.008	1.665	0.727	# 232.40+-15.00	133
1.035	1.680	0.742	# 223.40+-16.00	133
1.062	1.695	0.757	# 241.60+-17.00	133
1.089	1.710	0.772	# 232.40+-18.00	133
1.117	1.725	0.787	# 223.80+-16.00	133
1.144	1.740	0.802	# 207.90+-15.00	133
1.150+- 0.150	1.743+-0.081	0.805+-0.081	# 182.10+- 7.80	112
1.172	1.755	0.817	# 159.30+-17.00	133
1.200	1.770	0.832	# 184.10+-18.00	133
1.229	1.785	0.847	# 175.30+-15.00	133
1.258	1.800	0.862	# 152.60+-15.00	133
(1.273)				
1.080 - 1.550	1.705 -1.947	0.767 -1.008	# 150.00+-14.00	72
1.286	1.815	0.877	# 155.60+-16.00	133
1.316	1.830	0.892	# 180.60+-16.00	133
(1.333)				
1.000 - 2.000	1.660 -2.153	0.722 -1.214	# 151.00+- 9.00	209
1.345	1.845	0.907	# 159.90+-16.00	133
1.375	1.860	0.922	# 164.30+-17.00	133
1.404	1.875	0.937	# 116.00+-17.00	133
1.435	1.890	0.952	# 196.80+-16.00	133
1.443+- 0.050	1.894+-0.025	0.956+-0.025	# 145.10+- 5.70	101
1.450+- 0.150	1.898+-0.074	0.959+-0.074	# 153.70+- 6.30	112
1.465	1.905	0.967	# 170.80+-14.00	133
1.495	1.920	0.982	# 158.10+-14.00	133
1.526	1.935	0.997	# 175.40+-16.00	133
1.557	1.950	1.012	# 165.00+-16.00	133
1.589	1.965	1.027	# 163.70+-15.00	133
1.620	1.980	1.042	# 164.00+-15.00	133
1.652	1.995	1.057	# 141.70+-14.00	133
1.684	2.010	1.072	# 142.30+-14.00	133
1.750+- 0.150	2.041+-0.069	1.102+-0.069	# 146.00+- 6.40	112
(1.849)				
1.550 - 2.290	1.947 -2.275	1.008 -1.337	# 115.00+-12.00	72
2.050+- 0.150	2.174+-0.065	1.236+-0.065	# 148.50+- 6.70	112
2.253	2.260	1.322	# 146.30+- 8.00	133
2.350+- 0.150	2.300+-0.061	1.362+-0.061	# 144.20+- 8.00	112
(2.400)				
2.000 - 3.000	2.153 -2.551	1.214 -1.613	# 134.00+- 8.00	209
2.650+- 0.150	2.419+-0.058	1.481+-0.058	# 142.00+- 9.50	112
(2.769)				
2.290 - 3.500	2.275 -2.729	1.337 -1.791	# 111.00+-12.00	72
2.840+- 0.150	2.492+-0.056	1.554+-0.056	# 131.30+- 4.30	101
2.888	2.510	1.572	# 148.20+- 5.00	133
2.950+- 0.150	2.533+-0.056	1.595+-0.056	# 129.80+- 6.90	112
3.250+- 0.150	2.642+-0.053	1.704+-0.053	# 132.70+- 6.00	112
3.550+- 0.150	2.746+-0.051	1.808+-0.051	# 127.20+- 6.20	112
3.590	2.760	1.822	# 141.70+- 5.00	133
(3.750)				
3.000 - 5.000	2.551 -3.204	1.613 -2.265	# 127.00+- 8.00	209

# = NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
K = GAMMA ENERGY E* = CENTER OF MASS ENERGY $ = FOR DETAIL SEE REFERENCE

C110: GAMMA + PROTON - TOTAL HADRONIC CROSS SECTION (CONTINUED

K GEV	E* GEV	E*-M GEV	SIG MU BARN	REF
3.850+- 0.150	2.847+-0.049	1.909+-0.049	# 134.60+- 6.40	112
4.070+- 0.490	2.919+-0.158	1.980+-0.158	# 135.00+- 2.90	134
4.150+- 0.150	2.944+-0.048	2.006+-0.048	# 131.50+- 6.60	112
(4.241)				
3.500 - 5.380	2.729 -3.313	1.791 -2.375	# 116.00+-12.00	72
4.359	3.010	2.072	# 136.80+- 5.00	133
4.450+- 0.150	3.038+-0.046	2.100+-0.046	# 124.70+- 5.80	112
4.660+- 0.300	3.102+-0.091	2.164+-0.091	# 124.20+- 3.90	101
4.750+- 0.150	3.129+-0.045	2.191+-0.045	# 124.20+- 5.40	112
5.050+- 0.150	3.218+-0.044	2.280+-0.044	# 121.80+- 4.50	112
5.170+- 0.600	3.253+-0.173	2.315+-0.173	# 128.30+- 2.60	134
5.195	3.260	2.322	# 134.20+- 5.00	133
5.350+- 0.150	3.304+-0.043	2.366+-0.043	# 122.10+- 6.00	112
5.650+- 0.150	3.389+-0.042	2.450+-0.042	# 118.40+- 5.00	112
(5.652)				
5.000 - 6.500	3.204 -3.616	2.265 -2.678	# 125.00+-11.00	209
5.950+- 0.150	3.471+-0.041	2.532+-0.041	# 123.60+- 5.50	112
6.097	3.510	2.572	# 133.20+- 5.00	133
6.250+- 0.150	3.551+-0.040	2.613+-0.040	# 122.10+- 5.60	112
6.570+- 0.780	3.634+-0.201	2.696+-0.201	# 122.40+- 3.90	134
7.065	3.760	2.822	# 134.00+- 6.00	133
(7.467)				
7.000 - 8.000	3.744 -3.987	2.806 -3.048	# 126.00+-17.00	79
8.100	4.010	3.072	# 125.20+- 6.00	133
8.430+- 1.010	4.086+-0.232	3.148+-0.232	# 120.10+- 2.30	134
9.202	4.260	3.322	# 133.60+- 8.00	133
9.830+- 1.180	4.396+-0.252	3.458+-0.252	# 119.80+- 2.30	134
10.371	4.510	3.572	# 130.40+- 7.00	133
10.710+- 1.280	4.580+-0.262	3.642+-0.262	# 123.20+- 2.30	134
11.606	4.760	3.822	# 128.30+- 9.00	133
12.490+- 1.480	4.931+-0.282	3.993+-0.282	# 117.00+- 2.20	134
12.907	5.010	4.072	# 119.30+-12.00	133
13.610+- 1.620	5.140+-0.296	4.202+-0.296	# 113.60+- 2.40	134
14.276	5.260	4.322	# 112.10+-18.00	133
15.700	5.508	4.570	# 139.90+-25.00	133
16.130+- 1.980	5.581+-0.333	4.643+-0.333	# 112.70+- 2.20	134

C120: GAMMA + NEUTRON - TOTAL HADRONIC CROSS SCTION

K GEV	E* GEV	E*-M GEV	SIG MU BARN	REF
1.450+- 0.150	1.899+-0.074	0.960+-0.074	# 141.30+-11.90	112
1.750+- 0.150	2.042+-0.069	1.103+-0.069	# 141.30+-11.50	112
2.050+- 0.150	2.176+-0.065	1.236+-0.065	# 122.10+-10.80	112
2.350+- 0.150	2.302+-0.061	1.362+-0.061	# 125.50+-12.70	112
2.650+- 0.150	2.421+-0.058	1.482+-0.058	# 129.50+-13.60	112
2.950+- 0.150	2.535+-0.056	1.595+-0.056	# 140.50+-11.10	112
3.250+- 0.150	2.644+-0.053	1.704+-0.053	# 123.70+-10.40	112
3.550+- 0.150	2.748+-0.051	1.809+-0.051	# 120.20+-11.20	112
3.850+- 0.150	2.849+-0.049	1.910+-0.049	# 117.30+-11.90	112
4.070+- 0.490	2.921+-0.158	1.981+-0.158	# 115.70+- 6.00	134
4.150+- 0.150	2.946+-0.048	2.007+-0.048	# 117.90+-10.40	112
4.450+- 0.150	3.041+-0.046	2.101+-0.046	# 115.70+-10.10	112
4.750+- 0.150	3.132+-0.045	2.192+-0.045	# 117.70+- 9.80	112
5.050+- 0.150	3.221+-0.044	2.281+-0.044	# 130.70+- 8.90	112
5.170+- 0.600	3.255+-0.173	2.316+-0.173	# 114.80+- 5.40	134
5.350+- 0.150	3.307+-0.043	2.367+-0.043	# 116.30+-10.30	112
5.650+- 0.150	3.391+-0.042	2.452+-0.042	# 117.70+- 9.20	112
5.950+- 0.150	3.473+-0.041	2.534+-0.041	# 105.30+- 9.70	112
6.250+- 0.150	3.553+-0.040	2.614+-0.040	# 109.40+- 9.50	112
6.570+- 0.780	3.637+-0.201	2.698+-0.201	# 120.60+- 7.10	134
8.430+- 1.010	4.089+-0.232	3.150+-0.232	# 120.10+- 5.60	134
9.830+- 1.180	4.399+-0.252	3.460+-0.252	# 111.40+- 4.40	134
10.710+- 1.280	4.583+-0.262	3.644+-0.262	# 105.60+- 4.60	134
12.490+- 1.480	4.935+-0.282	3.995+-0.282	# 110.40+- 4.50	134
13.610+- 1.620	5.144+-0.296	4.204+-0.296	# 108.60+- 3.60	134
16.130+- 1.980	5.585+-0.333	4.645+-0.333	# 106.10+- 4.40	134

# = NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
K = GAMMA ENERGY E* = CENTER OF MASS ENERGY $ = FOR DETAIL SEE REFERENCE

C130: GAMMA + DEUTERON - TOTAL HADRONIC CROSS SECTION

K GEV	E* GEV	E* FOR SINGLE NUCLEON (GEV)	SIG MU BARN	REF
1.450+- 0.150	2.992+-0.094	1.899+-0.074	# 294.30+-10.00	112
1.750+- 0.150	3.175+-0.089	2.041+-0.069	# 285.70+- 9.50	112
2.050+- 0.150	3.347+-0.084	2.175+-0.065	# 268.10+- 8.50	112
2.350+- 0.150	3.511+-0.080	2.301+-0.061	# 266.70+- 9.90	112
2.650+- 0.150	3.668+-0.077	2.420+-0.058	# 268.20+- 9.70	112
2.950+- 0.150	3.818+-0.074	2.534+-0.056	# 266.80+- 8.70	112
3.250+- 0.150	3.963+-0.071	2.643+-0.053	# 252.90+- 8.50	112
3.550+- 0.150	4.102+-0.069	2.747+-0.051	# 243.90+- 9.30	112
3.850+- 0.150	4.237+-0.066	2.848+-0.049	# 248.20+-10.00	112
4.070+- 0.490	4.333+-0.212	2.920+-0.158	# 246.20+- 5.10	134
4.150+- 0.150	4.368+-0.064	2.945+-0.048	# 245.70+- 8.00	112
4.450+- 0.150	4.495+-0.063	3.039+-0.046	# 236.70+- 8.30	112
4.750+- 0.150	4.618+-0.061	3.131+-0.045	# 238.10+- 8.20	112
5.050+- 0.150	4.739+-0.059	3.219+-0.044	# 248.40+- 7.70	112
5.170+- 0.600	4.786+-0.235	3.254+-0.173	# 238.70+- 4.70	134
5.350+- 0.150	4.856+-0.058	3.306+-0.043	# 234.50+- 8.30	112
5.650+- 0.150	4.970+-0.057	3.390+-0.042	# 232.10+- 7.70	112
5.950+- 0.150	5.082+-0.055	3.472+-0.041	# 225.10+- 8.00	112
6.250+- 0.150	5.192+-0.054	3.552+-0.040	# 227.60+- 7.60	112
6.570+- 0.780	5.306+-0.276	3.636+-0.201	# 238.70+- 5.90	134
8.430+- 1.010	5.927+-0.320	4.088+-0.232	# 236.00+- 5.00	134
9.380+- 1.180	6.220+-0.356	4.301+-0.258	# 227.00+- 3.70	134
10.710+- 1.280	6.609+-0.363	4.582+-0.262	# 224.60+- 3.90	134
12.490+- 1.480	7.096+-0.391	4.933+-0.282	# 223.30+- 3.80	134
13.610+- 1.620	7.386+-0.411	5.142+-0.296	# 218.10+- 2.60	134
16.130+- 1.980	8.000+-0.464	5.583+-0.333	# 214.80+- 3.80	134

# = NUMERICAL VALUE FROM TABLE ∂ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
K = GAMMA ENERGY E* = CENTER OF MASS ENERGY

C011: PROTON COMPTON EFFECT (K > 5.50 GEV)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A MU BARN/GEV**2	B 1/GEV**2	C 1/GEV**4	SIG TOT MU BARN	REF
5.50	3.35	11.20	# 0.88+- 0.15	# 6.90+- 1.30	# 1.30+- 1.90	------	226
5.00 - 7.00	3.20 - 3.74	10.26 - 14.02	# 0.93+- 0.08	# 8.40+- 0.70	# 3.80+- 1.10	------	227
8.50	4.10	16.83	# 0.60+- 0.10	# 6.20+- 0.80	# 0.70+- 0.90	------	226
11.50	4.74	22.46	# 0.63+- 0.06	# 6.50+- 0.60	# 0.80+- 0.70	------	226
17.00	5.73	32.78	# 0.55+- 0.05	# 6.60+- 0.40	# 1.10+- 0.40	------	226

C011: PROTON COMPTON EFFECT (K > 0.13 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD	REF
0.13 - 0.14	1.06	0.0454-0.0546	#135.80-144.00	#130.34-139.4	5.08	+-.512	# .228E-01+-.230E-02	166
0.16 - 0.17	1.09	0.0655-0.0766	#135.70-143.70	#129.17-138.1	3.38	+-.360	# .216E-01+-.230E-02	166
0.18 - 0.19	1.11	0.0803-0.0927	#135.60-143.60	#128.37-137.4	3.82	+-.295	# .298E-01+-.230E-02	166
0.18 - 0.21	1.12	0.0436-0.0695	# 86.10-98.10	# 75.65-87.53	2.28	+-.273	# .192E-01+-.230E-02	166
0.19 - 0.21	1.12	0.0812-0.1029	#125.50-133.50	#116.43-125.3	4.10	+-1.06	# .364E-01+-.940E-02	166
		0.0880-0.1099	#135.50-143.50	#127.58-136.7	5.97	+-.800	# .530E-01+-.710E-02	166
0.21+- 0.01	1.13	0.0628 +- 0.0015	# 91.90 +- 1.40	81.36 +-1.384	1.92	+-.207	# .186E-01+-.200E-02	169
		0.1120 +- 0.0007	#147.40 +- 1.30	141.2 +-1.511	6.80	+-.424	# .658E-01+-.410E-02	169
		0.1010 +- 0.0013	#131.40 +- 1.60	123.0 +-1.789	4.39	+-.362	# .425E-01+-.350E-02	169
0.20 - 0.23	1.13	0.0541-0.0784	# 88.00-96.00	# 76.69-84.59	3.39	+-.712	# .338E-01+-.710E-02	166
0.19 - 0.24	1.13	0.1108	#142.00	134.9	4.46	+-.811	# .440E-01+-.800E-02	172
0.22+- 0.01	1.14	0.0420 +- 0.0014	# 68.80 +- 1.30	58.95 +-1.194	3.13	+-.325	# .328E-01+-.340E-02	169
		0.0852 +- 0.0014	#107.20 +- 1.30	96.45 +-1.352	2.38	+-.248	# .249E-01+-.260E-02	169
0.22 - 0.23	1.14	0.1129-0.1279	#135.50-143.30	#126.92-135.9	7.05	+-.864	# .767E-01+-.940E-02	166
0.21 - 0.25	1.14	0.0353-0.0576	# 65.10-72.90	# 54.55-61.64	4.81	+-.360	# .534E-01+-.400E-02	166
0.24+- 0.01	1.15	0.0329 +- 0.0015	# 55.40 +- 1.40	46.27 +-1.229	3.50	+-.471	# .424E-01+-.570E-02	167
		0.0494 +- 0.0016	# 69.50 +- 1.30	58.89 +-1.188	5.02	+-.628	# .608E-01+-.760E-02	167
0.23 - 0.25	1.15	0.0681-0.0898	# 87.70-95.80	# 75.62-83.59	5.63	+-.588	# .680E-01+-.710E-02	166
		0.0657-0.0926	# 85.70-97.80	# 73.68-85.59	6.83	+-.778	# .825E-01+-.940E-02	166
		0.1117-0.1373	#125.00-133.10	#114.40-123.5	10.2	+-.977	# .124 +-.118E-01	166
0.25+- 0.01	1.16	0.0536 +- 0.0016	# 70.00 +- 1.20	59.00 +-1.094	5.50	+-.656	# .713E-01+-.850E-02	169
		0.0857 +- 0.0017	# 93.00 +- 1.20	80.82 +-1.186	5.14	+-.424	# .666E-01+-.550E-02	169
		0.0851 +- 0.0016	# 92.60 +- 1.10	80.43 +-1.086	4.67	+-.540	# .605E-01+-.700E-02	167
		0.1071 +- 0.0015	#108.40 +- 1.10	96.49 +-1.152	7.38	+-.787	# .956E-01+-.102E-01	167
		0.1071 +- 0.0016	#108.40 +- 1.20	96.49 +-1.256	6.59	+-.502	# .854E-01+-.650E-02	169
		0.1357 +- 0.0013	#131.80 +- 1.20	122.0 +-1.364	7.05	+-.602	# .913E-01+-.780E-02	167
		0.1358 +- 0.0016	#131.90 +- 1.50	122.2 +-1.706	7.40	+-.486	# .959E-01+-.630E-02	169
		0.1501 +- 0.0008	#147.50 +- 1.10	140.3 +-1.307	9.87	+-.826	# .128 +-.107E-01	167
		0.1502 +- 0.0010	#147.70 +- 1.30	140.6 +-1.546	10.0	+-.540	# .130 +-.700E-02	169
0.25 - 0.27	1.17	0.0781-0.1016	# 87.60-95.60	# 74.76-82.61	9.70	+-1.02	# .134 +-.141E-01	166
0.26 - 0.27	1.17	0.0833-0.1016	# 87.60-95.60	# 74.76-82.61	12.1	+-2.96	# .173 +-.423E-01	166

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C011: PROTON COMPTON EFFECT (K > 0.13 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
0.24 - 0.29	1.17	0.1542	#138.00	128.8	10.8 +-1.14	# .152 +-.160E-01	172
0.27 - 0.28	1.18	0.0885- 0.1076	# 87.50- 95.50	# 74.29- 82.13	8.65 +-1.09	# .131 +-.165E-01	166
0.27 - 0.29	1.19	0.0883- 0.1137	# 87.40- 95.40	# 73.83- 81.65	11.6 +-3.02	# .180 +-.470E-01	166
		0.1014	# 92.00	78.68	9.94 +-1.99	# .155 +-.310E-01	172
0.28 - 0.30	1.19	0.1037	# 90.00	76.36	9.57 +-.666	# .158 +-.110E-01	170
0.31+- 0.01	1.21	0.1162	# 90.30	75.93			
		+- 0.0089	+- 4.40	+-4.267	6.74 +-1.63	# .124 +-.300E-01	171
0.30 - 0.32	1.21	0.1733	#120.00	106.7	11.2 +-1.14	# .206 +-.210E-01	170
0.30 - 0.33	1.21	0.0877	# 75.00	61.40	9.56 +-.850	# .180 +-.160E-01	170
0.29 - 0.34	1.21	0.1175	# 90.00	75.51	7.75 +-.855	# .145 +-.160E-01	172
		0.2021	#136.00	124.9	11.4 +-.962	# .213 +-.180E-01	172
0.30 - 0.33	1.21	0.1183	# 90.00	75.47	7.60 +-.478	# .143 +-.900E-02	170
0.30 - 0.35	1.22	0.0916	# 75.00	61.12	9.91 +-1.32	# .195 +-.260E-01	170
0.35+- 0.02	1.24	0.1399	# 90.00	74.28			
		+- 0.0112	+- 4.60	+-4.425	6.83 +-.988	# .152 +-.220E-01	171
0.35 - 0.38	1.25	0.1495	# 90.00	73.76	5.59 +-.547	# .133 +-.130E-01	170
0.40 - 0.43	1.29	0.1824	# 90.00	72.16	4.13 +-.586	# .120 +-.170E-01	170
0.42+- 0.01	1.29	0.1841	# 89.40	71.43			
		+- 0.0149	+- 4.60	+-4.360	3.75 +-.844	# .111 +-.250E-01	171
0.44+- 0.01	1.31	0.1969	# 89.20	70.64			
		+- 0.0160	+- 4.60	+-4.340	3.02 +-1.01	# .960E-01+-.320E-01	171
0.46+- 0.01	1.32	0.2095	# 88.90	69.77			
		+- 0.0175	+- 4.70	+-4.410	1.50 +-.559	# .510E-01+-.190E-01	171
0.48	1.33	0.1921	@ 81.00	61.97	2.79 +-.221	@ .101 +-.800E-02	15
0.51+- 0.02	1.36	0.2419	# 88.40	67.92			
		+- 0.0204	+- 4.70	+-4.356	1.57 +-.505	# .620E-01+-.200E-01	171
0.52	1.36	0.2208	@ 82.00	61.81	1.98 +-.171	@ .810E-01+-.700E-02	15
0.54+- 0.01	1.38	0.2620	# 88.10	66.82			
		+- 0.0227	+- 4.80	+-4.415	2.02 +-.719	# .870E-01+-.310E-01	171
0.54	1.38	0.2711	@ 90.00	68.57	1.48 +-.157	@ .638E-01+-.679E-02	173
0.57	1.40	0.2576	@ 83.00	61.46	1.63 +-.150	@ .760E-01+-.700E-02	15
		0.2934	@ 90.00	67.80	1.50 +-.145	@ .700E-01+-.679E-02	173
0.60	1.42	0.3159	@ 90.00	67.04	1.63 +-.135	@ .817E-01+-.679E-02	173
0.61	1.42	0.2897	@ 84.00	61.39	1.59 +-.136	@ .820E-01+-.700E-02	15
0.62+- 0.02	1.43	0.3152	# 87.30	64.12			
		+- 0.0277	+- 4.80	+-4.322	1.41 +-.462	# .740E-01+-.243E-01	171
0.63	1.44	0.3388	@ 90.00	66.31	1.73 +-.130	@ .934E-01+-.700E-02	173
0.66	1.46	0.3304	@ 85.00	61.14	1.37 +-.139	@ .790E-01+-.800E-02	15
		0.3304	@ 85.00	61.14	1.58 +-.191	@ .910E-01+-.110E-01	15
		0.3620	@ 90.00	65.61	1.57 +-.160	@ .905E-01+-.919E-02	173
0.69+- 0.03	1.47	0.3612	# 86.50	61.84			
		+- 0.0322	+- 4.80	+-4.238	.980 +-.261	# .600E-01+-.160E-01	171
0.69	1.47	0.3854	@ 90.00	64.93	1.80 +-.150	@ .110 +-.919E-02	173
0.70	1.48	0.3658	@ 86.00	61.14	1.41 +-.160	@ .880E-01+-.100E-01	15
0.72	1.49	0.3805	@ 86.00	60.72	1.29 +-.138	@ .840E-01+-.900E-02	15
		0.4090	@ 90.00	64.27	1.55 +-.141	@ .101 +-.919E-02	173
0.73 - 0.78	1.52	0.2181	# 60.00	39.35	.432 +-.432	# .300E-01+-.300E-01	170
0.74	1.51	0.3953	@ 86.00	60.30	1.26 +-.192	@ .850E-01+-.130E-01	15
0.75	1.51	0.4329	@ 90.00	63.62	1.42 +-.133	@ .978E-01+-.919E-02	173
0.77	1.52	0.4254	@ 87.00	60.56	1.22 +-.140	@ .870E-01+-.100E-01	15
0.78	1.53	0.4331	@ 87.00	60.36	1.18 +-.137	@ .860E-01+-.100E-01	15
		0.4570	@ 90.00	63.00	1.24 +-.126	@ .905E-01+-.919E-02	173
0.81	1.55	0.4813	@ 90.00	62.40	1.24 +-.131	@ .950E-01+-.100E-01	173
0.82	1.56	0.4723	@ 88.00	60.45	.937 +-.116	@ .730E-01+-.900E-02	15
0.83	1.56	0.4802	@ 88.00	60.25	.947 +-.101	@ .750E-01+-.800E-02	15
0.84	1.57	0.5057	@ 90.00	61.81	.748 +-.970E-01	@ .602E-01+-.781E-02	173
0.86	1.58	0.5130	@ 89.00	60.55	.770 +-.108	@ .640E-01+-.900E-02	15
0.89	1.60	0.5468	@ 90.00	60.87	.793 +-.103	@ .690E-01+-.900E-02	15
0.90	1.60	0.5551	@ 90.00	60.69	.713 +-.102	@ .630E-01+-.900E-02	15
0.94	1.63	0.5986	@ 91.00	60.84	.577 +-.854E-01	@ .540E-01+-.800E-02	15
0.95	1.63	0.6071	@ 91.00	60.66	.632 +-.948E-01	@ .600E-01+-.900E-02	15
0.98	1.65	0.6435	@ 92.00	61.01	.606 +-.909E-01	@ .600E-01+-.900E-02	15
1.02	1.67	0.6898	@ 93.00	61.21	.518 +-.105	@ .540E-01+-.110E-01	15
1.06	1.69	0.7375	@ 94.00	61.42	.592 +-.911E-01	@ .650E-01+-.100E-01	15
1.10	1.72	0.7740	@ 94.00	60.77	.443 +-.782E-01	@ .510E-01+-.900E-02	15
1.14	1.74	0.8238	@ 95.00	61.02	.232 +-.448E-01	@ .280E-01+-.540E-02	15
1.18	1.76	0.8750	@ 96.00	61.28	.127 +-.555E-01	@ .160E-01+-.700E-02	15
1.22	1.78	0.9275	@ 97.00	61.56	.137 +-.608E-01	@ .180E-01+-.800E-02	15
1.26	1.80	0.9813	@ 98.00	61.86	.160 +-.656E-01	@ .220E-01+-.900E-02	15
1.35	1.85	1.1032	@100.00	62.36	.261 +-.120	@ .390E-01+-.180E-01	15
1.41	1.88	1.1821	@101.00	62.44	.266 +-.152	@ .420E-01+-.240E-01	15
5.50	3.35	# 0.1000	11.77	3.311	# .424 +-.440E-01	.321 +-.333E-01	226
		# 0.1500	14.43	4.065	# .355 +-.300E-01	.269 +-.227E-01	226
		# 0.2000	16.68	4.706	# .225 +-.170E-01	.170 +-.129E-01	226
		# 0.3000	20.46	5.793	# .141 +-.150E-01	.107 +-.114E-01	226
		# 0.4000	23.67	6.724	# .648E-01+-.560E-02	.490E-01+-.424E-02	226
		# 0.5000	26.51	7.557	# .410E-01+-.330E-02	.310E-01+-.250E-02	226
		# 0.6000	29.10	8.322	# .230E-01+-.410E-02	.174E-01+-.310E-02	226
5.00 - 7.00	3.44	# 0.0800	16.20	2.789			
		+- 0.0200	+- 1.28	+-.3512	# .446 +-.300E-01	.360 +-.242E-01	227
		# 0.1250	12.75	3.493			
		+- 0.0250	+- 1.28	+-.3535	# .399 +-.230E-01	.322 +-.185E-01	227
		# 0.1750	15.10	4.143			
		+- 0.0250	+- 1.09	+-.3009	# .244 +-.120E-01	.197 +-.967E-02	227
		# 0.2250	17.14	4.709			
		+- 0.0250	+- 0.96	+-.2673	# .173 +-.800E-02	.139 +-.645E-02	227

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C011: PROTON COMPTON EFFECT (K > 0.13 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
5.00 - 7.00	3.44	# 0.2750	18.97	5.219			
		+- 0.0250	+- 0.87	+-.2435	# .120 +-.600E-02	.967E-01+-.484E-02	227
		# 0.3250	20.64	5.687			
		+- 0.0250	+- 0.80	+-.2256	# .930E-01+-.500E-02	.750E-01+-.403E-02	227
		# 0.3750	22.18	6.123			
		+- 0.0250	+- 0.75	+-.2116	# .690E-01+-.500E-02	.556E-01+-.403E-02	227
		# 0.4250	23.64	6.535			
		+- 0.0250	+- 0.71	+-.2002	# .550E-01+-.400E-02	.443E-01+-.322E-02	227
		# 0.4750	25.01	6.925			
		+- 0.0250	+- 0.67	+-.1907	# .420E-01+-.400E-02	.339E-01+-.322E-02	227
		# 0.5250	26.32	7.299			
		+- 0.0250	+- 0.64	+-.1828	# .330E-01+-.400E-02	.266E-01+-.322E-02	227
		# 0.5750	27.56	7.657			
		+- 0.0250	+- 0.61	+-.1760	# .270E-01+-.400E-02	.218E-01+-.322E-02	227
8.50	4.10	# 0.1000	9.33	2.138	# .309 +-.390E-01	.372 +-.469E-01	226
		# 0.2000	13.21	3.034	# .179 +-.150E-01	.215 +-.180E-01	226
		# 0.3000	16.20	3.728	# .114 +-.110E-01	.137 +-.132E-01	226
		# 0.4000	18.72	4.319	# .538E-01+-.460E-02	.647E-01+-.553E-02	226
		# 0.5000	20.96	4.844	# .343E-01+-.270E-02	.413E-01+-.325E-02	226
		# 0.6000	22.98	5.324	# .191E-01+-.180E-02	.230E-01+-.217E-02	226
		# 0.7000	24.85	5.770	# .105E-01+-.110E-02	.126E-01+-.132E-02	226
		# 0.8000	26.60	6.189	# .853E-02+-.150E-02	.103E-01+-.180E-02	226
11.50	4.74	# 0.0600	6.17	1.222	# .441 +-.630E-01	.728 +-.104	226
		# 0.1000	7.96	1.579	# .334 +-.280E-01	.551 +-.462E-01	226
		# 0.2000	11.27	2.239	# .171 +-.110E-01	.282 +-.181E-01	226
		# 0.3000	13.82	2.748	# .952E-01+-.900E-02	.157 +-.148E-01	226
		# 0.4000	15.97	3.181	# .499E-01+-.410E-02	.823E-01+-.676E-02	226
		# 0.5000	17.87	3.565	# .312E-01+-.260E-02	.515E-01+-.429E-02	226
		# 0.6000	19.59	3.915	# .165E-01+-.150E-02	.272E-01+-.247E-02	226
		# 0.7000	21.18	4.239	# .900E-02+-.980E-03	.148E-01+-.162E-02	226
		# 0.8000	22.66	4.542	# .550E-02+-.700E-03	.907E-02+-.115E-02	226
17.00	5.73	# 0.1000	6.51	1.067	# .302 +-.230E-01	.746 +-.568E-01	226
		# 0.2000	9.21	1.512	# .143 +-.880E-02	.353 +-.217E-01	226
		# 0.3000	11.28	1.855	# .850E-01+-.700E-02	.210 +-.173E-01	226
		# 0.4000	13.04	2.145	# .480E-01+-.460E-02	.119 +-.114E-01	226
		# 0.5000	14.58	2.402	# .266E-01+-.240E-02	.657E-01+-.593E-02	226
		# 0.6000	15.98	2.636	# .153E-01+-.130E-02	.378E-01+-.321E-02	226
		# 0.7000	17.27	2.852	# .760E-02+-.160E-02	.188E-01+-.395E-02	226
		# 0.8000	18.48	3.053	# .570E-02+-.630E-03	.141E-01+-.156E-02	226
		# 0.9000	19.61	3.244	# .326E-02+-.370E-03	.805E-02+-.914E-03	226
		# 1.0000	20.68	3.425	# .138E-02+-.220E-03	.341E-02+-.543E-03	226

C011: PROTON COMPTON EFFECT (K > 0.13 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 17.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	REF
# 0.0600	11.50	4.74	22.46	#0.441 +-.630E-01	226
# 0.0800+- 0.0200	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.446 +-.300E-01	227
# 0.1000	5.50	3.35	11.20	#0.424 +-.440E-01	226
# 0.1000	8.50	4.10	16.83	#0.309 +-.390E-01	226
# 0.1000	11.50	4.74	22.46	#0.334 +-.280E-01	226
# 0.1000	17.00	5.73	32.78	#0.302 +-.230E-01	226
# 0.1250+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.399 +-.230E-01	227
# 0.1500	5.50	3.35	11.20	#0.355 +-.300E-01	226
# 0.1750+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.244 +-.120E-01	227
# 0.2000	5.50	3.35	11.20	#0.225 +-.170E-01	226
# 0.2000	8.50	4.10	16.83	#0.179 +-.150E-01	226
# 0.2000	11.50	4.74	22.46	#0.171 +-.110E-01	226
# 0.2000	17.00	5.73	32.78	#0.143 +-.880E-02	226
# 0.2250+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.173 +-.800E-02	227
# 0.2750+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.120 +-.600E-02	227
# 0.3000	5.50	3.35	11.20	#0.141 +-.150E-01	226
# 0.3000	8.50	4.10	16.83	#0.114 +-.110E-01	226
# 0.3000	11.50	4.74	22.46	#0.952E-01+-.900E-02	226
# 0.3000	17.00	5.73	32.78	#0.850E-01+-.700E-02	226
# 0.3250+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.930E-01+-.500E-02	227
# 0.3750+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.690E-01+-.500E-02	227
# 0.4000	5.50	3.35	11.20	#0.648E-01+-.560E-02	226
# 0.4000	8.50	4.10	16.83	#0.538E-01+-.460E-02	226
# 0.4000	11.50	4.74	22.46	#0.499E-01+-.410E-02	226

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C011: PROTON COMPTON EFFECT (K > 0.13 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 17.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	REF
# 0.4000	17.00	5.73	32.78	#0.480E-01+-.460E-02	226
# 0.4250+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.550E-01+-.400E-02	227
# 0.4750+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.420E-01+-.400E-02	227
# 0.5000	5.50	3.35	11.20	#0.410E-01+-.330E-02	226
# 0.5000	8.50	4.10	16.83	#0.343E-01+-.270E-02	226
# 0.5000	11.50	4.74	22.46	#0.312E-01+-.260E-02	226
# 0.5000	17.00	5.73	32.78	#0.266E-01+-.240E-02	226
# 0.5250+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.330E-01+-.400E-02	227
# 0.5750+- 0.0250	5.00 - 7.00	3.20 - 3.74	10.26 -14.02	#0.270E-01+-.400E-02	227
# 0.6000	5.50	3.35	11.20	#0.230E-01+-.410E-02	226
# 0.6000	8.50	4.10	16.83	#0.191E-01+-.180E-02	226
# 0.6000	11.50	4.74	22.46	#0.165E-01+-.150E-02	226
# 0.6000	17.00	5.73	32.78	#0.153E-01+-.130E-02	226
# 0.7000	8.50	4.10	16.83	#0.105E-01+-.110E-02	226
# 0.7000	11.50	4.74	22.46	#0.900E-02+-.980E-03	226
# 0.7000	17.00	5.73	32.78	#0.760E-02+-.160E-02	226
# 0.8000	8.50	4.10	16.83	#0.853E-02+-.150E-02	226
# 0.8000	11.50	4.74	22.46	#0.550E-02+-.700E-03	226
# 0.8000	17.00	5.73	32.78	#0.570E-02+-.630E-03	226
# 0.9000	17.00	5.73	32.78	#0.326E-02+-.370E-03	226
# 1.0000	17.00	5.73	32.78	#0.138E-02+-.220E-03	226

0.75 GEV < K < GEV 2.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	REF
0.2181	0.73 - 0.78	1.50 - 1.53	2.25 - 2.34	0.432 +-.432	170

C011: PROTON COMPTON EFFECT (K > 0.13 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

RATIO OF CROSS SECTIONS FOR TRANSVERSE AND PARALLEL (TO THE PRODUCTION PLANE) POLARIZED GAMMAS

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	A=SIG TRANSVERSE (A-B)/(A+B)	A=SIG TRANSVERSE A/(A+B)	B=SIG PARALLEL B/(A+B)	REF
0.30 - 0.34	1.22	0.1210	# 90.00	75.31	#-.354 +-.930E-01	0.323 +-.465E-01	0.677 +-.465E-01	174

C011: PROTON COMPTON EFFECT (K > 0.13 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.0 GEV

P = BARYON POLARIZATION ALONG K(GAMMA) X P(MESON)

K GEV	E* GEV	THETA MESON CM	THETA MESON LAB	THETA BARYON CM	THETA BARYON LAB	P	REF
0.700	1.481	P# 88.0+- 3.0	62.9+- 5.3	92.0+- 3.0	43.1+- 3.0	P#-0.34+-.26	147
0.800	1.543	P# 89.0+- 3.0	61.7+- 5.3	91.0+- 3.0	42.1+- 3.0	P#-0.23+-.26	147

= NUMERICAL VALUE FROM TABLE # = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

TOTAL CROSS SECTION : NO DATA TO BE LISTED

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
1.20	1.77	0.0046	# 6.13	3.224	39.5	+-2.05	201.	+-10.4	# 5.01	+-.260	176
		0.0080	# 8.10	4.262	32.8	+-1.50	166.	+-7.60	# 4.15	+-.190	176
		0.0129	# 10.31	5.428	32.8	+-1.26	167.	+-6.40	# 4.16	+-.160	176
		0.0182	# 12.26	6.460	32.3	+-1.97	164.	+-10.0	# 4.09	+-.250	176
		0.0245	# 14.22	7.500	32.4	+-1.89	164.	+-9.61	# 4.10	+-.240	176
		0.0272	# 15.00	7.914	28.7	+-.868	146.	+-4.40	# 3.64	+-.110	24
		0.0317	# 16.21	8.559	30.9	+-1.34	157.	+-6.80	# 3.92	+-.170	176
		0.0481	# 20.00	10.59	31.8	+-1.03	161.	+-5.20	# 4.03	+-.130	24
		0.0490	# 20.18	10.68	32.6	+-1.89	165.	+-9.61	# 4.13	+-.240	176
		0.0747	# 25.00	13.29	34.5	+-.868	175.	+-4.40	# 4.37	+-.110	24
		0.0756	# 25.15	13.37	35.7	+-2.13	181.	+-10.8	# 4.52	+-.270	176
		0.1067	# 30.00	16.02	34.4	+-1.11	175.	+-5.60	# 4.36	+-.140	24
		0.1076	# 30.12	16.09	41.1	+-3.00	209.	+-15.2	# 5.21	+-.380	176
		0.1440	# 35.00	18.80	34.8	+-.868	177.	+-4.40	# 4.41	+-.110	24
		0.1449	# 35.11	18.87	37.7	+-2.92	191.	+-14.8	# 4.77	+-.370	176
		0.1863	# 40.00	21.64	32.0	+-1.58	162.	+-8.00	# 4.06	+-.200	24
		0.1874	# 40.12	21.71	31.3	+-.947	158.	+-4.80	# 3.96	+-.120	176
		0.2332	@ 45.00	24.54	37.1	+-1.97	188.	+-10.0	@ 4.70	+-.250	182
		0.2854	# 50.09	27.56	25.6	+-1.58	130.	+-8.00	# 3.24	+-.200	176
		0.3992	# 60.09	33.75	15.6	+-1.50	79.2	+-7.60	# 1.98	+-.190	176
		0.5250	# 70.09	40.36	12.8	+-1.34	64.8	+-6.80	# 1.62	+-.170	176
		0.6590	# 80.08	47.49	7.50	+-1.11	38.0	+-5.60	# .950	+-.140	176
		0.7974	# 90.09	55.28	5.60	+-.553	28.4	+-2.80	# .710	+-.700E-01	176
		1.5921	@180.00	180.0	3.16	+-.316	16.0	+-1.60	@ .400	+-.400E-01	229
1.21	1.78	1.3057	#128.50	#94.00	4.61	+-.547	23.8	+-2.82	# .590	+-.700E-01	156
1.21+- 0.02	1.78	$ 1.5843	#165.50	#152.0							
		+- 0.0228	+- 6.45	+-12.02	# 5.74	+-.670	29.6	+-3.45	.735	+-.858E-01	230
1.22	1.78	1.2226	#120.20	#84.00	3.17	+-.464	16.6	+-2.43	# .410	+-.600E-01	156
		1.6144-	@170.00-	@160.56-							
		1.6268	180.00	180.0	5.43	+-.386	28.5	+-2.02	@ .703	+-.500E-01	242
1.23	1.79	0.0009	# 2.50	1.303	46.5	+-3.13	248.	+-16.7	# 6.09	+-.410	34
		0.0032	# 5.00	2.606	41.7	+-1.91	222.	+-10.2	# 5.45	+-.250	34
		0.0077	# 7.80	4.068	30.9	+-1.68	165.	+-8.96	# 4.04	+-.220	34
		0.0166	# 11.50	6.005	24.5	+-1.53	131.	+-8.14	# 3.21	+-.200	34
		1.4301	#137.70	#106.0	7.87	+-.688	41.9	+-3.66	# 1.03	+-.900E-01	156
		1.5701	#155.50	#134.0	8.33	+-.535	44.4	+-2.85	# 1.09	+-.700E-01	156
		1.6240	#167.30	#155.4	2.75	+-.611	14.7	+-3.26	# .360	+-.800E-01	156
1.23+- 0.02	1.79	$ 1.6189	#165.60	#152.0							
		+- 0.0230	+- 6.41	+-12.01	# 4.60	+-.590	24.5	+-3.14	.602	+-.772E-01	230
1.24	1.79	0.0049	# 6.19	3.218	36.0	+-1.89	195.	+-10.2	# 4.76	+-.250	176
		0.0085	# 8.17	4.249	28.4	+-1.29	154.	+-6.96	# 3.76	+-.170	176
		0.0137	# 10.40	5.413	28.2	+-1.06	153.	+-5.73	# 3.73	+-.140	176
		0.0194	# 12.37	6.444	26.3	+-1.82	143.	+-9.83	# 3.48	+-.240	176
		0.0260	# 14.36	7.488	29.0	+-1.74	157.	+-9.42	# 3.84	+-.230	176
		0.0337	# 16.36	8.540	28.8	+-1.29	156.	+-6.96	# 3.81	+-.170	176
		0.0520	# 20.36	10.66	30.2	+-1.74	163.	+-9.42	# 3.99	+-.230	176
		0.0802	# 25.37	13.33	34.6	+-2.04	188.	+-11.1	# 4.58	+-.270	176
		0.1141	# 30.38	16.05	30.3	+-2.50	164.	+-13.5	# 4.01	+-.330	176
		0.1537	# 35.41	18.82	30.3	+-2.57	164.	+-13.9	# 4.00	+-.340	176
		0.1986	# 40.45	21.65	28.6	+-.908	155.	+-4.91	# 3.78	+-.120	176
		0.2434	@ 45.00	24.26	26.5	+-2.57	143.	+-13.9	@ 3.50	+-.340	182
		0.3024	# 50.50	27.50	20.7	+-1.29	112.	+-6.96	# 2.74	+-.170	176
		0.4221	# 60.53	33.67	15.0	+-1.36	81.1	+-7.37	# 1.98	+-.180	176
		0.5545	# 70.57	40.27	8.09	+-.983	43.8	+-5.32	# 1.07	+-.130	176
		0.6950	# 80.59	47.39	4.92	+-.832	26.6	+-4.50	# .650	+-.110	176
		0.8395	# 90.60	55.16	4.24	+-.454	22.9	+-2.46	# .560	+-.600E-01	176
1.24+- 0.04	1.79	$ 1.4696	#140.60	#109.5							
		+- 0.0826	+- 8.91	+-12.98	# 7.68	+-.750	41.6	+-4.06	1.01	+-.991E-01	230
		$ 1.5626	#151.60	#127.5							
		+- 0.0617	+- 9.01	+-14.98	# 8.30	+-.630	44.9	+-3.41	1.10	+-.832E-01	230
1.25	1.80	1.3677	#129.00	#94.00	4.27	+-.524	23.5	+-2.88	# .570	+-.700E-01	156
		1.5451	#147.20	#120.0	5.46	+-.749	30.1	+-4.12	# .730	+-.100E 00	156
1.25+- 0.02	1.80	$ 1.6534	#165.70	#152.0							
		+- 0.0232	+- 6.37	+-12.01	# 4.05	+-.410	22.3	+-2.26	.541	+-.548E-01	230
1.25	1.80	1.6789	@180.00	180.0	3.14	+-.449	17.3	+-2.47	@ .420	+-.600E-01	229
1.26	1.80	0.7595	# 84.00	49.71	2.82	+-.445	15.7	+-2.48	# .380	+-.600E-01	156
		1.2825	#120.80	#84.00	2.82	+-.445	15.7	+-2.48	# .380	+-.600E-01	156
1.27	1.81	0.0052	# 6.25	3.222	32.1	+-1.76	182.	+-10.0	# 4.38	+-.240	176
		0.0089	# 8.25	4.255	24.1	+-1.17	137.	+-6.66	# 3.29	+-.160	176
		0.0144	# 10.50	5.419	24.1	+-1.03	137.	+-5.83	# 3.29	+-.140	176
		0.0204	# 12.49	6.452	24.3	+-1.61	138.	+-9.16	# 3.31	+-.220	176
		0.0273	# 14.49	7.492	25.4	+-1.61	144.	+-9.16	# 3.46	+-.220	176
		0.0354	# 16.52	8.552	24.7	+-1.17	140.	+-6.66	# 3.37	+-.160	176
		0.0546	# 20.55	10.67	30.4	+-1.76	173.	+-10.0	# 4.15	+-.240	176
		0.0843	# 25.61	13.35	34.0	+-1.91	193.	+-10.8	# 4.63	+-.260	176
		0.1199	# 30.66	16.07	28.6	+-2.42	162.	+-13.7	# 3.90	+-.330	176
		0.1614	# 35.73	18.84	32.7	+-2.64	186.	+-15.0	# 4.46	+-.360	176
		0.2084	# 40.81	21.68	26.9	+-.807	153.	+-4.58	# 3.67	+-.110	176
		0.3168	# 50.92	27.52	18.5	+-1.25	105.	+-7.08	# 2.52	+-.170	176
		0.4418	# 61.02	33.71	11.5	+-1.17	65.4	+-6.66	# 1.57	+-.160	176
		0.5792	# 71.09	40.31	7.99	+-1.03	45.4	+-5.83	# 1.09	+-.140	176
		0.7249	# 81.14	47.44	4.55	+-.880	25.8	+-5.00	# .620	+-.120	176
		0.8741	# 91.15	55.21	4.18	+-.440	23.7	+-2.50	# .570	+-.600E-01	176
1.28	1.81	0.2536	@ 45.00	24.00	23.2	+-1.60	134.	+-9.21	@ 3.20	+-.220	182

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
1.28	1.81	1.5119	#138.30	#106.0	5.52	+-.653	31.8	+-3.77	# .760	+-.900E-01	156
1.28+- 0.04	1.81	$ 1.5347	#141.00	#109.5							
		+- 0.0846	+- 8.84	+-12.99	# 6.70	+-.720	38.7	+-4.15	.922	+-.991E-01	230
		$ 1.6307	#152.00	#127.5							
		+- 0.0631	+- 8.92	+-14.99	# 6.86	+-.560	39.6	+-3.23	.944	+-.771E-01	230
		$ 1.7057	#165.80	#152.0							
		+- 0.0235	+- 6.32	+-12.01	# 3.51	+-.330	20.3	+-1.90	.483	+-.454E-01	230
1.29	1.82	1.6724	#155.90	#134.0	5.97	+-.503	35.0	+-2.95	# .830	+-.700E-01	156
		1.7486	@180.00	180.0	1.51	+-.431	8.84	+-2.53	@ .210	+-.600E-01	229
1.30	1.82	1.3418	#121.30	#84.00	2.63	+-.427	15.7	+-2.54	# .370	+-.600E-01	156
		1.4459	#129.60	#94.00	3.63	+-.569	21.6	+-3.39	# .510	+-.800E-01	156
		1.6294	#147.70	#120.0	5.98	+-.854	35.6	+-5.08	# .840	+-.120	156
1.32+- 0.04	1.83	$ 1.8348	#141.40	#109.5							
		+- 0.0865	+- 8.76	+-17.65	# 7.30	+-.760	44.8	+-4.66	1.05	+-.109	230
		$ 1.6588	#152.40	#127.5							
		+- 0.0643	+- 8.84	+-15.00	# 6.22	+-.530	38.2	+-3.25	.891	+-.759E-01	230
		$ 1.7748	#165.90	#152.0							
		+- 0.0240	+- 6.26	+-12.01	# 3.28	+-.280	20.1	+-1.72	.470	+-.401E-01	230
1.32	1.83	1.7874-	@170.00-	@160.02-							
		1.8010	180.00	180.0	3.31	+-.209	20.3	+-1.28	@ .474	+-.300E-01	242
1.33	1.84	1.5934	#138.80	#106.0	5.04	+-.760	31.4	+-4.73	# .730	+-.110	156
1.34	1.84	0.0314	# 15.00	7.616	20.1	+-.684	127.	+-4.33	# 2.93	+-.100E 00	24
		0.0554	# 20.00	10.18	24.5	+-.753	155.	+-4.76	# 3.58	+-.110	24
		0.0861	# 25.00	12.78	25.8	+-.616	163.	+-3.89	# 3.77	+-.900E-01	24
		0.1231	# 30.00	15.41	25.7	+-.821	162.	+-5.19	# 3.75	+-.120	24
		0.1661	# 35.00	18.09	24.3	+-.616	154.	+-3.89	# 3.55	+-.900E-01	24
		0.2148	# 40.00	20.82	23.1	+-.890	146.	+-5.63	# 3.37	+-.130	24
1.36+- 0.04	1.85	$ 1.6668	#141.80	#109.5							
		+- 0.0883	+- 8.69	+-12.99	# 5.74	+-.660	37.4	+-4.30	.854	+-.982E-01	230
1.36	1.85	1.7307	#148.20	#120.0	4.70	+-.940	30.6	+-6.12	# .700	+-.140	156
1.36+- 0.04	1.85	$ 1.7668	#152.60	#127.5							
		+- 0.0656	+- 8.75	+-14.99	# 5.75	+-.510	37.4	+-3.32	.855	+-.759E-01	230
		$ 1.8438	#166.10	#152.0							
		+- 0.0244	+- 6.19	+-11.99	# 2.85	+-.260	18.6	+-1.69	.424	+-.387E-01	230
1.37	1.86	0.0010	# 2.50	1.253	29.3	+-2.93	194.	+-19.3	# 4.41	+-.440	34
		0.0037	# 5.00	2.507	26.7	+-1.20	176.	+-7.92	# 4.01	+-.180	34
		0.0144	# 10.00	5.021	18.0	+-1.06	119.	+-7.04	# 2.71	+-.160	34
1.40+- 0.04	1.87	$ 1.7339	#142.20	#109.5							
		+- 0.0902	+- 8.62	+-13.00	# 6.16	+-.680	42.5	+-4.69	.951	+-.105	230
		$ 1.8349	#152.90	#127.5							
		+- 0.0668	+- 8.67	+-14.98	# 5.71	+-.510	39.4	+-3.52	.881	+-.787E-01	230
		$ 1.9129	#166.20	#152.0							
		+- 0.0248	+- 6.13	+-11.98	# 2.64	+-.250	18.2	+-1.73	.408	+-.386E-01	230
1.43	1.89	1.9792-	@170.00-	@159.45-							
		1.9944	180.00	180.0	1.97	+-.189	14.2	+-1.36	@ .313	+-.300E-01	242
1.44+- 0.04	1.89	$ 1.8009	#142.50	#109.5							
		+- 0.0919	+- 8.54	+-12.99	# 5.86	+-.670	42.8	+-4.89	.937	+-.107	230
		$ 1.9039	#153.20	#127.5							
		+- 0.0679	+- 8.59	+-14.99	# 5.62	+-.510	41.0	+-3.72	.899	+-.816E-01	230
		$ 1.9829	#166.30	#152.0							
		+- 0.0252	+- 6.07	+-11.99	# 2.06	+-.220	15.0	+-1.61	.330	+-.352E-01	230
1.48	1.91	0.0355	# 15.00	7.338	19.3	+-.724	149.	+-5.58	# 3.20	+-.120	24
		0.0629	# 20.00	9.817	18.9	+-.543	146.	+-4.19	# 3.13	+-.900E-01	24
		0.0976	# 25.00	12.32	20.0	+-1.03	155.	+-7.91	# 3.32	+-.170	24
		0.1396	# 30.00	14.87	17.3	+-.483	134.	+-3.72	# 2.87	+-.800E-01	24
		0.1884	# 35.00	17.45	16.3	+-.422	126.	+-3.26	# 2.70	+-.700E-01	24
		0.2437	# 40.00	20.09	14.7	+-.422	114.	+-3.26	# 2.44	+-.700E-01	24
1.48+- 0.04	1.91	$ 1.8750	#142.90	#110.5							
		+- 0.0914	+- 8.40	+-12.98	# 3.85	+-.320	29.7	+-2.47	.638	+-.530E-01	230
		$ 1.9730	#153.50	#127.5							
		+- 0.0691	+- 8.51	+-14.99	# 3.86	+-.250	29.8	+-1.93	.639	+-.414E-01	230
		$ 2.0530	#166.40	#152.0							
		+- 0.0256	+- 6.01	+-11.98	# 1.69	+-.140	13.0	+-1.08	.280	+-.232E-01	230
1.52	1.93	0.0011	# 2.50	1.206	37.0	+-2.51	301.	+-20.4	# 6.34	+-.430	34
		0.0042	# 5.00	2.413	28.1	+-1.69	228.	+-13.8	# 4.81	+-.290	34
		0.0093	# 7.50	3.621	23.9	+-1.23	194.	+-9.97	# 4.09	+-.210	34
		0.0164	# 10.00	4.832	17.2	+-.817	140.	+-6.65	# 2.94	+-.140	34
		0.0252	# 12.40	5.998	15.8	+-1.11	129.	+-9.02	# 2.71	+-.190	34
1.52+- 0.04	1.93	$ 1.9431	#144.20	#110.5							
		+- 0.0931	+- 8.34	+-13.00	# 3.92	+-.330	31.9	+-2.68	.671	+-.565E-01	230
		$ 2.0421	#153.80	#127.5							
		+- 0.0702	+- 8.44	+-14.99	# 3.55	+-.240	28.9	+-1.95	.608	+-.411E-01	230
		$ 2.1241	#166.60	#152.0							
		+- 0.0259	+- 5.95	+-11.99	# 1.14	+-.110	9.27	+-.895	.195	+-.188E-01	230
1.56+- 0.04	1.95	$ 2.0151	#144.20	#111.0							
		+- 0.0863	+- 7.60	+-12.00	# 3.84	+-.400	32.9	+-3.43	.679	+-.708E-01	230
		$ 2.1111	#154.00	#127.5							
		+- 0.0712	+- 8.36	+-14.97	# 2.84	+-.220	24.3	+-1.89	.502	+-.389E-01	230
		$ 2.1951	#166.70	#152.0							
		+- 0.0263	+- 5.89	+-11.99	# 1.32	+-.140	11.3	+-1.20	.234	+-.248E-01	230
1.56	1.95	2.2077-	@170.00-	@158.78-							
		2.2246	180.00	180.0	.599	+-.565E-01	5.13	+-.484	@ .106	+-.100E-01	242
1.60+- 0.04	1.97	$ 2.0822	#144.50	#111.0							
		+- 0.0877	+- 7.54	+-11.99	# 4.10	+-.420	37.0	+-3.79	.749	+-.767E-01	230
		$ 2.1812	#154.20	#127.5							
		+- 0.0722	+- 8.29	+-14.98	# 2.22	+-.260	20.0	+-2.34	.405	+-.475E-01	230
		$ 2.2662	#166.80	#152.0							
		+- 0.0266	+- 5.84	+-12.00	# 1.00	+-.120	9.01	+-1.08	.183	+-.219E-01	230

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
1.62	1.98	0.0398	# 15.00	7.093	18.3	+-.755	169.	+-6.97	# 3.40	+-.140	24
		0.0704	# 20.00	9.490	14.6	+-.485	135.	+-4.48	# 2.71	+-.900E-01	24
		0.1093	# 25.00	11.91	15.5	+-.755	143.	+-6.97	# 2.87	+-.140	24
		0.1562	# 30.00	14.38	13.1	+-.377	121.	+-3.49	# 2.43	+-.700E-01	24
		0.2109	# 35.00	16.88	10.9	+-.323	101.	+-2.99	# 2.03	+-.600E-01	24
		0.2728	# 40.00	19.44	8.68	+-.216	80.2	+-1.99	# 1.61	+-.400E-01	24
		0.3415	# 45.00	22.05	5.66	+-.593	52.3	+-5.48	# 1.05	+-.110	24
1.64+- 0.04	1.99	$ 2.1512	#144.80	#111.0							
		+- 0.0890	+- 7.48	+-11.99	# 2.44	+-.330	23.1	+-3.13	.459	+-.621E-01	230
		$ 2.2512	#154.40	#127.5							
		+- 0.0732	+- 8.22	+-14.99	# 2.33	+-.240	22.1	+-2.27	.439	+-.452E-01	230
		$ 2.3362	#167.00	#152.0							
		+- 0.0270	+- 5.79	+-11.99	# .960	+-.120	9.09	+-1.14	.181	+-.226E-01	230
1.65	1.99	2.3669-	@170.00-	@158.34-							
		2.3851	180.00	180.0	.317	+-.435E-01	3.04	+-.417	@ .602E-01	+-.825E-02	242
1.66	2.00	0.0012	# 2.50	1.166	33.5	+-2.61	325.	+-25.4	# 6.40	+-.500	34
		0.0046	# 5.00	2.333	27.2	+-1.20	264.	+-11.7	# 5.21	+-.230	34
		0.0103	# 7.50	3.502	22.4	+-1.15	217.	+-11.2	# 4.28	+-.220	34
		0.0183	# 10.00	4.674	17.8	+-.889	173.	+-8.63	# 3.41	+-.170	34
1.68+- 0.04	2.01	$ 2.2193	#145.10	#111.5							
		+- 0.0967	+- 8.01	+-12.93	# 2.39	+-.500	23.8	+-4.97	.464	+-.970E-01	230
		$ 2.3213	#154.70	#127.5							
		+- 0.0742	+- 8.15	+-14.99	# 1.57	+-.190	15.6	+-1.89	.305	+-.369E-01	230
		$ 2.4073	#167.10	#152.0							
		+- 0.0273	+- 5.73	+-11.98	# .680	+-.110	6.76	+-1.09	.132	+-.213E-01	230
1.72+- 0.04	2.03	$ 2.2884	#145.40	#111.5							
		+- 0.0981	+- 7.95	+-12.93	# 1.92	+-.230	20.0	+-2.40	.383	+-.459E-01	230
		$ 2.3914	#154.90	#127.5							
		+- 0.0751	+- 8.08	+-14.98	# 1.87	+-.220	19.5	+-2.29	.373	+-.439E-01	230
		$ 2.4794	#167.20	#152.0							
		+- 0.0276	+- 5.68	+-11.99	# .552	+-.680E-01	5.75	+-.708	.110	+-.136E-01	230
1.75	2.04	2.5446-	@170.00-	@157.86-							
		2.5641	180.00	180.0	.321	+-.404E-01	3.46	+-.436	@ .655E-01	+-.825E-02	242
1.76+- 0.04	2.05	$ 2.3584	#145.70	#111.5							
		+- 0.0994	+- 7.89	+-12.95	# 1.16	+-.180	12.7	+-1.96	.238	+-.370E-01	230
		$ 2.4614	#155.10	#127.5							
		+- 0.0760	+- 8.02	+-14.98	# 1.09	+-.100E 00	11.9	+-1.09	.224	+-.205E-01	230
		$ 2.5504	#167.30	#152.0							
		+- 0.0279	+- 5.63	+-11.98	# .449	+-.600E-01	4.90	+-.654	.922E-01	+-.123E-01	230
1.77	2.05	0.0443	# 15.00	6.856	15.9	+-.677	175.	+-7.46	# 3.28	+-.140	24
		0.0784	# 20.00	9.173	14.0	+-.387	155.	+-4.27	# 2.90	+-.800E-01	24
		0.1218	# 25.00	11.52	13.1	+-.338	145.	+-3.73	# 2.72	+-.700E-01	24
		0.1742	# 30.00	13.90	11.4	+-.290	126.	+-3.20	# 2.36	+-.600E-01	24
		0.2351	# 35.00	16.32	8.60	+-.290	94.9	+-3.20	# 1.78	+-.600E-01	24
		0.3042	# 40.00	18.80	6.72	+-.193	74.1	+-2.13	# 1.39	+-.400E-01	24
		0.3808	# 45.00	21.33	5.65	+-.290	62.4	+-3.20	# 1.17	+-.600E-01	24
1.80	2.06	0.0013	# 2.50	1.130	26.4	+-1.33	301.	+-15.1	# 5.58	+-.280	34
		0.0051	# 5.00	2.261	26.4	+-1.33	301.	+-15.1	# 5.58	+-.280	34
		0.0114	# 7.50	3.394	20.1	+-.900	230.	+-10.3	# 4.25	+-.190	34
		0.0202	# 10.00	4.530	17.1	+-.900	196.	+-10.3	# 3.62	+-.190	34
		0.0351	# 13.20	5.988	15.8	+-.758	180.	+-8.64	# 3.34	+-.160	34
1.80+- 0.04	2.06	$ 2.4305	#146.00	#111.5							
		+- 0.1007	+- 7.83	+-12.98	# 1.23	+-.180	14.0	+-2.05	.260	+-.380E-01	230
		$ 2.5315	#155.30	#127.5							
		+- 0.0769	+- 7.96	+-14.98	# 1.05	+-.100E 00	12.0	+-1.14	.222	+-.211E-01	230
1.80+- 0.08	2.06	$ 2.6215	#167.40	#152.0							
		+- 0.0281	+- 5.59	+-11.97	# .471	+-.620E-01	5.37	+-.707	.993E-01	+-.131E-01	230
1.84+- 0.04	2.08	$ 2.5005	#146.30	#111.5							
		+- 0.1019	+- 7.78	+-13.00	# .534	+-.190	6.37	+-2.27	.116	+-.412E-01	230
		$ 2.6015	#155.50	#127.5							
		+- 0.0778	+- 7.89	+-14.95	# .810	+-.110	9.66	+-1.31	.176	+-.238E-01	230
		$ 2.6925	#167.50	#152.0							
		+- 0.0285	+- 5.54	+-11.97	# .467	+-.780E-01	5.57	+-.930	.101	+-.169E-01	230
1.85	2.09	2.7230-	@170.00-	@157.38-							
		2.7439	180.00	180.0	.450	+-.378E-01	5.43	+-.455	@ .983E-01	+-.825E-02	242
1.90+- 0.08	2.11	$ 2.6051	#146.70	#111.5							
		+- 0.1037	+- 7.70	+-12.98	# .815	+-.990E-01	10.4	+-1.26	.183	+-.223E-01	230
		$ 2.7081	#155.90	#127.5							
		+- 0.0790	+- 7.81	+-14.95	# .610	+-.700E-01	7.75	+-.890	.137	+-.158E-01	230
		$ 2.8011	#167.70	#152.0							
		+- 0.0288	+- 5.47	+-11.97	# .273	+-.440E-01	3.47	+-.559	.615E-01	+-.991E-02	230
1.93	2.12	2.8663-	@170.00-	@157.01-							
		2.8882	180.00	180.0	.318	+-.359E-01	4.17	+-.471	@ .730E-01	+-.825E-02	242
1.97	2.14	@ 0.1370	24.84	10.97	@ 12.6	+-2.09	172.	+-28.6	2.97	+-.492	21
		@ 0.1770	28.30	12.55	@ 9.10	+-1.71	124.	+-23.4	2.14	+-.403	21
1.98	2.14	0.0508	# 15.00	6.560	12.6	+-.633	174.	+-8.74	# 2.98	+-.150	24
		0.0899	# 20.00	8.778	12.1	+-.295	167.	+-4.08	# 2.87	+-.700E-01	24
		0.1396	# 25.00	11.02	10.4	+-.253	144.	+-3.49	# 2.47	+-.600E-01	24
		0.1996	# 30.00	13.30	8.61	+-.211	119.	+-2.91	# 2.04	+-.500E-01	24
		0.2694	# 35.00	15.63	6.92	+-.253	95.5	+-3.49	# 1.64	+-.600E-01	24
		0.3485	# 40.00	18.00	5.02	+-.127	69.3	+-1.75	# 1.19	+-.300E-01	24
		0.4362	# 45.00	20.43	4.22	+-.127	58.2	+-1.75	# 1.00	+-.300E-01	24
1.98+- 0.08	2.14	$ 2.7453	#147.20	#111.5							
		+- 0.1061	+- 7.60	+-12.99	# .354	+-.650E-01	4.89	+-.897	.838E-01	+-.154E-01	230
		$ 2.8503	#156.30	#127.5							
		+- 0.0806	+- 7.69	+-14.94	# .420	+-.500E-01	5.80	+-.690	.994E-01	+-.118E-01	230
		$ 2.9453	#167.80	#152.0							
		+- 0.0294	+- 5.39	+-11.99	# .254	+-.430E-01	3.51	+-.594	.601E-01	+-.102E-01	230

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.99	2.15	0.0015	# 2.50	1.086	20.7 +-1.51	289. +-21.1	# 4.94 +-.360	34
		0.0057	# 5.00	2.174	20.0 +-.797	279. +-11.1	# 4.77 +-.190	34
		0.0228	# 10.00	4.354	15.1 +-.671	211. +-9.36	# 3.61 +-.160	34
		0.0433	# 13.80	6.015	13.8 +-.629	193. +-8.77	# 3.30 +-.150	34
2.04	2.17	3.0638-	@170.00-	@156.52-				
		3.0872	180.00	180.0	.286 +-.336E-01	4.19 +-.492	@ .703E-01+-.825E-02	242
2.06+- 0.08	2.18	$ 2.8854	#147.70	#111.5				
		+- 0.1083	+- 7.50	+-12.99	# .429 +-.880E-01	6.41 +-1.31	.106 +-.218E-01	230
		$ 2.9924	#156.70	#127.5				
		+- 0.0821	+- 7.58	+-14.93	# .270 +-.300E-01	4.03 +-.448	.670E-01+-.745E-02	230
		$ 3.0904	#168.00	#152.0				
		+- 0.0299	+- 5.30	+-11.99	# .266 +-.290E-01	3.97 +-.433	.660E-01+-.720E-02	230
2.14+- 0.08	2.21	$ 3.0350	#149.10	#112.5				
		+- 0.1242	+- 8.46	+-14.99	# .305 +-.430E-01	4.92 +-.693	.792E-01+-.112E-01	230
		$ 3.1355	#157.10	#127.5				
		+- 0.0835	+- 7.47	+-14.93	# .250 +-.300E-01	4.03 +-.484	.649E-01+-.779E-02	230
		$ 3.2345	#168.20	#152.0				
		+- 0.0303	+- 5.22	+-11.98	# .259 +-.290E-01	4.18 +-.468	.673E-01+-.753E-02	230
2.15	2.22	3.2619-	@170.00-	@156.63-				
		3.2869	180.00	180.0	.317 +-.315E-01	5.16 +-.513	@ .829E-01+-.825E-02	242
2.18	2.23	0.0016	# 2.50	1.047	19.6 +-1.09	327. +-18.3	# 5.20 +-.290	34
		0.0064	# 5.00	2.095	15.8 +-.865	264. +-14.5	# 4.20 +-.230	34
		0.0254	# 10.00	4.197	12.0 +-.602	200. +-10.1	# 3.18 +-.160	34
		0.0570	# 15.00	6.311	9.78 +-.489	164. +-8.18	# 2.60 +-.130	34
		0.0570	# 15.00	6.311	9.78 +-.639	164. +-10.7	# 2.60 +-.170	24
		0.1008	# 20.00	8.446	9.18 +-.226	154. +-3.78	# 2.44 +-.600E-01	24
		0.1566	# 25.00	10.61	8.84 +-.226	148. +-3.78	# 2.35 +-.600E-01	24
		0.2239	# 30.00	12.80	7.00 +-.263	117. +-4.41	# 1.86 +-.700E-01	24
		0.3022	# 35.00	15.04	5.34 +-.188	89.4 +-3.15	# 1.42 +-.500E-01	24
		0.3909	# 40.00	17.33	3.91 +-.113	65.5 +-1.89	# 1.04 +-.300E-01	24
		0.4894	# 45.00	19.67	2.59 +-.752E-01	43.4 +-1.26	# .690 +-.200E-01	24
		0.5968	# 50.00	22.08	1.43 +-.263	23.9 +-4.41	# .380 +-.700E-01	24
2.22+- 0.08	2.25	$ 3.1816	#145.80	#113.0				
		+- 0.0998	+- 6.65	+-12.00	# .356 +-.570E-01	6.18 +-.989	.966E-01+-.155E-01	230
		$ 3.2806	#157.40	#127.5				
		+- 0.0849	+- 7.37	+-14.96	# .260 +-.400E-01	4.51 +-.694	.705E-01+-.109E-01	230
		$ 3.3796	#168.40	#152.0				
		+- 0.0308	+- 5.15	+-11.99	# .275 +-.380E-01	4.77 +-.659	.746E-01+-.103E-01	230
2.24	2.25	3.4244-	@170.00-	@155.64-				
		3.4506	180.00	180.0	.356 +-.300E-01	6.29 +-.531	@ .977E-01+-.825E-02	242
2.30+- 0.08	2.28	$ 3.3227	#150.10	#113.0				
		+- 0.1015	+- 6.56	+-11.97	# .310 +-.540E-01	5.77 +-1.01	.877E-01+-.153E-01	230
		$ 3.4227	#157.70	#127.5				
		+- 0.0862	+- 7.27	+-14.93	# .312 +-.430E-01	5.81 +-.801	.883E-01+-.122E-01	230
		$ 3.5247	#168.60	#152.0				
		+- 0.0312	+- 5.67	+-11.97	# .244 +-.280E-01	4.55 +-.522	.690E-01+-.792E-02	230
2.38	2.31	0.0018	# 2.50	1.010	14.9 +-1.19	297. +-23.7	# 4.39 +-.350	34
		0.0071	# 5.00	2.021	10.7 +-.543	214. +-10.8	# 3.17 +-.160	34
		0.0282	# 10.00	4.049	8.44 +-.441	168. +-8.79	# 2.49 +-.130	34
		0.0632	# 15.00	6.089	7.73 +-.339	154. +-6.76	# 2.28 +-.100E 00	34
		0.0632	# 15.00	6.089	7.22 +-.780	144. +-15.6	# 2.13 +-.230	24
		0.1118	# 20.00	8.148	6.48 +-.203	129. +-4.06	# 1.91 +-.600E-01	24
		0.1736	# 25.00	10.23	5.80 +-.170	116. +-3.38	# 1.71 +-.500E-01	24
		0.2483	# 30.00	12.35	5.12 +-.170	102. +-3.38	# 1.51 +-.500E-01	24
		0.3351	# 35.00	14.51	3.53 +-.102	70.3 +-2.03	# 1.04 +-.300E-01	24
		0.4335	# 40.00	16.72	2.75 +-.102	54.8 +-2.03	# .810 +-.300E-01	24
		0.5428	# 45.00	18.99	1.97 +-.678E-01	39.2 +-1.35	# .580 +-.200E-01	24
		0.6619	# 50.00	21.32	1.39 +-.102	27.7 +-2.03	# .410 +-.300E-01	24
2.38+- 0.08	2.31	$ 3.4669	#150.40	#113.0				
		+- 0.1031	+- 6.48	+-11.99	# .232 +-.490E-01	4.63 +-.977	.683E-01+-.144E-01	230
		$ 3.5679	#158.00	#127.5				
		+- 0.0874	+- 7.18	+-14.96	# .277 +-.270E-01	5.53 +-.539	.816E-01+-.795E-02	230
		$ 3.6699	#168.80	#152.0				
		+- 0.0316	+- 5.01	+-11.99	# .262 +-.270E-01	5.23 +-.539	.772E-01+-.795E-02	230
2.41	2.32	3.7322-	@170.00-	@154.92-				
		3.7608	180.00	180.0	.307 +-.276E-01	6.28 +-.564	@ .919E-01+-.825E-02	242
2.46+- 0.08	2.34	$ 3.6540	#151.00	#113.5				
		+- 0.1033	+- 6.38	+-12.55	# .232 +-.330E-01	4.94 +-.703	.710E-01+-.101E-01	230
		$ 3.7120	#158.20	#127.5				
		+- 0.0886	+- 7.09	+-14.95	# .279 +-.280E-01	5.95 +-.597	.854E-01+-.857E-02	230
		$ 3.8150	#168.90	#152.0				
		+- 0.0320	+- 4.94	+-11.97	# .231 +-.260E-01	4.92 +-.554	.707E-01+-.796E-02	230
2.51	2.36	@ 0.1260	20.59	8.211	@ 5.78 +-1.04	128. +-23.1	1.81 +-.326	21
		@ 0.1710	24.04	9.616	@ 4.14 +-.900	91.8 +-20.0	1.30 +-.282	21
		@ 0.2220	27.45	11.02	@ 2.99 +-.960	66.3 +-21.3	.938 +-.301	21
		@ 0.2750	30.62	12.35	@ 3.85 +-1.32	85.4 +-29.3	1.21 +-.414	21
		@ 0.3230	33.26	13.46	@ 3.68 +-1.04	81.6 +-23.1	1.15 +-.326	21
2.53	2.37	3.9501-	@170.00-	@154.42-				
		3.9803	180.00	180.0	.276 +-.260E-01	6.21 +-.587	@ .873E-01+-.825E-02	242
2.54+- 0.08	2.38	$ 3.7571	#151.40	#113.5				
		+- 0.1048	+- 6.30	+-11.99	# .260 +-.370E-01	5.91 +-.841	.827E-01+-.118E-01	230
		$ 3.8571	#158.50	#127.5				
		+- 0.0897	+- 7.00	+-14.95	# .258 +-.350E-01	5.86 +-.795	.820E-01+-.111E-01	230
		$ 3.9611	#169.10	#152.0				
		+- 0.0323	+- 4.87	+-11.96	# .191 +-.230E-01	4.34 +-.523	.607E-01+-.731E-02	230
2.60	2.40	0.0020	# 2.50	.9736	13.4 +-.765	319. +-18.2	# 4.38 +-.250	34
		0.0078	# 5.00	1.948	9.05 +-.306	216. +-7.28	# 2.96 +-.100E 00	34
		0.0312	# 10.00	3.902	7.16 +-.367	170. +-8.74	# 2.34 +-.120	34

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
2.60	2.40	0.0700	# 15.00	5.869	6.85 +-.275	163. +-6.55	# 2.24 +-.900E-01	34
2.62+- 0.08	2.41	$ 3.9002	#151.80	#113.5				
		+- 0.0973	+- 5.71	+-10.98	# .235 +-.470E-01	5.68 +-1.14	.774E-01+-.155E-01	230
		$ 4.0022	#158.80	#127.5				
		+- 0.0908	+- 6.92	+-14.96	# .321 +-.400E-01	7.76 +-.967	.106 +-.132E-01	230
		$ 4.1082	#169.30	#152.0				
		+- 0.0327	+- 4.81	+-11.98	# .186 +-.230E-01	4.50 +-.556	.613E-01+-.758E-02	230
2.63	2.41	0.0710	# 15.00	5.841	6.46 +-.272	157. +-6.62	# 2.14 +-.900E-01	24
		0.1256	# 20.00	7.817	4.95 +-.181	121. +-4.41	# 1.64 +-.600E-01	24
		0.1951	# 25.00	9.819	4.17 +-.121	101. +-2.94	# 1.38 +-.400E-01	24
		0.2789	# 30.00	11.85	3.59 +-.121	87.5 +-2.94	# 1.19 +-.400E-01	24
		0.3765	# 35.00	13.93	2.51 +-.905E-01	61.0 +-2.21	# .830 +-.300E-01	24
		0.4871	# 40.00	16.05	2.02 +-.905E-01	49.3 +-2.21	# .670 +-.300E-01	24
		0.6098	# 45.00	18.23	1.27 +-.604E-01	30.9 +-1.47	# .420 +-.200E-01	24
		0.7437	# 50.00	20.47	.996 +-.604E-01	24.3 +-1.47	# .330 +-.200E-01	24
2.66	2.42	4.1866-	a170.00-	a153.90-				
		4.2187	180.00	180.0	.163 +-.246E-01	4.07 +-.612	a .548E-01+-.825E-02	242
2.67	2.43	a 0.0001	0.52	.1988				
		+- 0.0000	+- 0.09	+-.3467E-01	a 14.5 +-2.10	364. +-52.7	4.89 +-.708	46
		a 0.0004	1.66	.4101				
		+- 0.0001	+- 0.16	+-.6164E-01	a 13.6 +-2.10	341. +-52.7	4.59 +-.708	46
		a 0.0020	2.47	.9531				
		+- 0.0004	+- 0.26	+-.9892E-01	a 13.0 +-1.50	326. +-37.7	4.38 +-.506	46
2.70+- 0.08	2.44	$ 4.0453	#152.20	#113.5				
		+- 0.0985	+- 5.65	+-11.00	# .129 +-.360E-01	3.31 +-.924	.440E-01+-.123E-01	230
		$ 4.1483	#159.10	#127.5				
		+- 0.0918	+- 6.84	+-14.98	# .269 +-.360E-01	6.91 +-.924	.918E-01+-.123E-01	230
		$ 4.2563	#169.50	#152.0				
		+- 0.0330	+- 4.75	+-12.01	# .136 +-.270E-01	3.49 +-.693	.464E-01+-.921E-02	230
2.71	2.44	4.2777-	a170.00-	a153.70-				
		4.3105	180.00	180.0	.133 +-.160E-01	3.44 +-.415	a .456E-01+-.550E-02	242
2.78+- 0.08	2.47	$ 4.1855	#152.50	#113.5				
		+- 0.0997	+- 5.59	+-11.00	# .171 +-.430E-01	4.65 +-1.17	.604E-01+-.152E-01	230
		$ 4.2955	#159.40	#127.5				
		+- 0.0928	+- 6.76	+-15.01	# .179 +-.300E-01	4.87 +-.816	.632E-01+-.106E-01	230
		$ 4.4025	#169.70	#152.0				
		+- 0.0333	+- 4.70	+-12.02	# .110 +-.260E-01	2.99 +-.708	.388E-01+-.918E-02	230
2.80	2.48	$ 3.9270	139.00	89.90	a .860E-01+-.128E-01	2.37 +-.353	.306E-01+-.456E-02	63
		$ 4.1520	148.79	106.2	a .140 +-.242E-01	3.86 +-.668	.499E-01+-.862E-02	63
		$ 4.2670	155.05	118.4	a .198 +-.166E-01	5.47 +-.458	.705E-01+-.591E-02	63
		$ 4.3670	162.06	133.8	a .228 +-.204E-01	6.29 +-.563	.812E-01+-.727E-02	63
		$ 4.4220	167.40	146.8	a .192 +-.172E-01	5.30 +-.475	.684E-01+-.613E-02	63
2.82+- 0.16	2.48	$ 4.3645	#159.70	#127.5				
		+- 0.0932	+- 6.73	+-14.90	# .112 +-.340E-01	3.14 +-.952	.401E-01+-.122E-01	230
2.86	2.50	0.0087	# 5.00	1.871	8.11 +-.329	234. +-9.47	# 2.96 +-.120	34
		0.0349	# 10.00	3.748	6.00 +-.247	173. +-7.10	# 2.19 +-.900E-01	34
		0.0782	# 15.00	5.638	5.95 +-.301	171. +-8.68	# 2.17 +-.110	34
2.86+- 0.08	2.50	$ 4.3336	#152.90	#113.5				
		+- 0.1008	+- 5.53	+-11.00	# .134 +-.380E-01	3.86 +-1.09	.489E-01+-.139E-01	230
		$ 4.4426	#159.70	#127.5				
		+- 0.0937	+- 6.68	+-15.02	# .156 +-.280E-01	4.49 +-.806	.569E-01+-.102E-01	230
		$ 4.5496	#169.90	#152.0				
		+- 0.0336	+- 4.64	+-12.01	# .680E-01+-.200E-01	1.96 +-.576	.248E-01+-.729E-02	230
2.88	2.51	0.1394	# 20.00	7.523	3.97 +-.163	116. +-4.76	# 1.46 +-.600E-01	24
		0.2166	# 25.00	9.451	3.10 +-.136	90.5 +-3.97	# 1.14 +-.500E-01	24
		0.3097	# 30.00	11.41	2.91 +-.217	84.9 +-6.35	# 1.07 +-.800E-01	24
		0.4180	# 35.00	13.41	2.17 +-.109	63.5 +-3.18	# .800 +-.400E-01	24
		0.5408	# 40.00	15.45	1.44 +-.815E-01	42.1 +-2.38	# .530 +-.300E-01	24
		0.6770	# 45.00	17.55	1.01 +-.544E-01	29.4 +-1.59	# .370 +-.200E-01	24
		0.8257	# 50.00	19.72	.707 +-.272E-01	20.6 +-.794	# .260 +-.100E-01	24
2.98+- 0.16	2.54	$ 4.6588	#160.10	#127.5				
		+- 0.0950	+- 6.58	+-14.95	# .110 +-.330E-01	3.44 +-1.03	.420E-01+-.126E-01	230
3.03	2.56	4.8621-	a170.00-	a152.47-				
		4.8993	180.00	180.0	.870E-01+-.141E-01	2.81 +-.456	a .339E-01+-.550E-02	242
3.14+- 0.16	2.60	$ 4.9530	#160.60	#127.5				
		+- 0.0966	+- 6.44	+-14.97	# .500E-01+-.260E-01	1.74 +-.903	.202E-01+-.105E-01	230
3.16	2.61	0.7526	# 45.00	16.88	.611 +-.734E-01	21.5 +-2.58	# .250 +-.300E-01	24
		0.9179	# 50.00	18.96	.538 +-.734E-01	18.9 +-2.58	# .220 +-.300E-01	24
3.17	2.61	0.7553	a 45.00	16.86	.529 +-.609E-01	18.7 +-2.16	a .217 +-.250E-01	44
3.25	2.64	a 0.1240	17.59	6.269	a 1.39 +-.520	51.7 +-19.3	.587 +-.220	21
		a 0.1740	20.87	7.459	a 2.93 +-.700	109. +-26.0	1.24 +-.296	21
		a 0.2470	24.92	8.945	a 1.97 +-.550	73.3 +-20.5	.832 +-.232	21
		a 0.3500	29.77	10.75	a 1.43 +-.450	53.2 +-16.7	.604 +-.190	21
		a 0.4500	33.86	12.30	a 1.30 +-.600	48.4 +-22.3	.549 +-.253	21
3.27	2.65	5.3017-	a170.00-	a151.59-				
		5.3422	180.00	180.0	.548E-01+-.706E-02	2.06 +-.266	a .233E-01+-.300E-02	242
3.28	2.65	0.4848	# 35.00	12.68	2.04 +-.117	77.3 +-4.44	# .870 +-.500E-01	16
3.29	2.66	0.7878	# 45.00	16.59	.584 +-.467E-01	22.3 +-1.78	# .250 +-.200E-01	24
		0.9608	# 50.00	18.64	.397 +-.234E-01	15.1 +-.890	# .170 +-.100E-01	24
3.30	2.66	0.7905	a 45.00	16.57	.768 +-.861E-01	29.5 +-3.30	a .330 +-.370E-01	44
3.30+- 0.16	2.66	$ 5.2452	#161.10	#127.5				
		+- 0.0982	+- 6.31	+-14.96	# .390E-01+-.200E-01	1.50 +-.767	.167E-01+-.857E-02	230
3.40	2.69	# 0.0030	2.65	.9198				
		+- 0.0010	+- 0.44	+-.1542	# 6.91 +-.430	281. +-17.5	3.07 +-.191	66
		# 0.0060	3.75	1.303				
		+- 0.0015	+- 0.47	+-.1635	# 5.23 +-.390	213. +-15.9	2.32 +-.173	66
		# 0.0120	5.31	1.845	# 5.03 +-.330	205. +-13.4	2.23 +-.147	66
		# 0.0220	7.20	2.501	# 4.21 +-.220	171. +-8.96	1.87 +-.977E-01	66

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
3.40	2.69	# 0.0480	10.64	3.703	# 3.92 +-.210	160. +-8.55	1.74 +-.933E-01	66
		# 0.0900	14.59	#5.100	# 3.82 +-.460	155. +-18.7	1.70 +-.204	39
		# 0.0960	15.07	5.258	# 3.41 +-.190	139. +-7.73	1.51 +-.844E-01	66
		# 0.1900	21.26	7.455	# 2.63 +-.140	107. +-5.70	1.17 +-.622E-01	66
		# 0.3300	28.14	#9.900	# 1.94 +-.160	79.0 +-6.51	.862 +-.711E-01	39
		@ 0.3740	@ 30.00	10.63	@ 2.17 +-.690	88.3 +-28.1	.964 +-.307	44
		# 0.3900	30.65	10.87	# 1.40 +-.700E-01	57.0 +-2.85	.622 +-.311E-01	66
		@ 0.6530	@ 40.00	14.40	@ .799 +-.880E-01	32.5 +-3.58	.355 +-.391E-01	44
		@ 0.8176	@ 45.00	16.36	@ .457 +-.890E-01	18.6 +-3.62	.203 +-.395E-01	44
		0.8176	@ 45.00	16.36	.450 +-.743E-01	18.3 +-3.02	@ .200 +-.330E-01	44
		@ 0.9971	@ 50.00	18.38	@ .235 +-.440E-01	9.57 +-1.79	.104 +-.195E-01	44
		@ 1.3956	@ 60.00	22.65	@ .123 +-.310E-01	5.01 +-1.26	.546E-01+-.138E-01	44
3.46	2.72	0.5148	# 35.00	12.40	1.63 +-.110	68.9 +-4.65	# .740 +-.500E-01	16
3.53	2.74	0.8528	@ 45.00	16.10	.388 +-.712E-01	17.0 +-3.12	@ .180 +-.330E-01	44
3.55	2.75	5.8156-	@170.00-	@150.60-				
		5.8601	180.00	180.0	.354E-01+-.536E-02	1.57 +-.238	@ .165E-01+-.250E-02	242
3.58	2.76	0.5349	# 35.00	12.21	1.13 +-.106	50.8 +-4.79	# .530 +-.500E-01	16
3.70	2.80	0.5550	# 35.00	12.04	1.06 +-.102	51.3 +-4.93	# .520 +-.500E-01	16
3.78	2.82	0.9206	# 45.00	15.62	.500 +-.600E-01	25.1 +-3.02	# .250 +-.300E-01	16
3.81	2.83	6.2937-	@170.00-	@149.72-				
		6.3419	180.00	180.0	.275E-01+-.594E-02	1.41 +-.304	@ .139E-01+-.300E-02	242
3.82	2.84	0.5751	# 35.00	11.87	1.01 +-.790E-01	51.8 +-4.06	# .510 +-.400F-01	16
3.94	2.88	0.5953	# 35.00	11.71	.611 +-.764E-01	33.4 +-4.17	# .320 +-.400E-01	16
4.00	2.90	@ 0.0020	1.97	.6380	@ 6.30 +-.700	355. +-39.4	3.36 +-.373	46
4.17	2.95	@ 0.0900	13.01	4.143	@ 1.02 +-.510	62.5 +-31.2	.569 +-.285	21
		@ 0.1270	15.47	4.934	@ 1.50 +-.460	91.8 +-28.2	.837 +-.257	21
		@ 0.1750	18.18	5.811	@ 1.15 +-.360	70.4 +-22.0	.642 +-.201	21
		@ 0.2510	21.81	6.995	@ .890 +-.310	54.5 +-19.0	.496 +-.173	21
		@ 0.3510	25.86	8.329	@ .810 +-.250	49.6 +-15.3	.452 +-.139	21
		@ 0.4510	29.39	9.508	@ .690 +-.250	42.2 +-15.3	.385 +-.139	21
		@ 0.5510	32.56	10.58	@ .390 +-.200	23.9 +-12.2	.218 +-.112	21
4.22	2.97	7.0490-	@170.00-	@148.38-				
		7.1030	180.00	180.0	.290E-01+-.663E-02	1.82 +-.416	@ .164E-01+-.375E-02	242
4.30	2.99	$ 6.6168	145.58	89.93	@ .129E-01+-.170E-02	0.840 +-.111	.744E-02+-.981E-03	63
4.10 - 4.50	2.99	$ 6.7723	150.72	99.60	@ .242E-01+-.240E-02	1.57 +-.155	.139E-01+-.138E-02	105
4.30	2.99	$ 6.8638	153.25	104.8	@ .244E-01+-.430E-02	1.59 +-.280	.141E-01+-.248E-02	63
		$ 6.9268	155.56	109.8	@ .373E-01+-.380E-02	2.43 +-.247	.215E-01+-.219E-02	63
		$ 6.9768	157.55	114.4	@ .335E-01+-.330E-02	2.18 +-.215	.193E-01+-.190E-02	63
		$ 6.9768	157.55	114.4	@ .335E-01+-.300E-02	2.18 +-.195	.193E-01+-.173E-02	63
4.10 - 4.50	2.99	$ 7.0003	159.27	118.6	@ .322E-01+-.410E-02	2.08 +-.265	.185E-01+-.236E-02	105
		$ 7.0803	163.22	128.7	@ .394E-01+-.410E-02	2.55 +-.265	.227E-01+-.236E-02	105
4.30	2.99	$ 7.1018	163.47	129.4	@ .445E-01+-.590E-02	2.90 +-.384	.257E-01+-.340E-02	63
		$ 7.1588	167.00	139.2	@ .322E-01+-.490E-02	2.10 +-.319	.186E-01+-.283E-02	63
		$ 7.1968	170.02	148.2	@ .335E-01+-.980E-02	2.18 +-.638	.193E-01+-.566E-02	63
		$ 7.2168	172.04	154.4	@ .377E-01+-.540E-02	2.45 +-.352	.218E-01+-.312E-02	63
4.73	3.12	7.9904-	@170.00-	@146.81-				
		8.0515	180.00	180.0	.236E-01+-.468E-02	1.86 +-.369	@ .151E-01+-.300E-02	242
4.87	3.17	@ 0.0001	0.42	.1237				
		+- 0.0001	+- 0.11	+-.3352E-01	@ 4.50 +-.700	376. +-58.5	2.98 +-.463	46
		@ 0.0003	0.70	.2072				
		+- 0.0001	+- 0.11	+-.3168E-01	@ 4.10 +-.700	342. +-58.5	2.71 +-.463	46
		@ 0.0020	1.77	.5246				
		+- 0.0005	+- 0.20	+-.6062E-01	@ 3.65 +-.500	305. +-41.8	2.41 +-.331	46
5.00	3.20	P# 0.0000-	0.0 -	0.0 -				
		0.0007	1.03	.3006	P# 3.20 +-.270	282. +-23.8	P 2.18 +-.184	210
		# 0.0002	0.48	.1402				
		+- 0.0001	+- 0.24	+-.7012E-01	# 3.73 +-.460	328. +-40.5	2.54 +-.313	51
		P# 0.0038	2.41	P#.7000	P# 2.44 +-.130	215. +-11.4	P 1.66 +-.885E-01	210
		# 0.0038	2.41	#.7200	# 2.96 +-.150	261. +-13.2	2.01 +-.102	51
		# 0.0076	3.41	#1.020	# 2.37 +-.100E 00	209. +-8.80	1.61 +-.681E-01	51
		# 0.0090	3.72	1.086	# 2.51 +-.170	221. +-15.0	1.71 +-.116	66
		P# 0.0100	3.92	P#1.140	P# 2.05 +-.120	180. +-10.6	P 1.40 +-.817E-01	210
		# 0.0140	4.64	1.355	# 2.01 +-.110	177. +-9.68	1.37 +-.749E-01	66
		# 0.0191	5.42	#1.620	# 1.87 +-.900E-01	165. +-7.92	1.27 +-.613E-01	51
		P# 0.0200	5.54	P#1.620	P# 1.85 +-.100E 00	163. +-8.80	P 1.26 +-.681E-01	210
		# 0.0382	7.66	#2.290	# 1.76 +-.800E-01	155. +-7.04	1.20 +-.545E-01	51
		P# 0.0401	7.85	P#2.290	P# 1.68 +-.900E-01	148. +-7.92	P 1.14 +-.613E-01	210
		# 0.0550	9.20	2.693	# 1.58 +-.110	139. +-9.68	1.08 +-.749E-01	66
		# 0.0768	10.87	#3.250	# 1.61 +-.800E-01	142. +-7.04	1.10 +-.545E-01	51
		P# 0.0799	11.09	P#3.250	P# 1.50 +-.900E-01	132. +-7.92	P 1.02 +-.613E-01	210
		# 0.1000	12.41	3.641	# 1.45 +-.800E-01	128. +-7.04	.987 +-.545E-01	66
		P# 0.1601	15.73	P#4.620	P# 1.24 +-.700E-01	109. +-6.16	P .844 +-.477E-01	210
		# 0.1640	15.92	#4.770	# 1.25 +-.600E-01	110. +-5.28	.851 +-.408E-01	51
		# 0.1900	17.14	#5.100	# 1.30 +-.120	114. +-10.6	.885 +-.817E-01	39
		# 0.2000	17.59	5.178	# 1.12 +-.700E-01	98.6 +-6.16	.762 +-.477E-01	66
		# 0.3000	21.59	6.378	# .860 +-.500E-01	75.7 +-4.40	.585 +-.340E-01	66
		# 0.3070	21.84	#6.590	# .850 +-.400E-01	74.8 +-3.52	.579 +-.272E-01	51
		# 0.3700	24.01	#7.100	# .890 +-.900E-01	78.3 +-7.92	.606 +-.613E-01	39
		# 0.4420	26.28	#7.970	# .590 +-.300E-01	51.9 +-2.64	.402 +-.204E-01	51
		# 0.5970	30.64	#9.340	# .375 +-.270E-01	33.0 +-2.38	.255 +-.184E-01	51
		# 0.6000	30.71	9.177	# .444 +-.350E-01	39.1 +-3.08	.302 +-.238E-01	66
		# 0.6900	33.00	#9.900	# .430 +-.500E-01	37.9 +-4.40	.293 +-.340E-01	39
		# 0.7690	34.89	#10.72	# .226 +-.160E-01	19.9 +-1.41	.154 +-.109E-01	51
		# 0.9640	39.23	#12.14	# .172 +-.160E-01	15.1 +-1.41	.117 +-.109E-01	51
		# 1.1510	43.04	#13.42	# .106 +-.100E-01	9.33 +-.880	.722E-01+-.681E-02	51
		# 1.4500	48.62	#15.10	# .600E-01+-.140E-01	5.28 +-1.23	.408E-01+-.953E-02	39
		$ 6.8003	126.15	59.57	@ .420E-02+-.600E-03	0.370 +-.528E-01	.286E-02+-.408E-03	105
		$ 7.0633	130.65	64.59	@ .480E-02+-.600E-03	0.423 +-.528E-01	.327E-02+-.408E-03	105

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
5.00	3.20	$ 7.2803	134.60	69.49	@ .500E-02+-.500E-03	0.440	+-.440E-01	.340E-02+-.340E-03		105
		$ 7.4803	138.49	74.83	@ .630E-02+-.100E-02	0.555	+-.880E-01	.429E-02+-.681E-03		105
		$ 7.6303	141.62	79.53	@ .740E-02+-.600E-03	0.651	+-.528E-01	.504E-02+-.408E-03		105
		$ 7.7803	144.99	85.05	@ .850E-02+-.900E-03	0.748	+-.792E-01	.579E-02+-.613E-03		105
		$ 7.8303	146.17	87.12	@ .930E-02+-.100E-02	0.819	+-.880E-01	.633E-02+-.681E-03		105
		$ 7.8953	147.77	90.02	@ .105E-01+-.120E-02	0.924	+-.106	.715E-02+-.817E-03		105
		$ 7.9473	149.10	92.53	@ .112E-01+-.130E-02	0.986	+-.114	.762E-02+-.885E-03		105
		$ 7.9803	149.97	94.23	@ .117E-01+-.900E-03	1.03	+-.792E-01	.796E-02+-.613E-03		105
		$ 8.0803	152.77	99.96	@ .142E-01+-.100E-02	1.25	+-.880E-01	.967E-02+-.681E-03		105
		$ 8.1573	155.12	105.1	@ .198E-01+-.170E-02	1.74	+-.150	.135E-01+-.116E-02		105
		$ 8.2233	157.31	110.2	@ .166E-01+-.160E-02	1.46	+-.141	.113E-01+-.109E-02		105
		$ 8.2773	159.27	115.1	@ .196E-01+-.140E-02	1.73	+-.123	.133E-01+-.953E-03		105
		$ 8.3303	161.37	120.6	@ .203E-01+-.190E-02	1.79	+-.167	.138E-01+-.129E-02		105
		$ 8.3703	163.13	125.4	@ .254E-01+-.200E-02	2.24	+-.176	.173E-01+-.136E-02		105
		$ 8.4413	166.80	136.0	@ .275E-01+-.220E-02	2.42	+-.194	.187E-01+-.150E-02		105
		$ 8.4723	168.76	142.1	@ .230E-01+-.380E-02	2.02	+-.335	.157E-01+-.259E-02		105
		$ 8.5083	171.59	151.2	@ .229E-01+-.210E-02	2.02	+-.185	.156E-01+-.143E-02		105
		$ 8.5303	173.92	159.0	@ .206E-01+-.180E-02	1.81	+-.158	.140E-01+-.123E-02		105
5.04	3.22	8.5633- 8.6289	@170.00- 180.00	@145.90- 180.0	.213E-01+-.655E-02	1.90	+-.586	@ .146E-01+-.450E-02		242
5.66	3.39	9.7105- 9.7849	@170.00- 180.00	@144.16- 180.0	.250E-01+-.514E-02	2.83	+-.579	@ .195E-01+-.400E-02		242
6.00	3.48	@ 0.0020	1.58	.4261	@ 2.35 +-.250	298.	+-31.7	1.95	+-.207	46
		# 0.0960	11.02	2.970	# 1.00 +-.600E-01	127.	+-7.61	.829	+-.497E-01	66
		# 0.2000	15.93	4.307	# .710 +-.500E-01	90.0	+-6.34	.589	+-.415E-01	66
		# 0.3800	22.02	5.987	# .537 +-.300E-01	68.1	+-3.80	.445	+-.249E-01	66
6.41	3.59	11.1001- 11.1851	@170.00- 180.00	@142.20- 180.0	.937E-02+-.753E-02	1.36	+-1.09	@ .834E-02+-.670E-02		242
6.70	3.67	$11.3704	159.92	109.7	@ .910E-02+-.800E-03	1.44	+-.126	.849E-02+-.747E-03		63
		$11.4854	163.50	120.0	@ .870E-02+-.160E-02	1.38	+-.253	.812E-02+-.149E-02		63
		$11.6704	172.04	148.9	@ .800E-02+-.170E-02	1.26	+-.269	.747E-02+-.159E-02		63
		$11.6824	172.94	152.3	@ .127E-01+-.390E-02	2.01	+-.616	.119E-01+-.364E-02		63
7.22	3.80	12.6024- 12.6988	@170.00- 180.00	@140.22- 180.0	.660E-02+-.643E-02	1.21	+-1.18	@ .667E-02+-.650E-02		242
8.00	3.99	P# 0.0 - 0.0004	0.0 - 0.64	0.0 - .1505	P# 1.29 +-.100E 00	291.	+-22.5	P 1.45	+-.113	210
		# 0.0005	0.68	.1601						
		+- 0.0005	+- 0.34	+-.8004E-01	# 1.46 +-.180	329.	+-40.6	1.64	+-.203	51
		P# 0.0 - 0.0018	0.0 - 1.30	0.0 - .3056	P# 1.23 +-.700E-01	277.	+-15.8	P 1.39	+-.789E-01	210
		P# 0.0017	1.27	P#.2500	P# 1.30 +-.140	293.	+-31.6	P 1.46	+-.158	210
		# 0.0019	1.32	#.2500						
		+- 0.0007	+- 0.25	+-.5761E-01	# 1.35 +-.150	304.	+-33.8	1.52	+-.169	51
		P# 0.0026	1.54	P#.2500	P# .940 +-.600E-01	212.	+-13.5	P. 1.06	+-.676E-01	210
		# 0.0035	1.80	#.2500						
		+- 0.0010	+- 0.26	+-.6059E-01	# 1.08 +-.100E 00	243.	+-22.5	1.22	+-.113	51
		P# 0.0035	1.81	P#.2500	P# .920 +-.700E-01	207.	+-15.8	P 1.04	+-.789E-01	210
		P# 0.0047	2.08	P#.2500	P# 1.04 +-.700E-01	234.	+-15.8	P 1.17	+-.789E-01	210
		# 0.0057	2.30	#.2500						
		+- 0.0012	+- 0.24	+-.5656E-01	# .980 +-.110	221.	+-24.8	1.10	+-.124	51
		# 0.0094	2.95	#.7000	# .830 +-.400E-01	187.	+-9.01	.935	+-.451E-01	51
		P# 0.0101	3.06	P#.7200	P# .770 +-.400E-01	174.	+-9.01	P .868	+-.451E-01	210
		# 0.0190	4.20	#1.000	# .680 +-.300E-01	153.	+-6.76	.766	+-.338E-01	51
		P# 0.0198	4.29	P#1.010	P# .667 +-.360E-01	150.	+-8.11	P .751	+-.406E-01	210
		# 0.0390	6.02	#1.420	# .582 +-.280E-01	131.	+-6.31	.656	+-.315E-01	51
		P# 0.0400	6.09	P#1.430	P# .626 +-.330E-01	141.	+-7.44	P .705	+-.372E-01	210
		# 0.0790	8.57	#2.040	# .548 +-.250E-01	123.	+-5.63	.617	+-.282E-01	51
		P# 0.0804	8.64	P#2.030	P# .554 +-.310E-01	125.	+-6.99	P .624	+-.349E-01	210
		# 0.1660	12.43	#2.960	# .463 +-.220E-01	104.	+-4.96	.522	+-.248E-01	51
		P# 0.2560	15.46	P#3.650	P# .373 +-.210E-01	84.1	+-4.73	P .420	+-.237E-01	210
		# 0.3120	17.07	#4.080	# .350 +-.150E-01	78.9	+-3.38	.394	+-.169E-01	51
		# 0.4450	20.42	#4.900	# .248 +-.110E-01	55.9	+-2.48	.279	+-.124E-01	51
		# 0.6010	23.78	#5.720	# .185 +-.900E-02	41.7	+-2.03	.208	+-.101E-01	51
		# 0.7760	27.08	#6.550	# .118 +-.600E-02	26.6	+-1.35	.133	+-.676E-02	51
		P# 0.8010	27.52	P#6.580	P# .106 +-.700E-02	23.9	+-1.58	P .119	+-.789E-02	210
		# 0.9720	30.38	#7.380	# .700E-01+-.400E-02	15.8	+-.901	.789E-01+-.451E-02		51
		# 1.2900	35.14	#8.600	# .288E-01+-.240E-02	6.49	+-.541	.324E-01+-.270E-02		51
		P# 1.3040	35.33	P#8.550	P# .320E-01+-.250E-02	7.21	+-.563	P .361E-01+-.282E-02		210
		# 1.6600	40.05	#9.900	# .820E-02+-.800E-03	1.85	+-.180	.924E-02+-.901E-03		51
		P# 2.0040	44.20	P#10.89	P# .182E-02+-.320E-03	0.410	+-.721E-01	P .205E-02+-.361E-03		210
		# 2.1300	45.64	#11.40	# .150E-02+-.300E-03	0.338	+-.676E-01	.169E-02+-.338E-03		51
9.50	4.33	$15.2146	142.53	64.81	@ .520E-03+-.700E-03	0.165	+-.222	.702E-03+-.945E-03		105
		$15.4946	145.75	69.85	@ .610E-03+-.160E-03	0.194	+-.508E-01	.824E-03+-.216E-03		105
		$15.7446	148.88	75.32	@ .730E-03+-.100E-03	0.232	+-.318E-01	.986E-03+-.135E-03		105
		$15.9246	151.32	80.05	@ .880E-03+-.100E-03	0.280	+-.318E-01	.119E-02+-.135E-03		105
		$16.0746	153.51	84.68	@ .110E-02+-.150E-03	0.350	+-.477E-01	.149E-02+-.203E-03		105
		$16.2246	155.88	90.16	@ .120E-02+-.170E-03	0.381	+-.540E-01	.162E-02+-.230E-03		105
		$16.3416	157.89	95.23	@ .120E-02+-.210E-03	0.381	+-.667E-01	.162E-02+-.284E-03		105
		$16.4246	159.43	99.39	@ .200E-02+-.240E-03	0.636	+-.763E-01	.270E-02+-.324E-03		105
		$16.5246	161.45	105.2	@ .150E-02+-.280E-03	0.477	+-.890E-01	.203E-02+-.378E-03		105
		$16.6606	164.60	115.2	@ .270E-02+-.300E-03	0.858	+-.953E-01	.365E-02+-.405E-03		105
		$16.7116	165.95	119.9	@ .340E-02+-.400E-03	1.08	+-.127	.459E-02+-.540E-03		105
		$16.7996	168.66	130.0	@ .360E-02+-.400E-03	1.14	+-.127	.486E-02+-.540E-03		105
		$16.8706	171.43	141.2	@ .380E-02+-.500E-03	1.21	+-.159	.513E-02+-.675E-03		105
		$16.9096	173.44	149.8	@ .360E-02+-.150E-03	1.14	+-.477E-01	.486E-02+-.203E-03		105
9.80	4.39	$17.0825	161.67	105.1	@ .220E-02+-.600E-03	0.744	+-.203	.307E-02+-.837E-03		63
		$17.1575	163.30	110.2	@ .270E-02+-.400E-03	0.913	+-.135	.377E-02+-.558E-03		63
		$17.2755	166.24	120.2	@ .320E-02+-.600E-03	1.08	+-.203	.446E-02+-.837E-03		63

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
9.80	4.39	$17.3625	168.88	130.2	@ .470E-02+-.700E-03	1.59 +-.237	.656E-02+-.976E-03	63
		$17.4225	171.15	139.4	@ .320E-02+-.120E-02	1.08 +-.406	.446E-02+-.167E-02	63
		$17.4675	173.32	148.8	@ .270E-02+-.170E-02	0.913 +-.575	.377E-02+-.237E-02	63
11.00	4.64	P# 0.0 -	0.0 -	0.0 -				
		0.0008	0.73	.1479	P# .750 +-.900E-01	320. +-38.3	P 1.18 +-.142	210
		# 0.0008	0.73	.1473				
		+- 0.0008	+- 0.36	+-.7364E-01	# .520 +-.700E-01	222. +-29.8	.818 +-.110	51
		P# 0.0 -	0.0 -	0.0 -				
		0.0034	1.50	.3035	P# .730 +-.500E-01	311. +-21.3	P 1.15 +-.787E-01	210
		P# 0.0033	1.47	P#.3000	P# .550 +-.500E-01	234. +-21.3	P .865 +-.787E-01	210
		# 0.0037	1.57	#.2500				
		+- 0.0013	+- 0.28	+-.5568E-01	# .570 +-.500E-01	243. +-21.3	.897 +-.787E-01	51
		P# 0.0054	1.89	P#.3000	P# .630 +-.600E-01	268. +-25.6	P .991 +-.944E-01	210
		# 0.0068	2.12	#.2500				
		+- 0.0018	+- 0.28	+-.5687E-01	# .450 +-.400E-01	192. +-17.0	.708 +-.629E-01	51
		P# 0.0080	2.30	P#.3000	P# .470 +-.400E-01	200. +-17.0	P .740 +-.629E-01	210
		# 0.0110	2.70	#.2500				
		+- 0.0020	+- 0.25	+-.4969E-01	# .376 +-.350E-01	160. +-14.9	.592 +-.551E-01	51
		P# 0.0111	2.72	P#.3000	P# .380 +-.500E-01	162. +-21.3	P .598 +-.787E-01	210
		# 0.0190	3.55	#.7200	# .339 +-.150E-01	144. +-6.39	.533 +-.236E-01	51
		P# 0.0202	3.66	P#.7400	P# .324 +-.170E-01	138. +-7.24	P .510 +-.268E-01	210
		# 0.0390	5.09	#1.030	# .296 +-.130E-01	126. +-5.54	.466 +-.205E-01	51
		P# 0.0398	5.14	P#1.040	P# .292 +-.160E-01	124. +-6.82	P .459 +-.252E-01	210
		# 0.0790	7.25	#1.480	# .269 +-.110E-01	115. +-4.69	.423 +-.173E-01	51
		P# 0.0806	7.32	P#1.480	P# .288 +-.150E-01	123. +-6.39	P .453 +-.236E-01	210
		P# 0.8000	23.21	P#4.750	P# .617E-01+-.400E-02	26.3 +-1.70	P .971E-01+-.629E-02	210
		P# 1.3010	29.72	P#6.140	P# .124E-01+-.110E-02	5.28 +-.469	P .195E-01+-.173E-02	210
		# 0.1670	10.55	#2.150	# .230 +-.110E-01	98.0 +-4.69	.362 +-.173E-01	51
		P# 1.9960	37.05	P#7.740	P# .124E-02+-.130E-03	0.528 +-.554E-01	P .195E-02+-.205E-03	210
		# 0.3180	14.57	#2.980	# .179 +-.900E-02	76.3 +-3.83	.282 +-.142E-01	51
		# 0.4530	17.41	#3.570	# .136 +-.700E-02	57.9 +-2.98	.214 +-.110E-01	51
		# 0.7810	22.93	#4.730	# .660E-01+-.400E-02	28.1 +-1.70	.104 +-.629E-02	51
		# 0.9840	25.78	#5.330	# .361E-01+-.230E-02	15.4 +-.980	.568E-01+-.362E-02	51
		# 1.2760	29.43	#6.120	# .143E-01+-.100E-02	6.09 +-.426	.225E-01+-.157E-02	51
		# 1.6850	33.94	#7.050	# .370E-02+-.500E-03	1.58 +-.213	.582E-02+-.787E-03	51
		# 2.0630	37.69	#7.950	# .100E-02+-.300E-03	0.426 +-.128	.157E-02+-.472E-03	51
14.80	5.35	$26.5341	166.67	111.8	@ .960E-03+-.930E-04	0.740 +-.717E-01	.205E-02+-.199E-03	105
		$26.7161	170.60	128.5	@ .990E-03+-.150E-03	0.764 +-.116	.212E-02+-.321E-03	105
		$26.8701	176.40	159.2	@ .690E-03+-.130E-03	0.532 +-.100	.148E-02+-.278E-03	105
16.00	5.56	P# 0.0 -	0.0 -	0.0 -				
		0.0018	0.90	.1517	P# .313 +-.240E-01	282. +-21.6	P .726 +-.557E-01	210
		# 0.0012	0.74	.1240				
		+- 0.0012	+- 0.37	+-.6201E-01	# .240 +-.500E-01	216. +-45.1	.557 +-.116	51
		# 0.0033	1.22	#.2500				
		+- 0.0017	+- 0.31	+-.5301E-01	# .250 +-.300E-01	225. +-27.0	.580 +-.696E-01	51
		P# 0.0 -	0.0 -	0.0 -				
		0.0071	1.79	.3016	P# .265 +-.120E-01	239. +-10.8	P .615 +-.278E-01	210
		P# 0.0048	1.48	P#.3000	P# .252 +-.900E-02	227. +-8.11	P .584 +-.209E-01	210
		# 0.0080	1.90	#.2500				
		+- 0.0030	+- 0.36	+-.6008E-01	# .187 +-.250E-01	169. +-22.5	.434 +-.580E-01	51
		P# 0.0097	2.09	P#.3000	P# .235 +-.160E-01	212. +-14.4	P .545 +-.371E-01	210
		# 0.0150	2.60	#.2500				
		+- 0.0040	+- 0.35	+-.5851E-01	# .148 +-.190E-01	133. +-17.1	.343 +-.441E-01	51
		P# 0.0162	2.70	P#.3000	P# .198 +-.120E-01	178. +-10.8	P .459 +-.278E-01	210
		# 0.0230	3.22	#.2500				
		+- 0.0050	+- 0.35	+-.5909E-01	# .113 +-.180E-01	102. +-16.2	.262 +-.417E-01	51
		P# 0.0245	3.32	P#.3000	P# .169 +-.140E-01	152. +-12.6	P .392 +-.325E-01	210
		# 0.0380	4.14	#.7000	# .143 +-.100E-01	129. +-9.01	.332 +-.232E-01	51
		P# 0.0405	4.27	P#.7200	P# .140 +-.700E-02	126. +-6.31	P .325 +-.162E-01	210
		# 0.0770	5.89	#1.000	# .124 +-.800E-02	112. +-7.21	.288 +-.186E-01	51
		P# 0.0795	5.99	P#1.010	P# .121 +-.700E-02	109. +-6.31	P .281 +-.162E-01	210
		# 0.1620	8.55	#1.450	# .105 +-.700E-02	94.7 +-6.31	.244 +-.162E-01	51
		P# 0.2530	10.69	P#1.810	P# .102 +-.600E-02	91.9 +-5.41	P .237 +-.139E-01	210
		# 0.3060	11.76	#2.000	# .850E-01+-.500E-02	76.6 +-4.51	.197 +-.116E-01	51
		# 0.4380	14.08	#2.400	# .660E-01+-.500E-02	59.5 +-4.51	.153 +-.116E-01	51
		# 0.5940	16.41	#2.800	# .480E-01+-.300E-02	43.3 +-2.70	.111 +-.696E-02	51
		# 0.7700	18.71	#3.200	# .284E-01+-.230E-02	25.6 +-2.07	.659E-01+-.533E-02	51
		P# 0.8020	19.10	P#3.250	P# .286E-01+-.170E-02	25.8 +-1.53	P .663E-01+-.394E-02	210
		# 0.9700	21.02	#3.600	# .142E-01+-.110E-02	12.8 +-.992	.329E-01+-.255E-02	51
		P# 1.2980	24.37	P#4.170	P# .468E-02+-.300E-03	4.22 +-.270	P .109E-01+-.696E-03	210
		# 1.3000	24.38	#4.200	# .410E-02+-.400E-03	3.70 +-.361	.951E-02+-.928E-03	51
		# 1.4900	26.14	#4.500	# .220E-02+-.400E-03	1.98 +-.361	.510E-02+-.928E-03	51
		# 1.6800	27.78	#4.800	# .140E-02+-.200E-03	1.26 +-.180	.325E-02+-.464E-03	51
		# 1.9500	29.98	#5.200	# .460E-03+-.200E-03	0.415 +-.180	.107E-02+-.464E-03	51
		P# 2.0000	30.37	P#5.240	P# .450E-03+-.500E-04	0.406 +-.451E-01	P .104E-02+-.116E-03	210
		P# 2.4970	34.04	P#5.910	P# .500E-04+-.100E-04	0.451E-01+-.901E-02	P .116E-03+-.232E-04	210
		P# 3.0000	37.43	P#6.540	P# .100E-04+-.100E-04	0.901E-02+-.901E-02	P .232E-04+-.232E-04	210
18.00	5.89	P# 0.0 -	0.0 -	0.0 -				
		0.0022	0.94	.1492	P# .360 +-.700E-01	411. +-79.9	P .942 +-.183	210
		P# 0.0 -	0.0 -	0.0 -				
		0.0089	1.88	.3002	P# .270 +-.300E-01	308. +-34.2	P .707 +-.785E-01	210
		P# 0.0068	1.65	P#.3000	P# .225 +-.200E-01	257. +-22.8	P .589 +-.524E-01	210
		P# 0.0129	2.27	P#.3000	P# .177 +-.210E-01	202. +-24.0	P .463 +-.550E-01	210
		P# 0.0211	2.90	P#.3000	P# .129 +-.160E-01	147. +-18.3	P .338 +-.419E-01	210
		P# 0.0316	3.55	P#.3000	P# .119 +-.150E-01	136. +-17.1	P .312 +-.393E-01	210
		P# 0.0497	4.46	P#.7100	P# .109 +-.600E-02	124. +-6.85	P .285 +-.157E-01	210
		P# 0.0803	5.66	P#.9000	P# .106 +-.600E-02	121. +-6.85	P .277 +-.157E-01	210
		P# 0.1605	8.01	P#1.280	P# .900E-01+-.500E-02	103. +-5.70	P .236 +-.131E-01	210

FOR RATIO OF CROSS SECTION ON DEUTERIUM AND HYDROGEN, SEE LIST 'RATIO PI-/PI+'.

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 18.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
≈	0.0001+- 0.0000	2.67	2.43	5.89	≈ 14.5	+-2.10	364.	+-52.7	46
≈	0.0001+- 0.0001	4.87	3.17	10.02	≈ 4.50	+-.700	376.	+-58.5	46
#	0.0002+- 0.0001	5.00	3.20	10.26	# 3.73	+-.460	328.	+-40.5	51
P#	0.0 - 0.0004	8.00	3.99	15.89	P# 1.29	+-.100E 00	291.	+-22.5	210
≈	0.0003+- 0.0001	4.87	3.17	10.02	≈ 4.10	+-.700	342.	+-58.5	46
P#	0.0000 - 0.0007	5.00	3.20	10.26	P# 3.20	+-.270	282.	+-23.8	210
≈	0.0004+- 0.0001	2.67	2.43	5.89	≈ 13.6	+-2.10	341.	+-52.7	46
P#	0.0 - 0.0008	11.00	4.64	21.52	P# .750	+-.900E-01	320.	+-38.3	210
#	0.0005+- 0.0005	8.00	3.99	15.89	# 1.46	+-.180	329.	+-40.6	51
#	0.0008+- 0.0008	11.00	4.64	21.52	# .520	+-.700E-01	222.	+-29.8	51
P#	0.0 - 0.0018	16.00	5.56	30.90	P# .313	+-.240E-01	282.	+-21.6	210
P#	0.0 - 0.0018	8.00	3.99	15.89	P# 1.23	+-.700E-01	277.	+-15.8	210
P#	0.0 - 0.0022	18.00	5.89	34.66	P# .360	+-.700E-01	411.	+-79.9	210
#	0.0012+- 0.0012	16.00	5.56	30.90	# .240	+-.500E-01	216.	+-45.1	51
	0.0016	2.18	2.23	4.97	19.6	+-1.09	327.	+-18.3	34
P#	0.0 - 0.0034	11.00	4.64	21.52	P# .730	+-.500E-01	311.	+-21.3	210
	P# 0.0017	8.00	3.99	15.89	P# 1.30	+-.140	293.	+-31.6	210
	0.0018	2.38	2.31	5.35	14.9	+-1.19	297.	+-23.7	34
#	0.0019+- 0.0007	8.00	3.99	15.89	# 1.35	+-.150	304.	+-33.8	51
	0.0020	2.60	2.40	5.76	13.4	+-.765	319.	+-18.2	34
≈	0.0020+- 0.0004	2.67	2.43	5.89	≈ 13.0	+-1.50	326.	+-37.7	46
	≈ 0.0020	4.00	2.90	8.39	≈ 6.30	+-.700	355.	+-39.4	46
≈	0.0020+- 0.0005	4.87	3.17	10.02	≈ 3.65	+-.500	305.	+-41.8	46
	≈ 0.0020	6.00	3.48	12.14	≈ 2.35	+-.250	298.	+-31.7	46
	P# 0.0026	8.00	3.99	15.89	P# .940	+-.600E-01	212.	+-13.5	210
#	0.0030+- 0.0010	3.40	2.69	7.26	# 6.91	+-.430	281.	+-17.5	66
	P# 0.0033	11.00	4.64	21.52	P# .550	+-.500E-01	234.	+-21.3	210
#	0.0033+- 0.0017	16.00	5.56	30.90	# .250	+-.300E-01	225.	+-27.0	51
#	0.0035+- 0.0010	8.00	3.99	15.89	# 1.08	+-.100E 00	243.	+-22.5	51
	P# 0.0035	8.00	3.99	15.89	P# .920	+-.700E-01	207.	+-15.8	210
P#	0.0 - 0.0071	16.00	5.56	30.90	P# .265	+-.120E-01	239.	+-10.8	210
#	0.0037+- 0.0013	11.00	4.64	21.52	# .570	+-.500E-01	243.	+-21.3	51
	P# 0.0038	5.00	3.20	10.26	P# 2.44	+-.130	215.	+-11.4	210
	# 0.0038	5.00	3.20	10.26	# 2.96	+-.150	261.	+-13.2	51
P#	0.0 - 0.0089	18.00	5.89	34.66	P# .270	+-.300E-01	308.	+-34.2	210
	P# 0.0047	8.00	3.99	15.89	P# 1.04	+-.700E-01	234.	+-15.8	210
	P# 0.0048	16.00	5.56	30.90	P# .252	+-.900E-02	227.	+-8.11	210
	P# 0.0054	11.00	4.64	21.52	P# .630	+-.600E-01	268.	+-25.6	210
#	0.0057+- 0.0012	8.00	3.99	15.89	# .980	+-.110	221.	+-24.8	51
#	0.0060+- 0.0015	3.40	2.69	7.26	# 5.23	+-.390	213.	+-15.9	66
	0.0064	2.18	2.23	4.97	15.8	+-.865	264.	+-14.5	34
#	0.0068+- 0.0018	11.00	4.64	21.52	# .450	+-.400E-01	192.	+-17.0	51
	P# 0.0068	18.00	5.89	34.66	P# .225	+-.200E-01	257.	+-22.8	210
	0.0071	2.38	2.31	5.35	10.7	+-.543	214.	+-10.8	34
	# 0.0076	5.00	3.20	10.26	# 2.37	+-.100E 00	209.	+-8.80	51
	0.0078	2.60	2.40	5.76	9.05	+-.306	216.	+-7.28	34
	P# 0.0080	11.00	4.64	21.52	P# .470	+-.400E-01	200.	+-17.0	210
#	0.0080+- 0.0030	16.00	5.56	30.90	# .187	+-.250E-01	169.	+-22.5	51
	0.0087	2.86	2.50	6.25	8.11	+-.329	234.	+-9.47	34
	# 0.0090	5.00	3.20	10.26	# 2.51	+-.170	221.	+-15.0	66
	# 0.0094	8.00	3.99	15.89	# .830	+-.400E-01	187.	+-9.01	51
	P# 0.0097	16.00	5.56	30.90	P# .235	+-.160E-01	212.	+-14.4	210
	P# 0.0100	5.00	3.20	10.26	P# 2.05	+-.120	180.	+-10.6	210
	P# 0.0101	8.00	3.99	15.89	P# .770	+-.400E-01	174.	+-9.01	210
#	0.0110+- 0.0020	11.00	4.64	21.52	# .376	+-.350E-01	160.	+-14.9	51
	P# 0.0111	11.00	4.64	21.52	P# .380	+-.500E-01	162.	+-21.3	210
	# 0.0120	3.40	2.69	7.26	# 5.03	+-.330	205.	+-13.4	66
	P# 0.0129	18.00	5.89	34.66	P# .177	+-.210E-01	202.	+-24.0	210
	# 0.0140	5.00	3.20	10.26	# 2.01	+-.110	177.	+-9.68	66
#	0.0150+- 0.0040	16.00	5.56	30.90	# .148	+-.190E-01	133.	+-17.1	51
	P# 0.0162	16.00	5.56	30.90	P# .198	+-.120E-01	178.	+-10.8	210
	# 0.0190	8.00	3.99	15.89	# .680	+-.300E-01	153.	+-6.76	51
	# 0.0190	11.00	4.64	21.52	# .339	+-.150E-01	144.	+-6.39	51
	# 0.0191	5.00	3.20	10.26	# 1.87	+-.900E-01	165.	+-7.92	51
	P# 0.0198	8.00	3.99	15.89	P# .667	+-.360E-01	150.	+-8.11	210
	P# 0.0200	5.00	3.20	10.26	P# 1.85	+-.100E 00	163.	+-8.80	210
	P# 0.0202	11.00	4.64	21.52	P# .324	+-.170E-01	138.	+-7.24	210
	P# 0.0211	18.00	5.89	34.66	P# .129	+-.160E-01	147.	+-18.3	210
	# 0.0220	3.40	2.69	7.26	# 4.21	+-.220	171.	+-8.96	66
#	0.0230+- 0.0050	16.00	5.56	30.90	# .113	+-.180E-01	102.	+-16.2	51
	P# 0.0245	16.00	5.56	30.90	P# .169	+-.140E-01	152.	+-12.6	210
	0.0254	2.18	2.23	4.97	12.0	+-.602	200.	+-10.1	34
	0.0282	2.38	2.31	5.35	8.44	+-.441	168.	+-8.79	34
	0.0312	2.60	2.40	5.76	7.16	+-.367	170.	+-8.74	34
	P# 0.0316	18.00	5.89	34.66	P# .119	+-.150E-01	136.	+-17.1	210
	0.0349	2.86	2.50	6.25	6.00	+-.247	173.	+-7.10	34
	# 0.0380	16.00	5.56	30.90	# .143	+-.100E-01	129.	+-9.01	51
	# 0.0382	5.00	3.20	10.26	# 1.76	+-.800E-01	155.	+-7.04	51
	# 0.0390	8.00	3.99	15.89	# .582	+-.280E-01	131.	+-6.31	51
	# 0.0390	11.00	4.64	21.52	# .296	+-.130E-01	126.	+-5.54	51
	P# 0.0398	11.00	4.64	21.52	P# .292	+-.160E-01	124.	+-6.82	210
	P# 0.0400	8.00	3.99	15.89	P# .626	+-.330E-01	141.	+-7.44	210
	P# 0.0401	5.00	3.20	10.26	P# 1.68	+-.900E-01	148.	+-7.92	210
	P# 0.0405	16.00	5.56	30.90	P# .140	+-.700E-02	126.	+-6.31	210
	# 0.0480	3.40	2.69	7.26	# 3.92	+-.210	160.	+-8.55	66
	P# 0.0497	18.00	5.89	34.66	P# .109	+-.600E-02	124.	+-6.85	210

= NUMERICAL VALUE FROM TABLE ≈ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 18.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
#	0.0550	5.00	3.20	10.26	# 1.58	+-.110	139.	+-9.68	66
	0.0570	2.18	2.23	4.97	9.78	+-.489	164.	+-8.18	34
	0.0570	2.18	2.23	4.97	9.78	+-.639	164.	+-10.7	24
	0.0632	2.38	2.31	5.35	7.73	+-.339	154.	+-6.76	34
	0.0632	2.38	2.31	5.35	7.22	+-.780	144.	+-15.6	24
	0.0700	2.60	2.40	5.76	6.85	+-.275	163.	+-6.55	34
	0.0710	2.63	2.41	5.82	6.46	+-.272	157.	+-6.62	24
#	0.0768	5.00	3.20	10.26	# 1.61	+-.800E-01	142.	+-7.04	51
#	0.0770	16.00	5.56	30.90	# .124	+-.800E-02	112.	+-7.21	51
	0.0782	2.86	2.50	6.25	5.95	+-.301	171.	+-8.68	34
#	0.0790	8.00	3.99	15.89	# .548	+-.250E-01	123.	+-5.63	51
#	0.0790	11.00	4.64	21.52	# .269	+-.110E-01	115.	+-4.69	51
P#	0.0795	16.00	5.56	30.90	P# .121	+-.700E-02	109.	+-6.31	210
P#	0.0799	5.00	3.20	10.26	P# 1.50	+-.900E-01	132.	+-7.92	210
P#	0.0803	18.00	5.89	34.66	P# .106	+-.600E-02	121.	+-6.85	210
P#	0.0804	8.00	3.99	15.89	P# .554	+-.310E-01	125.	+-6.99	210
P#	0.0806	11.00	4.64	21.52	P# .288	+-.150E-01	123.	+-6.39	210
#	0.0900	3.40	2.69	7.26	# 3.82	+-.460	155.	+-18.7	39
@	0.0900	4.17	2.95	8.71	@ 1.02	+-.510	62.5	+-31.2	21
#	0.0960	3.40	2.69	7.26	# 3.41	+-.190	139.	+-7.73	66
#	0.0960	6.00	3.48	12.14	# 1.00	+-.600E-01	127.	+-7.61	66
#	0.1000	5.00	3.20	10.26	# 1.45	+-.800E-01	128.	+-7.04	66
	0.1008	2.18	2.23	4.97	9.18	+-.226	154.	+-3.78	24
	0.1118	2.38	2.31	5.35	6.48	+-.203	129.	+-4.06	24
@	0.1240	3.25	2.64	6.98	@ 1.39	+-.520	51.7	+-19.3	21
	0.1256	2.63	2.41	5.82	4.95	+-.181	121.	+-4.41	24
@	0.1260	2.51	2.36	5.59	@ 5.78	+-1.04	128.	+-23.1	21
@	0.1270	4.17	2.95	8.71	@ 1.50	+-.460	91.8	+-28.2	21
	0.1394	2.88	2.51	6.28	3.97	+-.163	116.	+-4.76	24
	0.1566	2.18	2.23	4.97	8.84	+-.226	148.	+-3.78	24
P#	0.1601	5.00	3.20	10.26	P# 1.24	+-.700E-01	109.	+-6.16	210
P#	0.1605	18.00	5.89	34.66	P# .900E-01	+-.500E-02	103.	+-5.70	210
#	0.1620	16.00	5.56	30.90	# .105	+-.700E-02	94.7	+-6.31	51
#	0.1640	5.00	3.20	10.26	# 1.25	+-.600E-01	110.	+-5.28	51
#	0.1660	8.00	3.99	15.89	# .463	+-.220E-01	104.	+-4.96	51
#	0.1670	11.00	4.64	21.52	# .230	+-.110E-01	98.0	+-4.69	51
@	0.1710	2.51	2.36	5.59	@ 4.14	+-.900	91.8	+-20.0	21
	0.1736	2.38	2.31	5.35	5.80	+-.170	116.	+-3.38	24
@	0.1740	3.25	2.64	6.98	@ 2.93	+-.700	109.	+-26.0	21
@	0.1750	4.17	2.95	8.71	@ 1.15	+-.360	70.4	+-22.0	21
#	0.1900	3.40	2.69	7.26	# 2.63	+-.140	107.	+-5.70	66
#	0.1900	5.00	3.20	10.26	# 1.30	+-.120	114.	+-10.6	39
	0.1951	2.63	2.41	5.82	4.17	+-.121	101.	+-2.94	24
#	0.2000	5.00	3.20	10.26	# 1.12	+-.700E-01	98.6	+-6.16	66
#	0.2000	6.00	3.48	12.14	# .710	+-.500E-01	90.0	+-6.34	66
	0.2166	2.88	2.51	6.28	3.10	+-.136	90.5	+-3.97	24
@	0.2220	2.51	2.36	5.59	@ 2.99	+-.960	66.3	+-21.3	21
	0.2239	2.18	2.23	4.97	7.00	+-.263	117.	+-4.41	24
@	0.2470	3.25	2.64	6.98	@ 1.97	+-.550	73.3	+-20.5	21
	0.2483	2.38	2.31	5.35	5.12	+-.170	102.	+-3.38	24
@	0.2510	4.17	2.95	8.71	@ .890	+-.310	54.5	+-19.0	21
P#	0.2530	16.00	5.56	30.90	P# .102	+-.600E-02	91.9	+-5.41	210
P#	0.2560	8.00	3.99	15.89	P# .373	+-.210E-01	84.1	+-4.73	210
@	0.2750	2.51	2.36	5.59	@ 3.85	+-1.32	85.4	+-29.3	21
	0.2789	2.63	2.41	5.82	3.59	+-.121	87.5	+-2.94	24
#	0.3000	5.00	3.20	10.26	# .860	+-.500E-01	75.7	+-4.40	66
	0.3022	2.18	2.23	4.97	5.34	+-.188	89.4	+-3.15	24
#	0.3060	16.00	5.56	30.90	# .850E-01	+-.500E-02	76.6	+-4.51	51
#	0.3070	5.00	3.20	10.26	# .850	+-.400E-01	74.8	+-3.52	51
	0.3097	2.88	2.51	6.28	2.91	+-.217	84.9	+-6.35	24
#	0.3120	8.00	3.99	15.89	# .350	+-.150E-01	78.9	+-3.38	51
#	0.3180	11.00	4.64	21.52	# .179	+-.900E-02	76.3	+-3.83	51
@	0.3230	2.51	2.36	5.59	@ 3.68	+-1.04	81.6	+-23.1	21
#	0.3300	3.40	2.69	7.26	# 1.94	+-.160	79.0	+-6.51	39
	0.3351	2.38	2.31	5.35	3.53	+-.102	70.3	+-2.03	24
@	0.3500	3.25	2.64	6.98	@ 1.43	+-.450	53.2	+-16.7	21
@	0.3510	4.17	2.95	8.71	@ .810	+-.250	49.6	+-15.3	21
#	0.3700	5.00	3.20	10.26	# .890	+-.900E-01	78.3	+-7.92	39
@	0.3740	3.40	2.69	7.26	@ 2.17	+-.690	88.3	+-28.1	44
	0.3765	2.63	2.41	5.82	2.51	+-.905E-01	61.0	+-2.21	24
#	0.3800	6.00	3.48	12.14	# .537	+-.300E-01	68.1	+-3.80	66
#	0.3900	3.40	2.69	7.26	# 1.40	+-.700E-01	57.0	+-2.85	66
	0.3909	2.18	2.23	4.97	3.91	+-.113	65.5	+-1.89	24
	0.4180	2.88	2.51	6.28	2.17	+-.109	63.5	+-3.18	24
	0.4335	2.38	2.31	5.35	2.75	+-.102	54.8	+-2.03	24
#	0.4380	16.00	5.56	30.90	# .660E-01	+-.500E-02	59.5	+-4.51	51
#	0.4420	5.00	3.20	10.26	# .590	+-.300E-01	51.9	+-2.64	51
#	0.4450	8.00	3.99	15.89	# .248	+-.110E-01	55.9	+-2.48	51
@	0.4500	3.25	2.64	6.98	@ 1.30	+-.600	48.4	+-22.3	21
@	0.4510	4.17	2.95	8.71	@ .690	+-.250	42.2	+-15.3	21
#	0.4530	11.00	4.64	21.52	# .136	+-.700E-02	57.9	+-2.98	51
	0.4848	3.28	2.65	7.04	2.04	+-.117	77.3	+-4.44	16
	0.4871	2.63	2.41	5.82	2.02	+-.905E-01	49.3	+-2.21	24
	0.4894	2.18	2.23	4.97	2.59	+-.752E-01	43.4	+-1.26	24
	0.5148	3.46	2.72	7.37	1.63	+-.110	68.9	+-4.65	16
	0.5349	3.58	2.76	7.60	1.13	+-.106	50.8	+-4.79	16

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 18.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-N**2)**2 MU BARN*GEV**2	REF
	0.5408	2.88	2.51	6.28	1.44 +-.815E-01	42.1 +-2.38	24
	0.5428	2.38	2.31	5.35	1.97 +-.678E-01	39.2 +-1.35	24
a	0.5510	4.17	2.95	8.71	a .390 +-.200	23.9 +-12.2	21
	0.5550	3.70	2.80	7.82	1.06 +-.102	51.3 +-4.93	16
	0.5751	3.82	2.84	8.05	1.01 +-.790E-01	51.8 +-4.06	16
#	0.5940	16.00	5.56	30.90	# .480E-01+-.300E-02	43.3 +-2.70	51
	0.5953	3.94	2.88	8.27	.611 +-.764E-01	33.4 +-4.17	16
	0.5968	2.18	2.23	4.97	1.43 +-.263	23.9 +-4.41	24
#	0.5970	5.00	3.20	10.26	# .375 +-.270E-01	33.0 +-2.38	51
#	0.6000	5.00	3.20	10.26	# .444 +-.350E-01	39.1 +-3.08	66
#	0.6010	8.00	3.99	15.89	# .185 +-.900E-02	41.7 +-2.03	51
	0.6098	2.63	2.41	5.82	1.27 +-.604E-01	30.9 +-1.47	24
a	0.6530	3.40	2.69	7.26	a .799 +-.880E-01	32.5 +-3.58	44
	0.6619	2.38	2.31	5.35	1.39 +-.102	27.7 +-2.03	24
	0.6770	2.88	2.51	6.28	1.01 +-.544E-01	29.4 +-1.59	24
#	0.6900	5.00	3.20	10.26	# .430 +-.500E-01	37.9 +-4.40	39
	0.7437	2.63	2.41	5.82	.996 +-.604E-01	24.3 +-1.47	24
	0.7526	3.16	2.61	6.81	.611 +-.734E-01	21.5 +-2.58	24
	0.7553	3.17	2.61	6.83	.529 +-.609E-01	18.7 +-2.16	44
#	0.7690	5.00	3.20	10.26	# .226 +-.160E-01	19.9 +-1.41	51
#	0.7700	16.00	5.56	30.90	# .284E-01+-.230E-02	25.6 +-2.07	51
#	0.7760	8.00	3.99	15.89	# .118 +-.600E-02	26.6 +-1.35	51
#	0.7810	11.00	4.64	21.52	# .660E-01+-.400E-02	28.1 +-1.70	51
	0.7878	3.29	2.66	7.05	.584 +-.467E-01	22.3 +-1.78	24
	0.7905	3.30	2.66	7.07	.768 +-.861E-01	29.5 +-3.30	44
P#	0.8000	11.00	4.64	21.52	P# .617E-01+-.400E-02	26.3 +-1.70	210
P#	0.8010	8.00	3.99	15.89	P# .106 +-.700E-02	23.9 +-1.58	210
P#	0.8020	16.00	5.56	30.90	P# .286E-01+-.170E-02	25.8 +-1.53	210
	0.8176	3.40	2.69	7.26	.450 +-.743E-01	18.3 +-3.02	44
a	0.8176	3.40	2.69	7.26	a .457 +-.890E-01	18.6 +-3.62	44
	0.8257	2.88	2.51	6.28	.707 +-.272E-01	20.6 +-.794	24
	0.8528	3.53	2.74	7.50	.388 +-.712E-01	17.0 +-3.12	44
	0.9179	3.16	2.61	6.81	.538 +-.734E-01	18.9 +-2.58	24
	0.9206	3.78	2.82	7.97	.500 +-.600E-01	25.1 +-3.02	16
	0.9608	3.29	2.66	7.05	.397 +-.234E-01	15.1 +-.890	24
#	0.9640	5.00	3.20	10.26	# .172 +-.160E-01	15.1 +-1.41	51
#	0.9700	16.00	5.56	30.90	# .142E-01+-.110E-02	12.8 +-.992	51
#	0.9720	8.00	3.99	15.89	# .700E-01+-.400E-02	15.8 +-.901	51
#	0.9840	11.00	4.64	21.52	# .361E-01+-.230E-02	15.4 +-.980	51
a	0.9971	3.40	2.69	7.26	a .235 +-.440E-01	9.57 +-1.79	44
#	1.1510	5.00	3.20	10.26	# .106 +-.100E-01	9.33 +-.880	51
#	1.2760	11.00	4.64	21.52	# .143E-01+-.100E-02	6.09 +-.426	51
#	1.2900	8.00	3.99	15.89	# .288E-01+-.240E-02	6.49 +-.541	51
P#	1.2980	16.00	5.56	30.90	P# .468E-02+-.300E-03	4.22 +-.270	210
#	1.3000	16.00	5.56	30.90	# .410E-02+-.400E-03	3.70 +-.361	51
P#	1.3010	11.00	4.64	21.52	P# .124E-01+-.110E-02	5.28 +-.469	210
P#	1.3040	8.00	3.99	15.89	P# .320E-01+-.250E-02	7.21 +-.563	210
a	1.3956	3.40	2.69	7.26	a .123 +-.310E-01	5.01 +-1.26	44
#	1.4500	5.00	3.20	10.26	# .600E-01+-.140E-01	5.28 +-1.23	39
#	1.4900	16.00	5.56	30.90	# .220E-02+-.400E-03	1.98 +-.361	51
#	1.6600	8.00	3.99	15.89	# .820E-02+-.800E-03	1.85 +-.180	51
#	1.6800	16.00	5.56	30.90	# .140E-02+-.200E-03	1.26 +-.180	51
#	1.6850	11.00	4.64	21.52	# .370E-02+-.500E-03	1.58 +-.213	51
#	1.9500	16.00	5.56	30.90	# .460E-03+-.200E-03	.415 +-.180	51
P#	1.9960	11.00	4.64	21.52	P# .124E-02+-.130E-03	.528 +-.554E-01	210
P#	2.0000	16.00	5.56	30.90	P# .450E-03+-.500E-04	.406 +-.451E-01	210
P#	2.0040	8.00	3.99	15.89	P# .182E-02+-.320E-03	.410 +-.721E-01	210
#	2.0630	11.00	4.64	21.52	# .100E-02+-.300E-03	.426 +-.128	51
#	2.1300	8.00	3.99	15.89	# .150E-02+-.300E-03	.338 +-.676E-01	51
P#	2.4970	16.00	5.56	30.90	P# .500E-04+-.100E-04	.451E-01+-.901E-02	210
P#	3.0000	16.00	5.56	30.90	P# .100E-04+-.100E-04	.901E-02+-.901E-02	210

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

1.20 GEV < K < GEV 2.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
	0.0009	1.23	1.79	3.19	46.5	+-3.13	248.	+-16.7	34
	0.0010	1.37	1.86	3.45	29.3	+-2.93	194.	+-19.3	34
	0.0011	1.52	1.93	3.73	37.0	+-2.51	301.	+-20.4	34
	0.0012	1.66	2.00	4.00	33.5	+-2.61	325.	+-25.4	34
	0.0013	1.80	2.06	4.26	26.4	+-1.33	301.	+-15.1	34
	0.0015	1.99	2.15	4.61	20.7	+-1.51	289.	+-21.1	34
	0.0032	1.23	1.79	3.19	41.7	+-1.91	222.	+-10.2	34
	0.0037	1.37	1.86	3.45	26.7	+-1.20	176.	+-7.92	34
	0.0042	1.52	1.93	3.73	28.1	+-1.69	228.	+-13.8	34
	0.0046	1.66	2.00	4.00	27.2	+-1.20	264.	+-11.7	34
	0.0046	1.20	1.77	3.13	39.5	+-2.05	201.	+-10.4	176
	0.0049	1.24	1.79	3.21	36.0	+-1.89	195.	+-10.2	176
	0.0051	1.80	2.06	4.26	26.4	+-1.33	301.	+-15.1	34
	0.0052	1.27	1.81	3.26	32.1	+-1.76	182.	+-10.0	176
	0.0057	1.99	2.15	4.61	20.0	+-.797	279.	+-11.1	34
	0.0077	1.23	1.79	3.19	30.9	+-1.68	165.	+-8.96	34
	0.0080	1.20	1.77	3.13	32.8	+-1.50	166.	+-7.60	176
	0.0085	1.24	1.79	3.21	28.4	+-1.29	154.	+-6.96	176
	0.0089	1.27	1.81	3.26	24.1	+-1.17	137.	+-6.66	176
	0.0093	1.52	1.93	3.73	23.9	+-1.23	194.	+-9.97	34
	0.0103	1.66	2.00	4.00	22.4	+-1.15	217.	+-11.2	34
	0.0114	1.80	2.06	4.26	20.1	+-.900	230.	+-10.3	34
	0.0129	1.20	1.77	3.13	32.8	+-1.26	167.	+-6.40	176
	0.0137	1.24	1.79	3.21	28.2	+-1.06	153.	+-5.73	176
	0.0144	1.37	1.86	3.45	18.0	+-1.06	119.	+-7.04	34
	0.0144	1.27	1.81	3.26	24.1	+-1.03	137.	+-5.83	176
	0.0164	1.52	1.93	3.73	17.2	+-.817	140.	+-6.65	34
	0.0166	1.23	1.79	3.19	24.5	+-1.53	131.	+-8.14	34
	0.0182	1.20	1.77	3.13	32.3	+-1.97	164.	+-10.0	176
	0.0183	1.66	2.00	4.00	17.8	+-.889	173.	+-8.63	34
	0.0194	1.24	1.79	3.21	26.3	+-1.82	143.	+-9.83	176
	0.0202	1.80	2.06	4.26	17.1	+-.900	196.	+-10.3	34
	0.0204	1.27	1.81	3.26	24.3	+-1.61	138.	+-9.16	176
	0.0228	1.99	2.15	4.61	15.1	+-.671	211.	+-9.36	34
	0.0245	1.20	1.77	3.13	32.4	+-1.89	164.	+-9.61	176
	0.0252	1.52	1.93	3.73	15.8	+-1.11	129.	+-9.02	34
	0.0260	1.24	1.79	3.21	29.0	+-1.74	157.	+-9.42	176
	0.0272	1.20	1.77	3.13	28.7	+-.868	146.	+-4.40	24
	0.0273	1.27	1.81	3.26	25.4	+-1.61	144.	+-9.16	176
	0.0314	1.34	1.84	3.39	20.1	+-.684	127.	+-4.33	24
	0.0317	1.20	1.77	3.13	30.9	+-1.34	157.	+-6.80	176
	0.0337	1.24	1.79	3.21	28.8	+-1.29	156.	+-6.96	176
	0.0351	1.80	2.06	4.26	15.8	+-.758	180.	+-8.64	34
	0.0354	1.27	1.81	3.26	24.7	+-1.17	140.	+-6.66	176
	0.0355	1.48	1.91	3.66	19.3	+-.724	149.	+-5.58	24
	0.0398	1.62	1.98	3.92	18.3	+-.755	169.	+-6.97	24
	0.0433	1.99	2.15	4.61	13.8	+-.629	193.	+-8.77	34
	0.0443	1.77	2.05	4.20	15.9	+-.677	175.	+-7.46	24
	0.0481	1.20	1.77	3.13	31.8	+-1.03	161.	+-5.20	24
	0.0490	1.20	1.77	3.13	32.6	+-1.89	165.	+-9.61	176
	0.0508	1.98	2.14	4.60	12.6	+-.633	174.	+-8.74	24
	0.0520	1.24	1.79	3.21	30.2	+-1.74	163.	+-9.42	176
	0.0546	1.27	1.81	3.26	30.4	+-1.76	173.	+-10.0	176
	0.0554	1.34	1.84	3.39	24.5	+-.753	155.	+-4.76	24
	0.0629	1.48	1.91	3.66	18.9	+-.543	146.	+-4.19	24
	0.0704	1.62	1.98	3.92	14.6	+-.485	135.	+-4.48	24
	0.0747	1.20	1.77	3.13	34.5	+-.868	175.	+-4.40	24
	0.0756	1.20	1.77	3.13	35.7	+-2.13	181.	+-10.8	176
	0.0784	1.77	2.05	4.20	14.0	+-.387	155.	+-4.27	24
	0.0802	1.24	1.79	3.21	34.6	+-2.04	188.	+-11.1	176
	0.0843	1.27	1.81	3.26	34.0	+-1.91	193.	+-10.8	176
	0.0861	1.34	1.84	3.39	25.8	+-.616	163.	+-3.89	24
	0.0899	1.98	2.14	4.60	12.1	+-.295	167.	+-4.08	24
	0.0976	1.48	1.91	3.66	20.0	+-1.03	155.	+-7.91	24
	0.1067	1.20	1.77	3.13	34.4	+-1.11	175.	+-5.60	24
	0.1076	1.20	1.77	3.13	41.1	+-3.00	209.	+-15.2	176
	0.1093	1.62	1.98	3.92	15.5	+-.755	143.	+-6.97	24
	0.1141	1.24	1.79	3.21	30.3	+-2.50	164.	+-13.5	176
	0.1199	1.27	1.81	3.26	28.6	+-2.42	162.	+-13.7	176
	0.1218	1.77	2.05	4.20	13.1	+-.338	145.	+-3.73	24
	0.1231	1.34	1.84	3.39	25.7	+-.821	162.	+-5.19	24
a	0.1370	1.97	2.14	4.58	a 12.6	+-2.09	172.	+-28.6	21
	0.1396	1.98	2.14	4.60	10.4	+-.253	144.	+-3.49	24
	0.1396	1.48	1.91	3.66	17.3	+-.483	134.	+-3.72	24
	0.1440	1.20	1.77	3.13	34.8	+-.868	177.	+-4.40	24
	0.1449	1.20	1.77	3.13	37.7	+-2.92	191.	+-14.8	176
	0.1537	1.24	1.79	3.21	30.3	+-2.57	164.	+-13.9	176
	0.1562	1.62	1.98	3.92	13.1	+-.377	121.	+-3.49	24
	0.1614	1.27	1.81	3.26	32.7	+-2.64	186.	+-15.0	176
	0.1661	1.34	1.84	3.39	24.3	+-.616	154.	+-3.89	24
	0.1742	1.77	2.05	4.20	11.4	+-.290	126.	+-3.20	24
a	0.1770	1.97	2.14	4.58	a 9.10	+-1.71	124.	+-23.4	21
	0.1863	1.20	1.77	3.13	32.0	+-1.58	162.	+-8.00	24
	0.1874	1.20	1.77	3.13	31.3	+-.947	158.	+-4.80	176
	0.1884	1.48	1.91	3.66	16.3	+-.422	126.	+-3.26	24
	0.1986	1.24	1.79	3.21	28.6	+-.908	155.	+-4.91	176

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

1.20 GEV < K < GEV 2.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
0.1996	1.98	2.14	4.60	8.61	+-.211	119.	+-2.91	24
0.2084	1.27	1.81	3.26	26.9	+-.807	153.	+-4.58	176
0.2109	1.62	1.98	3.92	10.9	+-.323	101.	+-2.99	24
0.2148	1.34	1.84	3.39	23.1	+-.890	146.	+-5.63	24
0.2332	1.20	1.77	3.13	37.1	+-1.97	188.	+-10.0	182
0.2351	1.77	2.05	4.20	8.60	+-.290	94.9	+-3.20	24
0.2434	1.24	1.79	3.21	26.5	+-2.57	143.	+-13.9	182
0.2437	1.48	1.91	3.66	14.7	+-.422	114.	+-3.26	24
0.2536	1.28	1.81	3.28	23.2	+-1.60	134.	+-9.21	182
0.2694	1.98	2.14	4.60	6.92	+-.253	95.5	+-3.49	24
0.2728	1.62	1.98	3.92	8.68	+-.216	80.2	+-1.99	24
0.2854	1.20	1.77	3.13	25.6	+-1.58	130.	+-8.00	176
0.3024	1.24	1.79	3.21	20.7	+-1.29	112.	+-6.96	176
0.3042	1.77	2.05	4.20	6.72	+-.193	74.1	+-2.13	24
0.3168	1.27	1.81	3.26	18.5	+-1.25	105.	+-7.08	176
0.3415	1.62	1.98	3.92	5.66	+-.593	52.3	+-5.48	24
0.3485	1.98	2.14	4.60	5.02	+-.127	69.3	+-1.75	24
0.3808	1.77	2.05	4.20	5.65	+-.290	62.4	+-3.20	24
0.3992	1.20	1.77	3.13	15.6	+-1.50	79.2	+-7.60	176
0.4221	1.24	1.79	3.21	15.0	+-1.36	81.1	+-7.37	176
0.4362	1.98	2.14	4.60	4.22	+-.127	58.2	+-1.75	24
0.4418	1.27	1.81	3.26	11.5	+-1.17	65.4	+-6.66	176
0.5250	1.20	1.77	3.13	12.8	+-1.34	64.8	+-6.80	176
0.5545	1.24	1.79	3.21	8.09	+-.983	43.8	+-5.32	176
0.5792	1.27	1.81	3.26	7.99	+-1.03	45.4	+-5.83	176
0.6590	1.20	1.77	3.13	7.50	+-1.11	38.0	+-5.60	176
0.6950	1.24	1.79	3.21	4.92	+-.832	26.6	+-4.50	176
0.7249	1.27	1.81	3.26	4.55	+-.880	25.8	+-5.00	176

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.20 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2		THETA (BARYON) CM	LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD		REF
1.20	1.77	3.13	-0.243	3.16	+-.316	a 0.0	0.0	a.400	+-.400E-01	229
			0.552	5.60	+-.553	# 89.9	39.2	#.710	+-.700E-01	176
1.21+- 0.02	1.78+- 0.01	3.15+- 0.04	#-0.216+- 0.023	#5.74	+-.670	14.5+- 6.4	5.9+- 2.7	.735	+-.858E-01	230
1.21	1.78	3.15	0.063	4.61	+-.547	# 51.5	21.6	#.590	+-.700E-01	156
1.22	1.78	3.17	-0.240 --0.227	5.43	+-.386	a 0.0 - 10.0	0.0 - 4.1	a.703	+-.500E-01	242
			0.165	3.17	+-.464	# 59.8	25.2	#.410	+-.600E-01	156
1.23+- 0.02	1.79+- 0.01	3.19+- 0.04	#-0.213+- 0.023	#4.60	+-.590	14.4+- 6.4	5.9+- 2.6	.602	+-.772E-01	230
1.23	1.79	3.19	-0.218	2.75	+-.611	# 12.7	5.2	#.360	+-.800E-01	156
			-0.164	8.33	+-.535	# 24.5	10.1	#1.09	+-.700E-01	156
			-0.024	7.87	+-.688	# 42.3	17.6	#1.03	+-.900E-01	156
1.24+- 0.04	1.79+- 0.02	3.21+- 0.08	#-0.138+- 0.062	#8.30	+-.630	28.4+- 9.0	11.7+- 3.8	1.10	+-.832E-01	230
			#-0.045+- 0.083	#7.68	+-.750	39.4+- 8.9	16.5+- 3.8	1.01	+-.991E-01	230
1.24	1.79	3.21	0.585	4.24	+-.454	# 89.4	38.8	#.560	+-.600E-01	176
1.25	1.80	3.23	-0.235	3.14	+-.449	a 0.0	0.0	a.420	+-.600E-01	229
1.25+- 0.02	1.80+- 0.01	3.23+- 0.04	#-0.210+- 0.023	#4.05	+-.410	14.3+- 6.4	5.8+- 2.6	.541	+-.548E-01	230
1.25	1.80	3.23	-0.102	5.46	+-.749	# 32.8	13.5	#.730	+-.100E 00	156
			0.076	4.27	+-.524	# 51.0	21.2	#.570	+-.700E-01	156
1.26	1.80	3.24	0.180	2.82	+-.445	# 59.2	24.8	#.380	+-.600E-01	156
			0.703	2.82	+-.445	# 96.0	41.9	#.380	+-.600E-01	156
1.27	1.81	3.26	0.607	4.18	+-.440	# 88.9	38.4	#.570	+-.600E-01	176
1.28+- 0.04	1.81+- 0.02	3.28+- 0.08	#-0.206+- 0.024	#3.51	+-.330	14.2+- 6.3	5.7+- 2.6	.483	+-.454E-01	230
			#-0.131+- 0.063	#6.86	+-.560	28.0+- 8.9	11.4+- 3.7	.944	+-.771E-01	230
			#-0.035+- 0.085	#6.70	+-.720	39.0+- 8.8	16.2+- 3.7	.922	+-.991E-01	230
1.28	1.81	3.28	-0.012	5.52	+-.653	# 41.7	17.2	#.760	+-.900E-01	156
1.29	1.82	3.30	-0.230	1.51	+-.431	a 0.0	0.0	a.210	+-.600E-01	229
			-0.154	5.97	+-.503	# 24.1	9.8	#.830	+-.700E-01	156
1.30	1.82	3.32	-0.092	5.98	+-.854	# 32.3	13.2	#.840	+-.120	156
			0.091	3.63	+-.569	# 50.4	20.8	#.510	+-.800E-01	156
			0.195	2.63	+-.427	# 58.7	24.4	#.370	+-.600E-01	156
1.32	1.83	3.36	-0.226 --0.213	3.31	+-.209	a 0.0 - 10.0	0.0 - 4.0	a.474	+-.300E-01	242
1.32+- 0.04	1.83+- 0.02	3.36+- 0.08	#-0.200+- 0.024	#3.28	+-.280	14.1+- 6.3	5.7+- 2.5	.470	+-.401E-01	230
			#-0.124+- 0.064	#6.22	+-.530	27.6+- 8.8	11.2+- 3.6	.891	+-.759E-01	230
			#-0.260+- 0.086	#7.30	+-.760	38.6+- 8.8	0.0+- 3.5	1.05	+-.109	230
1.33	1.84	3.38	0.000	5.04	+-.760	# 41.2	16.8	#.730	+-.110	156
1.36+- 0.04	1.85+- 0.02	3.43+- 0.08	#-0.194+- 0.024	#2.85	+-.260	13.9+- 6.2	5.6+- 2.5	.424	+-.387E-01	230
			#-0.117+- 0.066	#5.75	+-.510	27.4+- 8.8	11.1+- 3.6	.855	+-.759E-01	230
1.36	1.85	3.43	-0.081	4.70	+-.940	# 31.8	12.9	#.700	+-.140	156

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + P1+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.20 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2		THETA (BARYON) CM		LAB		D SIG/D OMEGA (CM) MU BARN/ STERAD		REF
1.36+- 0.04	1.85+- 0.02	3.43+- 0.08	#-0.017+- 0.088	#5.74	+-.660	38.2+-	8.7	15.7+-	3.6	.854	+-.982E-01	230
1.40+- 0.04	1.87+- 0.02	3.51+- 0.08	#-0.188+- 0.025	#2.64	+-.250	13.8+-	6.1	5.6+-	2.5	.408	+-.386E-01	230
			#-0.110+- 0.067	#5.71	+-.510	27.1+-	8.7	10.9+-	3.5	.881	+-.787E-01	230
			#-0.009+- 0.090	#6.16	+-.680	37.8+-	8.6	15.4+-	3.6	.951	+-.105	230
1.43	1.89	3.56	-0.213 --0.198	1.97	+-.189	a 0.0 -	10.0	0.0 -	4.0	a.313	+-.300E-01	242
1.44+- 0.04	1.89+- 0.02	3.58+- 0.08	#-0.183+- 0.025	#2.06	+-.220	13.7+-	6.1	5.5+-	2.4	.330	+-.352E-01	230
			#-0.104+- 0.068	#5.62	+-.510	26.8+-	8.6	10.7+-	3.5	.899	+-.816E-01	230
			#-0.001+- 0.092	#5.86	+-.670	37.5+-	8.5	15.2+-	3.5	.937	+-.107	230
1.48+- 0.04	1.91+- 0.02	3.66+- 0.08	#-0.178+- 0.026	#1.69	+-.140	13.6+-	6.0	5.5+-	2.4	.280	+-.232E-01	230
			#-0.098+- 0.069	#3.86	+-.250	26.5+-	8.5	10.6+-	3.4	.639	+-.414E-01	230
			# 0.0 +- 0.091	#3.85	+-.320	37.1+-	8.4	14.7+-	3.4	.638	+-.530E-01	230
1.52+- 0.04	1.93+- 0.02	3.73+- 0.08	#-0.174+- 0.026	#1.14	+-.110	13.4+-	5.9	5.3+-	2.3	.195	+-.188E-01	230
			#-0.092+- 0.070	#3.55	+-.240	26.2+-	8.4	10.4+-	3.4	.608	+-.411E-01	230
			# 0.007+- 0.093	#3.92	+-.330	35.8+-	8.3	14.5+-	3.4	.671	+-.565E-01	230
1.56	1.95	3.81	-0.200 --0.183	.599	+-.565E-01	a 0.0 -	10.0	0.0 -	3.9	a.106	+-.100E-01	242
1.56+- 0.04	1.95+- 0.02	3.81+- 0.08	#-0.170+- 0.026	#1.32	+-.140	13.3+-	5.9	5.2+-	2.3	.234	+-.248E-01	230
			#-0.086+- 0.071	#2.84	+-.220	26.0+-	8.4	10.3+-	3.3	.502	+-.389E-01	230
			# 0.010+- 0.086	#3.84	+-.400	35.8+-	7.6	14.1+-	3.1	.679	+-.708E-01	230
1.60+- 0.04	1.97+- 0.02	3.88+- 0.08	#-0.166+- 0.027	#1.00	+-.120	13.2+-	5.8	5.1+-	2.3	.183	+-.219E-01	230
			#-0.081+- 0.072	#2.22	+-.260	25.8+-	8.3	10.1+-	3.3	.405	+-.475E-01	230
			# 0.018+- 0.088	#4.10	+-.420	35.5+-	7.5	13.9+-	3.0	.749	+-.767E-01	230
1.64+- 0.04	1.99+- 0.02	3.96+- 0.08	#-0.161+- 0.027	#.960	+-.120	13.0+-	5.8	5.1+-	2.2	.181	+-.226E-01	230
			#-0.076+- 0.073	#2.33	+-.240	25.6+-	8.2	9.9+-	3.2	.439	+-.452E-01	230
			# 0.024+- 0.089	#2.44	+-.330	35.2+-	7.5	13.7+-	3.0	.459	+-.621E-01	230
1.65	1.99	3.98	-0.191 --0.173	.317	+-.435E-01	a 0.0 -	10.0	0.0 -	3.8	a.602E-01	+-.825E-02	242
1.68+- 0.04	2.01+- 0.02	4.03+- 0.08	#-0.157+- 0.027	#.680	+-.110	12.9+-	5.7	5.0+-	2.2	.132	+-.213E-01	230
			#-0.071+- 0.074	#1.57	+-.190	25.3+-	8.1	9.8+-	3.2	.305	+-.369E-01	230
			# 0.031+- 0.097	#2.39	+-.500	34.9+-	8.0	13.5+-	3.2	.464	+-.970E-01	230
1.72+- 0.04	2.03+- 0.02	4.11+- 0.08	#-0.154+- 0.028	#.552	+-.680E-01	12.8+-	5.7	4.9+-	2.2	.110	+-.136E-01	230
			#-0.066+- 0.075	#1.87	+-.220	25.1+-	8.1	9.6+-	3.1	.373	+-.439E-01	230
			# 0.037+- 0.098	#1.92	+-.230	34.6+-	7.9	13.3+-	3.1	.383	+-.459E-01	230
1.75	2.04	4.16	-0.182 --0.163	.321	+-.404E-01	a 0.0 -	10.0	0.0 -	3.8	a.655E-01	+-.825E-02	242
1.76+- 0.04	2.05+- 0.02	4.18+- 0.08	#-0.150+- 0.028	#.449	+-.600E-01	12.7+-	5.6	4.8+-	2.1	.922E-01	+-.123E-01	230
			#-0.061+- 0.076	#1.09	+-.100E 00	24.9+-	8.0	9.5+-	3.1	.224	+-.205E-01	230
			# 0.042+- 0.099	#1.16	+-.180	34.3+-	7.9	13.1+-	3.1	.238	+-.370E-01	230
1.80+- 0.08	2.06+- 0.04	4.26+- 0.15	#-0.146+- 0.028	#.471	+-.620E-01	12.6+-	5.6	4.9+-	2.1	.993E-01	+-.131E-01	230
1.80+- 0.04	2.06+- 0.02	4.26+- 0.08	#-0.056+- 0.077	#1.05	+-.100E 00	24.7+-	8.0	9.4+-	3.1	.222	+-.211E-01	230
			# 0.045+- 0.101	#1.23	+-.180	34.0+-	7.8	12.8+-	3.1	.260	+-.380E-01	230
1.84+- 0.04	2.08+- 0.02	4.33+- 0.08	#-0.142+- 0.028	#.467	+-.780E-01	12.5+-	5.5	4.8+-	2.1	.101	+-.169E-01	230
			#-0.051+- 0.078	#.810	+-.110	24.5+-	7.9	9.3+-	3.0	.176	+-.238E-01	230
			# 0.050+- 0.102	#.534	+-.190	33.7+-	7.8	12.7+-	3.0	.116	+-.412E-01	230
1.85	2.09	4.35	-0.175 --0.154	.450	+-.378E-01	a 0.0 -	10.0	0.0 -	3.7	a.983E-01	+-.825E-02	242
1.90+- 0.08	2.11+- 0.04	4.45+- 0.15	#-0.138+- 0.029	#.273	+-.440E-01	12.3+-	5.5	4.7+-	2.0	.615E-01	+-.991E-02	230
			#-0.045+- 0.079	#.610	+-.700E-01	24.1+-	7.8	9.1+-	3.0	.137	+-.158E-01	230
			# 0.058+- 0.104	#.815	+-.990E-01	33.3+-	7.7	12.4+-	3.0	.183	+-.223E-01	230
1.93	2.12	4.50	-0.169 --0.147	.318	+-.359E-01	a 0.0 -	10.0	0.0 -	3.7	a.730E-01	+-.825E-02	242
1.98+- 0.08	2.14+- 0.04	4.60+- 0.15	#-0.132+- 0.029	#.254	+-.430E-01	12.2+-	5.4	4.5+-	2.0	.601E-01	+-.102E-01	230
			#-0.037+- 0.081	#.420	+-.500E-01	23.7+-	7.7	8.9+-	2.9	.994E-01	+-.118E-01	230
			# 0.068+- 0.106	#.354	+-.650E-01	32.8+-	7.6	12.1+-	2.9	.838E-01	+-.154E-01	230
2.04	2.17	4.71	-0.161 --0.138	.286	+-.336E-01	a 0.0 -	10.0	0.0 -	3.6	a.703E-01	+-.825E-02	242
2.06+- 0.08	2.18+- 0.03	4.75+- 0.15	#-0.127+- 0.030	#.266	+-.290E-01	12.0+-	5.3	4.4+-	1.9	.660E-01	+-.720E-02	230
			#-0.029+- 0.082	#.270	+-.300E-01	23.3+-	7.6	8.7+-	2.8	.670E-01	+-.745E-02	230
			# 0.078+- 0.108	#.429	+-.880E-01	32.3+-	7.5	11.8+-	2.8	.106	+-.218E-01	230
2.14+- 0.08	2.21+- 0.03	4.90+- 0.15	#-0.121+- 0.030	#.259	+-.290E-01	11.8+-	5.2	4.3+-	1.9	.673E-01	+-.753E-02	230
			#-0.022+- 0.084	#.250	+-.300E-01	22.9+-	7.5	8.5+-	2.7	.649E-01	+-.779E-02	230
			# 0.079+- 0.124	#.305	+-.430E-01	30.9+-	8.5	11.3+-	3.1	.792E-01	+-.112E-01	230
2.15	2.22	4.91	-0.155 --0.130	.317	+-.315E-01	a 0.0 -	10.0	0.0 -	3.6	a.829E-01	+-.825E-02	242
2.22+- 0.08	2.25+- 0.03	5.05+- 0.15	#-0.116+- 0.031	#.275	+-.380E-01	11.6+-	5.1	4.2+-	1.8	.746E-01	+-.103E-01	230
			#-0.017+- 0.085	#.260	+-.400E-01	22.6+-	7.4	8.2+-	2.7	.705E-01	+-.109E-01	230
			# 0.082+- 0.100	#.356	+-.570E-01	30.2+-	6.6	10.9+-	2.4	.966E-01	+-.155E-01	230
2.24	2.25	5.08	-0.149 --0.123	.356	+-.300E-01	a 0.0 -	10.0	0.0 -	3.5	a.977E-01	+-.825E-02	242
2.30+- 0.08	2.28+- 0.03	5.20+- 0.15	#-0.111+- 0.031	#.244	+-.280E-01	11.4+-	5.1	4.1+-	1.8	.690E-01	+-.792E-02	230
			#-0.009+- 0.086	#.312	+-.430E-01	22.3+-	7.3	8.0+-	2.6	.883E-01	+-.122E-01	230
			# 0.091+- 0.102	#.310	+-.540E-01	29.9+-	6.6	10.7+-	2.4	.877E-01	+-.153E-01	230
2.38+- 0.08	2.31+- 0.03	5.35+- 0.15	#-0.106+- 0.032	#.262	+-.270E-01	11.2+-	5.0	4.0+-	1.8	.772E-01	+-.795E-02	230
			#-0.004+- 0.087	#.277	+-.270E-01	22.0+-	7.2	7.8+-	2.5	.816E-01	+-.795E-02	230
			# 0.097+- 0.103	#.232	+-.490E-01	29.6+-	6.5	10.4+-	2.3	.683E-01	+-.144E-01	230
2.41	2.32	5.40	-0.141 --0.112	.307	+-.276E-01	a 0.0 -	10.0	0.0 -	3.5	a.919E-01	+-.825E-02	242
2.46+- 0.08	2.34+- 0.03	5.50+- 0.15	#-0.101+- 0.032	#.231	+-.260E-01	11.1+-	4.9	3.9+-	1.7	.707E-01	+-.796E-02	230
			# 0.002+- 0.089	#.279	+-.280E-01	21.8+-	7.1	7.7+-	2.5	.854E-01	+-.857E-02	230
			# 0.060+- 0.103	#.232	+-.330E-01	29.0+-	6.4	9.1+-	2.3	.710E-01	+-.101E-01	230
2.53	2.37	5.63	-0.135 --0.105	.276	+-.260E-01	a 0.0 -	10.0	0.0 -	3.4	a.873E-01	+-.825E-02	242
2.54+- 0.08	2.38+- 0.03	5.65+- 0.15	#-0.097+- 0.032	#.191	+-.230E-01	10.9+-	4.9	3.8+-	1.7	.607E-01	+-.731E-02	230
			# 0.007+- 0.090	#.258	+-.350E-01	21.5+-	7.0	7.5+-	2.4	.820E-01	+-.111E-01	230
			# 0.107+- 0.105	#.260	+-.370E-01	28.6+-	6.3	9.8+-	2.2	.827E-01	+-.118E-01	230
2.62+- 0.08	2.41+- 0.03	5.80+- 0.15	#-0.094+- 0.033	#.186	+-.230E-01	10.7+-	4.8	3.7+-	1.6	.613E-01	+-.758E-02	230
			# 0.012+- 0.091	#.321	+-.400E-01	21.2+-	6.9	7.3+-	2.4	.106	+-.132E-01	230
			# 0.114+- 0.097	#.235	+-.470E-01	28.2+-	5.7	9.6+-	2.0	.774E-01	+-.155E-01	230
2.66	2.42	5.87	-0.129 --0.097	.163	+-.246E-01	a 0.0 -	10.0	0.0 -	3.4	a.548E-01	+-.825E-02	242
2.70+- 0.08	2.44+- 0.03	5.95+- 0.15	#-0.092+- 0.033	#.136	+-.270E-01	10.5+-	4.8	3.5+-	1.6	.464E-01	+-.921E-02	230
			# 0.016+- 0.092	#.269	+-.360E-01	20.9+-	6.8	7.1+-	2.3	.918E-01	+-.123E-01	230
			# 0.119+- 0.099	#.129	+-.360E-01	27.8+-	5.6	9.4+-	2.0	.440E-01	+-.123E-01	230
2.71	2.44	5.97	-0.127 --0.095	.133	+-.160E-01	a 0.0 -	10.0	0.0 -	3.3	a.456E-01	+-.550E-02	242
2.78+- 0.08	2.47+- 0.03	6.10+- 0.15	#-0.088+- 0.033	#.110	+-.260E-01	10.3+-	4.7	3.5+-	1.6	.388E-01	+-.918E-02	230
			# 0.019+- 0.093	#.179	+-.300E-01	20.6+-	6.8	6.9+-	2.3	.632E-01	+-.106E-01	230
			# 0.125+- 0.100	#.171	+-.430E-01	27.5+-	5.6	9.2+-	1.9	.604E-01	+-.152E-01	230
2.80	2.48	6.13	a-0.070	a.192	+-.172E-01	12.6		4.2		.684E-01	+-.613E-02	63
			a-0.015	a.228	+-.204E-01	17.9		6.0		.812E-01	+-.727E-02	63

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.20 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
2.80	2.48	6.13	@ 0.085	@.198 +-.166E-01	25.0	8.3	.705E-01+-.591E-02	63
			@ 0.200	@.140 +-.242E-01	31.2	10.5	.499E-01+-.862E-02	63
			@ 0.425	@.860E-01+-.128E-01	41.0	13.9	.306E-01+-.456E-02	63
2.82+- 0.16	2.48+- 0.06	6.17+- 0.30	# 0.025+- 0.093	#.112 +-.340E-01	20.3+- 6.7	7.0+- 2.3	.401E-01+-.122E-01	230
2.86+- 0.08	2.50+- 0.03	6.25+- 0.15	#-0.085+- 0.034	#.680E-01+-.200E-01	10.1+- 4.6	3.4+- 1.5	.248E-01+-.729E-02	230
			# 0.022+- 0.094	#.156 +-.280E-01	20.3+- 6.7	6.8+- 2.2	.569E-01+-.102E-01	230
			# 0.131+- 0.101	#.134 +-.380E-01	27.1+- 5.5	9.0+- 1.9	.489E-01+-.139E-01	230
2.98+- 0.16	2.54+- 0.06	6.47+- 0.30	# 0.031+- 0.095	#.110 +-.330E-01	19.9+- 6.6	6.7+- 2.2	.420E-01+-.126E-01	230
3.03	2.56	6.57	-0.116 --0.078	.870E-01+-.141E-01	@ 0.0 - 10.0	0.0 - 3.2	@.339E-01+-.550E-02	242
3.14+- 0.16	2.60+- 0.06	6.77+- 0.36	# 0.037+- 0.097	#.500E-01+-.260E-01	19.4+- 6.4	6.4+- 2.1	.202E-01+-.105E-01	230
3.27	2.65	7.02	-0.108 --0.068	.548E-01+-.706E-02	@ 0.0 - 10.0	0.0 - 3.1	@.233E-01+-.300E-02	242
3.30+- 0.16	2.66+- 0.06	7.07+- 0.36	# 0.045+- 0.098	#.390E-01+-.200E-01	18.9+- 6.3	6.2+- 2.0	.167E-01+-.857E-02	230
3.55	2.75	7.54	-0.101 --0.056	.354E-01+-.536E-02	@ 0.0 - 10.0	0.0 - 3.1	@.165E-01+-.250E-02	242
3.81	2.83	8.03	-0.095 --0.046	.275E-01+-.594E-02	@ 0.0 - 10.0	0.0 - 3.0	@.139E-01+-.300E-02	242
4.22	2.97	8.86	-0.086 --0.032	.290E-01+-.663E-02	@ 0.0 - 10.0	0.0 - 2.9	@.164E-01+-.375E-02	242
4.30	2.99	8.95	@ 0.550	@.129E-01+-.170E-02	34.4	10.0	.744E-02+-.981E-03	63
4.10 - 4.50	2.93 - 3.05	8.57 - 9.32	@ 0.377	@.242E-01+-.240E-02	29.3	8.5	.139E-01+-.138E-02	105
4.30	2.99	8.95	@ 0.190	@.335E-01+-.300E-02	22.5	6.5	.193E-01+-.173E-02	63
			@ 0.190	@.335E-01+-.330E-02	22.5	6.5	.193E-01+-.190E-02	63
			@ 0.240	@.373E-01+-.380E-02	24.4	7.0	.215E-01+-.219E-02	63
			@ 0.303	@.244E-01+-.430E-02	26.7	7.7	.141E-01+-.248E-02	63
4.10 - 4.50	2.93 - 3.05	8.57 - 9.32	@ 0.069	@.394E-01+-.410E-02	16.8	4.8	.227E-01+-.236E-02	105
			@ 0.149	@.322E-01+-.410E-02	20.7	6.0	.185E-01+-.236E-02	105
4.30	2.99	8.95	@-0.050	@.377E-01+-.540E-02	8.0	2.3	.218E-01+-.312E-02	63
			@-0.030	@.335E-01+-.980E-02	10.0	2.9	.193E-01+-.566E-02	63
			@ 0.008	@.322E-01+-.490E-02	13.0	3.7	.186E-01+-.283E-02	63
			@ 0.065	@.445E-01+-.590E-02	16.5	4.7	.257E-01+-.340E-02	63
4.73	3.12	9.76	-0.078 --0.017	.236E-01+-.468E-02	@ 0.0 - 10.0	0.0 - 2.8	@.151E-01+-.300E-02	242
5.00	3.20	10.26	@-0.050	@.206E-01+-.180E-02	6.1	1.6	.140E-01+-.123E-02	105
			@-0.028	@.229E-01+-.210E-02	8.4	2.3	.156E-01+-.143E-02	105
			@ 0.008	@.230E-01+-.380E-02	11.2	3.0	.157E-01+-.259E-02	105
			@ 0.039	@.275E-01+-.220E-02	13.2	3.6	.187E-01+-.150E-02	105
			@ 0.110	@.254E-01+-.200E-02	16.9	4.6	.173E-01+-.136E-02	105
			@ 0.150	@.203E-01+-.190E-02	18.6	5.1	.138E-01+-.129E-02	105
			@ 0.203	@.196E-01+-.140E-02	20.7	5.6	.133E-01+-.953E-03	105
			@ 0.257	@.166E-01+-.160E-02	22.7	6.2	.113E-01+-.109E-02	105
			@ 0.323	@.198E-01+-.170E-02	24.9	6.8	.135E-01+-.116E-02	105
			@ 0.400	@.142E-01+-.100E-02	27.2	7.4	.967E-02+-.681E-03	105
			@ 0.500	@.117E-01+-.900E-03	30.0	8.2	.796E-02+-.613E-03	105
			@ 0.533	@.112E-01+-.130E-02	30.9	8.5	.762E-02+-.885E-03	105
			@ 0.585	@.105E-01+-.120E-02	32.2	8.9	.715E-02+-.817E-03	105
			@ 0.650	@.930E-02+-.100E-02	33.8	9.3	.633E-02+-.681E-03	105
			@ 0.700	@.850E-02+-.900E-03	35.0	9.7	.579E-02+-.613E-03	105
			@ 0.850	@.740E-02+-.600E-03	38.4	10.6	.504E-02+-.408E-03	105
			@ 1.000	@.630E-02+-.100E-02	41.5	11.5	.429E-02+-.681E-03	105
			@ 1.200	@.500E-02+-.500E-03	45.4	12.7	.340E-02+-.340E-03	105
			@ 1.417	@.480E-02+-.600E-03	49.4	13.9	.327E-02+-.408E-03	105
			@ 1.680	@.420E-02+-.600E-03	53.8	15.3	.286E-02+-.408E-03	105
5.04	3.22	10.34	-0.073 --0.008	.213E-01+-.655E-02	@ 0.0 - 10.0	0.0 - 2.7	@.146E-01+-.450E-02	242
5.66	3.39	11.50	-0.066 - 0.008	.250E-01+-.514E-02	@ 0.0 - 10.0	0.0 - 2.6	@.195E-01+-.400E-02	242
6.41	3.59	12.91	-0.059 - 0.026	.937E-02+-.753E-02	@ 0.0 - 10.0	0.0 - 2.4	@.834E-02+-.670E-02	242
6.70	3.67	13.45	@-0.012	@.127E-01+-.390E-02	7.1	1.7	.119E-01+-.364E-02	63
			@ 0.0	@.800E-02+-.170E-02	8.0	1.9	.747E-02+-.159E-02	63
			@ 0.185	@.870E-02+-.160E-02	16.5	4.0	.812E-02+-.149E-02	63
			@ 0.300	@.910E-02+-.800E-03	20.1	4.9	.849E-02+-.747E-03	63
7.22	3.80	14.43	-0.053 - 0.044	.660E-02+-.643E-02	@ 0.0 - 10.0	0.0 - 2.3	@.667E-02+-.650E-02	242
9.50	4.33	18.71	@ 0.015	@.360E-02+-.150E-03	6.6	1.4	.486E-02+-.203E-03	105
			@ 0.054	@.380E-02+-.500E-03	8.6	1.8	.513E-02+-.675E-03	105
			@ 0.125	@.360E-02+-.400E-03	11.3	2.4	.486E-02+-.540E-03	105
			@ 0.213	@.340E-02+-.400E-03	14.0	2.9	.459E-02+-.540E-03	105
			@ 0.264	@.270E-02+-.300E-03	15.4	3.2	.365E-02+-.405E-03	105
			@ 0.400	@.150E-02+-.280E-03	18.5	3.9	.203E-02+-.378E-03	105
			@ 0.500	@.200E-02+-.240E-03	20.6	4.3	.270E-02+-.324E-03	105
			@ 0.583	@.120E-02+-.210E-03	22.1	4.6	.162E-02+-.284E-03	105
			@ 0.700	@.120E-02+-.170E-03	24.1	5.1	.162E-02+-.230E-03	105
			@ 0.850	@.110E-02+-.150E-03	26.5	5.6	.149E-02+-.203E-03	105
			@ 1.000	@.880E-03+-.100E-03	28.7	6.0	.119E-02+-.135E-03	105
			@ 1.180	@.730E-03+-.100E-03	31.1	6.6	.986E-03+-.135E-03	105
			@ 1.430	@.610E-03+-.160E-03	34.2	7.3	.824E-03+-.216E-03	105
			@ 1.710	@.520E-03+-.700E-03	37.5	8.0	.702E-03+-.945E-03	105
9.80	4.39	19.27	@ 0.020	@.270E-02+-.170E-02	6.7	1.4	.377E-02+-.237E-02	63
			@ 0.065	@.320E-02+-.120E-02	8.9	1.8	.446E-02+-.167E-02	63
			@ 0.125	@.470E-02+-.700E-03	11.1	2.3	.656E-02+-.976E-03	63
			@ 0.212	@.320E-02+-.600E-03	13.8	2.8	.446E-02+-.837E-03	63
			@ 0.330	@.270E-02+-.400E-03	16.7	3.4	.377E-02+-.558E-03	63
			@ 0.405	@.220E-02+-.600E-03	18.3	3.8	.307E-02+-.837E-03	63
14.80	5.35	28.65	@ 0.0	@.690E-03+-.130E-03	3.6	0.6	.148E-02+-.278E-03	105
			@ 0.154	@.990E-03+-.150E-03	9.4	1.6	.212E-02+-.321E-03	105
			@ 0.336	@.960E-03+-.930E-04	13.3	2.3	.205E-02+-.199E-03	105

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

RATIO OF CROSS SECTIONS FOR TRANSVERSE AND PARALLEL (TO THE PRODUCTION PLANE) POLARIZED GAMMAS

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	A=SIG TRANSVERSE (A-B)/(A+B)	A/(A+B)	B=SIG PARALLEL B/(A+B)		REF
2.50	2.36	# 0.0200	8.18	3.243	#0.980 +-.100E 00	0.990 +-.500E-01	0.100E-01	+-.500E-01	87
		# 0.0500	12.96	5.147	#0.960 +-.800E-01	0.980 +-.400E-01	0.200E-01	+-.400E-01	87
		# 0.1000	18.37	7.322	#0.800 +-.800E-01	0.900 +-.400E-01	0.100	+-.400E-01	87
		# 0.2000	26.09	10.48	#0.580 +-.800E-01	0.790 +-.400E-01	0.210	+-.400E-01	87
		# 0.3000	32.10	12.99	#0.590 +-.800E-01	0.795 +-.400E-01	0.205	+-.400E-01	87
3.00	2.55	Pa 0.1400	19.57	7.234					
		+- 0.0500	+- 3.53	+-1.327	Pa0.930 +-.110	0.965 +-.550E-01	0.350E-01	+-.550E-01	119
		Pa 0.2400	25.72	9.564					
		+- 0.0500	+- 2.73	+-1.043	Pa0.670 +-.900E-01	0.835 +-.450E-01	0.165	+-.450E-01	119
		Pa 0.3400	30.73	11.50					
		+- 0.0500	+- 2.32	+-.9027	Pa0.900 +-.100E 00	0.950 +-.500E-01	0.500E-01	+-.500E-01	119
		Pa 0.6000	41.21	15.68					
		+- 0.1200	+- 4.31	+-1.766	Pa0.680 +-.170	0.840 +-.850E-01	0.160	+-.850E-01	119
		Pa 0.8400	49.22	19.04					
		+- 0.1200	+- 3.75	+-1.614	Pa0.800 +-.140	0.900 +-.700E-01	0.100	+-.700E-01	119
		Pa 1.0600	55.78	21.94					
		+- 0.1000	+- 2.86	+-1.290	Pa0.880 +-.160	0.940 +-.800E-01	0.600E-01	+-.800E-01	119
3.40	2.69	# 0.0100	4.85	1.684	#0.680 +-.110	0.840 +-.550E-01	0.160	+-.550E-01	87
		# 0.0200	6.86	2.384	# 1.00 +-.120	1.00 +-.600E-01	0.0	+-.600E-01	87
		# 0.0500	10.86	3.780	#0.970 +-.800E-01	0.985 +-.400E-01	0.150E-01	+-.400E-01	87
		# 0.1000	15.38	5.368	#0.800 +-.800E-01	0.900 +-.400E-01	0.100	+-.400E-01	87
		# 0.2000	21.82	7.656	#0.790 +-.800E-01	0.895 +-.400E-01	0.105	+-.400E-01	87
		# 0.3000	26.81	9.457	#0.690 +-.800E-01	0.845 +-.400E-01	0.155	+-.400E-01	87
		# 0.4000	31.05	11.01	#0.640 +-.100E 00	0.820 +-.500E-01	0.180	+-.500E-01	87
		# 0.5000	34.83	12.42	#0.640 +-.900E-01	0.820 +-.450E-01	0.180	+-.450E-01	87
		# 0.6000	38.27	13.73	#0.630 +-.100E 00	0.815 +-.500E-01	0.185	+-.500E-01	87
5.00	3.20	# 0.1000	12.41	3.641	#0.730 +-.170	0.865 +-.850E-01	0.135	+-.850E-01	87
		# 0.4000	24.98	7.407	#0.720 +-.200	0.860 +-.100E 00	0.140	+-.100E 00	87

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

POLARIZED GAMMAS (DIRECTION OF POLARIZATION IS WITH RESPECT TO THE PRODUCTION PLANE)

R = RATIO (SIG(TRANSVERSE) - SIG(PARALLEL))/(SIG(TRANSVERSE) + SIG(PARALLEL))
(T DEPENDENCE)

2.00 GEV < K < GEV 5.00

-T GEV**2	K GEV	E* GEV	S GEV**2	R		REF
# 0.0100	3.40	2.69	7.26	#0.680	+-.110	87
# 0.0200	2.50	2.36	5.57	#0.980	+-.100E 00	87
# 0.0200	3.40	2.69	7.26	# 1.00	+-.120	87
# 0.0500	2.50	2.36	5.57	#0.960	+-.800E-01	87
# 0.0500	3.40	2.69	7.26	#0.970	+-.800E-01	87
# 0.1000	2.50	2.36	5.57	#0.800	+-.800E-01	87
# 0.1000	3.40	2.69	7.26	#0.800	+-.800E-01	87
# 0.1000	5.00	3.20	10.26	#0.730	+-.170	87
Pa 0.1400+- 0.0500	3.00	2.55	6.51	Pa0.930	+-.110	119
# 0.2000	2.50	2.36	5.57	#0.580	+-.800E-01	87
# 0.2000	3.40	2.69	7.26	#0.790	+-.800E-01	87
Pa 0.2400+- 0.0500	3.00	2.55	6.51	Pa0.670	+-.900E-01	119
# 0.3000	2.50	2.36	5.57	#0.590	+-.800E-01	87
# 0.3000	3.40	2.69	7.26	#0.690	+-.800E-01	87
Pa 0.3400+- 0.0500	3.00	2.55	6.51	Pa0.900	+-.100E 00	119
# 0.4000	3.40	2.69	7.26	#0.640	+-.100E 00	87
# 0.4000	5.00	3.20	10.26	#0.720	+-.200	87
# 0.5000	3.40	2.69	7.26	#0.640	+-.900E-01	87
Pa 0.6000+- 0.1200	3.00	2.55	6.51	Pa0.680	+-.170	119
# 0.6000	3.40	2.69	7.26	#0.630	+-.100E 00	87
Pa 0.8400+- 0.1200	3.00	2.55	6.51	Pa0.800	+-.140	119
Pa 1.0600+- 0.1000	3.00	2.55	6.51	Pa0.880	+-.160	119

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C111: GAMMA + PROTON --> NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9395 GEV
M4: 0.1396 GEV

A = ASYMMETRY ((+)-(-))/((+)+(-)) FOR POLARIZED TARGET (POLARIZATION POSITIVE ALONG K(GAMMA) X P(MESON))

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	A		REF
5.00	3.20	# 0.0200	5.54	1.621	#-.180	+-.120	184
		# 0.0800	11.10	3.253	#-.340	+-.110	184
		# 0.1700	16.21	4.766	#-.380	+-.110	184
		# 0.3200	22.30	6.594	#-.560	+-.140	184
		# 0.6200	31.24	9.340	#-.710	+-.150	184
		# 1.0200	40.40	12.27	#-.400	+-.180	184
16.00	5.56	# 0.0200	3.00	.5064	#-.250	+-.240	184
		# 0.0800	6.01	1.014	#-.720	+-.130	184
		# 0.1600	8.50	1.436	#-.660	+-.120	184
		# 0.3100	11.84	2.004	#-.590	+-.190	184
		# 0.6100	16.64	2.825	#-.360	+-.200	184

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

TOTAL CROSS SECTION : NO DATA TO BE LISTED

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
1.21	1.78	0.4033	# 60.00	33.63	7.40	+-1.09	38.2	+-5.62	# .950	+-.140	231
		0.5267	# 69.70	40.02	9.19	+-1.01	47.4	+-5.22	# 1.18	+-.130	231
		0.8079	# 90.10	55.20	4.99	+-.545	25.7	+-2.81	# .640	+-.700E-01	231
		0.9562	#100.70	64.32	5.14	+-.390	26.5	+-2.01	# .660	+-.500E-01	231
		1.0889	#110.50	73.74	5.38	+-.701	27.7	+-3.62	# .690	+-.900E-01	231
		1.2157	#120.50	84.51	5.92	+-.545	30.5	+-2.81	# .760	+-.700E-01	231
		1.3334	#130.80	97.05	7.17	+-.623	37.0	+-3.21	# .920	+-.800E-01	231
		1.4367	#141.40	111.7	7.79	+-.623	40.2	+-3.21	# 1.00	+-.800E-01	231
		1.5110	#150.90	126.5	8.88	+-1.09	45.8	+-5.62	# 1.14	+-.140	231
		1.5666	#160.50	143.0	10.8	+-1.01	55.4	+-5.22	# 1.38	+-.130	231
		1.6011	#170.20	161.0	12.7	+-1.48	65.5	+-7.63	# 1.63	+-.190	231
		1.6128	#180.00	180.0	12.5	+-.530	64.7	+-2.73	# 1.61	+-.680E-01	47
1.23	1.79	0.8238	@ 90.00	54.85	5.07	+-.458	27.0	+-2.44	@ .665	+-.600E-01	6
		1.6475	@180.00	180.0	8.20	+-.198	43.7	+-1.06	@ 1.07	+-.260E-01	74
		1.6475	#180.00	180.0	11.8	+-.404	63.0	+-2.15	# 1.55	+-.530E-01	47
1.25	1.80	1.6823	#180.00	180.0	10.5	+-.366	58.0	+-2.01	# 1.41	+-.490E-01	47
1.26	1.80	0.8499	@ 90.00	54.45	3.77	+-.325	21.1	+-1.82	@ .510	+-.440E-01	6
1.27	1.81	1.7171	@180.00	180.0	9.05	+-.256	51.4	+-1.45	@ 1.24	+-.350E-01	74
		1.7171	#180.00	180.0	13.2	+-1.00	74.8	+-5.69	# 1.80	+-.137	47
1.29	1.82	1.7520	#180.00	180.0	10.5	+-.983	61.4	+-5.76	# 1.46	+-.137	47
1.30	1.82	0.8848	@ 90.00	53.94	4.25	+-.561	25.3	+-3.34	@ .599	+-.790E-01	6
		1.7695	#180.00	180.0	11.8	+-1.13	70.2	+-6.72	# 1.66	+-.159	47
1.31	1.83	1.7870	#180.00	180.0	11.9	+-.689	71.8	+-4.16	# 1.69	+-.980E-01	47
1.32	1.83	1.8045	@180.00	180.0	9.07	+-.181	55.7	+-1.11	@ 1.30	+-.260E-01	74
1.34	1.84	0.9198	@ 90.00	53.44	3.70	+-.588	23.4	+-3.71	@ .541	+-.860E-01	6
		1.8395	#180.00	180.0	10.5	+-.991	66.5	+-6.26	# 1.54	+-.145	47
1.36	1.85	0.0566	# 20.00	10.13	14.5	+-1.27	94.3	+-8.30	# 2.16	+-.190	53
		0.1256	# 30.00	15.34	15.4	+-1.61	100.	+-10.5	# 2.30	+-.240	53
		0.2193	# 40.00	20.73	12.0	+-.737	78.2	+-4.80	# 1.79	+-.110	53
		0.4687	# 60.00	32.32	3.15	+-.603	20.5	+-3.93	# .470	+-.900E-01	53
		0.4687	@ 60.00	32.32	3.39	+-.308	22.1	+-2.01	@ .506	+-.460E-01	6
1.37	1.86	1.8921	@180.00	180.0	8.68	+-.173	57.4	+-1.14	@ 1.31	+-.260E-01	74
		1.8921	#180.00	180.0	11.0	+-.565	72.9	+-3.73	# 1.66	+-.850E-01	47
1.41	1.88	1.9625	@180.00	180.0	8.31	+-.166	58.2	+-1.17	@ 1.30	+-.260E-01	74
1.42	1.88	1.9801	#180.00	180.0	10.3	+-.641	73.0	+-4.55	# 1.62	+-.101	47
1.44	1.89	1.0077	@ 90.00	52.24	3.76	+-.237	27.5	+-1.73	@ .603	+-.380E-01	6
		2.0154	#180.00	180.0	9.04	+-.917	66.0	+-6.69	# 1.45	+-.147	47
1.45	1.90	0.5083	@ 60.00	31.61	2.29	+-.142	16.9	+-1.05	@ .370	+-.230E-01	6
1.46	1.90	2.0508	@180.00	180.0	6.96	+-.190	52.3	+-1.43	@ 1.14	+-.310E-01	74
		2.0508	#180.00	180.0	9.07	+-.784	68.1	+-5.89	# 1.48	+-.128	47
1.50	1.92	2.1216	@180.00	180.0	5.98	+-.184	47.4	+-1.45	@ 1.01	+-.310E-01	74
1.53	1.94	1.0874	@ 90.00	51.23	3.54	+-.156	29.2	+-1.29	@ .613	+-.270E-01	6
1.55	1.95	2.2103	@180.00	180.0	4.41	+-.199	37.3	+-1.68	@ .776	+-.350E-01	74
1.56	1.95	2.2281	#180.00	180.0	5.87	+-.530	50.3	+-4.54	# 1.04	+-.940E-01	47
1.57	1.96	2.2459	#180.00	180.0	4.45	+-.257	38.6	+-2.23	# .795	+-.460E-01	47
1.58	1.96	1.1319	@ 90.00	50.69	3.40	+-.111	29.9	+-.976	@ .613	+-.200E-01	6
1.59	1.97	0.5704	@ 60.00	30.59	1.17	+-.110	10.4	+-.981	@ .212	+-.200E-01	6
1.60	1.97	2.2993	@180.00	180.0	3.60	+-.191	32.4	+-1.72	@ .658	+-.350E-01	74
1.62	1.98	1.1675	@ 90.00	50.27	3.03	+-.129	28.0	+-1.19	@ .563	+-.240E-01	6
1.65	1.99	2.3885	@180.00	180.0	2.93	+-.163	28.1	+-1.56	@ .557	+-.310E-01	74
1.66	2.00	2.4064	#180.00	180.0	2.79	+-.188	27.1	+-1.82	# .535	+-.360E-01	47
1.67	2.00	1.2121	@ 90.00	49.77	2.71	+-.161	26.6	+-1.58	@ .523	+-.310E-01	6
1.68	2.01	2.4421	#180.00	180.0	2.01	+-.216	19.9	+-2.15	# .390	+-.420E-01	47
1.70	2.02	2.4779	@180.00	180.0	2.18	+-.223	22.2	+-2.27	@ .430	+-.440E-01	74
1.72	2.03	1.2569	@ 90.00	49.27	2.31	+-.195	24.1	+-2.03	@ .462	+-.390E-01	6
		2.5138	#180.00	180.0	1.71	+-.205	17.9	+-2.14	# .343	+-.410E-01	47
1.74	2.04	2.5496	@180.00	180.0	1.67	+-.153	17.8	+-1.63	@ .338	+-.310E-01	74
1.75	2.04	2.5676	#180.00	180.0	2.03	+-.147	21.9	+-1.58	# .415	+-.300E-01	47
1.78	2.05	1.3107	@ 90.00	48.70	2.17	+-.182	24.2	+-2.03	@ .452	+-.380E-01	6
1.83	2.08	1.3557	@ 90.00	48.24	3.11	+-.139	36.7	+-1.64	@ .672	+-.300E-01	6
1.86	2.09	2.7654	#180.00	180.0	1.04	+-.727E-01	12.6	+-.886	# .228	+-.160E-01	47
1.88	2.10	1.4007	@ 90.00	47.79	1.26	+-.108	15.6	+-1.34	@ .280	+-.240E-01	6
		0.7004	@ 60.00	28.75	.785	+-.807E-01	9.77	+-1.00	@ .175	+-.180E-01	6
		2.8014	#180.00	180.0	.902	+-.942E-01	11.2	+-1.17	# .201	+-.210E-01	47
1.90+-0.12	2.11	@ 1.0000	73.00	36.31	@ .575	+-.126	7.31	+-1.60	.129	+-.283E-01	37
1.90+-0.08	2.11	@ 1.5000	93.39	50.21	@ 2.38	+-.247	30.2	+-3.14	.536	+-.557E-01	37
1.90	2.11	1.4188	@ 90.00	47.61	1.10	+-.797E-01	14.0	+-1.01	@ .249	+-.180E-01	6
1.92	2.12	2.8736	#180.00	180.0	.870	+-.700E-01	11.3	+-.908	# .199	+-.160E-01	47
1.94	2.13	2.9097	#180.00	180.0	.721	+-.950E-01	9.56	+-1.26	# .167	+-.220E-01	47
1.96	2.14	1.4730	@ 90.00	47.10	.994	+-.141	13.4	+-1.90	@ .233	+-.330E-01	6
1.99+-0.13	2.15	@ 1.0000	70.70	34.31	@ .398	+-.930E-01	5.55	+-1.30	.946E-01	+-.221E-01	37
2.00	2.15	$ 0.0000	# 0.00	.0	# 2.04	+-.410	28.7	+-5.77	.490	+-.985E-01	149
		# 0.0150	# 8.00	3.509	# 2.96	+-.440	41.7	+-6.20	.711	+-.106	149
		# 0.0510	# 15.00	6.508	# 4.73	+-.650	66.6	+-9.16	1.14	+-.156	149
		# 0.0910	# 20.00	8.745	# 5.77	+-.460	81.3	+-6.48	1.39	+-.110	149
		# 0.1410	# 25.00	10.97	# 5.19	+-.490	73.1	+-6.90	1.25	+-.118	149
		# 0.2020	# 30.00	13.25	# 4.43	+-.340	62.4	+-4.79	1.06	+-.817E-01	149
		# 0.3530	# 40.00	17.93	# 2.77	+-.290	39.0	+-4.08	.665	+-.697E-01	149
		# 0.5390	# 50.00	22.85	# 1.63	+-.190	23.0	+-2.68	.391	+-.456E-01	149
2.00+-0.10	2.15	@ 0.5800	52.07	23.95							
		+- 0.0600	+- 2.90	+-1.487	@ .749	+-.269	10.5	+-3.79	.179	+-.644E-01	37
2.00	2.15	# 0.7550	# 60.00	28.10	# .650	+-.180	9.16	+-2.54	.156	+-.432E-01	149
2.00+-0.10	2.15	@ 0.7800	61.19	28.79							
		+- 0.0700	+- 3.04	+-1.667	@ .385	+-.710E-01	5.42	+-1.00	.922E-01	+-.170E-01	37

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
2.00+- 0.10	2.15	@ 1.0200	71.19	34.50				
		+- 0.0900	+- 3.62	+-2.157	@ .441 +-.130	6.21 +-1.83	.106 +-.311E-01	37
		@ 1.3100	82.54	41.65				
		+- 0.1100	+- 4.22	+-2.816	@ 1.11 +-.115	15.6 +-1.62	.266 +-.276E-01	37
2.00+- 0.08	2.15	@ 1.5000	89.75	46.62	@ 1.94 +-.202	27.3 +-2.85	.465 +-.484E-01	37
2.00+- 0.10	2.15	@ 1.5700	92.46	48.64				
		+- 0.1300	+- 4.95	+-3.697	@ 1.91 +-.210	26.9 +-2.96	.458 +-.503E-01	37
		@ 1.6900	97.05	52.16				
		+- 0.1000	+- 3.84	+-3.030	@ 2.14 +-.222	30.2 +-3.13	.513 +-.532E-01	37
2.01	2.16	0.7591	@ 60.00	28.03	.728 +-.579E-01	10.4 +-.824	@ .176 +-.140E-01	6
		3.0364	#180.00	180.0	.567 +-.662E-01	8.07 +-.942	# .137 +-.160E-01	47
2.02	2.16	1.5272	@ 90.00	46.59	.946 +-.535E-01	13.6 +-.768	@ .230 +-.130E-01	6
2.03	2.17	3.0726	#180.00	180.0	.528 +-.613E-01	7.66 +-.890	# .129 +-.150E-01	47
2.05	2.17	3.1088	#180.00	180.0	.449 +-.606E-01	6.64 +-.897	# .111 +-.150E-01	47
2.06	2.18	0.7818	@ 60.00	27.77	.743 +-.442E-01	11.1 +-.661	@ .185 +-.110E-01	6
2.08	2.19	1.5816	@ 90.00	46.11	.779 +-.437E-01	11.9 +-.666	@ .196 +-.110E-01	6
2.08+- 0.08	2.19	@ 1.5000	87.12	44.12	@ 1.84 +-.192	28.1 +-2.93	.463 +-.483E-01	37
2.12	2.20	3.2358	#180.00	180.0	.396 +-.350E-01	6.27 +-.553	# .102 +-.900E-02	47
2.15	2.22	1.6452	@ 90.00	45.56	.729 +-.229E-01	11.9 +-.373	@ .191 +-.600E-02	6
2.15+- 0.08	2.22	@ 2.0000	102.55	55.27	@ 1.29 +-.134	21.0 +-2.18	.338 +-.350E-01	37
2.15	2.22	3.2903	#180.00	180.0	.420 +-.420E-01	6.84 +-.684	# .110 +-.110E-01	47
2.16	2.22	1.6543	@ 90.00	45.49	.589 +-.608E-01	9.67 +-.998	@ .155 +-.160E-01	23
2.16+- 0.08	2.22	@ 4.0000	180.00	180.0	@ .170 +-.270E-01	2.79 +-.444	.447E-01+-.710E-02	37
2.18	2.23	0.8362	@ 60.00	27.16	.845 +-.564E-01	14.1 +-.943	@ .225 +-.150E-01	6
		3.3449	#180.00	180.0	.413 +-.301E-01	6.92 +-.503	# .110 +-.800E-02	47
2.19	2.23	1.6816	@ 90.00	45.26	.523 +-.897E-01	8.83 +-1.51	@ .140 +-.240E-01	23
		3.3631	#180.00	180.0	.430 +-.262E-01	7.26 +-.442	# .115 +-.700E-02	47
2.21	2.24	1.6997	@ 90.00	45.11	.595 +-.185E-01	10.2 +-.318	@ .161 +-.500E-02	6
2.22	2.25	3.4177	#180.00	180.0	.375 +-.331E-01	6.51 +-.574	# .102 +-.900E-02	47
2.23	2.25	3.4359	#180.00	180.0	.490 +-.622E-01	8.58 +-1.09	# .134 +-.170E-01	47
2.24	2.25	1.7271	@ 90.00	44.89	.411 +-.618E-01	7.26 +-1.09	@ .113 +-.170E-01	23
		3.4541	#180.00	180.0	.335 +-.291E-01	5.91 +-.514	# .920E-01+-.800E-02	47
2.26	2.26	1.7453	@ 90.00	44.74	.364 +-.396E-01	6.54 +-.712	@ .101 +-.110E-01	23
2.28	2.27	1.7635	@ 90.00	44.60	.527 +-.178E-01	9.65 +-.326	@ .148 +-.500E-02	6
		3.5270	#180.00	180.0	.321 +-.463E-01	5.87 +-.848	# .900E-01+-.130E-01	47
2.30+- 0.09	2.28	@ 2.0000	97.14	49.76	@ .383 +-.500E-01	7.13 +-.931	.108 +-.142E-01	37
2.30	2.28	3.5635	#180.00	180.0	.335 +-.388E-01	6.24 +-.723	# .950E-01+-.110E-01	47
2.31	2.28	3.5817	#180.00	180.0	.463 +-.526E-01	8.70 +-.989	# .132 +-.150E-01	47
2.33	2.29	0.9046	@ 60.00	26.46	.816 +-.660E-01	15.6 +-1.26	@ .235 +-.190E-01	6
		1.8091	@ 90.00	44.24	.354 +-.660E-01	6.77 +-1.26	@ .102 +-.190E-01	23
		3.6182	#180.00	180.0	.413 +-.521E-01	7.90 +-.996	# .119 +-.150E-01	47
2.34	2.30	3.6364	#180.00	180.0	.346 +-.415E-01	6.66 +-.800	# .100E 00+-.120E-01	47
2.35	2.30	1.8274	@ 90.00	44.10	.457 +-.378E-01	8.89 +-.736	@ .133 +-.110E-01	6
2.36	2.30	1.8365	@ 90.00	44.03	.200 +-.277E-01	3.93 +-.544	@ .585E-01+-.810E-02	23
2.39	2.32	3.7277	#180.00	180.0	.455 +-.640E-01	9.15 +-1.29	# .135 +-.190E-01	47
		3.7277	#180.00	180.0	.435 +-.337E-01	8.75 +-.678	# .129 +-.100E-01	47
2.40+- 0.21	2.32	@ 1.0000	62.49	27.59	@ .564 +-.850E-01	11.4 +-1.72	.167 +-.251E-01	37
2.40	2.32	@ 3.0000	126.99	77.39	@ .180 +-.380E-01	3.65 +-.771	.537E-01+-.113E-01	37
2.42	2.33	1.8913	@ 90.00	43.62	.295 +-.259E-01	6.09 +-.534	@ .889E-01+-.780E-02	6
2.42+- 0.07	2.33	@ 4.0000	180.00	180.0	@ .129 +-.240E-01	2.66 +-.495	.388E-01+-.722E-02	37
2.44	2.34	1.9096	@ 90.00	43.49	.156 +-.230E-01	3.26 +-.483	@ .473E-01+-.700E-02	23
2.46	2.34	1.9279	@ 90.00	43.35	.111 +-.137E-01	2.38 +-.292	@ .342E-01+-.420E-02	23
2.47	2.35	3.8740	#180.00	180.0	.493 +-.454E-01	10.6 +-.976	# .152 +-.140E-01	47
2.49	2.36	3.9106	#180.00	180.0	.456 +-.386E-01	9.96 +-.842	# .142 +-.120E-01	47
2.50+- 0.10	2.36	@ 0.7200	50.74	21.28				
		+- 0.0600	+- 2.26	+-1.060	@ .646 +-.110	14.2 +-2.42	.202 +-.343E-01	37
2.50	2.36	0.9822	@ 60.00	25.73	.691 +-.480E-01	15.2 +-1.06	@ .216 +-.150E-01	6
2.50+- 0.10	2.36	@ 1.0000	60.65	26.09				
		+- 0.1000	+- 3.35	+-1.687	@ .531 +-.119	11.7 +-2.62	.166 +-.371E-01	37
		@ 1.3200	76.91	31.49				
		+- 0.1200	+- 3.71	+-2.044	@ .313 +-.330E-01	6.89 +-.726	.977E-01+-.103E-01	37
2.50+- 0.11	2.36	@ 1.5000	76.41	34.61	@ .259 +-.410E-01	5.70 +-.902	.808E-01+-.128E-01	37
2.50+- 0.10	2.36	@ 1.6500	80.87	37.25				
		+- 0.1200	+- 3.55	+-2.168	@ .211 +-.320E-01	4.64 +-.704	.659E-01+-.999E-02	37
		@ 2.0000	91.13	43.91	@ .219 +-.290E-01	4.82 +-.638	.684E-01+-.905E-02	37
		@ 2.3300	100.84	51.06				
		+- 0.1400	+- 4.16	+-3.275	@ .278 +-.420E-01	6.12 +-.924	.868E-01+-.131E-01	37
2.50+- 0.01	2.36	@ 2.6600	110.74	59.40				
		+- 0.1500	+- 4.68	+-4.272	@ .190 +-.290E-01	4.18 +-.638	.594E-01+-.907E-02	37
2.50+- 0.10	2.36	@ 2.9700	120.95	69.60				
		+- 0.1300	+- 4.43	+-4.792	@ .213 +-.250E-01	4.69 +-.550	.665E-01+-.780E-02	37
		@ 3.2700	131.86	82.62				
		+- 0.1200	+- 4.71	+-6.198	@ .143 +-.270E-01	3.15 +-.594	.446E-01+-.843E-02	37
		@ 3.4700	140.28	94.65				
		+- 0.1200	+- 5.49	+-8.463	@ .156 +-.280E-01	3.43 +-.616	.487E-01+-.874E-02	37
		@ 3.8000	155.63	130.4				
		+- 0.1200	+- 10.07	+-21.88	@ .299 +-.470E-01	6.58 +-1.03	.933E-01+-.147E-01	37
2.50	2.36	1.9645	@ 90.00	43.05	.226 +-.240E-01	4.98 +-.528	@ .708E-01+-.750E-02	6
2.51	2.36	@ 3.0000	121.34	69.88	@ .219 +-.340E-01	4.86 +-.754	.688E-01+-.107E-01	37
2.57	2.39	2.0286	@ 90.00	42.64	.138 +-.136E-01	3.21 +-.317	@ .446E-01+-.440E-02	6
		4.0571	#180.00	180.0	.511 +-.465E-01	11.9 +-1.08	# .165 +-.150E-01	47
2.58+- 0.14	2.39	@ 1.0000	59.48	25.21	@ .493 +-.510E-01	11.6 +-1.20	.159 +-.165E-01	37
2.60+- 0.10	2.40	@ 2.0000	88.52	41.51	@ .177 +-.330E-01	4.21 +-.786	.578E-01+-.108E-01	37
2.60	2.40	@ 3.0000	117.33	64.90	@ .132 +-.240E-01	3.14 +-.571	.432E-01+-.785E-02	37
		4.1121	#180.00	180.0	.458 +-.397E-01	10.9 +-.946	# .150 +-.130E-01	47
2.61	2.40	4.1305	#180.00	180.0	.423 +-.426E-01	10.1 +-1.02	# .139 +-.140E-01	47
2.62	2.41	1.0372	@ 60.00	25.24	.642 +-.515E-01	15.5 +-1.24	@ .212 +-.170E-01	6
		2.0744	@ 90.00	42.33	.128 +-.112E-01	3.09 +-.271	@ .422E-01+-.370E-02	6

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
2.62	2.41	4.1488	#180.00	180.0	.424 +-.575E-01	10.2 +-1.39	# .140 +-.190E-01	47
2.63	2.41	4.1672	#180.00	180.0	.446 +-.452E-01	10.9 +-1.10	# .148 +-.150E-01	47
2.64	2.42	2.0928	@ 90.00	42.21	.612E-01+-.991E-02	1.50 +-.243	@ .204E-01+-.330E-02	23
2.69+- 0.11	2.43	@ 2.0000	86.37	39.60	@ .850E-01+-.188E-01	2.17 +-.479	.289E-01+-.639E-02	37
2.71	2.44	4.3140	#180.00	180.0	.425 +-.437E-01	11.0 +-1.13	# .146 +-.150E-01	47
2.72	2.45	2.1662	@ 90.00	41.73	.882E-01+-.609E-02	2.30 +-.159	@ .304E-01+-.210E-02	6
2.73	2.45	4.3507	#180.00	180.0	.373 +-.231E-01	9.78 +-.606	# .129 +-.800E-02	47
2.74+- 0.19	2.45	@ 1.0000	57.32	23.60	@ .468 +-.480E-01	12.4 +-1.27	.162 +-.166E-01	37
2.74	2.45	2.1846	@ 90.00	41.61	.460E-01+-.170E-01	1.22 +-.449	@ .160E-01+-.590E-02	23
		4.3691	#180.00	180.0	.406 +-.345E-01	10.7 +-.912	# .141 +-.120E-01	47
2.75	2.46	4.3875	#180.00	180.0	.384 +-.516E-01	10.2 +-1.37	# .134 +-.180E-01	47
2.76	2.46	2.2029	@ 90.00	41.49	.394E-01+-.456E-02	1.06 +-.122	@ .138E-01+-.160E-02	23
2.78	2.47	1.1107	@ 60.00	24.64	.636 +-.283E-01	17.3 +-.770	@ .225 +-.100E-01	6
2.79	2.47	4.4610	#180.00	180.0	.442 +-.704E-01	12.1 +-1.93	# .157 +-.250E-01	47
2.80	2.48	4.4794	#180.00	180.0	.353 +-.252E-01	9.76 +-.697	# .126 +-.900E-02	47
2.81	2.48	2.2489	@ 90.00	41.21	.629E-01+-.503E-02	1.75 +-.140	@ .225E-01+-.180E-02	6
		4.4978	#180.00	180.0	.319 +-.363E-01	8.86 +-1.01	# .114 +-.130E-01	47
2.83	2.49	4.5346	#180.00	180.0	.357 +-.333E-01	10.1 +-.938	# .129 +-.120E-01	47
2.85	2.50	2.2857	@ 90.00	40.98	.181E-01+-.550E-02	0.519 +-.157	@ .660E-02+-.200E-02	23
2.86	2.50	4.5897	#180.00	180.0	.331 +-.274E-01	9.54 +-.789	# .121 +-.100E-01	47
		4.5897	#180.00	180.0	.235 +-.383E-01	6.78 +-1.10	# .860E-01+-.140E-01	47
2.87	2.50	2.3041	@ 90.00	40.87	.188E-01+-.191E-02	0.546 +-.554E-01	@ .690E-02+-.700E-03	23
2.89	2.51	2.3225	@ 90.00	40.76	.425E-01+-.352E-02	1.25 +-.103	@ .157E-01+-.130E-02	6
		4.6450	#180.00	180.0	.268 +-.216E-01	7.88 +-.637	# .990E-01+-.800E-02	47
2.90+- 0.22	2.51	@ 1.0000	55.35	22.16	@ .413 +-.430E-01	12.2 +-1.27	.152 +-.159E-01	37
2.92	2.52	1.1751	@ 60.00	24.15	.612 +-.588E-01	18.4 +-1.77	@ .229 +-.220E-01	6
2.93	2.53	4.7186	#180.00	180.0	.298 +-.320E-01	9.02 +-.966	# .112 +-.120E-01	47
2.96	2.54	4.7739	#180.00	180.0	.258 +-.263E-01	7.96 +-.812	# .980E-01+-.100E-01	47
2.97	2.54	2.3961	@ 90.00	40.33	.108E-01+-.142E-02	0.336 +-.440E-01	@ .412E-02+-.540E-03	23
		4.7923	#180.00	180.0	.254 +-.236E-01	7.90 +-.733	# .970E-01+-.900E-02	47
2.98	2.54	2.4054	@ 90.00	40.27	.259E-01+-.392E-02	0.810 +-.123	@ .992E-02+-.150E-02	6
2.99	2.55	2.4146	@ 90.00	40.22	.126E-01+-.114E-02	0.397 +-.360E-01	@ .485E-02+-.440E-03	23
3.00	2.55	$ 0.0000	# 0.00	.0	# 1.14 +-.290	36.1 +-9.19	.440 +-.112	149
		# 0.0370	# 10.00	3.682	# 1.91 +-.230	60.5 +-7.29	.737 +-.887E-01	149
		# 0.0830	# 15.00	5.539	# 3.48 +-.300	110. +-9.51	1.34 +-.116	149
		# 0.1460	# 20.00	7.391	# 2.43 +-.240	77.0 +-7.61	.937 +-.926E-01	149
		# 0.2270	# 25.00	9.288	# 2.14 +-.180	67.8 +-5.70	.826 +-.694E-01	149
		# 0.3250	# 30.00	11.22	# 1.47 +-.150	46.6 +-4.75	.567 +-.579E-01	149
		# 0.5670	# 40.00	15.19	# .430 +-.700E-01	13.6 +-2.22	.166 +-.270E-01	149
		# 0.8660	# 50.00	19.39	# .390 +-.800E-01	12.4 +-2.54	.150 +-.309E-01	149
3.00+- 0.10	2.55	@ 1.0200	54.64	21.45				
		+- 0.0900	+- 2.61	+-1.169	@ .378 +-.670E-01	12.0 +-2.12	.146 +-.258E-01	37
		@ 1.0800	56.36	22.23				
		+- 0.1000	+- 2.84	+-1.289	@ .383 +-.400E-01	12.1 +-1.27	.148 +-.154E-01	37
3.00	2.55	# 1.2120	# 60.00	23.88	# .390 +-.800E-01	12.4 +-2.54	.150 +-.309E-01	149
		# 1.5950	# 70.00	28.76	# .310 +-.800E-01	9.82 +-2.54	.120 +-.309E-01	149
3.00+- 0.10	2.55	@ 4.0400	131.97	78.44				
		+- 0.1500	+- 4.77	+-6.224	@ .129 +-.180E-01	4.08 +-.570	.496E-01+-.694E-02	37
3.00	2.55	4.8476	#180.00	180.0	.213 +-.207E-01	6.74 +-.657	# .820E-01+-.800E-02	47
3.03	2.56	4.9029	#180.00	180.0	.197 +-.333E-01	6.38 +-1.08	# .770E-01+-.130E-01	47
3.04	2.57	4.9213	#180.00	180.0	.204 +-.204E-01	6.65 +-.665	# .800E-01+-.800E-02	47
		4.9213	#180.00	180.0	.189 +-.281E-01	6.15 +-.914	# .740E-01+-.110E-01	47
3.07	2.58	4.9766	#180.00	180.0	.237 +-.354E-01	7.88 +-1.17	# .940E-01+-.140E-01	47
3.08	2.58	1.2488	@ 60.00	23.62	.443 +-.252E-01	14.8 +-.840	@ .176 +-.100E-01	6
3.07	2.58	2.4883	@ 90.00	39.81	.250E-01+-.657E-02	0.830 +-.218	@ .990E-02+-.260E-02	6
3.09	2.58	2.5067	@ 90.00	39.70	.559E-02+-.108E-02	0.188 +-.362E-01	@ .223E-02+-.430E-03	23
		3.7601	@120.00	63.86	.351E-01+-.160E-01	1.18 +-.539	@ .140E-01+-.640E-02	23
3.10	2.59	5.0319	#180.00	180.0	.140 +-.150E-01	4.73 +-.507	# .560E-01+-.600E-02	47
3.11	2.59	2.5252	@ 90.00	39.60	.898E-02+-.746E-03	0.306 +-.254E-01	@ .361E-02+-.300E-03	23
		3.7878	@120.00	63.72	.363E-01+-.871E-02	1.24 +-.297	@ .146E-01+-.350E-02	23
		5.0504	#180.00	180.0	.174 +-.149E-01	5.93 +-.508	# .700E-01+-.600E-02	47
3.16	2.61	2.5713	@ 90.00	39.35	.134E-01+-.342E-02	0.473 +-.120	@ .550E-02+-.140E-02	6
3.17	2.61	5.1611	#180.00	180.0	.141 +-.146E-01	5.00 +-.517	# .580E-01+-.600E-02	47
		5.1611	#180.00	180.0	.134 +-.170E-01	4.74 +-.603	# .550E-01+-.700E-02	47
		5.1611	#180.00	180.0	.136 +-.146E-01	4.82 +-.517	# .560E-01+-.600E-02	47
3.19	2.62	5.1980	#180.00	180.0	.126 +-.145E-01	4.50 +-.520	# .520E-01+-.600E-02	47
3.20+- 0.35	2.62	@ 1.0000	52.27	20.03	@ .282 +-.300E-01	10.2 +-1.08	.116 +-.123E-01	37
3.21	2.63	2.6175	@ 90.00	39.11	.468E-02+-.101E-02	0.170 +-.366E-01	@ .195E-02+-.420E-03	23
3.23	2.63	2.6360	@ 90.00	39.01	.534E-02+-.548E-03	0.196 +-.201E-01	@ .224E-02+-.230E-03	23
		3.9539	@120.00	62.89	.265E-01+-.834E-02	0.972 +-.306	@ .111E-01+-.350E-02	23
3.24	2.64	1.3226	@ 60.00	23.12	.352 +-.166E-01	13.0 +-.615	@ .148 +-.700E-02	6
		5.2904	#180.00	180.0	.162 +-.190E-01	5.97 +-.702	# .680E-01+-.800E-02	47
3.25+- 0.15	2.64	@ 2.0000	75.82	30.84	@ .384E-01+-.910E-02	1.43 +-.338	.162E-01+-.384E-02	37
3.25	2.64	3.9816	@120.00	62.75	.211E-01+-.402E-02	0.784 +-.150	@ .890E-02+-.170E-02	23
		5.3088	#180.00	180.0	.104 +-.947E-02	3.87 +-.352	# .440E-01+-.400E-02	47
3.26	2.65	2.6637	@ 90.00	38.87	.100E-01+-.226E-02	0.375 +-.847E-01	@ .425E-02+-.960E-03	6
3.32+- 0.10	2.67	@ 3.0000	95.99	42.49	@ .102E-01+-.500E-02	0.396 +-.194	.441E-02+-.216E-02	37
3.32	2.67	5.4382	#180.00	180.0	.111 +-.139E-01	4.31 +-.538	# .480E-01+-.600E-02	47
3.34	2.67	2.7376	@ 90.00	38.49	.920E-02+-.252E-02	0.362 +-.992E-01	@ .401E-02+-.110E-02	6
		2.7376	@ 90.00	38.49	.397E-02+-.666E-03	0.156 +-.261E-01	@ .173E-02+-.290E-03	23
		4.1064	@120.00	62.15	.174E-01+-.505E-02	0.685 +-.198	@ .760E-02+-.220E-02	23
3.35+- 0.34	2.68	@ 1.0000	50.80	19.00	@ .269 +-.420E-01	10.6 +-1.66	.116 +-.182E-01	37
3.35	2.68	5.4936	#180.00	180.0	.103 +-.137E-01	4.07 +-.542	# .450E-01+-.600E-02	47
3.36	2.68	2.7561	@ 90.00	38.40	.383E-02+-.365E-03	0.152 +-.145E-01	@ .168E-02+-.160E-03	23
		4.1341	@120.00	62.02	.169E-01+-.274E-02	0.671 +-.109	@ .740E-02+-.120E-02	23
		5.5121	#180.00	180.0	.107 +-.137E-01	4.26 +-.544	# .470E-01+-.600E-02	47
3.37	2.68	5.5306	#180.00	180.0	.932E-01+-.182E-01	3.73 +-.727	# .410E-01+-.800E-02	47
3.39	2.69	1.3919	@ 60.00	22.68	.204 +-.115E-01	8.27 +-.466	@ .905E-01+-.510E-02	6

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
3.39+- 0.15	2.69	@ 2.0000	73.73	29.23	@ .372E-01+-.910E-02	1.51 +-.368	.164E-01+-.402E-02	37
3.43	2.70	5.6416	#180.00	180.0	.958E-01+-.134E-01	3.97 +-.554	# .430E-01+-.600E-02	47
		5.6416	#180.00	180.0	.846E-01+-.111E-01	3.51 +-.461	# .380E-01+-.500E-02	47
3.46	2.72	2.8486	@ 90.00	37.95	.922E-02+-.179E-02	0.389 +-.753E-01	@ .418E-02+-.810E-03	6
3.46+- 0.10	2.72	@ 4.0000	113.92	55.64	@ .480E-01+-.100E-01	2.02 +-.422	.217E-01+-.453E-02	37
3.47	2.72	2.8578	@ 90.00	37.90	.389E-02+-.748E-03	0.165 +-.317E-01	@ .177E-02+-.340E-03	23
3.47+- 0.10	2.72	@ 3.0000	92.90	39.74	@ .137E-01+-.450E-02	0.581 +-.191	.623E-02+-.205E-02	37
3.47	2.72	4.2867	@120.00	61.32	.123E-01+-.418E-02	0.522 +-.177	@ .560E-02+-.190E-02	23
3.49+- 0.34	2.73	@ 1.0000	49.54	18.14	@ .230 +-.440E-01	9.86 +-1.89	.104 +-.200E-01	37
3.49	2.73	2.8763	@ 90.00	37.81	.310E-02+-.415E-03	0.133 +-.178E-01	@ .142E-02+-.190E-03	23
		4.3145	@120.00	61.19	.105E-01+-.240E-02	0.450 +-.103	@ .480E-02+-.110E-02	23
3.50+- 0.10	2.73	@ 1.0200	49.74	18.06				
		+- 0.0900	+- 2.34	+-.9513	@ .237 +-.310E-01	10.2 +-1.34	.109 +-.142E-01	37
		@ 1.4100	59.27	22.07				
		+- 0.1200	+- 2.77	+-1.211	@ .143 +-.270E-01	6.17 +-1.16	.656E-01+-.124E-01	37
		@ 2.0200	72.58	28.25				
		+- 0.1800	+- 3.75	+-1.855	@ .383E-01+-.490E-02	1.65 +-.211	.176E-01+-.225E-02	37
		@ 3.0300	92.92	39.61				
		+- 0.2000	+- 3.98	+-2.529	@ .104E-01+-.310E-02	0.449 +-.134	.477E-02+-.142E-02	37
		@ 3.9800	112.36	54.03				
		+- 0.2000	+- 4.30	+-3.734	@ .420E-01+-.910E-02	1.81 +-.393	.193E-01+-.418E-02	37
3.50	2.73	5.7711	#180.00	180.0	.523E-01+-.653E-02	2.25 +-.282	# .240E-01+-.300E-02	47
3.51	2.73	1.4474	@ 60.00	22.35	.142 +-.111E-01	6.18 +-.480	@ .656E-01+-.510E-02	6
3.55	2.75	@ 2.0000	71.47	27.52	@ .345E-01+-.840E-02	1.53 +-.373	.161E-01+-.392E-02	37
3.56	2.75	2.9411	@ 90.00	37.51	.812E-02+-.169E-02	0.362 +-.753E-01	@ .380E-02+-.790E-03	6
3.58+- 0.11	2.76	@ 4.0000	110.66	52.13	@ .175E-01+-.470E-02	0.790 +-.212	.824E-02+-.221E-02	37
3.60	2.76	5.9563	#180.00	180.0	.654E-01+-.844E-02	2.98 +-.385	# .310E-01+-.400E-02	47
3.61	2.77	2.9874	@ 90.00	37.30	.488E-02+-.862E-03	0.224 +-.396E-01	@ .232E-02+-.410E-03	23
		4.4811	@120.00	60.46	.612E-02+-.149E-02	0.281 +-.685E-01	@ .291E-02+-.710E-03	23
3.63	2.77	3.0059	@ 90.00	37.21	.418E-02+-.397E-03	0.194 +-.184E-01	@ .200E-02+-.190E-03	23
		4.5089	@120.00	60.34	.100E-01+-.230E-02	0.466 +-.107	@ .480E-02+-.110E-02	23
3.64+- 0.11	2.78	@ 3.0000	89.76	37.06	@ .780E-02+-.370E-02	0.364 +-.173	.374F-02+-.177E-02	37
3.68	2.79	1.5261	@ 60.00	21.90	.103 +-.117E-01	4.89 +-.560	@ .498E-01+-.570E-02	6
		3.0522	@ 90.00	37.01	.609E-02+-.144E-02	0.291 +-.687E-01	@ .296E-02+-.700E-03	6
3.69+- 0.29	2.79	@ 1.5000	59.54	21.79	@ .127 +-.300E-01	6.09 +-1.44	.615E-01+-.145F-01	37
3.70	2.80	6.1415	#180.00	180.0	.982E-01+-.818E-02	4.73 +-.395	# .480E-01+-.400E-02	47
3.73+- 0.14	2.81	@ 2.0000	65.29	25.95	@ .283E-01+-.680E-02	1.39 +-.333	.139E-01+-.335E-02	37
3.75+- 0.43	2.81	@ 1.0000	47.56	16.86	@ .197 +-.270E-01	9.76 +-1.34	.964E-01+-.132E-01	37
3.76	2.82	3.1264	@ 90.00	36.68	.318E-02+-.563E-03	0.158 +-.280E-01	@ .158E-02+-.280E-03	23
3.79	2.83	3.1542	@ 90.00	36.56	.371E-02+-.339E-03	0.187 +-.171E-01	@ .186E-02+-.170E-03	23
		3.1542	@ 90.00	36.56	.600E-02+-.141E-02	0.303 +-.715E-01	@ .301E-02+-.710E-03	6
3.83	2.84	1.5956	@ 60.00	21.53	.868E-01+-.120E-01	4.48 +-.620	@ .441E-01+-.610E-02	6
3.88+- 0.18	2.86	@ 2.0000	67.61	24.77	@ .201E-01+-.450E-02	1.07 +-.239	.103E-01+-.231E-02	37
3.90+- 0.22	2.86	@ 1.5000	57.46	20.36	@ .127 +-.260E-01	6.80 +-1.39	.656E-01+-.134E-01	37
3.90	2.86	3.2562	@ 90.00	36.13	.430E-02+-.164E-02	0.230 +-.878E-01	@ .223E-02+-.850E-03	6
		6.5124	#180.00	180.0	.733E-01+-.772E-02	3.93 +-.413	# .380E-01+-.400E-02	47
3.91	2.87	3.2655	@ 90.00	36.10	.292E-02+-.693E-03	0.157 +-.373E-01	@ .152E-02+-.360E-03	23
3.93	2.87	3.2840	@ 90.00	36.02	.291E-02+-.689E-03	0.158 +-.375E-01	@ .152E-02+-.360E-03	23
3.94+- 0.49	2.88	@ 1.0000	46.25	16.03	@ .224 +-.440E-01	12.2 +-2.41	.116 +-.227E-01	37
3.96+- 0.09	2.88	@ 4.0000	102.63	43.62	@ .101E-01+-.360E-02	0.558 +-.199	.532E-02+-.190E-02	37
4.00	2.90	$ 0.0000	# 0.00	.0	# 1.17 +-.150	65.9 +-8.45	.624 +-.800E-01	149
		$ 0.0005	# 1.00	.3240	# .690 +-.330	38.9 +-18.6	.368 +-.176	149
		$ 0.0020	# 2.00	.6469	# .710 +-.110	40.0 +-6.20	.378 +-.586E-01	149
		$ 0.0046	# 3.00	.9700	# .680 +-.110	38.3 +-6.20	.362 +-.586E-01	149
		# 0.0090	# 4.25	1.358	# 1.11 +-.130	62.5 +-7.32	.592 +-.693E-01	149
		# 0.0510	# 10.00	3.243	# 1.62 +-.190	91.3 +-10.7	.863 +-.101	149
		# 0.0800	# 12.50	4.070	# 1.91 +-.900E-01	108. +-5.07	1.02 +-.480E-01	149
		# 0.1150	# 15.00	4.892	# 1.77 +-.130	99.7 +-7.32	.943 +-.693E-01	149
		# 0.1560	# 17.50	5.714	# 1.76 +-.190	95.8 +-10.7	.906 +-.101	149
		# 0.2040	# 20.00	6.557	# 1.28 +-.130	72.1 +-7.32	.682 +-.693E-01	149
		# 0.3160	# 25.00	8.226	# .760 +-.900E-01	42.8 +-5.07	.405 +-.480E-01	149
		# 0.4520	# 30.00	9.937	# .340 +-.600E-01	19.2 +-3.38	.181 +-.320E-01	149
4.00+- 0.10	2.90	@ 0.5500	33.31	11.05				
		+- 0.0600	+- 1.87	+-.6524	@ .292 +-.990E-01	16.5 +-5.58	.156 +-.527E-01	37
4.00	2.90	# 0.6110	# 35.00	11.69	# .280 +-.600E-01	15.8 +-3.38	.149 +-.320E-01	149
		# 0.7900	# 40.00	13.48	# .300 +-.700E-01	16.9 +-3.94	.160 +-.373E-01	149
		# 0.9890	# 45.00	15.32	# .320 +-.600E-01	18.0 +-3.38	.171 +-.320E-01	149
4.00+- 0.10	2.90	@ 1.0000	45.48	15.43				
		+- 0.0800	+- 1.92	+-.7163	@ .245 +-.370E-01	13.8 +-2.08	.131 +-.197E-01	37
		@ 1.0600	46.50	15.96				
		+- 0.1000	+- 2.34	+-.8824	@ .174 +-.310E-01	9.80 +-1.75	.927E-01+-.165E-01	37
4.00	2.90	# 1.2060	# 50.00	17.22	# .260 +-.400E-01	14.6 +-2.25	.139 +-.213E-01	149
		# 1.4400	# 55.00	19.19	# .260 +-.600E-01	14.6 +-3.38	.139 +-.320E-01	149
		# 1.6880	# 60.00	21.24	# .600E-01+-.300E-01	3.38 +-1.69	.320E-01+-.160E-01	149
4.00+- 0.10	2.90	@ 1.9600	65.52	23.45				
		+- 0.1500	+- 2.82	+-1.234	@ .203E-01+-.600E-02	1.14 +-.338	.108E-01+-.320E-02	37
		@ 2.1200	68.50	24.81				
		+- 0.1600	+- 2.94	+-1.325	@ .262E-01+-.500E-02	1.48 +-.282	.140E-01+-.266E-02	37
		@ 4.0200	101.60	43.15				
		+- 0.2100	+- 3.67	+-2.549	@ .880E-02+-.160E-02	0.496 +-.901E-01	.469E-02+-.852E-03	37
4.05	2.91	3.3954	@ 90.00	35.57	.244E-02+-.592E-03	0.141 +-.342E-01	@ .132E-02+-.320E-03	23
4.07	2.92	3.4140	@ 90.00	35.50	.162E-02+-.405E-03	0.945E-01+-.236E-01	@ .880E-03+-.220E-03	23
4.07+- 0.24	2.92	@ 4.0000	100.12	41.92	@ .610E-02+-.210E-02	0.356 +-.122	.330E-02+-.114E-02	37
4.08+- 0.21	2.92	@ 2.0000	65.53	23.33	@ .225E-01+-.610E-02	1.32 +-.358	.122E-01+-.331E-02	37
4.10	2.93	6.8836	#180.00	180.0	.767E-01+-.913E-02	4.54 +-.540	# .420E-01+-.500E-02	47
4.12+- 0.31	2.93	@ 1.5000	55.67	19.20	@ .103 +-.220E-01	6.16 +-1.31	.564E-01+-.120E-01	37
4.20	2.96	7.0694	#180.00	180.0	.551E-01+-.711E-02	3.42 +-.442	# .310E-01+-.400E-02	47
4.23+- 0.62	2.97	@ 1.0000	44.52	14.98	@ .210 +-.510E-01	13.2 +-3.21	.117 +-.283E-01	37

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D ONEGA (CM) MU BARN/STERAD	REF
4.23+- 0.22	2.97	@ 2.0000	64.08	22.36	@ .221E-01+-.530E-02	1.39 +-.334	.125E-01+-.300E-02	37
4.23	2.97	3.5626	@ 90.00	34.93	.104E-02+-.282E-03	0.656E-01+-.178E-01	@ .590E-03+-.160E-03	23
4.25	2.98	3.5812	@ 90.00	34.86	.877E-03+-.386E-03	0.558E-01+-.246E-01	@ .500E-03+-.220E-03	23
4.30	2.99	7.2552	#180.00	180.0	.416E-01+-.520E-02	2.71 +-.338	# .240E-01+-.300E-02	47
4.33+- 0.30	3.00	@ 1.5000	54.01	18.13	@ .900E-01+-.130E-01	5.94 +-.858	.521E-01+-.753E-02	37
4.40	3.02	3.7206	@ 90.00	34.36	.963E-03+-.355E-03	0.656E-01+-.242E-01	@ .570E-03+-.210E-03	23
4.42	3.03	3.7392	@ 90.00	34.29	.588E-03+-.336E-03	0.405E-01+-.231E-01	@ .350E-03+-.200E-03	23
4.47+- 0.27	3.04	@ 2.0000	61.98	20.98	@ .139E-01+-.420E-02	0.978 +-.296	.834E-02+-.252E-02	37
4.47	3.04	@ 3.0000	78.02	27.95	@ .100E-03+-.100E-03	0.704E-02+-.704E-02	.603E-04+-.603E-04	37
4.50+- 0.10	3.05	@ 0.5700	31.74	9.965				
		+- 0.0600	+- 1.71	+-.5638	@ .146 +-.570E-01	10.4 +-4.06	.886E-01+-.346E-01	37
		@ 1.0200	42.91	13.74				
		+- 0.0900	+- 1.99	+-.6929	@ .188 +-.490E-01	13.4 +-3.49	.114 +-.297E-01	37
		@ 1.4900	52.48	17.19				
		+- 0.1400	+- 2.65	+-.9876	@ .733E-01+-.115E-01	5.23 +-.820	.445E-01+-.698E-02	37
		@ 1.9700	61.11	20.51				
		+- 0.1500	+- 2.58	+-1.029	@ .165E-01+-.700E-02	1.18 +-.499	.100E-01+-.425E-02	37
		@ 2.0600	62.64	21.13				
		+- 0.1800	+- 3.05	+-1.235	@ .202E-01+-.400E-02	1.44 +-.285	.123E-01+-.243E-02	37
4.50	3.05	7.6271	#180.00	180.0	.346E-01+-.494E-02	2.47 +-.352	# .210E-01+-.300E-02	47
4.52+- 0.35	3.06	@ 1.5000	52.69	17.31	@ .690E-01+-.210E-01	4.96 +-1.51	.418E-01+-.127E-01	37
4.57	3.08	3.8787	@ 90.00	33.81	<.583E-03	<.429E-01	@ <.360E-03	23
4.59	3.08	3.8973	@ 90.00	33.75	.564E-03+-.564E-03	0.419E-01+-.419E-01	@ .350E-03+-.350E-03	23
4.62+- 0.59	3.09	@ 1.0000	42.19	13.52	@ .510E-01+-.350E-01	3.83 +-2.63	.313E-01+-.215E-01	37
4.64+- 0.32	3.10	@ 2.0000	60.63	20.12	@ .114E-01+-.460E-02	0.864 +-.349	.712E-02+-.287E-02	37
4.66	3.10	@ 3.0000	75.94	26.48	@ .170E-02+-.170E-02	0.130 +-.130	.107E-02+-.107E-02	37
4.70	3.11	7.9993	#180.00	180.0	.298E-01+-.471E-02	2.32 +-.367	# .190E-01+-.300E-02	47
4.74+- 0.36	3.13	@ 1.5000	51.23	16.42	@ .570E-01+-.100E-01	4.51 +-.791	.364E-01+-.639E-02	37
4.75+- 0.16	3.13	@ 4.0000	89.41	32.97	@ .120E-02+-.900E-03	0.953E-01+-.715E-01	.772E-03+-.579E-03	37
4.75	3.13	4.0462	@ 90.00	33.26	.342E-03+-.342E-03	0.271E-01+-.271E-01	@ .220E-03+-.220E-03	23
4.77	3.14	4.0648	@ 90.00	33.20	<.479E-03	<.384E-01	@ <.310E-03	23
4.78+- 0.36	3.14	@ 2.0000	59.58	19.47	@ .108E-01+-.440E-02	0.869 +-.354	.696E-02+-.284E-02	37
4.85	3.16	@ 3.0000	74.02	25.17	@ <.290E-02	<.240	<.191E-02	37
4.86	3.16	8.2972	#180.00	180.0	.273E-01+-.454E-02	2.27 +-.378	# .180E-01+-.300E-02	47
4.94+- 0.13	3.19	@ 4.0000	87.01	31.15	@ .100E-02+-.800E-03	0.859E-01+-.687E-01	.672E-03+-.537E-03	37
4.95+- 0.37	3.19	@ 2.0000	58.35	18.70	@ .780E-02+-.490E-02	0.673 +-.423	.522E-02+-.328E-02	37
4.97+- 0.39	3.19	@ 1.5000	49.84	15.59	@ .340E-01+-.900E-02	2.96 +-.783	.229E-01+-.605E-02	37
5.00	3.20	$ 0.0000	# 0.00	.0	# 1.62 +-.440	143. +-38.7	1.10 +-.300	149
		# 0.0150	# 4.75	1.403	# .740 +-.280	65.1 +-24.6	.504 +-.191	149
		# 0.0650	# 10.00	2.930	# 1.43 +-.140	126. +-12.3	.974 +-.953E-01	149
		# 0.1010	# 12.50	3.659	# 1.16 +-.160	102. +-14.1	.790 +-.109	149
		# 0.1460	# 15.00	4.411	# 1.06 +-.140	93.3 +-12.3	.722 +-.953E-01	149
		# 0.1980	# 17.50	5.151	# .840 +-.130	73.9 +-11.4	.572 +-.885E-01	149
		# 0.2580	# 20.00	5.900	# .690 +-.110	60.7 +-9.68	.470 +-.749E-01	149
		# 0.4010	# 25.00	7.416	# .320 +-.600E-01	28.2 +-5.28	.218 +-.409E-01	149
		# 0.5730	# 30.00	8.954	# .160 +-.400E-01	14.1 +-3.52	.109 +-.272E-01	149
		# 0.6700	# 32.50	9.737	# .130 +-.300E-01	11.4 +-2.64	.885E-01+-.204E-01	149
		# 0.7740	# 35.00	10.53	# .180 +-.400E-01	15.8 +-3.52	.123 +-.272E-01	149
		# 1.0010	# 40.00	12.14	# .190 +-.400E-01	16.7 +-3.52	.129 +-.272E-01	149
5.00+- 0.10	3.20	@ 1.0700	41.42	12.62				
		+- 0.1000	+- 2.02	+-.6680	@ .415E-01+-.360E-01	3.65 +-3.17	.283E-01+-.245E-01	37
5.00	3.20	# 1.1240	# 42.50	12.97	# .140 +-.400E-01	12.3 +-3.52	.953E-01+-.272E-01	149
		# 1.2530	# 45.00	13.80	# .160 +-.400E-01	14.1 +-3.52	.109 +-.272E-01	149
		# 1.5280	# 50.00	15.51	# .800E-01+-.300E-01	7.04 +-2.64	.545E-01+-.204E-01	149
5.00+- 0.10	3.20	@ 1.5700	50.73	15.78				
		+- 0.1400	+- 2.42	+-.8502	@ .377E-01+-.800E-02	3.32 +-.704	.257E-01+-.545E-02	37
5.00	3.20	# 1.8250	# 55.00	17.30	# .300E-01+-.150E-01	2.64 +-1.32	.204E-01+-.102E-01	149
5.00+- 0.10	3.20	@ 2.0700	58.93	18.75				
		+- 0.2000	+- 3.13	+-1.173	@ .950E-02+-.200E-02	0.836 +-.176	.647E-02+-.136E-02	37
		@ 3.0600	73.47	24.60				
		+- 0.2400	+- 3.35	+-1.453	@ <.100E-02	<.880E-01	<.681E-03	37
		@ 4.1000	87.62	31.30				
		+- 0.2900	+- 3.89	+-2.016	@ .900E-03+-.900E-03	0.792E-01+-.792E-01	.613E-03+-.613E-03	37
5.03	3.21	@ 3.0000	72.34	24.04	@ <.110E-02	<.980E-01	<.754E-03	37
		8.6138	#180.00	180.0	.321E-01+-.584E-02	2.86 +-.520	# .220E-01+-.400E-02	47
5.07	3.22	8.6884	#180.00	180.0	.289E-01+-.579E-02	2.62 +-.524	# .200E-01+-.400E-02	47
5.15+- 0.21	3.25	@ 4.0000	84.65	29.44	@ .190E-02+-.110E-02	0.177 +-.103	.133E-02+-.772E-03	37
5.17	3.25	8.8747	#180.00	180.0	.255E-01+-.566E-02	2.40 +-.533	# .180E-01+-.400E-02	47
5.20+- 0.18	3.26	@ 3.0000	70.89	23.11	@ .900E-03+-.900E-03	0.857E-01+-.857E-01	.639E-03+-.639E-03	37
5.28	3.28	9.0798	#180.00	180.0	.194E-01+-.415E-02	1.90 +-.408	# .140E-01+-.300E-02	47
5.35+- 0.32	3.30	@ 4.0000	82.63	28.03	@ .110E-02+-.800E-03	0.111 +-.806E-01	.803E-03+-.584E-03	37
5.36+- 0.29	3.31	@ 3.0000	69.64	22.32	@ .140E-02+-.140E-02	0.142 +-.142	.103E-02+-.103E-02	37
5.50	3.35	9.4900	#180.00	180.0	.185E-01+-.397E-02	1.97 +-.423	# .140E-01+-.300E-02	47
5.80	3.43	$ 0.0000	# 0.00	.0	# 1.48 +-.220	175. +-26.1	1.18 +-.176	149
		$ 0.0008	# 1.00	.2733	# .800 +-.310	94.8 +-36.7	.640 +-.248	149
		$ 0.0031	# 2.00	.5465	# .640 +-.200	75.8 +-23.7	.512 +-.160	149
		$ 0.0094	# 3.50	.9561	# .500 +-.110	59.2 +-13.0	.400 +-.880E-01	149
		# 0.0190	# 5.00	1.362	# .800 +-.110	94.8 +-13.0	.640 +-.880E-01	149
		# 0.0760	# 10.00	2.731	# 1.08 +-.140	128. +-16.6	.864 +-.112	149
		# 0.1190	# 12.50	3.425	# .920 +-.130	109. +-15.4	.736 +-.104	149
		# 0.1710	# 15.00	4.115	# .670 +-.700E-01	79.4 +-8.29	.536 +-.560E-01	149
		# 0.2330	# 17.50	4.818	# .510 +-.100E 00	60.4 +-11.8	.408 +-.800E-01	149
		# 0.3030	# 20.00	5.513	# .340 +-.800E-01	40.3 +-9.48	.272 +-.640E-01	149
		# 0.4710	# 25.00	6.930	# .100E 00+-.400E-01	11.8 +-4.74	.800E-01+-.320E-01	149
		# 0.6730	# 30.00	8.368	# .130 +-.400E-01	15.4 +-4.74	.104 +-.320E-01	149
6.00	3.48	# 0.1000	11.24	3.031	# 1.13 +-.110	143. +-13.9	.938 +-.912E-01	137
		# 0.1500	13.78	3.721	# .863 +-.600E-01	109. +-7.61	.716 +-.498E-01	137
		# 0.2000	15.92	4.307	# .671 +-.500E-01	85.1 +-6.34	.557 +-.415E-01	137

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
6.00	3.48	# 0.3000	19.54	5.300	# .339 +-.400E-01	43.0 +-5.07	.281 +-.332E-01	137
		# 0.4000	22.59	6.148	# .130 +-.140E-01	16.5 +-1.77	.108 +-.116E-01	137
		# 0.5000	25.30	6.907	# .777E-01+-.100E-01	9.85 +-1.27	.644E-01+-.829E-02	137
		# 0.6000	27.76	7.602	# .946E-01+-.120E-01	12.0 +-1.52	.785E-01+-.995E-02	137
		# 0.7000	30.04	8.251	# .122 +-.100E-01	15.5 +-1.27	.101 +-.829E-02	137
		# 0.9000	34.18	9.448	# .140 +-.700E-02	17.7 +-.887	.116 +-.581E-02	137
		# 1.1000	37.91	10.55	# .129 +-.500E-02	16.4 +-.634	.107 +-.415E-02	137
		# 1.3800	42.68	11.99	# .849E-01+-.450E-02	10.8 +-.570	.704E-01+-.373E-02	137
		$ 9.2735	141.21	74.31	@ .378E-02+-.650E-03	0.479 +-.824E-01	.314E-02+-.539E-03	113
		$ 9.6695	148.81	87.27	@ .472E-02+-.580E-03	0.598 +-.735E-01	.391E-02+-.481E-03	113
		$ 9.9335	154.97	100.2	@ .852E-02+-.107E-02	1.08 +-.136	.707E-02+-.887E-03	113
		$10.1275	160.61	114.4	@ .118E-01+-.117E-02	1.50 +-.148	.983E-02+-.970E-03	113
		$10.1355	160.88	115.1	@ .578E-02+-.760E-03	0.733 +-.963E-01	.479E-02+-.630E-03	113
		$10.2125	163.66	123.0	@ .125E-01+-.115E-02	1.59 +-.146	.104E-01+-.954E-03	113
		$10.2825	166.66	132.3	@ .168E-01+-.182E-02	2.13 +-.231	.139E-01+-.151E-02	113
		$10.2985	167.45	134.8	@ .161E-01+-.134E-02	2.04 +-.170	.133E-01+-.111E-02	113
8.00	3.99	$11.8855	132.73	56.27	@ .146E-02+-.320E-03	0.329 +-.721E-01	.165E-02+-.361E-03	113
		$12.2575	136.98	61.36	@ .178E-02+-.300E-03	0.401 +-.676E-01	.201E-02+-.338E-03	113
		$12.6845	142.32	68.77	@ .214E-02+-.320E-03	0.482 +-.721E-01	.241E-02+-.361E-03	113
		$13.0115	146.89	76.23	@ .228E-02+-.340E-03	0.514 +-.766E-01	.257E-02+-.383E-03	113
		$13.4065	153.30	88.88	@ .213E-02+-.320E-03	0.480 +-.721E-01	.240E-02+-.361E-03	113
		$13.6865	158.90	102.5	@ .352E-02+-.500E-03	0.793 +-.113	.397E-02+-.563E-03	113
		$14.0205	168.56	133.1	@ .560E-02+-.490E-03	1.26 +-.110	.631E-02+-.552E-03	113
		$14.0665	170.62	140.8	@ .692E-02+-.790E-03	1.56 +-.178	.780E-02+-.890E-03	113
9.00	4.22	# 0.1000	9.06	2.018	# .592 +-.700E-01	169. +-20.0	.755 +-.893E-01	137
		# 0.1500	11.10	2.476	# .468 +-.500E-01	133. +-14.3	.597 +-.638E-01	137
		# 0.2000	12.83	2.863	# .332 +-.400E-01	94.7 +-11.4	.424 +-.510E-01	137
		# 0.3000	15.72	3.517	# .138 +-.200E-01	39.4 +-5.70	.176 +-.255E-01	137
		# 0.4000	18.18	4.074	# .582E-01+-.800E-02	16.6 +-2.28	.743E-01+-.102E-01	137
		# 0.5000	20.34	4.569	# .388E-01+-.600E-02	11.1 +-1.71	.495E-01+-.766E-02	137
		# 0.6000	22.31	5.020	# .452E-01+-.800E-02	12.9 +-2.28	.577E-01+-.102E-01	137
		# 0.7000	24.12	5.440	# .542E-01+-.500E-02	15.5 +-1.43	.692E-01+-.638E-02	137
		# 0.8000	25.82	5.834	# .657E-01+-.130E-01	18.7 +-3.71	.838E-01+-.166E-01	137
		# 0.9000	27.41	6.207	# .630E-01+-.400E-02	18.0 +-1.14	.804E-01+-.510E-02	137
		# 1.1000	30.37	6.906	# .512E-01+-.300E-02	14.6 +-.856	.653E-01+-.383E-02	137
		# 1.3800	34.12	7.806	# .321E-01+-.240E-02	9.16 +-.685	.410E-01+-.306E-02	137
11.00	4.64	@ 0.2000	11.54	2.340	@ .237 +-.470E-01	101. +-20.0	.373 +-.740E-01	64
		@ 0.3000	14.15	2.873	@ .137 +-.180E-01	58.4 +-7.67	.216 +-.283E-01	64
		@ 0.4000	16.35	3.326	@ .755E-01+-.760E-02	32.2 +-3.24	.119 +-.120E-01	64
		@ 0.5000	18.30	3.728	@ .507E-01+-.600E-02	21.6 +-2.56	.798E-01+-.944E-02	64
		@ 0.6000	20.06	4.094	@ .549E-01+-.108E-01	23.4 +-4.60	.864E-01+-.170E-01	64
		@ 0.7000	21.69	4.433	@ .527E-01+-.740E-02	22.5 +-3.15	.829E-01+-.116E-01	64
		@ 0.9000	24.63	5.052	@ .510E-01+-.510E-02	21.7 +-2.17	.803E-01+-.803E-02	64
12.00	4.84	# 0.1000	7.79	1.513	# .374 +-.500E-01	190. +-25.4	.644 +-.862E-01	137
		# 0.1500	9.55	1.855	# .303 +-.400E-01	154. +-20.3	.522 +-.689E-01	137
		# 0.2000	11.03	2.144	# .202 +-.300E-01	102. +-15.2	.348 +-.517E-01	137
		# 0.3000	13.52	2.632	# .731E-01+-.130E-01	37.1 +-6.59	.126 +-.224E-01	137
		# 0.4000	15.62	3.046	# .329E-01+-.600E-02	16.7 +-3.04	.567E-01+-.103F-01	137
		# 0.5000	17.48	3.414	# .237E-01+-.400E-02	12.0 +-2.03	.408E-01+-.689E-02	137
		# 0.6000	19.16	3.748	# .268E-01+-.600E-02	13.6 +-3.04	.462E-01+-.103E-01	137
		# 0.7000	20.72	4.058	# .304E-01+-.300E-02	15.4 +-1.52	.524E-01+-.517E-02	137
		# 0.8000	22.16	4.348	# .376E-01+-.300E-02	19.1 +-1.52	.648E-01+-.517E-02	137
		# 0.9000	23.53	4.622	# .358E-01+-.300E-02	18.2 +-1.52	.617E-01+-.517E-02	137
		# 1.1000	26.05	5.134	# .266E-01+-.200E-02	13.5 +-1.01	.458E-01+-.345E-02	137
		# 1.3800	29.25	5.789	# .161E-01+-.130E-02	8.16 +-.659	.277E-01+-.224E-02	137
		$18.9176	138.37	53.82	@ .177E-03+-.117E-03	0.898E-01+-.593E-01	.305E-03+-.202E-03	113
		$19.3756	142.16	58.72	@ .355E-03+-.980E-04	0.180 +-.497E-01	.612E-03+-.169E-03	113
		$19.7946	145.94	64.34	@ .466E-03+-.100E-03	0.236 +-.507E-01	.803E-03+-.172E-03	113
		$20.1676	149.64	70.70	@ .586E-03+-.780E-04	0.297 +-.396E-01	.101E-02+-.134E-03	113
		$20.5326	153.71	78.91	@ .586E-03+-.120E-03	0.297 +-.608E-01	.101E-02+-.207E-03	113
		$20.8586	157.93	89.05	@ .650E-03+-.140E-03	0.330 +-.710E-01	.112E-02+-.241E-03	113
		$21.1926	163.25	104.8	@ .970E-03+-.160E-03	0.492 +-.811E-01	.167E-02+-.276E-03	113
		$21.4026	167.68	121.0	@ .185E-02+-.250E-03	0.938 +-.127	.319E-02+-.431E-03	113
		$21.5416	171.81	138.8	@ .218E-02+-.220E-03	1.11 +-.112	.376E-02+-.379E-03	113
		$21.6116	175.05	154.3	@ .174E-02+-.280E-03	0.882 +-.142	.300E-02+-.482E-03	113
15.00	5.39	# 0.1500	8.51	1.483	# .216 +-.300E-01	171. +-23.8	.469 +-.651E-01	137
		# 0.2000	9.82	1.714	# .137 +-.200E-01	109. +-15.8	.297 +-.434E-01	137
		# 0.3000	12.04	2.103	# .446E-01+-.900E-02	35.3 +-7.13	.968E-01+-.195E-01	137
		# 0.4000	13.91	2.433	# .212E-01+-.450E-02	16.8 +-3.57	.460E-01+-.977E-02	137
		# 0.5000	15.56	2.725	# .161E-01+-.300E-02	12.8 +-2.38	.349E-01+-.651E-02	137
		# 0.6000	17.06	2.990	# .178E-01+-.400E-02	14.1 +-3.17	.386E-01+-.868E-02	137
		# 0.7000	18.44	3.236	# .194E-01+-.300E-02	15.4 +-2.38	.421E-01+-.651E-02	137
		# 0.8000	19.72	3.466	# .244E-01+-.300E-02	19.3 +-2.38	.530E-01+-.651E-02	137
		# 0.9000	20.93	3.683	# .231E-01+-.250E-02	18.3 +-1.98	.501E-01+-.543E-02	137
		# 1.1000	23.17	4.086	# .160E-01+-.130E-02	12.7 +-1.03	.347E-01+-.282E-02	137
		# 1.3800	26.00	4.601	# .944E-02+-.900E-03	7.48 +-.713	.205E-01+-.195E-02	137
16.00	5.56	@ 0.4000	13.45	2.280	@ .458E-01+-.112E-01	41.3 +-10.1	.106 +-.260E-01	64
		@ 0.7000	17.83	3.031	@ .290E-01+-.520E-02	26.1 +-4.69	.673E-01+-.121E-01	64
		@ 0.9000	20.24	3.449	@ .275E-01+-.250E-02	24.8 +-2.25	.638E-01+-.580E-02	64
18.00	5.89	$30.1456	146.36	55.36	@ .730E-04+-.280E-04	0.833E-01+-.319E-01	.191E-03+-.733E-04	113
		$30.6266	149.52	60.36	@ .880E-04+-.220E-04	0.100 +-.251E-01	.230E-03+-.576E-04	113
		$31.0226	152.36	65.52	@ .129E-03+-.390E-04	0.147 +-.445E-01	.338E-03+-.102E-03	113
		$31.4266	155.56	72.27	@ .150E-03+-.320E-04	0.171 +-.365E-01	.393E-03+-.838E-04	113
		$31.7916	158.84	80.43	@ .150E-03+-.460E-04	0.171 +-.525E-01	.393E-03+-.120E-03	113
		$32.1796	162.98	92.94	@ .202E-03+-.600E-04	0.230 +-.685E-01	.529E-03+-.157E-03	113
		$32.4286	166.24	105.0	@ .416E-03+-.630E-04	0.475 +-.719E-01	.109E-02+-.165E-03	113
		$32.6456	169.90	121.2	@ .648E-03+-.109E-03	0.739 +-.124	.170E-02+-.285E-03	113
		$32.7936	173.46	139.9	@ .651E-03+-.760E-04	0.743 +-.867E-01	.170E-02+-.199E-03	113

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
$	0.0000	5.80	3.43	11.76	# 1.48	+-.220	175.	+-26.1	149
$	0.0000	5.00	3.20	10.26	# 1.62	+-.440	143.	+-38.7	149
$	0.0000	4.00	2.90	8.39	# 1.17	+-.150	65.9	+-8.45	149
$	0.0000	3.00	2.55	6.51	# 1.14	+-.290	36.1	+-9.19	149
$	0.0000	2.00	2.15	4.63	# 2.04	+-.410	28.7	+-5.77	149
$	0.0005	4.00	2.90	8.39	# .690	+-.330	38.9	+-18.6	149
$	0.0008	5.80	3.43	11.76	# .800	+-.310	94.8	+-36.7	149
$	0.0020	4.00	2.90	8.39	# .710	+-.110	40.0	+-6.20	149
$	0.0031	5.80	3.43	11.76	# .640	+-.200	75.8	+-23.7	149
$	0.0046	4.00	2.90	8.39	# .680	+-.110	38.3	+-6.20	149
#	0.0090	4.00	2.90	8.39	# 1.11	+-.130	62.5	+-7.32	149
$	0.0094	5.80	3.43	11.76	# .500	+-.110	59.2	+-13.0	149
#	0.0150	2.00	2.15	4.63	# 2.96	+-.440	41.7	+-6.20	149
#	0.0150	5.00	3.20	10.26	# .740	+-.280	65.1	+-24.6	149
#	0.0190	5.80	3.43	11.76	# .800	+-.110	94.8	+-13.0	149
#	0.0370	3.00	2.55	6.51	# 1.91	+-.230	60.5	+-7.29	149
#	0.0510	2.00	2.15	4.63	# 4.73	+-.650	66.6	+-9.16	149
#	0.0510	4.00	2.90	8.39	# 1.62	+-.190	91.3	+-10.7	149
#	0.0650	5.00	3.20	10.26	# 1.43	+-.140	126.	+-12.3	149
#	0.0760	5.80	3.43	11.76	# 1.08	+-.140	128.	+-16.6	149
#	0.0800	4.00	2.90	8.39	# 1.91	+-.900E-01	108.	+-5.07	149
#	0.0830	3.00	2.55	6.51	# 3.48	+-.300	110.	+-9.51	149
#	0.0910	2.00	2.15	4.63	# 5.77	+-.460	81.3	+-6.48	149
#	0.1000	6.00	3.48	12.14	# 1.13	+-.110	143.	+-13.9	137
#	0.1000	9.00	4.22	17.77	# .592	+-.700E-01	169.	+-20.0	137
#	0.1000	12.00	4.84	23.40	# .374	+-.500E-01	190.	+-25.4	137
#	0.1010	5.00	3.20	10.26	# 1.16	+-.160	102.	+-14.1	149
#	0.1150	4.00	2.90	8.39	# 1.77	+-.130	99.7	+-7.32	149
#	0.1190	5.80	3.43	11.76	# .920	+-.130	109.	+-15.4	149
#	0.1410	2.00	2.15	4.63	# 5.19	+-.490	73.1	+-6.90	149
#	0.1460	3.00	2.55	6.51	# 2.43	+-.240	77.0	+-7.61	149
#	0.1460	5.00	3.20	10.26	# 1.06	+-.140	93.3	+-12.3	149
#	0.1500	6.00	3.48	12.14	# .863	+-.600E-01	109.	+-7.61	137
#	0.1500	9.00	4.22	17.77	# .468	+-.500E-01	133.	+-14.3	137
#	0.1500	12.00	4.84	23.40	# .303	+-.400E-01	154.	+-20.3	137
#	0.1500	15.00	5.39	29.03	# .216	+-.300E-01	171.	+-23.8	137
#	0.1560	4.00	2.90	8.39	# 1.70	+-.190	95.8	+-10.7	149
#	0.1710	5.80	3.43	11.76	# .670	+-.700E-01	79.4	+-8.29	149
#	0.1980	5.00	3.20	10.26	# .840	+-.130	73.9	+-11.4	149
#	0.2000	6.00	3.48	12.14	# .671	+-.500E-01	85.1	+-6.34	137
#	0.2000	9.00	4.22	17.77	# .332	+-.400E-01	94.7	+-11.4	137
a	0.2000	11.00	4.64	21.52	a .237	+-.470E-01	101.	+-20.0	64
#	0.2000	12.00	4.84	23.40	# .202	+-.300E-01	102.	+-15.2	137
#	0.2000	15.00	5.39	29.03	# .137	+-.200E-01	109.	+-15.8	137
#	0.2020	2.00	2.15	4.63	# 4.43	+-.340	62.4	+-4.79	149
#	0.2040	4.00	2.90	8.39	# 1.28	+-.130	72.1	+-7.32	149
#	0.2270	3.00	2.55	6.51	# 2.14	+-.180	67.8	+-5.70	149
#	0.2330	5.80	3.43	11.76	# .510	+-.100E 00	60.4	+-11.8	149
#	0.2580	5.00	3.20	10.26	# .690	+-.110	60.7	+-9.68	149
#	0.3000	6.00	3.48	12.14	# .339	+-.400E-01	43.0	+-5.07	137
#	0.3000	9.00	4.22	17.77	# .138	+-.200E-01	39.4	+-5.70	137
a	0.3000	11.00	4.64	21.52	a .137	+-.180E-01	58.4	+-7.67	64
#	0.3000	12.00	4.84	23.40	# .731E-01	+-.130E-01	37.1	+-6.59	137
#	0.3000	15.00	5.39	29.03	# .446E-01	+-.900E-02	35.3	+-7.13	137
#	0.3030	5.80	3.43	11.76	# .340	+-.800E-01	40.3	+-9.48	149
#	0.3160	4.00	2.90	8.39	# .760	+-.900E-01	42.8	+-5.07	149
#	0.3250	3.00	2.55	6.51	# 1.47	+-.150	46.6	+-4.75	149
#	0.3530	2.00	2.15	4.63	# 2.77	+-.290	39.0	+-4.08	149
#	0.4000	6.00	3.48	12.14	# .130	+-.140E-01	16.5	+-1.77	137
#	0.4000	9.00	4.22	17.77	# .582E-01	+-.800E-02	16.6	+-2.28	137
a	0.4000	11.00	4.64	21.52	a .755E-01	+-.760E-02	32.2	+-3.24	64
#	0.4000	12.00	4.84	23.40	# .329E-01	+-.600E-02	16.7	+-3.04	137
#	0.4000	15.00	5.39	29.03	# .212E-01	+-.450E-02	16.8	+-3.57	137
a	0.4000	16.00	5.56	30.90	a .458E-01	+-.112E-01	41.3	+-10.1	64
#	0.4010	5.00	3.20	10.26	# .320	+-.600E-01	28.2	+-5.28	149
#	0.4520	4.00	2.90	8.39	# .340	+-.600E-01	19.2	+-3.38	149
#	0.4710	5.80	3.43	11.76	# .100E 00	+-.400E-01	11.8	+-4.74	149
#	0.5000	6.00	3.48	12.14	# .777E-01	+-.100E-01	9.85	+-1.27	137
#	0.5000	9.00	4.22	17.77	# .388E-01	+-.600E-02	11.1	+-1.71	137
a	0.5000	11.00	4.64	21.52	a .507E-01	+-.600E-02	21.6	+-2.56	64
#	0.5000	12.00	4.84	23.40	# .237E-01	+-.400E-02	12.0	+-2.03	137
#	0.5000	15.00	5.39	29.03	# .161E-01	+-.300E-02	12.8	+-2.38	137
#	0.5390	2.00	2.15	4.63	# 1.63	+-.190	23.0	+-2.68	149
a	0.5500+- 0.0600	4.00+- 0.10	2.90+- 0.03	8.39+- 0.19	a .292	+-.990E-01	16.5	+-5.58	37
#	0.5670	3.00	2.55	6.51	# .430	+-.700E-01	13.6	+-2.22	149
a	0.5700+- 0.0600	4.50+- 0.10	3.05+- 0.03	9.32+- 0.19	a .146	+-.570E-01	10.4	+-4.06	37
#	0.5730	5.00	3.20	10.26	# .160	+-.400E-01	14.1	+-3.52	149
a	0.5800+- 0.0600	2.00+- 0.10	2.15+- 0.04	4.63+- 0.19	a .749	+-.269	10.5	+-3.79	37
#	0.6000	6.00	3.48	12.14	# .946E-01	+-.120E-01	12.0	+-1.52	137
#	0.6000	9.00	4.22	17.77	# .452E-01	+-.800E-02	12.9	+-2.28	137
a	0.6000	11.00	4.64	21.52	a .549E-01	+-.108E-01	23.4	+-4.60	64
#	0.6000	12.00	4.84	23.40	# .268E-01	+-.600E-02	13.6	+-3.04	137
#	0.6000	15.00	5.39	29.03	# .178E-01	+-.400E-02	14.1	+-3.17	137
#	0.6110	4.00	2.90	8.39	# .280	+-.600E-01	15.8	+-3.38	149
#	0.6700	5.00	3.20	10.26	# .130	+-.300E-01	11.4	+-2.64	149
#	0.6730	5.80	3.43	11.76	# .130	+-.400E-01	15.4	+-4.74	149

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
#	0.7000	6.00	3.48	12.14	# .122 +-.100E-01	15.5 +-1.27	137
#	0.7000	9.00	4.22	17.77	# .542E-01+-.500E-02	15.5 +-1.43	137
a	0.7000	11.00	4.64	21.52	a .527E-01+-.740E-02	22.5 +-3.15	64
#	0.7000	12.00	4.84	23.40	# .304E-01+-.300E-02	15.4 +-1.52	137
#	0.7000	15.00	5.39	29.03	# .194E-01+-.300E-02	15.4 +-2.38	137
a	0.7000	16.00	5.56	30.90	a .290E-01+-.520E-02	26.1 +-4.69	64
a	0.7200+- 0.0600	2.50+- 0.10	2.36+- 0.04	5.57+- 0.19	a .646 +-.110	14.2 +-2.42	37
#	0.7550	2.00	2.15	4.63	# .650 +-.180	9.16 +-2.54	149
	0.7591	2.01	2.16	4.65	.728 +-.579E-01	10.4 +-.824	6
#	0.7740	5.00	3.20	10.26	# .180 +-.400E-01	15.8 +-3.52	149
a	0.7800+- 0.0700	2.00+- 0.10	2.15+- 0.04	4.63+- 0.19	a .385 +-.710E-01	5.42 +-1.00	37
	0.7818	2.06	2.18	4.75	.743 +-.442E-01	11.1 +-.661	6
#	0.7900	4.00	2.90	8.39	# .300 +-.700E-01	16.9 +-3.94	149
#	0.8000	9.00	4.22	17.77	# .657E-01+-.130E-01	18.7 +-3.71	137
#	0.8000	12.00	4.84	23.40	# .376E-01+-.300E-02	19.1 +-1.52	137
#	0.8000	15.00	5.39	29.03	# .244E-01+-.300E-02	19.3 +-2.38	137
	0.8362	2.18	2.23	4.97	.845 +-.564E-01	14.1 +-.943	6
#	0.8660	3.00	2.55	6.51	# .390 +-.800E-01	12.4 +-2.54	149
#	0.9000	6.00	3.48	12.14	# .140 +-.700E-02	17.7 +-1.887	137
#	0.9000	9.00	4.22	17.77	# .630E-01+-.400E-02	18.0 +-1.14	137
a	0.9000	11.00	4.64	21.52	a .510E-01+-.510E-02	21.7 +-2.17	64
#	0.9000	12.00	4.84	23.40	# .358E-01+-.300E-02	18.2 +-1.52	137
#	0.9000	15.00	5.39	29.03	# .231E-01+-.250E-02	18.3 +-1.98	137
a	0.9000	16.00	5.56	30.90	a .275E-01+-.250E-02	24.8 +-2.25	64
	0.9046	2.33	2.29	5.25	.816 +-.660E-01	15.6 +-1.26	6
	0.9822	2.50	2.36	5.57	.691 +-.480E-01	15.2 +-1.06	6
#	0.9890	4.00	2.90	8.39	# .320 +-.600E-01	18.0 +-3.38	149
a	1.0000	2.40+- 0.21	2.32+- 0.08	5.38+- 0.39	a .564 +-.850E-01	11.4 +-1.72	37
a	1.0000+- 0.1000	2.50+- 0.10	2.36+- 0.04	5.57+- 0.19	a .531 +-.119	11.7 +-2.62	37
a	1.0000	2.58+- 0.14	2.39+- 0.05	5.72+- 0.26	a .493 +-.510E-01	11.6 +-1.20	37
a	1.0000	2.74+- 0.19	2.45+- 0.07	6.02+- 0.36	a .468 +-.480E-01	12.4 +-1.27	37
a	1.0000	2.90+- 0.22	2.51+- 0.08	6.32+- 0.41	a .413 +-.430E-01	12.2 +-1.27	37
a	1.0000	3.20+- 0.35	2.62+- 0.13	6.89+- 0.66	a .282 +-.300E-01	10.2 +-1.08	37
a	1.0000	3.35+- 0.34	2.68+- 0.12	7.17+- 0.64	a .269 +-.420E-01	10.6 +-1.66	37
a	1.0000	3.49+- 0.34	2.73+- 0.12	7.43+- 0.64	a .230 +-.440E-01	9.86 +-1.89	37
a	1.0000	3.75+- 0.43	2.81+- 0.14	7.92+- 0.81	a .197 +-.270E-01	9.76 +-1.34	37
a	1.0000	3.94+- 0.49	2.88+- 0.16	8.27+- 0.92	a .224 +-.440E-01	12.2 +-2.41	37
a	1.0000+- 0.0800	4.00+- 0.10	2.90+- 0.03	8.39+- 0.19	a .245 +-.370E-01	13.8 +-2.08	37
a	1.0000	4.23+- 0.62	2.97+- 0.20	8.82+- 1.16	a .210 +-.510E-01	13.2 +-3.21	37
a	1.0000	4.62+- 0.59	3.09+- 0.18	9.55+- 1.11	a .510E-01+-.350E-01	3.83 +-2.63	37
#	1.0010	5.00	3.20	10.26	# .190 +-.400E-01	16.7 +-3.52	149
a	1.0200+- 0.0900	2.00+- 0.10	2.15+- 0.04	4.63+- 0.19	a .441 +-.130	6.21 +-1.83	37
a	1.0200+- 0.0900	3.00+- 0.10	2.55+- 0.04	6.51+- 0.19	a .378 +-.670E-01	12.0 +-2.12	37
a	1.0200+- 0.0900	3.50+- 0.10	2.73+- 0.03	7.45+- 0.19	a .237 +-.310E-01	10.2 +-1.34	37
a	1.0200+- 0.0900	4.50+- 0.10	3.05+- 0.03	9.32+- 0.19	a .188 +-.490E-01	13.4 +-3.49	37
	1.0372	2.62	2.41	5.80	.642 +-.515E-01	15.5 +-1.24	6
a	1.0600+- 0.1000	4.00+- 0.10	2.90+- 0.03	8.39+- 0.19	a .174 +-.310E-01	9.80 +-1.75	37
a	1.0700+- 0.1000	5.00+- 0.10	3.20+- 0.03	10.26+- 0.19	a .415E-01+-.360E-01	3.65 +-3.17	37
a	1.0800+- 0.1000	3.00+- 0.10	2.55+- 0.04	6.51+- 0.19	a .383 +-.400E-01	12.1 +-1.27	37
#	1.1000	6.00	3.48	12.14	# .129 +-.500E-02	16.4 +-.634	137
#	1.1000	9.00	4.22	17.77	# .512E-01+-.300E-02	14.6 +-.856	137
#	1.1000	12.00	4.84	23.40	# .266E-01+-.200E-02	13.5 +-1.01	137
#	1.1000	15.00	5.39	29.03	# .160E-01+-.130E-02	12.7 +-1.03	137
	1.1107	2.78	2.47	6.10	.636 +-.283E-01	17.3 +-.770	6
#	1.1240	5.00	3.20	10.26	# .140 +-.400E-01	12.3 +-3.52	149
	1.1751	2.92	2.52	6.36	.612 +-.588E-01	18.4 +-1.77	6
#	1.2060	4.00	2.90	8.39	# .260 +-.400E-01	14.6 +-2.25	149
#	1.2120	3.00	2.55	6.51	# .390 +-.800E-01	12.4 +-2.54	149
	1.2488	3.08	2.58	6.66	.443 +-.252E-01	14.8 +-.840	6
#	1.2530	5.00	3.20	10.26	# .160 +-.400E-01	14.1 +-3.52	149
a	1.3100+- 0.1100	2.00+- 0.10	2.15+- 0.04	4.63+- 0.19	a 1.11 +-.115	15.6 +-1.62	37
a	1.3200+- 0.1200	2.50+- 0.10	2.36+- 0.04	5.57+- 0.19	a .313 +-.330E-01	6.89 +-.726	37
	1.3226	3.24	2.64	6.96	.352 +-.166E-01	13.0 +-.615	6
#	1.3800	6.00	3.48	12.14	# .849E-01+-.450E-02	10.8 +-.570	137
#	1.3800	9.00	4.22	17.77	# .321E-01+-.240E-02	9.16 +-.685	137
#	1.3800	12.00	4.84	23.40	# .161E-01+-.130E-02	8.16 +-.659	137
#	1.3800	15.00	5.39	29.03	# .944E-02+-.900E-03	7.48 +-.713	137
	1.3919	3.39	2.69	7.24	.204 +-.115E-01	8.27 +-.466	6
a	1.4100+- 0.1200	3.50+- 0.10	2.73+- 0.03	7.45+- 0.19	a .143 +-.270E-01	6.17 +-1.16	37
#	1.4400	4.00	2.90	8.39	# .260 +-.600E-01	14.6 +-3.38	149
	1.4474	3.51	2.73	7.47	.142 +-.111E-01	6.18 +-.480	6
a	1.4900+- 0.1400	4.50+- 0.10	3.05+- 0.03	9.32+- 0.19	a .733E-01+-.115E-01	5.23 +-.820	37
a	1.5000	2.08+- 0.08	2.19+- 0.03	4.78+- 0.15	a 1.84 +-.192	28.1 +-2.93	37
a	1.5000	2.50+- 0.11	2.36+- 0.04	5.57+- 0.21	a .259 +-.410E-01	5.70 +-.902	37
a	1.5000	3.69+- 0.29	2.79+- 0.10	7.80+- 0.54	a .127 +-.300E-01	6.09 +-1.44	37
a	1.5000	3.90+- 0.22	2.86+- 0.07	8.20+- 0.41	a .127 +-.260E-01	6.80 +-1.39	37
a	1.5000	4.12+- 0.31	2.93+- 0.10	8.61+- 0.58	a .103 +-.220E-01	6.16 +-1.31	37
a	1.5000	4.33+- 0.30	3.00+- 0.09	9.01+- 0.56	a .900E-01+-.130E-01	5.94 +-.858	37
a	1.5000	4.52+- 0.35	3.06+- 0.11	9.36+- 0.66	a .690E-01+-.210E-01	4.96 +-1.51	37
a	1.5000	4.74+- 0.36	3.13+- 0.11	9.77+- 0.68	a .570E-01+-.100E-01	4.51 +-.791	37
a	1.5000	4.97+- 0.39	3.19+- 0.11	10.21+- 0.73	a .340F-01+-.900E-02	2.96 +-.783	37
	1.5261	3.68	2.79	7.79	.103 +-.117E-01	4.89 +-.560	6
#	1.5280	5.00	3.20	10.26	# .800E-01+-.300E-01	7.04 +-2.64	149
a	1.5700+- 0.1400	5.00+- 0.10	3.20+- 0.03	10.26+- 0.19	a .377E-01+-.800E-02	3.32 +-.704	37
#	1.5950	3.00	2.55	6.51	# .310 +-.800E-01	9.82 +-2.54	149
	1.5956	3.83	2.84	8.07	.868E-01+-.120E-01	4.48 +-.620	6

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
a	1.6500+- 0.1200	2.50+- 0.10	2.36+- 0.04	5.57+- 0.19	a .211 +-.320E-01	4.64 +-.704	37
	# 1.6880	4.00	2.90	8.39	# .600E-01+-.300E-01	3.38 +-1.69	149
	# 1.8250	5.00	3.20	10.26	# .300E-01+-.150E-01	2.64 +-1.32	149
a	1.9600+- 0.1500	4.00+- 0.10	2.90+- 0.03	8.39+- 0.19	a .203E-01+-.600E-02	1.14 +-.338	37
a	1.9700+- 0.1500	4.50+- 0.10	3.05+- 0.03	9.32+- 0.19	a .165E-01+-.700E-02	1.18 +-.499	37
	a 2.0000	2.69+- 0.11	2.43+- 0.04	5.93+- 0.21	a .850E-01+-.188E-01	2.17 +-.479	37
	a 2.0000	3.25+- 0.15	2.64+- 0.05	6.98+- 0.28	a .384E-01+-.910E-02	1.43 +-.338	37
	a 2.0000	3.39+- 0.15	2.69+- 0.05	7.24+- 0.28	a .372E-01+-.910E-02	1.51 +-.368	37
	a 2.0000	3.55	2.75	7.54	a .345E-01+-.840E-02	1.53 +-.373	37
	a 2.0000	3.73+- 0.14	2.81+- 0.05	7.88+- 0.26	a .283E-01+-.680E-02	1.39 +-.333	37
	a 2.0000	3.88+- 0.18	2.86+- 0.06	8.16+- 0.34	a .201E-01+-.450E-02	1.07 +-.239	37
	a 2.0000	4.08+- 0.21	2.92+- 0.07	8.54+- 0.39	a .225E-01+-.610E-02	1.32 +-.358	37
	a 2.0000	4.23+- 0.22	2.97+- 0.07	8.82+- 0.41	a .221E-01+-.530E-02	1.39 +-.334	37
	a 2.0000	4.47+- 0.27	3.04+- 0.08	9.27+- 0.51	a .139E-01+-.420E-02	.978 +-.296	37
	a 2.0000	4.64+- 0.32	3.10+- 0.10	9.59+- 0.60	a .114E-01+-.460E-02	.864 +-.349	37
	a 2.0000	4.78+- 0.36	3.14+- 0.11	9.85+- 0.68	a .108E-01+-.440E-02	.869 +-.354	37
	a 2.0000	4.95+- 0.37	3.19+- 0.11	10.17+- 0.69	a .780E-02+-.490E-02	.673 +-.423	37
a	2.0200+- 0.1800	3.50+- 0.10	2.73+- 0.03	7.45+- 0.19	a .383E-01+-.490E-02	1.65 +-.211	37
a	2.0600+- 0.1800	4.50+- 0.10	3.05+- 0.03	9.32+- 0.19	a .202E-01+-.400E-02	1.44 +-.285	37
a	2.0700+- 0.2000	5.00+- 0.10	3.20+- 0.03	10.26+- 0.19	a .950E-02+-.200E-02	.836 +-.176	37
a	2.1200+- 0.1600	4.00+- 0.10	2.90+- 0.03	8.39+- 0.19	a .262E-01+-.500E-02	1.48 +-.282	37
	a 3.0000	4.47	3.04	9.27	a .100E-03+-.100E-03	.704E-02+-.704E-02	37
	a 3.0000	4.66	3.10	9.62	a .170E-02+-.170E-02	.130 +-.130	37
	a 3.0000	4.85	3.16	9.98	a <.290E-02	<.240	37
	a 3.0000	5.03	3.21	10.32	a <.110E-02	<.980E-01	37
	a 3.0000	5.20+- 0.18	3.26+- 0.05	10.64+- 0.34	a .900E-03+-.900E-03	.857E-01+-.857E-01	37
	a 3.0000	5.36+- 0.29	3.31+- 0.08	10.94+- 0.54	a .140E-02+-.140E-02	.142 +-.142	37
a	3.0600+- 0.2400	5.00+- 0.10	3.20+- 0.03	10.26+- 0.19	a <.100E-02	<.880E-01	37
	a 4.0000	4.75+- 0.16	3.13+- 0.05	9.79+- 0.30	a .120E-02+-.900E-03	.953E-01+-.715E-01	37
	a 4.0000	4.94+- 0.13	3.19+- 0.04	10.15+- 0.24	a .100E-02+-.800E-03	.859E-01+-.687E-01	37
	a 4.0000	5.15+- 0.21	3.25+- 0.06	10.54+- 0.39	a .190E-02+-.110E-02	.177 +-.103	37
	a 4.0000	5.35+- 0.32	3.30+- 0.09	10.92+- 0.60	a .110E-02+-.800E-03	.111 +-.806E-01	37
a	4.1000+- 0.2900	5.00+- 0.10	3.20+- 0.03	10.26+- 0.19	a .900E-03+-.900E-03	.792E-01+-.792E-01	37

1.21 GEV < K < GEV 2.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
	0.0566	1.36	1.85	3.43	14.5 +-1.27	94.3 +-8.30	53
	0.1256	1.36	1.85	3.43	15.4 +-1.61	100. +-10.5	53
	0.2193	1.36	1.85	3.43	12.0 +-.737	78.2 +-4.80	53
	0.4033	1.21	1.78	3.15	7.40 +-1.09	38.2 +-5.62	231
	0.4687	1.36	1.85	3.43	3.15 +-.603	20.5 +-3.93	53
	0.4687	1.36	1.85	3.43	3.39 +-.308	22.1 +-2.01	6
	0.5083	1.45	1.90	3.60	2.29 +-.142	16.9 +-1.05	6
	0.5267	1.21	1.78	3.15	9.19 +-1.01	47.4 +-5.22	231
	0.5704	1.59	1.97	3.86	1.17 +-.110	10.4 +-.981	6
	0.7004	1.88	2.10	4.41	.785 +-.807E-01	9.77 +-1.00	6
	a 1.0000	1.90+- 0.12	2.11+- 0.05	4.45+- 0.23	a .575 +-.126	7.31 +-1.60	37
	a 1.0000	1.99+- 0.13	2.15+- 0.06	4.61+- 0.24	a .398 +-.930E-01	5.55 +-1.30	37

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.21 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2		THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD		REF
1.21	1.78	3.15	-0.241	12.5	+-.530	# 0.0	0.0	#1.61	+-.680E-01	47
			-0.229	12.7	+-1.48	# 9.8	4.0	#1.63	+-.190	231
			-0.195	10.8	+-1.01	# 19.5	8.0	#1.38	+-.130	231
			-0.139	8.88	+-1.09	# 29.1	12.0	#1.14	+-.140	231
			-0.065	7.79	+-.623	# 38.6	16.1	#1.00	+-.800E-01	231
			0.039	7.17	+-.623	# 49.2	20.6	#.920	+-.800E-01	231
			0.156	5.92	+-.545	# 59.5	25.1	#.760	+-.700E-01	231
			0.283	5.38	+-.701	# 69.5	29.6	#.690	+-.900E-01	231
			0.416	5.14	+-.390	# 79.3	34.2	#.660	+-.500E-01	231
			0.564	4.99	+-.545	# 89.9	39.2	#.640	+-.700E-01	231
1.23	1.79	3.19	-0.238	11.8	+-.404	# 0.0	0.0	#1.55	+-.530E-01	47
			-0.238	8.20	+-.198	@ 0.0	0.0	@1.07	+-.260E-01	74
			0.586	5.07	+-.458	@ 90.0	39.2	@.665	+-.600E-01	6
1.25	1.80	3.23	-0.235	10.5	+-.366	# 0.0	0.0	#1.41	+-.490E-01	47
1.26	1.80	3.24	0.616	3.77	+-.325	@ 90.0	39.1	@.510	+-.440E-01	6
1.27	1.81	3.26	-0.232	13.2	+-1.00	# 0.0	0.0	#1.80	+-.137	47
			-0.232	9.05	+-.256	@ 0.0	0.0	@1.24	+-.350E-01	74
1.29	1.82	3.30	-0.230	10.5	+-.983	# 0.0	0.0	#1.46	+-.137	47
1.30	1.82	3.32	-0.229	11.8	+-1.13	# 0.0	0.0	#1.66	+-.159	47
			0.656	4.25	+-.561	@ 90.0	38.9	@.599	+-.790E-01	6
1.31	1.83	3.34	-0.227	11.9	+-.689	# 0.0	0.0	#1.69	+-.980E-01	47
1.32	1.83	3.36	-0.226	9.07	+-.181	@ 0.0	0.0	@1.30	+-.260E-01	74
1.34	1.84	3.39	-0.224	10.5	+-.991	# 0.0	0.0	#1.54	+-.145	47
			0.696	3.70	+-.588	@ 90.0	38.7	@.541	+-.860E-01	6
1.37	1.86	3.45	-0.220	11.0	+-.565	# 0.0	0.0	#1.66	+-.850E-01	47
			-0.220	8.68	+-.173	@ 0.0	0.0	@1.31	+-.260E-01	74
1.41	1.88	3.53	-0.215	8.31	+-.166	@ 0.0	0.0	@1.30	+-.260E-01	74
1.42	1.88	3.54	-0.214	10.3	+-.641	# 0.0	0.0	#1.62	+-.101	47
1.44	1.89	3.58	-0.212	9.04	+-.917	# 0.0	0.0	#1.45	+-.147	47
			0.796	3.76	+-.237	@ 90.0	38.3	@.603	+-.380E-01	6
1.46	1.90	3.62	-0.210	9.07	+-.784	# 0.0	0.0	#1.48	+-.128	47
			-0.210	6.96	+-.190	@ 0.0	0.0	@1.14	+-.310E-01	74
1.50	1.92	3.70	-0.205	5.98	+-.184	@ 0.0	0.0	@1.01	+-.310E-01	74
1.53	1.94	3.75	0.885	3.54	+-.156	@ 90.0	37.9	@.613	+-.270E-01	6
1.55	1.95	3.79	-0.200	4.41	+-.199	@ 0.0	0.0	@.776	+-.350E-01	74
1.56	1.95	3.81	-0.199	5.87	+-.530	# 0.0	0.0	#1.04	+-.940E-01	47
1.57	1.96	3.83	-0.198	4.45	+-.257	# 0.0	0.0	#.795	+-.460E-01	47
1.58	1.96	3.85	0.934	3.40	+-.111	@ 90.0	37.7	@.613	+-.200E-01	6
1.60	1.97	3.88	-0.195	3.60	+-.191	@ 0.0	0.0	@.658	+-.350E-01	74
1.62	1.98	3.92	0.974	3.03	+-.129	@ 90.0	37.6	@.563	+-.240E-01	6
1.65	1.99	3.98	-0.191	2.93	+-.163	@ 0.0	0.0	@.557	+-.310E-01	74
1.66	2.00	4.00	-0.190	2.79	+-.188	# 0.0	0.0	#.535	+-.360E-01	47
1.67	2.00	4.01	1.023	2.71	+-.161	@ 90.0	37.4	@.523	+-.310E-01	6
1.68	2.01	4.03	-0.188	2.01	+-.216	# 0.0	0.0	#.390	+-.420E-01	47
1.70	2.02	4.07	-0.186	2.18	+-.223	@ 0.0	0.0	@.430	+-.440E-01	74
1.72	2.03	4.11	-0.185	1.71	+-.205	# 0.0	0.0	#.343	+-.410E-01	47
			1.072	2.31	+-.195	@ 90.0	37.2	@.462	+-.390E-01	6
1.74	2.04	4.15	-0.183	1.67	+-.153	@ 0.0	0.0	@.338	+-.310E-01	74
1.75	2.04	4.16	-0.182	2.03	+-.147	# 0.0	0.0	#.415	+-.300E-01	47
1.78	2.05	4.22	1.131	2.17	+-.182	@ 90.0	36.9	@.452	+-.380E-01	6
1.83	2.08	4.31	1.180	3.11	+-.139	@ 90.0	36.8	@.672	+-.300E-01	6
1.86	2.09	4.37	-0.174	1.04	+-.727E-01	# 0.0	0.0	#.228	+-.160E-01	47
1.88	2.10	4.41	-0.172	.902	+-.942E-01	# 0.0	0.0	#.201	+-.210E-01	47
			1.229	1.26	+-.108	@ 90.0	36.6	@.280	+-.240E-01	6
1.90	2.11	4.45	1.248	1.10	+-.797E-01	@ 90.0	36.5	@.249	+-.180E-01	6
1.90+- 0.08	2.11+- 0.04	4.45+- 0.15	$ 1.167	@2.38	+-.247	86.6	34.9	.536	+-.557E-01	37
1.92	2.12	4.48	-0.169	.870	+-.700E-01	# 0.0	0.0	#.199	+-.160E-01	47
1.94	2.13	4.52	-0.168	.721	+-.950E-01	# 0.0	0.0	#.167	+-.220E-01	47
1.96	2.14	4.56	1.306	.994	+-.141	@ 90.0	36.3	@.233	+-.330E-01	6
2.00+- 0.10	2.15+- 0.04	4.63+- 0.19	$ 1.164+- 0.100	@2.14	+-.222	83.0+- 3.8	32.9+- 1.8	.513	+-.532E-01	37
			$ 1.284+- 0.130	@1.91	+-.210	87.5+- 5.0	35.0+- 2.3	.458	+-.503E-01	37
2.00+- 0.08	2.15+- 0.03	4.63+- 0.15	$ 1.354	@1.94	+-.202	90.3	36.3	.465	+-.484E-01	37
2.01	2.16	4.65	-0.163	.567	+-.662E-01	# 0.0	0.0	#.137	+-.160E-01	47
2.02	2.16	4.67	1.365	.946	+-.535E-01	@ 90.0	36.0	@.230	+-.130E-01	6
2.03	2.17	4.69	-0.162	.528	+-.613E-01	# 0.0	0.0	#.129	+-.150E-01	47
2.05	2.17	4.73	-0.161	.449	+-.606E-01	# 0.0	0.0	#.111	+-.150E-01	47
2.08	2.19	4.78	1.423	.779	+-.437E-01	@ 90.0	35.8	@.196	+-.110E-01	6
2.12	2.20	4.86	-0.156	.396	+-.350E-01	# 0.0	0.0	#.102	+-.900E-02	47
2.15	2.22	4.91	-0.154	.420	+-.420E-01	# 0.0	0.0	#.110	+-.110E-01	47
2.15+- 0.08	2.22+- 0.03	4.91+- 0.15	$ 1.136	@1.29	+-.134	77.4	29.9	.338	+-.350E-01	37
2.15	2.22	4.91	1.491	.729	+-.229E-01	@ 90.0	35.6	@.191	+-.600E-02	6
2.16+- 0.08	2.22+- 0.03	4.93+- 0.15	$-0.845	@.170	+-.270E-01	0.0	0.0	.447E-01	+-.710E-02	37
2.16	2.22	4.93	1.500	.589	+-.608E-01	@ 90.0	35.5	@.155	+-.160E-01	23
2.18	2.23	4.97	-0.153	.413	+-.301E-01	# 0.0	0.0	#.110	+-.800E-02	47
2.19	2.23	4.99	-0.152	.430	+-.262E-01	# 0.0	0.0	#.115	+-.700E-02	47
			1.529	.523	+-.897E-01	@ 90.0	35.4	@.140	+-.240E-01	23
2.21	2.24	5.03	1.549	.595	+-.185E-01	@ 90.0	35.4	@.161	+-.500E-02	6
2.22	2.25	5.05	-0.150	.375	+-.331E-01	# 0.0	0.0	#.102	+-.900E-02	47
2.23	2.25	5.06	-0.150	.490	+-.622E-01	# 0.0	0.0	#.134	+-.170E-01	47
2.24	2.25	5.08	-0.149	.335	+-.291E-01	# 0.0	0.0	#.920E-01	+-.800E-02	47
			1.578	.411	+-.618E-01	@ 90.0	35.3	@.113	+-.170E-01	23
2.26	2.26	5.12	1.597	.364	+-.396E-01	@ 90.0	35.2	@.101	+-.110E-01	23
2.28	2.27	5.16	-0.147	.321	+-.463E-01	# 0.0	0.0	#.900E-01	+-.130E-01	47
			1.616	.527	+-.178E-01	@ 90.0	35.1	@.148	+-.500E-02	6
2.30	2.28	5.20	-0.146	.335	+-.388E-01	# 0.0	0.0	#.950E-01	+-.110E-01	47
2.30+- 0.09	2.28+- 0.04	5.20+- 0.17	$ 1.417	@.383	+-.500E-01	82.9	31.8	.108	+-.142E-01	37
2.31	2.28	5.22	-0.146	.463	+-.526E-01	# 0.0	0.0	#.132	+-.150E-01	47
2.33	2.29	5.25	-0.144	.413	+-.521E-01	# 0.0	0.0	#.119	+-.150E-01	47

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.21 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
2.33	2.29	5.25	1.665	.354 +-.660E-01	@ 90.0	35.0	@.102 +-.190E-01	23
2.34	2.30	5.27	-0.144	.346 +-.415E-01	# 0.0	0.0	#.100E 00+-.120E-01	47
2.35	2.30	5.29	1.684	.457 +-.378E-01	@ 90.0	34.9	@.133 +-.110E-01	6
2.36	2.30	5.31	1.694	.200 +-.277E-01	@ 90.0	34.9	@.585E-01+-.810E-02	23
2.39	2.32	5.37	-0.141	.435 +-.337E-01	# 0.0	0.0	#.129 +-.100E-01	47
			-0.141	.455 +-.640E-01	# 0.0	0.0	#.135 +-.190E-01	47
2.40	2.32	5.38	$ 0.605	@.180 +-.380E-01	53.0	19.1	.537E-01+-.113E-01	37
2.42+- 0.07	2.33+- 0.03	5.42+- 0.13	$-0.357	@.129 +-.240E-01	0.0	0.0	.388E-01+-.722E-02	37
2.42	2.33	5.42	1.751	.295 +-.259E-01	@ 90.0	34.7	@.889E-01+-.780E-02	6
2.44	2.34	5.46	1.771	.156 +-.230E-01	@ 90.0	34.6	@.473E-01+-.700E-02	23
2.46	2.34	5.50	1.790	.111 +-.137E-01	@ 90.0	34.5	@.342E-01+-.420E-02	23
2.47	2.35	5.52	-0.138	.493 +-.454E-01	# 0.0	0.0	#.152 +-.140E-01	47
2.49	2.36	5.55	-0.137	.456 +-.386E-01	# 0.0	0.0	#.142 +-.120E-01	47
2.50	2.36	5.57	1.828	.226 +-.240E-01	@ 90.0	34.4	@.708E-01+-.750E-02	6
2.50+- 0.10	2.36+- 0.04	5.57+- 0.19	$-0.007+- 0.120	@.299 +-.470E-01	20.4+- 10.1	7.0+- 3.5	.933E-01+-.147E-01	37
			$ 0.323+- 0.120	@.156 +-.280E-01	39.7+- 5.5	13.9+- 2.0	.487E-01+-.874E-02	37
			$ 0.523+- 0.120	@.143 +-.270E-01	48.1+- 4.7	17.0+- 1.8	.446E-01+-.843E-02	37
			$ 0.823+- 0.130	@.213 +-.250E-01	59.0+- 4.4	21.2+- 1.7	.665E-01+-.780E-02	37
2.50+- 0.01	2.36+- 0.00	5.57+- 0.02	$ 1.133+- 0.150	@.190 +-.290E-01	69.3+- 4.7	25.3+- 1.9	.594E-01+-.907E-02	37
2.50+- 0.10	2.36+- 0.04	5.57+- 0.19	$ 1.463+- 0.140	@.278 +-.420E-01	79.2+- 4.2	29.6+- 1.8	.868E-01+-.131E-01	37
			$ 1.793	@.219 +-.290E-01	88.9	33.9	.684E-01+-.905E-02	37
2.51	2.36	5.59	$ 0.811	@.219 +-.340E-01	58.7	21.0	.688E-01+-.107E-01	37
2.57	2.39	5.70	-0.133	.511 +-.465E-01	# 0.0	0.0	#.165 +-.150E-01	47
			1.896	.138 +-.136E-01	@ 90.0	34.2	@.446E-01+-.440E-02	6
2.60	2.40	5.76	-0.132	.458 +-.397E-01	# 0.0	0.0	#.150 +-.130E-01	47
			$ 0.980	@.132 +-.240E-01	62.7	22.4	.432E-01+-.785E-02	37
2.60+- 0.10	2.40+- 0.04	5.76+- 0.19	$ 1.980	@.177 +-.330E-01	91.5	34.8	.578E-01+-.108E-01	37
2.61	2.40	5.78	-0.131	.423 +-.426E-01	# 0.0	0.0	#.139 +-.140E-01	47
2.62	2.41	5.80	-0.131	.424 +-.575E-01	# 0.0	0.0	#.140 +-.190E-01	47
			1.944	.128 +-.112E-01	@ 90.0	34.0	@.422E-01+-.370E-02	6
2.63	2.41	5.82	-0.130	.446 +-.452E-01	# 0.0	0.0	#.148 +-.150E-01	47
2.64	2.42	5.83	1.963	.612E-01+-.991E-02	@ 90.0	34.0	@.204E-01+-.330E-02	23
2.71	2.44	5.97	-0.127	.425 +-.437E-01	# 0.0	0.0	#.146 +-.150E-01	47
2.72	2.45	5.98	2.039	.882E-01+-.609E-02	@ 90.0	33.7	@.304E-01+-.210E-02	6
2.73	2.45	6.00	-0.126	.373 +-.231E-01	# 0.0	0.0	#.129 +-.800E-02	47
2.74	2.45	6.02	-0.126	.406 +-.345E-01	# 0.0	0.0	#.141 +-.120E-01	47
			2.059	.460E-01+-.170E-01	@ 90.0	33.7	@.160E-01+-.590E-02	23
2.75	2.46	6.04	-0.126	.384 +-.516E-01	# 0.0	0.0	#.134 +-.180E-01	47
2.76	2.46	6.06	2.078	.394E-01+-.456E-02	@ 90.0	33.6	@.138E-01+-.160E-02	23
2.79	2.47	6.12	-0.124	.442 +-.704E-01	# 0.0	0.0	#.157 +-.250E-01	47
2.80	2.48	6.13	-0.124	.353 +-.252E-01	# 0.0	0.0	#.126 +-.900E-02	47
2.81	2.48	6.15	-0.123	.319 +-.363E-01	# 0.0	0.0	#.114 +-.130E-01	47
			2.126	.629E-01+-.503E-02	@ 90.0	33.4	@.225E-01+-.180E-02	6
2.83	2.49	6.19	-0.123	.357 +-.333E-01	# 0.0	0.0	#.129 +-.120E-01	47
2.85	2.50	6.23	2.164	.181E-01+-.550E-02	@ 90.0	33.3	@.660E-02+-.200E-02	23
2.86	2.50	6.25	-0.121	.235 +-.383E-01	# 0.0	0.0	#.860E-01+-.140E-01	47
			-0.121	.331 +-.274E-01	# 0.0	0.0	#.121 +-.100E-01	47
2.87	2.50	6.27	2.183	.188E-01+-.191E-02	@ 90.0	33.3	@.690E-02+-.700E-03	23
2.89	2.51	6.30	-0.120	.268 +-.216E-01	# 0.0	0.0	#.990E-01+-.800E-02	47
			2.202	.425E-01+-.352E-02	@ 90.0	33.2	@.157E-01+-.130E-02	6
2.93	2.53	6.38	-0.119	.298 +-.320E-01	# 0.0	0.0	#.112 +-.120E-01	47
2.96	2.54	6.43	-0.118	.258 +-.263E-01	# 0.0	0.0	#.980E-01+-.100E-01	47
2.97	2.54	6.45	-0.118	.254 +-.236E-01	# 0.0	0.0	#.970E-01+-.900E-02	47
			2.279	.108E-01+-.142E-02	@ 90.0	33.0	@.412E-02+-.540E-03	23
2.98	2.54	6.47	2.288	.259E-01+-.392E-02	@ 90.0	32.9	@.992E-02+-.150E-02	6
2.99	2.55	6.49	2.298	.126E-01+-.114E-02	@ 90.0	32.9	@.485E-02+-.440E-03	23
3.00	2.55	6.51	-0.117	.213 +-.207E-01	# 0.0	0.0	#.820E-01+-.800E-02	47
3.00+- 0.10	2.55+- 0.04	6.51+- 0.19	$ 0.691+- 0.150	@.129 +-.180E-01	48.0+- 4.8	16.1+- 1.7	.496E-01+-.694E-02	37
3.03	2.56	6.57	-0.116	.197 +-.333E-01	# 0.0	0.0	#.770E-01+-.130E-01	47
3.04	2.57	6.58	-0.115	.189 +-.281E-01	# 0.0	0.0	#.740E-01+-.110E-01	47
			-0.115	.204 +-.204E-01	# 0.0	0.0	#.800E-01+-.800E-02	47
3.07	2.58	6.64	2.374	.250E-01+-.657E-02	@ 90.0	32.7	@.990E-02+-.260E-02	6
			-0.114	.237 +-.354E-01	# 0.0	0.0	#.940E-01+-.140E-01	47
3.09	2.58	6.68	1.140	.351E-01+-.160E-01	@ 60.0	20.3	@.140E-01+-.640E-02	23
			2.393	.559E-02+-.108E-02	@ 90.0	32.6	@.223E-02+-.430E-03	23
3.10	2.59	6.70	-0.113	.140 +-.150E-01	# 0.0	0.0	#.560E-01+-.600E-02	47
3.11	2.59	6.72	-0.113	.174 +-.149E-01	# 0.0	0.0	#.700E-01+-.600E-02	47
			1.150	.363E-01+-.871E-02	@ 60.0	20.3	@.146E-01+-.350E-02	23
			2.412	.898E-02+-.746E-03	@ 90.0	32.6	@.361E-02+-.300E-03	23
3.16	2.61	6.81	2.460	.134E-01+-.342E-02	@ 90.0	32.4	@.550E-02+-.140E-02	6
3.17	2.61	6.83	-0.111	.136 +-.146E-01	# 0.0	0.0	#.560E-01+-.600E-02	47
			-0.111	.134 +-.170E-01	# 0.0	0.0	#.550E-01+-.700E-02	47
			-0.111	.141 +-.146E-01	# 0.0	0.0	#.580E-01+-.600E-02	47
3.19	2.62	6.87	-0.111	.126 +-.145E-01	# 0.0	0.0	#.520E-01+-.600E-02	47
3.21	2.63	6.90	2.508	.468E-02+-.101E-02	@ 90.0	32.3	@.195E-02+-.420E-03	23
3.23	2.63	6.94	1.209	.265E-01+-.834E-02	@ 60.0	20.0	@.111E-01+-.350E-02	23
			2.527	.534E-02+-.548E-03	@ 90.0	32.3	@.224E-02+-.230E-03	23
3.24	2.64	6.96	-0.109	.162 +-.190E-01	# 0.0	0.0	#.680E-01+-.800E-02	47
3.25	2.64	6.98	-0.109	.104 +-.947E-02	# 0.0	0.0	#.440E-01+-.400E-02	47
			1.218	.211E-01+-.402E-02	@ 60.0	20.0	@.890E-02+-.170E-02	23
3.26	2.65	7.00	2.555	.100E-01+-.226E-02	@ 90.0	32.2	@.425E-02+-.960E-03	6
3.32	2.67	7.11	-0.107	.111 +-.139E-01	# 0.0	0.0	#.480E-01+-.600E-02	47
3.32+- 0.10	2.67+- 0.04	7.11+- 0.19	$ 2.331	@.102E-01+-.500E-02	84.0	29.4	.441E-02+-.216E-02	37
3.34	2.67	7.15	1.263	.174E-01+-.505E-02	@ 60.0	19.8	@.760E-02+-.220E-02	23
			2.631	.397E-02+-.666E-03	@ 90.0	32.0	@.173E-02+-.290E-03	23
			2.631	.920E-02+-.252E-02	@ 90.0	32.0	@.401E-02+-.110E-02	6
3.35	2.68	7.17	-0.106	.103 +-.137E-01	# 0.0	0.0	#.450E-01+-.600E-02	47
3.36	2.68	7.19	-0.106	.107 +-.137E-01	# 0.0	0.0	#.470E-01+-.600E-02	47

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.21 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
3.36	2.68	7.19	1.272	.169E-01+-.274E-02	@ 60.0	19.8	@.740E-02+-.120E-02	23
			2.650	.383E-02+-.365E-03	@ 90.0	31.9	@.168E-02+-.160E-03	23
3.37	2.68	7.20	-0.105	.932E-01+-.182E-01	# 0.0	0.0	#.410E-01+-.800E-02	47
3.43	2.70	7.32	-0.104	.846E-01+-.111E-01	# 0.0	0.0	#.380E-01+-.500E-02	47
			-0.104	.958E-01+-.134E-01	# 0.0	0.0	#.430E-01+-.600E-02	47
3.46+- 0.10	2.72+- 0.03	7.37+- 0.19	$ 1.594	@.480E-01+-.100E-01	66.1	21.9	.217E-01+-.453E-02	37
3.46	2.72	7.37	2.746	.922E-02+-.179E-02	@ 90.0	31.7	@.418E-02+-.810E-03	6
3.47	2.72	7.39	1.326	.123E-01+-.418E-02	@ 60.0	19.6	@.560E-02+-.190E-02	23
3.47+- 0.10	2.72+- 0.03	7.39+- 0.19	$ 2.613	@.137E-01+-.450E-02	87.1	30.4	.623E-02+-.205E-02	37
3.47	2.72	7.39	2.755	.389E-02+-.748E-03	@ 90.0	31.6	@.177E-02+-.340E-03	23
3.49	2.73	7.43	1.336	.105E-01+-.240E-02	@ 60.0	19.5	@.480E-02+-.110E-02	23
			2.774	.310E-02+-.415E-03	@ 90.0	31.6	@.142E-02+-.190E-03	23
3.50	2.73	7.45	-0.102	.523E-01+-.653E-02	# 0.0	0.0	#.240E-01+-.300E-02	47
3.50+- 0.10	2.73+- 0.03	7.45+- 0.19	$ 1.689+- 0.200	@.420E-01+-.910E-02	67.6+- 4.3	22.4+- 1.6	.193E-01+-.418E-02	37
			$ 2.639+- 0.200	@.104E-01+-.310E-02	87.1+- 4.0	30.3+- 1.7	.477E-02+-.142E-02	37
3.56	2.75	7.56	2.841	.812E-02+-.169E-02	@ 90.0	31.4	@.380E-02+-.790E-03	6
3.58+- 0.11	2.76+- 0.04	7.60+- 0.21	$ 1.819	@.175E-01+-.470E-02	69.3	22.9	.824E-02+-.221E-02	37
3.60	2.76	7.64	-0.099	.654E-01+-.844E-02	# 0.0	0.0	#.310E-01+-.400E-02	47
3.61	2.77	7.65	1.395	.612E-02+-.149E-02	@ 60.0	19.3	@.291E-02+-.710E-03	23
			2.888	.488E-02+-.862E-03	@ 90.0	31.3	@.232E-02+-.410E-03	23
3.63	2.77	7.69	1.404	.100E-01+-.230E-02	@ 60.0	19.3	@.480E-02+-.110E-02	23
			2.907	.418E-02+-.397E-03	@ 90.0	31.2	@.200E-02+-.190E-03	23
3.64+- 0.11	2.78+- 0.04	7.71+- 0.21	$ 2.932	@.780E-02+-.370E-02	90.2	31.3	.374E-02+-.177E-02	37
3.68	2.79	7.79	2.955	.609E-02+-.144E-02	@ 90.0	31.1	@.296E-02+-.700E-03	6
3.70	2.80	7.82	-0.097	.982E-01+-.818E-02	# 0.0	0.0	#.480E-01+-.400E-02	47
3.76	2.82	7.94	3.031	.318E-02+-.563E-03	@ 90.0	30.9	@.158E-02+-.280E-03	23
3.79	2.83	7.99	3.059	.600E-02+-.141E-02	@ 90.0	30.8	@.301E-02+-.710E-03	6
			3.059	.371E-02+-.339E-03	@ 90.0	30.8	@.186E-02+-.170E-03	23
3.90	2.86	8.20	-0.093	.733E-01+-.772E-02	# 0.0	0.0	#.380E-01+-.400E-02	47
			3.164	.430E-02+-.164E-02	@ 90.0	30.6	@.223E-02+-.850E-03	6
3.91	2.87	8.22	3.173	.292E-02+-.693E-03	@ 90.0	30.6	@.152E-02+-.360E-03	23
3.93	2.87	8.26	3.192	.291E-02+-.689E-03	@ 90.0	30.5	@.152E-02+-.360E-03	23
3.96+- 0.09	2.88+- 0.03	8.31+- 0.17	$ 2.532	@.101E-01+-.360E-02	78.0	25.5	.532E-02+-.190E-02	37
4.00+- 0.10	2.90+- 0.03	8.39+- 0.19	$ 2.588+- 0.210	@.880E-02+-.160E-02	78.4+- 3.7	25.6+- 1.5	.469E-02+-.852E-03	37
4.05	2.91	8.48	3.306	.244E-02+-.592E-03	@ 90.0	30.3	@.132E-02+-.320E-03	23
4.07+- 0.24	2.92+- 0.08	8.52+- 0.45	$ 2.739	@.610E-02+-.210E-02	79.9	26.1	.330E-02+-.114E-02	37
4.07	2.92	8.52	3.325	.162E-02+-.405E-03	@ 90.0	30.2	@.880E-03+-.220E-03	23
4.10	2.93	8.57	-0.088	.767E-01+-.913E-02	# 0.0	0.0	#.420E-01+-.500E-02	47
4.20	2.96	8.76	-0.087	.551E-01+-.711E-02	# 0.0	0.0	#.310E-01+-.400E-02	47
4.23	2.97	8.82	3.477	.104E-02+-.282E-03	@ 90.0	29.9	@.590E-03+-.160E-03	23
4.25	2.98	8.86	3.495	.877E-03+-.386E-03	@ 90.0	29.8	@.500E-03+-.220E-03	23
4.30	2.99	8.95	-0.085	.416E-01+-.520E-02	# 0.0	0.0	#.240E-01+-.300E-02	47
4.40	3.02	9.14	3.638	.963E-03+-.355E-03	@ 90.0	29.5	@.570E-03+-.210E-03	23
4.42	3.03	9.17	3.656	.588E-03+-.336E-03	@ 90.0	29.5	@.350E-03+-.200E-03	23
4.50	3.05	9.32	-0.081	.346E-01+-.494E-02	# 0.0	0.0	#.210E-01+-.300E-02	47
4.57	3.08	9.46	3.798	<.583E-03	@ 90.0	29.2	@ <.360E-03	23
4.59	3.08	9.49	3.817	.564E-03+-.564E-03	@ 90.0	29.1	@.350E-03+-.350E-03	23
4.70	3.11	9.70	-0.078	.298E-01+-.471E-02	# 0.0	0.0	#.190E-01+-.300E-02	47
4.75	3.13	9.79	3.969	.342E-03+-.342E-03	@ 90.0	28.8	@.220E-03+-.220E-03	23
4.77	3.14	9.83	3.988	<.479E-03	@ 90.0	28.8	@ <.310E-03	23
4.86	3.16	10.00	-0.076	.273E-01+-.454E-02	# 0.0	0.0	#.180E-01+-.300E-02	47
5.03	3.21	10.32	-0.074	.321E-01+-.584E-02	# 0.0	0.0	#.220E-01+-.400E-02	47
5.07	3.22	10.39	-0.073	.289E-01+-.579E-02	# 0.0	0.0	#.200E-01+-.400E-02	47
5.17	3.25	10.58	-0.072	.255E-01+-.566E-02	# 0.0	0.0	#.180E-01+-.400E-02	47
5.28	3.28	10.79	-0.070	.194E-01+-.415E-02	# 0.0	0.0	#.140E-01+-.300E-02	47
5.50	3.35	11.20	-0.068	.185E-01+-.397E-02	# 0.0	0.0	#.140E-01+-.300E-02	47
6.00	3.48	12.14	@ 0.062	@.161E-01+-.134E-02	12.5	3.2	.133E-01+-.111E-02	113
			@ 0.078	@.168E-01+-.182E-02	13.3	3.4	.139E-01+-.151E-02	113
			@ 0.148	@.125E-01+-.115E-02	16.3	4.1	.104E-01+-.954E-03	113
			@ 0.225	@.578E-02+-.760E-03	19.1	4.8	.479E-02+-.630E-03	113
			@ 0.233	@.118E-01+-.117E-02	19.4	4.9	.983E-02+-.970E-03	113
			@ 0.427	@.852E-02+-.107E-02	25.0	6.4	.707E-02+-.887E-03	113
			@ 0.691	@.472E-02+-.580E-03	31.2	8.0	.391E-02+-.481E-03	113
			@ 1.087	@.378E-02+-.650E-03	38.8	10.0	.314E-02+-.539E-03	113
8.00	3.99	15.89	@ 0.047	@.692E-02+-.790E-03	9.4	2.1	.780E-02+-.890E-03	113
			@ 0.093	@.560E-02+-.490E-03	11.4	2.6	.631E-02+-.552E-03	113
			@ 0.427	@.352E-02+-.500E-03	21.1	4.7	.397E-02+-.563E-03	113
			@ 0.707	@.213E-02+-.320E-03	26.7	6.0	.240E-02+-.361E-03	113
			@ 1.102	@.228E-02+-.340E-03	33.1	7.6	.257E-02+-.383E-03	113
			@ 1.429	@.214E-02+-.320E-03	37.7	8.7	.241E-02+-.361E-03	113
			@ 1.856	@.178E-02+-.300E-03	43.0	10.0	.201E-02+-.338E-03	113
			@ 2.228	@.146E-02+-.320E-03	47.3	11.0	.165E-02+-.361E-03	113
12.00	4.84	23.40	@ 0.008	@.174E-02+-.280E-03	5.0	0.9	.300E-02+-.482E-03	113
			@ 0.078	@.218E-02+-.220E-03	8.2	1.5	.376E-02+-.379E-03	113
			@ 0.217	@.185E-02+-.250E-03	12.3	2.3	.319E-02+-.431E-03	113
			@ 0.427	@.970E-03+-.160E-03	16.8	3.2	.167E-02+-.276E-03	113
			@ 0.761	@.650E-03+-.140E-03	22.1	4.2	.112E-02+-.241E-03	113
			@ 1.087	@.586E-03+-.120E-03	26.3	5.0	.101E-02+-.207E-03	113
			@ 1.452	@.586E-03+-.780E-04	30.4	5.8	.101E-02+-.134E-03	113
			@ 1.825	@.466E-03+-.100E-03	34.1	6.5	.803E-03+-.172E-03	113
			@ 2.244	@.355E-03+-.980E-04	37.8	7.3	.612E-03+-.169E-03	113
			@ 2.702	@.177E-03+-.117E-03	41.6	8.1	.305E-03+-.202E-03	113
18.00	5.89	34.66	@ 0.085	@.651E-03+-.760E-04	6.5	1.0	.170E-02+-.199E-03	113
			@ 0.233	@.648E-03+-.109E-03	10.1	1.6	.170E-02+-.285E-03	113
			@ 0.450	@.416E-03+-.630E-04	13.8	2.1	.109E-02+-.165E-03	113
			@ 0.699	@.202E-03+-.600E-04	17.0	2.7	.529E-03+-.157E-03	113
			@ 1.087	@.150E-03+-.460E-04	21.2	3.3	.393E-03+-.120E-03	113
			@ 1.452	@.150E-03+-.320E-04	24.4	3.9	.393E-03+-.838E-04	113

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.21 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
18.00	5.89	34.66	@ 1.856	@.129E-03+-.390E-04	27.6	4.4	.338E-03+-.102E-03	113
			@ 2.252	@.880E-04+-.220E-04	30.5	4.8	.230E-03+-.576E-04	113
			@ 2.733	@.730E-04+-.280E-04	33.6	5.4	.191E-03+-.733E-04	113

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

RATIO OF CROSS SECTIONS FOR TRANSVERSE AND PARALLEL (TO THE PRODUCTION PLANE) POLARIZED GAMMAS

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	A=SIG TRANSVERSE (A-B)/(A+B)		A=SIG TRANSVERSE A/(A+B)		B=SIG PARALLEL B/(A+B)		REF
3.00+- 0.30	2.55	@ 0.1000	16.61	6.180							
		+- 0.0500	+- 4.18	+-1.572	@0.879	+-.111	0.939	+-.555E-01	0.605E-01	+-.555E-01	70
		@ 0.4000	33.57	12.72							
		+- 0.0500	+- 2.16	+-.8594	@ 1.01	+-.138	1.00	+-.690E-01	0.0	+-.790E-01	70
		@ 0.5000	37.67	14.37							
		+- 0.0500	+- 1.95	+-.7927	@0.760	+-.119	0.880	+-.595E-01	0.120	+-.595E-01	70
		@ 0.6000	41.42	15.91							
		+- 0.0500	+- 1.80	+-.7468	@0.538	+-.138	0.769	+-.690E-01	0.231	+-.690E-01	70
		@ 0.7000	44.91	17.37							
		+- 0.0500	+- 1.69	+-.7140	@0.662	+-.163	0.831	+-.815E-01	0.169	+-.815E-01	70
		@ 1.1000	57.21	22.78							
		+- 0.0500	+- 1.42	+-.6525	@ 1.03	+-.160	1.01	+-.800E-01	0.0	+-.110	70
		@ 1.2000	60.01	24.08							
		+- 0.0500	+- 1.38	+-.6477	@0.916	+-.146	0.958	+-.730E-01	0.420E-01	+-.730E-01	70
		@ 1.3000	62.73	25.37							
		+- 0.0500	+- 1.34	+-.6457	@0.830	+-.465	0.915	+-.232	0.850E-01	+-.232	70

C112: GAMMA + PROTON --> PROTON + PI ZERO (K > 1.21 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.1350 GEV

P = BARYON POLARIZATION ALONG K(GAMMA) X P(MESON)

K GEV	E* GEV	THETA MESON CM	THETA MESON LAB	THETA BARYON CM	THETA BARYON LAB	P	REF
1.250+-0.050	1.796	# 60.0+- 10.0	33.4+- 11.8	120.0+- 10.0	54.5+- 10.3	# 0.30+-.13	71
1.250+-0.050	1.796	# 65.0	37.0	115.0	51.9	# 0.60+-.16	148
1.350+-0.050	1.847	# 60.0+- 10.0	32.6+- 11.5	120.0+- 10.0	54.1+- 10.3	# 0.44+-.18	71
1.350+-0.050	1.847	# 65.0	36.0	115.0	51.5	#-0.30+-.21	148
1.450+-0.050	1.898	# 60.0+- 10.0	31.8+- 11.3	120.0+- 10.0	53.7+- 10.4	# 0.84+-.32	71
1.450+-0.050	1.898	# 65.0	35.1	115.0	51.1	#-0.14+-.28	148
1.550+-0.050	1.946	# 65.0	34.3	115.0	50.7	#-0.73+-.33	148
1.650+-0.050	1.994	# 65.0	33.5	115.0	50.3	#-0.09+-.41	148
1.750+-0.050	2.041	# 65.0	32.8	115.0	49.9	# 0.19+-.66	148

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C113: GAMMA + PROTON --> DELTA ZERO + PI+ (K > 0.40 GEV)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
0.40 - 0.50	1.31	<4.30		<2.95		36
0.50 - 0.60	1.38	<12.7		<13.2		36
0.60 - 0.70	1.45	<11.9		<17.4		36
0.70 - 0.80	1.51	<20.0		<39.1		36
0.80 - 0.90	1.57	14.6	+-14.6	36.8	+-36.8	36
0.90 - 1.00	1.63	22.7	+-12.6	71.5	+-39.7	36
1.00 - 1.10	1.69	<30.0		<116.		36
1.10 - 1.30	1.77	9.70	+-7.70	48.2	+-38.2	36
1.10 - 1.30	1.77	8.10	+-2.70	40.2	+-13.4	28
1.30 - 1.50	1.87	2.20	+-2.20	15.0	+-15.0	28
1.30 - 1.50	1.87	14.8	+-11.5	101.	+-78.2	36
1.50 - 1.80	1.99	<6.20		<58.0		36
1.50 - 1.80	1.99	3.90	+-2.10	36.5	+-19.6	28
1.80 - 2.50	2.19	<.900		<13.5		28
1.80 - 2.50	2.19	<9.70		<146.		36
2.80	2.48	1.50	+-.600	41.4	+-16.6	212
2.50 - 3.50	2.52	<2.70		<78.7		36
2.50 - 3.50	2.52	3.80	+-.800	111.	+-23.3	28
3.50 - 5.80	3.01	.800	+-.400	50.6	+-25.3	28
3.50 - 6.00	3.03	<3.30		<212.		36
4.70	3.11	.480	+-.270	37.3	+-21.0	212

C113: GAMMA + PROTON --> DELTA ZERO + PI+ (K > 0.40 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2		THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
16.00	5.56	# 0.0010		0.51	.8638E-01							
		+- 0.0006	+-	0.27	+-.4549E-01	# .470	+-.110	424.	+-99.2	1.07	+-.250	126
		# 0.0028		1.04	.1762							
		+- 0.0022	+-	0.48	+-.8179E-01	# .280	+-.500E-01	252.	+-45.1	.635	+-.113	126
		# 0.0140		2.50	#.3000							
		+- 0.0060	+-	0.55	+-.9327E-01	# .350	+-.400E-01	316.	+-36.1	.794	+-.908E-01	126
		# 0.0380		4.16	#.7000	# .300	+-.300E-01	270.	+-27.0	.681	+-.681E-01	126
		# 0.0770		5.94	#1.000	# .202	+-.120E-01	182.	+-10.8	.458	+-.272E-01	126
		# 0.1490		8.28	#1.400	# .138	+-.900E-02	124.	+-8.11	.313	+-.204E-01	126
		# 0.4000		13.60	#2.300	# .640E-01	+-.600E-02	57.7	+-5.41	.145	+-.136E-01	126
		# 0.8000		19.28	#3.280	# .260E-01	+-.300E-02	23.4	+-2.70	.590E-01	+-.681E-02	126
		# 1.0000		21.58	#3.680	# .168E-01	+-.170E-02	15.1	+-1.53	.381E-01	+-.386E-02	126
		# 1.2900		24.55	#4.200	# .650E-02	+-.800E-03	5.86	+-.721	.148E-01	+-.182E-02	126
		# 1.5800		27.22	#4.680	# .190E-02	+-.500E-03	1.71	+-.451	.431E-02	+-.113E-02	126
		# 2.0000		30.71	#5.300	# .700E-03	+-.300E-03	0.631	+-.270	.159E-02	+-.681E-03	126

C113: GAMMA + PROTON --> DELTA ZERO + PI+ (K > 0.40 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
# 0.0010+- 0.0006	16.00	5.56	30.90	# .470	+-.110	424.	+-99.2	126
# 0.0028+- 0.0022	16.00	5.56	30.90	# .280	+-.500E-01	252.	+-45.1	126
# 0.0140+- 0.0060	16.00	5.56	30.90	# .350	+-.400E-01	316.	+-36.1	126
# 0.0380	16.00	5.56	30.90	# .300	+-.300E-01	270.	+-27.0	126
# 0.0770	16.00	5.56	30.90	# .202	+-.120E-01	182.	+-10.8	126
# 0.1490	16.00	5.56	30.90	# .138	+-.900E-02	124.	+-8.11	126
# 0.4000	16.00	5.56	30.90	# .640E-01	+-.600E-02	57.7	+-5.41	126
# 0.8000	16.00	5.56	30.90	# .260E-01	+-.300E-02	23.4	+-2.70	126

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C113: GAMMA + PROTON --> DELTA ZERO + PI+ (K > 0.40 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
#	1.0000	16.00	5.56	30.90	# .168E-01+-.170E-02	15.1	+-1.53	126
#	1.2900	16.00	5.56	30.90	# .650E-02+-.800E-03	5.86	+-.721	126
#	1.5800	16.00	5.56	30.90	# .190E-02+-.500E-03	1.71	+-.451	126
#	2.0000	16.00	5.56	30.90	# .700E-03+-.300E-03	.631	+-.270	126

C113: GAMMA + PROTON --> DELTA ZERO + PI+ (K > 0.40 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

A = ASYMMETRY ((+)-(-))/((+)+(-)) FOR POLARIZED TARGET (POLARIZATION POSITIVE ALONG K(GAMMA) X P(MESON))

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	A	REF
16.00	5.56	# 0.0800	6.06	1.022	#-.600E-01+-.760	184
		# 0.3100	11.96	2.024	#-1.21 +-1.09	184

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
0.35 - 0.50	1.29	a 5.60	+-1.40	3.24	+-.811	155
0.40 - 0.45	1.29	# 4.00	+-.800	2.52	+-.504	28
0.40 - 0.50	1.31	a 7.80	+-3.20	5.36	+-2.20	36
0.45 - 0.50	1.33	# 13.8	+-1.40	10.9	+-1.10	28
0.50 - 0.55	1.37	a 40.0	+-5.00	38.6	+-4.82	155
0.50 - 0.55	1.37	# 33.1	+-2.30	31.9	+-2.22	28
0.50 - 0.60	1.38	a 44.2	+-4.00	45.9	+-4.16	36
0.55 - 0.60	1.40	a 50.0	+-5.00	57.9	+-5.79	155
0.55 - 0.60	1.40	# 47.8	+-3.40	55.3	+-3.94	28
0.58	1.40	a 69.0	+-2.60	81.7	+-3.08	159
0.60	1.42	a 68.1	+-2.20	86.3	+-2.79	159
0.60 - 0.65	1.43	a 71.0	+-7.00	97.2	+-9.58	155
0.60 - 0.65	1.43	# 66.5	+-5.50	91.0	+-7.53	28
0.63	1.44	a 73.4	+-7.90	103.	+-11.0	159
0.65	1.45	a 74.7	+-8.70	111.	+-12.9	159
0.60 - 0.70	1.45	a 69.5	+-6.00	102.	+-8.77	36
0.65 - 0.70	1.46	a 72.0	+-10.0	115.	+-16.0	155
0.65 - 0.70	1.46	# 54.5	+-6.20	87.1	+-9.91	28
0.70	1.48	a 65.9	+-3.50	114.	+-6.04	159
0.70 - 0.75	1.50	a 59.0	+-9.00	109.	+-16.6	155
0.70 - 0.75	1.50	# 64.5	+-6.40	119.	+-11.8	28
0.70 - 0.80	1.51	a 76.5	+-6.60	150.	+-12.9	36
0.75	1.51	a 49.8	+-3.10	98.6	+-6.14	159
0.75 - 0.80	1.53	a 41.0	+-9.00	86.4	+-19.0	155
0.75 - 0.80	1.53	# 50.2	+-7.30	106.	+-15.4	28
0.80	1.54	a 46.7	+-5.20	105.	+-11.7	159
0.80 - 0.85	1.56	a 31.0	+-8.00	74.1	+-19.1	155
0.80 - 0.85	1.56	# 58.0	+-7.00	139.	+-16.7	28
0.85	1.57	a 43.0	+-2.80	109.	+-7.12	159
0.80 - 0.90	1.57	a 53.4	+-6.00	134.	+-15.1	36
0.85 - 0.90	1.59	a 48.0	+-8.50	129.	+-22.9	155
0.85 - 0.90	1.59	# 62.0	+-6.00	167.	+-16.1	28
0.90	1.60	a 46.9	+-5.20	134.	+-14.8	159
0.90 - 0.95	1.62	# 54.8	+-6.10	165.	+-18.3	28
0.95	1.63	a 41.5	+-2.20	132.	+-6.99	159
0.90 - 1.00	1.63	a 57.0	+-6.00	180.	+-18.9	155
0.90 - 1.00	1.63	a 51.4	+-7.10	162.	+-22.4	36
0.95 - 1.00	1.65	# 51.2	+-5.50	171.	+-18.4	28
1.00 - 1.10	1.69	a 53.0	+-8.60	204.	+-33.2	36
1.00 - 1.10	1.69	# 44.5	+-3.60	172.	+-13.9	28
1.10 - 1.15	1.73	# 36.0	+-2.80	134.	+-12.5	28
1.15 - 1.20	1.76	# 22.0	+-2.80	107.	+-13.6	28
1.10 - 1.30	1.77	a 29.0	+-4.00	144.	+-19.9	36
1.20 - 1.25	1.78	# 22.5	+-3.00	119.	+-15.8	28
1.25 - 1.30	1.81	# 19.5	+-2.50	111.	+-14.3	28
1.30 - 1.35	1.83	# 18.5	+-2.50	114.	+-15.4	28
1.35 - 1.40	1.86	# 13.7	+-2.20	91.1	+-14.6	28
1.30 - 1.50	1.87	a 17.5	+-5.20	119.	+-35.3	36
1.40 - 1.50	1.90	# 15.5	+-2.00	114.	+-14.8	28
1.50 - 1.60	1.95	# 15.2	+-1.60	128.	+-13.5	28
1.50 - 1.80	1.99	a 11.8	+-3.50	110.	+-32.7	36
1.60 - 1.70	1.99	# 12.2	+-1.50	117.	+-14.3	28
1.70 - 1.80	2.04	# 15.4	+-1.50	166.	+-16.1	28
1.80 - 2.00	2.11	# 9.60	+-1.00	121.	+-12.6	28
2.00 - 2.20	2.19	# 6.20	+-1.00	95.6	+-15.4	28
1.80 - 2.50	2.19	a 11.8	+-3.50	177.	+-52.6	36
2.20 - 2.50	2.30	# 6.10	+-.700	117.	+-13.4	28
2.00 - 4.00	2.43	# 3.50	+-1.20	78.9	+-27.0	65
2.00 - 4.00	2.43	# 3.50	+-1.20	78.9	+-27.0	107
2.50 - 3.00	2.45	# 3.00	+-.600	77.9	+-15.6	28
2.80	2.48	# 3.70	+-.400	102.	+-11.0	212
2.50 - 3.50	2.52	a 1.20	+-.900	35.0	+-26.2	36
3.00 - 3.50	2.63	# 3.80	+-.600	139.	+-21.9	28
3.50 - 4.50	2.88	# 1.90	+-.500	102.	+-26.9	28
4.30	2.99	# 1.40	+-.300	91.2	+-19.5	94
3.50 - 6.00	3.03	a 1.10	+-1.10	70.8	+-70.8	36
4.70	3.11	# 1.00	+-.10GE 00	77.8	+-7.78	212
4.50 - 5.80	3.22	# 1.50	+-.300	134.	+-26.7	28
5.25	3.28	# 1.70	+-.400	165.	+-38.8	114
4.00 - 8.00	3.30	# .800	+-.400	72.1	+-36.1	107
8.00 -16.00	4.57	# .300	+-.200	108.	+-72.1	107

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
M3 = 1.1760 - 1.2090 GEV											
0.40 - 0.50	1.31	-----	# 0.0 - 36.90	-----	-------		-------		# 1.00	+-.200	28
			# 36.90- 53.10	-----	-------		-------		# .960	+-.150	28
			# 53.10- 66.40	-----	-------		-------		# .760	+-.180	28
			# 66.40- 78.50	-----	-------		-------		# .620	+-.180	28
			# 78.50- 90.00	-----	-------		-------		# .650	+-.150	28
			# 90.00- 101.50	-----	-------		-------		# .900	+-.150	28
			#101.50- 113.60	-----	-------		-------		# .600	+-.150	28
			#113.60- 126.90	-----	-------		-------		# .500	+-.150	28
			#126.90- 143.10	-----	-------		-------		# .400	+-.150	28
			#143.10- 180.00	-----	-------		-------		# .150	+-.150	28
		# 0.0 - 0.0500	-------	-----	# 60.0	+-10.0	41.2	+-6.87		-------	28
		# 0.0500- 0.1000	-------	-----	# 76.0	+-10.0	52.2	+-6.87		-------	28
		# 0.1000- 0.1500	-------	-----	# 43.0	+-7.00	29.5	+-4.81		-------	28
		#.0.1500- 0.2000	-------	-----	# 13.0	+-5.00	8.93	+-3.44		-------	28
M3 = 1.2090 - 1.2768 GEV											
0.50 - 0.60	1.38	-----	# 0.0 - 36.90	-----	-------		-------		# 5.45	+-.450	28
			# 36.90- 53.10	-----	-------		-------		# 4.80	+-.400	28
			# 53.10- 66.40	-----	-------		-------		# 4.40	+-.400	28
			# 66.40- 78.50	-----	-------		-------		# 4.10	+-.400	28
			# 78.50- 90.00	-----	-------		-------		# 3.20	+-.300	28
			# 90.00- 101.50	-----	-------		-------		# 2.80	+-.300	28
			#101.50- 113.60	-----	-------		-------		# 3.10	+-.300	28
			#113.60- 126.90	-----	-------		-------		# 2.60	+-.300	28
			#126.90- 143.10	-----	-------		-------		# 3.00	+-.400	28
			#143.10- 180.00	-----	-------		-------		# 2.10	+-.300	28
		# 0.0 - 0.0500	-------	-----	# 193.	+-18.0	201.	+-18.7		-------	28
		# 0.0500- 0.1000	-------	-----	# 311.	+-18.0	323.	+-18.7		-------	28
		# 0.1000- 0.1500	-------	-----	# 200.	+-15.0	208.	+-15.6		-------	28
		# 0.1500- 0.2000	-------	-----	# 102.	+-12.0	106.	+-12.5		-------	28
		# 0.2000- 0.2500	-------	-----	# 53.0	+-9.00	55.1	+-9.35		-------	28
		# 0.2500- 0.3000	-------	-----	# 14.0	+-6.00	14.5	+-6.23		-------	28
		# 0.3000- 0.3500	-------	-----	# 9.00	+-7.00	9.35	+-7.27		-------	28
		# 0.3500- 0.4000	-------	-----	# 3.00	+-4.00	3.12	+-4.16		-------	28
0.58	1.40	0.0810	@ 66.40	36.93	611.	+-62.9	724.	+-74.5	@ 6.51	+-.670	159
		0.1077	@ 89.90	51.76	501.	+-80.7	594.	+-95.6	@ 5.34	+-.860	159
		0.1305	@109.80	65.97	472.	+-113.	559.	+-133.	@ 5.03	+-1.20	159
0.60	1.42	0.0455	@ 28.30	16.00	496.	+-126.	629.	+-160.	@ 6.71	+-1.71	159
		0.0760	@ 58.60	34.06	469.	+-42.9	594.	+-54.4	@ 6.34	+-.580	159
		0.0812	@ 62.60	36.58	469.	+-28.1	594.	+-35.6	@ 6.34	+-.380	159
		0.1014	@ 77.20	46.13	489.	+-63.6	620.	+-80.6	@ 6.61	+-.860	159
		0.1269	@ 94.50	58.47	398.	+-65.8	504.	+-83.4	@ 5.38	+-.890	159
		0.1525	@112.30	72.90	375.	+-76.2	475.	+-96.6	@ 5.07	+-1.03	159
		0.1745	@129.70	89.77	263.	+-101.	334.	+-128.	@ 3.56	+-1.37	159
0.63	1.44	0.0867	@ 61.30	37.10	428.	+-49.3	598.	+-68.8	@ 7.47	+-.860	159
		0.0955	@ 66.40	40.51	351.	+-49.3	491.	+-68.8	@ 6.13	+-.860	159
		0.1283	@ 84.20	53.15	343.	+-29.2	479.	+-40.8	@ 5.99	+-.510	159
		0.1567	@ 99.10	64.90	280.	+-47.0	391.	+-65.6	@ 4.89	+-.820	159
		0.2095	@129.70	94.63	329.	+-66.4	460.	+-92.9	@ 5.75	+-1.16	159
		0.2292	@145.00	114.3	184.	+-88.2	258.	+-123.	@ 3.22	+-1.54	159
M3 = 1.2360 GEV											
0.60 - 0.70	1.45	-----	# 0.0 - 25.10	-----	-------		-------		# 9.00	+-1.10	28

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
0.60 - 0.70	1.45	-----	# 25.10-36.90	-----		---------		---------	# 8.20	+-1.00	28
			# 36.90-53.10	-----		---------		---------	# 7.80	+-.700	28
0.65	1.45	0.1097	@ 70.10	43.60	312.	+-33.6	464.	+-49.9	@ 6.23	+-.670	159
0.60 - 0.70	1.45	-----	# 53.10-66.40	-----		---------		---------	# 6.70	+-.600	28
			# 66.40-78.50	-----		---------		---------	# 5.00	+-.600	28
			# 78.50-90.00	-----		---------		---------	# 5.20	+-.550	28
0.65	1.45	0.1397	@ 84.20	53.91	250.	+-41.1	373.	+-61.1	@ 5.00	+-.820	159
		0.1635	@ 95.10	62.56	261.	+-27.5	388.	+-41.0	@ 5.21	+-.550	159
0.60 - 0.70	1.45	-----	# 90.00-101.50	-----		---------		---------	# 4.20	+-.600	28
			#101.50-113.60	-----		---------		---------	# 4.10	+-.500	28
0.65	1.45	0.1974	@111.00	76.64	266.	+-22.5	396.	+-33.5	@ 5.31	+-.450	159
0.60 - 0.70	1.45	-----	#113.60-126.90	-----		---------		---------	# 3.70	+-.500	28
0.65	1.45	0.2225	@124.00	89.89	214.	+-37.6	319.	+-55.9	@ 4.28	+-.750	159
0.60 - 0.70	1.45	-----	#126.90-143.10	-----		---------		---------	# 4.60	+-.550	28
0.65	1.45	0.2502	@141.20	110.9	223.	+-53.1	332.	+-79.0	@ 4.45	+-1.06	159
0.60 - 0.70	1.45	-----	#143.10-180.00	-----		---------		---------	# 5.50	+-.550	28
		# 0.0 - 0.0500	-------	-----	# 225.	+-21.0	329.	+-30.7		---------	28
		# 0.0500-0.1000	-------	-----	# 340.	+-27.0	497.	+-39.5		---------	28
		# 0.1000-0.1500	-------	-----	# 270.	+-23.0	395.	+-33.6		---------	28
		# 0.1500-0.2000	-------	-----	# 202.	+-19.0	295.	+-27.8		---------	28
		# 0.2000-0.2500	-------	-----	# 146.	+-15.0	213.	+-21.9		---------	28
		# 0.2500-0.3000	-------	-----	# 107.	+-13.0	156.	+-19.0		---------	28
		# 0.3000-0.3500	-------	-----	# 71.0	+-11.0	104.	+-16.1		---------	28
		# 0.3500-0.4000	-------	-----	# 45.0	+-9.00	65.8	+-13.2		---------	28
		# 0.4000-0.4500	-------	-----	# 16.0	+-7.00	23.4	+-10.2		---------	28
0.70	1.48	0.0450	@ 30.70	18.30	337.	+-46.0	581.	+-79.4	@ 8.77	+-1.20	159
		0.1431	@ 74.90	47.63	189.	+-33.0	326.	+-56.9	@ 4.93	+-.860	159
		0.2086	@ 98.00	66.12	138.	+-19.6	238.	+-33.8	@ 3.60	+-.510	159
		0.2380	@108.60	75.81	166.	+-22.3	286.	+-38.4	@ 4.32	+-.580	159
		0.2674	@119.90	87.29	148.	+-19.6	256.	+-33.8	@ 3.87	+-.510	159
		0.2936	@131.20	100.3	164.	+-17.3	283.	+-29.8	@ 4.28	+-.450	159
		0.3199	@145.00	118.7	164.	+-25.7	283.	+-44.4	@ 4.28	+-.670	159
0.70 - 0.80	1.51	-----	# 0.0 - 25.10	-----		---------		---------	# 10.0	+-1.30	28
0.75	1.51	0.0470	@ 30.70	18.23	195.	+-36.2	387.	+-71.6	@ 6.27	+-1.16	159
0.70 - 0.80	1.51	-----	# 25.10-36.90	-----		---------		---------	# 7.70	+-1.40	28
			# 36.90-53.10	-----		---------		---------	# 7.40	+-.900	28
			# 53.10-66.40	-----		---------		---------	# 6.50	+-.700	28
0.75	1.51	0.1354	@ 65.10	40.56	127.	+-12.8	252.	+-25.3	@ 4.08	+-.410	159
0.70 - 0.80	1.51	-----	# 66.40-78.50	-----		---------		---------	# 4.40	+-.650	28
			# 78.50-90.00	-----		---------		---------	# 3.40	+-.650	28
			# 90.00-101.50	-----		---------		---------	# 3.90	+-.650	28
0.75	1.51	0.2483	@ 98.00	66.31	81.1	+-15.9	161.	+-31.5	@ 2.60	+-.510	159
0.70 - 0.80	1.51	-----	#101.50-113.60	-----		---------		---------	# 2.50	+-.650	28
0.75	1.51	0.2968	@112.30	79.81	101.	+-15.0	201.	+-29.6	@ 3.25	+-.480	159
0.70 - 0.80	1.51	-----	#113.60-126.90	-----		---------		---------	# 3.10	+-.650	28
0.75	1.51	0.3330	@124.00	92.37	96.0	+-15.9	190.	+-31.5	@ 3.08	+-.510	159
		0.3611	@134.30	104.8	113.	+-15.9	224.	+-31.5	@ 3.63	+-.510	159
0.70 - 0.80	1.51	-----	#126.90-143.10	-----		---------		---------	# 3.10	+-.650	28
			#143.10-180.00	-----		---------		---------	# 4.50	+-.700	28
		# 0.0 - 0.0500	-------	-----	# 156.	+-17.0	305.	+-33.2		---------	28
		@ 0.0 - 0.1000	-------	-----	@ 228.	+-36.0	446.	+-70.4		---------	36
		# 0.0500-0.1000	-------	-----	# 249.	+-23.0	487.	+-45.0		---------	28
		# 0.1000-0.1500	-------	-----	# 166.	+-21.0	324.	+-41.0		---------	28
		@ 0.1000-0.2000	-------	-----	@ 190.	+-30.0	371.	+-58.6		---------	36

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
0.70 - 0.80	1.51	# 0.1500-0.2000	------	-----	# 134.	+-19.0	262.	+-37.1		--------	28
		# 0.2000-0.2500	------	-----	# 102.	+-17.0	199.	+-33.2		--------	28
		@ 0.2000-0.3000	------	-----	@ 146.	+-28.0	285.	+-54.7		--------	36
		# 0.2500-0.3000	------	-----	# 86.0	+-16.0	168.	+-31.3		--------	28
		# 0.3000-0.3500	------	-----	# 81.0	+-15.0	158.	+-29.3		--------	28
		@ 0.3000-0.4000	------	-----	@ 113.	+-11.0	221.	+-21.5		--------	36
		# 0.3500-0.4000	------	-----	# 86.0	+-14.0	168.	+-27.4		--------	28
		# 0.4000-0.4500	------	-----	# 40.0	+-10.0	78.2	+-19.5		--------	28
		@ 0.4000-0.5000	------	-----	@ 70.0	+-16.0	137.	+-31.3		--------	36
		# 0.4500-0.5000	------	-----	# 36.0	+-9.00	70.4	+-17.6		--------	28
		@ 0.5000-0.6000	------	-----	@ 12.0	+-7.00	23.5	+-13.7		--------	36
0.80	1.54	0.0545	@ 32.80	19.35	224.	+-27.8	504.	+-62.7	@ 8.53	+-1.06	159
		0.1504	@ 63.90	39.45	109.	+-10.8	245.	+-24.2	@ 4.14	+-.410	159
		0.2508	@ 88.80	58.21	68.2	+-13.4	154.	+-30.2	@ 2.60	+-.510	159
		0.3321	@108.60	75.98	67.4	+-13.4	152.	+-30.2	@ 2.57	+-.510	159
		0.3897	@124.00	92.34	48.5	+-13.4	109.	+-30.2	@ 1.85	+-.510	159
		0.4280	@136.00	107.1	63.8	+-12.6	144.	+-28.4	@ 2.43	+-.480	159
0.80 - 0.90	1.57	0.0130-0.0429	# 0.0 - 25.10	0.0 - 14.35	151.	+-27.8	380.	+-70.0	# 7.60	+-1.40	28
		0.0389-0.0764	# 25.10- 36.90	# 14.35- 21.35	208.	+-32.3	522.	+-81.3	# 9.00	+-1.40	28
0.85	1.57	0.0588	@ 32.80	19.13	143.	+-19.5	365.	+-49.5	@ 6.34	+-.860	159
0.80 - 0.90	1.57	0.0643-0.1394	# 36.90- 53.10	# 21.35- 31.44	175.	+-20.8	441.	+-52.2	# 7.60	+-.900	28
0.85	1.57	0.1475	@ 58.60	35.46	86.9	+-14.0	221.	+-35.7	@ 3.84	+-.620	159
0.80 - 0.90	1.57	0.1120-0.2026	# 53.10- 66.40	# 31.44- 40.36	148.	+-18.4	372.	+-46.4	# 6.40	+-.800	28
		0.1599-0.2662	# 66.40- 78.50	# 40.36- 49.13	136.	+-18.4	343.	+-46.4	# 5.90	+-.800	28
0.85	1.57	0.2420	@ 79.60	50.47	76.0	+-9.28	193.	+-23.6	@ 3.36	+-.410	159
0.80 - 0.90	1.57	0.2080-0.3292	# 78.50- 90.00	# 49.13- 58.23	98.0	+-16.1	247.	+-40.6	# 4.25	+-.700	28
		0.2558-0.3923	# 90.00- 101.50	# 58.23- 68.27	98.0	+-16.1	247.	+-40.6	# 4.25	+-.700	28
0.85	1.57	0.3308	@ 98.00	65.65	51.8	+-6.11	132.	+-15.5	@ 2.29	+-.270	159
0.80 - 0.90	1.57	0.3035-0.4558	#101.50- 113.60	# 68.27- 80.09	70.3	+-15.0	177.	+-37.7	# 3.05	+-.650	28
		0.3516-0.5191	#113.60- 126.90	# 80.09- 94.96	31.1	+-15.0	78.4	+-37.7	# 1.35	+-.650	28
0.85	1.57	0.4474	@124.00	92.02	57.3	+-12.4	146.	+-31.7	@ 2.53	+-.550	159
0.80 - 0.90	1.57	0.3995-0.5821	#126.90- 143.10	# 94.96- 116.4	66.9	+-15.0	168.	+-37.7	# 2.90	+-.650	28
0.85	1.57	0.4918	@136.00	106.9	60.4	+-11.5	154.	+-29.4	@ 2.67	+-.510	159
		0.5195	@145.00	119.5	51.8	+-11.5	132.	+-29.4	@ 2.29	+-.510	159
0.80 - 0.90	1.57	0.4472-0.6454	#143.10- 180.00	#116.39- 180.0	85.3	+-15.0	215.	+-37.7	# 3.70	+-.650	28
		# 0.0 - 0.0500	0.0 - 30.75	0.0 - 18.10	# 117.	+-19.0	295.	+-47.8	4.46	+-.724	28
		# 0.0500-0.1000	27.98- 49.41	16.04- 29.75	# 195.	+-22.0	491.	+-55.4	8.62	+-.973	28
		# 0.1000-0.1500	43.53- 63.78	25.40- 39.37	# 193.	+-20.0	486.	+-50.4	8.53	+-.884	28
		# 0.1500-0.2000	55.47- 76.53	32.98- 48.57	# 131.	+-19.0	330.	+-47.8	5.79	+-.840	28
		# 0.2000-0.2500	65.88- 88.62	39.99- 58.07	# 119.	+-18.0	300.	+-45.3	5.26	+-.796	28
		# 0.2500-0.3000	75.49- 100.65	46.88- 68.46	# 105.	+-18.0	264.	+-45.3	4.64	+-.796	28
		# 0.3000-0.3500	84.69- 113.18	53.93- 80.57	# 48.0	+-17.0	121.	+-42.8	2.12	+-.752	28
		# 0.3500-0.4000	93.77- 127.04	61.40- 95.91	# 71.0	+-17.0	179.	+-42.8	3.14	+-.752	28
		# 0.4000-0.4500	102.93- 144.22	69.59- 118.5	# 51.0	+-15.0	128.	+-37.8	2.25	+-.663	28
		# 0.4500-0.5000	112.45- 180.00	78.91- 180.0	# 50.0	+-14.0	126.	+-35.2	2.21	+-.619	28
0.86	1.58	0.1568	# 60.00	36.32	111.	+-4.18	290.	+-10.9	# 5.06	+-.190	177
0.90	1.60	0.1645	@ 58.60	35.05	110.	+-8.94	315.	+-25.5	@ 5.55	+-.450	159
		0.2342	@ 72.50	44.69	68.0	+-7.55	194.	+-21.5	@ 3.42	+-.380	159
		0.3226	@ 88.80	57.24	51.1	+-6.16	146.	+-17.6	@ 2.57	+-.310	159
		0.4047	@103.80	70.41	21.9	+-8.15	62.3	+-23.2	@ 1.10	+-.410	159
		0.5375	@131.20	100.3	38.2	+-8.15	109.	+-23.2	@ 1.92	+-.410	159
0.91	1.61	0.1748	# 60.00	35.90	93.9	+-3.69	274.	+-10.7	# 4.84	+-.190	177
0.93	1.62	0.2447	# 71.60	43.74	64.8	+-5.55	197.	+-16.9	# 3.50	+-.300	160
		0.3376	# 87.60	55.92	53.7	+-7.40	163.	+-22.5	# 2.90	+-.400	160
		0.5070	#117.20	83.54	27.8	+-9.25	84.5	+-28.2	# 1.50	+-.500	160
0.94	1.63	0.0147	# 7.10	3.979	107.	+-14.5	332.	+-45.0	# 5.90	+-.800	160

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
0.94	1.63	0.0356	# 21.20	11.96	190.	+-16.3	591.	+-50.7	# 10.5	+-.900	160
		0.0742	# 34.80	19.87	156.	+-9.04	484.	+-28.1	# 8.60	+-.500	160
		0.1413	# 51.10	29.85	101.	+-9.04	315.	+-28.1	# 5.60	+-.500	160
0.90 - 1.00	1.63	0.0109-	# 0.0 -	0.0 -							
		0.0481	25.10	13.97	116.	+-22.3	366.	+-70.3	# 7.30	+-1.40	28
		0.0429-	# 25.10-	# 13.97-							
		0.0899	36.90	20.78	166.	+-25.1	525.	+-79.0	# 9.30	+-1.40	28
		0.0764-	# 36.90-	# 20.78-							
		0.1686	53.10	30.65	141.	+-16.1	446.	+-50.8	# 7.90	+-.900	28
		0.1394-	# 53.10-	# 30.65-							
		0.2475	66.40	39.39	125.	+-16.1	395.	+-50.8	# 7.00	+-.900	28
0.95	1.63	0.2392	@ 68.90	41.62	79.4	+-7.25	252.	+-23.0	@ 4.49	+-.410	159
0.90 - 1.00	1.63	0.2026-	# 66.40-	# 39.39-							
		0.3268	78.50	48.03	78.7	+-14.3	248.	+-45.1	# 4.40	+-.800	28
		0.2662-	# 78.50-	# 48.03-							
		0.4055	90.00	57.03	67.1	+-11.6	212.	+-36.7	# 3.75	+-.650	28
0.95	1.63	0.4165	@ 98.00	64.49	33.3	+-4.78	106.	+-15.2	@ 1.88	+-.270	159
		0.3355	@ 84.90	53.52	52.7	+-5.48	168.	+-17.4	@ 2.98	+-.310	159
0.90 - 1.00	1.63	0.3292-	# 90.00-	# 57.03-							
		0.4841	101.50	67.00	34.0	+-11.6	107.	+-36.7	# 1.90	+-.650	28
		0.3923-	#101.50-	# 67.00-							
		0.5634	113.60	78.81	45.6	+-11.6	144.	+-36.7	# 2.55	+-.650	28
0.95	1.63	0.5087	@113.50	79.37	11.0	+-3.71	34.9	+-11.8	@ .620	+-.210	159
0.90 - 1.00	1.63	0.4558-	#113.60-	# 78.81-							
		0.6424	126.90	93.74	26.0	+-11.6	81.8	+-36.7	# 1.45	+-.650	28
		0.5191-	#126.90-	# 93.74-							
		0.7210	143.10	115.4	26.0	+-11.6	81.8	+-36.7	# 1.45	+-.650	28
		0.5821-	#143.10-	#115.38-							
		0.8001	180.00	180.0	50.1	+-11.6	158.	+-36.7	# 2.80	+-.650	28
		# 0.0 -	0.0 -	0.0 -							
		0.0500	27.98	16.04	# 96.0	+-18.0	303.	+-56.7	4.83	+-.906	28
		# 0.0500-	25.73-	14.32-							
		0.1000	43.53	25.46	# 155.	+-18.0	489.	+-56.7	8.77	+-1.02	28
		# 0.1000-	39.27-	22.18-							
		0.1500	55.47	32.98	# 136.	+-18.0	429.	+-56.7	7.69	+-1.02	28
		# 0.1500-	49.65-	28.49-							
		0.2000	65.88	39.95	# 124.	+-17.0	391.	+-53.6	7.01	+-.962	28
		# 0.2000-	58.62-	34.19-							
		0.2500	75.49	46.88	# 122.	+-16.0	385.	+-50.4	6.90	+-.905	28
		# 0.2500-	66.80-	39.66-							
		0.3000	84.69	53.93	# 85.0	+-16.0	268.	+-50.4	4.81	+-.905	28
		# 0.3000-	74.50-	45.09-							
		0.3500	93.77	61.40	# 58.0	+-14.0	183.	+-44.1	3.28	+-.792	28
		# 0.3500-	81.92-	50.62-							
		0.4000	102.93	69.59	# 39.0	+-15.0	123.	+-47.3	2.21	+-.848	28
		# 0.4000-	89.21-	56.38-							
		0.4500	112.45	78.91	# 29.0	+-15.0	91.4	+-47.3	1.64	+-.848	28
		# 0.4500-	96.48-	62.52-							
		0.5000	122.69	90.01	# 29.0	+-15.0	91.4	+-47.3	1.64	+-.848	28
0.96	1.64	0.1932	# 60.00	35.46	73.9	+-3.12	240.	+-10.1	# 4.27	+-.180	177
0.98	1.65	0.0379	# 21.60	12.05	141.	+-13.3	477.	+-44.9	# 8.50	+-.800	160
		0.0813	# 35.40	20.01	126.	+-9.95	426.	+-33.7	# 7.60	+-.600	160
		0.1558	# 51.80	29.99	92.9	+-8.29	314.	+-28.0	# 5.60	+-.500	160
		0.2768	# 72.60	43.94	68.0	+-4.98	230.	+-16.8	# 4.10	+-.300	160
		0.3814	# 88.70	56.21	39.8	+-8.29	135.	+-28.0	# 2.40	+-.500	160
		0.5684	#118.10	83.88	24.9	+-8.29	84.1	+-28.0	# 1.50	+-.500	160
0.99	1.65	0.0141	# 7.20	3.979	110.	+-13.0	381.	+-44.9	# 6.80	+-.800	160
1.01	1.67	0.2120	# 60.00	35.01	48.2	+-3.28	173.	+-11.8	# 3.09	+-.210	177
1.03	1.68	0.0138	# 7.30	3.989	54.1	+-18.0	202.	+-67.3	# 3.60	+-1.20	160
		0.0406	# 21.90	12.05	108.	+-18.0	404.	+-67.3	# 7.20	+-1.20	160
		0.3107	# 73.60	44.12	54.1	+-6.01	202.	+-22.4	# 3.60	+-.400	160
		0.4251	# 89.50	56.25	25.5	+-13.5	95.4	+-50.5	# 1.70	+-.900	160
		0.6297	#118.70	83.86	37.5	+-15.0	140.	+-56.1	# 2.50	+-1.00	160
1.04	1.68	0.0908	# 35.80	19.92	100.	+-8.84	382.	+-33.7	# 6.80	+-.600	160
1.00 - 1.10	1.69	# 0.0 -	0.0 -	0.0 -							
		0.0500	25.73	14.32	# 90.0	+-17.0	347.	+-65.6	5.65	+-1.07	28
		@ 0.0 -	0.0 -	0.0 -							
		0.1000	39.27	22.18	@ 110.	+-30.0	424.	+-116.	6.91	+-1.88	36
		# 0.0500-	23.89-	12.91-							
		0.1000	39.27	22.18	# 103.	+-16.0	397.	+-61.7	7.12	+-1.11	28
		# 0.1000-	36.00-	19.71-							
		0.1500	49.65	28.49	# 74.0	+-16.0	285.	+-61.7	5.12	+-1.11	28
		@ 0.1000-	36.00-	19.71-							
		0.2000	58.62	34.19	@ 98.0	+-28.0	378.	+-108.	6.78	+-1.94	36
		# 0.1500-	45.28-	25.12-							
		0.2000	58.62	34.19	# 116.	+-17.0	447.	+-65.6	8.02	+-1.18	28
		# 0.2000-	53.25-	29.95-							
		0.2500	66.80	39.66	# 83.0	+-14.0	320.	+-54.0	5.74	+-.968	28
		@ 0.2000-	53.25-	29.95-							
		0.3000	74.50	45.09	@ 65.0	+-22.0	251.	+-84.8	4.50	+-1.52	36
		# 0.2500-	60.47-	34.51-							
		0.3000	74.50	45.09	# 78.0	+-16.0	301.	+-61.7	5.40	+-1.11	28
		# 0.3000-	67.20-	38.95-							
		0.3500	81.92	50.62	# 50.0	+-13.0	193.	+-50.1	3.46	+-.899	28
		@ 0.3000-	67.20-	38.95-							
		0.4000	89.21	56.38	@ 58.0	+-19.0	224.	+-73.3	4.01	+-1.31	36
		# 0.3500-	73.61-	43.38-							
		0.4000	89.21	56.38	# 51.0	+-14.0	197.	+-54.0	3.53	+-.968	28

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
1.00 - 1.10	1.69	# 0.4000-	79.81-	47.88-							
		0.4500	96.48	62.52	# 47.0	+-13.0	181.	+-50.1	3.25	+-.899	28
		@ 0.4000-	79.81-	47.88-							
		0.5000	103.86	69.19	@ 71.0	+-22.0	274.	+-84.8	4.91	+-1.52	36
		# 0.4500-	85.90-	52.52-							
		0.5000	103.86	69.19	# 30.0	+-12.0	116.	+-46.3	2.08	+-.830	28
		@ 0.5000-	91.94-	57.37-							
		0.6000	119.54	85.20	@ 46.0	+-17.0	177.	+-65.6	3.18	+-1.18	36
1.06	1.69	0.2311	# 60.00	34.56	42.5	+-2.56	168.	+-10.1	# 2.99	+-.180	177
1.08	1.70	0.4697	# 90.20	56.20	27.4	+-5.48	113.	+-22.5	# 2.00	+-.400	160
		0.6939	#119.50	84.05	24.7	+-17.8	101.	+-73.2	# 1.80	+-1.30	160
		0.8509	#146.60	119.7	<85.0		<349.		# <6.20		160
1.09	1.71	0.0134	# 7.40	3.977	64.6	+-13.5	270.	+-56.3	# 4.80	+-1.00	160
		0.0438	# 22.10	11.96	128.	+-14.8	535.	+-62.0	# 9.50	+-1.10	160
		0.1000	# 36.30	19.93	86.2	+-8.08	361.	+-33.8	# 6.40	+-.600	160
		0.3490	# 74.20	43.91	44.4	+-6.73	186.	+-28.2	# 3.30	+-.500	160
1.00 - 1.20	1.71	0.0082-	# 0.0 -	0.0 -							
		0.0607	25.10	13.22	92.7	+-19.2	385.	+-79.8	# 8.20	+-1.70	28
		0.0481-	# 25.10-	# 13.22-							
		0.1196	36.90	19.69	68.1	+-19.1	283.	+-79.2	# 5.00	+-1.40	28
		0.0899-	# 36.90-	# 19.69-							
		0.2304	53.10	29.09	84.4	+-10.9	351.	+-45.3	# 6.20	+-.800	28
		0.1686-	# 53.10-	# 29.09-							
		0.3416	66.40	37.47	57.2	+-9.53	238.	+-39.6	# 4.20	+-.700	28
		0.2475-	# 66.40-	# 37.47-							
		0.4534	78.50	45.81	40.8	+-9.53	170.	+-39.6	# 3.00	+-.700	28
		0.3268-	# 78.50-	# 45.81-							
		0.5643	90.00	54.56	28.6	+-6.81	119.	+-28.3	# 2.10	+-.500	28
		0.4055-	# 90.00-	# 54.56-							
		0.6751	101.50	64.33	17.7	+-6.81	73.5	+-28.3	# 1.30	+-.500	28
		0.4841-	#101.50-	# 64.33-							
		0.7869	113.60	76.02	8.85	+-6.81	36.8	+-28.3	# .650	+-.500	28
		0.5634-	#113.60-	# 76.02-							
		0.8981	126.90	90.98	17.7	+-5.44	73.5	+-22.6	# 1.30	+-.400	28
		0.6424-	#126.90-	# 90.98-							
		1.0090	143.10	113.6	15.0	+-5.44	62.2	+-22.6	# 1.10	+-.400	28
		0.7210-	#143.10-	#112.96-							
		1.1203	180.00	180.0	12.3	+-5.44	50.9	+-22.6	# .900	+-.400	28
1.11	1.72	0.2506	# 60.00	34.12	31.2	+-2.34	136.	+-10.2	# 2.40	+-.180	177
1.13	1.73	0.5166	# 91.00	56.23	21.4	+-6.30	96.3	+-28.3	# 1.70	+-.500	160
		0.7573	#120.00	83.90	<18.9		<84.9		# <1.50		160
		0.9268	#147.10	119.9	<95.7		<430.		# <7.60		160
1.14	1.74	0.0132	# 7.50	3.975	55.8	+-18.6	255.	+-85.1	# 4.50	+-1.50	160
		0.0474	# 22.50	12.02	75.6	+-16.1	346.	+-73.7	# 6.10	+-1.30	160
		0.1099	# 36.80	19.95	70.6	+-7.44	323.	+-34.0	# 5.70	+-.600	160
		0.3846	# 75.00	43.94	27.3	+-6.20	125.	+-28.4	# 2.20	+-.500	160
1.16	1.75	0.2703	# 60.00	33.69	23.5	+-2.16	112.	+-10.2	# 1.96	+-.180	177
1.18	1.76	0.5641	# 91.70	56.18	15.1	+-5.82	74.2	+-28.5	# 1.30	+-.500	160
		0.8236	#120.70	83.98	17.5	+-14.0	85.6	+-68.5	# 1.50	+-1.20	160
		1.0037	#147.60	120.2	<47.7		<234.		# <4.10		160
1.19	1.76	0.0132	# 7.70	4.026	95.2	+-12.6	475.	+-62.9	# 8.30	+-1.10	160
		0.0511	# 22.80	12.02	66.5	+-10.3	332.	+-51.5	# 5.80	+-.900	160
		0.1203	# 37.30	19.97	61.9	+-5.73	309.	+-28.6	# 5.40	+-.500	160
		0.4218	# 75.80	43.98	25.2	+-5.73	126.	+-28.6	# 2.20	+-.500	160
1.21	1.78	0.2902	# 60.00	33.27	9.69	+-2.78	49.9	+-14.4	# .870	+-.250	177
1.23	1.79	0.6140	# 92.50	56.22	<6.49		<34.6		# <.600		160
		0.8921	#121.50	84.18	<10.8		<57.6		# <1.00		160
		1.0807	#147.90	120.0	<56.3		<300.		# <5.20		160
1.10 - 1.40	1.79	# 0.0 -									
		0.1000	------	-----	# 82.0	+-8.00	432.	+-42.2		--------	28
		# 0.1000-									
		0.2000	------	-----	# 60.0	+-8.00	316.	+-42.2		--------	28
		# 0.2000-									
		0.3000	------	-----	# 40.0	+-7.00	211.	+-36.9		--------	28
		# 0.3000-									
		0.4000	------	-----	# 14.0	+-6.00	73.8	+-31.6		--------	28
		# 0.4000-									
		0.5000	------	-----	# 14.0	+-6.00	73.8	+-31.6		--------	28
1.24	1.79	0.0133	# 7.80	4.023	68.3	+-13.9	370.	+-75.1	# 6.40	+-1.30	160
		0.0550	# 23.10	12.02	93.9	+-11.7	508.	+-63.5	# 8.80	+-1.10	160
		0.1314	# 37.80	19.98	48.0	+-5.33	260.	+-28.9	# 4.50	+-.500	160
		0.4603	# 76.60	44.03	16.0	+-5.33	86.6	+-28.9	# 1.50	+-.500	160
1.28	1.81	0.6654	# 93.30	56.27	<9.09		<52.4		# <.900		160
		0.9584	#121.90	83.94	<15.1		<87.4		# <1.50		160
		1.1590	#148.30	120.1	<47.5		<274.		# <4.70		160
1.29	1.82	0.0134	# 7.90	4.021	81.7	+-13.0	479.	+-75.9	# 8.20	+-1.30	160
		0.0592	# 23.40	12.02	70.8	+-14.0	415.	+-81.8	# 7.10	+-1.40	160
		0.1431	# 38.30	20.00	37.9	+-4.98	222.	+-29.2	# 3.80	+-.500	160
		0.5003	# 77.40	44.08	6.98	+-5.98	40.9	+-35.0	# .700	+-.600	160
1.20 - 1.40	1.82	0.0066-	# 0.0 -	0.0 -							
		0.1513	36.90	18.71	80.0	+-6.96	468.	+-40.7	# 9.20	+-.800	28
		0.1196-	# 36.90-	# 18.71-							
		0.2953	53.10	27.69	34.0	+-7.00	199.	+-40.9	# 3.40	+-.700	28
		0.2304-	# 53.10-	# 27.69-							
		0.4399	66.40	35.72	22.0	+-7.00	129.	+-40.9	# 2.20	+-.700	28
		0.3416-	# 66.40-	# 35.72-							
		0.5852	78.50	43.76	18.0	+-5.00	105.	+-29.2	# 1.80	+-.500	28
		0.4534-	# 78.50-	# 43.76-							
		0.7292	90.00	52.24	10.0	+-5.00	58.4	+-29.2	# 1.00	+-.500	28

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA** + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.20 - 1.40	1.82	0.5643-	# 90.00-	# 52.24-				
		0.8733	101.50	61.79	<4.00	<23.4	# <.400	28
		0.7869-	#113.60-	# 73.32-				
		1.1631	126.90	88.22	<3.00	<17.5	# <.300	28
		0.8981-	#126.90-	# 88.22-				
		1.3071	143.10	110.5	<3.00	<17.5	# <.300	28
		1.0090-	#143.10-	#110.45-				
		1.4519	180.00	180.0	<3.00	<17.5	# <.300	28
1.40 - 1.60	1.92	0.0055-	# 0.0 -	0.0 -				
		0.1844	36.90	17.85	59.8 +-5.63	468. +-44.0	# 8.50 +-.800	28
		0.1513-	# 36.90-	# 17.85-				
		0.3624	53.10	26.44	19.7 +-3.93	154. +-30.7	# 2.50 +-.500	28
		0.2953-	# 53.10-	# 26.44-				
		0.5410	66.40	34.16	14.9 +-3.93	117. +-30.7	# 1.90 +-.500	28
		0.4399-	# 66.40-	# 34.16-				
		0.7205	78.50	41.92	<4.72	<36.9	# <.600	28
		0.5852-	# 78.50-	# 41.92-				
		0.8986	90.00	50.15	6.29 +-3.15	49.2 +-24.6	# .800 +-.400	28
		0.7292-	# 90.00-	# 50.15-				
		1.0767	101.50	59.47	4.72 +-3.15	36.9 +-24.6	# .600 +-.400	28
		0.8733-	#101.50-	# 59.47-				
		1.2561	113.60	70.81	3.15 +-3.15	24.6 +-24.6	# .400 +-.400	28
		1.0186-	#113.60-	# 70.81-				
		1.4348	126.90	85.62	<3.15	<24.6	# <.400	28
		1.1631-	#126.90-	# 85.62-				
		1.6128	143.10	108.0	<3.15	<24.6	# <.400	28
		1.3071-	#143.10-	#108.03-				
		1.7917	180.00	180.0	<3.15	<24.6	# <.400	28
1.40 - 1.80	1.96	# 0.0 -	0.0 -	0.0 -				
		0.1000	29.46	14.80	# 81.0 +-6.00	697. +-51.6	9.32 +-.690	28
		# 0.1000-	24.40-	11.13-				
		0.2000	42.92	21.96	# 39.0 +-6.00	335. +-51.6	5.55 +-.854	28
		# 0.2000-	35.23-	16.27-				
		0.3000	53.56	27.95	# 16.0 +-4.00	138. +-34.4	2.28 +-.569	28
		# 0.3000-	43.69-	20.46-				
		0.4000	62.90	33.53	# 6.00 +-4.00	51.6 +-34.4	.854 +-.569	28
		# 0.4000-	51.00-	24.22-				
		0.5000	71.51	39.01	# 5.00 +-4.00	43.0 +-34.4	.712 +-.569	28
1.50 - 1.80	1.99	@ 0.0 -	0.0 -	0.0 -				
		0.1000	27.92	13.67	@ 50.0 +-28.0	468. +-262.	6.43 +-3.60	36
		@ 0.1000-	24.40-	11.13-				
		0.2000	40.56	20.19	@ 39.0 +-21.0	365. +-196.	5.82 +-3.13	36
		@ 0.2000-	35.23-	16.27-				
		0.4000	59.20	30.57	@ 4.70 +-3.50	44.0 +-32.7	.701 +-.522	36
		@ 0.4000-	51.00-	24.22-				
		0.6000	74.67	40.22	@ 1.80 +-1.80	16.8 +-16.8	.268 +-.268	36
1.60 - 1.80	2.01	0.0047-	# 0.0 -	0.0 -				
		0.2183	36.90	17.09	47.1 +-5.89	475. +-59.3	# 8.00 +-1.00	28
		0.1844-	# 36.90-	# 17.09-				
		0.4309	53.10	25.34	16.5 +-4.52	166. +-45.6	# 2.55 +-.700	28
		0.3624-	# 53.10-	# 25.34-				
		0.6442	66.40	32.77	4.20 +-3.23	42.3 +-32.5	# .650 +-.500	28
		0.5410-	# 66.40-	# 32.77-				
		0.8586	78.50	40.27	2.59 +-2.59	26.0 +-26.0	# .400 +-.400	28
		0.7205-	# 78.50-	# 40.27-				
		1.0712	90.00	48.26	<1.62	<16.3	# <.250	28
		0.8986-	# 90.00-	# 48.26-				
		1.2838	101.50	57.36	<1.62	<16.3	# <.250	28
		1.0767-	#101.50-	# 57.36-				
		1.4981	113.60	68.51	<2.59	<26.0	# <.400	28
		1.2561-	#113.60-	# 68.51-				
		1.7115	126.90	83.20	1.62 +-1.62	16.3 +-16.3	# .250 +-.250	28
		1.4348-	#126.90-	# 83.20-				
		1.9240	143.10	105.7	2.59 +-2.59	26.0 +-26.0	# .400 +-.400	28
		1.6128-	#143.10-	#105.73-				
		2.1376	180.00	180.0	<2.59	<26.0	# <.400	28
1.80 - 2.50	2.19	-----	# 0.0 -					
			18.20	-----	--------	--------	# 10.6 +-1.20	28
			# 18.20-					
			25.10	-----	--------	--------	# 8.50 +-1.00	28
			# 25.10-					
			31.80	-----	--------	--------	# 3.80 +-.800	28
			# 31.80-					
			36.90	-----	--------	--------	# 3.00 +-.800	28
			# 36.90-					
			53.10	-----	--------	--------	# .500 +-.250	28
			# 53.10-					
			66.40	-----	--------	--------	# <.190	28
			# 66.40-					
			78.50	-----	--------	--------	# <.100E 00	28
			# 78.50-					
			90.00	-----	--------	--------	# <.120	28
			# 90.00-					
			101.50	-----	--------	--------	# <.100E 00	28
			#101.50-					
			113.60	-----	--------	--------	# <.100E 00	28
			#113.60-					
			126.90	-----	--------	--------	# <.100E 00	28

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA** + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.80 - 2.50	2.19	-----	#126.90-143.10	-----	--------	--------	# <.120	28
			#143.10-180.00	-----	--------	--------	# <.100E 00	28
		# 0.0 - 0.1000	-------	-----	# 42.0 +-4.00	631. +-60.1	--------	28
		# 0.1000-0.2000	-------	-----	# 19.0 +-4.00	286. +-60.1	--------	28
		# 0.2000-0.3000	-------	-----	# 7.00 +-3.00	105. +-45.1	--------	28
		# 0.3000-0.4000	-------	-----	# <1.00	<15.0	--------	28
		# 0.4000-0.5000	-------	-----	# <1.00	<15.0	--------	28
2.80	2.48	# 0.0 - 0.0200	0.0 - 7.60	0.0 - 2.870	# 17.2 +-3.20	475. +-88.3	5.36 +-.998	212
		# 0.0200-0.0600	7.60-13.88	2.87-5.256	# 23.6 +-2.20	652. +-60.7	7.36 +-.686	212
		# 0.0600-0.1000	13.88-18.13	5.26-6.882	# 9.70 +-1.90	268. +-52.5	3.02 +-.592	212
		# 0.1000-0.2000	18.13-25.93	6.88-9.919	# 8.40 +-1.00	232. +-27.6	2.62 +-.312	212
		# 0.2000-0.3000	25.93-31.98	9.92-12.33	# 3.30 +-.670	91.1 +-18.5	1.03 +-.209	212
		# 0.3000-0.5000	31.98-41.74	12.33-16.35	# 1.50 +-.330	41.4 +-9.11	.468 +-.103	212
		# 0.5000-1.0000	41.74-60.60	16.35-24.81	# .510 +-.130	14.1 +-3.59	.159 +-.405E-01	212
		# 1.0000-4.0000	60.60-180.00	24.81-180.0	# .110 +-.300E-01	3.04 +-.828	.343E-01+-.935E-02	212
2.50 - 3.50	2.52	-----	# 0.0 - 18.20	-----	--------	--------	# 11.1 +-1.00	28
			# 18.20-25.10	-----	--------	--------	# 3.20 +-.800	28
			# 25.10-31.80	-----	--------	--------	# 1.80 +-.700	28
			# 31.80-36.90	-----	--------	--------	# .800 +-.500	28
			# 36.90-53.10	-----	--------	--------	# <.200	28
			# 53.10-66.40	-----	--------	--------	# <.100E 00	28
			# 66.40-78.50	-----	--------	--------	# <.150	28
			# 78.50-90.00	-----	--------	--------	# <.120	28
			# 90.00-101.50	-----	--------	--------	# <.800E-01	28
			#101.50-113.60	-----	--------	--------	# <.800E-01	28
			#113.60-126.90	-----	--------	--------	# <.100E 00	28
			#126.90-143.10	-----	--------	--------	# <.800E-01	28
			#143.10-180.00	-----	--------	--------	# <.100E 00	28
		# 0.0 - 0.1000	-------	-----	# 25.0 +-3.00	729. +-87.4	--------	28
		# 0.1000-0.2000	-------	-----	# 8.00 +-3.00	233. +-87.4	--------	28
		# 0.2000-0.3000	-------	-----	# 2.00 +-1.00	58.3 +-29.1	--------	28
		# 0.3000-0.4000	-------	-----	# 3.00 +-3.00	87.4 +-87.4	--------	28
		# 0.4000-0.5000	-------	-----	# <3.00	<87.4	--------	28
3.50 - 5.80	3.01	-----	# 0.0 - 18.20	-----	--------	--------	# 6.80 +-.800	28
			# 18.20-25.10	-----	--------	--------	# 1.70 +-.500	28
			# 25.10-31.80	-----	--------	--------	# .500 +-.300	28
			# 31.80-36.90	-----	--------	--------	# <1.00	28
			# 36.90-53.10	-----	--------	--------	# <.100E 00	28
			# 53.10-66.40	-----	--------	--------	# <.100E 00	28
			# 66.40-78.50	-----	--------	--------	# <.700E-01	28
			# 78.50-90.00	-----	--------	--------	# <.700E-01	28
			# 90.00-101.50	-----	--------	--------	# <.700E-01	28
			#101.50-113.60	-----	--------	--------	# <.700E-01	28
			#113.60-126.90	-----	--------	--------	# <.700E-01	28

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
3.50 - 5.80	3.01	-----	#126.90-143.10	-----	--------		--------		# <.700E-01		28
			#143.10-180.00	-----	--------		--------		# <.700E-01		28
		# 0.0 - 0.1000	------	-----	# 10.0	+-3.00	632.	+-190.	--------		28
		# 0.1000-0.2000	------	-----	# 5.50	+-2.00	348.	+-126.	--------		28
		# 0.2000-0.3000	------	-----	# <3.50		<221.		--------		28
		# 0.3000-0.4000	------	-----	# <3.50		<221.		--------		28
		# 0.4000-0.5000	------	-----	# <1.00		<63.2		--------		28
4.50	3.05	$ 6.8251	159.97	119.1	@ .314E-01	+-.380E-02	2.24	+-.271	.176E-01	+-.213E-02	105
		$ 6.8411	160.75	121.1	@ .467E-01	+-.560E-02	3.33	+-.399	.261E-01	+-.314E-02	105
		$ 6.9741	169.07	144.5	@ .589E-01	+-.490E-02	4.20	+-.349	.330E-01	+-.274E-02	105
4.70	3.11	# 0.0015-0.0200	0.0 - 5.72	0.0 - 1.720	# 5.90	+-1.40	459.	+-109.	3.48	+-.825	212
		# 0.0200-0.0600	5.72-10.19	1.72-3.070	# 6.40	+-1.20	498.	+-93.3	3.77	+-.707	212
		# 0.0600-0.1000	10.19-13.24	3.07-3.995	# 3.40	+-.800	264.	+-62.2	2.00	+-.471	212
		# 0.1000-0.2000	13.24-18.84	3.99-5.708	# 1.80	+-.400	140.	+-31.1	1.06	+-.236	212
		# 0.2000-0.3000	18.84-23.16	5.71-7.046	# 1.50	+-.340	117.	+-26.4	.884	+-.200	212
		# 0.3000-0.5000	23.16-30.07	7.05-9.228	# .300	+-.140	23.3	+-10.9	.177	+-.825E-01	212
		# 0.5000-1.0000	30.07-43.08	9.23-13.52	# .140	+-.500E-01	10.9	+-3.89	.825E-01	+-.295E-01	212
		# 1.0000-7.7000	43.08-180.0C	13.52-180.0	# .600E-02	+-.400E-02	0.467	+-.311	.354E-02	+-.236E-02	212
5.00	3.20	# 0.0017	0.64	.1868	# <12.0		<.106E 04		<7.60		82
		# 0.0050	2.42	.7069	# 10.2	+-1.50	898.	+-132.	6.46	+-.950	82
		# 0.0101	3.78	1.104	# 10.9	+-1.60	960.	+-141.	6.91	+-1.01	82
		# 0.0201	5.55	1.622	# 10.7	+-1.60	942.	+-141.	6.78	+-1.01	82
		# 0.0399	7.97	2.332	# 7.90	+-1.20	695.	+-106.	5.01	+-.760	82
		# 0.0701	10.66	3.122	# 5.77	+-.860	508.	+-75.7	3.66	+-.545	82
		# 0.1500	15.70	4.614	# 2.64	+-.400	232.	+-35.2	1.67	+-.253	82
		# 0.2500	20.35	6.004	# 1.14	+-.170	100.	+-15.0	.722	+-.108	82
		# 0.4000	25.86	7.673	# .478	+-.720E-01	42.1	+-6.34	.303	+-.456E-01	82
		# 0.6000	31.83	9.522	# .280	+-.420E-01	24.6	+-3.70	.177	+-.266E-01	82
5.30	3.29	$ 7.6483	142.70	79.66	@ .390E-02	+-.120E-02	0.386	+-.119	.264E-02	+-.813E-03	105
		$ 7.8923	148.51	89.78	@ .570E-02	+-.160E-02	0.564	+-.158	.386E-02	+-.108E-02	105
		$ 8.0723	153.51	99.94	@ .660E-02	+-.160E-02	0.653	+-.158	.447E-02	+-.108E-02	105
		$ 8.2053	157.85	110.0	@ .140E-01	+-.230E-02	1.38	+-.228	.949E-02	+-.156E-02	105
		$ 8.3063	161.79	120.3	@ .191E-01	+-.380E-02	1.89	+-.376	.129E-01	+-.258E-02	105
		$ 8.3753	165.04	129.5	@ .314E-01	+-.280E-02	3.11	+-.277	.213E-01	+-.190E-02	105
		$ 8.4283	168.12	139.0	@ .300E-01	+-.410E-02	2.97	+-.406	.203E-01	+-.278E-02	105
		$ 8.4883	173.05	155.3	@ .384E-01	+-.490E-02	3.80	+-.485	.260E-01	+-.332E-02	105
8.00	3.99	# 0.0011	0.41	.9708E-01	# 2.18	+-.750	491.	+-169.	2.35	+-.809	82
		# 0.0014	0.74	.1741	# 2.94	+-.790	663.	+-178.	3.17	+-.852	82
		# 0.0035	1.60	.3750	# 3.62	+-.580	816.	+-131.	3.90	+-.625	82
		# 0.0043	1.82	.4283	# 4.31	+-.650	971.	+-146.	4.65	+-.701	82
		# 0.0052	2.05	.4813	# 4.26	+-.680	960.	+-153.	4.59	+-.733	82
		# 0.0062	2.27	.5336	# 4.51	+-.680	0.102E 04	+-153.	4.86	+-.733	82
		# 0.0101	2.99	.7027	# 4.33	+-.650	976.	+-146.	4.67	+-.701	82
		# 0.0198	4.28	1.007	# 4.33	+-.650	976.	+-146.	4.67	+-.701	82
		# 0.0376	5.97	1.404	# 3.71	+-.560	836.	+-126.	4.00	+-.604	82
		# 0.0688	8.12	1.912	# 2.14	+-.320	482.	+-72.1	2.31	+-.345	82
		# 0.1520	12.13	2.860	# 1.05	+-.160	237.	+-36.1	1.13	+-.172	82
		# 0.2460	15.46	3.655	# .479	+-.720E-01	108.	+-16.2	.516	+-.776E-01	82
		# 0.4010	19.79	4.696	# .237	+-.360E-01	53.4	+-8.11	.255	+-.388E-01	82
		# 0.6020	24.32	5.798	# .113	+-.170E-01	25.5	+-3.83	.122	+-.183E-01	82
		# 0.8010	28.13	6.739	# .104	+-.160E-01	23.4	+-3.61	.112	+-.172E-01	82
		# 1.0350	32.08	7.730	# .680E-01	+-.100E-01	15.3	+-2.25	.733E-01	+-.108E-01	82
11.00	4.64	# 0.0009	0.45	.9079E-01	# 1.81	+-.270	771.	+-115.	2.76	+-.412	82
		# 0.0016	0.83	.1676	# 1.30	+-.200	554.	+-85.2	1.98	+-.305	82
		# 0.0038	1.47	.2576	# 2.70	+-.400	0.115E 04	+-170.	4.12	+-.610	82
		# 0.0058	1.89	.3810	# 2.54	+-.380	0.108E 04	+-162.	3.87	+-.579	82
		# 0.0084	2.30	.4650	# 2.18	+-.330	929.	+-141.	3.32	+-.503	82
		# 0.0114	2.72	.5490	# 1.83	+-.270	780.	+-115.	2.79	+-.412	82
		# 0.0201	3.65	.7384	# 2.10	+-.310	895.	+-132.	3.20	+-.473	82
		# 0.0400	5.20	1.051	# 1.69	+-.250	720.	+-107.	2.58	+-.381	82
		# 0.0705	6.92	1.401	# 1.19	+-.180	507.	+-76.7	1.81	+-.274	82
		# 0.1500	10.13	2.052	# .459	+-.690E-01	196.	+-29.4	.700	+-.105	82
		# 0.2490	13.08	2.653	# .226	+-.330E-01	96.3	+-14.1	.344	+-.503E-01	82
		# 0.4000	16.60	3.377	# .107	+-.160E-01	45.6	+-6.82	.163	+-.244E-01	82
		# 0.6010	20.39	4.163	# .812E-01	+-.122E-01	34.6	+-5.20	.124	+-.186E-01	82
		# 1.0000	26.41	5.428	# .351E-01	+-.530E-02	15.0	+-2.26	.535E-01	+-.808E-02	82
16.00	5.56	# 0.0010	0.50	.8408E-01	# .596	+-.890E-01	537.	+-80.2	1.35	+-.202	82
		# 0.0010	0.51	.8638E-01							
		+- 0.0006	+- 0.27	+-.4549E-01	# .740	+-.600E-01	667.	+-54.1	1.68	+-.136	126
		# 0.0026	1.00	.1690	# .809	+-.122	729.	+-110.	1.84	+-.277	82
		# 0.0028	1.04	.1762							
		+- 0.0022	+- 0.48	+-.8179E-01	# .810	+-.500E-01	730.	+-45.1	1.84	+-.113	126
		# 0.0097	2.07	.3487	# .982	+-.133	885.	+-120.	2.23	+-.302	82

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON —> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
16.00	5.56	# 0.0134	2.44	.4122	# 1.16 +-.170	0.105E 04+-153.	2.63 +-.386	82
		# 0.0140	2.50	#.3000				
		+- 0.0060	+- 0.55	+-.9327E-01	# 1.07 +-.700E-01	965. +-63.1	2.43 +-.159	126
		# 0.0176	2.81	.4744	# 1.05 +-.160	947. +-144.	2.38 +-.363	82
		# 0.0212	3.09	.5218	# .900 +-.135	811. +-122.	2.04 +-.306	82
		# 0.0380	4.16	#.7000	# .660 +-.300E-01	595. +-27.0	1.50 +-.681E-01	126
		# 0.0396	4.25	.7167	# .682 +-.102	615. +-91.9	1.55 +-.231	82
		# 0.0694	5.64	.9516	# .486 +-.730E-01	438. +-65.8	1.10 +-.166	82
		# 0.0770	5.94	#1.000	# .420 +-.200E-01	379. +-18.0	.953 +-.454E-01	126
		# 0.0991	6.74	1.139	# .326 +-.490E-01	294. +-44.2	.740 +-.111	82
		# 0.1490	8.28	#1.400	# .169 +-.900E-02	152. +-8.11	.384 +-.204E-01	126
		# 0.1490	8.28	1.399	# .182 +-.270E-01	164. +-24.3	.413 +-.613E-01	82
		# 0.2490	10.71	1.812	# .968E-01+-.150E-01	87.3 +-13.5	.220 +-.340E-01	82
		# 0.3990	13.58	2.301	# .657E-01+-.720E-02	59.2 +-6.49	.149 +-.163E-01	82
		# 0.4000	13.60	#2.300	# .600E-01+-.300E-02	54.1 +-2.70	.136 +-.681E-02	126
		# 0.5970	16.63	2.824	# .472E-01+-.420E-02	42.5 +-3.79	.107 +-.953E-02	82
		# 0.7960	19.23	3.273	# .283E-01+-.250E-02	25.5 +-2.25	.642E-01+-.567E-02	82
		# 0.8000	19.28	#3.280	# .274E-01+-.160E-02	24.7 +-1.44	.622E-01+-.363E-02	126
		# 0.9990	21.57	3.680	# .170E-01+-.500E-02	15.3 +-4.51	.386E-01+-.113E-01	82
		# 1.0000	21.58	#3.680	# .150E-01+-.100E-02	13.5 +-.901	.340E-01+-.227E-02	126
		# 1.2900	24.55	#4.200	# .480E-02+-.400E-03	4.33 +-.361	.109E-01+-.908E-03	126
		# 1.5000	26.51	4.551	# .255E-02+-.380E-02	2.30 +-3.43	.579E-02+-.862E-02	82
		# 1.5800	27.22	#4.680	# .200E-02+-.300E-03	1.80 +-.270	.454E-02+-.681E-03	126
		# 2.0000	30.71	#5.300	# .330E-03+-.900E-04	0.297 +-.811E-01	.749E-03+-.204E-03	126
		# 2.0000	30.71	5.303	# .350E-03+-.900E-04	0.316 +-.811E-01	.794E-03+-.204E-03	82

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
# 0.0009	11.00	4.64	21.52	# 1.81 +-.270	771. +-115.	82
# 0.0010	16.00	5.56	30.90	# .596 +-.890E-01	537. +-80.2	82
# 0.0010+- 0.0006	16.00	5.56	30.90	# .740 +-.600E-01	667. +-54.1	126
# 0.0011	8.00	3.99	15.89	# 2.18 +-.750	491. +-169.	82
# 0.0014	8.00	3.99	15.89	# 2.94 +-.790	663. +-178.	82
# 0.0016	11.00	4.64	21.52	# 1.30 +-.200	554. +-85.2	82
# 0.0017	5.00	3.20	10.26	# <12.0	<.106E 04	82
# 0.0026	16.00	5.56	30.90	# .809 +-.122	729. +-110.	82
# 0.0028+- 0.0022	16.00	5.56	30.90	# .810 +-.500E-01	730. +-45.1	126
# 0.0035	8.00	3.99	15.89	# 3.62 +-.580	816. +-131.	82
# 0.0038	11.00	4.64	21.52	# 2.70 +-.400	.115E 04+-170.	82
# 0.0043	8.00	3.99	15.89	# 4.31 +-.650	971. +-146.	82
# 0.0050	5.00	3.20	10.26	# 10.2 +-1.50	898. +-132.	82
# 0.0052	8.00	3.99	15.89	# 4.26 +-.680	960. +-153.	82
# 0.0058	11.00	4.64	21.52	# 2.54 +-.380	.108E 04+-162.	82
# 0.0062	8.00	3.99	15.89	# 4.51 +-.680	.102E 04+-153.	82
# 0.0084	11.00	4.64	21.52	# 2.18 +-.330	929. +-141.	82
# 0.0097	16.00	5.56	30.90	# .982 +-.133	885. +-120.	82
# 0.0 - 0.0200	2.80	2.48	6.13	# 17.2 +-3.20	475. +-88.3	212
# 0.0101	5.00	3.20	10.26	# 10.9 +-1.60	960. +-141.	82
# 0.0101	8.00	3.99	15.89	# 4.33 +-.650	976. +-146.	82
# 0.0015 - 0.0200	4.70	3.11	9.70	# 5.90 +-1.40	459. +-109.	212
# 0.0114	11.00	4.64	21.52	# 1.83 +-.270	780. +-115.	82
# 0.0134	16.00	5.56	30.90	# 1.16 +-.170	.105E 04+-153.	82
# 0.0140+- 0.0060	16.00	5.56	30.90	# 1.07 +-.700E-01	965. +-63.1	126
# 0.0176	16.00	5.56	30.90	# 1.05 +-.160	947. +-144.	82
# 0.0198	8.00	3.99	15.89	# 4.33 +-.650	976. +-146.	82
# 0.0201	5.00	3.20	10.26	# 10.7 +-1.60	942. +-141.	82
# 0.0201	11.00	4.64	21.52	# 2.10 +-.310	895. +-132.	82
# 0.0212	16.00	5.56	30.90	# .900 +-.135	811. +-122.	82
# 0.0376	8.00	3.99	15.89	# 3.71 +-.560	836. +-126.	82
# 0.0380	16.00	5.56	30.90	# .660 +-.300E-01	595. +-27.0	126
# 0.0396	16.00	5.56	30.90	# .682 +-.102	615. +-91.9	82
# 0.0399	5.00	3.20	10.26	# 7.90 +-1.20	695. +-106.	82
# 0.0200 - 0.0600	2.80	2.48	6.13	# 23.6 +-2.20	652. +-60.7	212
# 0.0200 - 0.0600	4.70	3.11	9.70	# 6.40 +-1.20	498. +-93.3	212
# 0.0400	11.00	4.64	21.52	# 1.69 +-.250	720. +-107.	82
# 0.0 - 0.1000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 42.0 +-4.00	631. +-60.1	28
# 0.0 - 0.1000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 25.0 +-3.00	729. +-87.4	28
# 0.0 - 0.1000	3.50 - 5.80	2.73 - 3.43	7.45 -11.76	# 10.0 +-3.00	632. +-190.	28

= NUMERICAL VALUE FROM TABLE & = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2		D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
#	0.0688	8.00	3.99	15.89	#	2.14	+-.320	482.	+-72.1	82
#	0.0694	16.00	5.56	30.90	#	.486	+-.730E-01	438.	+-65.8	82
#	0.0701	5.00	3.20	10.26	#	5.77	+-.860	508.	+-75.7	82
#	0.0705	11.00	4.64	21.52	#	1.19	+-.180	507.	+-76.7	82
#	0.0770	16.00	5.56	30.90	#	.420	+-.200E-01	379.	+-18.0	126
#	0.0600 - 0.1000	2.80	2.48	6.13	#	9.70	+-1.90	268.	+-52.5	212
#	0.0600 - 0.1000	4.70	3.11	9.70	#	3.40	+-.800	264.	+-62.2	212
#	0.0991	16.00	5.56	30.90	#	.326	+-.490E-01	294.	+-44.2	82
#	0.1490	16.00	5.56	30.90	#	.169	+-.900E-02	152.	+-8.11	126
#	0.1490	16.00	5.56	30.90	#	.182	+-.270E-01	164.	+-24.3	82
#	0.1000 - 0.2000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	#	19.0	+-4.00	286.	+-60.1	28
#	0.1000 - 0.2000	2.80	2.48	6.13	#	8.40	+-1.00	232.	+-27.6	212
#	0.1000 - 0.2000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	#	8.00	+-3.00	233.	+-87.4	28
#	0.1000 - 0.2000	3.50 - 5.80	2.73 - 3.43	7.45 -11.76	#	5.50	+-2.00	348.	+-126.	28
#	0.1000 - 0.2000	4.70	3.11	9.70	#	1.80	+-.400	140.	+-31.1	212
#	0.1500	5.00	3.20	10.26	#	2.64	+-.400	232.	+-35.2	82
#	0.1500	11.00	4.64	21.52	#	.459	+-.690E-01	196.	+-29.4	82
#	0.1520	8.00	3.99	15.89	#	1.05	+-.160	237.	+-36.1	82
#	0.2460	8.00	3.99	15.89	#	.479	+-.720E-01	108.	+-16.2	82
#	0.2490	11.00	4.64	21.52	#	.226	+-.330E-01	96.3	+-14.1	82
#	0.2490	16.00	5.56	30.90	#	.968E-01	+-.150E-01	87.3	+-13.5	82
#	0.2000 - 0.3000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	#	7.00	+-3.00	105.	+-45.1	28
#	0.2000 - 0.3000	2.80	2.48	6.13	#	3.30	+-.670	91.1	+-18.5	212
#	0.2000 - 0.3000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	#	2.00	+-1.00	58.3	+-29.1	28
#	0.2000 - 0.3000	3.50 - 5.80	2.73 - 3.43	7.45 -11.76	#	<3.50			<221.	28
#	0.2000 - 0.3000	4.70	3.11	9.70	#	1.50	+-.340	117.	+-26.4	212
#	0.2500	5.00	3.20	10.26	#	1.14	+-.170	100.	+-15.0	82
#	0.3000 - 0.4000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	#	<1.00			<15.0	28
#	0.3000 - 0.4000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	#	3.00	+-3.00	87.4	+-87.4	28
#	0.3000 - 0.4000	3.50 - 5.80	2.73 - 3.43	7.45 -11.76	#	<3.50			<221.	28
#	0.3990	16.00	5.56	30.90	#	.657E-01	+-.720E-02	59.2	+-6.49	82
#	0.3000 - 0.5000	2.80	2.48	6.13	#	1.50	+-.330	41.4	+-9.11	212
#	0.3000 - 0.5000	4.70	3.11	9.70	#	.300	+-.140	23.3	+-10.9	212
#	0.4000	5.00	3.20	10.26	#	.478	+-.720E-01	42.1	+-6.34	82
#	0.4000	11.00	4.64	21.52	#	.107	+-.160E-01	45.6	+-6.82	82
#	0.4000	16.00	5.56	30.90	#	.600E-01	+-.300E-02	54.1	+-2.70	126
#	0.4010	8.00	3.99	15.89	#	.237	+-.360E-01	53.4	+-8.11	82
#	0.4000 - 0.5000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	#	<1.00			<15.0	28
#	0.4000 - 0.5000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	#	<3.00			<87.4	28
#	0.4000 - 0.5000	3.50 - 5.80	2.73 - 3.43	7.45 -11.76	#	<1.00			<63.2	28
#	0.5970	16.00	5.56	30.90	#	.472E-01	+-.420E-02	42.5	+-3.79	82
#	0.6000	5.00	3.20	10.26	#	.280	+-.420E-01	24.6	+-3.70	82
#	0.6010	11.00	4.64	21.52	#	.812E-01	+-.122E-01	34.6	+-5.20	82
#	0.6020	8.00	3.99	15.89	#	.113	+-.170E-01	25.5	+-3.83	82
#	0.5000 - 1.0000	2.80	2.48	6.13	#	.510	+-.130	14.1	+-3.59	212
#	0.5000 - 1.0000	4.70	3.11	9.70	#	.140	+-.500E-01	10.9	+-3.89	212
#	0.7960	16.00	5.56	30.90	#	.283E-01	+-.250E-02	25.5	+-2.25	82
#	0.8000	16.00	5.56	30.90	#	.274E-01	+-.160E-02	24.7	+-1.44	126
#	0.8010	8.00	3.99	15.89	#	.104	+-.160E-01	23.4	+-3.61	82
#	0.9990	16.00	5.56	30.90	#	.170E-01	+-.500E-02	15.3	+-4.51	82
#	1.0000	11.00	4.64	21.52	#	.351E-01	+-.530E-02	15.0	+-2.26	82
#	1.0000	16.00	5.56	30.90	#	.150E-01	+-.100E-02	13.5	+-.901	126
#	1.0350	8.00	3.99	15.89	#	.680E-01	+-.100E-01	15.3	+-2.25	82
#	1.2900	16.00	5.56	30.90	#	.480E-02	+-.400E-03	4.33	+-.361	126
#	1.5000	16.00	5.56	30.90	#	.255E-02	+-.380E-02	2.30	+-3.43	82
#	1.5800	16.00	5.56	30.90	#	.200E-02	+-.300E-03	1.80	+-.270	126
#	2.0000	16.00	5.56	30.90	#	.330E-03	+-.900E-04	.297	+-.811E-01	126
#	2.0000	16.00	5.56	30.90	#	.350E-03	+-.900E-04	.316	+-.811E-01	82

1.03 GEV < K < GEV 2.00

	-T GEV**2	K GEV	E* GEV	S GEV**2		D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
	0.0132	1.14	1.74	3.02		55.8	+-18.6	255.	+-85.1	160
	0.0132	1.19	1.76	3.11		95.2	+-12.6	475.	+-62.9	160
	0.0133	1.24	1.79	3.21		68.3	+-13.9	370.	+-75.1	160
	0.0134	1.29	1.82	3.30		81.7	+-13.0	479.	+-75.9	160
	0.0134	1.09	1.71	2.93		64.6	+-13.5	270.	+-56.3	160
	0.0138	1.03	1.68	2.81		54.1	+-18.0	202.	+-67.3	160
#	0.0 - 0.0500	1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	#	90.0	+-17.0	347.	+-65.6	28
	0.0082 - 0.0607	1.00 - 1.20	1.66 - 1.77	2.76 - 3.13		92.7	+-19.2	385.	+-79.8	28
	0.0406	1.03	1.68	2.81		108.	+-18.0	404.	+-67.3	160
	0.0438	1.09	1.71	2.93		128.	+-14.8	535.	+-62.0	160
	0.0474	1.14	1.74	3.02		75.6	+-16.1	346.	+-73.7	160
ĝ	0.0 - 0.1000	1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	ĝ	110.	+-30.0	424.	+-116.	36
#	0.0 - 0.1000	1.10 - 1.40	1.72 - 1.87	2.94 - 3.51	#	82.0	+-8.00	432.	+-42.2	28

= NUMERICAL VALUE FROM TABLE ĝ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

1.03 GEV < K < GEV 2.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
#	0.0 - 0.1000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 81.0	+-6.00	697.	+-51.6	28
@	0.0 - 0.1000	1.50 - 1.80	1.92 - 2.06	3.70 - 4.26	@ 50.0	+-28.0	468.	+-262.	36
	0.0511	1.19	1.76	3.11	66.5	+-10.3	332.	+-51.5	160
	0.0550	1.24	1.79	3.21	93.9	+-11.7	508.	+-63.5	160
	0.0592	1.29	1.82	3.30	70.8	+-14.0	415.	+-81.8	160
#	0.0500 - 0.1000	1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	# 103.	+-16.0	397.	+-61.7	28
	0.0066 - 0.1513	1.20 - 1.40	1.77 - 1.87	3.13 - 3.51	80.0	+-6.96	468.	+-40.7	28
	0.0481 - 0.1196	1.00 - 1.20	1.66 - 1.77	2.76 - 3.13	68.1	+-19.1	283.	+-79.2	28
	0.0908	1.04	1.68	2.83	100.	+-8.84	382.	+-33.7	160
	0.0055 - 0.1844	1.40 - 1.60	1.87 - 1.97	3.51 - 3.88	59.8	+-5.63	468.	+-44.0	28
	0.1000	1.09	1.71	2.93	86.2	+-8.08	361.	+-33.8	160
	0.1099	1.14	1.74	3.02	70.6	+-7.44	323.	+-34.0	160
	0.0047 - 0.2183	1.60 - 1.80	1.97 - 2.06	3.88 - 4.26	47.1	+-5.89	475.	+-59.3	28
	0.1203	1.19	1.76	3.11	61.9	+-5.73	309.	+-28.6	160
#	0.1000 - 0.1500	1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	# 74.0	+-16.0	285.	+-61.7	28
	0.1314	1.24	1.79	3.21	48.0	+-5.33	260.	+-28.9	160
	0.1431	1.29	1.82	3.30	37.9	+-4.98	222.	+-29.2	160
@	0.1000 - 0.2000	1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	@ 98.0	+-28.0	378.	+-108.	36
#	0.1000 - 0.2000	1.10 - 1.40	1.72 - 1.87	2.94 - 3.51	# 60.0	+-8.00	316.	+-42.2	28
#	0.1000 - 0.2000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 39.0	+-6.00	335.	+-51.6	28
@	0.1000 - 0.2000	1.50 - 1.80	1.92 - 2.06	3.70 - 4.26	@ 39.0	+-21.0	365.	+-196.	36
	0.0899 - 0.2304	1.00 - 1.20	1.66 - 1.77	2.76 - 3.13	84.4	+-10.9	351.	+-45.3	28
#	0.1500 - 0.2000	1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	# 116.	+-17.0	447.	+-65.6	28
	0.1196 - 0.2953	1.20 - 1.40	1.77 - 1.87	3.13 - 3.51	34.0	+-7.00	199.	+-40.9	28
#	0.2000 - 0.3000	1.10 - 1.40	1.72 - 1.87	2.94 - 3.51	# 40.0	+-7.00	211.	+-36.9	28
#	0.2000 - 0.3000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 16.0	+-4.00	138.	+-34.4	28
	0.2506	1.11	1.72	2.96	31.2	+-2.34	136.	+-10.2	177
	0.1686 - 0.3416	1.00 - 1.20	1.66 - 1.77	2.76 - 3.13	57.2	+-9.53	238.	+-39.6	28
	0.1513 - 0.3624	1.40 - 1.60	1.87 - 1.97	3.51 - 3.88	19.7	+-3.93	154.	+-30.7	28
	0.2703	1.16	1.75	3.06	23.5	+-2.16	112.	+-10.2	177
	0.2902	1.21	1.78	3.15	9.69	+-2.78	49.9	+-14.4	177
@	0.2000 - 0.4000	1.50 - 1.80	1.92 - 2.06	3.70 - 4.26	@ 4.70	+-3.50	44.0	+-32.7	36
	0.1844 - 0.4309	1.60 - 1.80	1.97 - 2.06	3.88 - 4.26	16.5	+-4.52	166.	+-45.6	28
	0.2304 - 0.4399	1.20 - 1.40	1.77 - 1.87	3.13 - 3.51	22.0	+-7.00	129.	+-40.9	28
#	0.3000 - 0.4000	1.10 - 1.40	1.72 - 1.87	2.94 - 3.51	# 14.0	+-6.00	73.8	+-31.6	28
#	0.3000 - 0.4000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 6.00	+-4.00	51.6	+-34.4	28
	0.2953 - 0.5410	1.40 - 1.60	1.87 - 1.97	3.51 - 3.88	14.9	+-3.93	117.	+-30.7	28
#	0.4000 - 0.5000	1.10 - 1.40	1.72 - 1.87	2.94 - 3.51	# 14.0	+-6.00	73.8	+-31.6	28
#	0.4000 - 0.5000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 5.00	+-4.00	43.0	+-34.4	28
@	0.4000 - 0.6000	1.50 - 1.80	1.92 - 2.06	3.70 - 4.26	@ 1.80	+-1.80	16.8	+-16.8	36
	0.3624 - 0.6442	1.60 - 1.80	1.97 - 2.06	3.88 - 4.26	4.20	+-3.23	42.3	+-32.5	28
	0.4399 - 0.7205	1.40 - 1.60	1.87 - 1.97	3.51 - 3.88	<4.72		<36.9		28
	0.5410 - 0.8586	1.60 - 1.80	1.97 - 2.06	3.88 - 4.26	2.59	+-2.59	26.0	+-26.0	28

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.01 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2		THETA (BARYON) CM	LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD		REF
1.01	1.67	2.78	0.136	48.2	+-3.28	#120.0	28.2	#3.09	+-.210	177
1.03	1.68	2.81	-0.244	37.5	+-15.0	# 61.3	17.7	#2.50	+-1.00	160
			-0.040	25.5	+-13.5	# 90.5	24.8	#1.70	+-.900	160
			0.075	54.1	+-6.01	#106.4	27.4	#3.60	+-.400	160
1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	$-0.271 - 0.017	@46.0	+-17.0	60.5 - 88.1	17.3 - 24.9	3.18	+-1.18	36
			$-0.171 - 0.067	#30.0	+-12.0	76.1 - 94.1	21.3 - 26.2	2.08	+-.830	28
			$-0.171 - 0.117	@71.0	+-22.0	76.1 -100.2	21.3 - 27.4	4.91	+-1.52	36
			$-0.121 - 0.117	#47.0	+-13.0	83.5 -100.2	22.9 - 27.4	3.25	+-.899	28
			$-0.071 - 0.167	#51.0	+-14.0	90.8 -106.4	24.4 - 28.4	3.53	+-.968	28
			$-0.071 - 0.217	@58.0	+-19.0	90.8 -112.8	24.4 - 29.2	4.01	+-1.31	36
			$-0.021 - 0.217	#50.0	+-13.0	98.1 -112.8	25.8 - 29.2	3.46	+-.899	28
			$ 0.029 - 0.267	#78.0	+-16.0	105.5 -119.5	26.8 - 29.7	5.40	+-1.11	28
			$ 0.029 - 0.317	@65.0	+-22.0	105.5 -126.7	26.8 - 29.8	4.50	+-1.52	36
			$ 0.079 - 0.317	#83.0	+-14.0	113.2 -126.7	27.6 - 29.8	5.74	+-.968	28
1.06	1.69	2.87	0.211	42.5	+-2.56	#120.0	29.1	#2.99	+-.180	177
1.08	1.70	2.91	-0.371	<85.0		# 33.4	10.0	P <6.20		160
			-0.214	24.7	+-17.8	# 60.5	17.8	#1.80	+-1.30	160
			0.010	27.4	+-5.48	# 89.8	25.1	#2.00	+-.400	160
1.09	1.71	2.93	0.149	44.4	+-6.73	#105.8	28.2	#3.30	+-.500	160
1.00 - 1.20	1.66 - 1.77	2.76 - 3.13	-0.471 --0.304	12.3	+-5.44	# 0.0 - 36.9	0.0 - 11.3	#.900	+-.400	28
			-0.392 --0.194	15.0	+-5.44	# 36.9 - 53.1	10.8 - 16.2	#1.10	+-.400	28
			-0.313 --0.082	17.7	+-5.44	# 53.1 - 66.4	15.3 - 20.0	#1.30	+-.400	28

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.01 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
1.00 - 1.20	1.66 - 1.77	2.76 - 3.13	-0.234 - 0.030	8.85 +-6.81	# 66.4 - 78.5	18.9 - 23.3	#.650 +-.500	28
			-0.155 - 0.140	17.7 +-6.81	# 78.5 - 90.0	21.8 - 26.2	#1.30 +-.500	28
			-0.076 - 0.251	28.6 +-6.81	# 90.0 -101.5	24.3 - 28.7	#2.10 +-.500	28
			0.003 - 0.363	40.8 +-9.53	#101.5 -113.6	26.3 - 30.6	#3.00 +-.700	28
1.13	1.73	3.00	-0.353	<95.7	# 32.9	10.0	# <7.60	160
			-0.184	<18.9	# 60.0	17.9	# <1.50	160
			0.057	21.4 +-6.30	# 89.0	25.4	#1.70 +-.500	160
1.14	1.74	3.02	0.207	27.3 +-6.20	#105.0	28.7	#2.20 +-.500	160
1.18	1.76	3.09	-0.337	<47.7	# 32.4	9.9	# <4.10	160
			-0.156	17.5 +-14.0	# 59.3	17.9	#1.50 +-1.20	160
			0.103	15.1 +-5.82	# 88.3	25.6	#1.30 +-.500	160
1.19	1.76	3.11	0.264	25.2 +-5.73	#104.2	29.1	#2.20 +-.500	160
1.23	1.79	3.19	-0.320	<56.3	# 32.1	9.9	# <5.20	160
			-0.131	<10.8	# 58.5	17.8	# <1.00	160
			0.147	<6.49	# 87.5	25.8	# <.600	160
1.24	1.79	3.21	0.319	16.0 +-5.33	#103.4	29.4	#1.50 +-.500	160
1.28	1.81	3.28	-0.304	<47.5	# 31.7	9.8	# <4.70	160
			-0.104	<15.1	# 58.1	17.8	# <1.50	160
			0.189	<9.09	# 86.7	25.8	# <.900	160
1.29	1.82	3.30	0.373	6.98 +-5.98	#102.6	29.6	#.700 +-.600	160
1.20 - 1.40	1.77 - 1.87	3.13 - 3.51	-0.416 --0.227	<3.00	# 0.0 - 36.9	0.0 - 11.5	# <.300	28
			-0.304 --0.083	<3.00	# 36.9 - 53.1	11.3 - 16.5	# <.300	28
			-0.194 - 0.061	<3.00	# 53.1 - 66.4	16.2 - 20.6	# <.300	28
			0.030 - 0.351	<4.00	# 78.5 - 90.0	23.3 - 27.2	# <.400	28
			0.140 - 0.495	10.0 +-5.00	# 90.0 -101.5	26.2 - 30.0	#1.00 +-.500	28
			0.251 - 0.640	18.0 +-5.00	#101.5 -113.6	28.7 - 32.4	#1.80 +-.500	28
1.40 - 1.60	1.87 - 1.97	3.51 - 3.88	-0.372 --0.158	<3.15	# 0.0 - 36.9	0.0 - 11.6	# <.400	28
			-0.227 - 0.020	<3.15	# 36.9 - 53.1	11.5 - 16.7	# <.400	28
			-0.083 - 0.199	<3.15	# 53.1 - 66.4	16.5 - 20.8	# <.400	28
			0.061 - 0.379	3.15 +-3.15	# 66.4 - 78.5	20.6 - 24.5	#.400 +-.400	28
			0.207 - 0.557	4.72 +-3.15	# 78.5 - 90.0	24.1 - 27.8	#.600 +-.400	28
			0.351 - 0.735	6.29 +-3.15	# 90.0 -101.5	27.2 - 30.9	#.800 +-.400	28
1.60 - 1.80	1.97 - 2.06	3.88 - 4.26	-0.336 --0.093	<2.59	# 0.0 - 36.9	0.0 - 11.6	# <.400	28
			-0.158 - 0.119	2.59 +-2.59	# 36.9 - 53.1	11.6 - 16.7	#.400 +-.400	28
			0.020 - 0.332	1.62 +-1.62	# 53.1 - 66.4	16.7 - 20.9	#.250 +-.250	28
			0.199 - 0.547	<2.59	# 66.4 - 78.5	20.8 - 24.7	# <.400	28
			0.379 - 0.759	<1.62	# 78.5 - 90.0	24.5 - 28.1	# <.250	28
			0.557 - 0.972	<1.62	# 90.0 -101.5	27.8 - 31.4	# <.250	28
1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	------	------	# 0.0 - 36.9		# <.100E 00	28
			------	------	# 36.9 - 53.1		# <.120	28
			------	------	# 53.1 - 66.4		# <.100E 00	28
			------	------	# 66.4 - 78.5		# <.100E 00	28
			------	------	# 78.5 - 90.0		# <.100E 00	28
			------	------	# 90.0 -101.5		# <.120	28
2.80	2.48	6.13	$-0.293 - 2.707	#.110 +-.300E-01	0.0 -119.4	0.0 - 37.2	.343E-01+-.935E-02	212
2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	------	------	# 0.0 - 36.9		# <.100E 00	28
			------	------	# 36.9 - 53.1		# <.800E-01	28
			------	------	# 53.1 - 66.4		# <.100E 00	28
			------	------	# 66.4 - 78.5		# <.800E-01	28
			------	------	# 78.5 - 90.0		# <.800E-01	28
			------	------	# 90.0 -101.5		# <.120	28
3.50 - 5.80	2.73 - 3.43	7.45 -11.76	------	------	# 0.0 - 36.9		# <.700E-01	28
			------	------	# 36.9 - 53.1		# <.700E-01	28
			------	------	# 53.1 - 66.4		# <.700E-01	28
			------	------	# 66.4 - 78.5		# <.700E-01	28
			------	------	# 78.5 - 90.0		# <.700E-01	28
			------	------	# 90.0 -101.5		# <.700E-01	28
4.50	3.05	9.32	a-0.077	a.589E-01+-.490E-02	10.9	2.9	.330E-01+-.274E-02	105
			a 0.056	a.467E-01+-.560E-02	19.3	5.0	.261E-01+-.314E-02	105
			a 0.072	a.314E-01+-.380E-02	20.0	5.2	.176E-01+-.213E-02	105
4.70	3.11	9.70	$-0.428 - 6.272	#.600E-02+-.400E-02	0.0 -136.9	0.0 - 42.2	.354E-02+-.236E-02	212
5.30	3.29	10.83	a-0.090	a.384E-01+-.490E-02	6.9	1.7	.260E-01+-.332E-02	105
			a-0.030	a.300E-01+-.410E-02	11.9	2.9	.203E-01+-.278E-02	105
			a 0.023	a.314E-01+-.280E-02	15.0	3.7	.213E-01+-.190E-02	105
			a 0.092	a.191E-01+-.380E-02	18.2	4.5	.129E-01+-.258E-02	105
			a 0.193	a.140E-01+-.230E-02	22.1	5.5	.949E-02+-.156E-02	105
			a 0.326	a.660E-02+-.160E-02	26.5	6.6	.447E-02+-.108E-02	105
			a 0.506	a.570E-02+-.160E-02	31.5	7.9	.386E-02+-.108E-02	105
			a 0.750	a.390E-02+-.120E-02	37.3	9.4	.264E-02+-.813E-03	105

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

RATIO OF CROSS SECTIONS FOR TRANSVERSE AND PARALLEL (TO THE PRODUCTION PLANE) POLARIZED GAMMAS

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	A=SIG TRANSVERSE (A-B)/(A+B)		A/(A+B)	B=SIG PARALLEL		B/(A+B)	REF
0.57	1.40	0.1017	@ 90.00	49.05	@0.220	+-.150E-01	0.610	+-.750E-02	0.390	+-.750E-02	67
0.65	1.45	0.0637	@ 45.00	26.97	@0.150	+-.110E-01	0.575	+-.550E-02	0.425	+-.550E-02	67
		0.1524	@ 90.00	58.43	@0.160	+-.110E-01	0.580	+-.550E-02	0.420	+-.550E-02	67
0.80	1.54	0.2558	@ 90.00	59.21	@0.110	+-.120E-01	0.555	+-.600E-02	0.445	+-.600E-02	67
2.80	2.48	# 0.0 - 0.5000	0.0 - 41.74	0.0 - 16.35	#-.270	+-.120	0.365	+-.600E-01	0.635	+-.600E-01	212
4.70	3.11	# 0.0 - 0.5000	0.0 - 30.07	0.0 - 9.228	#-.530	+-.150	0.235	+-.750E-01	0.765	+-.750E-01	212

C115: GAMMA + PROTON --> DELTA++ + PI- (K > 0.35 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

A = ASYMMETRY ((+)-(-))/((+)+(-)) FOR POLARIZED TARGET (POLARIZATION POSITIVE ALONG K(GAMMA) X P(MESON))

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	A		REF
16.00	5.56	# 0.1600	8.58	1.450	#0.330	+-.340	184

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
0.71 - 0.75	1.50	a 12.0	+-3.20	22.6	+-5.99	28
0.73	1.50	a 6.40	+-1.25	12.0	+-2.35	90
0.75	1.51	a 13.2	+-.750	26.1	+-1.49	90
0.75 - 0.80	1.53	a 17.2	+-3.00	36.3	+-6.33	28
0.71 - 0.90	1.54	a 10.4	+-2.70	22.8	+-5.91	49
0.80 - 0.85	1.56	a 15.3	+-2.80	36.6	+-6.69	28
0.84	1.57	a 12.4	+-.630	30.8	+-1.57	90
0.87	1.59	a 11.6	+-.880	30.9	+-2.35	90
0.85 - 0.90	1.59	a 10.5	+-3.00	28.2	+-8.07	28
0.88	1.59	a 11.4	+-1.00	31.1	+-2.73	90
0.90 - 1.00	1.63	a 6.00	+-1.90	18.9	+-5.99	28
0.90 - 1.10	1.65	a 3.00	+-1.50	10.3	+-5.13	49
1.00 - 1.10	1.69	a 4.60	+-1.80	17.7	+-6.94	28
1.10 - 1.30	1.77	a 5.20	+-2.60	25.8	+-12.9	49
1.10 - 1.30	1.77	a 2.90	+-1.30	14.4	+-6.46	28
1.30 - 1.50	1.87	a 1.70	+-1.70	11.6	+-11.6	49
1.30 - 1.50	1.87	a 2.00	+-1.30	13.6	+-8.84	28
1.50 - 1.80	1.99	a .700	+-.700	6.55	+-6.55	49
1.80 - 2.50	2.19	a .700	+-.700	10.5	+-10.5	49
1.50 - 3.50	2.20	a .580	+-.370	7.76	+-4.95	28
2.50 - 3.50	2.52	a <.700		<20.4		49
3.50 - 5.80	3.01	a <.200		<12.6		28

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
0.73+- 0.01	1.50	0.2225	a100.00	20.35	18.1	+-7.95	33.9	+-14.9	a .250	+-.110	19
		0.2632	#130.00	19.75	36.9	+-3.62	69.2	+-6.79	# .510	+-.500E-01	90
0.74+- 0.01	1.51	0.2344	a100.00	24.28	53.5	+-15.3	103.	+-29.5	a .910	+-.260	19
0.75+- 0.01	1.51	0.1251	# 37.00	11.39	50.6	+-8.09	100.	+-16.0	# 1.00	+-.160	90
		0.1256	37.43	$11.51							
		+- 0.0012	+- 0.93	+-.4109	42.0	+-31.9	83.2	+-63.1	# .830	+-.630	5
		0.1622	# 60.00	18.06	42.0	+-8.09	83.2	+-16.0	# .830	+-.160	90
		0.2373	# 96.00	26.66	65.3	+-7.59	129.	+-15.0	# 1.29	+-.150	90
		0.2919	#123.00	29.38	44.5	+-6.58	88.2	+-13.0	# .880	+-.130	90
		0.3260	#145.00	25.87	51.1	+-5.06	101.	+-10.0	# 1.01	+-.100E 00	90
0.76+- 0.01	1.52	0.2571	a100.00	29.87	45.8	+-7.18	93.1	+-14.6	a 1.02	+-.160	19
0.78	1.53	0.0865	a 14.00	5.016							
		+- 0.0100	+- 14.00	+-5.011	37.3	+-4.85	79.9	+-10.4	a 1.00	+-.130	54
		0.1247	a 42.00	14.98							
		+- 0.0157	+- 8.00	+-2.818	31.7	+-4.85	68.0	+-10.4	a .850	+-.130	54
		0.1760	a 64.00	22.60							
		+- 0.0211	+- 8.00	+-2.710	36.2	+-5.22	77.5	+-11.2	a .970	+-.140	54
		0.2077	a 75.50	26.42							
		+- 0.0213	+- 7.50	+-2.440	37.3	+-5.97	79.9	+-12.8	a 1.00	+-.160	54
0.79+- 0.01	1.54	0.1213	a 41.00	15.09	34.3	+-7.62	75.3	+-16.7	a .990	+-.220	19
		0.2804	a 97.00	34.45	35.0	+-5.54	76.8	+-12.2	a 1.01	+-.160	19
		0.3174	a109.00	37.82	29.8	+-6.92	65.4	+-15.2	a .860	+-.200	19
		0.4138	a149.00	39.70	38.4	+-6.23	84.4	+-13.7	a 1.11	+-.180	19
		0.4138	a149.00	39.70	35.3	+5.19 -3.12	77.6	+11.4 -6.85	a 1.02	+.150 -.900E-01	19
0.80	1.54	0.0785	a 14.00	5.296							
		+- 0.0115	+- 14.00	+-5.295	41.7	+-5.18	94.1	+-11.7	a 1.29	+-.160	54
		0.1226	a 42.00	15.87							
		+- 0.0181	+- 8.00	+-3.011	30.4	+-4.53	68.6	+-10.2	a .940	+-.140	54
		0.1818	a 64.00	24.09							
		+- 0.0244	+- 8.00	+-2.955	25.9	+-4.21	58.3	+-9.48	a .800	+-.130	54
0.80+- 0.01	1.54	0.2298	# 79.00	29.55	39.8	+-7.44	89.7	+-16.8	# 1.23	+-.230	90
0.80	1.54	0.2804	a 94.00	34.75							
		+- 0.0338	+- 10.00	+-3.332	33.0	+-4.53	74.4	+-10.2	a 1.02	+-.140	54
0.80+- 0.01	1.54	0.2938	# 98.00	36.07	29.5	+-4.85	66.4	+-10.9	# .910	+-.150	90
		0.3697	#122.00	42.68	32.7	+-4.53	73.7	+-10.2	# 1.01	+-.140	90
		0.4349	#150.00	42.74	33.3	+-2.59	75.1	+-5.84	# 1.03	+-.800E-01	90
0.81	1.55	0.2048	a 70.00	26.97							
		+- 0.0338	+- 10.00	+-3.792	30.4	+-3.96	70.3	+-9.14	a 1.00	+-.130	80
0.82	1.56	0.2093	a 70.00	27.57							
		+- 0.0358	+- 10.00	+-3.914	27.6	+-2.68	65.3	+-6.34	a .958	+-.930E-01	80
0.83	1.56	0.2139	a 70.00	28.09							
		+- 0.0377	+- 10.00	+-4.023	27.6	+-2.05	67.0	+-4.97	a 1.01	+-.750E-01	80
0.84	1.57	0.2186	a 70.00	28.56							
		+- 0.0396	+- 10.00	+-4.122	26.8	+-1.75	66.7	+-4.34	a 1.03	+-.670E-01	80

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB		D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
0.84+- 0.02	1.57	0.0860	# 27.00	10.94		7.56	+-2.35	18.8	+-5.83	# .290	+-.900E-01	90
0.84+- 0.01	1.57	0.3429	@100.00	40.80		24.7	+-5.73	61.5	+-14.2	@ .950	+-.220	19
0.84	1.57	0.3717	#107.00	43.53		28.9	+-3.39	71.8	+-8.41	# 1.11	+-.130	29
		0.3757	#108.00	43.92		22.7	+-3.39	56.3	+-8.41	# .870	+-.130	29
0.84+- 0.01	1.57	0.3756	#108.00	43.92		23.4	+-3.39	58.3	+-8.41	# .900	+-.130	90
		0.4428	#126.00	50.32		28.9	+-2.87	71.8	+-7.12	# 1.11	+-.110	90
		0.5140	#152.00	54.38		26.1	+-2.61	64.7	+-6.47	# 1.00	+-.100E 00	90
0.85	1.57	0.0649	@ 14.00	5.730								
		+- 0.0149	+- 14.00	+-5.737		22.2	+-3.98	56.4	+-10.1	@ .890	+-.160	54
		0.1222	@ 42.00	17.27								
		+- 0.0236	+- 8.00	+-3.320		15.9	+-3.49	40.5	+-8.87	@ .640	+-.140	54
		0.1991	@ 64.00	26.46								
		+- 0.0317	+- 8.00	+-3.361		16.4	+-3.49	41.8	+-8.87	@ .660	+-.140	54
		0.2234	@ 70.00	28.98								
		+- 0.0414	+- 10.00	+-4.211		21.6	+-1.62	54.9	+-4.12	@ .867	+-.650E-01	80
		0.3317	@ 95.00	39.49								
		+- 0.0439	+- 10.00	+-4.168		21.7	+-3.49	55.1	+-8.87	@ .870	+-.140	54
		0.3919	#109.00	45.23		26.6	+-3.73	67.8	+-9.50	# 1.07	+-.150	29
		0.3961	#110.00	45.63		24.4	+-3.73	62.1	+-9.50	# .980	+-.150	29
		0.5261	@149.00	57.06								
		+- 0.0204	+- 9.00	+-.3706		39.1	+-8.47	99.5	+-21.5	@ 1.57	+-.340	54
0.86	1.58	0.2283	@ 70.00	29.36								
		+- 0.0432	+- 10.00	+-4.292		21.2	+-1.55	55.3	+-4.04	@ .890	+-.650E-01	80
0.86+- 0.02	1.58	0.3637	@100.00	42.28		21.7	+-3.34	56.6	+-8.71	@ .910	+-.140	19
0.86	1.58	0.4127	#111.00	46.91		25.5	+-3.58	66.5	+-9.32	# 1.07	+-.150	29
0.87+- 0.02	1.59	0.0825	# 27.00	11.29		37.6	+-16.3	100.	+-43.4	# 1.64	+-.710	90
0.87	1.59	0.2332	@ 70.00	29.69								
		+- 0.0450	+- 10.00	+-4.365		17.9	+-1.49	47.8	+-3.97	@ .783	+-.650E-01	80
		0.4297	#112.00	48.15		24.8	+-2.98	66.0	+-7.94	# 1.08	+-.130	29
		0.4341	#113.00	48.58		24.5	+-3.44	65.4	+-9.16	# 1.07	+-.150	29
0.87+- 0.01	1.59	0.4513	#117.00	50.30		21.6	+-2.06	57.4	+-5.50	# .940	+-.900E-01	90
		0.5828	#159.00	61.73		20.9	+-2.52	55.6	+-6.72	# .910	+-.110	90
0.88	1.59	0.2382	@ 70.00	30.00								
		+- 0.0467	+- 10.00	+-4.433		15.9	+-1.37	43.4	+-3.73	@ .722	+-.620E-01	80
0.88+- 0.02	1.59	0.3847	@100.00	43.50		16.1	+-3.53	43.9	+-9.63	@ .730	+-.160	19
0.88	1.59	0.4469	#113.00	49.35		17.7	+-3.31	48.1	+-9.03	# .800	+-.150	29
		0.4514	#114.00	49.80		19.4	+-4.41	52.9	+-12.0	# .880	+-.200	29
0.89	1.60	0.2433	@ 70.00	30.28								
		+- 0.0484	+- 10.00	+-4.495		14.9	+-1.38	41.7	+-3.86	@ .702	+-.650E-01	80
		0.3057	P@ 82.50	35.94	P	15.3	+-.638	42.7	+-1.78	P@ .720	+-.300E-01	131
0.89+- 0.02	1.60	0.3952	@100.00	44.03		9.37	+-2.13	26.1	+-5.94	@ .440	+-.100E 00	19
0.89	1.60	0.4330	P@107.50	47.50	P	24.0	+-1.92	67.1	+-5.34	P@ 1.13	+-.900E-01	131
		0.4643	#114.00	50.52		17.0	+-4.26	47.5	+-11.9	# .800	+-.200	29
		0.4690	#115.00	50.99		19.4	+-4.26	54.0	+-11.9	# .910	+-.200	29
0.89+- 0.02	1.60	0.5336	@130.00	57.83		19.6	+-1.49	54.6	+-4.16	@ .920	+-.700E-01	19
0.90	1.60	0.2483	@ 70.00	30.53								
		+- 0.0501	+- 10.00	+-4.551		13.7	+-1.64	39.2	+-4.69	@ .668	+-.800E-01	80
0.91	1.61	0.2535	@ 70.00	30.75								
		+- 0.0518	+- 10.00	+-4.604		13.9	+-1.59	40.5	+-4.64	@ .698	+-.800E-01	80
		0.4951	#115.00	52.29		12.3	+-2.19	35.9	+-6.38	# .620	+-.110	29
0.92	1.61	0.2586	@ 70.00	30.96								
		+- 0.0535	+- 10.00	+-4.652		9.59	+-1.79	28.6	+-5.34	@ .498	+-.930E-01	80
		0.3702	@ 90.00	40.46								
		+- 0.0569	+- 10.00	+-4.846		13.5	+-1.79	40.2	+-5.34	@ .700	+-.930E-01	80
		0.5133	#116.00	53.37		6.74	+-2.89	20.1	+-8.61	# .350	+-.150	29
0.93	1.62	0.1627	@ 50.00	21.94								
		+- 0.0450	+- 10.00	+-4.518		7.79	+-1.10	23.7	+-3.36	@ .417	+-.590E-01	80
		0.2639	@ 70.00	31.15								
		+- 0.0552	+- 10.00	+-4.696		14.1	+-2.65	42.9	+-8.08	@ .755	+-.142	80
		0.5316	#117.00	54.44		11.0	+-6.35	33.6	+-19.3	# .590	+-.340	29
		0.5316	#117.00	54.44		9.53	+-6.35	29.0	+-19.3	# .510	+-.340	29
0.94	1.63	0.1426	# 45.00	19.78		4.52	+-1.31	14.0	+-4.06	# .249	+-.720E-01	18
		0.3876	@ 90.00	41.03								
		+- 0.0605	+- 10.00	+-4.977		9.83	+-1.22	30.6	+-3.78	@ .542	+-.670E-01	80
0.94+- 0.02	1.63	0.4474	@100.00	46.09		4.72	+-1.81	14.7	+-5.65	@ .260	+-.100E 00	19
0.94	1.63	0.5503	#118.00	55.50		3.08	+-3.99	9.59	+-12.4	# .170	+-.220	29
0.95	1.63	0.1672	@ 50.00	22.14								
		+- 0.0477	+- 10.00	+-4.572		7.98	+-.723	25.4	+-2.30	@ .453	+-.410E-01	80
		0.5691	#119.00	56.54		12.3	+-4.23	39.2	+-13.4	# .700	+-.240	29
0.96	1.64	0.4050	@ 90.00	41.51								
		+- 0.0640	+- 10.00	+-5.092		7.32	+-.703	23.8	+-2.28	@ .427	+-.410E-01	80
		0.4242	# 93.00	43.05		4.60	+-.446	14.9	+-1.45	# .268	+-.260E-01	95
		0.5827	#119.00	57.01		2.57	+-4.63	8.35	+-15.0	# .150	+-.270	29
0.97	1.64	0.1476	# 45.00	20.00		4.14	+-.534	13.7	+-1.77	# .248	+-.320E-01	18
		0.2313	# 61.00	27.44		5.71	+-.417	18.9	+-1.38	# .342	+-.250E-01	95
		0.6349	#126.00	61.52		5.51	+-1.09	18.3	+-3.60	# .330	+-.650E-01	95
0.98	1.65	0.1743	@ 50.00	22.37								
		+- 0.0516	+- 10.00	+-4.638		4.83	+-.635	16.3	+-2.15	@ .297	+-.390E-01	80
		0.4225	@ 90.00	41.92								
		+- 0.0674	+- 10.00	+-5.193		5.53	+-.504	18.7	+-1.71	@ .340	+-.310E-01	80
0.99	1.65	0.1512	# 45.00	20.12		2.86	+-.333	9.86	+-1.15	# .180	+-.210E-01	18
1.00	1.66	0.1792	@ 50.00	22.49								
		+- 0.0542	+- 10.00	+-4.673		2.99	+-.403	10.5	+-1.42	@ .193	+-.260E-01	80
		0.4400	@ 90.00	42.27								
		+- 0.0708	+- 10.00	+-5.281		3.19	+-.403	11.2	+-1.42	@ .206	+-.260E-01	80
1.02	1.67	0.1569	# 45.00	20.24		2.42	+-.296	8.88	+-1.08	# .164	+-.200E-01	18
		0.2322	# 58.00	26.38		2.23	+-.177	8.18	+-.650	# .151	+-.120E-01	95
		0.4575	@ 90.00	42.56								
		+- 0.0742	+- 10.00	+-5.359		2.90	+-.384	10.6	+-1.41	@ .196	+-.260E-01	80

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.03	1.68	0.1868	@ 50.00	22.62				
		+- 0.0581	+- 10.00	+-4.715	3.69 +-.376	13.8 +-1.40	@ .255 +-.260E-01	80
1.04	1.68	0.1608	# 45.00	20.31	2.47 +-.325	9.42 +-1.24	# .175 +-.230E-01	18
		0.4750	@ 90.00	42.81				
		+- 0.0776	+- 10.00	+-5.429	2.55 +-.368	9.69 +-1.40	@ .180 +-.260E-01	80
1.05	1.69	0.1920	@ 50.00	22.65				
		+- 0.0607	+- 10.00	+-4.738	3.57 +-.388	13.9 +-1.50	@ .258 +-.280E-01	80
		0.4285	P@ 83.00	39.16	P 2.77	10.7	P@ .200	131
1.06	1.69	0.2750	# 62.00	28.51	2.25 +-.339	8.90 +-1.34	# .166 +-.250E-01	95
1.07	1.70	0.1669	# 45.00	20.38	2.35 +-.372	9.48 +-1.50	# .177 +-.280E-01	18
1.08	1.70	0.2001	@ 50.00	22.76				
		+- 0.0645	+- 10.00	+-4.765	2.68 +-.339	11.0 +-1.39	@ .206 +-.260E-01	80
1.09	1.71	0.1711	# 45.00	20.41	2.76 +-.638	11.5 +-2.67	# .216 +-.500E-01	18
1.10	1.72	0.2055	@ 50.00	22.79				
		+- 0.0671	+- 10.00	+-4.779	3.58 +-.351	15.3 +-1.49	@ .286 +-.280E-01	80
1.13	1.73	0.2138	@ 50.00	22.82				
		+- 0.0708	+- 10.00	+-4.795	3.06 +-.308	13.8 +-1.39	@ .258 +-.260E-01	80
1.11	1.72	0.2735	# 59.00	27.17	2.57 +-.184	11.1 +-.800	# .209 +-.150E-01	95
1.14	1.74	0.3184	# 63.00	29.20	2.56 +-.384	11.7 +-1.76	# .220 +-.330E-01	95
1.15	1.74	0.2194	@ 50.00	22.82				
		+- 0.0734	+- 10.00	+-4.803	3.18 +-.263	14.8 +-1.23	@ .278 +-.230E-01	80
		0.2268	# 51.00	23.31	3.05 +-.344	14.2 +-1.60	# .266 +-.300E-01	95
		0.4769	# 80.00	38.05	2.97 +-.344	13.8 +-1.60	# .259 +-.300E-01	95
1.18	1.76	0.2280	@ 50.00	22.82				
		+- 0.0771	+- 10.00	+-4.811	3.05 +-.196	15.0 +-.961	@ .280 +-.180E-01	80
1.20	1.77	0.2338	@ 50.00	22.81				
		+- 0.0796	+- 10.00	+-4.814	2.45 +-.222	12.4 +-1.12	@ .232 +-.210E-01	80
1.23	1.79	0.3699	# 64.00	29.76	1.80 +-.181	9.61 +-.966	# .179 +-.180E-01	95
1.25	1.80	0.2484	@ 50.00	22.76				
		+- 0.0858	+- 10.00	+-4.816	2.17 +-.147	12.0 +-.808	@ .222 +-.150E-01	80
1.28	1.81	0.2572	@ 50.00	22.71				
		+- 0.0896	+- 10.00	+-4.814	2.15 +-.169	12.4 +-.974	@ .229 +-.180E-01	80
1.30	1.82	0.2632	@ 50.00	22.68				
		+- 0.0921	+- 10.00	+-4.812	2.35 +-.237	14.0 +-1.41	@ .258 +-.260E-01	80
1.32	1.83	0.4249	# 65.00	30.07	1.54 +-.160	9.43 +-.981	# .173 +-.180E-01	95
1.33	1.84	0.2722	@ 50.00	22.62				
		+- 0.0958	+- 10.00	+-4.806	1.76 +-.228	11.0 +-1.42	@ .201 +-.260E-01	80
		0.2722	# 50.00	22.62	1.58 +-.140	9.83 +-.874	# .180 +-.160E-01	95
		0.6453	# 83.00	39.71	1.66 +-.114	10.3 +-.710	# .189 +-.130E-01	95
1.34	1.84	0.2285	# 45.00	20.22	1.35 +-.173	8.54 +-1.10	# .156 +-.200E-01	95
1.35	1.85	0.2782	@ 50.00	22.58				
		+- 0.0982	+- 10.00	+-4.801	1.65 +-.333	10.6 +-2.14	@ .193 +-.390E-01	80
1.38	1.86	0.2873	@ 50.00	22.52				
		+- 0.1020	+- 10.00	+-4.793	1.91 +-.297	12.8 +-1.99	@ .232 +-.360E-01	80
1.40	1.87	0.2934	@ 50.00	22.47				
		+- 0.1044	+- 10.00	+-4.787	1.58 +-.314	10.9 +-2.17	@ .196 +-.390E-01	80
1.41	1.88	0.4705	# 65.00	29.85	1.18 +-.954E-01	8.29 +-.668	# .149 +-.120E-01	95
1.43	1.89	0.3026	@ 50.00	22.40				
		+- 0.1081	+- 10.00	+-4.777	1.12 +-.280	8.06 +-2.01	@ .144 +-.360E-01	80
1.45	1.90	0.3088	@ 50.00	22.35				
		+- 0.1106	+- 10.00	+-4.770	1.41 +-.494	10.5 +-3.66	@ .186 +-.650E-01	80
1.50	1.92	0.5304	# 66.00	30.09	.691 +-.719E-01	5.47 +-.570	# .960E-01+-.100E-01	95
		0.6449	# 74.00	34.28	1.01 +-.863E-01	8.04 +-.684	# .141 +-.120E-01	95
1.51	1.93	0.2286	# 41.00	17.99	1.12 +-.926E-01	8.97 +-.743	# .157 +-.130E-01	95
1.59	1.97	0.5329	# 63.00	28.27	.539 +-.526E-01	4.80 +-.468	# .820E-01+-.800E-02	95
1.64	1.99	0.3816	# 51.00	22.29	.577 +-.627E-01	5.46 +-.594	# .920E-01+-.100E-01	95
1.68	2.01	0.6427	# 67.00	29.97	.387 +-.544E-01	3.85 +-.541	# .640E-01+-.900E-02	95
1.70	2.02	0.2334	# 38.00	16.19	.760 +-.594E-01	7.74 +-.605	# .128 +-.100E-01	95
1.83	2.08	0.3674	# 46.00	19.44	.432 +-.640E-01	5.10 +-.755	# .810E-01+-.120E-01	95
1.85	2.09	0.5348	# 56.00	23.99	.273 +-.420E-01	3.29 +-.507	# .520E-01+-.800E-02	95
1.88	2.10	0.2287	# 35.00	14.48	.703 +-.668E-01	8.76 +-.831	# .137 +-.130E-01	95
2.02	2.16	0.5262	# 52.00	21.60	.441 +-.511E-01	6.34 +-.734	# .950E-01+-.110E-01	95
2.03	2.17	0.6465	# 58.00	24.33	.254 +-.369E-01	3.68 +-.536	# .550E-01+-.800E-02	95
2.04	2.17	0.2681	# 36.00	14.57	.834 +-.733E-01	12.2 +-1.07	# .182 +-.160E-01	95
2.20	2.24	0.6530	# 55.00	22.42	.277 +-.662E-01	4.72 +-1.13	# .670E-01+-.160E-01	95
4.00	2.90	# 0.0170	5.65	1.757	# .295 +-.500E-01	16.6 +-2.82	.150 +-.254E-01	239
		# 0.0280	7.39	2.299	# .270 +-.490E-01	15.2 +-2.76	.137 +-.249E-01	239
		@ 0.0400	8.91	2.774	@ .800E-01 +.100E 00	4.51 +5.63	.406E-01 +.508E-01	81
					-.500E-01	-2.82	-.254E-01	
		# 0.0630	11.27	3.511	# .406 +-.620E-01	22.9 +-3.49	.206 +-.315E-01	239
		@ 0.1000	14.27	4.454	@ .290 +-.620E-01	16.3 +-3.49	.147 +-.315E-01	81
		# 0.1200	15.66	4.892	# .408 +-.580E-01	23.0 +-3.27	.207 +-.295E-01	239
		@ 0.2000	20.32	6.367	@ .250 +-.600E-01	14.1 +-3.38	.127 +-.305E-01	81
		# 0.2100	20.83	6.530	# .432 +-.650E-01	24.3 +-3.66	.219 +-.330E-01	239
		# 0.3100	25.40	7.999	# .330 +-.500E-01	18.6 +-2.82	.168 +-.254E-01	239
		@ 0.4000	28.94	9.149	@ .162 +-.320E-01	9.13 +-1.80	.823E-01+-.163E-01	81
		# 0.4400	30.39	9.625	# .234 +-.420E-01	13.2 +-2.37	.119 +-.213E-01	239
		# 0.5900	35.35	11.27	# .153 +-.340E-01	8.62 +-1.92	.777E-01+-.173E-01	239
		@ 0.6600	37.47	11.99	@ .100E 00+-.400E-01	5.63 +-2.25	.508E-01+-.203E-01	81
		# 0.7600	40.33	12.96	# .128 +-.300E-01	7.21 +-1.69	.650E-01+-.152E-01	239
		# 0.9400	45.10	14.62	# .620E-01+-.220E-01	3.49 +-1.24	.315E-01+-.112E-01	239
		@ 1.0000	46.60	15.15	@ .760E-01 +.740E-01	4.28 +4.17	.386E-01 +.376E-01	81
					-.460E-01	-2.59	-.234E-01	
		# 1.1200	49.50	16.18	# .410E-01+-.240E-01	2.31 +-1.35	.208E-01+-.122E-01	239
		# 1.3700	55.17	18.27	# .440E-01+-.220E-01	2.48 +-1.24	.223E-01+-.112E-01	239
5.50	3.35	@ 0.3000	20.80	5.712	@ .325 +-.178	34.6 +-18.9	.238 +-.130	137
		@ 0.4000	24.67	6.632	@ .179 +-.500E-01	19.1 +-5.33	.131 +-.365E-01	137
		@ 0.5000	26.97	7.454	@ .160 +-.410E-01	17.0 +-4.37	.117 +-.300E-01	137

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
5.50	3.35	@ 0.7000	32.04	8.913	@ .890E-01+-.210E-01	9.48 +-2.24	.650E-01+-.153E-01	137
		@ 0.9000	36.47	10.22	@ .450E-01+-.140E-01	4.79 +-1.49	.329E-01+-.102E-01	137
6.00	3.48	# 0.0120	3.84	1.006	# .191 +-.370E-01	24.2 +-4.69	.154 +-.298E-01	239
		# 0.0300	6.17	1.619	# .158 +-.390E-01	20.0 +-4.94	.127 +-.314E-01	239
		# 0.0900	10.78	2.833	# .232 +-.420E-01	29.4 +-5.32	.187 +-.338E-01	239
		# 0.1800	15.30	4.030	# .194 +-.340E-01	24.6 +-4.31	.156 +-.274E-01	239
		@ 0.2900	19.47	5.145	@ .375 +.180 -.140	47.5 +22.8 -17.7	.302 +.145 -.113	64
		# 0.3100	20.14	5.325	# .133 +-.280E-01	16.9 +-3.55	.107 +-.225E-01	239
		# 0.3900	22.63	5.996	# .142 +-.280E-01	18.0 +-3.55	.114 +-.225E-01	239
		@ 0.4000	22.92	6.075	@ .132 +-.420E-01	16.7 +-5.32	.106 +-.338E-01	64
		# 0.4800	25.14	6.680	# .106 +-.260E-01	13.4 +-3.30	.853E-01+-.209E-01	239
		@ 0.5000	25.67	6.825	@ .145 +-.450E-01	18.4 +-5.70	.117 +-.362E-01	64
		# 0.5800	27.69	7.379	# .910E-01+-.230E-01	11.5 +-2.92	.733E-01+-.185E-01	239
		# 0.6800	30.04	8.028	# .550E-01+-.230E-01	6.97 +-2.92	.443E-01+-.185E-01	239
		@ 0.7000	30.48	8.153	@ .790E-01+-.170E-01	10.0 +-2.16	.636E-01+-.137E-01	64
		# 0.7900	32.44	8.699	# .480E-01+-.190E-01	6.08 +-2.41	.386E-01+-.153E-01	239
		@ 0.9000	34.69	9.335	@ .390E-01+-.800E-02	4.94 +-1.01	.314E-01+-.644E-02	64
		# 0.9100	34.89	9.392	# .370E-01+-.180E-01	4.69 +-2.28	.298E-01+-.145E-01	239
		@ 1.1000	38.49	10.42	@ .188E-01+-.920E-02	2.38 +-1.17	.151E-01+-.741E-02	137
		# 1.1800	39.92	10.84	# .240E-01+-.150E-01	3.04 +-1.90	.193E-01+-.121E-01	239
		$10.0316	169.34	#2.750	# .991E-02+-.139E-02	1.26 +-.176	.798E-02+-.112E-02	113
		$10.0886	173.72	#1.600	# .682E-02+-.156E-02	0.865 +-.198	.549E-02+-.126E-02	113
6.50	3.62	@ 0.3000	18.95	4.832	@ .242 +-.102	36.0 +-15.2	.213 +-.897E-01	137
		@ 0.4000	21.92	5.604	@ .110 +-.400E-01	16.4 +-5.95	.968E-01+-.352E-01	137
		@ 0.5000	24.55	6.294	@ .900E-01+-.200E-01	13.4 +-2.98	.792E-01+-.176E-01	137
		@ 0.7000	29.14	7.513	@ .490E-01+-.900E-02	7.29 +-1.34	.431E-01+-.792E-02	137
		@ 0.9000	33.15	8.595	@ .257E-01+-.160E-01	3.82 +-2.38	.226E-01+-.141E-01	137
		@ 1.1000	36.77	9.589	@ .150E-01+-.760E-02	2.23 +-1.13	.132E-01+-.669E-02	137
8.00	3.99	$13.1606	153.99	#5.820	# .210E-02+-.570E-03	0.473 +-.128	.232E-02+-.629E-03	113
		$13.7806	171.19	#1.900	# .446E-02+-.860E-03	1.01 +-.194	.492E-02+-.949E-03	113
9.00	4.22	@ 0.7000	24.35	5.396	@ .274E-01+-.137E-01	7.82 +-3.91	.343E-01+-.172E-01	137
		@ 0.9000	27.67	6.157	@ .162E-01+-.890E-02	4.62 +-2.54	.203E-01+-.111E-01	137
12.00	4.84	$20.6916	159.65	#3.850	# .470E-03+-.420E-03	0.238 +-.213	.799E-03+-.714E-03	113
		$21.2916	173.60	#1.200	# .920E-03+-.300E-03	0.467 +-.152	.156E-02+-.510E-03	113
18.00	5.89	$31.9257	163.34	#2.590	# .530E-04+-.580E-04	0.605E-01+-.662E-01	.138E-03+-.151E-03	113
		$32.5537	175.22	#.7500	# .260E-03+-.120E-03	0.297 +-.137	.675E-03+-.311E-03	113

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 9.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
# 0.0120	6.00	3.48	12.14	# .191 +-.370E-01	24.2 +-4.69	239
# 0.0170	4.00	2.90	8.39	# .295 +-.500E-01	16.6 +-2.82	239
# 0.0280	4.00	2.90	8.39	# .270 +-.490E-01	15.2 +-2.76	239
# 0.0300	6.00	3.48	12.14	# .158 +-.390E-01	20.0 +-4.94	239
@ 0.0400	4.00	2.90	8.39	@ .800E-01 +.100E 00 -.500E-01	4.51 +5.63 -2.82	81
# 0.0630	4.00	2.90	8.39	# .406 +-.620E-01	22.9 +-3.49	239
# 0.0900	6.00	3.48	12.14	# .232 +-.420E-01	29.4 +-5.32	239
@ 0.1000	4.00	2.90	8.39	@ .290 +-.620E-01	16.3 +-3.49	81
# 0.1200	4.00	2.90	8.39	# .408 +-.580E-01	23.0 +-3.27	239
# 0.1800	6.00	3.48	12.14	# .194 +-.340E-01	24.6 +-4.31	239
@ 0.2000	4.00	2.90	8.39	@ .250 +-.600E-01	14.1 +-3.38	81
# 0.2100	4.00	2.90	8.39	# .432 +-.650E-01	24.3 +-3.66	239
0.2681	2.04	2.17	4.71	.834 +-.733E-01	12.2 +-1.07	95
@ 0.2900	6.00	3.48	12.14	@ .375 +.180 -.140	47.5 +22.8 -17.7	64
@ 0.3000	5.50	3.35	11.20	@ .325 +-.178	34.6 +-18.9	137
@ 0.3000	6.50	3.62	13.08	@ .242 +-.102	36.0 +-15.2	137
# 0.3100	4.00	2.90	8.39	# .330 +-.500E-01	18.6 +-2.82	239
# 0.3100	6.00	3.48	12.14	# .133 +-.280E-01	16.9 +-3.55	239
# 0.3900	6.00	3.48	12.14	# .142 +-.280E-01	18.0 +-3.55	239
@ 0.4000	4.00	2.90	8.39	@ .162 +-.320E-01	9.13 +-1.80	81
@ 0.4000	5.50	3.35	11.20	@ .179 +-.500E-01	19.1 +-5.33	137
@ 0.4000	6.00	3.48	12.14	@ .132 +-.420E-01	16.7 +-5.32	64
@ 0.4000	6.50	3.62	13.08	@ .110 +-.400E-01	16.4 +-5.95	137
# 0.4400	4.00	2.90	8.39	# .234 +-.420E-01	13.2 +-2.37	239
# 0.4800	6.00	3.48	12.14	# .106 +-.260E-01	13.4 +-3.30	239
@ 0.5000	5.50	3.35	11.20	@ .160 +-.410E-01	17.0 +-4.37	137

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 9.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
@	0.5000	6.00	3.48	12.14	@ .145 +-.450E-01	18.4 +-5.70	64
@	0.5000	6.50	3.62	13.08	@ .900E-01+-.200E-01	13.4 +-2.98	137
	0.5262	2.02	2.16	4.67	.441 +-.511E-01	6.34 +-.734	95
#	0.5800	6.00	3.48	12.14	# .910E-01+-.230E-01	11.5 +-2.92	239
#	0.5900	4.00	2.90	8.39	# .153 +-.340E-01	8.62 +-1.92	239
	0.6465	2.03	2.17	4.69	.254 +-.369E-01	3.68 +-.536	95
	0.6530	2.20	2.24	5.01	.277 +-.662E-01	4.72 +-1.13	95
@	0.6600	4.00	2.90	8.39	@ .100E 00+-.400E-01	5.63 +-2.25	81
#	0.6800	6.00	3.48	12.14	# .550E-01+-.230E-01	6.97 +-2.92	239
@	0.7000	5.50	3.35	11.20	@ .890E-01+-.210E-01	9.48 +-2.24	137
@	0.7000	6.00	3.48	12.14	@ .790E-01+-.170E-01	10.0 +-2.16	64
@	0.7000	6.50	3.62	13.08	@ .490E-01+-.900E-02	7.29 +-1.34	137
@	0.7000	9.00	4.22	17.77	@ .274E-01+-.137E-01	7.82 +-3.91	137
#	0.7600	4.00	2.90	8.39	# .128 +-.300E-01	7.21 +-1.69	239
#	0.7900	6.00	3.48	12.14	# .480E-01+-.190E-01	6.08 +-2.41	239
@	0.9000	5.50	3.35	11.20	@ .450E-01+-.140E-01	4.79 +-1.49	137
@	0.9000	6.00	3.48	12.14	@ .390E-01+-.800E-02	4.94 +-1.01	64
@	0.9000	6.50	3.62	13.08	@ .257E-01+-.160E-01	3.82 +-2.38	137
@	0.9000	9.00	4.22	17.77	@ .162E-01+-.890E-02	4.62 +-2.54	137
#	0.9100	6.00	3.48	12.14	# .370E-01+-.180E-01	4.69 +-2.28	239
#	0.9400	4.00	2.90	8.39	# .620E-01+-.220E-01	3.49 +-1.24	239
@	1.0000	4.00	2.90	8.39	@ .760E-01 +.740E-01 -.460E-01	4.28 +4.17 -2.59	81
@	1.1000	6.00	3.48	12.14	@ .188E-01+-.920E-02	2.38 +-1.17	137
@	1.1000	6.50	3.62	13.08	@ .150E-01+-.760E-02	2.23 +-1.13	137
#	1.1200	4.00	2.90	8.39	# .410E-01+-.240E-01	2.31 +-1.35	239
#	1.1800	6.00	3.48	12.14	# .240E-01+-.150E-01	3.04 +-1.90	239
#	1.3700	4.00	2.90	8.39	# .440E-01+-.220E-01	2.48 +-1.24	239

1.18 GEV < K < GEV 2.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
0.2280+- 0.0771	1.18	1.76	3.09	3.05 +-.196	15.0 +-.961	80
0.2285	1.34	1.84	3.39	1.35 +-.173	8.54 +-1.10	95
0.2286	1.51	1.93	3.71	1.12 +-.926E-01	8.97 +-.743	95
0.2287	1.88	2.10	4.41	.703 +-.668E-01	8.76 +-.831	95
0.2334	1.70	2.02	4.07	.760 +-.594E-01	7.74 +-.605	95
0.2338+- 0.0796	1.20	1.77	3.13	2.45 +-.222	12.4 +-1.12	80
0.2484+- 0.0858	1.25	1.80	3.23	2.17 +-.147	12.0 +-.808	80
0.2572+- 0.0896	1.28	1.81	3.28	2.15 +-.169	12.4 +-.974	80
0.2632+- 0.0921	1.30	1.82	3.32	2.35 +-.237	14.0 +-1.41	80
0.2722+- 0.0958	1.33	1.84	3.38	1.76 +-.228	11.0 +-1.42	80
0.2722	1.33	1.84	3.38	1.58 +-.140	9.83 +-.874	95
0.2782+- 0.0982	1.35	1.85	3.41	1.65 +-.333	10.6 +-2.14	80
0.2873+- 0.1020	1.38	1.86	3.47	1.91 +-.297	12.8 +-1.99	80
0.2934+- 0.1044	1.40	1.87	3.51	1.58 +-.314	10.9 +-2.17	80
0.3026+- 0.1081	1.43	1.89	3.56	1.12 +-.280	8.06 +-2.01	80
0.3088+- 0.1106	1.45	1.90	3.60	1.41 +-.494	10.5 +-3.66	80
0.3674	1.83	2.08	4.31	.432 +-.640E-01	5.10 +-.755	95
0.3699	1.23	1.79	3.19	1.80 +-.181	9.61 +-.966	95
0.3816	1.64	1.99	3.96	.577 +-.627E-01	5.46 +-.594	95
0.4249	1.32	1.83	3.36	1.54 +-.160	9.43 +-.981	95
0.4705	1.41	1.88	3.53	1.18 +-.954E-01	8.29 +-.668	95
0.5304	1.50	1.92	3.70	.691 +-.719E-01	5.47 +-.570	95
0.5329	1.59	1.97	3.86	.539 +-.526E-01	4.80 +-.468	95
0.5348	1.85	2.09	4.35	.273 +-.420E-01	3.29 +-.507	95
0.6427	1.68	2.01	4.03	.387 +-.544E-01	3.85 +-.541	95
0.6449	1.50	1.92	3.70	1.01 +-.863E-01	8.04 +-.684	95
0.6453	1.33	1.84	3.38	1.66 +-.114	10.3 +-.710	95

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C116: GAMMA + PROTON --> PROTON + ETA (K > 0.71 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.5488 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 6.00 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
6.00	3.48	12.14	#-0.011	#.682E-02+-.156E-02	6.3	1.6	.549E-02+-.126E-02	113
			# 0.046	#.991E-02+-.139E-02	10.7	2.7	.798E-02+-.112E-02	113
8.00	3.99	15.89	# 0.050	#.446E-02+-.860E-03	8.8	2.0	.492E-02+-.949E-03	113
			# 0.670	#.210E-02+-.570E-03	26.0	5.9	.232E-02+-.629E-03	113
12.00	4.84	23.40	# 0.045	#.920E-03+-.300E-03	6.4	1.2	.156E-02+-.510E-03	113
			# 0.645	#.470E-03+-.420E-03	20.4	3.8	.799E-03+-.714E-03	113
18.00	5.89	34.66	# 0.042	#.260E-03+-.120E-03	4.8	0.7	.675E-03+-.311E-03	113
			#~0.670	#.530E-04+-.580E-04	16.7	2.6	.138E-03+-.151E-03	113

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C117: GAMMA + PROTON --> PROTON + X ZERO (K > 1.47 GEV)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.9583 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
1.47 - 1.90	2.00	@ 1.20	+-.500	11.4	+-4.76	28
1.90 - 2.50	2.22	@ 1.00	+-.450	16.1	+-7.25	28
2.50 - 5.80	2.73	@ .200	+-.100E 00	7.42	+-3.71	28

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C121: GAMMA + NEUTRON --> NEUTRON + PI ZERO (K > 4.00 GEV)

M2: 0.9395 GEV
M3: 0.9395 GEV
M4: 0.1350 GEV

TOTAL CROSS SECTION : NO DATA TO BE LISTED

RATIO OF DIFFERENTIAL CROSS SECTION ON NEUTRON TO THAT ON PROTON

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T (PIO,N)/(PIO,P).		REF
4.00	2.90	Pa 0.3000	24.42	8.006			
		+- 0.1000	+- 4.13	+-1.392	Pa0.850	+.110	130
		Pa 0.5300	32.65	10.82			
		+- 0.1200	+- 3.80	+-1.322	Pa0.630	+.110	130
						-.900E-02	130
		Pa 0.8000	40.41	13.57			
		+- 0.1500	+- 3.95	+-1.430	Pa0.700	+-.600E-01	130
		Pa 1.6000	58.48	20.51			
		+- 0.3000	+- 6.01	+-2.468	Pa0.850	+.120	130
						-.110	130

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
1.20	1.77	@ 21.0		107.		182
1.20 - 1.30	1.80	# 12.8	+2.20 -2.00	70.3	+12.1 -11.0	62
1.30 - 1.40	1.85	# 13.4	+2.40 -2.20	85.9	+15.4 -14.1	62
1.40 - 1.50	1.90	# 10.6	+2.10 -2.00	78.4	+15.5 -14.8	62
1.50 - 2.00	2.03	# 6.20	+.900 -.800	63.0	+9.15 -8.14	62

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
1.20	1.77	0.2340	@ 45.00	24.55	26.0	+-1.73	132.	+-8.80	@ 3.30	+-.220	182
1.24	1.79	0.2441	@ 45.00	24.28	21.9	+-1.51	119.	+-8.19	@ 2.90	+-.200	182
1.20 - 1.30	1.80	0.0482- 0.1187	# 20.00- 30.00	# 10.30- 15.59	12.7	+-7.48	69.8	+-41.1	# 1.70	+-1.00	62
		0.1070- 0.2073	# 30.00- 40.00	# 15.59- 21.06	16.5	+-7.48	90.4	+-41.1	# 2.20	+-1.00	62
		0.1869- 0.3164	# 40.00- 50.00	# 21.06- 26.78	33.7	+10.5 -9.70	185.	+57.5 -53.3	# 4.50	+1.40 -1.30	62
		0.2853- 0.4429	# 50.00- 60.00	# 26.78- 32.82	31.4	+-8.98	173.	+-49.3	# 4.20	+-1.20	62
		0.3993- 0.5828	# 60.00- 70.00	# 32.82- 39.29	9.72	+-4.49	53.4	+-24.6	# 1.30	+-.600	62
		0.5255- 0.7320	# 70.00- 80.00	# 39.29- 46.28	.0		.0		# .0		62
		0.6600- 0.8858	# 80.00- 90.00	# 46.28- 53.92	2.24	+-2.24	12.3	+-12.3	# .300	+-.300	62
		0.7987- 1.0396	# 90.00- 100.00	# 53.92- 62.38	2.24	+-2.24	12.3	+-12.3	# .300	+-.300	62
		0.9373- 1.1887	#100.00- 110.00	# 62.38- 71.82	.0		.0		# .0		62
		1.0718- 1.3286	#110.00- 120.00	# 71.82- 82.47	.0		.0		# .0		62
		1.1980- 1.4551	#120.00- 130.00	# 82.47- 94.54	.0		.0		# .0		62
		1.3120- 1.5643	#130.00- 140.00	# 94.54- 108.3	5.98	+-3.74	32.9	+-20.5	# .800	+-.500	62
		1.4104- 1.6528	#140.00- 150.00	#108.27- 123.8	3.74	+-3.74	20.5	+-20.5	# .500	+-.500	62
		1.4903- 1.7181	#150.00- 160.00	#123.82- 141.2	.0		.0		# .0		62
		1.5491- 1.7580	#160.00- 170.00	#141.20- 160.1	.0		.0		# .0		62
		1.5851- 1.7715	#170.00- 180.00	#160.14- 180.0	.0		.0		# .0		62
1.28	1.81	0.2543	@ 45.00	24.01	20.3	+-1.59	117.	+-9.21	@ 2.80	+-.220	182
1.30 - 1.40	1.85	0.0535- 0.1305	# 20.00- 30.00	# 10.03- 15.18	35.2	+-12.2	226.	+-78.1	# 5.20	+-1.80	62
		0.1187- 0.2278	# 30.00- 40.00	# 15.18- 20.51	21.7	+-8.81	139.	+-56.4	# 3.20	+-1.30	62
		0.2073- 0.3478	# 40.00- 50.00	# 20.51- 26.09	13.5	+-6.10	86.8	+-39.1	# 2.00	+-.900	62
		0.3164- 0.4868	# 50.00- 60.00	# 26.09- 32.00	6.10	+-4.06	39.1	+-26.0	# .900	+-.600	62
		0.4429- 0.6406	# 60.00- 70.00	# 32.00- 38.33	10.2	+-4.74	65.1	+-30.4	# 1.50	+-.700	62
		0.5828- 0.8045	# 70.00- 80.00	# 38.33- 45.18	5.42	+-3.39	34.7	+-21.7	# .800	+-.500	62
		0.7320- 0.9736	# 80.00- 90.00	# 45.18- 52.70	7.45	+5.42 -4.06	47.8	+34.7 -26.0	# 1.10	+.800 -.600	62
		0.8858- 1.1427	# 90.00- 100.00	# 52.70- 61.03	2.03	+-2.03	13.0	+-13.0	# .300	+-.300	62
		1.0396- 1.3066	#100.00- 110.00	# 61.03- 70.38	.0		.0		# .0		62
		1.1887- 1.4604	#110.00- 120.00	# 70.38- 80.96	2.71	+-2.03	17.4	+-13.0	# .400	+-.300	62
		1.3286- 1.5994	#120.00- 130.00	# 80.96- 93.02	6.10	+-4.06	39.1	+-26.0	# .900	+-.600	62

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C122: GAMMA + NEUTRON —> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
1.30 - 1.40	1.85	1.4551-1.7194	#130.00-140.00	# 93.02-106.8	.0		.0		# .0		62
		1.5643-1.8167	#140.00-150.00	#106.82-122.5	.0		.0		# .0		62
		1.6528-1.8885	#150.00-160.00	#122.54-140.2	4.74	+-4.06	30.4	+-26.0	# .700	+-.600	62
		1.7181-1.9324	#160.00-170.00	#140.23-159.6	7.45	+-6.77	47.8	+-43.4	# 1.10	+-1.00	62
		1.7580-1.9472	#170.00-180.00	#159.62-180.0	.0		.0		# .0		62
1.40 - 1.50	1.90	0.0587-0.1423	# 20.00-30.00	# 9.77-14.80	13.6	+-8.04	101.	+-59.5	# 2.20	+-1.30	62
		0.1305-0.2485	# 30.00-40.00	# 14.80-20.01	13.0	+-6.80	96.1	+-50.3	# 2.10	+-1.10	62
		0.2278-0.3794	# 40.00-50.00	# 20.01-25.46	6.80	+-4.33	50.3	+-32.0	# 1.10	+-.700	62
		0.3478-0.5310	# 50.00-60.00	# 25.46-31.24	8.04	+-4.33	59.5	+-32.0	# 1.30	+-.700	62
		0.4868-0.6988	# 60.00-70.00	# 31.24-37.43	4.95	+-3.09	36.6	+-22.9	# .800	+-.500	62
		0.6406-0.8776	# 70.00-80.00	# 37.43-44.16	9.28	+-4.33	68.6	+-32.0	# 1.50	+-.700	62
		0.8045-1.0621	# 80.00-90.00	# 44.16-51.55	2.47	+-1.86	18.3	+-13.7	# .400	+-.300	62
		0.9736-1.2465	# 90.00-100.00	# 51.55-59.77	.0		.0		# .0		62
		1.1427-1.4253	#100.00-110.00	# 59.77-69.02	2.47	+-2.47	18.3	+-18.3	# .400	+-.400	62
		1.3066-1.5931	#110.00-120.00	# 69.02-79.53	.0		.0		# .0		62
		1.4604-1.7447	#120.00-130.00	# 79.53-91.58	2.47	+-2.47	18.3	+-18.3	# .400	+-.400	62
		1.5994-1.8756	#130.00-140.00	# 91.58-105.4	3.09	+-3.09	22.9	+-22.9	# .500	+-.500	62
		1.7194-1.9818	#140.00-150.00	#105.43-121.3	.0		.0		# .0		62
		1.8167-2.0601	#150.00-160.00	#121.31-139.3	.0		.0		# .0		62
		1.8885-2.1080	#160.00-170.00	#139.29-159.1	13.6	+9.28 -8.64	101.	+68.6 -63.9	# 2.20	+1.50 -1.40	62
		1.9324-2.1241	#170.00-180.00	#159.10-180.0	.0		.0		# .0		62
1.50 - 2.00	2.03	0.0641-0.2025	# 20.00-30.00	# 8.75-13.26	8.06	+-3.02	82.0	+-30.7	# 1.60	+-.600	62
		0.1423-0.3535	# 30.00-40.00	# 13.26-17.94	6.04	+-2.01	61.5	+-20.5	# 1.20	+-.400	62
		0.2485-0.5398	# 40.00-50.00	# 17.94-22.86	5.04	+-1.51	51.2	+-15.4	# 1.00	+-.300	62
		0.3794-0.7555	# 50.00-60.00	# 22.86-28.09	1.01	+-1.01	10.2	+-10.2	# .200	+-.200	62
		0.5310-0.9943	# 60.00-70.00	# 28.09-33.74	3.02	+-1.01	30.7	+-10.2	# .600	+-.200	62
		0.6988-1.2487	# 70.00-80.00	# 33.74-39.91	2.01	+-1.01	20.5	+-10.2	# .400	+-.200	62
		0.8776-1.5111	# 80.00-90.00	# 39.91-46.76	1.51	+-.504	15.4	+-5.12	# .300	+-.100E 00	62
		1.0621-1.7735	# 90.00-100.00	# 46.76-54.46	1.01	+-.504	10.2	+-5.12	# .200	+-.100E 00	62
		1.2465-2.0279	#100.00-110.00	# 54.46-63.25	2.01	+-1.01	20.5	+-10.2	# .400	+-.200	62
		1.4253-2.2666	#110.00-120.00	# 63.25-73.40	2.01	+-1.01	20.5	+-10.2	# .400	+-.200	62
		1.5931-2.4824	#120.00-130.00	# 73.40-85.28	.0		.0		# .0		62
		1.7447-2.6686	#130.00-140.00	# 85.28-99.27	1.51	+-1.01	15.4	+-10.2	# .300	+-.200	62
		1.8756-2.8197	#140.00-150.00	# 99.27-115.8	1.51	+-1.01	15.4	+-10.2	# .300	+-.200	62
		1.9818-2.9310	#150.00-160.00	#115.77-135.0	.0		.0		# .0		62
		2.0601-2.9992	#160.00-170.00	#134.99-156.7	5.54	+-3.02	56.3	+-30.7	# 1.10	+-.600	62
		2.1080-3.0221	#170.00-180.00	#156.71-180.0	.0		.0		# .0		62
3.40	2.70	a 0.3740	a 30.00	10.62	a .713	+-.150	29.1	+-6.12	.317	+-.668E-01	44
		a 0.6530	a 40.00	14.39	a .303	+-.360E-01	12.4	+-1.47	.135	+-.160E-01	44
		a 0.8176	a 45.00	16.35	a .195	+-.410E-01	7.96	+-1.67	.868E-01	+-.183E-01	44
		a 0.9971	a 50.00	18.37	a .950E-01	+-.230E-01	3.88	+-.939	.423E-01	+-.102E-01	44
		a 1.3956	a 60.00	22.63	a .710E-01	+-.220E-01	2.90	+-.898	.316E-01	+-.979E-02	44

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 3.40

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
a 0.3740	3.40	2.70	7.27	a .713 +-.150	29.1 +-6.12	44
a 0.6530	3.40	2.70	7.27	a .303 +-.360E-01	12.4 +-1.47	44
a 0.8176	3.40	2.70	7.27	a .195 +-.410E-01	7.96 +-1.67	44
a 0.9971	3.40	2.70	7.27	a .950E-01+-.230E-01	3.88 +-.939	44
a 1.3956	3.40	2.70	7.27	a .710E-01+-.220E-01	2.90 +-.898	44

1.20 GEV < K < GEV 2.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
0.0482 - 0.1187	1.20 - 1.30	1.77 - 1.82	3.14 - 3.33	12.7 +-7.48	69.8 +-41.1	62
0.0535 - 0.1305	1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	35.2 +-12.2	226. +-78.1	62
0.0587 - 0.1423	1.40 - 1.50	1.87 - 1.92	3.51 - 3.70	13.6 +-8.04	101. +-59.5	62
0.0641 - 0.2025	1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	8.06 +-3.02	82.0 +-30.7	62
0.1070 - 0.2073	1.20 - 1.30	1.77 - 1.82	3.14 - 3.33	16.5 +-7.48	90.4 +-41.1	62
0.1187 - 0.2278	1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	21.7 +-8.81	139. +-56.4	62
0.1305 - 0.2485	1.40 - 1.50	1.87 - 1.92	3.51 - 3.70	13.0 +-6.80	96.1 +-50.3	62
0.2340	1.20	1.77	3.14	26.0 +-1.73	132. +-8.80	182
0.2441	1.24	1.79	3.21	21.9 +-1.51	119. +-8.19	182
0.1423 - 0.3535	1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	6.04 +-2.01	61.5 +-20.5	62
0.1869 - 0.3164	1.20 - 1.30	1.77 - 1.82	3.14 - 3.33	33.7 +10.5 -9.70	185. +57.5 -53.3	62
0.2543	1.28	1.81	3.29	20.3 +-1.59	117. +-9.21	182
0.2073 - 0.3478	1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	13.5 +-6.10	86.8 +-39.1	62
0.2278 - 0.3794	1.40 - 1.50	1.87 - 1.92	3.51 - 3.70	6.80 +-4.33	50.3 +-32.0	62
0.2853 - 0.4429	1.20 - 1.30	1.77 - 1.82	3.14 - 3.33	31.4 +-8.98	173. +-49.3	62
0.2485 - 0.5398	1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	5.04 +-1.51	51.2 +-15.4	62
0.3164 - 0.4868	1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	6.10 +-4.06	39.1 +-26.0	62
0.3478 - 0.5310	1.40 - 1.50	1.87 - 1.92	3.51 - 3.70	8.04 +-4.33	59.5 +-32.0	62
0.3993 - 0.5828	1.20 - 1.30	1.77 - 1.82	3.14 - 3.33	9.72 +-4.49	53.4 +-24.6	62
0.4429 - 0.6406	1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	10.2 +-4.74	65.1 +-30.4	62
0.3794 - 0.7555	1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	1.01 +-1.01	10.2 +-10.2	62
0.4868 - 0.6988	1.40 - 1.50	1.87 - 1.92	3.51 - 3.70	4.95 +-3.09	36.6 +-22.9	62
0.5255 - 0.7320	1.20 - 1.30	1.77 - 1.82	3.14 - 3.33	.0	.0	62
0.5828 - 0.8045	1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	5.42 +-3.39	34.7 +-21.7	62
0.6406 - 0.8776	1.40 - 1.50	1.87 - 1.92	3.51 - 3.70	9.28 +-4.33	68.6 +-32.0	62
0.5310 - 0.9943	1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	3.02 +-1.01	30.7 +-10.2	62
0.6988 - 1.2487	1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	2.01 +-1.01	20.5 +-10.2	62
0.8776 - 1.5111	1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	1.51 +-.504	15.4 +-5.12	62

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.20 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
1.20 - 1.30	1.77 - 1.82	3.14 - 3.33	-0.242 --0.215	.0	# 0.0 - 10.0	0.0 - 4.1	# .0	62
			-0.230 --0.175	.0	# 10.0 - 20.0	4.1 - 8.3	# .0	62
			-0.194 --0.110	.0	# 20.0 - 30.0	8.1 - 12.4	# .0	62
			-0.135 --0.021	3.74 +-3.74	# 30.0 - 40.0	12.3 - 16.7	#.500 +-.500	62
			-0.055 - 0.088	5.98 +-3.74	# 40.0 - 50.0	16.4 - 21.0	#.800 +-.500	62
			0.043 - 0.214	.0	# 50.0 - 60.0	20.7 - 25.4	# .0	62
			0.157 - 0.354	.0	# 60.0 - 70.0	25.1 - 29.9	# .0	62
			0.283 - 0.503	.0	# 70.0 - 80.0	29.5 - 34.6	# .0	62
			0.418 - 0.657	2.24 +-2.24	# 80.0 - 90.0	34.2 - 39.4	#.300 +-.300	62
			0.556 - 0.811	2.24 +-2.24	# 90.0 -100.0	38.9 - 44.3	#.300 +-.300	62
1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	-0.228 --0.201	.0	# 0.0 - 10.0	0.0 - 4.1	# .0	62
			-0.215 --0.158	7.45 +-6.77	# 10.0 - 20.0	4.0 - 8.1	#1.10 +-1.00	62
			-0.175 --0.086	4.74 +-4.06	# 20.0 - 30.0	8.0 - 12.3	#.700 +-.600	62
			-0.110 - 0.012	.0	# 30.0 - 40.0	12.1 - 16.4	# .0	62
			-0.021 - 0.132	.0	# 40.0 - 50.0	16.2 - 20.7	# .0	62
			0.088 - 0.271	6.10 +-4.06	# 50.0 - 60.0	20.4 - 25.1	#.900 +- 600	62

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.20 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2		THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD		REF
1.30 - 1.40	1.82 - 1.87	3.33 - 3.51	0.214 - 0.424	2.71	+-2.03	# 60.0 - 70.0	24.7 - 29.5	#.400	+-.300	62
			0.354 - 0.588	.0		# 70.0 - 80.0	29.2 - 34.2	# .0		62
			0.503 - 0.757	2.03	+-2.03	# 80.0 - 90.0	33.8 - 38.9	#.300	+-.300	62
			0.657 - 0.926	7.45	+5.42 -4.06	# 90.0 -100.0	38.5 - 43.9	#1.10	+.800 -.600	62
1.40 - 1.50	1.87 - 1.92	3.51 - 3.70	-0.216 --0.189	.0		# 0.0 - 10.0	0.0 - 4.0	# .0		62
			-0.201 --0.141	13.6	+9.28 -8.64	# 10.0 - 20.0	3.9 - 8.0	#2.20	+1.50 -1.40	62
			-0.158 --0.063	.0		# 20.0 - 30.0	7.9 - 12.1	# .0		62
			-0.086 - 0.043	.0		# 30.0 - 40.0	11.9 - 16.2	# .0		62
			0.012 - 0.174	3.09	+-3.09	# 40.0 - 50.0	16.0 - 20.4	#.500	+-.500	62
			0.132 - 0.326	2.47	+-2.47	# 50.0 - 60.0	20.1 - 24.7	#.400	+-.400	62
			0.271 - 0.494	.0		# 60.0 - 70.0	24.4 - 29.2	# .0		62
			0.424 - 0.672	2.47	+-2.47	# 70.0 - 80.0	28.8 - 33.8	#.400	+-.400	62
			0.588 - 0.857	.0		# 80.0 - 90.0	33.4 - 38.5	# .0		62
			0.757 - 1.041	2.47	+-1.86	# 90.0 -100.0	38.1 - 43.4	#.400	+-.300	62
1.50 - 2.00	1.92 - 2.15	3.70 - 4.64	-0.205 --0.141	.0		# 0.0 - 10.0	0.0 - 3.9	# .0		62
			-0.189 --0.073	5.54	+-3.02	# 10.0 - 20.0	3.7 - 7.9	#1.10	+-.600	62
			-0.141 - 0.039	.0		# 20.0 - 30.0	7.4 - 11.9	# .0		62
			-0.063 - 0.190	1.51	+-1.01	# 30.0 - 40.0	11.1 - 16.0	#.300	+-.200	62
			0.043 - 0.376	1.51	+-1.01	# 40.0 - 50.0	14.9 - 20.1	#.300	+-.200	62
			0.174 - 0.592	.0		# 50.0 - 60.0	18.8 - 24.4	# .0		62
			0.326 - 0.831	2.01	+-1.01	# 60.0 - 70.0	22.9 - 28.8	#.400	+-.200	62
			0.494 - 1.085	2.01	+-1.01	# 70.0 - 80.0	27.1 - 33.4	#.400	+-.200	62
			0.672 - 1.347	1.01	+-.504	# 80.0 - 90.0	31.5 - 38.1	#.200	+-.100E 00	62

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

RATIO OF CROSS SECTIONS FOR TRANSVERSE AND PARALLEL (TO THE PRODUCTION PLANE) POLARIZED GAMMAS

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	A=SIG TRANSVERSE B=SIG PARALLEL (A-B)/(A+B)		A/(A+B)		B/(A+B)		REF
3.00	2.55	a 0.1400	19.56	7.231							
		+- 0.0400	+- 2.82	+-1.061	a0.510	+-.220	0.755	+-.110	0.245	+-.110	116
		a 0.2300	25.15	9.349							
		+- 0.0450	+- 2.50	+-.9555	a0.190	+-.170	0.595	+-.850E-01	0.405	+-.850E-01	116
		a 0.4000	33.36	12.54							
		+- 0.1100	+- 4.72	+-1.863	a-.290	+-.180	0.355	+-.900E-01	0.645	+-.900E-01	116
		a 0.6000	41.17	15.68							
		+- 0.0600	+- 2.15	+-.8825	a-.950E-01	+-.170	0.452	+-.850E-01	0.547	+-.850E-01	116
		a 0.8500	49.48	19.17							
		+- 0.1700	+- 5.28	+-2.278	a0.320	+-.200	0.660	+-.100E 00	0.340	+-.100E 00	116
		a 1.2000	59.63	23.71							
		+- 0.1000	+- 2.74	+-1.273	a0.130	+-.195	0.565	+-.975E-01	0.435	+-.975E-01	116
		a 1.5000	67.54	27.52							
		+- 0.1000	+- 2.55	+-1.274	a0.675	+-.220	0.837	+-.110	0.163	+-.110	116
		a 1.8000	75.03	31.40							
		+- 0.1000	+- 2.44	+-1.314	a0.530	+-.250	0.765	+-.125	0.235	+-.125	116
3.41	2.70	# 0.2000	21.76	7.630	#0.340	+-.150	0.670	+-.750E-01	0.330	+-.750E-01	118
		# 0.4000	30.97	10.98	#-.200	+-.200	0.400	+-.100E 00	0.600	+-.100E 00	118

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

POLARIZED GAMMAS (DIRECTION OF POLARIZATION IS WITH RESPECT TO THE PRODUCTION PLANE)

R = RATIO (SIG(TRANSVERSE) - SIG(PARALLEL))/(SIG(TRANSVERSE) + SIG(PARALLEL))
(T DEPENDENCE)

2.00 GEV < K < GEV 3.41

	-T GEV**2	K GEV	E* GEV	S GEV**2	R		REF
a	0.1400+- 0.0400	3.00	2.55	6.52	a0.510	+-.220	116
	# 0.2000	3.41	2.70	7.29	#0.340	+-.150	118
a	0.2300+- 0.0450	3.00	2.55	6.52	a0.190	+-.170	116
a	0.4000+- 0.1100	3.00	2.55	6.52	a-.290	+-.180	116
	# 0.4000	3.41	2.70	7.29	#-.200	+-.200	118
a	0.6000+- 0.0600	3.00	2.55	6.52	a-.950E-01	+-.170	116
a	0.8500+- 0.1700	3.00	2.55	6.52	a0.320	+-.200	116
a	1.2000+- 0.1000	3.00	2.55	6.52	a0.130	+-.195	116
a	1.5000+- 0.1000	3.00	2.55	6.52	a0.675	+-.220	116
a	1.8000+- 0.1000	3.00	2.55	6.52	a0.530	+-.250	116

C131: GAMMA + DEUTERON --> NEUTRON + NEUTRON + PI+

AND

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION: RATIO PI-/PI+ AND (P+,D)/(PI+,P)

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	PI-/PI+		(PI+ - PI-)/(PI+ + PI-)		(PI+,D)/(PI+,P)		REF
1.20	1.77	$ 0.0000	0.00	.4767E-01	0.780	+-.900E-01	0.124	+-.568E-01		---------	157
		0.2340	45.00	24.55	0.700	+-.600E-01	0.176	+-.415E-01		---------	182
1.24	1.79	0.2441	45.00	24.28	0.830	+-.100E 00	0.929E-01	+-.597E-01		---------	182
1.28	1.81	0.2543	45.00	24.01	0.880	+-.120	0.638E-01	+-.679E-01		---------	182
1.30	1.82	$ 0.0000	0.00	.4400E-01	1.00	+-.110	0.0	+-.550E-01		---------	157
1.40	1.87	$ 0.0000	0.00	.4086E-01	0.960	+-.100E 00	0.204E-01	+-.521E-01		---------	157
1.55	1.95	$ 0.0000	0.00	.0	1.01	+-.110	-.497E-02	+-.545E-01		---------	157
1.70	2.02	$ 0.0000	0.00	.0	1.09	+-.120	-.431E-01	+-.549E-01		---------	157
2.60	2.40	# 0.0970	17.66	6.926	#0.647	+-.720E-01	0.214	+-.531E-01		---------	66
3.04	2.57	0.7217	a 45.00	17.17	---------		---------		a 1.13	+-.600E-01	44
3.05	2.57	0.7244	a 45.00	17.14	a0.450	+-.500E-01	0.379	+-.476E-01		---------	44
3.06	2.58	0.7271	a 45.00	17.12	a0.410	+-.600E-01	0.418	+-.604E-01		---------	44
3.15	2.61	0.7514	a 45.00	16.91	---------		---------		a0.950	+-.600E-01	44
3.16	2.61	0.7541	a 45.00	16.89	a0.430	+-.400E-01	0.399	+-.391E-01		---------	44
3.17	2.62	0.7568	a 45.00	16.87	a0.470	+-.600E-01	0.361	+-.555E-01		---------	44
3.26	2.65	0.7812	a 45.00	16.67	a0.430	+-.400E-01	0.399	+-.391E-01	a 1.15	+-.900E-01	44
3.27	2.65	0.7839	a 45.00	16.64	a0.350	+-.600E-01	0.481	+-.658E-01		---------	44
3.36	2.68	0.8083	a 45.00	16.45	a0.420	+-.500E-01	0.408	+-.496E-01		---------	44
3.37	2.69	0.8110	a 45.00	16.43	a0.440	+-.400E-01	0.389	+-.386E-01	a0.970	+-.900E-01	44
3.38	2.69	0.8137	a 45.00	16.41	a0.440	+-.500E-01	0.389	+-.482E-01		---------	44
3.40	2.70	# 0.0030	2.65	.9218							
		+- 0.0010	+- 0.44	+-.1538	# 1.02	+-.870E-01	-.794E-02	+-.428E-01	#0.618	+-.560E-01	66
		# 0.0120	5.31	1.845	#0.861	+-.670E-01	0.747E-01	+-.387E-01	#0.799	+-.670E-01	66
		# 0.0480	10.63	3.702	#0.771	+-.590E-01	0.129	+-.376E-01	#0.880	+-.680E-01	66
		# 0.0960	15.06	5.256	#0.650	+-.490E-01	0.212	+-.360E-01	#0.897	+-.690E-01	66
		# 0.1900	21.24	7.453	#0.553	+-.440E-01	0.288	+-.365E-01	#0.859	+-.670E-01	66
		# 0.2900	26.32	9.286	#0.482	+-.410E-01	0.350	+-.373E-01		---------	66
		# 0.3900	30.62	10.86	#0.304	+-.240E-01	0.534	+-.282E-01	# 1.00	+-.760E-01	66
3.41	2.70	0.3759	a 30.00	10.62	a0.360	+-.300E-01	0.471	+-.324E-01	a 1.04	+-.900E-01	44
		0.5075	a 35.00	12.48	a0.370	+-.400E-01	0.460	+-.426E-01		---------	44
		0.6565	a 40.00	14.39	a0.380	+-.400E-01	0.449	+-.420E-01	a0.950	+-.600E-01	44
		0.8219	a 45.00	16.35	a0.420	+-.300E-01	0.408	+-.298E-01	a0.930	+-.900E-01	44
		1.0024	a 50.00	18.37	a0.410	+-.700E-01	0.418	+-.704E-01	a 1.12	+-.100E 00	44
		1.4030	a 60.00	22.63	a0.580	+-.700E-01	0.266	+-.561E-01	a0.980	+-.140	44
		1.8463	a 70.00	27.27	a0.590	+-.800E-01	0.258	+-.633E-01		---------	44
		2.3188	a 80.00	32.41	a0.860	+-.200	0.753E-01	+-.116		---------	44
		2.8061	a 90.00	38.18	a0.780	+-.140	0.124	+-.884E-01		---------	44
3.48	2.72	0.8409	a 45.00	16.20	a0.560	+-.600E-01	0.282	+-.493E-01		---------	44
3.59	2.76	0.8707	a 45.00	15.99	a0.710	+-.100E 00	0.170	+-.684E-01		---------	44
5.00	3.21	# 0.0060	3.03	.8870							
		+- 0.0020	+- 0.51	+-.1480	#0.983	+-.980E-01	0.857E-02	+-.498E-01		---------	66
		# 0.0140	4.63	1.356	#0.959	+-.750E-01	0.209E-01	+-.391E-01	#0.731	+-.560E-01	66
		# 0.0570	9.36	2.742	#0.754	+-.610E-01	0.140	+-.397E-01	#0.823	+-.720E-01	66
		# 0.1000	12.40	3.640	#0.589	+-.450E-01	0.259	+-.356E-01	#0.890	+-.690E-01	66
		# 0.2000	17.57	5.177	#0.488	+-.390E-01	0.344	+-.352E-01	#0.893	+-.770E-01	66
		# 0.3000	21.57	6.376	#0.350	+-.290E-01	0.481	+-.318E-01	#0.977	+-.810E-01	66
		# 0.3900	24.64	7.307	#0.268	+-.230E-01	0.577	+-.286E-01		---------	66
		# 0.6000	30.69	9.174	#0.331	+-.330E-01	0.503	+-.373E-01	#0.899	+-.920E-01	66

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFFRENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C131: GAMMA + DEUTERON --> NEUTRON + NEUTRON + PI+

AND

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION: RATIO PI-/PI+ AND (P+,D)/(PI+,P)

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	PI-/PI+		(PI+ - PI-)/(PI+ + PI-)		(PI+,D)/(PI+,P)		REF
6.00	3.49	# 0.0980	11.12	3.000	#0.602	+-.500E-01	0.248	+-.390E-01	#0.950	+-.830E-01	66
		# 0.3000	19.52	5.299	#0.282	+-.360E-01	0.560	+-.438E-01		---------	66
8.00	3.99	# 0.0000	0.17	.3995E-01	# 1.17	+-.160	-.783E-01	+-.680E-01	@0.810	+-.140	83
		# 0.0106	3.13	.7372	# 1.05	+-.800E-01	-.244E-01	+-.381E-01	@0.820	+-.800E-01	83
		# 0.0200	4.30	1.013	#0.930	+-.600E-01	0.363E-01	+-.322E-01	@0.850	+-.700E-01	83
		# 0.0400	6.09	1.433	#0.808	+-.580E-01	0.106	+-.355E-01	@0.800	+-.700E-01	83
		# 0.0800	8.62	2.030	#0.569	+-.420E-01	0.275	+-.341E-01	@0.950	+-.100E 00	83
		# 0.1200	10.56	2.490	#0.475	+-.360E-01	0.356	+-.331E-01	@0.950	+-.100E 00	83
		# 0.1600	12.20	2.879	#0.435	+-.490E-01	0.394	+-.476E-01	@0.910	+-.800E-01	83
		# 0.3000	16.73	3.961	#0.299	+-.240E-01	0.540	+-.284E-01	@0.950	+-.700E-01	83
		# 0.4500	20.52	4.876	#0.303	+-.280E-01	0.535	+-.330E-01	@0.950	+-.900E-01	83
		# 0.6000	23.74	5.660	#0.380	+-.430E-01	0.449	+-.452E-01	@ 1.08	+-.160	83
		# 0.8000	27.48	6.583	#0.435	+-.540E-01	0.394	+-.524E-01	@ 1.13	+-.230	83
		# 1.0000	30.80	7.413	#0.544	+-.700E-01	0.295	+-.587E-01	@ 1.15	+-.170	83
		# 1.3000	35.25	8.546	#0.604	+-.830E-01	0.247	+-.645E-01		---------	83
16.00	5.56	$ 0.0000	0.00	.0	0.988	+-.152	0.604E-02	+-.769E-01	@0.960	+-.190	83
		# 0.0050	1.50	.2531	# 1.03	+-.160	-.138E-01	+-.778E-01		---------	83
		# 0.0100	2.12	.3580	#0.959	+-.112	0.209E-01	+-.584E-01		---------	83
		# 0.0160	2.68	.4529	# 1.12	+-.120	-.575E-01	+-.533E-01		---------	83
		# 0.0240	3.29	.5548	#0.779	+-.110	0.124	+-.695E-01	@0.880	+-.800E-01	83
		# 0.0400	4.24	.7164	#0.712	+-.550E-01	0.168	+-.375E-01		---------	83
		# 0.0800	6.00	1.014	#0.480	+-.390E-01	0.351	+-.356E-01	@0.950	+-.900E-01	83
		# 0.1200	7.35	1.243	#0.432	+-.400E-01	0.397	+-.390E-01	@0.970	+-.100E 00	83
		# 0.1600	8.49	1.436	#0.336	+-.300E-01	0.497	+-.336E-01	@0.880	+-.130	83
		# 0.3000	11.64	1.971	#0.331	+-.280E-01	0.503	+-.316E-01	@0.970	+-.100E 00	83
		# 0.4500	14.26	2.420	#0.421	+-.370E-01	0.407	+-.366E-01	@ 1.18	+-.170	83
		# 0.6000	16.49	2.801	#0.471	+-.390E-01	0.360	+-.360E-01	@ 1.09	+-.160	83
		# 0.8000	19.06	3.246	#0.524	+-.520E-01	0.312	+-.448E-01	@ 1.07	+-.160	83
		# 1.0000	21.33	3.641	#0.636	+-.740E-01	0.222	+-.553E-01	@ 1.09	+-.190	83
		# 1.3000	24.37	4.174	#0.569	+-.920E-01	0.275	+-.747E-01		---------	83

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

R = RATIO (-)/(+) (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	R		REF
$ 0.0000	16.00	5.56	30.95	#0.988	+-.152	83
# 0.0000	8.00	3.99	15.92	# 1.17	+-.160	83
# 0.0030+- 0.0010	3.40	2.70	7.27	# 1.02	+-.870E-01	66
# 0.0050	16.00	5.56	30.95	# 1.03	+-.160	83
# 0.0060+- 0.0020	5.00	3.21	10.28	#0.983	+-.980E-01	66
# 0.0100	16.00	5.56	30.95	#0.959	+-.112	83
# 0.0106	8.00	3.99	15.92	# 1.05	+-.800E-01	83
# 0.0120	3.40	2.70	7.27	#0.861	+-.670E-01	66
# 0.0140	5.00	3.21	10.28	#0.959	+-.750E-01	66
# 0.0160	16.00	5.56	30.95	# 1.12	+-.120	83
# 0.0200	8.00	3.99	15.92	#0.930	+-.600E-01	83
# 0.0240	16.00	5.56	30.95	#0.779	+-.110	83
# 0.0400	8.00	3.99	15.92	#0.808	+-.580E-01	83
# 0.0400	16.00	5.56	30.95	#0.712	+-.550E-01	83
# 0.0480	3.40	2.70	7.27	#0.771	+-.590E-01	66
# 0.0570	5.00	3.21	10.28	#0.754	+-.610E-01	66
# 0.0800	8.00	3.99	15.92	#0.569	+-.420E-01	83
# 0.0800	16.00	5.56	30.95	#0.480	+-.390E-01	83
# 0.0960	3.40	2.70	7.27	#0.650	+-.490E-01	66
# 0.0970	2.60	2.40	5.77	#0.647	+-.720E-01	66
# 0.0980	6.00	3.49	12.16	#0.602	+-.500E-01	66
# 0.1000	5.00	3.21	10.28	#0.589	+-.450E-01	66
# 0.1200	8.00	3.99	15.92	#0.475	+-.360E-01	83
# 0.1200	16.00	5.56	30.95	#0.432	+-.400E-01	83
# 0.1600	8.00	3.99	15.92	#0.435	+-.490E-01	83
# 0.1600	16.00	5.56	30.95	#0.336	+-.300E-01	83
# 0.1900	3.40	2.70	7.27	#0.553	+-.440E-01	66
# 0.2000	5.00	3.21	10.28	#0.488	+-.390E-01	66
# 0.2900	3.40	2.70	7.27	#0.482	+-.410E-01	66
# 0.3000	5.00	3.21	10.28	#0.350	+-.290E-01	66
# 0.3000	6.00	3.49	12.16	#0.282	+-.360E-01	66

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C122: GAMMA + NEUTRON --> PROTON + PI- (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

R = RATIO (-)/(+) (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2		R	REF
#	0.3000	8.00	3.99	15.92	#0.299	+-.240E-01	83
#	0.3000	16.00	5.56	30.95	#0.331	+-.280E-01	83
	0.3759	3.41	2.70	7.29	0.360	+-.300E-01	44
#	0.3900	3.40	2.70	7.27	#0.304	+-.240E-01	66
#	0.3900	5.00	3.21	10.28	#0.268	+-.230E-01	66
#	0.4500	8.00	3.99	15.92	#0.303	+-.280E-01	83
#	0.4500	16.00	5.56	30.95	#0.421	+-.370E-01	83
	0.5075	3.41	2.70	7.29	0.370	+-.400E-01	44
#	0.6000	5.00	3.21	10.28	#0.331	+-.330E-01	66
#	0.6000	8.00	3.99	15.92	#0.380	+-.430E-01	83
#	0.6000	16.00	5.56	30.95	#0.471	+-.390E-01	83
	0.6565	3.41	2.70	7.29	0.380	+-.400E-01	44
	0.7244	3.05	2.57	6.61	0.450	+-.500E-01	44
	0.7271	3.06	2.58	6.63	0.410	+-.600E-01	44
	0.7541	3.16	2.61	6.82	0.430	+-.400E-01	44
	0.7568	3.17	2.62	6.84	0.470	+-.600E-01	44
	0.7812	3.26	2.65	7.01	0.430	+-.400E-01	44
	0.7839	3.27	2.65	7.03	0.350	+-.600E-01	44
#	0.8000	8.00	3.99	15.92	#0.435	+-.540E-01	83
#	0.8000	16.00	5.56	30.95	#0.524	+-.520E+01	83
	0.8083	3.36	2.68	7.20	0.420	+-.500E-01	44
	0.8110	3.37	2.69	7.22	0.440	+-.400E-01	44
	0.8137	3.38	2.69	7.23	0.440	+-.500E-01	44
	0.8219	3.41	2.70	7.29	0.420	+-.300E-01	44
	0.8409	3.48	2.72	7.42	0.560	+-.600E-01	44
	0.8707	3.59	2.76	7.63	0.710	+-.100E 00	44
#	1.0000	8.00	3.99	15.92	#0.544	+-.700E-01	83
#	1.0000	16.00	5.56	30.95	#0.636	+-.740E-01	83
	1.0024	3.41	2.70	7.29	0.410	+-.700E-01	44
#	1.3000	8.00	3.99	15.92	#0.604	+-.830E-01	83
#	1.3000	16.00	5.56	30.95	#0.569	+-.920E-01	83
	1.4030	3.41	2.70	7.29	0.580	+-.700E-01	44
	1.8463	3.41	2.70	7.29	0.590	+-.800E-01	44
	2.3188	3.41	2.70	7.29	0.860	+-.200	44

1.20 GEV < K < GEV 2.00

	-T GEV**2	K GEV	E* GEV	S GEV**2		R	REF
$	0.0000	1.70	2.02	4.08	# 1.09	+-.120	157
$	0.0000	1.55	1.95	3.80	# 1.01	+-.110	157
$	0.0000	1.40	1.87	3.51	#0.960	+-.100E 00	157
$	0.0000	1.30	1.82	3.33	# 1.00	+-.110	157
$	0.0000	1.20	1.77	3.14	#0.780	+-.900E-01	157
P$	0.2340	1.20	1.77	3.14	P@0.700	+-.600E-01	182
P$	0.2441	1.24	1.79	3.21	P@0.830	+-.100F 00	182
P$	0.2543	1.28	1.81	3.29	P@0.880	+-.120	182

C131: GAMMA + DEUTERON --> NEUTRON + NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

R = RATIO (PI+,D)/(PI+,P) (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2		R	REF
$	0.0000	16.00	5.56	30.95	#0.960	+-.190	83
#	0.0000	8.00	3.99	15.92	#0.810	+-.140	83
#	0.0030+- 0.0010	3.40	2.70	7.27	#0.618	+-.560E-01	66
#	0.0106	8.00	3.99	15.92	#0.820	+-.800E-01	83
#	0.0120	3.40	2.70	7.27	#0.799	+-.670E-01	66
#	0.0140	5.00	3.21	10.28	#0.731	+-.560E-01	66

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C131: GAMMA + DEUTERON --> NEUTRON + NEUTRON + PI+ (K > 1.20 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.1396 GEV

R = RATIO (PI+,D)/(PI+,P) (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	R		REF
#	0.0200	8.00	3.99	15.92	#0.850	+-.700E-01	83
#	0.0240	16.00	5.56	30.95	#0.880	+-.800E-01	83
#	0.0400	8.00	3.99	15.92	#0.800	+-.700E-01	83
#	0.0480	3.40	2.70	7.27	#0.880	+-.680E-01	66
#	0.0570	5.00	3.21	10.28	#0.823	+-.720E-01	66
#	0.0800	8.00	3.99	15.92	#0.950	+-.100E 00	83
#	0.0800	16.00	5.56	30.95	#0.950	+-.900E-01	83
#	0.0960	3.40	2.70	7.27	#0.897	+-.690E-01	66
#	0.0980	6.00	3.49	12.16	#0.950	+-.830E-01	66
#	0.1000	5.00	3.21	10.28	#0.890	+-.690E-01	66
#	0.1200	8.00	3.99	15.92	#0.950	+-.100E 00	83
#	0.1200	16.00	5.56	30.95	#0.970	+-.100E 00	83
#	0.1600	8.00	3.99	15.92	#0.910	+-.800E-01	83
#	0.1600	16.00	5.56	30.95	#0.880	+-.130	83
#	0.1900	3.40	2.70	7.27	#0.859	+-.670E-01	66
#	0.2000	5.00	3.21	10.28	#0.893	+-.770E-01	66
#	0.3000	5.00	3.21	10.28	#0.977	+-.810E-01	66
#	0.3000	8.00	3.99	15.92	#0.950	+-.700E-01	83
#	0.3000	16.00	5.56	30.95	#0.970	+-.100E 00	83
	0.3759	3.41	2.70	7.29	1.04	+-.900E-01	44
#	0.3900	3.40	2.70	7.27	# 1.00	+-.760E-01	66
#	0.4500	8.00	3.99	15.92	#0.950	+-.900E-01	83
#	0.4500	16.00	5.56	30.95	# 1.18	+-.170	83
#	0.6000	5.00	3.21	10.28	#0.899	+-.920E-01	66
#	0.6000	8.00	3.99	15.92	# 1.08	+-.160	83
#	0.6000	16.00	5.56	30.95	# 1.09	+-.160	83
	0.6565	3.41	2.70	7.29	0.950	+-.600E-01	44
	0.7217	3.04	2.57	6.60	1.13	+-.600E-01	44
	0.7514	3.15	2.61	6.80	0.950	+-.600E-01	44
	0.7812	3.26	2.65	7.01	1.15	+-.900E-01	44
#	0.8000	8.00	3.99	15.92	# 1.13	+-.230	83
#	0.8000	16.00	5.56	30.95	# 1.07	+-.160	83
	0.8110	3.37	2.69	7.22	0.970	+-.900E-01	44
	0.8219	3.41	2.70	7.29	0.930	+-.900E-01	44
#	1.0000	8.00	3.99	15.92	# 1.15	+-.170	83
#	1.0000	16.00	5.56	30.95	# 1.09	+-.190	83
	1.0024	3.41	2.70	7.29	1.12	+-.100E 00	44
	1.4030	3.41	2.70	7.29	0.980	+-.140	44

= NUMERICAL VALUE FROM TABLE & = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C123: GAMMA + NEUTRON --> DELTA- + PI+ (K >16.00 GEV)

M2: 0.9395 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

TOTAL CROSS SECTION : NO DATA TO BE LISTED

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
16.00	5.56	# 0.0010	0.51	.8654E-01				
		+- 0.0006	+- 0.27	+-.4540E-01	# .540 +-.180	488. +-163.	1.23 +-.409	126
		# 0.0028	1.04	.1762				
		+- 0.0022	+- 0.48	+-.8175E-01	# .710 +-.900E-01	642. +-81.4	1.61 +-.205	126
		# 0.0140	2.50	#.3000				
		+- 0.0060	+- 0.55	+-.9326E-01	# .980 +-.100E 00	886. +-90.4	2.23 +-.227	126
		# 0.0380	4.16	#.7000	# .680 +-.600E-01	615. +-54.2	1.55 +-.136	126
		# 0.0770	5.94	#1.000	# .500 +-.400E-01	452. +-36.2	1.14 +-.909E-01	126
		# 0.1490	8.27	#1.400	# .269 +-.240E-01	243. +-21.7	.611 +-.545E-01	126
		# 0.4000	13.59	#2.300	# .112 +-.120E-01	101. +-10.8	.255 +-.273E-01	126
		# 0.8000	19.26	#3.280	# .500E-01+-.500E-02	45.2 +-4.52	.114 +-.114E-01	126
		# 1.0000	21.56	#3.680	# .210E-01+-.300E-02	19.0 +-2.71	.477E-01+-.682E-02	126
		# 1.2900	24.54	#4.200	# .870E-02+-.140E-02	7.86 +-1.27	.198E-01+-.318E-02	126
		# 1.5800	27.20	#4.680	# .280E-02+-.900E-03	2.53 +-.814	.636E-02+-.205E-02	126
		# 2.0000	30.69	#5.300	# .900E-03+-.500E-03	0.814 +-.452	.205E-02+-.114E-02	126

C123: GAMMA + NEUTRON --> DELTA- + PI+ (K >16.00 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
# 0.0010+- 0.0006	16.00	5.56	30.95	# .540 +-.180	488. +-163.	126
# 0.0028+- 0.0022	16.00	5.56	30.95	# .710 +-.900E-01	642. +-81.4	126
# 0.0140+- 0.0060	16.00	5.56	30.95	# .980 +-.100E 00	886. +-90.4	126
# 0.0380	16.00	5.56	30.95	# .680 +-.600E-01	615. +-54.2	126
# 0.0770	16.00	5.56	30.95	# .500 +-.400E-01	452. +-36.2	126
# 0.1490	16.00	5.56	30.95	# .269 +-.240E-01	243. +-21.7	126
# 0.4000	16.00	5.56	30.95	# .112 +-.120E-01	101. +-10.8	126
# 0.8000	16.00	5.56	30.95	# .500E-01+-.500E-02	45.2 +-4.52	126
# 1.0000	16.00	5.56	30.95	# .210E-01+-.300E-02	19.0 +-2.71	126
# 1.2900	16.00	5.56	30.95	# .870E-02+-.140E-02	7.86 +-1.27	126
# 1.5800	16.00	5.56	30.95	# .280E-02+-.900E-03	2.53 +-.814	126
# 2.0000	16.00	5.56	30.95	# .900E-03+-.500E-03	.814 +-.452	126

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C125: GAMMA + NEUTRON --> DELTA+ + PI- (K >16.00 GEV)

M2: 0.9395 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

TOTAL CROSS SECTION : NO DATA TO BE LISTED

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2		THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
16.00	5.56	# 0.0010		0.51	.8654E-01							
		+- 0.0006	+-	0.27	+-.4540E-01	# <.250		<226.		<.568		126
		# 0.0028		1.04	.1762							
		+- 0.0022	+-	0.48	+-.8175E-01	# .260	+-.900E-01	235.	+-81.4	.591	+-.205	126
		# 0.0140		2.50	#.3000							
		+- 0.0060	+-	0.55	+-.9326E-01	# .170	+-.110	154.	+-99.4	.386	+-.250	126
		# 0.0380		4.16	#.7000	# .160	+-.600E-01	145.	+-54.2	.364	+-.136	126
		# 0.0770		5.54	#1.000	# .900E-01	+-.400E-01	81.4	+-36.2	.205	+-.909E-01	126
		# 0.1490		8.27	#1.400	# .510E-01	+-.150E-01	46.1	+-13.6	.116	+-.341E-01	126
		# 0.4000		13.59	#2.300	# .200E-01	+-.600E-02	18.1	+-5.42	.455E-01	+-.136E-01	126
		# 0.8000		19.26	#3.280	# .120E-01	+-.300E-02	10.8	+-2.71	.273E-01	+-.682E-02	126
		# 1.0000		21.56	#3.680	# .410E-02	+-.190E-02	3.71	+-1.72	.932E-02	+-.432E-02	126
		# 1.2900		24.54	#4.200	# .360E-02	+-.900E-03	3.25	+-.814	.818E-02	+-.205E-02	126
		# 1.5800		27.20	#4.680	# .170E-02	+-.600E-03	1.54	+-.542	.386E-02	+-.136E-02	126
		# 2.0000		30.69	#5.300	# .500E-03	+-.300E-03	0.452	+-.271	.114E-02	+-.682E-03	126

C125: GAMMA + NEUTRON --> DELTA+ + PI- (K >16.00 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 1.2360 GEV
M4: 0.1396 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
# 0.0010+- 0.0006	16.00	5.56	30.95	# <.250		<226.		126
# 0.0028+- 0.0022	16.00	5.56	30.95	# .260	+-.900E-01	235.	+-81.4	126
# 0.0140+- 0.0060	16.00	5.56	30.95	# .170	+-.110	154.	+-99.4	126
# 0.0380	16.00	5.56	30.95	# .160	+-.600E-01	145.	+-54.2	126
# 0.0770	16.00	5.56	30.95	# .900E-01	+-.400E-01	81.4	+-36.2	126
# 0.1490	16.00	5.56	30.95	# .510E-01	+-.150E-01	46.1	+-13.6	126
# 0.4000	16.00	5.56	30.95	# .200E-01	+-.600E-02	18.1	+-5.42	126
# 0.8000	16.00	5.56	30.95	# .120E-01	+-.300E-02	10.8	+-2.71	126
# 1.0000	16.00	5.56	30.95	# .410E-02	+-.190E-02	3.71	+-1.72	126
# 1.2900	16.00	5.56	30.95	# .360E-02	+-.900E-03	3.25	+-.814	126
# 1.5800	16.00	5.56	30.95	# .170E-02	+-.600E-03	1.54	+-.542	126
# 2.0000	16.00	5.56	30.95	# .500E-03	+-.300E-03	.452	+-.271	126

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C211: GAMMA + PROTON --> SIGMA+ + K ZERO (K > 1.06 GEV)

M2: 0.9383 GEV
M3: 1.1894 GEV
M4: 0.4978 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
1.06 - 1.30	1.75	# .690	+-.310	3.28	+-1.47	100
1.30 - 2.00	1.96	# .700E-01	+-.700E-01	.586	+-.586	100

C212: GAMMA + PROTON --> SIGMA ZERO + K+ (K > 1.04 GEV)

M2: 0.9383 GEV
M3: 1.1925 GEV
M4: 0.4938 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
1.05 - 1.20	1.73	# .620	+-.190	2.72	+-.833	100
1.20 - 1.30	1.80	# .880	+-.330	4.82	+-1.81	100
1.30 - 1.40	1.85	# 1.93	+-.500	12.3	+-3.20	100
1.40 - 1.50	1.90	# 2.06	+-.550	15.2	+-4.06	100
1.50 - 1.70	1.97	# 1.32	+-.330	11.8	+-2.94	100
1.70 - 2.00	2.08	# .900	+-.240	10.6	+-2.84	100
2.00 - 3.00	2.32	# .290	+-.80CE-01	5.66	+-1.56	100
3.00 - 5.80	2.88	# .10CE 00	+-.400E-01	5.00	+-2.00	100

C212: GAMMA + PROTON --> SIGMA ZERO + K+ (K > 1.04 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1925 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.08	1.70	0.3587	# 90.00	19.64	1.89	+-.231	7.77	+-.947	# .410E-01 +-.500E-02	22
1.11	1.72	0.2232	# 33.00	9.917	2.89	+-.329	12.6	+-1.43	# .880E-01 +-.100E-01	22
		0.2879	# 60.00	17.71	2.27	+-.263	9.84	+-1.14	# .690E-01 +-.800E-02	22
		0.3340	# 75.00	21.72	1.84	+-.296	7.99	+-1.28	# .560E-01 +-.900E-02	224
		0.3835	# 90.00	25.28	1.41	+-.263	6.13	+-1.14	# .430E-01 +-.800E-02	22
		0.4124	# 98.70	27.03	1.51	+-.164	6.56	+-.713	# .460E-01 +-.500E-02	224
		0.4790	#120.00	29.64	2.07	+-.230	8.99	+-.999	# .630E-01 +-.700E-02	22
1.12	1.73	0.5177	#127.50	32.05	1.03	+-.213	4.56	+-.939	# .340E-01 +-.700E-02	224
1.14	1.74	0.2443	# 46.00	15.23	3.17	+-.293	14.5	+-1.34	# .119 +-.110E-01	27
1.15	1.74	0.3562	# 76.00	25.52	2.81	+-.427	13.1	+-1.99	# .112 +-.170E-01	27
1.16	1.75	0.1968	# 30.00	10.40	1.98	+-.477	9.38	+-2.26	# .830E-01 +-.200E-01	27
		0.2539	# 49.50	17.15	2.79	+-.429	13.2	+-2.03	# .117 +-.180E-01	27
		0.3568	# 75.00	25.84	2.24	+-.358	10.6	+-1.69	# .940E-01 +-.150E-01	224
		0.4250	# 90.00	30.70	2.15	+-.191	10.2	+-.904	# .900E-01 +-.800E-02	22
		0.4544	# 96.40	32.66	1.69	+-.262	8.02	+-1.24	# .710E-01 +-.110E-01	224
		0.4888	#104.00	34.84	1.22	+-.238	5.76	+-1.13	# .510E-01 +-.100E-01	27
		0.6097	#134.50	40.23	.906	+-.358	4.29	+-1.69	# .380E-01 +-.150E-01	27
1.17	1.75	0.2473	# 47.70	16.85	3.41	+-.386	16.4	+-1.86	# .150 +-.170E-01	27
1.18	1.76	0.2717	# 54.00	19.40	3.35	+-.782	16.4	+-3.83	# .154 +-.360E-01	202
		0.4115	# 84.00	30.10	2.67	+-.608	13.1	+-2.98	# .123 +-.280E-01	202
1.20	1.77	0.4869	# 95.20	35.27	1.90	+-.300	9.64	+-1.52	# .950E-01 +-.150E-01	224
1.22	1.78	0.6322	#117.70	44.65	1.34	+-.205	7.02	+-1.07	# .720E-01 +-.110E-01	224
		0.6699	#125.20	47.03	.987	+-.168	5.17	+-.878	# .530E-01 +-.900E-02	224
1.23	1.79	0.7484	#139.30	51.71	.504	+-.378	2.68	+-2.01	# .280E-01 +-.210E-01	224
1.24	1.79	0.5236	# 95.00	37.31	2.54	+-.174	13.8	+-.943	# .146 +-.100E-01	224
1.31	1.83	0.6967	#109.40	46.48	2.07	+-.230	12.5	+-1.39	# .144 +-.160E-01	224
1.33	1.84	0.8261	#124.20	54.53	1.23	+-.219	7.69	+-1.37	# .900E-01 +-.160E-01	224
1.34	1.84	0.9286	#138.60	62.36	.818	+-.147	5.17	+-.932	# .610E-01 +-.110E-01	224
1.05 - 1.80	1.83	# 0.1000-0.2000	------	-----	# .770	+-.450	4.44	+-2.60	--------	100
		# 0.2000-0.3000	------	-----	# 2.42	+-.670	14.0	+-3.87	--------	100
		# 0.3000-0.4000	------	-----	# 2.04	+-.620	11.8	+-3.58	--------	100
		# 0.4000-0.5000	------	-----	# 2.27	+-.650	13.1	+-3.75	--------	100

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C212: GAMMA + PROTON --> SIGMA ZERO + K+ (K > 1.05 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1925 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.05 - 1.80	1.83	# 0.5000-0.6000	-------	-----	# 1.83 +-.580	10.6 +-3.35	--------	100
		# 0.6000-0.8000	-------	-----	# 1.00 +-.330	5.77 +-1.90	--------	100
		# 0.8000-1.0000	-------	-----	# 1.33 +-.440	7.68 +-2.54	--------	100
		# 1.0000-1.9300	-------	-----	# .240 +-.140	1.39 +-.808	--------	100
			# 0.0 - 39.60	-----	--------	--------	# .112 +-.370E-01	100
			# 39.60-60.00	-----	--------	--------	# .157 +-.440E-01	100
			# 60.00-75.50	-----	--------	--------	# .189 +-.470E-01	100
			# 75.50-90.00	-----	--------	--------	# .145 +-.400E-01	100
			# 90.00-104.50	-----	--------	--------	# .108 +-.380E-01	100
			#104.50-120.00	-----	--------	--------	# .620E-01+-.280E-01	100
			#120.00-140.40	-----	--------	--------	# .400E-01+-.200E-01	100
			#140.40-180.00	-----	--------	--------	# .250E-01+-.170E-01	100
1.35	1.85	0.5856	# 90.00	38.32	1.99 +-.184	12.8 +-1.18	# .152 +-.140E-01	111
1.36	1.85	0.5941	# 90.00	38.50	2.02 +-.193	13.1 +-1.25	# .157 +-.150E-01	111
1.37	1.86	0.8821	#124.00	56.21	1.07 +-.189	7.06 +-1.25	# .850E-01+-.150F-01	224
1.41	1.88	0.1170	# 15.70	6.359	2.91 +-.465	20.4 +-3.26	# .250 +-.400E-01	127
		0.1327	# 21.00	8.521	2.56 +-.465	17.9 +-3.26	# .220 +-.400E-01	127
1.42	1.88	0.2361	# 41.90	17.24	2.63 +-.571	18.6 +-4.05	# .230 +-.500E-01	127
1.45	1.90	# 0.1031	# 11.70	4.755	2.91 +-.368	21.6 +-2.73	# .269 +-.340E-01	127
		# 0.1210	# 18.50	7.534	2.47 +-.271	18.3 +-2.00	# .228 +-.250E-01	127
		# 0.1427	# 24.30	9.922	2.47 +-.271	18.3 +-2.00	# .228 +-.250E-01	127
		# 0.1964	# 35.00	14.38	2.52 +-.314	18.7 +-2.33	# .233 +-.290E-01	127
		# 0.2627	# 45.10	18.69	3.02 +-.325	22.4 +-2.41	# .279 +-.300E-01	127
		# 0.3395	# 55.00	23.02	2.98 +-.325	22.1 +-2.41	# .275 +-.300E-01	127
		# 0.4244	# 64.70	27.41	3.34 +-.325	24.7 +-2.41	# .308 +-.300E-01	127
		# 0.5149	# 74.20	31.86	2.85 +-.357	21.1 +-2.65	# .263 +-.330E-01	127
		# 0.6083	# 83.50	36.39	2.50 +-.314	18.5 +-2.33	# .231 +-.290E-01	127
1.47	1.91	0.6888	# 90.00	39.85	1.98 +-.115	15.1 +-.877	# .189 +-.110E-01	111
		0.9959	#120.80	57.29	1.05 +-.733E-01	7.97 +-.558	# .100E 00+-.700E-02	224
1.48	1.91	1.0348	#123.60	59.28	.917 +-.721E-01	7.07 +-.556	# .890E-01+-.700E-02	224
		1.0893	#130.00	63.50	.526 +-.618E-01	4.05 +-.477	# .510E-01+-.600E-02	224
1.49	1.92	0.7061	# 90.00	40.00	1.82 +-.122	14.2 +-.951	# .179 +-.120E-01	111
		1.1672	#138.10	69.56	.456 +-.710E-01	3.57 +-.555	# .450E-01+-.700E-02	224
1.50	1.92	1.1817	#137.90	69.74	.689 +-.998E-01	5.46 +-.791	# .690E-01+-.100E-01	224
1.51	1.93	0.7234	# 90.00	40.14	1.61 +-.118	12.9 +-.947	# .164 +-.120E-01	111
1.52	1.93	0.7321	# 90.00	40.20	1.52 +-.116	12.4 +-.945	# .157 +-.120E-01	111
1.56	1.95	0.1721	P# 30.12	12.40	P 2.42 +-.155	20.8 +-1.33	P# .265 +-.170E-01	127
1.58	1.96	1.1724	#123.30	60.81	.827 +-.107	7.27 +-.938	# .930E-01+-.120E-01	224
1.59	1.97	0.7930	# 90.00	40.51	1.30 +-.789E-01	11.6 +-.703	# .148 +-.900E-02	111
1.60	1.97	1.3405	#137.90	72.33	.242 +-.692E-01	2.18 +-.624	# .280E-01+-.800E-02	224
1.62	1.98	0.8193	# 90.00	40.59	1.15 +-.843E-01	10.6 +-.779	# .136 +-.100E-01	111
1.65	1.99	0.8455	# 90.00	40.65	.958 +-.893E-01	9.18 +-.856	# .118 +-.110E-01	111
1.67	2.00	0.8631	# 90.00	40.67	.888 +-.103	8.72 +-1.01	# .112 +-.130F-01	111
1.76	2.05	1.5918	#137.70	74.50	.243 +-.501E-01	2.65 +-.546	# .340E-01+-.700E-02	224
1.84	2.08	1.7171	#137.60	75.07	.257 +-.527E-01	3.06 +-.629	# .390E-01+-.800E-02	224
1.85	2.09	1.7847	#142.40	80.05	.300 +-.653E-01	3.62 +-.787	# .460E-01+-.100E-01	224
3.46	2.72	0.4696	# 35.00	11.82				
		+- 0.0861	+- 3.50	+-1.240	.894 +-.434	37.7 +-18.3	# .350 +-.170	16
3.58	2.76	0.4888	# 35.00	11.67				
		+- 0.0901	+- 3.50	+-1.225	.880 +-.269	39.7 +-12.1	# .360 +-.110	16
3.70	2.80	0.5080	# 35.00	11.53				
		+- 0.0940	+- 3.50	+-1.210	.609 +-.211	29.4 +-10.2	# .260 +-.900E-01	16
3.78	2.82	0.8297	# 45.00	14.94				
		+- 0.1191	+- 3.50	+-1.261	.365 +-.912E-01	18.4 +-4.59	# .160 +-.400F-01	16
3.82	2.84	0.5273	# 35.00	11.38				
		+- 0.0979	+- 3.50	+-1.196	.517 +-.180	26.6 +-9.25	# .230 +-.800E-01	16
3.94	2.88	0.5467	# 35.00	11.25				
		+- 0.1018	+- 3.50	+-1.182	.779 +-.151	42.6 +-8.28	# .360 +-.700E-01	16
4.06	2.92	0.5662	# 35.00	11.12				
		+- 0.1057	+- 3.50	+-1.169	.729 +-.146	42.3 +-8.46	# .350 +-.700E-01	16
4.30	2.99	$ 5.7230	139.49	71.07	@ .129E-01+-.277E-02	0.843 +-.180	.668E-02+-.143E-02	106
		$ 5.8030	141.72	73.84	@ .168E-01+-.352E-02	1.10 +-.229	.869E-02+-.182E-02	106
		$ 5.9430	145.91	79.50	@ .262E-01+-.629E-02	1.70 +-.409	.135E-01+-.324E-02	106
		$ 6.0880	150.80	87.00	@ .268E-01+-.428E-02	1.74 +-.278	.138E-01+-.221E-02	106
		$ 6.2230	156.15	96.69	@ .401E-01+-.742E-02	2.61 +-.483	.207E-01+-.383E-02	106
5.00	3.20	# 0.0201	2.60	.7384	# .173 +-.330E-01	15.2 +-2.91	.107 +-.204E-01	92
		# 0.0261	4.11	1.168	# .176 +-.570E-01	15.5 +-5.02	.109 +-.353E-01	92
		# 0.0361	5.81	1.653	# .151 +-.350E-01	13.3 +-3.08	.935F-01+-.217E-01	92
		# 0.0551	8.12	2.310	# .241 +-.450E-01	21.2 +-3.96	.149 +-.279E-01	92
		# 0.0951	11.56	3.296	# .213 +-.460E-01	18.8 +-4.05	.132 +-.285E-01	92
		# 0.1731	16.33	4.667	# .150 +-.500E-01	13.2 +-4.40	.929E-01+-.310E-01	92
		# 0.1791	16.64	4.757	# .440 +-.100E 00	38.7 +-8.80	.273 +-.620E-01	92
		# 0.3211	22.83	6.562	# .350 +-.900E-01	30.8 +-7.92	.217 +-.558E-01	92
		# 0.4561	27.51	7.945	# .260 +-.800E-01	22.9 +-7.04	.161 +-.496E-01	92
		# 0.6061	31.96	9.285	# .140 +-.500E-01	12.3 +-4.40	.867E-01+-.310E-01	92
		# 0.7761	36.41	10.65	# .120 +-.500E-01	10.6 +-4.40	.743E-01+-.310E-01	92

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C212: GAMMA + PROTON --> SIGMA ZERO + K+ (K > 1.05 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1925 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
5.00	3.20	# 0.9761	41.12	12.12	# .400E-01+-.360E-01	3.52 +-3.17	.248E-01+-.223E-01	92
		# 1.1561	45.66	13.37	# .260E-01+-.250E-01	2.29 +-2.20	.161E-01+-.155E-01	92
8.00	3.99	# 0.0196	3.13	.7243	# .390E-01+-.140E-01	8.79 +-3.16	.416E-01+-.149E-01	92
		# 0.0296	4.43	1.025	# .810E-01+-.120E-01	18.3 +-2.70	.863E-01+-.128E-01	92
		# 0.0486	6.19	1.432	# .820E-01+-.800E-02	18.5 +-1.80	.874E-01+-.853E-02	92
		# 0.0896	8.87	2.054	# .940E-01+-.150E-01	21.2 +-3.38	.100 +-.160E-01	92
		# 0.1696	12.55	2.912	# .138 +-.220E-01	31.1 +-4.96	.147 +-.234E-01	92
		# 0.2596	15.71	3.652	# .126 +-.270E-01	28.4 +-6.08	.134 +-.288E-01	92
		# 0.3196	17.50	4.075	# .940E-01+-.900E-02	21.2 +-2.03	.100 +-.959E-02	92
		# 0.4496	20.89	4.878	# .900E-01+-.160E-01	20.3 +-3.61	.959E-01+-.171E-01	92
		# 0.6096	24.44	5.729	# .680E-01+-.170E-01	15.3 +-3.83	.725E-01+-.181E-01	92
		# 0.7796	27.75	6.531	# .460E-01+-.800E-02	10.4 +-1.80	.490E-01+-.853E-02	92
		# 0.9796	31.22	7.384	# .140E-01+-.800E-02	3.16 +-1.80	.149E-01+-.853E-02	92
		# 1.2896	36.02	8.582	# .800E-02+-.350E-02	1.80 +-.789	.853E-02+-.373E-02	92
		# 1.6596	41.10	9.885	# .130E-02+-.210E-02	0.293 +-.473	.139E-02+-.224E-02	92
		# 2.0096	45.47	11.04	# .600E-03+-.600E-03	0.135 +-.135	.639E-03+-.639E-03	92
11.00	4.64	# 0.0268	3.72	.7427	# .440E-01+-.800E-02	18.7 +-3.41	.666E-01+-.121E-01	92
		# 0.0468	5.26	1.051	# .440E-01+-.800E-02	18.7 +-3.41	.666E-01+-.121E-01	92
		# 0.0868	7.44	1.488	# .630E-01+-.600E-02	26.8 +-2.56	.953E-01+-.908E-02	92
		# 0.1718	10.69	2.141	# .810E-01+-.130E-01	34.5 +-5.54	.123 +-.197E-01	92
		# 0.3268	14.91	2.993	# .460E-01+-.120E-01	19.6 +-5.11	.696E-01+-.182E-01	92
		# 0.4668	17.90	3.602	# .530E-01+-.110E-01	22.6 +-4.69	.802E-01+-.166E-01	92
		# 0.7968	23.52	4.760	# .180E-01+-.400E-02	7.67 +-1.70	.272E-01+-.605E-02	92
		# 1.0068	26.52	5.385	# <.410E-02	<1.75	<.620E-02	92
		# 1.3068	30.32	6.189	# .310E-02+-.900E-03	1.32 +-.383	.469E-02+-.136E-02	92
		# 2.0068	37.85	7.824	# <.310E-02	<1.32	<.469E-02	92
16.00	5.56	# 0.0436	4.25	.7113	# .240E-01+-.300E-02	21.6 +-2.70	.542E-01+-.678E-02	92
		# 0.0826	6.61	1.007	# .360E-01+-.300E-02	32.5 +-2.70	.813E-01+-.678E-02	92
		# 0.1666	8.67	1.453	# .450E-01+-.700E-02	40.6 +-6.31	.102 +-.158E-01	92
		# 0.2646	10.98	1.844	# .460E-01+-.700E-02	41.5 +-6.31	.104 +-.158E-01	92
		# 0.3146	12.00	2.015	# .310E-01+-.500E-02	27.9 +-4.51	.700E-01+-.113E-01	92
		# 0.4446	14.30	2.406	# .280E-01+-.900E-02	25.2 +-8.11	.632E-01+-.203E-01	92
		# 0.6046	16.72	2.817	# .130E-01+-.400E-02	11.7 +-3.61	.294E-01+-.903E-02	92
		# 0.7946	19.21	3.243	# .560E-02+-.190E-02	5.05 +-1.71	.126E-01+-.429E-02	92
		# 1.0046	21.64	3.662	# .320E-02+-.130E-02	2.88 +-1.17	.723E-02+-.294E-02	92
		# 1.3046	24.72	4.198	# .160E-02+-.700E-03	1.44 +-.631	.361E-02+-.158E-02	92
		# 2.0046	30.79	5.273	# .180E-03+-.110E-03	0.162 +-.992E-01	.407E-03+-.248E-03	92

C212: GAMMA + PROTON --> SIGMA ZERO + K+ (K > 1.05 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1925 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
# 0.0196	8.00	3.99	15.89	# .390E-01+-.140E-01	8.79 +-3.16	92
# 0.0201	5.00	3.20	10.26	# .173 +-.330E-01	15.2 +-2.91	92
# 0.0261	5.00	3.20	10.26	# .176 +-.570E-01	15.5 +-5.02	92
# 0.0268	11.00	4.64	21.52	# .440E-01+-.800E-02	18.7 +-3.41	92
# 0.0296	8.00	3.99	15.89	# .810E-01+-.120E-01	18.3 +-2.70	92
# 0.0361	5.00	3.20	10.26	# .151 +-.350E-01	13.3 +-3.08	92
# 0.0436	16.00	5.56	30.90	# .240E-01+-.300E-02	21.6 +-2.70	92
# 0.0468	11.00	4.64	21.52	# .440E-01+-.800E-02	18.7 +-3.41	92
# 0.0486	8.00	3.99	15.89	# .820E-01+-.800E-02	18.5 +-1.80	92
# 0.0551	5.00	3.20	10.26	# .241 +-.450E-01	21.2 +-3.96	92
# 0.0826	16.00	5.56	30.90	# .360E-01+-.300E-02	32.5 +-2.70	92
# 0.0868	11.00	4.64	21.52	# .630E-01+-.600E-02	26.8 +-2.56	92
# 0.0896	8.00	3.99	15.89	# .940E-01+-.150E-01	21.2 +-3.38	92
# 0.0951	5.00	3.20	10.26	# .213 +-.460E-01	18.8 +-4.05	92
# 0.1666	16.00	5.56	30.90	# .450E-01+-.700E-02	40.6 +-6.31	92
# 0.1696	8.00	3.99	15.89	# .138 +-.220E-01	31.1 +-4.96	92
# 0.1718	11.00	4.64	21.52	# .810E-01+-.130E-01	34.5 +-5.54	92
# 0.1731	5.00	3.20	10.26	# .150 +-.500E-01	13.2 +-4.40	92
# 0.1791	5.00	3.20	10.26	# .440 +-.100E 00	38.7 +-8.80	92
# 0.2596	8.00	3.99	15.89	# .126 +-.270E-01	28.4 +-6.08	92
# 0.2646	16.00	5.56	30.90	# .460E-01+-.700E-02	41.5 +-6.31	92
# 0.3146	16.00	5.56	30.90	# .310E-01+-.500E-02	27.9 +-4.51	92
# 0.3196	8.00	3.99	15.89	# .940E-01+-.900E-02	21.2 +-2.03	92
# 0.3211	5.00	3.20	10.26	# .350 +-.900E-01	30.8 +-7.92	92
# 0.3268	11.00	4.64	21.52	# .460E-01+-.120E-01	19.6 +-5.11	92
# 0.4446	16.00	5.56	30.90	# .280E-01+-.900E-02	25.2 +-8.11	92
# 0.4496	8.00	3.99	15.89	# .900E-01+-.160E-01	20.3 +-3.61	92
# 0.4561	5.00	3.20	10.26	# .260 +-.800E-01	22.9 +-7.04	92

= NUMERICAL VALUE FROM TABLE & = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C212: GAMMA + PROTON --> SIGMA ZERO + K+ (K > 1.05 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1925 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
# 0.4668	11.00	4.64	21.52	# .530E-01+-.110E-01	22.6 +-4.69	92
0.4696+- 0.0861	3.46	2.72	7.37	.894 +-.434	37.7 +-18.3	16
0.4888+- 0.0901	3.58	2.76	7.60	.880 +-.269	39.7 +-12.1	16
0.5080+- 0.0940	3.70	2.80	7.82	.609 +-.211	29.4 +-10.2	16
0.5273+- 0.0979	3.82	2.84	8.05	.517 +-.180	26.6 +-9.25	16
0.5467+- 0.1018	3.94	2.88	8.27	.779 +-.151	42.6 +-8.28	16
0.5662+- 0.1057	4.06	2.92	8.50	.729 +-.146	42.3 +-8.46	16
# 0.6046	16.00	5.56	30.90	# .130E-01+-.400E-02	11.7 +-3.61	92
# 0.6061	5.00	3.20	10.26	# .140 +-.500E-01	12.3 +-4.40	92
# 0.6096	8.00	3.99	15.89	# .680E-01+-.170E-01	15.3 +-3.83	92
# 0.7761	5.00	3.20	10.26	# .120 +-.500E-01	10.6 +-4.40	92
# 0.7796	8.00	3.99	15.89	# .460E-01+-.800E-02	10.4 +-1.80	92
# 0.7946	16.00	5.56	30.90	# .560E-02+-.190E-02	5.05 +-1.71	92
# 0.7968	11.00	4.64	21.52	# .180E-01+-.400E-02	7.67 +-1.70	92
0.8297+- 0.1191	3.78	2.82	7.97	.365 +-.912E-01	18.4 +-4.59	16
# 0.9761	5.00	3.20	10.26	# .400E-01+-.360E-01	3.52 +-3.17	92
# 0.9796	8.00	3.99	15.89	# .140E-01+-.800E-02	3.16 +-1.80	92
# 1.0046	16.00	5.56	30.90	# .320E-02+-.130E-02	2.88 +-1.17	92
# 1.0068	11.00	4.64	21.52	# <.410E-02	<1.75	92
# 1.1561	5.00	3.20	10.26	# .260E-01+-.250E-01	2.29 +-2.20	92
# 1.2896	8.00	3.99	15.89	# .800E-02+-.350E-02	1.80 +-.789	92
# 1.3046	16.00	5.56	30.90	# .160E-02+-.700E-03	1.44 +-.631	92
# 1.3068	11.00	4.64	21.52	# .310E-02+-.900E-03	1.32 +-.383	92
# 1.6596	8.00	3.99	15.89	# .130E-02+-.210E-02	.293 +-.473	92
# 2.0046	16.00	5.56	30.90	# .180E-03+-.110E-03	.162 +-.992E-01	92
# 2.0068	11.00	4.64	21.52	# <.310E-02	<1.32	92
# 2.0096	8.00	3.99	15.89	# .600E-03+-.600E-03	.135 +-.135	92

1.56 GEV < K < GEV 2.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
0.1721	1.56	1.95	3.81	2.42 +-.155	20.8 +-1.33	127

C212: GAMMA + PROTON --> SIGMA ZERO + K+ (K > 1.05 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1925 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.52 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
1.52	1.93	3.73	0.454	1.52 +-.116	# 90.0	23.7	#.157 +-.120E-01	111
1.58	1.96	3.85	0.126	.827 +-.107	# 56.7	16.0	#.930E-01+-.120E-01	224
1.59	1.97	3.86	0.525	1.30 +-.789E-01	# 90.0	24.5	#.148 +-.900E-02	111
1.60	1.97	3.88	-0.004	.242 +-.692E-01	# 42.1	12.0	#.280E-01+-.800E-02	224
1.62	1.98	3.92	0.555	1.15 +-.843E-01	# 90.0	24.7	#.136 +-.100E-01	111
1.65	1.99	3.98	0.585	.958 +-.893E-01	# 90.0	25.0	#.118 +-.110E-01	111
1.67	2.00	4.01	0.605	.888 +-.103	# 90.0	25.1	#.112 +-.130E-01	111
1.76	2.05	4.18	0.045	.243 +-.501E-01	# 42.3	12.4	#.340E-01+-.700E-02	224
1.84	2.08	4.33	0.070	.257 +-.527E-01	# 42.4	12.6	#.390E-01+-.800E-02	224
1.85	2.09	4.35	0.021	.300 +-.653E-01	# 37.6	11.2	#.460E-01+-.100E-01	224
4.30	2.99	8.95	a 0.180	a.401E-01+-.742E-02	23.8	6.4	.207E-01+-.383E-02	106
			a 0.315	a.268E-01+-.428E-02	29.2	7.8	.138E-01+-.221E-02	106
			a 0.460	a.262E-01+-.629E-02	34.1	9.2	.135E-01+-.324E-02	106
			a 0.600	a.168E-01+-.352E-02	38.3	10.3	.869E-02+-.182E-02	106
			a 0.680	a.129E-01+-.277E-02	40.5	11.0	.668E-02+-.143E-02	106

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
0.91 - 1.00	1.63	# 1.40	+-.370	4.48	+-1.18	100
1.00 - 1.10	1.69	# 1.36	+-.360	5.24	+-1.39	100
1.10 - 1.20	1.74	# 1.85	+-.450	8.57	+-2.08	100
1.20 - 1.30	1.80	# 2.16	+-.510	11.8	+-2.79	100
1.30 - 1.40	1.85	# 2.11	+-.530	13.5	+-3.39	100
1.40 - 1.50	1.90	# 1.40	+-.440	10.3	+-3.25	100
1.50 - 1.60	1.95	# 1.42	+-.470	12.0	+-3.96	100
1.60 - 1.70	1.99	# 2.04	+-.590	19.5	+-5.64	100
1.70 - 1.80	2.04	# 1.27	+-.480	13.7	+-5.16	100
1.80 - 1.90	2.09	# 1.20	+-.490	14.4	+-5.89	100
1.90 - 2.00	2.13	# 1.51	+-.570	20.2	+-7.62	100
2.00 - 2.40	2.23	# .500	+-.190	8.31	+-3.16	100
2.40 - 2.80	2.39	# .460	+-.190	10.8	+-4.44	100
2.80 - 3.20	2.55	# .600	+-.250	18.8	+-7.82	100
3.20 - 3.60	2.69	# .780	+-.290	31.4	+-11.7	100
3.60 - 5.80	3.04	# .120	+-.600E-01	7.91	+-3.95	100

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
0.93	1.62	0.2962	# 90.00	16.79	3.70	+-.269	11.3	+-.819	# .550E-01	+-.400E-02	27
0.97	1.64	0.1832	# 31.10	9.835	4.94	+-.295	16.4	+-.978	# .134	+-.800E-02	27
		0.2544	# 64.00	19.82	4.91	+-.295	16.3	+-.978	# .133	+-.800E-02	27
		0.4142	#120.00	31.66	2.43	+-.111	8.07	+-.367	# .660E-01	+-.300E-02	224
0.98	1.65	0.2660	# 67.40	21.80	3.32	+-.135	11.2	+-.458	# .980E-01	+-.400E-02	224
		0.3373	# 90.00	28.26	2.40	+-.135	8.13	+-.458	# .710E-01	+-.400E-02	224
0.99	1.65	0.2351	# 56.50	19.12	3.52	+-.377	12.1	+-1.30	# .112	+-.120E-01	202
1.00	1.66	0.1686	# 30.00	10.52	5.99	+-.206	21.1	+-.724	# .204	+-.700E-02	27
		0.2478	# 60.30	21.02	4.96	+-.264	17.5	+-.931	# .169	+-.900E-02	27
		0.3486	# 88.60	30.29	4.52	+-.264	15.9	+-.931	# .154	+-.900E-02	27
		0.4986	#132.60	39.51	3.55	+-.294	12.5	+-1.03	# .121	+-.100E-01	27
1.01	1.67	0.2286	# 54.00	19.35	3.90	+-.359	14.0	+-1.29	# .141	+-.130E-01	202
1.02	1.67	0.1631	# 30.30	11.10	5.96	+-.288	21.9	+-1.05	# .228	+-.110E-01	27
		0.1965	# 43.60	15.97	5.13	+-.288	18.8	+-1.05	# .196	+-.110E-01	27
		0.2348	# 55.60	20.37	5.23	+-.262	19.2	+-.958	# .200	+-.100E-01	27
		0.2875	# 69.80	25.53	4.06	+-.209	14.9	+-.767	# .155	+-.800E-02	27
		0.2848	# 69.10	25.27	4.00	+-.157	14.7	+-.575	# .153	+-.600E-02	224
		0.3705	# 90.00	32.65	3.69	+-.157	13.5	+-.575	# .141	+-.600E-02	224
		0.3880	# 94.20	34.06	3.79	+-.288	13.9	+-1.05	# .145	+-.110E-01	27
		0.3997	# 97.00	34.99	3.48	+-.157	12.7	+-.575	# .133	+-.600E-02	27
1.04	1.68	0.1998	# 45.00	17.07	5.45	+-.190	20.8	+-.723	# .230	+-.800E-02	27
		0.1521	# 27.50	10.40	6.66	+-.332	25.4	+-1.26	# .281	+-.140E-01	27
1.05	1.69	0.1557	# 30.00	11.51	6.26	+-.340	24.3	+-1.32	# .276	+-.150E-01	27
		0.1581	# 31.00	11.89	6.44	+-.499	25.0	+-1.94	# .284	+-.220E-01	7
		0.1913	# 42.50	16.34	6.15	+-.295	23.9	+-1.15	# .271	+-.130E-01	27
		0.2102	# 48.00	18.48	5.29	+-.431	20.5	+-1.67	# .233	+-.190E-01	7
		0.2194	# 50.50	19.45	5.38	+-.340	20.9	+-1.32	# .237	+-.150E-01	202
		0.2308	# 53.50	20.62	5.54	+-.318	21.5	+-1.23	# .244	+-.140E-01	27
		0.3379	# 78.00	30.20	3.90	+-.250	15.2	+-.969	# .172	+-.110E-01	202
		0.3484	# 80.20	31.06	4.45	+-.272	17.3	+-1.06	# .196	+-.120E-01	27
		0.3940	# 89.70	34.74	3.56	+-.204	13.8	+-.793	# .157	+-.900E-02	27
		0.5819	#132.30	48.98	2.79	+-.250	10.8	+-.969	# .123	+-.110E-01	27
1.06	1.69	0.2145	# 49.00	19.11	5.64	+-.370	22.3	+-1.46	# .259	+-.170E-01	202
		0.3340	# 76.00	29.87	4.07	+-.196	16.1	+-.775	# .187	+-.900E-02	202
		0.4039	# 90.00	35.45	3.53	+-.131	14.0	+-.517	# .162	+-.600E-02	224
		0.5134	#112.30	44.04	3.00	+-.152	11.9	+-.603	# .138	+-.700E-02	224
		0.5482	#120.00	46.76	2.83	+-.109	11.2	+-.431	# .130	+-.500E-02	224
		0.6080	#135.00	51.12	2.26	+-.218	8.96	+-.861	# .104	+-.100E-01	224
1.08	1.70	0.2062	# 46.50	18.51	5.63	+-.363	23.1	+-1.49	# .279	+-.180E-01	7
		0.2062	# 46.50	18.51	4.92	+-.242	20.2	+-.994	# .244	+-.120E-01	27
		0.4207	# 90.00	36.50	3.19	+-.161	13.1	+-.663	# .158	+-.800E-02	27
		0.5750	#119.70	48.64	2.52	+-.161	10.4	+-.663	# .125	+-.800E-02	27
1.09	1.71	0.2132	# 48.00	19.30	4.83	+-.234	20.2	+-.978	# .248	+-.120E-01	202
		0.3374	# 73.50	29.93	4.07	+-.195	17.0	+-.815	# .209	+-.100E-01	202
		0.4628	# 96.00	39.53	2.67	+-.156	11.2	+-.652	# .137	+-.800E-02	202
1.10	1.72	0.4375	# 90.00	37.38	2.62	+-.410	11.2	+-1.75	# .139	+-.218E-01	45
		0.4375	# 90.00	37.38	3.03	+-.113	12.9	+-.481	# .161	+-.600E-02	224
1.11	1.72	0.2131	# 47.50	19.39	4.27	+-.219	18.5	+-.949	# .234	+-.120E-01	202
		0.3423	# 72.50	30.05	3.72	+-.237	16.1	+-1.03	# .204	+-.130E-01	202
		0.4670	# 93.50	39.33	2.57	+-.146	11.2	+-.633	# .141	+-.800E-02	202
1.15	1.74	0.2133	# 46.50	19.42	4.11	+-.146	19.1	+-.680	# .253	+-.900E-02	202

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C213: GAMMA + PROTON ---> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.15	1.74	0.3537	# 71.00	30.22	3.39 +-.179	15.8 +-.831	# .209 +-.110E-01	202
		0.4865	# 91.00	39.51	2.13 +-.227	9.90 +-1.06	# .131 +-.140E-01	202
1.16	1.75	0.1666	# 36.00	15.01	4.09 +-2.69	19.4 +-12.7	# .259 +-.170	22
		0.2895	# 60.00	25.42	3.26 +-1.90	15.4 +-8.99	# .206 +-.120	22
		0.3854	# 75.00	32.22	3.24 +-2.53	15.4 +-12.0	# .205 +-.160	22
		0.4883	# 90.00	39.30	2.10 +-1.58	9.96 +-7.49	# .133 +-.100E 00	22
		0.5912	#105.00	46.67	1.69 +-.790E-01	8.01 +-.374	# .107 +-.500E-02	224
		0.6870	#120.00	54.32	1.23 +-.632E-01	5.84 +-.300	# .780E-01 +-.400E-02	224
		0.7694	#135.00	62.18	1.09 +-.632E-01	5.17 +-.300	# .690E-01 +-.400E-02	224
		0.7694	#135.00	62.18	1.25 +-1.42	5.92 +-6.74	# .790E-01 +-.900E-01	22
1.17	1.75	0.2134	# 46.00	19.37	3.80 +-.231	18.3 +-1.11	# .247 +-.150E-01	202
		0.3539	# 69.50	29.85	3.02 +-.185	14.6 +-.891	# .196 +-.120E-01	202
		0.4897	# 89.00	39.05	2.08 +-.185	10.0 +-.891	# .135 +-.120E-01	202
1.19	1.76	0.5138	# 90.00	39.97	1.89 +-.132	9.44 +-.658	# .129 +-.900E-02	111
1.20	1.77	0.0988	# 15.00	6.280	5.43 +-.387E-01	27.5 +-.196	# .379 +-.270E-02	7
		0.1249	# 25.00	10.50	4.79 +-.215	24.3 +-1.09	# .334 +-.150E-01	7
		0.1426	# 30.00	12.63	4.89 +-.272E-01	24.8 +-.138	# .341 +-.190E-02	7
		0.1427	P# 30.03	12.64	P 5.06 +-.272	25.6 +-1.38	P# .353 +-.190E-01	127
		0.1631	# 35.00	14.78	4.30 +-.201E-01	21.8 +-.102	# .300 +-.140E-02	7
		0.1965	# 42.00	17.81	4.07 +-.215	20.6 +-1.09	# .284 +-.150E-01	7
		0.2347	# 49.00	20.89	4.04 +-.229	20.5 +-1.16	# .282 +-.160E-01	7
		0.2708	# 55.00	23.57	3.95 +-.229	20.1 +-1.16	# .276 +-.160E-01	7
		0.3233	# 63.00	27.21	3.45 +-.229	17.5 +-1.16	# .241 +-.160E-01	7
		0.3724	# 70.00	30.46	2.89 +-.201	14.7 +-1.02	# .202 +-.140E-01	7
		0.4312	# 78.00	34.26	2.78 +-.244	14.1 +-1.24	# .194 +-.170E-01	7
		0.4841	# 85.00	37.68	2.21 +-.258	11.2 +-1.31	# .154 +-.180E-01	7
		0.5223	# 90.00	40.17	2.05 +-.314	10.4 +-1.59	# .143 +-.219E-01	45
		0.7416	#120.00	56.16	1.35 +-.573E-01	6.83 +-.291	# .940E-01 +-.400E-02	224
1.21	1.78	0.5309	# 90.00	40.35	2.00 +-.140	10.3 +-.722	# .143 +-.100E-01	111
0.91 - 1.40	1.72	# 0.1000-0.1600	------	-----	# 4.18 +-1.58	17.2 +-6.50	--------	100
		# 0.1600-0.2400	------	-----	# 4.36 +-1.17	17.9 +-4.81	--------	100
		# 0.2400-0.3200	------	-----	# 5.00 +-1.18	20.6 +-4.85	--------	100
		# 0.3200-0.4000	------	-----	# 3.25 +-.980	13.4 +-4.03	--------	100
		# 0.4000-0.6000	------	-----	# 1.72 +-.460	7.08 +-1.89	--------	100
		# 0.6000-0.8000	------	-----	# 1.15 +-.470	4.73 +-1.93	--------	100
		# 0.8000-1.0500	------	-----	# 1.96 +-.690	8.06 +-2.84	--------	100
			# 0.0 - 39.60	-----	--------	--------	# .218 +-.560E-01	100
			# 39.60-60.00	-----	--------	--------	# .276 +-.630E-01	100
			# 60.00-75.50	-----	--------	--------	# .165 +-.480E-01	100
			# 75.50-90.00	-----	--------	--------	# .125 +-.420E-01	100
			# 90.00-104.50	-----	--------	--------	# .120 +-.420E-01	100
			#104.50-120.00	-----	--------	--------	# .710E-01 +-.320E-01	100
			#120.00-140.40	-----	--------	--------	# .122 +-.430E-01	100
			#140.40-180.00	-----	--------	--------	# .530E-01 +-.210E-01	100
1.30	1.82	# 0.0737	# 6.00	2.544	3.75 +-.386	22.3 +-2.30	# .321 +-.330E-01	127
		# 0.0789	# 10.00	4.243	3.67 +-.234	21.8 +-1.39	# .314 +-.200E-01	127
		# 0.0890	# 15.00	6.372	3.69 +-.187	22.0 +-1.11	# .316 +-.160E-01	127
		# 0.1031	# 20.00	8.511	3.83 +-.152	22.8 +-.904	# .328 +-.130E-01	127
		# 0.1427	# 30.00	12.83	3.94 +-.210	23.4 +-1.25	# .337 +-.180E-01	127
		# 0.1965	# 40.00	17.23	3.86 +-.234	23.0 +-1.39	# .330 +-.200E-01	127
		# 0.2627	# 50.00	21.74	3.45 +-.175	20.5 +-1.04	# .295 +-.150E-01	127
		# 0.3395	# 60.00	26.39	2.72 +-.175	16.2 +-1.04	# .233 +-.150E-01	127
		# 0.4244	# 70.00	31.21	2.34 +-.199	13.9 +-1.18	# .200 +-.170E-01	127
		# 0.5149	# 80.00	36.22	2.06 +-.210	12.2 +-1.25	# .176 +-.180E-01	127
		# 0.6082	# 90.00	41.48	1.60 +-.199	9.53 +-1.18	# .137 +-.170E-01	127
		0.6082	# 90.00	41.48	1.67 +-.298	9.95 +-1.77	# .143 +-.255E-01	45
		0.8539	#117.20	57.37	1.25 +-.468E-01	7.44 +-.278	# .107 +-.400E-02	224
		0.8770	#120.00	59.17	1.22 +-.351E-01	7.23 +-.209	# .104 +-.300E-02	224
		0.9279	#126.50	63.52	1.25 +-.468E-01	7.44 +-.278	# .107 +-.400E-02	224
1.31	1.83	0.9809	#131.70	67.51	1.03 +-.574E-01	6.24 +-.347	# .900E-01 +-.500E-02	224
1.30	1.82	0.9883	#135.00	69.64	1.01 +-.468E-01	5.98 +-.278	# .860E-01 +-.400E-02	224
1.32	1.83	0.6255	# 90.00	41.64	1.44 +-.790E-01	8.86 +-.485	# .128 +-.700E-02	111
1.33	1.84	0.2908	# 52.70	23.05	2.99 +-.244	18.7 +-1.52	# .270 +-.220E-01	127
		0.3682	# 62.00	27.43	2.65 +-.222	16.5 +-1.38	# .239 +-.200E-01	127
1.34	1.84	0.0776	# 11.20	4.761	3.64 +-.273	23.0 +-1.72	# .334 +-.250E-01	127
		0.0939	# 17.70	7.540	3.81 +-.196	24.1 +-1.24	# .349 +-.180E-01	127
		0.1136	# 23.30	9.950	3.94 +-.164	24.9 +-1.03	# .361 +-.150E-01	127
		0.1623	# 33.50	14.40	3.71 +-.207	23.4 +-1.31	# .340 +-.190E-01	127
		0.2228	# 43.20	18.72	3.26 +-.218	20.6 +-1.38	# .299 +-.200E-01	127
		0.6428	# 90.00	41.78	1.55 +-.763E-01	9.79 +-.483	# .142 +-.700E-02	111
1.36	1.85	0.6602	# 90.00	41.90	1.42 +-.739E-01	9.28 +-.481	# .135 +-.700E-02	111
1.37	1.86	0.6689	# 90.00	41.95	1.28 +-.831E-01	8.44 +-.549	# .123 +-.800E-02	111
1.40	1.87	0.0906	# 17.50	7.454	2.69 +-2.28	18.5 +-15.7	# .271 +-.230	22

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.40	1.87	0.1207	# 25.00	10.69	2.58 +-1.98	17.8 +-13.7	# .260 +-.200	22
		0.1605	# 32.50	13.97	2.71 +-1.98	18.7 +-13.7	# .273 +-.200	22
		0.2095	# 40.00	17.30	2.42 +-1.98	16.7 +-13.7	# .244 +-.200	22
		0.2469	# 45.00	19.56	2.52 +-1.59	17.4 +-10.9	# .254 +-.160	22
		0.3781	# 60.00	26.57	2.19 +-1.19	15.1 +-8.21	# .221 +-.120	22
		0.5310	# 75.00	34.03	1.81 +-1.29	12.5 +-8.90	# .183 +-.130	22
		0.6950	# 90.00	42.08	1.55 +-.793	10.7 +-5.47	# .156 +-.800E-01	22
		1.0118	#120.00	60.84	1.18 +-.397E-01	8.14 +-.274	# .119 +-.400E-02	224
		1.1430	#135.00	72.37	1.20 +-.496E-01	8.28 +-.342	# .121 +-.500E-02	224
		1.1977	#142.50	79.12	1.31 +-1.88	9.03 +-13.0	# .132 +-.190	22
1.44	1.89	0.7299	# 90.00	42.20	1.07 +-.561E-01	7.79 +-.410	# .114 +-.600E-02	111
1.45	1.90	0.1427	P# 28.97	12.40	P 3.14 +-.148	23.2 +-1.09	P# .340 +-.160E-01	127
1.47	1.91	0.7561	# 90.00	42.25	1.07 +-.539E-01	8.13 +-.410	# .119 +-.600E-02	111
1.48	1.91	1.1718	#125.00	65.40	1.07 +-.443E-01	8.27 +-.342	# .121 +-.500E-02	224
		1.2665	#135.00	73.74	1.23 +-.443E-01	9.50 +-.342	# .139 +-.500E-02	224
1.49	1.92	0.7736	# 90.00	42.27	1.08 +-.612E-01	8.47 +-.478	# .124 +-.700E-02	111
1.52	1.93	0.8000	# 90.00	42.29	.925 +-.589E-01	7.53 +-.479	# .110 +-.700E-02	111
1.55	1.95	1.3745	#135.00	74.55	.965 +-.405E-01	8.16 +-.343	# .119 +-.500E-02	224
1.62	1.98	1.4825	#135.00	75.09	.785 +-.374E-01	7.25 +-.345	# .105 +-.500E-02	224
		1.5321	#140.00	80.11	.852 +-.374E-01	7.87 +-.345	# .114 +-.500E-02	224
1.70	2.02	1.6061	#135.00	75.49	.549 +-.206E-01	5.59 +-.210	# .800E-01+-.300E-02	224
1.40 - 1.80	1.96	# 0.0500-0.2400	------	-----	# 1.00 +-.450	8.60 +-3.87	--------	100
		# 0.2400-0.4000	------	-----	# 1.86 +-.700	16.0 +-6.02	--------	100
		# 0.4000-0.6000	------	-----	# 1.21 +-.490	10.4 +-4.21	--------	100
		# 0.6000-0.8000	------	-----	# 1.60 +-.570	13.8 +-4.90	--------	100
		# 0.8000-1.0000	------	-----	# .980 +-.440	8.43 +-3.78	--------	100
		# 1.0000-1.7000	------	-----	# .520 +-.200	4.47 +-1.72	--------	100
			# 0.0 - 39.60	-----	--------	--------	# .177 +-.670E-01	100
			# 39.60-60.00	-----	--------	--------	# .248 +-.830E-01	100
			# 60.00-75.50	-----	--------	--------	# .128 +-.570E-01	100
			# 75.50-90.00	-----	--------	--------	# .106 +-.530E-01	100
			# 90.00-120.00	-----	--------	--------	# .710E-01+-.290E-01	100
			#120.00-180.00	-----	--------	--------	# .880E-01+-.330E-01	100
1.80 - 5.80	2.46	# 0.0500-0.0800	------	-----	# 1.16 +-.580	24.1 +-12.1	--------	100
		# 0.0800-0.1600	------	-----	# .780 +-.320	16.2 +-6.66	--------	100
		# 0.1600-0.2400	------	-----	# .850 +-.340	17.7 +-7.08	--------	100
		# 0.2400-0.4000	------	-----	# .310 +-.120	6.45 +-2.50	--------	100
		# 0.4000-0.5600	------	-----	# .400 +-.130	8.33 +-2.71	--------	100
		# 0.5600-0.8400	------	-----	# .190 +-.700E-01	3.95 +-1.46	--------	100
		# 0.8400-1.3600	------	-----	# .600E-01+-.300E-01	1.25 +-.624	--------	100
			# 0.0 - 18.00	-----	--------	--------	# .253 +-.960E-01	100
			# 18.00-25.80	-----	--------	--------	# .274 +-.976E-01	100
			# 25.80-36.80	-----	--------	--------	# .750E-01+-.310E-01	100
			# 36.80-45.50	-----	--------	--------	# .380E-01+-.196E-01	100
			# 45.50-53.10	-----	--------	--------	# .133 +-.400E-01	100
			# 53.10-60.00	-----	--------	--------	# .360E-01+-.186E-01	100
			# 60.00-90.00	-----	--------	--------	# .900E-02+-.500E-02	100
3.46	2.72	0.4770 +- 0.0892	# 35.00 +- 3.50	11.86 +-1.245	.765 +-.272	32.3 +-11.4	# .310 +-.110	16
3.58	2.76	0.4965 +- 0.0931	# 35.00 +- 3.50	11.70 +-1.229	.710 +-.189	32.0 +-8.54	# .300 +-.800E-01	16
3.70	2.80	0.5160 +- 0.0970	# 35.00 +- 3.50	11.56 +-1.214	.499 +-.159	24.1 +-7.66	# .220 +-.700E-01	16
3.78	2.82	0.8476 +- 0.1228	# 45.00 +- 3.50	14.98 +-1.265	.309 +-.663E-01	15.6 +-3.34	# .140 +-.300E-01	16
3.82	2.84	0.5356 +- 0.1009	# 35.00 +- 3.50	11.41 +-1.199	.196 +-.131	10.1 +-6.73	# .900E-01+-.600E-01	16
3.94	2.88	0.5553 +- 0.1048	# 35.00 +- 3.50	11.27 +-1.185	.252 +-.105	13.8 +-5.74	# .120 +-.500E-01	16
4.06	2.92	0.5750 +- 0.1087	# 35.00 +- 3.50	11.14 +-1.172	.344 +-.101	20.0 +-5.88	# .170 +-.500E-01	16
4.30	2.99	$ 5.9006	140.34	72.58	@ .604E-02+-.151E-02	0.393 +-.982E-01	.320E-02+-.799E-03	106

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD	REF
4.30	2.99	$ 5.9806	142.55	75.42	a .112E-01+-.176E-02	0.729	+-.115	.592E-02+-.932E-03	106
		$ 6.1206	146.72	81.25	a .152E-01+-.302E-02	0.991	+-.197	.806E-02+-.160E-02	106
		$ 6.2656	151.59	89.02	a .156E-01+-.252E-02	1.02	+-.164	.826E-02+-.133E-02	106
		$ 6.4006	156.95	99.13	a .270E-01+-.453E-02	1.76	+-.295	.143E-01+-.240E-02	106
5.00	3.20	# 0.0110	0.57	.1635	# .340 +-.600E-01	29.9	+-5.28	.215 +-.380E-01	92
		# 0.0148	2.57	.7312	# .333 +-.220E-01	29.3	+-1.94	.211 +-.139E-01	92
		# 0.0208	4.06	1.157	# .425 +-.380E-01	37.4	+-3.35	.269 +-.241E-01	92
		# 0.0308	5.75	1.636	# .398 +-.250E-01	35.0	+-2.20	.252 +-.158E-01	92
		# 0.0498	8.03	2.288	# .405 +-.310E-01	35.7	+-2.73	.256 +-.196E-01	92
		# 0.0898	11.44	3.263	# .424 +-.300E-01	37.3	+-2.64	.269 +-.190E-01	92
		# 0.1678	16.15	4.621	# .473 +-.320E-01	41.6	+-2.82	.300 +-.203E-01	92
		# 0.1738	16.46	4.710	# .394 +-.390E-01	34.7	+-3.43	.250 +-.247E-01	92
		# 0.3158	22.58	6.496	# .341 +-.370E-01	30.0	+-3.26	.216 +-.234E-01	92
		# 0.4508	27.20	7.864	# .325 +-.330E-01	28.6	+-2.91	.206 +-.209E-01	92
		# 0.6008	31.60	9.188	# .228 +-.250E-01	20.1	+-2.20	.144 +-.158E-01	92
		# 0.7708	36.00	10.54	# .134 +-.200E-01	11.8	+-1.76	.849E-01+-.127E-01	92
		# 0.9708	40.65	11.99	# .920E-01+-.160E-01	8.10	+-1.41	.583E-01+-.101E-01	92
		# 1.1508	44.48	13.22	# .500E-01+-.110E-01	4.40	+-.968	.317E-01+-.697E-02	92
8.00	3.99	# 0.0069	0.70	.1609	# .940E-01+-.330E-01	21.2	+-7.44	.101 +-.356E-01	92
		# 0.0093	1.68	.3876	# .790E-01+-.180E-01	17.8	+-4.06	.853E-01+-.194E-01	92
		# 0.0114	2.20	.5090	# .105 +-.140E-01	23.7	+-3.16	.113 +-.151E-01	92
		# 0.0164	3.11	.7199	# .130 +-.300E-01	29.3	+-6.76	.140 +-.324E-01	92
		# 0.0264	4.40	1.018	# .127 +-.600E-02	28.6	+-1.35	.137 +-.648E-02	92
		# 0.0454	6.15	1.423	# .141 +-.500E-02	31.8	+-1.13	.152 +-.540E-02	92
		# 0.0864	8.81	2.041	# .161 +-.900E-02	36.3	+-2.03	.174 +-.972E-02	92
		# 0.1664	12.47	2.895	# .161 +-.120E-01	36.3	+-2.70	.174 +-.130E-01	92
		# 0.2564	15.60	3.630	# .147 +-.160E-01	33.1	+-3.61	.159 +-.173E-01	92
		# 0.3164	17.39	4.050	# .135 +-.600E-02	30.4	+-1.35	.146 +-.648E-02	92
		# 0.4464	20.75	4.848	# .980E-01+-.800E-02	22.1	+-1.80	.106 +-.864E-02	92
		# 0.6064	24.28	5.693	# .760E-01+-.700E-02	17.1	+-1.58	.820E-01+-.756E-02	92
		# 0.7764	27.57	6.489	# .410E-01+-.300E-02	9.24	+-.676	.443E-01+-.324E-02	92
		# 0.9764	31.02	7.337	# .240E-01+-.300E-02	5.41	+-.676	.259E-01+-.324E-02	92
		# 1.2864	35.78	8.526	# .910E-02+-.130E-02	2.05	+-.293	.982E-02+-.140E-02	92
		# 1.6564	40.82	9.818	# .290E-02+-.900E-03	0.654	+-.203	.313E-02+-.972E-03	92
		# 2.0064	45.16	10.96	# .860E-03+-.320E-03	0.194	+-.721E-01	.928E-03+-.345E-03	92
11.00	4.64	# 0.0057	0.87	.1733	# .570E-01+-.130E-01	24.3	+-5.54	.870E-01+-.198E-01	92
		# 0.0120	2.25	.4497	# .700E-01+-.140E-01	29.8	+-5.97	.107 +-.214E-01	92
		# 0.0246	3.70	.7395	# .580E-01+-.500E-02	24.7	+-2.13	.885E-01+-.763E-02	92
		# 0.0446	5.23	1.046	# .710E-01+-.400E-02	30.3	+-1.70	.108 +-.611E-02	92
		# 0.0846	7.40	1.481	# .790E-01+-.400E-02	33.7	+-1.70	.121 +-.611E-02	92
		# 0.1696	10.64	2.132	# .800E-01+-.600E-02	34.1	+-2.56	.122 +-.916E-02	92
		# 0.3246	14.84	2.980	# .780E-01+-.700E-02	33.2	+-2.98	.119 +-.107E-01	92
		# 0.4646	17.82	3.586	# .580E-01+-.500E-02	24.7	+-2.13	.885E-01+-.763E-02	92
		# 0.7946	23.42	4.739	# .203E-01+-.190E-02	8.65	+-.810	.310E-01+-.290E-02	92
		# 1.0046	26.39	5.361	# .133E-01+-.180E-02	5.67	+-.767	.203E-01+-.275E-02	92
		# 1.3046	30.18	6.160	# .360E-02+-.400E-03	1.53	+-.170	.550E-02+-.611E-03	92
		# 2.0046	37.67	7.787	# .560E-03+-.140E-03	0.239	+-.597E-01	.855E-03+-.214E-03	92
16.00	5.56	# 0.0053	1.01	.1683	# .240E-01+-.500E-02	21.6	+-4.51	.545E-01+-.114E-01	92
		# 0.0189	2.70	.4512	# .420E-01+-.800E-02	37.9	+-7.21	.954E-01+-.182E-01	92
		# 0.0421	4.24	.7092	# .350E-01+-.200E-02	31.6	+-1.80	.795E-01+-.455E-02	92
		# 0.0811	5.99	1.004	# .400E-01+-.200E-02	36.1	+-1.80	.909E-01+-.455E-02	92
		# 0.1651	8.64	1.448	# .350E-01+-.300E-02	31.6	+-2.70	.795E-01+-.682E-02	92
		# 0.2631	10.95	1.838	# .410E-01+-.300E-02	37.0	+-2.70	.932E-01+-.682E-02	92
		# 0.3131	11.96	2.009	# .335E-01+-.230E-02	30.2	+-2.07	.761E-01+-.523E-02	92
		# 0.4431	14.26	2.399	# .264E-01+-.330E-02	23.8	+-2.97	.600E-01+-.750E-02	92
		# 0.6031	16.67	2.809	# .149E-01+-.150E-02	13.4	+-1.35	.339E-01+-.341E-02	92
		# 0.7931	19.15	3.233	# .940E-02+-.100E-02	8.47	+-.901	.214E-01+-.227E-02	92
		# 1.0031	21.57	3.651	# .380E-02+-.600E-03	3.43	+-.541	.864E-02+-.136E-02	92
		# 1.3031	24.64	4.185	# .210E-02+-.300E-03	1.89	+-.270	.477E-02+-.682E-03	92
		# 2.0031	30.69	5.256	# .130E-03+-.500E-04	0.117	+-.451E-01	.295E-03+-.114E-03	92

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		REF
# 0.0053	16.00	5.56	30.90	# .240E-01+-.500E-02	21.6	+-4.51	92
# 0.0057	11.00	4.64	21.52	# .570E-01+-.130E-01	24.3	+-5.54	92
# 0.0069	8.00	3.99	15.89	# .940E-01+-.330E-01	21.2	+-7.44	92
# 0.0093	8.00	3.99	15.89	# .790E-01+-.180E-01	17.8	+-4.06	92
# 0.0110	5.00	3.20	10.26	# .340 +-.600E-01	29.9	+-5.28	92

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 16.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-N**2)**2 MU BARN*GEV**2	REF
#	0.0114	8.00	3.99	15.89	# .105 +-.140E-01	23.7 +-3.16	92
#	0.0120	11.00	4.64	21.52	# .700E-01+-.140E-01	29.8 +-5.97	92
#	0.0148	5.00	3.20	10.26	# .333 +-.220E-01	29.3 +-1.94	92
#	0.0164	8.00	3.99	15.89	# .130 +-.300E-01	29.3 +-6.76	92
#	0.0189	16.00	5.56	30.90	# .420E-01+-.800E-02	37.9 +-7.21	92
#	0.0208	5.00	3.20	10.26	# .425 +-.380E-01	37.4 +-3.35	92
#	0.0246	11.00	4.64	21.52	# .580E-01+-.500E-02	24.7 +-2.13	92
#	0.0264	8.00	3.99	15.89	# .127 +-.600E-02	28.6 +-1.35	92
#	0.0308	5.00	3.20	10.26	# .398 +-.250E-01	35.0 +-2.20	92
#	0.0421	16.00	5.56	30.90	# .350E-01+-.200E-02	31.6 +-1.80	92
#	0.0446	11.00	4.64	21.52	# .710E-01+-.400E-02	30.3 +-1.70	92
#	0.0454	8.00	3.99	15.89	# .141 +-.500E-02	31.8 +-1.13	92
#	0.0498	5.00	3.20	10.26	# .405 +-.310E-01	35.7 +-2.73	92
#	0.0500 - 0.0800	1.80 - 5.80	2.06 - 3.43	4.26 -11.76	# 1.16 +-.580	24.1 +-12.1	100
#	0.0811	16.00	5.56	30.90	# .400E-01+-.200E-02	36.1 +-1.80	92
#	0.0846	11.00	4.64	21.52	# .790E-01+-.400E-02	33.7 +-1.70	92
#	0.0864	8.00	3.99	15.89	# .161 +-.900E-02	36.3 +-2.03	92
#	0.0898	5.00	3.20	10.26	# .424 +-.300E-01	37.3 +-2.64	92
#	0.0800 - 0.1600	1.80 - 5.80	2.06 - 3.43	4.26 -11.76	# .780 +-.320	16.2 +-6.66	100
#	0.1651	16.00	5.56	30.90	# .350E-01+-.300E-02	31.6 +-2.70	92
#	0.1664	8.00	3.99	15.89	# .161 +-.120E-01	36.3 +-2.70	92
#	0.1678	5.00	3.20	10.26	# .473 +-.320E-01	41.6 +-2.82	92
#	0.1696	11.00	4.64	21.52	# .800E-01+-.600E-02	34.1 +-2.56	92
#	0.1738	5.00	3.20	10.26	# .394 +-.390E-01	34.7 +-3.43	92
#	0.1600 - 0.2400	1.80 - 5.80	2.06 - 3.43	4.26 -11.76	# .850 +-.340	17.7 +-7.08	100
#	0.2564	8.00	3.99	15.89	# .147 +-.160E-01	33.1 +-3.61	92
#	0.2631	16.00	5.56	30.90	# .410E-01+-.300E-02	37.0 +-2.70	92
#	0.3131	16.00	5.56	30.90	# .335E-01+-.230E-02	30.2 +-2.07	92
#	0.3158	5.00	3.20	10.26	# .341 +-.370E-01	30.0 +-3.26	92
#	0.3164	8.00	3.99	15.89	# .135 +-.600E-02	30.4 +-1.35	92
#	0.2400 - 0.4000	1.80 - 5.80	2.06 - 3.43	4.26 -11.76	# .310 +-.120	6.45 +-2.50	100
#	0.3246	11.00	4.64	21.52	# .780E-01+-.700E-02	33.2 +-2.98	92
#	0.4431	16.00	5.56	30.90	# .264E-01+-.330E-02	23.8 +-2.97	92
#	0.4464	8.00	3.99	15.89	# .980E-01+-.800E-02	22.1 +-1.80	92
#	0.4508	5.00	3.20	10.26	# .325 +-.330E-01	28.6 +-2.91	92
#	0.4646	11.00	4.64	21.52	# .580E-01+-.500E-02	24.7 +-2.13	92
	0.4770+- 0.0892	3.46	2.72	7.37	.765 +-.272	32.3 +-11.4	16
#	0.4000 - 0.5600	1.80 - 5.80	2.06 - 3.43	4.26 -11.76	# .400 +-.130	8.33 +-2.71	100
	0.4965+- 0.0931	3.58	2.76	7.60	.710 +-.189	32.0 +-8.54	16
	0.5160+- 0.0970	3.70	2.80	7.82	.499 +-.159	24.1 +-7.66	16
	0.5356+- 0.1009	3.82	2.84	8.05	.196 +-.131	10.1 +-6.73	16
	0.5553+- 0.1048	3.94	2.88	8.27	.252 +-.105	13.8 +-5.74	16
	0.5750+- 0.1087	4.06	2.92	8.50	.344 +-.101	20.0 +-5.88	16
#	0.6008	5.00	3.20	10.26	# .228 +-.250E-01	20.1 +-2.20	92
#	0.6031	16.00	5.56	30.90	# .149E-01+-.150E-02	13.4 +-1.35	92
#	0.6064	8.00	3.99	15.89	# .760E-01+-.700E-02	17.1 +-1.58	92
#	0.5600 - 0.8400	1.80 - 5.80	2.06 - 3.43	4.26 -11.76	# .190 +-.700E-01	3.95 +-1.46	100
#	0.7708	5.00	3.20	10.26	# .134 +-.200E-01	11.8 +-1.76	92
#	0.7764	8.00	3.99	15.89	# .410E-01+-.300E-02	9.24 +-.676	92
#	0.7931	16.00	5.56	30.90	# .940E-02+-.100E-02	8.47 +-.901	92
#	0.7946	11.00	4.64	21.52	# .203E-01+-.190E-02	8.65 +-.810	92
	0.8476+- 0.1228	3.78	2.82	7.97	.309 +-.663E-01	15.6 +-3.34	16
#	0.9708	5.00	3.20	10.26	# .920E-01+-.160E-01	8.10 +-1.41	92
#	0.9764	8.00	3.99	15.89	# .240E-01+-.300E-02	5.41 +-.676	92
#	1.0031	16.00	5.56	30.90	# .380E-02+-.600E-03	3.43 +-.541	92
#	1.0046	11.00	4.64	21.52	# .133E-01+-.180E-02	5.67 +-.767	92
#	0.8400 - 1.3600	1.80 - 5.80	2.06 - 3.43	4.26 -11.76	# .600E-01+-.300E-01	1.25 +-.624	100
#	1.1508	5.00	3.20	10.26	# .500E-01+-.110E-01	4.40 +-.968	92
#	1.2864	8.00	3.99	15.89	# .910E-02+-.130E-02	2.05 +-.293	92
#	1.3031	16.00	5.56	30.90	# .210E-02+-.300E-03	1.89 +-.270	92
#	1.3046	11.00	4.64	21.52	# .360E-02+-.400E-03	1.53 +-.170	92
#	1.6564	8.00	3.99	15.89	# .290E-02+-.900E-03	.654 +-.203	92
#	2.0031	16.00	5.56	30.90	# .130E-03+-.500E-04	.117 +-.451E-01	92
#	2.0046	11.00	4.64	21.52	# .560E-03+-.140E-03	.239 +-.597E-01	92
#	2.0064	8.00	3.99	15.89	# .860E-03+-.320E-03	.194 +-.721E-01	92

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

1.40 GEV < K < GEV 2.00

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2	REF
0.0906	1.40	1.87	3.51	2.69 +-2.28	18.5 +-15.7	22
0.1207	1.40	1.87	3.51	2.58 +-1.98	17.8 +-13.7	22
0.1427	1.45	1.90	3.60	3.14 +-.148	23.2 +-1.09	127
# 0.0500 - 0.2400	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 1.00 +-.450	8.60 +-3.87	100
0.1605	1.40	1.87	3.51	2.71 +-1.98	18.7 +-13.7	22
0.2095	1.40	1.87	3.51	2.42 +-1.98	16.7 +-13.7	22
0.2469	1.40	1.87	3.51	2.52 +-1.59	17.4 +-10.9	22
# 0.2400 - 0.4000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 1.86 +-.700	16.0 +-6.02	100
0.3781	1.40	1.87	3.51	2.19 +-1.19	15.1 +-8.21	22
# 0.4000 - 0.6000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 1.21 +-.490	10.4 +-4.21	100
0.5310	1.40	1.87	3.51	1.81 +-1.29	12.5 +-8.90	22
# 0.6000 - 0.8000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 1.60 +-.570	13.8 +-4.90	100
# 0.8000 - 1.0000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# .980 +-.440	8.43 +-3.78	100
# 1.0000 - 1.7000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# .520 +-.200	4.47 +-1.72	100

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.40 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
1.40	1.87	3.51	-0.059	1.31 +-1.88	# 37.5	11.5	#.132 +-.190	22
			-0.004	1.20 +-.496E-01	# 45.0	13.8	#.121 +-.500E-02	224
			0.127	1.18 +-.397E-01	# 60.0	18.3	#.119 +-.400E-02	224
			0.444	1.55 +-.793	# 90.0	26.7	#.156 +-.800E-01	22
1.44	1.89	3.58	0.484	1.07 +-.561E-01	# 90.0	27.1	#.114 +-.600E-02	111
1.47	1.91	3.64	0.514	1.07 +-.539E-01	# 90.0	27.3	#.119 +-.600E-02	111
1.48	1.91	3.66	0.022	1.23 +-.443E-01	# 45.0	14.1	#.139 +-.500E-02	224
			0.117	1.07 +-.443E-01	# 55.0	17.1	#.121 +-.500E-02	224
1.49	1.92	3.68	0.534	1.08 +-.612E-01	# 90.0	27.5	#.124 +-.700E-02	111
1.52	1.93	3.73	0.564	.925 +-.589E-01	# 90.0	27.7	#.110 +-.700E-02	111
1.55	1.95	3.79	0.046	.965 +-.405E-01	# 45.0	14.2	#.119 +-.500E-02	224
1.62	1.98	3.92	0.020	.852 +-.374E-01	# 40.0	12.7	#.114 +-.500E-02	224
			0.069	.785 +-.374E-01	# 45.0	14.3	#.105 +-.500E-02	224
1.70	2.02	4.07	0.096	.549 +-.206E-01	# 45.0	14.4	#.800E-01+-.300E-02	224
1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	------	------	# 0.0 - 60.0		#.880E-01+-.330E-01	100
			------	------	# 60.0 - 90.0		#.710E-01+-.290E-01	100
			------	------	# 90.0 -104.5		#.106 +-.530E-01	100
1.80 - 5.80	2.06 - 3.43	4.26 -11.76	------	------	# 90.0 -120.0		#.900E-02+-.500E-02	100
4.30	2.99	8.95	a 0.180	a.270E-01+-.453E-02	23.0	6.3	.143E-01+-.240E-02	106
			a 0.315	a.156E-01+-.252E-02	28.4	7.8	.826E-02+-.133E-02	106
			a 0.460	a.152E-01+-.302E-02	33.3	9.2	.806E-02+-.160E-02	106
			a 0.600	a.112E-01+-.176E-02	37.4	10.4	.592E-02+-.932E-03	106
			a 0.680	a.604E-02+-.151E-02	39.7	11.0	.320E-02+-.799E-03	106

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

P = BARYON POLARIZATION ALONG K(GAMMA) X P(MESON)

K GEV	E* GEV	THETA MESON CM	THETA MESON LAB	THETA BARYON CM	THETA BARYON LAB	P	REF
0.960+-0.010	1.638	# 91.0+- 9.0	25.1+- 7.6	89.0+- 9.0	11.8+- 3.1	#-0.19+-.14	14
1.000+-0.030	1.660	# 32.0+- 10.0	11.3+- 8.7	148.0+- 10.0	10.5+- 0.8	#-0.06+-.18	14
1.000+-0.020	1.660	# 93.0+- 4.3	31.5+- 7.2	87.0+- 4.3	15.2+- 3.6	#-0.23+-.11	3
1.020+-0.030	1.672	# 61.0+- 7.0	22.3+- 8.0	119.0+- 7.0	17.4+- 4.0	#-0.16+-.12	14
1.020+-0.020	1.672	# 92.0+- 7.0	33.3+- 8.3	88.0+- 7.0	16.6+- 3.9	#-0.30+-.13	14
1.030+-0.020	1.677	# 87.0+- 4.3	32.3+- 6.0	93.0+- 4.3	17.7+- 3.2	#-0.21+-.10	3
1.050	1.688	# 49.8	19.2	130.2	18.9	#-0.28+-.12	202

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C213: GAMMA + PROTON --> LAMBDA ZERO + K+ (K > 0.91 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 1.1156 GEV
M4: 0.4938 GEV

P = BARYON POLARIZATION ALONG K(GAMMA) X P(MESON)

K GEV	E* GEV	THETA MESON CM	THETA MESON LAB	THETA BARYON CM	THETA BARYON LAB	P	REF
1.050	1.688	# 76.8	29.7	103.2	19.7	#-0.07+-.13	202
1.050+-0.020	1.688	# 85.0+- 6.0	32.9+- 6.9	95.0+- 6.0	19.0+- 3.3	#-0.39+-.15	14
1.060+-0.030	1.694	# 80.0+- 4.6	31.4+- 6.5	100.0+- 4.6	19.9+- 3.9	#-0.40+-.13	3
1.060+-0.030	1.694	# 80.0+- 4.6	31.4+- 6.5	100.0+- 4.6	19.9+- 3.9	#-0.36+-.13	3
1.100	1.716	# 47.6	19.3	132.4	21.7	#-0.38+-.12	202
1.100	1.716	# 72.8	29.9	107.2	22.5	#-0.48+-.10	202
1.100	1.716	# 89.9+- 5.1	37.3+- 4.5	90.1+- 5.1	20.6+- 1.5	#-0.34+-.09	45
1.100+-0.030	1.716	# 91.0+- 4.0	37.8+- 6.0	89.0+- 4.0	20.4+- 3.4	#-0.09+-.11	3
1.100	1.716	# 94.4	39.3	85.6	19.9	#-0.32+-.19	202
1.120+-0.030	1.727	# 90.0+- 3.5	38.1+- 5.2	90.0+- 3.5	21.3+- 3.1	#-0.37+-.11	3
1.160	1.748	# 46.0	19.3	134.0	24.5	#-0.54+-.09	202
1.160	1.748	# 70.0	29.9	110.0	25.2	#-0.44+-.10	202
1.160	1.748	# 90.0	39.3	90.0	22.5	#-0.27+-.14	202
1.190+-0.010	1.764	# 90.2+- 4.6	40.1+- 5.0	89.8+- 4.6	23.2+- 2.2	#-0.30+-.07	45
1.290+-0.010	1.817	# 89.8+- 4.3	41.3+- 4.8	90.2+- 4.3	25.3+- 2.2	#-0.08+-.06	45

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 1.00 GEV)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A MU BARN/GEV**2	B 1/GEV**2	C 1/GEV**4	SIG TOT MU BARN	REF
1.00 - 1.10	1.66 - 1.72	2.76 - 2.94	------	------	------	@ 5.49+- 2.05	28
1.10 - 1.20	1.72 - 1.77	2.94 - 3.13	------	------	------	@ 11.24+- 2.20	28
1.10 - 1.30	1.72 - 1.82	2.94 - 3.32	------	------	------	@ 21.10+- 5.00	26
1.20 - 1.30	1.77 - 1.82	3.13 - 3.32	------	------	------	@ 14.40+- 2.30	28
1.30 - 1.40	1.82 - 1.87	3.32 - 3.51	------	------	------	@ 18.34+- 2.70	28
1.30 - 1.50	1.82 - 1.92	3.32 - 3.70	------	------	------	@ 29.80+- 7.10	26
1.40 - 1.60	1.87 - 1.97	3.51 - 3.88	------	------	------	@ 22.00+- 4.70	28
1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	#140.70+- 19.00	# 5.75+- 0.65	------	17.89+- 4.44	28
1.50 - 1.80	1.92 - 2.06	3.70 - 4.26	------	------	------	@ 37.50+- 5.00	26
1.60 - 1.80	1.97 - 2.06	3.88 - 4.26	------	------	------	@ 25.10+- 4.30	28
1.80 - 2.00	2.06 - 2.15	4.26 - 4.63	------	------	------	@ 21.50+- 3.00	28
2.00 - 2.20	2.15 - 2.24	4.63 - 5.01	------	------	------	@ 18.00+- 2.70	28
1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	#128.80+- 11.30	# 5.43+- 0.39	------	20.56+- 3.28	28
1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	------	------	------	@ 33.20+- 4.10	26
2.20 - 2.40	2.24 - 2.32	5.01 - 5.38	------	------	------	@ 15.50+- 2.00	28
2.40 - 2.60	2.32 - 2.40	5.38 - 5.76	------	------	------	@ 16.80+- 2.00	28
2.60 - 2.80	2.40 - 2.48	5.76 - 6.13	------	------	------	@ 19.60+- 2.10	28
2.80	2.48	6.13	# 93.00+- 7.00	# 5.40+- 0.40	------	# 16.40+- 1.00	138
2.80 - 3.00	2.48 - 2.55	6.13 - 6.51	------	------	------	@ 18.40+- 2.00	28
2.90	2.51	6.32	@156.00+- 21.00	------	------	------	136
2.00 - 4.00	2.15 - 2.90	4.63 - 8.39	#178.00+- 33.00	# 8.30+- 1.00	------	# 19.20+- 2.30	107
2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	#146.80+- 13.00	# 6.92+- 0.43	------	19.50+- 2.94	28
2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	------	------	------	@ 22.40+- 3.40	26
3.00 - 3.50	2.55 - 2.73	6.51 - 7.45	------	------	------	@ 16.50+- 1.30	28
3.50	2.73	7.45	@139.00+- 24.00	------	------	------	136
3.50 - 4.00	2.73 - 2.90	7.45 - 8.39	------	------	------	@ 16.60+- 1.30	28
4.10	2.93	8.57	@132.00+- 16.00	------	------	------	136
3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	#149.30+- 18.50	# 8.10+- 0.69	------	17.52+- 3.66	28
3.20 - 4.90	2.62 - 3.17	6.89 - 10.08	125.00+- 15.00	8.10+- 1.50	------	14.60+- 1.80	38
4.00 - 4.50	2.90 - 3.05	8.39 - 9.32	------	------	------	@ 16.00+- 1.30	28
4.30	2.99	8.95	#145.00+- 15.00	# 7.60+- 0.50	------	# 19.20+- 1.20	94
4.70	3.11	9.70	# 80.00+- 5.00	# 5.50+- 0.30	------	# 16.40+- 1.00	138
3.50 - 6.00	2.73 - 3.48	7.45 - 12.14	------	------	------	@ 20.90+- 2.50	26
4.70	3.11	9.70	@136.00+- 6.00	------	------	------	136
4.50 - 5.00	3.05 - 3.20	9.32 - 10.26	------	------	------	@ 16.90+- 1.40	28
5.10	3.23	10.45	@145.00+- 14.00	------	------	------	85
5.20	3.26	10.64	------	------	------	# 16.00+- 2.50	78
5.23	3.27	10.69	@145.00+- 12.00	------	------	------	85
4.50 - 5.80	3.05 - 3.43	9.32 - 11.76	#129.70+- 16.20	# 7.90+- 0.66	------	15.95+- 3.32	28
4.50 - 5.80	3.05 - 3.43	9.32 - 11.76	#146.00+- 50.00	# 10.00+- 1.50	# 3.70+- 1.30	------	73
5.25	3.28	10.73	------	------	------	# 18.50+- 0.60	114
5.30	3.29	10.83	@139.00+- 8.00	------	------	------	136
5.00 - 5.80	3.20 - 3.43	10.26 - 11.76	------	------	------	@ 15.00+- 2.20	28
5.50	3.35	11.20	#166.90+- 20.00	------	------	# 19.80+- 2.18	137
4.00 - 8.00	2.90 - 3.99	8.39 - 15.89	#133.00+- 34.00	# 8.90+- 1.50	------	# 15.60+- 1.70	107
5.90	3.46	11.95	@119.00+- 7.00	------	------	------	136
6.00	3.48	12.14	@115.00+- 9.00	@ 8.90+- 0.70	------	12.63+- 1.98	85
6.00	3.48	12.14	#151.90+- 15.20	------	------	# 18.00+- 1.80	137
6.50	3.62	13.08	#137.60+- 13.80	------	------	# 16.27+- 1.63	137
6.50	3.62	13.08	@117.00+- 7.00	------	------	------	136
6.85	3.71	13.73	@120.00+- 10.00	@ 8.50+- 0.50	------	13.89+- 1.97	85
7.16	3.78	14.32	@132.00+- 11.00	@ 8.50+- 0.50	------	15.30+- 2.17	85
7.50	3.87	14.95	------	------	------	# 14.40+- 2.50	78
8.80	4.17	17.39	@142.00+- 11.00	@ 8.50+- 0.50	------	16.54+- 2.25	85
9.20	4.26	18.14	@131.00+- 10.00	------	------	------	85
9.58	4.34	18.86	@118.00+- 9.00	------	------	------	85
11.50	4.74	22.46	#113.40+- 6.80	------	------	# 13.44+- 0.81	137
11.50	4.74	22.46	# 94.00+- 32.00	# 8.60+- 1.50	# 2.10+- 1.30	------	73
8.00 - 16.00	3.99 - 5.56	15.89 - 30.90	#152.00+- 65.00	# 11.10+- 2.80	------	# 13.40+- 3.60	107
12.25	4.89	23.87	#111.40+- 6.80	------	------	# 13.19+- 0.79	137
13.00	5.03	25.27	#108.70+- 6.50	------	------	# 12.86+- 0.77	137
13.00	5.03	25.27	# 71.00+- 25.00	# 7.40+- 1.50	# 0.90+- 1.30	------	73
13.75	5.17	26.68	#109.50+- 5.50	------	------	# 12.95+- 0.65	137
14.50	5.30	28.09	#101.20+- 6.10	------	------	# 11.98+- 0.72	137
14.50	5.30	28.09	# 80.00+- 34.00	# 8.50+- 1.40	# 2.10+- 1.20	------	73
15.25	5.43	29.50	#106.60+- 6.40	------	------	# 12.54+- 0.75	137
16.00	5.56	30.90	#103.30+- 6.20	------	------	# 12.24+- 0.73	137
16.00	5.56	30.90	# 78.00+- 26.00	# 8.20+- 1.30	# 1.60+- 1.10	------	73
16.90	5.71	32.59	#105.30+- 6.30	------	------	# 12.47+- 0.75	137
17.80	5.86	34.28	#100.50+- 5.00	------	------	# 11.89+- 0.60	137
17.80	5.86	34.28	# 87.00+- 30.00	# 8.50+- 1.30	# 1.90+- 1.20	------	73

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
M4 = 0.6975 - 0.8315 GEV							
0.90 - 1.20	1.68	-----	# 0.0 - 50.00	-----	--------	# 2.00 +-1.00	8
			# 45.00- 63.00	-----	--------	# 4.40 +-1.30	8
			# 63.00- 81.00	-----	--------	# 3.60 +-2.10	8
			# 81.00- 99.00	-----	--------	# 2.10 +-.800	8
			# 99.00- 117.00	-----	--------	# 1.30 +-.600	8
M4 = 0.7650 GEV							
1.40 - 1.80	1.96	-----	# 0.0 - 12.83	-----	--------	# 14.5 +-2.50	28
			# 12.83- 18.20	-----	--------	# 11.8 +-2.10	28
			# 18.20- 22.33	-----	--------	# 12.6 +-2.10	28
			# 22.33- 25.84	-----	--------	# 9.80 +-2.00	28
			# 25.84- 31.79	-----	--------	# 9.55 +-1.25	28
			# 31.79- 36.87	-----	--------	# 9.68 +-1.36	28
			# 36.87- 45.58	-----	--------	# 3.92 +-.630	28
			# 45.58- 60.00	-----	--------	# 2.19 +-.350	28
			# 60.00- 75.52	-----	--------	# .890 +-.240	28
			# 75.52- 90.00	-----	--------	# .640 +-.200	28
			# 90.00- 104.48	-----	--------	# 1.18 +-.220	28
			#104.48- 120.00	-----	--------	# .470 +-.170	28
			#120.00- 138.59	-----	--------	# .340 +-.150	28
			#138.59- 180.00	-----	--------	# .130 +-.130	28
		# 0.0500- 0.1000	-------	-----	# 97.3 +-10.0	--------	28
		# 0.1000- 0.2000	-------	-----	# 62.7 +-6.40	--------	28
		# 0.2000- 0.3000	-------	-----	# 33.9 +-4.70	--------	28
		# 0.3000- 0.4000	-------	-----	# 17.7 +-4.20	--------	28
		# 0.4000- 0.5000	-------	-----	# 9.90 +-3.50	--------	28
		# 0.5000- 0.7000	-------	-----	# 8.10 +-2.10	--------	28
		# 0.7000- 1.0000	-------	-----	# 8.80 +-1.60	--------	28
		# 1.0000- 1.5000	-------	-----	# 2.80 +-.800	--------	28
1.80 - 2.50	2.19	-----	# 0.0 - 12.83	-----	--------	# 24.1 +-2.10	28
			# 12.83- 18.20	-----	--------	# 19.5 +-1.80	28
			# 18.20- 22.33	-----	--------	# 15.7 +-1.60	28
			# 22.33- 25.84	-----	--------	# 12.7 +-1.40	28
			# 25.84- 31.79	-----	--------	# 9.74 +-.970	28
			# 31.79- 36.87	-----	--------	# 6.55 +-.730	28
			# 36.87- 45.58	-----	--------	# 4.55 +-.470	28
			# 45.58- 60.00	-----	--------	# 1.24 +-.210	28
			# 60.00- 75.52	-----	--------	# .350 +-.130	28
			# 75.52- 90.00	-----	--------	# .450 +-.140	28
			# 90.00- 120.00	-----	--------	# .190 +-.800E-01	28
			#120.00- 138.59	-----	--------	# .800E-01+-.600E-01	28
			#138.59- 180.00	-----	--------	# .800E-01+-.600E-01	28
		# 0.0250- 0.0500	-------	-----	# 116. +-14.0	--------	28
		# 0.0500- 0.1000	-------	-----	# 91.4 +-7.50	--------	28

= NUMERICAL VALUE FROM TABLE 3 = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.80 - 2.50	2.19	# 0.1000-0.2000	------	-----	# 52.1 +-4.20	--------	28
		# 0.2000-0.3000	------	-----	# 35.0 +-3.10	--------	28
		# 0.3000-0.4000	------	-----	# 20.3 +-2.50	--------	28
		# 0.4000-0.5000	------	-----	# 10.5 +-1.80	--------	28
		# 0.5000-0.7000	------	-----	# 2.00 +-.900	--------	28
		# 0.7000-1.0000	------	-----	# 2.30 +-.700	--------	28
		# 1.0000-1.5000	------	-----	# .900 +-.500	--------	28
2.52	2.37	$ 0.0163	# 0.00	.0	# 350. +-110.	91.3 +-28.7	11
2.56	2.38	# 0.0960	# 6.50	6.110	# 150. +-62.0	40.0 +-16.5	11
2.60	2.40	# 0.0390	# 3.50	3.258	# 220. +-74.0	60.0 +-20.2	11
2.00 - 4.00	2.43	# 0.0 - 0.0500	------	-----	# >65.0	--------	107
		# 0.0500-0.1000	------	-----	# 87.0 +-15.0	--------	107
		# 0.1000-0.2000	------	-----	# 63.0 +-8.30	--------	107
		# 0.2000-0.3000	------	-----	# 16.8 +-4.40	--------	107
		# 0.3000-0.4000	------	-----	# 12.9 +-3.20	--------	107
		# 0.4000-0.5000	------	-----	# 3.20 +-2.20	--------	107
2.80	2.48	# 0.0200-0.0500	4.96-11.34	1.66-3.792	# 78.0 +-6.00	23.6 +-1.82	138
		# 0.0500-0.0750	11.34-14.68	3.79-4.917	# 64.0 +-6.00	19.4 +-1.82	138
		# 0.0750-0.1000	14.68-17.41	4.92-5.837	# 58.0 +-6.00	17.6 +-1.82	138
		# 0.1000-0.1500	17.41-21.89	5.84-7.355	# 46.0 +-4.00	13.9 +-1.21	138
		# 0.1500-0.2000	21.89-25.62	7.36-8.638	# 39.0 +-4.00	11.8 +-1.21	138
		# 0.2000-0.2500	25.62-28.91	8.64-9.772	# 25.0 +-4.00	7.57 +-1.21	138
		# 0.2500-0.3000	28.91-31.89	9.77-10.81	# 22.0 +-2.00	6.66 +-.606	138
		# 0.3000-0.3500	31.89-34.63	10.81-11.77	# 15.0 +-4.00	4.54 +-1.21	138
		# 0.3500-0.4000	34.63-37.20	11.77-12.68	# 11.4 +-2.40	3.45 +-.727	138
		# 0.4000-0.5000	37.20-41.93	12.68-14.37	# 6.20 +-1.10	1.88 +-.333	138
		# 0.5000-0.7000	41.93-50.29	14.37-17.43	# 2.40 +-.600	.727 +-.182	138
		# 0.7000-1.0000	50.29-61.24	17.43-21.62	# 2.20 +-.400	.666 +-.121	138
		# 1.0000-1.5000	61.24-77.39	21.62-28.26	# .760 +-.220	.230 +-.666E-01	138
		# 1.5000-2.5000	77.39-107.89	28.26-42.95	# .170 +-.900E-01	.515E-01+-.273E-01	138
		# 2.5000-3.8182	107.89-179.92	42.55-176.6	# .230 +-.800E-01	.696E-01+-.242E-01	138
2.50 - 3.50	2.52	-----	# 0.0 - 9.07	-----	--------	# 30.4 +-3.10	28
			# 9.07-12.83	-----	--------	# 29.5 +-3.70	28
			# 12.83-18.20	-----	--------	# 25.5 +-2.00	28
			# 18.20-22.33	-----	--------	# 15.7 +-1.70	28
			# 22.33-25.84	-----	--------	# 11.2 +-1.40	28
			# 25.84-31.79	-----	--------	# 5.90 +-.500	28
			# 31.79-45.58	-----	--------	# 1.18 +-.270	28
			# 45.58-60.00	-----	--------	# .670 +-.140	28
			# 60.00-90.00	-----	--------	# .900E-01+-.500E-01	28
			# 90.00-120.00	-----	--------	# <.200E-01	28
			#120.00-180.00	-----	--------	# .600E-01+-.300E-01	28
		# 0.0100-0.0500	------	-----	# 92.0 +-8.40	--------	28
		# 0.0500-0.1000	------	-----	# 94.8 +-7.00	--------	28
		# 0.1000-0.2000	------	-----	# 49.2 +-3.60	--------	28
		# 0.2000-0.3000	------	-----	# 24.0 +-2.70	--------	28

= NUMERICAL VALUE FROM TABLE & = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
2.50 - 3.50	2.52	# 0.3000-0.4000	------	-----	# 16.0 +-2.00	--------	28
		# 0.4000-0.5000	------	-----	# 6.00 +-1.40	--------	28
		# 0.5000-0.7000	------	-----	# 2.60 +-.700	--------	28
		# 0.7000-1.0000	------	-----	# .900 +-.400	--------	28
		# 1.0000-1.5000	------	-----	# .580 +-.200	--------	28
3.20 - 4.90	2.85	# 0.0080	1.93	.5808	# 94.0 +-8.00	43.5 +-3.70	38
		# 0.0280	6.99	2.110	# 85.0 +-9.00	39.4 +-4.17	38
		# 0.0480	9.71	2.930	# 76.0 +-12.0	35.2 +-5.56	38
		# 0.0680	11.82	3.570	# 71.0 +-14.0	32.9 +-6.48	38
		# 0.0880	13.61	4.114	# 46.0 +-15.0	21.3 +-6.95	38
		# 0.1240	16.35	4.951	# 33.0 +-9.00	15.3 +-4.17	38
		# 0.1740	19.55	5.931	# 18.0 +-7.00	8.33 +-3.24	38
		# 0.2240	22.30	6.781	# 39.0 +-16.0	18.1 +-7.41	38
		# 0.2740	24.77	7.546	# 23.0 +-12.0	10.6 +-5.56	38
		# 0.3240	27.02	8.250	# 32.0 +-20.0	14.8 +-9.26	38
3.50 - 4.50	2.88	0.0046-0.0484	# 0.0 - 9.07	0.0 - 2.593	49.6 +-6.47	# 27.6 +-3.60	28
		0.0399-0.0920	# 9.07- 12.83	# 2.59- 3.674	96.0 +-11.7	# 45.2 +-5.50	28
		0.0718-0.1797	# 12.83- 18.20	# 3.67- 5.227	55.2 +-6.59	# 26.0 +-3.10	28
		0.1360-0.2670	# 18.20- 22.33	# 5.23- 6.433	28.9 +-3.82	# 13.6 +-1.80	28
		0.1999-0.3544	# 22.33- 25.84	# 6.43- 7.468	17.0 +-2.97	# 8.00 +-1.40	28
		0.2639-0.5295	# 25.84- 31.79	# 7.47- 9.247	5.44 +-.871	# 2.56 +-.410	28
		0.3920-1.0545	# 31.79- 45.58	# 9.25- 13.53	.659 +-.489	# .310 +-.230	28
		0.7763-1.7540	# 45.58- 60.00	# 13.53- 18.34	.680 +-.234	# .320 +-.110	28
		1.2882-3.5033	# 60.00- 90.00	# 18.34- 30.14	.276E-01+-.552E-01	# .130E-01+-.260E-01	28
		2.5686-5.2526	# 90.00- 120.00	# 30.14- 46.16	.531E-01+-.446E-01	# .250E-01+-.210E-01	28
		3.8489-7.0020	#120.00- 180.00	# 46.16- 180.0	.659E-01+-.552E-01	# .310E-01+-.260E-01	28
		# 0.0050-0.0500	0.0 - 10.40	0.0 - 3.252	# 57.6 +-8.70	23.5 +-3.55	28
		# 0.0500-0.1000	9.24- 15.41	2.64- 4.827	# 88.6 +-7.90	42.7 +-3.81	28
		# 0.1000-0.2000	13.41- 22.34	3.84- 7.025	# 41.7 +-3.90	20.1 +-1.88	28
		# 0.2000-0.3000	19.24- 27.63	5.53- 8.731	# 17.4 +-2.60	8.39 +-1.25	28
		# 0.3000-0.4000	23.71- 32.13	6.84- 10.20	# 9.20 +-2.00	4.44 +-.964	28
		# 0.4000-0.5000	27.50- 36.12	7.96- 11.52	# 6.20 +-1.60	2.99 +-.771	28
		# 0.5000-0.7000	30.86- 43.14	8.97- 13.88	# 1.81 +-.500	.873 +-.241	28
		# 0.7000-1.0000	36.75- 52.23	10.76- 17.06	# .880 +-.300	.424 +-.145	28
		# 1.0000-1.5000	44.32- 65.34	13.12- 21.92	# .400 +-.200	.193 +-.964E-01	28
4.30	2.99	a 0.0 - 0.0250	0.0 - 6.29	0.0 - 1.827	a >26.1	>13.8	94
		a 0.0250-0.0450	6.29- 8.91	1.83- 2.589	a >74.1	>39.0	94
		a 0.0400-0.1000	8.33- 13.75	2.42- 4.006	a 87.6 +-10.4	46.2 +-5.48	94
		a 0.1000-0.1500	13.75- 17.01	4.01- 4.965	a 59.5 +-8.90	31.4 +-4.69	94
		a 0.1500-0.2000	17.01- 19.76	4.97- 5.776	a 30.1 +-6.60	15.9 +-3.48	94
		a 0.2000-0.2500	19.76- 22.18	5.78- 6.495	a 29.0 +-6.30	15.3 +-3.32	94
		a 0.2500-0.3500	22.18- 26.38	6.50- 7.757	a 13.6 +-3.20	7.17 +-1.69	94
		a 0.3500-0.4500	26.38- 30.05	7.76- 8.867	a 7.50 +-2.50	3.95 +-1.32	94
		a 0.4500-0.5500	30.05- 33.34	8.87- 9.877	a 3.80 +-1.80	2.00 +-.949	94
		a 0.5500-0.6500	33.34- 36.37	9.88- 10.82	a 2.20 +-1.30	1.16 +-.685	94
		P# 0.6500-1.2500	36.37- 51.39	10.82- 15.67	P# 1.03 +-.410	P .543 +-.216	94
4.40	3.02	$ 0.0048	# 0.00	.0	# 230. +-30.0	125. +-16.3	11
4.70	3.11	# 0.0200-0.0500	5.30- 9.04	1.49- 2.543	# 65.0 +-4.00	38.1 +-2.35	138
		# 0.0500-0.0750	9.04- 11.25	2.54- 3.166	# 56.0 +-5.00	32.9 +-2.93	138
		# 0.0750-0.1000	11.25- 13.09	3.17- 3.688	# 49.0 +-4.00	28.7 +-2.35	138

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
4.70	3.11	# 0.1000-0.1500	13.09-16.17	3.69-4.563	# 41.0 +-3.00	24.1 +-1.76	138
		# 0.1500-0.2000	16.17-18.76	4.56-5.303	# 33.0 +-2.00	19.4 +-1.17	138
		# 0.2000-0.2500	18.76-21.04	5.30-5.958	# 20.0 +-2.00	11.7 +-1.17	138
		# 0.2500-0.3000	21.04-23.11	5.96-6.555	# 20.0 +-1.40	11.7 +-.821	138
		# 0.3000-0.3500	23.11-25.02	6.56-7.108	# 12.4 +-1.60	7.27 +-.939	138
		# 0.3500-0.4000	25.02-26.79	7.11-7.627	# 9.00 +-1.50	5.28 +-.880	138
		# 0.4000-0.5000	26.79-30.06	7.63-8.587	# 6.20 +-1.00	3.64 +-.587	138
		# 0.5000-0.7000	30.06-35.78	8.59-10.29	# 2.40 +-.400	1.41 +-.235	138
		# 0.7000-1.0000	35.78-43.13	10.29-12.55	# .780 +-.160	.458 +-.939E-01	138
		# 1.0000-1.5000	43.13-53.54	12.55-15.89	# .340 +-.800E-01	.199 +-.469E-01	138
		# 1.5000-2.5000	53.54-71.16	15.89-22.06	# .670E-01+-.270E-01	.393E-01+-.158E-01	138
		# 2.5000-7.3766	71.16-179.92	22.06-178.7	# .160E-01+-.800E-02	.939E-02+-.469E-02	138
4.80	3.14	# 0.0900	# 3.50	3.421	# 95.0 +-14.0	57.2 +-8.42	11
4.50 - 5.80	3.22	0.0027-0.0617	# 0.0 - 9.07	0.0 - 2.350	52.6 +-5.86	# 39.5 +-4.40	28
		0.0484-0.1205	# 5.07-12.83	# 2.35-3.329	68.7 +-7.35	# 43.9 +-4.70	28
		0.0920-0.2387	# 12.83-18.20	# 3.33-4.738	41.1 +-4.07	# 26.3 +-2.60	28
		0.1797-0.3565	# 18.20-22.33	# 4.74-5.833	15.8 +-2.50	# 10.1 +-1.60	28
		0.2670-0.4744	# 22.33-25.84	# 5.83-6.773	7.66 +-1.88	# 4.90 +-1.20	28
		0.3544-0.7104	# 25.84-31.79	# 6.77-8.390	2.03 +-.547	# 1.30 +-.350	28
		0.5295-1.4184	# 31.79-45.58	# 8.39-12.30	.938E-01+-.938E-01	# .600E-01+-.600E-01	28
		1.0545-2.3614	# 45.58-60.00	# 12.30-16.71	.563 +-.407	# .360 +-.260	28
		1.7540-4.7201	# 60.00-90.00	# 16.71-27.74	.141 +-.938E-01	# .900E-01+-.600E-01	28
		3.5033-7.0789	# 90.00-120.00	# 27.74-43.28	.188E-01+-.188E-01	# .120E-01+-.120E-01	28
		0.2156-3.9010	# 20.00-80.00	# 5.21-23.71	<.188E-01	# <.120E-01	28
		# 0.0025-0.0500	0.0 - 9.24	0.0 - 2.641	# 55.2 +-7.10	30.7 +-3.95	28
		# 0.0500-0.1000	8.12-13.41	2.10-3.841	# 69.6 +-7.50	45.5 +-4.90	28
		# 0.1000-0.2000	11.66-19.24	3.02-5.530	# 42.7 +-4.10	27.9 +-2.68	28
		# 0.2000-0.3000	16.63-23.71	4.32-6.840	# 16.5 +-2.60	10.8 +-1.70	28
		# 0.3000-0.4000	20.45-27.50	5.33-7.962	# 7.10 +-1.70	4.64 +-1.11	28
		# 0.4000-0.5000	23.68-30.86	6.19-8.967	# 5.60 +-1.70	3.66 +-1.11	28
		# 0.5000-0.7000	26.54-36.75	6.96-10.76	# 1.68 +-.600	1.10 +-.392	28
		# 0.7000-1.0000	31.55-44.32	8.32-13.12	# .370 +-.300	.242 +-.196	28
4.00 - 8.00	3.30	# 0.0 - 0.0500	------	-----	# >59.0	--------	107
		# 0.0500-0.1000	------	-----	# 74.4 +-14.0	--------	107
		# 0.1000-0.2000	------	-----	# 30.8 +-5.80	--------	107
		# 0.2000-0.3000	------	-----	# 17.9 +-4.80	--------	107
		# 0.3000-0.4000	------	-----	# 7.10 +-2.90	--------	107
		# 0.4000-0.5000	------	-----	# 1.80 +-1.20	--------	107
5.50	3.35	@ 0.2000	17.14	4.554	@ 14.2 +-4.50	10.0 +-3.18	137
		@ 0.3000	21.08	5.619	@ 9.53 +-1.93	6.73 +-1.36	137
		@ 0.5000	27.38	7.342	@ 3.41 +-.540	2.41 +-.381	137
		@ 0.7000	32.55	8.783	@ .795 +-.166	.561 +-.117	137
		@ 0.9000	37.08	10.07	@ .317 +-.109	.224 +-.770E-01	137
		@ 1.1000	41.17	11.25	@ .212 +-.540	.150 +-.381	137
6.00	3.48	@ 0.0070	2.45	.6240	@ 136. +-11.0	106. +-8.59	85
		@ 0.0180	4.55	1.162	@ 121. +-9.30	94.5 +-7.26	85
		@ 0.0330	6.39	1.631	@ 96.1 +-8.20	75.0 +-6.40	85
		@ 0.0520	8.14	2.080	@ 70.0 +-7.50	54.6 +-5.85	85
		@ 0.0780	10.06	2.573	@ 61.1 +-6.90	47.7 +-5.39	85
		@ 0.1080	11.90	3.045	@ 49.7 +-5.10	38.8 +-3.98	85
		@ 0.1200	12.56	3.216	@ 41.2 +-7.70	32.2 +-6.01	137

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
6.00	3.48	a 0.1750	15.24	3.906	a 28.2 +-3.10	22.0 +-2.42	85
		a 0.2210	17.16	4.405	a 18.5 +-2.70	14.4 +-2.11	85
		a 0.2700	19.01	4.885	a 12.3 +-1.60	9.60 +-1.25	85
		a 0.5000	26.03	6.731	a 3.42 +-.600	2.67 +-.468	137
		a 0.7000	30.93	8.045	a 1.08 +-.220	.843 +-.172	137
		a 0.9000	35.21	9.212	a .376 +-.730E-01	.294 +-.570E-01	137
		a 1.1000	39.08	10.28	a .259 +-.570E-01	.202 +-.445E-01	137
6.50	3.62	a 0.1200	12.02	2.977	a 40.9 +-7.30	35.0 +-6.24	137
		a 0.2000	15.60	3.869	a 27.6 +-5.20	23.6 +-4.45	137
		a 0.3000	19.17	4.767	a 11.4 +-2.20	9.75 +-1.88	137
		a 0.4000	22.19	5.533	a 5.22 +-.980	4.46 +-.838	137
		a 0.5000	24.86	6.215	a 2.61 +-.330	2.23 +-.282	137
		a 0.7000	29.53	7.421	a .920 +-.140	.787 +-.120	137
		a 0.9000	33.60	8.491	a .455 +-.850E-01	.389 +-.727E-01	137
		a 1.1000	37.28	9.472	a .165 +-.900E-01	.141 +-.770E-01	137
7.60	3.89	a 0.0080	2.57	.5943	a 133. +-11.0	136. +-11.2	85
		a 0.0160	3.85	.8899	a 108. +-7.60	110. +-7.75	85
		a 0.0500	7.05	1.632	a 84.8 +-6.50	86.4 +-6.63	85
		a 0.1020	10.16	2.354	a 51.6 +-4.00	52.6 +-4.08	85
		a 0.1740	13.33	3.092	a 31.3 +-2.80	31.9 +-2.85	85
		a 0.2640	16.46	3.826	a 13.6 +-1.10	13.9 +-1.12	85
		a 0.3750	19.66	4.582	a 6.10 +-.750	6.22 +-.765	85
8.00 -16.00	4.57	# 0.0 - 0.0500	------	-----	# >30.0	--------	107
		# 0.0500- 0.1000	------	-----	# 68.5 +-23.0	--------	107
		# 0.1000- 0.2000	------	-----	# 34.0 +-9.00	--------	107
		# 0.2000- 0.3000	------	-----	# 9.90 +-5.00	--------	107
		# 0.3000- 0.4000	------	-----	# 3.00 +-2.10	--------	107
11.50	4.74	a 0.2000	11.42	2.207	a 23.0 +-3.60	36.8 +-5.77	137
		a 0.3000	14.01	2.710	a 8.36 +-1.66	13.4 +-2.66	137
		a 0.4000	16.20	3.138	a 4.91 +-.700	7.86 +-1.12	137
		a 0.5000	18.13	3.517	a 2.28 +-.320	3.65 +-.512	137
		a 0.7000	21.49	4.182	a .667 +-.670E-01	1.07 +-.107	137
		a 0.9000	24.41	4.765	a .236 +-.340E-01	.378 +-.544E-01	137
		a 1.1000	27.03	5.293	a .107 +-.150E-01	.171 +-.240E-01	137
		a 1.3800	30.35	5.970	a .338E-01+-.111E-01	.541E-01+-.178E-01	137
13.00	5.03	a 0.2000	10.70	1.954	a 17.4 +-3.70	31.8 +-6.75	137
		a 0.3000	13.12	2.399	a 7.85 +-1.23	14.3 +-2.25	137
		a 0.4000	15.17	2.777	a 4.61 +-.700	8.41 +-1.28	137
		a 0.5000	16.97	3.112	a 2.21 +-.300	4.03 +-.548	137
		a 0.7000	20.11	3.698	a .690 +-.900E-01	1.26 +-.164	137
		a 0.9000	22.84	4.211	a .191 +-.270E-01	.349 +-.493E-01	137
		a 1.1000	25.29	4.675	a .104 +-.190E-01	.190 +-.347E-01	137
		a 1.3800	28.39	5.268	a .316E-01+-.910E-02	.577E-01+-.166E-01	137
14.50	5.30	a 0.1200	7.81	1.356	a 39.1 +-6.50	80.1 +-13.3	137
		a 0.2000	10.10	1.754	a 16.3 +-3.10	33.4 +-6.35	137
		a 0.3000	12.38	2.153	a 7.61 +-1.22	15.6 +-2.50	137
		a 0.4000	14.31	2.491	a 4.13 +-.620	8.46 +-1.27	137
		a 0.5000	16.01	2.790	a 2.19 +-.330	4.49 +-.676	137
		a 0.7000	18.97	3.314	a .603 +-.860E-01	1.24 +-.176	137
		a 0.9000	21.54	3.772	a .236 +-.270E-01	.484 +-.553E-01	137
		a 1.1000	23.85	4.186	a .936E-01+-.187E-01	.192 +-.383E-01	137
		a 1.3800	26.77	4.714	a .207E-01+-.900E-02	.424E-01+-.184E-01	137
16.00	5.56	a 0.1200	7.42	1.230	a 33.9 +-5.80	77.1 +-13.2	137
		a 0.2000	9.59	1.591	a 16.5 +-3.40	37.5 +-7.73	137
		a 0.3000	11.76	1.952	a 9.18 +-1.99	20.9 +-4.52	137
		a 0.4000	13.59	2.258	a 4.45 +-.650	10.1 +-1.48	137
		a 0.5000	15.20	2.529	a 2.10 +-.280	4.77 +-.637	137
		a 0.7000	18.01	3.003	a .586 +-.660E-01	1.33 +-.150	137
		a 0.9000	20.44	3.416	a .216 +-.250E-01	.491 +-.568E-01	137
		a 1.1000	22.63	3.790	a .924E-01+-.122E-01	.210 +-.277E-01	137
		a 1.3800	25.39	4.266	a .211E-01+-.770E-02	.480E-01+-.175E-01	137
17.80	5.86	a 0.1200	7.02	1.106	a 35.3 +-5.50	89.7 +-14.0	137
		a 0.2000	9.07	1.431	a 16.1 +-4.40	40.9 +-11.2	137
		a 0.3000	11.12	1.755	a 8.13 +-1.33	20.7 +-3.38	137
		a 0.4000	12.85	2.030	a 3.99 +-.570	10.1 +-1.45	137
		a 0.5000	14.37	2.273	a 1.94 +-.320	4.93 +-.813	137
		a 0.7000	17.02	2.698	a .539 +-.610E-01	1.37 +-.155	137
		a 0.9000	19.32	3.069	a .190 +-.300E-01	.483 +-.763E-01	137

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 17.80

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	REF
$	0.0048	4.40	3.02	9.14	# 230. +-30.0	11
@	0.0070	6.00	3.48	12.14	@ 136. +-11.0	85
#	0.0080	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 94.0 +-8.00	38
@	0.0080	7.60	3.89	15.14	@ 133. +-11.0	85
@	0.0 - 0.0250	4.30	2.99	8.95	@ > 26.1	94
@	0.0160	7.60	3.89	15.14	@ 108. +-7.60	85
$	0.0163	2.52	2.37	5.61	# 350. +-110.	11
@	0.0180	6.00	3.48	12.14	@ 121. +-9.30	85
#	0.0 - 0.0500	2.00 - 4.00	2.15 - 2.90	4.63 - 8.39	# > 65.0	107
#	0.0 - 0.0500	4.00 - 8.00	2.90 - 3.99	8.39 -15.89	# > 59.0	107
#	0.0 - 0.0500	8.00 -16.00	3.99 - 5.56	15.89 -30.90	# > 30.0	107
#	0.0025 - 0.0500	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	# 55.2 +-7.10	28
	0.0046 - 0.0484	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	49.6 +-6.47	28
#	0.0050 - 0.0500	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	# 57.6 +-8.70	28
#	0.0280	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 85.0 +-9.00	38
#	0.0100 - 0.0500	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 92.0 +-8.40	28
	0.0027 - 0.0617	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	52.6 +-5.86	28
@	0.0330	6.00	3.48	12.14	@ 96.1 +-8.20	85
#	0.0200 - 0.0500	2.80	2.48	6.13	# 78.0 +-6.00	138
@	0.0250 - 0.0450	4.30	2.99	8.95	@ > 74.1	94
#	0.0200 - 0.0500	4.70	3.11	9.70	# 65.0 +-4.00	138
#	0.0250 - 0.0500	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 116. +-14.0	28
#	0.0390	2.60	2.40	5.76	# 220. +-74.0	11
#	0.0480	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 76.0 +-12.0	38
@	0.0500	7.60	3.89	15.14	@ 84.8 +-6.50	85
@	0.0520	6.00	3.48	12.14	@ 70.0 +-7.50	85
#	0.0500 - 0.0750	2.80	2.48	6.13	# 64.0 +-6.00	138
#	0.0500 - 0.0750	4.70	3.11	9.70	# 56.0 +-5.00	138
	0.0399 - 0.0920	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	96.0 +-11.7	28
#	0.0680	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 71.0 +-14.0	38
@	0.0400 - 0.1000	4.30	2.99	8.95	@ 87.6 +-10.4	94
#	0.0500 - 0.1000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 91.4 +-7.50	28
#	0.0500 - 0.1000	2.00 - 4.00	2.15 - 2.90	4.63 - 8.39	# 87.0 +-15.0	107
#	0.0500 - 0.1000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 94.8 +-7.00	28
#	0.0500 - 0.1000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	# 88.6 +-7.90	28
#	0.0500 - 0.1000	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	# 69.6 +-7.50	28
#	0.0500 - 0.1000	4.00 - 8.00	2.90 - 3.99	8.39 -15.89	# 74.4 +-14.0	107
#	0.0500 - 0.1000	8.00 -16.00	3.99 - 5.56	15.89 -30.90	# 68.5 +-23.0	107
@	0.0780	6.00	3.48	12.14	@ 61.1 +-6.90	85
	0.0484 - 0.1205	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	68.7 +-7.35	28
#	0.0750 - 0.1000	2.80	2.48	6.13	# 58.0 +-6.00	138
#	0.0750 - 0.1000	4.70	3.11	9.70	# 49.0 +-4.00	138
#	0.0880	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 46.0 +-15.0	38
#	0.0900	4.80	3.14	9.89	# 95.0 +-14.0	11
#	0.0960	2.56	2.38	5.68	# 150. +-62.0	11
@	0.1020	7.60	3.89	15.14	@ 51.6 +-4.00	85
@	0.1080	6.00	3.48	12.14	@ 49.7 +-5.10	85
@	0.1200	6.00	3.48	12.14	@ 41.2 +-7.70	137
@	0.1200	6.50	3.62	13.08	@ 40.9 +-7.30	137
@	0.1200	14.50	5.30	28.09	@ 39.1 +-6.50	137
@	0.1200	16.00	5.56	30.90	@ 33.9 +-5.80	137
@	0.1200	17.80	5.86	34.28	@ 35.3 +-5.50	137
#	0.1240	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 33.0 +-9.00	38
#	0.1000 - 0.1500	2.80	2.48	6.13	# 46.0 +-4.00	138
@	0.1000 - 0.1500	4.30	2.99	8.95	@ 59.5 +-8.90	94
#	0.1000 - 0.1500	4.70	3.11	9.70	# 41.0 +-3.00	138
	0.0718 - 0.1797	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	55.2 +-6.59	28
#	0.1000 - 0.2000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 52.1 +-4.20	28
#	0.1000 - 0.2000	2.00 - 4.00	2.15 - 2.90	4.63 - 8.39	# 63.0 +-8.30	107
#	0.1000 - 0.2000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 49.2 +-3.60	28
#	0.1000 - 0.2000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	# 41.7 +-3.90	28
#	0.1000 - 0.2000	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	# 42.7 +-4.10	28
#	0.1000 - 0.2000	4.00 - 8.00	2.90 - 3.99	8.39 -15.89	# 30.8 +-5.80	107
#	0.1000 - 0.2000	8.00 -16.00	3.99 - 5.56	15.89 -30.90	# 34.0 +-9.00	107
	0.0920 - 0.2387	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	41.1 +-4.07	28
#	0.1740	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 18.0 +-7.00	38
@	0.1740	7.60	3.89	15.14	@ 31.3 +-2.80	85
#	0.1500 - 0.2000	2.80	2.48	6.13	# 39.0 +-4.00	138
@	0.1500 - 0.2000	4.30	2.99	8.95	@ 30.1 +-6.60	94
#	0.1500 - 0.2000	4.70	3.11	9.70	# 33.0 +-2.00	138
@	0.1750	6.00	3.48	12.14	@ 28.2 +-3.10	85
@	0.2000	5.50	3.35	11.20	@ 14.2 +-4.50	137
@	0.2000	6.50	3.62	13.08	@ 27.6 +-5.20	137
@	0.2000	11.50	4.74	22.46	@ 23.0 +-3.60	137
@	0.2000	13.00	5.03	25.27	@ 17.4 +-3.70	137
@	0.2000	14.50	5.30	28.09	@ 16.3 +-3.10	137
@	0.2000	16.00	5.56	30.90	@ 16.5 +-3.40	137
@	0.2000	17.80	5.86	34.28	@ 16.1 +-4.40	137
	0.1360 - 0.2670	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	28.9 +-3.82	28
@	0.2210	6.00	3.48	12.14	@ 18.5 +-2.70	85
#	0.2240	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 39.0 +-16.0	38
#	0.2000 - 0.2500	2.80	2.48	6.13	# 25.0 +-4.00	138
@	0.2000 - 0.2500	4.30	2.99	8.95	@ 29.0 +-6.30	94
#	0.2000 - 0.2500	4.70	3.11	9.70	# 20.0 +-2.00	138
#	0.2000 - 0.3000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 35.0 +-3.10	28
#	0.2000 - 0.3000	2.00 - 4.00	2.15 - 2.90	4.63 - 8.39	# 16.8 +-4.40	107

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 17.80

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		REF
#	0.2000 - 0.3000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 24.0	+-2.70	28
#	0.2000 - 0.3000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	# 17.4	+-2.60	28
#	0.2000 - 0.3000	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	# 16.5	+-2.60	28
#	0.2000 - 0.3000	4.00 - 8.00	2.90 - 3.99	8.39 -15.89	# 17.9	+-4.80	107
#	0.2000 - 0.3000	8.00 -16.00	3.99 - 5.56	15.89 -30.90	# 9.90	+-5.00	107
	a 0.2640	7.60	3.89	15.14	a 13.6	+-1.10	85
	0.1797 - 0.3565	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	15.8	+-2.50	28
	a 0.2700	6.00	3.48	12.14	a 12.3	+-1.60	85
	# 0.2740	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 23.0	+-12.0	38
#	0.2500 - 0.3000	2.80	2.48	6.13	# 22.0	+-2.00	138
#	0.2500 - 0.3000	4.70	3.11	9.70	# 20.0	+-1.40	138
	0.1999 - 0.3544	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	17.0	+-2.97	28
a	0.2500 - 0.3500	4.30	2.99	8.95	a 13.6	+-3.20	94
	a 0.3000	5.50	3.35	11.20	a 9.53	+-1.93	137
	a 0.3000	6.50	3.62	13.08	a 11.4	+-2.20	137
	a 0.3000	11.50	4.74	22.46	a 8.36	+-1.66	137
	a 0.3000	13.00	5.03	25.27	a 7.85	+-1.23	137
	a 0.3000	14.50	5.30	28.09	a 7.61	+-1.22	137
	a 0.3000	16.00	5.56	30.90	a 9.18	+-1.99	137
	a 0.3000	17.80	5.86	34.28	a 8.13	+-1.33	137
	# 0.3240	3.20 - 4.90	2.62 - 3.17	6.89 -10.08	# 32.0	+-20.0	38
#	0.3000 - 0.3500	2.80	2.48	6.13	# 15.0	+-4.00	138
#	0.3000 - 0.3500	4.70	3.11	9.70	# 12.4	+-1.60	138
#	0.3000 - 0.4000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 20.3	+-2.50	28
#	0.3000 - 0.4000	2.00 - 4.00	2.15 - 2.90	4.63 - 8.39	# 12.9	+-3.20	107
#	0.3000 - 0.4000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 16.0	+-2.00	28
#	0.3000 - 0.4000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	# 9.20	+-2.00	28
#	0.3000 - 0.4000	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	# 7.10	+-1.70	28
#	0.3000 - 0.4000	4.00 - 8.00	2.90 - 3.99	8.39 -15.89	# 7.10	+-2.90	107
#	0.3000 - 0.4000	8.00 -16.00	3.99 - 5.56	15.89 -30.90	# 3.00	+-2.10	107
	0.2670 - 0.4744	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	7.66	+-1.88	28
#	0.3500 - 0.4000	2.80	2.48	6.13	# 11.4	+-2.40	138
#	0.3500 - 0.4000	4.70	3.11	9.70	# 9.00	+-1.50	138
	a 0.3750	7.60	3.89	15.14	a 6.10	+-.750	85
	0.2639 - 0.5295	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	5.44	+-.871	28
a	0.3500 - 0.4500	4.30	2.99	8.95	a 7.50	+-2.50	94
	a 0.4000	6.50	3.62	13.08	a 5.22	+-.980	137
	a 0.4000	11.50	4.74	22.46	a 4.91	+-.700	137
	a 0.4000	13.00	5.03	25.27	a 4.61	+-.700	137
	a 0.4000	14.50	5.30	28.09	a 4.13	+-.620	137
	a 0.4000	16.00	5.56	30.90	a 4.45	+-.650	137
	a 0.4000	17.80	5.86	34.28	a 3.99	+-.570	137
#	0.4000 - 0.5000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 10.5	+-1.80	28
#	0.4000 - 0.5000	2.00 - 4.00	2.15 - 2.90	4.63 - 8.39	# 3.20	+-2.20	107
#	0.4000 - 0.5000	2.80	2.48	6.13	# 6.20	+-1.10	138
#	0.4000 - 0.5000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 6.00	+-1.40	28
#	0.4000 - 0.5000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	# 6.20	+-1.60	28
#	0.4000 - 0.5000	4.70	3.11	9.70	# 6.20	+-1.00	138
#	0.4000 - 0.5000	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	# 5.60	+-1.70	28
#	0.4000 - 0.5000	4.00 - 8.00	2.90 - 3.99	8.39 -15.89	# 1.80	+-1.20	107
a	0.4500 - 0.5500	4.30	2.99	8.95	a 3.80	+-1.80	94
	a 0.5000	5.50	3.35	11.20	a 3.41	+-.540	137
	a 0.5000	6.00	3.48	12.14	a 3.42	+-.600	137
	a 0.5000	6.50	3.62	13.08	a 2.61	+-.330	137
	a 0.5000	11.50	4.74	22.46	a 2.28	+-.320	137
	a 0.5000	13.00	5.03	25.27	a 2.21	+-.300	137
	a 0.5000	14.50	5.30	28.09	a 2.19	+-.330	137
	a 0.5000	16.00	5.56	30.90	a 2.10	+-.280	137
	a 0.5000	17.80	5.86	34.28	a 1.94	+-.320	137
	0.3544 - 0.7104	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	2.03	+-.547	28
#	0.5000 - 0.7000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 2.00	+-.900	28
#	0.5000 - 0.7000	2.80	2.48	6.13	# 2.40	+-.600	138
#	0.5000 - 0.7000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	# 2.60	+-.700	28
#	0.5000 - 0.7000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	# 1.81	+-.500	28
a	0.5500 - 0.6500	4.30	2.99	8.95	a 2.20	+-1.30	94
#	0.5000 - 0.7000	4.70	3.11	9.70	# 2.40	+-.400	138
#	0.5000 - 0.7000	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	# 1.68	+-.600	28
	a 0.7000	5.50	3.35	11.20	a0.795	+-.166	137
	a 0.7000	6.00	3.48	12.14	a 1.08	+-.220	137
	a 0.7000	6.50	3.62	13.08	a0.920	+-.140	137
	a 0.7000	11.50	4.74	22.46	a0.667	+-.670E-01	137
	a 0.7000	13.00	5.03	25.27	a0.690	+-.900E-01	137
	a 0.7000	14.50	5.30	28.09	a0.603	+-.860E-01	137
	a 0.7000	16.00	5.56	30.90	a0.586	+-.660E-01	137
	a 0.7000	17.80	5.86	34.28	a0.539	+-.610E-01	137
	0.3920 - 1.0545	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	0.659	+-.489	28
#	0.7000 - 1.0000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 2.30	+-.700	28
#	0.7000 - 1.0000	2.80	2.48	6.13	# 2.20	+-.400	138
#	0.7000 - 1.0000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	#0.900	+-.400	28
#	0.7000 - 1.0000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	#0.880	+-.300	28
#	0.7000 - 1.0000	4.70	3.11	9.70	#0.780	+-.160	138
#	0.7000 - 1.0000	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	#0.370	+-.300	28
	a 0.9000	5.50	3.35	11.20	a0.317	+-.109	137
	a 0.9000	6.00	3.48	12.14	a0.376	+-.730E-01	137
	a 0.9000	6.50	3.62	13.08	a0.455	+-.850E-01	137
	a 0.9000	11.50	4.74	22.46	a0.236	+-.340E-01	137

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON —> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 17.80

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		REF
	ə 0.9000	13.00	5.03	25.27	ə0.191	+-.270E-01	137
	ə 0.9000	14.50	5.30	28.09	ə0.236	+-.270E-01	137
	ə 0.9000	16.00	5.56	30.90	ə0.216	+-.250E-01	137
	ə 0.9000	17.80	5.86	34.28	ə0.190	+-.300E-01	137
P#	0.6500 - 1.2500	4.30	2.99	8.95	P# 1.03	+-.410	94
	0.5295 - 1.4184	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	0.938E-01	+-.938E-01	28
	ə 1.1000	5.50	3.35	11.20	ə0.212	+-.540	137
	ə 1.1000	6.00	3.48	12.14	ə0.259	+-.570E-01	137
	ə 1.1000	6.50	3.62	13.08	ə0.165	+-.900E-01	137
	ə 1.1000	11.50	4.74	22.46	ə0.107	+-.150E-01	137
	ə 1.1000	13.00	5.03	25.27	ə0.104	+-.190E-01	137
	ə 1.1000	14.50	5.30	28.09	ə0.936E-01	+-.187E-01	137
	ə 1.1000	16.00	5.56	30.90	ə0.924E-01	+-.122E-01	137
#	1.0000 - 1.5000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	#0.900	+-.500	28
#	1.0000 - 1.5000	2.80	2.48	6.13	#0.760	+-.220	138
#	1.0000 - 1.5000	2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	#0.580	+-.200	28
#	1.0000 - 1.5000	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	#0.400	+-.200	28
#	1.0000 - 1.5000	4.70	3.11	9.70	#0.340	+-.800E-01	138
	0.7763 - 1.7540	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	0.680	+-.234	28
	ə 1.3800	11.50	4.74	22.46	ə0.338E-01	+-.111E-01	137
	ə 1.3800	13.00	5.03	25.27	ə0.316E-01	+-.910E-02	137
	ə 1.3800	14.50	5.30	28.09	ə0.207E-01	+-.900E-02	137
	ə 1.3800	16.00	5.56	30.90	ə0.211E-01	+-.770E-02	137
	1.0545 - 2.3614	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	0.563	+-.407	28
#	1.5000 - 2.5000	4.70	3.11	9.70	#0.670E-01	+-.270E-01	138
	0.2156 - 3.9010	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	<0.188E-01		28
	1.2882 - 3.5033	3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	0.276E-01	+-.552E-01	28
	1.7540 - 4.7201	4.50 - 5.80	3.05 - 3.43	9.32 -11.76	0.141	+-.938E-01	28

1.60 GEV < K < GEV 2.00

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		REF
#	0.0500 - 0.1000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 97.3	+-10.0	28
#	0.1000 - 0.2000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 62.7	+-6.40	28
#	0.2000 - 0.3000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 33.9	+-4.70	28
#	0.3000 - 0.4000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 17.7	+-4.20	28
#	0.4000 - 0.5000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 9.90	+-3.50	28
#	0.5000 - 0.7000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 8.10	+-2.10	28
#	0.7000 - 1.0000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 8.80	+-1.60	28
#	1.0000 - 1.5000	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 2.80	+-.800	28

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.40 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	------	------	# 0.0 - 41.4		#.130 +-.130	28
			------	------	# 41.4 - 60.0		#.340 +-.150	28
			------	------	# 60.0 - 75.5		#.470 +-.170	28
			------	------	# 75.5 - 90.0		#1.18 +-.220	28
			------	------	# 90.0 -104.5		#.640 +-.200	28
1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	------	------	# 0.0 - 41.4		#.800E-01 +-.600E-01	28
			------	------	# 41.4 - 60.0		#.800E-01 +-.600E-01	28
			------	------	# 60.0 - 90.0		#.190 +-.800E-01	28
			------	------	# 90.0 -104.5		#.450 +-.140	28
2.80	2.48	6.13	$-0.029 - 1.289 #.230	+-.800E-01	0.1 - 72.1	0.0 - 24.4	.696E-01 +-.242E-01	138
			$ 1.289 - 2.289 #.170	+-.900E-01	72.1 -102.6	24.4 - 36.8	.515E-01 +-.273E-01	138
2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	------	------	# 0.0 - 60.0		#.600E-01 +-.300E-01	28
			------	------	# 60.0 - 90.0		# <.200E-01	28
			------	------	# 90.0 -120.0		#.900E-01 +-.500E-01	28

= NUMERICAL VALUE FROM TABLE ə = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.40 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	-0.027 - 1.726	.659E-01+-.552E-01 #	0.0 - 60.0	0.0 - 18.9	#.310E-01+-.260E-01	28
			1.253 - 3.475	.531E-01+-.446E-01 #	60.0 - 90.0	17.6 - 30.3	#.250E-01+-.210E-01	28
4.70	3.11	9.70	$-0.023 - 4.854	#.160E-01+-.800E-02	0.1 -108.8	0.0 - 36.6	.939E-02+-.469E-02	138
4.50 - 5.80	3.05 - 3.43	9.32 -11.76	1.726 - 4.698	.188E-01+-.188E-01 #	60.0 - 90.0	16.2 - 28.6	#.120E-01+-.120E-01	28

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

RATIO OF CROSS SECTIONS FOR TRANSVERSE AND PARALLEL (TO THE VECTOR MESON DECAY PLANE) POLARIZED GAMMAS

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	A=SIG PARALLEL (A-B)/(A+B)		A/(A+B)		B=SIG TRANSVERSE B/(A+B)		REF
1.40 - 1.80	1.96	# 0.0520-									
1.40 - 1.80	1.96	0.1190	------	------	# 1.06	+-.850E-01	1.03	+-.425E-01	0.0	+-.100	135
		# 0.1190-									
1.40 - 1.80	1.96	0.1700	------	------	#0.986	+-.790E-01	0.993	+-.395E-01	0.700E-02	+-.395E-01	135
		# 0.1700-									
1.40 - 1.80	1.96	0.2430	------	------	#0.971	+-.780E-01	0.985	+-.390E-01	0.145E-01	+-.390E-01	135
		# 0.2430-									
1.40 - 1.80	1.96	0.3180	------	------	#0.844	+-.740E-01	0.922	+-.370E-01	0.780E-01	+-.370E-01	135
1.80 - 2.10	2.13	# 0.0520-	10.34-	3.74-							
		0.1190	24.04	8.725	#0.994	+-.800E-01	0.997	+-.400E-01	0.300E-02	+-.400E-01	135
		# 0.1190-	22.46-	8.04-							
		0.1700	30.73	11.19	#0.888	+-.750E-01	0.944	+-.375E-01	0.560E-01	+-.375E-01	135
		# 0.1700-	27.99-	10.05-							
		0.2430	38.49	14.08	#0.869	+-.700E-01	0.934	+-.350E-01	0.655E-01	+-.350E-01	135
		# 0.2430-	34.50-	12.44-							
		0.3180	45.27	16.64	#0.866	+-.760E-01	0.933	+-.380E-01	0.670E-01	+-.380E-01	135
2.10 - 2.40	2.25	# 0.0520-	11.99-	4.27-							
		0.1190	22.46	8.036	#0.966	+-.900E-01	0.983	+-.450E-01	0.170E-01	+-.450E-01	135
		# 0.1190-	20.94-	7.31-							
		0.1700	27.99	10.05	#0.855	+-.100E 00	0.927	+-.500E-01	0.725E-01	+-.500E-01	135
		# 0.1700-	25.78-	9.02-							
		0.2430	34.50	12.44	#0.841	+-.980E-01	0.920	+-.490F-01	0.795E-01	+-.490E-01	135
		# 0.2430-	31.50-	11.07-							
		0.3180	40.22	14.57	#0.842	+-.109	0.921	+-.545E-01	0.790E-01	+-.545E-01	135
2.80	2.48	# 0.0200-	4.96-	1.66-							
		0.0500	11.34	3.792	#0.960	+-.800E-01	0.980	+-.400E-01	0.200E-01	+-.400E-01	158
		# 0.0500-	11.34-	3.79-							
		0.0800	15.26	5.114	#0.840	+-.150	0.920	+-.750E-01	0.800E-01	+-.750E-01	158
		# 0.0800-	15.26-	5.11-							
		0.1200	19.32	6.485	#0.960	+-.130	0.980	+-.650E-01	0.200E-01	+-.650E-01	158
		# 0.1200-	19.32-	6.49-							
		0.1800	24.19	8.148	#0.860	+-.190	0.930	+-.950E-01	0.700E-01	+-.950E-01	158
		# 0.1800-	24.19-	8.15-							
		0.2500	28.91	9.772	# 1.08	+-.260	1.04	+-.130	0.0	+-.210	158
		# 0.2500-	28.91-	9.77-							
		0.4000	37.20	12.68	#0.660	+-.170	0.830	+-.850E-01	0.170	+-.850E-01	158
		# 0.4000-	37.20-	12.68-							
		1.0000	61.24	21.62	# 1.14	+-.390	1.07	+-.195	0.0	+-.335	158
3.50	2.73	$ 0.0079	0.00	.0	0.870	+-.600E-01	0.935	+-.300E-01	0.650E-01	+-.300E-01	110
4.70	3.11	# 0.0200-	5.30-	1.49-							
		0.0500	9.04	2.543	# 1.12	+-.110	1.06	+-.550E-01	0.0	+-.175	158
		# 0.0500-	9.04-	2.54-							
		0.0800	11.64	3.277	#0.850	+-.140	0.925	+-.700E-01	0.750E-01	+-.700E-01	158
		# 0.0800-	11.64-	3.28-							
		0.1200	14.40	4.059	# 1.13	+-.110	1.06	+-.550E-01	0.0	+-.185	158
		# 0.1200-	14.40-	4.06-							
		0.1800	17.77	5.019	# 1.01	+-.120	1.00	+-.600E-01	0.0	+-.700E-01	158
		# 0.1800-	17.77-	5.02-							
		0.2500	21.04	5.958	#0.930	+-.170	0.965	+-.850E-01	0.350E-01	+-.850E-01	158
		# 0.2500-	21.04-	5.96-							
		0.4000	26.79	7.627	# 1.16	+-.160	1.08	+-.800E-01	0.0	+-.240	158
		# 0.4000-	26.79-	7.63-							
		1.0000	43.13	12.55	# 1.25	+-.270	1.13	+-.135	0.0	+-.385	158

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA ! = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C512: GAMMA + PROTON --> PROTON + RHO ZERO (K > 0.90 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

POLARIZED GAMMAS (DIRECTION OF POLARIZATION IS WITH RESPECT TO THE VECTOR MESON DECAY PLANE)

R = RATIO (SIG(PARALLEL) - SIG(TRANSVERSE))/(SIG(PARALLEL) + SIG(TRANSVERSE))
(T DEPENDENCE)

2.00 GEV < K < GEV 4.70

	-T GEV**2	K GEV	E* GEV	S GEV**2		R	REF
$	0.0079	3.50	2.73	7.45	#0.870	+-.600E-01	110
#	0.0200 - 0.0500	2.80	2.48	6.13	#0.960	+-.800E-01	158
#	0.0200 - 0.0500	4.70	3.11	9.70	# 1.12	+-.110	158
#	0.0500 - 0.0800	2.80	2.48	6.13	#0.840	+-.150	158
#	0.0500 - 0.0800	4.70	3.11	9.70	#0.850	+-.140	158
#	0.0520 - 0.1190	2.10 - 2.40	2.20 - 2.32	4.82 - 5.38	#0.966	+-.900E-01	135
#	0.0800 - 0.1200	2.80	2.48	6.13	#0.960	+-.130	158
#	0.0800 - 0.1200	4.70	3.11	9.70	# 1.13	+-.110	158
#	0.1190 - 0.1700	2.10 - 2.40	2.20 - 2.32	4.82 - 5.38	#0.855	+-.100E 00	135
#	0.1200 - 0.1800	2.80	2.48	6.13	#0.860	+-.190	158
#	0.1200 - 0.1800	4.70	3.11	9.70	# 1.01	+-.120	158
#	0.1700 - 0.2430	2.10 - 2.40	2.20 - 2.32	4.82 - 5.38	#0.841	+-.980E-01	135
#	0.1800 - 0.2500	2.80	2.48	6.13	# 1.08	+-.260	158
#	0.1800 - 0.2500	4.70	3.11	9.70	#0.930	+-.170	158
#	0.2430 - 0.3180	2.10 - 2.40	2.20 - 2.32	4.82 - 5.38	#0.842	+-.109	135
#	0.2500 - 0.4000	2.80	2.48	6.13	#0.660	+-.170	158
#	0.2500 - 0.4000	4.70	3.11	9.70	# 1.16	+-.160	158
#	0.4000 - 1.0000	2.80	2.48	6.13	# 1.14	+-.390	158
#	0.4000 - 1.0000	4.70	3.11	9.70	# 1.25	+-.270	158

1.60 GEV < K < GEV 2.00

	-T GEV**2	K GEV	E* GEV	S GEV**2		R	REF
#	0.0520 - 0.1190	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 1.06	+-.850E-01	135
#	0.0520 - 0.1190	1.80 - 2.10	2.06 - 2.20	4.26 - 4.82	#0.994	+-.800E-01	135
#	0.1190 - 0.1700	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	#0.986	+-.790E-01	135
#	0.1190 - 0.1700	1.80 - 2.10	2.06 - 2.20	4.26 - 4.82	#0.888	+-.750E-01	135
#	0.1700 - 0.2430	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	#0.971	+-.780E-01	135
#	0.1700 - 0.2430	1.80 - 2.10	2.06 - 2.20	4.26 - 4.82	#0.869	+-.700E-01	135
#	0.2430 - 0.3180	1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	#0.844	+-.740E-01	135
#	0.2430 - 0.3180	1.80 - 2.10	2.06 - 2.20	4.26 - 4.82	#0.866	+-.760E-01	135

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A MU BARN/GEV**2	B 1/GEV**2	C 1/GEV**4	SIG TOT MU BARN	REF
1.11 - 1.40	1.72 - 1.87	2.97 - 3.51	------	------	------	# 6.70+- 1.10	28
1.11 - 1.50	1.72 - 1.92	2.97 - 3.70	------	------	------	# 7.30+- 1.60	25
1.40 - 1.80	1.87 - 2.06	3.51 - 4.26	# 43.90+- 12.60	# 6.30+- 1.40	------	# 7.51+- 0.97	28
1.50 - 1.80	1.92 - 2.06	3.70 - 4.26	------	------	------	# 6.30+- 1.90	25
1.80 - 2.10	2.06 - 2.20	4.26 - 4.82	------	------	------	# 7.37+- 1.20	28
1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	# 37.60+- 8.10	# 5.40+- 1.00	------	5.94+- 2.38	28
1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	------	------	------	# 5.50+- 1.00	25
2.10 - 2.50	2.20 - 2.36	4.82 - 5.57	------	------	------	# 6.80+- 1.02	28
2.50 - 3.00	2.36 - 2.55	5.57 - 6.51	------	------	------	# 5.45+- 1.00	28
2.80	2.48	6.13	# 34.40+- 4.00	# 6.20+- 0.70	------	# 5.80+- 0.50	213
2.00 - 5.00	2.15 - 3.20	4.63 - 10.26	# 35.00+- 12.00	# 9.00+- 2.60	------	# 3.90+- 0.90	107
3.00 - 3.50	2.55 - 2.73	6.51 - 7.45	------	------	------	# 4.23+- 0.86	28
3.50 - 4.50	2.73 - 3.05	7.45 - 9.32	------	------	------	# 3.60+- 0.61	28
2.50 - 5.80	2.36 - 3.43	5.57 - 11.76	# 28.40+- 5.20	# 7.60+- 1.20	------	3.45+- 1.18	28
2.50 - 6.00	2.36 - 3.48	5.57 - 12.14	------	------	------	# 3.20+- 0.60	25
4.30	2.99	8.95	# 20.50+- 4.50	# 7.40+- 1.20	------	# 2.80+- 0.50	94
4.70	3.11	9.70	# 25.00+- 3.00	# 8.00+- 0.80	------	# 3.20+- 0.30	213
4.50 - 5.80	3.05 - 3.43	9.32 - 11.76	------	------	------	# 3.15+- 0.66	28
5.25	3.28	10.73	------	------	------	# 2.00+- 0.50	114
5.00 - 16.00	3.20 - 5.56	10.26 - 30.90	# 25.00+- 10.00	# 9.50+- 2.30	------	# 2.60+- 0.70	107

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

NATURAL PARITY CONTRIBUTION

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A MU BARN/GEV**2	B 1/GEV**2	C 1/GEV**4	SIG TOT MU BARN	REF
2.80	2.48	6.13	# 13.10+- 4.10	# 5.50+- 1.60	------	# 2.50+- 0.37	213
4.70	3.11	9.70	# 15.20+- 3.80	# 7.50+- 1.50	------	# 1.84+- 0.28	213

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

UNNATURAL PARITY CONTRIBUTION

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A MU BARN/GEV**2	B 1/GEV**2	C 1/GEV**4	SIG TOT MU BARN	REF
2.80	2.48	6.13	------	------	------	# 2.70+- 0.39	213
4.70	3.11	9.70	------	------	------	# 1.25+- 0.27	213

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.11 - 1.40	1.79	-----	a 0.0 - 36.90	-----	----------	a .960 +-.800	28
			a 36.90- 53.10	-----	----------	a .540 +-.220	28
			a 53.10- 66.40	-----	----------	a .540 +-.260	28
			a 66.40- 90.00	-----	----------	a .520 +-.130	28
			a 90.00- 107.50	-----	----------	a .640 +-.160	28
			a107.50- 180.00	-----	----------	a .360 +-.120	28
1.40 - 1.80	1.96	-----	a 0.0 - 25.80	-----	----------	a 3.04 +-.630	28
			a 25.80- 36.90	-----	----------	a 1.93 +-.790	28
			a 36.90- 53.10	-----	----------	a .960 +-.310	28
			a 53.10- 66.40	-----	----------	a .300 +-.210	28
			a 66.40- 90.00	-----	----------	a .390 +-.140	28
			a 90.00- 107.50	-----	----------	a .410 +-.140	28
			a107.50- 180.00	-----	----------	a .190 +-.900E-01	28
		a 0.0500- 0.1000	-------	-----	a 26.8 +-7.40	---------	28
		a 0.1000- 0.2000	-------	-----	a 17.9 +-4.60	---------	28
		a 0.2000- 0.3000	-------	-----	a 9.10 +-3.60	---------	28
		a 0.3000- 0.4000	-------	-----	a 2.98 +-1.89	---------	28
		a 0.4000- 0.5000	-------	-----	a 3.44 +-1.71	---------	28
		a 0.5000- 1.2000	-------	-----	a 4.65 +-.880	---------	28
1.50 - 1.80	1.99	-----	a 0.0 - 18.20	-----	----------	a 2.84 +-1.90	25
			a 18.20- 25.80	-----	----------	a 5.15 +-1.89	25
			a 25.80- 36.90	-----	----------	a 1.91 +-1.03	25
			a 36.90- 53.10	-----	----------	a .526 +-.526	25
			a 53.10- 90.00	-----	----------	a <.294	25
			a 90.00- 113.60	-----	----------	a <.360	25
1.80 - 2.50	2.19	-----	a 0.0 - 18.20	-----	----------	a 2.26 +-1.74	25
			a 0.0 - 18.20	-----	----------	a 6.10 +-.900	28
			a 18.20- 25.80	-----	----------	a 3.31 +-1.45	25
			a 18.20- 25.80	-----	----------	a 4.58 +-1.07	28
			a 25.80- 36.90	-----	----------	a 3.10 +-1.07	25
			a 25.80- 36.90	-----	----------	a 1.65 +-.490	28
			a 36.90- 45.30	-----	----------	a 1.81 +-.865	25
			a 36.90- 53.10	-----	----------	a .773 +-.200	28
			a 45.30- 66.40	-----	----------	a <.300	25
			a 53.10- 66.40	-----	----------	a .250 +-.150	28
			a 66.40- 90.00	-----	----------	a .150 +-.100E 00	28
			a 90.00- 107.50	-----	----------	a .220 +-.190	28
			a107.50- 180.00	-----	----------	a .121 +-.820E-01	28
		a 0.0 - 0.0500	-------	-----	a 38.7 +-12.0	---------	28
		a 0.0500- 0.1000	-------	-----	a 24.8 +-7.80	---------	28
		a 0.1000- 0.2000	-------	-----	a 16.4 +-3.40	---------	28
		a 0.2000- 0.3000	-------	-----	a 9.95 +-2.71	---------	28
		a 0.3000- 0.4000	-------	-----	a 5.45 +-2.33	---------	28
		a 0.4000- 0.5000	-------	-----	a 3.79 +-1.92	---------	28

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.80 - 2.50	2.19	@ 0.5000-1.2000	------	-----	@ .990 +-.300	--------	28
2.80	2.48	# 0.0140-0.0600	0.0 - 12.64	0.0 - 4.201	# 27.3 +-3.10	8.19 +-.930	213
		# 0.0600-0.1000	12.64- 17.35	4.20- 5.775	# 22.5 +-3.10	6.75 +-.930	213
		# 0.1000-0.1500	17.35- 21.87	5.77- 7.302	# 16.6 +-2.30	4.98 +-.690	213
		# 0.1500-0.2000	21.87- 25.65	7.30- 8.583	# 8.70 +-1.80	2.61 +-.540	213
		# 0.2000-0.3000	25.65- 31.96	8.58- 10.75	# 7.30 +-1.10	2.19 +-.330	213
		# 0.3000-0.4000	31.96- 37.31	10.75- 12.62	# 4.10 +-.800	1.23 +-.240	213
		# 0.4000-0.5000	37.31- 42.07	12.62- 14.31	# 2.00 +-.600	.600 +-.180	213
		# 0.5000-1.0000	42.07- 61.51	14.31- 21.54	# .900 +-.200	.270 +-.600E-01	213
		# 1.0000-2.0000	61.51- 93.06	21.54- 34.99	# .280 +-.800E-01	.840E-01+-.240E-01	213
		# 2.0000-3.7842	93.06- 179.89	34.99- 138.0	# .150 +.150 -.800E-01	.450E-01 +.450E-01 -.240E-01	213
2.50 - 5.80	2.73	-----	@ 0.0 - 18.20	-----	--------	@ >5.48	28
			@ 18.20-25.80	-----	--------	@ 1.95 +-.500	28
			@ 25.80-36.90	-----	--------	@ .720 +-.200	28
			@ 36.90-53.10	-----	--------	@ .211 +-.850E-01	28
			@ 53.10-66.40	-----	--------	@ .400E-01+-.320E-01	28
			@ 66.40-90.00	-----	--------	@ .390E-01+-.290E-01	28
			@ 90.00-107.50	-----	--------	@ .700E-01+-.430E-01	28
			@107.50-180.00	-----	--------	@ .200E-01+-.200E-01	28
		@ 0.0 - 0.0250	------	-----	@ >3.30	--------	28
		@ 0.0250-0.0500	------	-----	@ 20.2 +-4.40	--------	28
		@ 0.0500-0.1000	------	-----	@ 17.6 +-3.30	--------	28
		@ 0.1000-0.2000	------	-----	@ 8.96 +-1.65	--------	28
		@ 0.2000-0.3000	------	-----	@ 2.87 +-1.26	--------	28
		@ 0.3000-0.4000	------	-----	@ 2.79 +-1.22	--------	28
		@ 0.4000-0.5000	------	-----	@ 1.51 +-.950	--------	28
		@ 0.5000-1.2000	------	-----	@ .320 +-.170	--------	28
2.50 - 6.00	2.74	-----	@ 0.0 - 12.80	-----	--------	@ 4.43 +-1.52	25
			@ 12.80-18.20	-----	--------	@ 6.50 +-1.95	25
			@ 18.20-25.80	-----	--------	@ 1.66 +-.535	25
			@ 25.80-36.90	-----	--------	@ .580 +-.230	25
			@ 36.90-53.10	-----	--------	@ .580 +-.230	25
			@ 53.10-90.00	-----	--------	@ 1.53 +-1.02	25
4.30	2.99	@ 0.0 - 0.0125	0.0 - 3.70	0.0 - 1.071	@ >.152	>.797E-01	94
		@ 0.0125-0.0525	3.70- 9.68	1.07- 2.803	@ >10.4	>5.45	94
		@ 0.0500-0.1000	9.41- 13.75	2.73- 3.988	@ 10.4 +-4.50	5.45 +-2.36	94
		@ 0.1000-0.2000	13.75- 19.78	3.99- 5.759	@ 4.30 +-2.00	2.25 +-1.05	94
		@ 0.2000-0.4400	19.78- 29.75	5.76- 8.741	@ 1.80 +-.760	.944 +-.399	94
		@ 0.4400-1.0000	29.75- 45.72	8.74- 13.73	@ .150 +-.150	.787E-01+-.787E-01	94
4.70	3.11	# 0.0140-0.0600	4.09- 9.96	1.14- 2.793	# 20.1 +-2.10	11.7 +-1.23	213
		# 0.0600-0.1000	9.96- 13.09	2.79- 3.674	# 11.7 +-1.70	6.83 +-.993	213
		# 0.1000-0.1500	13.09- 16.18	3.67- 4.549	# 9.00 +-1.30	5.26 +-.759	213
		# 0.1500-0.2000	16.18- 18.78	4.55- 5.289	# 5.90 +-1.10	3.45 +-.643	213
		# 0.2000-0.3000	18.78- 23.14	5.29- 6.540	# 2.90 +-.600	1.69 +-.350	213

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES ANC T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
4.70	3.11	# 0.3000-0.4000	23.14-26.84	6.54-7.611	# 2.20 +-.500	1.29 +-.292	213
		# 0.4000-0.5000	26.84-30.11	7.61-8.570	# 1.10 +-.400	.643 +-.234	213
		# 0.5000-1.0000	30.11-43.21	8.57-12.52	# .270 +-.900E-01	.158 +-.526E-01	213
		# 1.0000-2.0000	43.21-62.85	12.52-18.96	# <.300E-01	<.175E-01	213
		# 2.0000-5.5000	62.85-119.82	18.96-45.15	# <.700E-02	<.409E-02	213
		# 5.5000-7.3451	119.82-179.92	45.15-178.3	# .500E-01+-.200E-01	.292E-01+-.117E-01	213

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 4.70

	-T GEV**2	K GEV	E* GEV	S GEV**2		D SIG/D T MU BARN/GEV**2	REF
a	0.0 - 0.0125	4.30	2.99	8.95	a	>0.152	94
a	0.0 - 0.0250	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	> 3.30	28
a	0.0 - 0.0500	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	a	38.7 +-12.0	28
a	0.0125 - 0.0525	4.30	2.99	8.95	a	> 10.4	94
#	0.0140 - 0.0600	2.80	2.48	6.13	#	27.3 +-3.10	213
#	0.0140 - 0.0600	4.70	3.11	9.70	#	20.1 +-2.10	213
a	0.0250 - 0.0500	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	20.2 +-4.40	28
a	0.0500 - 0.1000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	a	24.8 +-7.80	28
a	0.0500 - 0.1000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	17.6 +-3.30	28
a	0.0500 - 0.1000	4.30	2.99	8.95	a	10.4 +-4.50	94
#	0.0600 - 0.1000	2.80	2.48	6.13	#	22.5 +-3.10	213
#	0.0600 - 0.1000	4.70	3.11	9.70	#	11.7 +-1.70	213
#	0.1000 - 0.1500	2.80	2.48	6.13	#	16.6 +-2.30	213
#	0.1000 - 0.1500	4.70	3.11	9.70	#	9.00 +-1.30	213
a	0.1000 - 0.2000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	a	16.4 +-3.40	28
a	0.1000 - 0.2000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	8.96 +-1.65	28
a	0.1000 - 0.2000	4.30	2.99	8.95	a	4.30 +-2.00	94
#	0.1500 - 0.2000	2.80	2.48	6.13	#	8.70 +-1.80	213
#	0.1500 - 0.2000	4.70	3.11	9.70	#	5.90 +-1.10	213
a	0.2000 - 0.3000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	a	9.95 +-2.71	28
#	0.2000 - 0.3000	2.80	2.48	6.13	#	7.30 +-1.10	213
a	0.2000 - 0.3000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	2.87 +-1.26	28
#	0.2000 - 0.3000	4.70	3.11	9.70	#	2.90 +-.600	213
a	0.2000 - 0.4400	4.30	2.99	8.95	a	1.80 +-.760	94
a	0.3000 - 0.4000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	a	5.45 +-2.33	28
#	0.3000 - 0.4000	2.80	2.48	6.13	#	4.10 +-.800	213
a	0.3000 - 0.4000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	2.79 +-1.22	28
#	0.3000 - 0.4000	4.70	3.11	9.70	#	2.20 +-.500	213
a	0.4000 - 0.5000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	a	3.79 +-1.92	28
#	0.4000 - 0.5000	2.80	2.48	6.13	#	2.00 +-.600	213
a	0.4000 - 0.5000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	1.51 +-.950	28
#	0.4000 - 0.5000	4.70	3.11	9.70	#	1.10 +-.400	213
a	0.4400 - 1.0000	4.30	2.99	8.95	a	0.150 +-.150	94
#	0.5000 - 1.0000	2.80	2.48	6.13	#	0.900 +-.200	213
#	0.5000 - 1.0000	4.70	3.11	9.70	#	0.270 +-.900E-01	213
a	0.5000 - 1.2000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	a	0.990 +-.300	28
a	0.5000 - 1.2000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	a	0.320 +-.170	28
#	1.0000 - 2.0000	2.80	2.48	6.13	#	0.280 +-.800E-01	213
#	1.0000 - 2.0000	4.70	3.11	9.70	#	<0.300E-01	213

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 1.50 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	THETA (BARYON) LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
1.50 - 1.80	1.92 - 2.06	3.70 - 4.26	------	------	a 66.4 - 90.0		a <.360	25
			------	------	a 90.0 -126.9		a <.294	25
1.80 - 2.50	2.06 - 2.36	4.26 - 5.57	------	------	a 0.0 - 72.5		a.121 +-.820E-01	28
			------	------	a 72.5 - 90.0		a.220 +-.190	28
			------	------	a 90.0 -113.6		a.150 +-.100E 00	28
2.80	2.48	6.13	$-0.024 - 1.760	#.150 +.150 -.800E-01	0.1 - 86.9	0.0 - 30.1	.450E-01 +.450E-01 -.240E-01	213
2.50 - 5.80	2.36 - 3.43	5.57 -11.76	------	------	a 0.0 - 72.5		a.200E-01+-.200E-01	28
			------	------	a 72.5 - 90.0		a.700E-01+-.430E-01	28
			------	------	a 90.0 -113.6		a.390E-01+-.290E-01	28
2.50 - 6.00	2.36 - 3.48	5.57 -12.14	------	------	a 90.0 -126.9		a1.53 +-1.02	25
4.70	3.11	9.70	$-0.020 - 1.826	#.500E-01+-.200E-01	0.1 - 60.2	0.0 - 17.4	.292E-01+-.117E-01	213
			$ 1.826 - 5.326	# <.700E-02	60.2 -117.2	17.4 - 40.6	<.409E-02	213

C514: GAMMA + PROTON --> PROTON + OMEGA (K > 1.10 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 0.7834 GEV

NATURAL PARITY CONTRIBUTION

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
2.80	2.48	a 0.0 - 0.0500	0.0 - 11.17	0.0 - 3.710	a 11.5 +-4.00	3.45 +-1.20	213
		a 0.0500- 0.1000	11.17- 17.35	3.71- 5.775	a 6.50 +-3.20	1.95 +-.960	213
		a 0.1000- 0.2000	17.35- 25.65	5.77- 8.583	a 6.90 +-3.00	2.07 +-.900	213
		a 0.2000- 0.4000	25.65- 37.31	8.58- 12.62	a 2.20 +-.800	.660 +-.240	213
4.70	3.11	a 0.0 - 0.0600	0.0 - 9.96	0.0 - 2.793	a 10.0 +-2.90	5.84 +-1.69	213
		a 0.0600- 0.1000	9.96- 13.09	2.79- 3.674	a 9.10 +-2.70	5.32 +-1.58	213
		a 0.1000- 0.2000	13.09- 18.78	3.67- 5.289	a 4.90 +-1.10	2.86 +-.643	213
		a 0.2000- 0.4000	18.78- 26.84	5.29- 7.611	a 1.60 +-.500	.935 +-.292	213

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C515: GAMMA + PROTON --> PROTON + PHI (K > 1.58 GEV)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 1.0195 GEV

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A MU BARN/GEV**2	B 1/GEV**2	C 1/GEV**4	SIG TOT MU BARN	REF
1.58 - 2.50	1.96 - 2.36	3.85 - 5.57	@ 1.13+- 0.70	@ 2.70+- 1.10	------	@ 0.30+- 0.10	28
1.60 - 3.50	1.97 - 2.73	3.88 - 7.45	------	------	------	# 0.50 + 0.70	41
1.60 - 3.50	1.97 - 2.73	3.88 - 7.45	------	------	------	# 0.50 - 0.50	41
2.80	2.48	6.13	------	------	------	P# 0.33+- 0.13	140
2.50 - 3.50	2.36 - 2.73	5.57 - 7.45	------	------	------	@ 0.40+- 0.14	28
2.50 - 5.80	2.36 - 3.43	5.57 - 11.76	@ 1.60+- 0.60	@ 3.50+- 0.90	------	0.40+- 0.26	28
3.50 - 5.80	2.73 - 3.43	7.45 - 11.76	------	------	------	@ 0.45+- 0.13	28
4.70	3.11	9.70	------	------	------	P@ 0.45+- 0.16	140
5.20	3.26	10.64	P@ 2.76+- 0.54	------	------	------	211
6.25	3.55	12.61	4.04+- 0.74	------	------	------	108
2.00 - 16.00	2.15 - 5.56	4.63 - 30.90	# 3.40+- 1.80	# 6.30+- 2.50	------	# 0.61+- 0.24	107
8.25	4.04	16.36	5.28+- 0.31	------	------	------	108
9.25	4.27	18.24	5.81+- 0.51	------	------	------	108

C515: GAMMA + PROTON --> PROTON + PHI (K > 1.50 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 1.0195 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.57 - 2.50	2.12	------	@ 0.0 - 45.50	------	--------	@ .735E-01+-.285E-01	28
			@ 45.50- 66.40	------	--------	@ .259E-01+-.151E-01	28
			@ 66.40- 90.00	------	--------	@ .111E-01+-.800E-02	28
			@ 90.00- 180.00	------	--------	@ .115E-01+-.550E-02	28
		@ 0.1000- 0.2000	------	------	@ .755 +-.628	--------	28
		@ 0.2000- 0.6000	------	------	@ .386 +-.141	--------	28
		@ 0.6000- 1.0000	------	------	@ .125 +-.750E-01	--------	28
		@ 1.0000- 1.6000	------	------	@ .950E-01+-.680E-01	--------	28
2.50 - 5.80	2.73	------	@ 0.0 - 25.80	------	--------	@ .385 +-.110	28
			@ 25.80- 45.50	------	--------	@ .935E-01+-.353E-01	28
			@ 45.50- 90.00	------	--------	@ .850E-02+-.490E-02	28
			@ 90.00- 180.00	------	--------	@ .480E-02+-.340E-02	28
		@ 0.0500- 0.2000	------	------	@ 1.07 +-.310	--------	28
		@ 0.2000- 0.3000	------	------	@ .370 +-.120	--------	28
		@ 0.6000- 1.0000	------	------	@ .960E-01+-.530E-01	--------	28
		@ 1.0000- 1.6000	------	------	@ .160E-01+-.160E-01	--------	28
3.20 - 4.40	2.80	# 0.0250- 0.0350	------	------	# 1.90 +-1.40	--------	52
5.20	3.26	P@ 0.0360	6.43	1.648	P@ 2.30 +-.400	P 1.43 +-.248	211
6.00	3.48	@ 0.5000	26.57	6.558	@ .311 +-.800E-01	.230 +-.593E-01	137
		@ 1.1000	40.05	10.04	@ .397E-01+-.200E-01	.294E-01+-.148E-01	137
6.25	3.55	$ 0.0077	# 0.00	.0	# 3.85 +-.700	3.00 +-.545	108
6.50	3.62	@ 0.5000	25.33	6.070	@ .289 +-.750E-01	.236 +-.612E-01	137
		@ 0.7000	30.14	7.256	@ .171 +-.430E-01	.140 +-.351E-01	137
		@ 0.9000	34.33	8.306	@ .596E-01+-.359E-01	.486E-01+-.293E-01	137
8.25	4.04	$ 0.0043	# 0.00	.0	# 5.14 +-.300	5.54 +-.323	108
		# 0.2330	14.93	3.242	# 1.44 +-.100E 00	1.55 +-.108	108
9.25	4.27	# 0.0040	0.72	.1497	# 5.67 +-.500	6.96 +-.614	108
11.50	4.74	@ 0.4000	16.36	3.099	@ .364 +-.810E-01	.569 +-.127	137
		@ 0.5000	18.32	3.475	@ .172 +-.410E-01	.269 +-.641E-01	137
		@ 0.7000	21.72	4.133	@ .850E-01+-.210E-01	.133 +-.328E-01	137
		@ 0.9000	24.69	4.710	@ .370E-01+-.110E-01	.579E-01+-.172E-01	137
13.00	5.03	# 0.2000	10.78	1.931	# 1.15 +-.450	2.06 +-.805	73
		@ 0.3000	13.23	2.373	@ .555 +-.111	.992 +-.198	137
		@ 0.4000	15.30	2.748	@ .299 +-.590E-01	.535 +-.105	137
		@ 0.5000	17.13	3.079	@ .210 +-.620E-01	.375 +-.111	137

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C515: GAMMA + PROTON --> PROTON + PHI (K > 1.50 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 1.0195 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
13.00	5.03	@ 0.7000	20.31	3.660	@ .896E-01+-.197E-01	.160 +-.352E-01	137
		@ 0.9000	23.07	4.169	@ .300E-01+-.120E-01	.536E-01+-.215E-01	137
		@ 1.1000	25.55	4.629	@ .341E-01+-.800E-02	.610E-01+-.143E-01	137
14.50	5.30	@ 0.3000	12.48	2.132	@ .496 +-.960E-01	.998 +-.193	137
		@ 0.4000	14.43	2.467	@ .294 +-.610E-01	.591 +-.123	137
		@ 0.5000	16.15	2.765	@ .192 +-.410E-01	.386 +-.825E-01	137
		@ 0.7000	19.14	3.284	@ .900E-01+-.180E-01	.181 +-.362E-01	137
		@ 0.9000	21.73	3.739	@ .350E-01+-.110E-01	.704E-01+-.221E-01	137
16.00	5.56	@ 0.3000	11.84	1.935	@ .259 +-.100E 00	.579 +-.224	137
		@ 0.4000	13.69	2.239	@ .211 +-.133	.472 +-.298	137
		@ 0.5000	15.32	2.508	@ .129 +-.400E-01	.288 +-.894E-01	137
		@ 0.7000	18.15	2.978	@ .569E-01+-.185E-01	.127 +-.414E-01	137
		@ 0.9000	20.61	3.389	@ .271E-01+-.730E-02	.606E-01+-.163E-01	137
		@ 1.1000	22.81	3.760	@ .267E-01+-.700E-02	.597E-01+-.157E-01	137
		@ 1.3800	25.60	4.232	@ .730E-02+-.340E-02	.163E-01+-.760E-02	137
17.80	5.86	@ 0.3000	11.19	1.742	@ .313 +-.183	.784 +-.458	137
		@ 0.5000	14.47	2.257	@ .139 +-.420E-01	.348 +-.105	137
		@ 0.7000	17.14	2.679	@ .630E-01+-.190E-01	.158 +-.476E-01	137
		@ 0.9000	19.46	3.047	@ .260E-01+-.110E-01	.651E-01+-.276E-01	137

C515: GAMMA + PROTON --> PROTON + PHI (K > 1.50 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 1.0195 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 17.80

	-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	REF
	# 0.0040	9.25	4.27	18.24	# 5.67 +-.500	108
	$ 0.0043	8.25	4.04	16.36	# 5.14 +-.300	108
	$ 0.0077	6.25	3.55	12.61	# 3.85 +-.700	108
#	0.0250 - 0.0350	3.20 - 4.40	2.62 - 3.02	6.89 - 9.14	# 1.90 +-1.40	52
	P@ 0.0360	5.20	3.26	10.64	P@ 2.30 +-.400	211
@	0.0500 - 0.2000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	@ 1.07 +-.310	28
	# 0.2000	13.00	5.03	25.27	# 1.15 +-.450	73
	# 0.2330	8.25	4.04	16.36	# 1.44 +-.100E 00	108
@	0.2000 - 0.3000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	@0.370 +-.120	28
	@ 0.3000	13.00	5.03	25.27	@0.555 +-.111	137
	@ 0.3000	14.50	5.30	28.09	@0.496 +-.960E-01	137
	@ 0.3000	16.00	5.56	30.90	@0.259 +-.100E 00	137
	@ 0.3000	17.80	5.86	34.28	@0.313 +-.183	137
	@ 0.4000	11.50	4.74	22.46	@0.364 +-.810E-01	137
	@ 0.4000	13.00	5.03	25.27	@0.299 +-.590E-01	137
	@ 0.4000	14.50	5.30	28.09	@0.294 +-.610E-01	137
	@ 0.4000	16.00	5.56	30.90	@0.211 +-.133	137
	@ 0.5000	6.00	3.48	12.14	@0.311 +-.800E-01	137
	@ 0.5000	6.50	3.62	13.08	@0.289 +-.750E-01	137
	@ 0.5000	11.50	4.74	22.46	@0.172 +-.410E-01	137
	@ 0.5000	13.00	5.03	25.27	@0.210 +-.620E-01	137
	@ 0.5000	14.50	5.30	28.09	@0.192 +-.410E-01	137
	@ 0.5000	16.00	5.56	30.90	@0.129 +-.400E-01	137
	@ 0.5000	17.80	5.86	34.28	@0.139 +-.420E-01	137
	@ 0.7000	6.50	3.62	13.08	@0.171 +-.430E-01	137
	@ 0.7000	11.50	4.74	22.46	@0.850E-01+-.210E-01	137
	@ 0.7000	13.00	5.03	25.27	@0.896E-01+-.197E-01	137
	@ 0.7000	14.50	5.30	28.09	@0.900E-01+-.180E-01	137
	@ 0.7000	16.00	5.56	30.90	@0.569E-01+-.185E-01	137
	@ 0.7000	17.80	5.86	34.28	@0.630E-01+-.190E-01	137
@	0.6000 - 1.0000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	@0.960E-01+-.530E-01	28
	@ 0.9000	6.50	3.62	13.08	@0.596E-01+-.359E-01	137
	@ 0.9000	11.50	4.74	22.46	@0.370E-01+-.110E-01	137
	@ 0.9000	13.00	5.03	25.27	@0.300E-01+-.120E-01	137
	@ 0.9000	14.50	5.30	28.09	@0.350E-01+-.110E-01	137
	@ 0.9000	16.00	5.56	30.90	@0.271E-01+-.730E-02	137
	@ 0.9000	17.80	5.86	34.28	@0.260E-01+-.110E-01	137
	@ 1.1000	6.00	3.48	12.14	@0.397E-01+-.200E-01	137
	@ 1.1000	13.00	5.03	25.27	@0.341E-01+-.800E-02	137
	@ 1.1000	16.00	5.56	30.90	@0.267E-01+-.700E-02	137
@	1.0000 - 1.6000	2.50 - 5.80	2.36 - 3.43	5.57 -11.76	@0.160E-01+-.160E-01	28
	@ 1.3800	16.00	5.56	30.90	@0.730E-02+-.340E-02	137

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA $ = FOR DETAILS SEE REFERENCE
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C515: GAMMA + PROTON --> PROTON + PHI (K > 1.50 GEV) (CONTINUED)

M2: 0.9383 GEV
M3: 0.9383 GEV
M4: 1.0195 GEV

DIFFERENTIAL CROSS SECTION (BACKWARD PRODUCTION) K > 2.50 GEV

K GEV	E* GEV	S GEV**2	-U GEV**2	D SIG/D U MU BARN/GEV**2	THETA (BARYON) CM	LAB	D SIG/D OMEGA (CM) MU BARN/ STERAD	REF
2.50 - 5.80	2.36 - 3.43	5.57 -11.76	------	------	a 0.0 - 90.0		a.480E-02+-.340E-02	28
			------	------	a 90.0 -134.5		a.850E-02+-.490E-02	28

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C516: GAMMA + PROTON --> DELTA ZERO + RHO+ (K > 1.40 GEV)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.7650 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		REF
1.40 - 1.80	1.96	# 1.20	+-.900	100
1.80 - 2.50	2.19	# <1.40		100
2.50 - 3.50	2.52	# <.700		100
4.30	2.99	.900	+-.600	243
3.50 - 5.80	3.01	# .600	+-.300	100
5.25	3.28	# <.500		114

C517: GAMMA + PROTON --> DELTA+ + RHO ZERO (K > 4.30 GEV)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.7650 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		REF
4.30	2.99	# .300	+-.200	243
3.50 - 5.80	3.01	# .500	+-.300	100
5.25	3.28	# .400	+-.400	114

C518: GAMMA + PROTON --> DELTA++ + RHO- (K > 1.40 GEV)

M2: 0.9383 GEV
M3: 1.2360 GEV
M4: 0.7650 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		REF
1.40 - 1.80	1.96	# 1.40	+-.600	100
1.80 - 2.50	2.19	# 6.70	+-2.50	49
1.80 - 2.50	2.19	# 2.10	+-.900	100
2.80	2.48	P# 1.70	+-.700	140
2.50 - 3.50	2.52	# 1.50	+-.600	100
2.50 - 6.00	2.74	# 3.50	+-1.10	49
4.30	2.99	# 1.80	+-.400	243
3.50 - 5.80	3.01	# .800	+-.300	100
4.70	3.11	P# .700	+-.300	140
5.25	3.28	# <.500		114

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C521: GAMMA + DEUTERON --> PROTON + NEUTRON + RHO ZERO (K > 1.08 GEV)

M2: 0.9389 GEV
M3: 0.9389 GEV
M4: 0.7650 GEV

TOTAL CROSS SECTION : NO DATA TO BE LISTED

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (PESON) CM	LAB	D SIG/D T MU BARN/GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD	REF
		0.0 GEV/C . PROTON MOMENTUM < 0.100 GEV/C						
1.80 - 2.50	2.19	# 0.0500-0.1000	------	-----	# 50.0	+-14.0	--------	102
		# 0.1000-0.1500	------	-----	# 36.0	+-11.3	--------	102
		# 0.1500-0.2000	------	-----	# 37.4	+-8.20	--------	102
		# 0.2000-0.3000	------	-----	# 15.6	+-5.10	--------	102
		# 0.3000-0.4000	------	-----	# 10.5	+-4.20	--------	102
		# 0.4000-0.6000	------	-----	# 6.90	+-2.50	--------	102
		# 0.6000-0.8000	------	-----	# 5.60	+-2.00	--------	102
		# 0.8000-1.5000	------	-----	# .800	+-.700	--------	102
2.50 - 5.30	2.69	# 0.0500-0.1000	------	-----	# 35.2	+-5.70	--------	102
		# 0.1000-0.2000	------	-----	# 18.7	+-3.10	--------	102
		# 0.2000-0.3000	------	-----	# 12.7	+-2.50	--------	102
		# 0.3000-0.4000	------	-----	# 7.70	+-1.80	--------	102
		# 0.4000-0.8000	------	-----	# 1.60	+-.500	--------	102
		# 0.8000-1.5000	------	-----	# .400	+-.300	--------	102

C521: GAMMA + DEUTERON --> PROTON + NEUTRON + RHO ZERO (K > 1.08 GEV) (CONTINUED)

M2: 0.9389 GEV
M3: 0.9389 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 3.90

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2		REF
	0.0 GEV/C < PROTON MOMENTUM < 0.100 GEV/C					
# 0.0500 - 0.1000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	# 50.0	+-14.0	102
# 0.0500 - 0.1000	2.50 - 5.30	2.36 - 3.29	5.58 -10.83	# 35.2	+-5.70	102
# 0.1000 - 0.1500	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	# 36.0	+-11.3	102
# 0.1000 - 0.2000	2.50 - 5.30	2.36 - 3.29	5.58 -10.83	# 18.7	+-3.10	102
# 0.1500 - 0.2000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	# 37.4	+-8.20	102
# 0.2000 - 0.3000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	# 15.6	+-5.10	102
# 0.2000 - 0.3000	2.50 - 5.30	2.36 - 3.29	5.58 -10.83	# 12.7	+-2.50	102
# 0.3000 - 0.4000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	# 10.5	+-4.20	102
# 0.3000 - 0.4000	2.50 - 5.30	2.36 - 3.29	5.58 -10.83	# 7.70	+-1.80	102
# 0.4000 - 0.6000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	# 6.90	+-2.50	102
# 0.4000 - 0.8000	2.50 - 5.30	2.36 - 3.29	5.58 -10.83	# 1.60	+-.500	102
# 0.6000 - 0.8000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	# 5.60	+-2.00	102
# 0.8000 - 1.5000	1.80 - 2.50	2.06 - 2.36	4.26 - 5.58	#0.800	+-.700	102
# 0.8000 - 1.5000	2.50 - 5.30	2.36 - 3.29	5.58 -10.83	#0.400	+-.300	102

= NUMERICAL VALUE FROM TABLE G = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C521: GAMMA + DEUTERON --> PROTON + NEUTRON + RHO ZERO (K > 1.08 GEV) (CONTINUED)

M2: 0.9389 GEV
M3: 0.9389 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD	REF
		0.100 GEV/C . PROTON MOMENTUM < 0.300 GEV/C						
2.50 - 5.30	2.69	# 0.0 - 0.0500	------	-----	# 20.1	+-5.20	--------	102
		# 0.0500- 0.1000	------	-----	# 60.8	+-5.90	--------	102
		# 0.1000- 0.1500	------	-----	# 27.7	+-4.40	--------	102
		# 0.1500- 0.2000	------	-----	# 12.5	+-2.90	--------	102
		# 0.2000- 0.4000	------	-----	# 2.70	+-.600	--------	102
		# 0.4000- 0.6000	------	-----	# 1.20	+-.500	--------	102
		# 0.6000- 0.8000	------	-----	# .300	+-.200	--------	102

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C522: GAMMA + NEUTRON --> PROTON + RHC- (K > 1.10 GEV)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

TOTAL CROSS SECTION

K GEV	E* GEV	SIGMA MU BARN		SIGMA*(S-M**2)**2 MU BARN*GEV**2		REF
1.10 - 1.40	1.79	a .400	+-.400	2.11	+-2.11	103
1.40 - 1.80	1.96	a 7.80	+-1.80	67.3	+-15.5	103
1.80 - 2.50	2.19	a 3.00	+-1.40	45.2	+-21.1	103
2.50 - 3.50	2.52	a 1.00	+-.850	29.2	+-24.8	103
3.50 - 5.30	2.97	a .800	+-.600	48.2	+-36.1	103

C522: GAMMA + NEUTRON --> PROTON + RHC- (K > 1.10 GEV) (CONTINUED)

M2: 0.9395 GEV
M3: 0.9383 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		(D SIG/D T)*(S-M**2)**2 MU BARN*GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.40 - 2.50	2.06	a 0.0 - 0.1500	------	-----	a 5.50	+-2.00	58.0	+-21.1	--------	103
		a 0.1500- 0.3000	------	-----	a 6.90	+-2.10	72.7	+-22.1	--------	103
		a 0.3000- 0.5000	------	-----	a 5.80	+-1.90	61.1	+-20.0	--------	103
		a 0.5000- 0.7000	------	-----	a 3.50	+-1.80	36.9	+-19.0	--------	103
		a 0.7000- 0.9000	------	-----	a 3.40	+-1.50	35.8	+-15.8	--------	103
		a 0.9000- 1.1000	------	-----	a 2.20	+.700 -1.50	23.2	+7.38 -15.8	-------- -	103
		a 1.1000- 1.5000	------	-----	a .900	+.900 -.750	9.48	+9.48 -7.90	-------- -	103

= NUMERICAL VALUE FROM TABLE a = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C532: GAMMA + DEUTERON --> DEUTERON + RHO ZERO (K > 1.80 GEV)

M2: 3.7527 GEV
M3: 3.7527 GEV
M4: 0.7650 GEV

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A MU BARN/GEV**2	B 1/GEV**2	C 1/GEV**4	SIG TOT MU BARN	REF
1.80 - 2.50	5.25 - 5.73	27.59 - 32.85	#262.60+- 83.00	# 21.50+- 3.50	------	7.58+- 3.63	102
2.50 - 3.50	5.73 - 6.35	32.85 - 40.35	#283.00+-109.00	# 23.70+- 4.60	------	9.21+- 5.34	102
3.50 - 5.30	6.35 - 7.34	40.35 - 53.86	#288.00+- 93.00	# 23.30+- 3.60	------	10.96+- 5.23	102

C532: GAMMA + DEUTERON --> DEUTERON + RHO ZERO (K > 1.80 GEV) (CONTINUED)

M2: 3.7527 GEV
M3: 3.7527 GEV
M4: 0.7650 GEV

CONSTANTS AND TOTAL CROSS SECTION
D SIGMA/D T = A*EXP(B*T) A=(D SIGMA/D T)T=0
IF A VALUE FOR 'C' IS GIVEN D SIGMA/D T = A*EXP(B*T+C*T**2)

K GEV	E* GEV	S GEV**2	A D / H	B D / H	C D / H	SIG TOT D / H	REF
4.48	6.91	47.71	@ 3.08+- 0.15	------	------	------	85
6.00	7.69	59.12	@ 3.22+- 0.13	------	------	------	85
7.00	8.16	66.62	@ 3.50+- 0.20	------	------	------	85
7.60	8.43	71.12	@ 3.36+- 0.26	------	------	------	85
8.50	8.82	77.88	@ 3.14+- 0.17	------	------	------	85

C532: GAMMA + DEUTERON --> DEUTERON + RHO ZERO (K > 1.80 GEV) (CONTINUED)

M2: 3.7527 GEV
M3: 3.7527 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
1.80 - 2.50	5.46	# 0.0 - 0.0200	------	------	# 722.	--------	102
		# 0.0200- 0.0400	------	------	# 120.	--------	102
		# 0.0400- 0.0600	------	------	# 94.4 +-20.4	--------	102
		# 0.0600- 0.0800	------	------	# 56.0 +-15.6	--------	102
		# 0.0800- 0.1000	------	------	# 38.4 +-11.7	--------	102
		# 0.1000- 0.1200	------	------	# 19.4 +-9.40	--------	102
		# 0.1200- 0.1400	------	------	# 15.7 +-7.90	--------	102
		# 0.1400- 0.1600	------	------	# 16.0 +-8.00	--------	102
		# 0.1600- 0.1800	------	------	# 15.8 +-7.90	--------	102
		# 0.1800- 0.2000	------	------	# 3.20 +-3.20	--------	102
2.50 - 3.50	6.00	# 0.0 - 0.0200	------	------	# 257.	--------	102
		# 0.0400- 0.0600	------	------	# 97.9 +-23.1	--------	102
		# 0.0600- 0.0800	------	------	# 81.2 +-23.4	--------	102
		# 0.0800- 0.1000	------	------	# 24.1 +-11.7	--------	102
		# 0.1000- 0.1200	------	------	# 12.5 +-8.70	--------	102
		# 0.1200- 0.1400	------	------	# 17.0 +-9.90	--------	102
		# 0.1400- 0.1600	------	------	# 13.0 +-7.50	--------	102

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF-MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C532: GAMMA + DEUTERON --> DEUTERON + RHO ZERO (K > 1.80 GEV) (CONTINUED)

M2: 3.7527 GEV
M3: 3.7527 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	THETA (MESON) LAB	D SIG/D T MU BARN/GEV**2	D SIG/D OMEGA (CM) MU BARN/STERAD	REF
2.50 - 3.50	6.00	# 0.1600-0.1800	------	-----	# 9.10 +-6.00	--------	102
		# 0.1800-0.2000	------	-----	# 12.2 +-8.00	--------	102
3.50 - 5.30	6.76	# 0.0400-0.0600	------	-----	# 96.8 +-23.0	--------	102
		# 0.0600-0.0800	------	-----	# 53.1 +-17.1	--------	102
		# 0.0800-0.1000	------	-----	# 41.0 +-14.2	--------	102
		# 0.1000-0.1200	------	-----	# 35.9 +-14.1	--------	102
		# 0.1200-0.1400	------	-----	# 21.8 +-10.2	--------	102
		# 0.1400-0.1600	------	-----	# 7.00 +-5.60	--------	102
		# 0.1600-0.1800	------	-----	# 4.00 +-4.10	--------	102
		# 0.1800-0.2000	------	-----	# 8.00 +-6.40	--------	102
6.00	7.69	@ 0.0070	1.34	.6440	@ 395. +-23.0	.106E 04+-61.5	85
		@ 0.0180	2.47	1.189	@ 342. +-26.0	914. +-69.5	85
		@ 0.0520	4.40	2.122	@ 183. +-21.0	489. +-56.1	85
		@ 0.1080	6.43	3.099	@ 91.5 +-6.10	244. +-16.3	85
		@ 0.1750	8.22	3.965	@ 51.1 +-3.50	137. +-9.35	85
		@ 0.2700	10.24	4.944	@ 21.1 +-2.40	56.4 +-6.41	85
7.60	8.43	@ 0.0080	1.38	.6058	@ 407. +-33.0	.146E 04+-118.	85
		@ 0.0160	2.06	.9052	@ 309. +-21.0	.111E 04+-75.3	85
		@ 0.0320	2.98	1.313	@ 209. +-13.0	749. +-46.6	85
		@ 0.0500	3.76	1.657	@ 177. +-11.0	634. +-39.4	85
		@ 0.1020	5.41	2.386	@ 106. +-7.40	380. +-26.5	85
		@ 0.1740	7.10	3.128	@ 52.7 +-4.10	189. +-14.7	85
		@ 0.2640	8.76	3.862	@ 27.2 +-2.20	97.5 +-7.89	85
		@ 0.3750	10.45	4.612	@ 11.2 +-1.20	40.1 +-4.30	85

C532: GAMMA + DEUTERON --> DEUTERON + RHO ZERO (K > 1.80 GEV) (CONTINUED)

M2: 3.7527 GEV
M3: 3.7527 GEV
M4: 0.7650 GEV

DIFFERENTIAL CROSS SECTION (T DEPENDENCE)

2.00 GEV < K < GEV 7.60

-T GEV**2	K GEV	E* GEV	S GEV**2	D SIG/D T MU BARN/GEV**2	REF
@ 0.0070	6.00	7.69	59.12	@ 395. +-23.0	85
@ 0.0080	7.60	8.43	71.12	@ 407. +-33.0	85
# 0.0 - 0.0200	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 257.	102
@ 0.0160	7.60	8.43	71.12	@ 309. +-21.0	85
@ 0.0180	6.00	7.69	59.12	@ 342. +-26.0	85
@ 0.0320	7.60	8.43	71.12	@ 209. +-13.0	85
# 0.0400 - 0.0600	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 97.9 +-23.1	102
# 0.0400 - 0.0600	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 96.8 +-23.0	102
@ 0.0500	7.60	8.43	71.12	@ 177. +-11.0	85
@ 0.0520	6.00	7.69	59.12	@ 183. +-21.0	85
# 0.0600 - 0.0800	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 81.2 +-23.4	102
# 0.0600 - 0.0800	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 53.1 +-17.1	102
# 0.0800 - 0.1000	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 24.1 +-11.7	102
# 0.0800 - 0.1000	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 41.0 +-14.2	102
@ 0.1020	7.60	8.43	71.12	@ 106. +-7.40	85
@ 0.1080	6.00	7.69	59.12	@ 91.5 +-6.10	85
# 0.1000 - 0.1200	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 12.5 +-8.70	102
# 0.1000 - 0.1200	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 35.9 +-14.1	102
# 0.1200 - 0.1400	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 17.0 +-9.90	102
# 0.1200 - 0.1400	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 21.8 +-10.2	102
# 0.1400 - 0.1600	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 13.0 +-7.50	102
# 0.1400 - 0.1600	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 7.00 +-5.60	102
# 0.1600 - 0.1800	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 9.10 +-6.00	102
# 0.1600 - 0.1800	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 4.00 +-4.10	102
@ 0.1740	7.60	8.43	71.12	@ 52.7 +-4.10	85
@ 0.1750	6.00	7.69	59.12	@ 51.1 +-3.50	85
# 0.1800 - 0.2000	2.50 - 3.50	5.73 - 6.35	32.85 -40.35	# 12.2 +-8.00	102
# 0.1800 - 0.2000	3.50 - 5.30	6.35 - 7.34	40.35 -53.86	# 8.00 +-6.40	102
@ 0.2640	7.60	8.43	71.12	@ 27.2 +-2.20	85
@ 0.2700	6.00	7.69	59.12	@ 21.1 +-2.40	85
@ 0.3750	7.60	8.43	71.12	@ 11.2 +-1.20	85

= NUMERICAL VALUE FROM TABLE @ = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

C535: GAMMA + DEUTERON --> DEUTERON + PHI (K > 6.25 GEV)

M2: 3.7527 GEV
M3: 3.7527 GEV
M4: 1.0195 GEV

TOTAL CROSS SECTION : NO DATA TO BE LISTED

DIFFERENTIAL CROSS SECTION

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T MU BARN/GEV**2		D SIG/D OMEGA (CM) MU BARN/STERAD		REF
6.25	7.81	$ 0.0072	# 0.00	.0	# 14.2	+-1.00	39.4	+-2.77	108
8.25	8.72	$ 0.0041	# 0.00	.0	# 13.9	+-.600	54.4	+-2.35	108
		# 0.2330	7.82	3.314	# 2.25	+-.150	8.81	+-.587	108

C535: GAMMA + DEUTERON --> DEUTERON + PHI (K > 6.25 GEV) (CONTINUED)

M2: 3.7527 GEV
M3: 3.7527 GEV
M4: 1.0195 GEV

DIFFERENTIAL CROSS SECTION: RATIO DEUTERIUM TO HYDROGEN

K GEV	E* GEV	-T GEV**2	THETA (MESON) CM	LAB	D SIG/D T D / H		REF
6.25	7.81	$ 0.0072	0.00	.0	$ 4.60	+-1.00	108
8.25	8.72	$ 0.0041	0.00	.0	$ 3.05	+-.200	108
		# 0.2330	7.82	3.314	# 1.57	+-.150	108

= NUMERICAL VALUE FROM TABLE & = VALUE READ FROM DIAGRAM P = PRELIMINARY DATA
UNMARKED CROSS SECTIONS, ANGLES AND T VALUES ARE CALCULATED FROM THE QUANTITIES GIVEN BY THE AUTHOR(S).
ANGLES ARE IN DEGREES; CM AND LAB ARE CENTER-OF MASS AND LABORATORY SYSTEM; E* = CM ENERGY.

INDEX OF REFERENCES BY REACTION

REFERENCES FOR REACTIONS FOR WHICH DATA HAVE BEEN COMPILED

A = ALL REFERENCES B = REFERENCES WHOSE DATA ARE INCLUDED IN THE COMPILATION

C517 GAMMA + P = N*(1236)+ + RHOO	A:	100, 114, 243,
	B:	100, 114, 243,
C518 GAMMA + P =N*(1236)++ + RHO-	A:	49, 94, 100, 114, 140, 243,
	B:	49, 100, 114, 140, 243,
C521 GAMMA + D = P + N + RHOO	A:	102, 185,
	B:	102,
C522 GAMMA + N = P + RHO-	A:	103,
	B:	103,
C532 GAMMA + C = D + RHOO	A:	85, 102, 108, 185,
	B:	85, 102,
C534 GAMMA + C = D + OMEGA	NO DATA AVAILABLE	
C535 GAMMA + C = D + PHI	A:	85, 108,
	B:	108,

REFERENCES FOR REACTIONS WHICH HAVE NOT BEEN COMPILED

N1 PION PAIRS OFF HYDROGEN	8, 9, 11, 12, 13, 26, 28, 32, 33, 36, 38, 61, 65, 69, 77, 78, 79, 82, 85, 89, 94, 100, 107, 110, 114, 126, 135, 136, 138, 143, 153, 155, 158, 159, 160, 161, 178, 186, 222, 225,
N2 MULTI MESON PRODUCTION OFF H	12, 13, 25, 28, 31, 33, 41, 42, 49, 61, 63, 76, 78, 79, 89, 94, 100, 114, 132, 140, 143, 154, 205,
N3 PARTICLE YIELD OFF HYDROGEN	12, 20, 35, 48, 55, 56, 88, 101, 125, 144, 179, 181, 184, 186, 208, 223,
N4 YIELD OFF COMPLEX NUCLEI	2, 20, 40, 50, 57, 86, 91, 96, 97, 124, 132, 142, 146, 152, 175, 179, 181, 183, 204, 232, 236,
N5 VECTOR M.PROD.ON COMPL.NUCL.	30, 38, 52, 60, 68, 84, 93, 99, 109, 110, 123, 129, 201, 208, 220, 221, 222, 238,
N6 SEARCH FOR NEW PARTICLES	9, 10, 35, 55, 58, 59, 69, 98, 137, 139, 151, 153, 154, 164, 203, 208, 214, 215, 216, 217, 218, 219,
N7 PRIMAKOFF EFFECT	1, 17, 43, 128, 234,
N8 PHOTODISINTEGRATION ETC.	141, 165,
N9 TEST OF QED	150, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 207, 214, 233, 235, 237, 241,

1. Photoproduction and neutral decay modes of the eta particle
Bacci C., Mencuccini C., Penso G., Querzoli T., Salvini G., Silvestrini V., Wattenberg A.
Phys. Rev. Letters 11, (1963) 37
Reactions N7, C116; for new results see Ref. 29 — Frascati

2. K^+ meson photoproduction from complex nuclei
Sadoff A.J., McDaniel B.D.
Phys. Rev. 133 (1964) B 1200
Reaction N4 — Cornell

3. Polarization of Λ^o from photoproduction in hydrogen
McDaniel B.D., Joos P., McLeod D., Richert S., and Zipoy D.
Phys. Rev. Letters 4 (1960) 33
Reaction C213 — Cornell

Polarization of Λ^o from photoproduction in hydrogen
Thom H., Gabathuler E., Jones E., McDaniel B.D., Woodward W.M.
Phys. Rev. Letters 11 (1963) 433
Reaction C213 — Cornell

4. Photoproduction of π^+ mesons from hydrogen near threshold using liquid hydrogen bubble chamber
Ascoli G., Goldwasser E.L., Kruse V.E., Simpson J., and Swanson W.P.
Siena Conference (1963) P. 485
Reaction C111 — Illinois

5. Photoproduction of the eta meson near threshold
Delcourt B., Lefrancois J., Perez-Y-Jorba J.P., Walker J.K.
Physics Letters 7 (1963) 215
Reaction C116 — Orsay

6. Photoproduction of π mesons between .9 - 4. GeV
Alvarez R., Bar-Yam Z., Kern W., Luckey D., Osborne L.S., Tazzari S.
Phys. Rev. Letters 12 (1964) 707
Reactions C111, C112 — CEA

7. K^+A photoproduction from hydrogen at 1200 MeV
Peck C.W.
Phys. Rev. 135 (1964) B 860
Reaction C213 — CIT

8. Photoproduction of the ρ^o meson
Franklin A.D., Rust D.R., Silverman A., Sinclair C.K., Talman R.M.
Phys. Rev. Letters 13 (1964) 491
Reactions C512, N1 — Cornell

9. Two body effective mass spectra in the products of the reaction $\gamma+p \to p+\pi^+\pi^-$ and the σ resonance
Del Fabro R., De Pretis M., Jones R., Marini G., Odian A., Stoppini G., Tau L.
Phys. Rev. Letters 12 (1964) 674
Phys. Rev. 139 (1965) B 701
Reactions N1, N6 — Frascati

Evidence for a pion-pion resonance from photoproduction of pion pairs
McLeod D., Richert S., Silverman A.
Phys. Rev. Letters 7 (1961) 383
Reactions N1, N6 — Cornell

Multiple meson production by photons in hydrogen
Gellen J.M., Cocconi G., Cocconi V.T., Hart E.L.
Phys. Rev. 119 (1960) 811
Reaction N1 — Cornell

For additional experimental work see
Phys. Rev. Letters 5 (1960) 518 — CAL TECH THESES
Phys. Rev. 105 (1957) 1364 — Shanks W.L. (1968)
Phys. Rev. 99 (1955) 624 — Elliot D.D. (1959)
Phys. Rev. 96 (1954) 850
Phys. Rev. 91 (1953) 695
Phys. Rev. 86 (1952) 838
Reaction N1

10. Evidence for the photoproduction of Y=0 states with masses greater than 1900 MeV
Blanpied W.A., Greenberg J.S., Hughes V.W., Kitching P., Lu D.C., Minehart R.C.
Phys. Rev. Letters 14 (1965) 741
Reaction N6 — CEA

11. High energy photoproduction of neutral rho-mesons
Lanzerotti L.J., Blumenthal R.B., Ehn D.C., Faissler W.L., Joseph P.M., Pipkin F.M., Randolph J.K., Russel J.J., Stairs D.O., Tenenbaum J.
Phys. Rev. Letters 15 (1965) 210
Phys. Rev. 166 (1968) 1365
Reactions C512, N1 — CEA

12. $N^{++}_{33}(1238)$ and ρ^o production by high energy photons
Cambridge Bubble Chamber Group
Phys. Rev. Letters 13 (1964) 640
Reactions C115, C512, for new results see Ref. 26 and 36

Gamma-ray interactions between 0.5 and 4.8 BeV
Cambridge Bubble Chamber Group
Phys. Rev. Letters 13 (1964) 636
Reactions C115, C512, C514, N1, N2, N3
for new results see Ref. 89 — CEA

13. Photoproduction of pion and nucleon resonances at energies up to 5.5 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Nuovo Cimento 41A (1966) 270
Reactions C111, C112, C115, C512, C514, N1, N2
for new results see Ref. 28 — DESY

14. Λ^o polarization from the reaction $\gamma+p \to \Lambda^o+K^+$ in the energy range (950 - 1050)MeV
Borgia B., Grilli M., Joos P., Mezzetti L., Nigro M., Schiavuta E., Villa F.
Nuovo Cimento 32 (1964) 218 — Frascati

Λ^o polarization from the reaction $\gamma+p \to \Lambda^o+K^+$ in the energy range (950 - 1050)MeV
Grilli M., Mezzetti L., Nigro M., Schiavuta E.
Nuovo Cimento 38 (1965) 1467
Reaction C213 — Frascati

15. Photon proton scattering measurement from 450 to 1350 MeV near 90 degrees in the center of mass system
Rust D.R., Eisenhandler E., Mostek P.J., Silverman A., Sinclair C.K., Talman R.M.
Phys. Rev. Letters 15 (1965) 938
Reaction C011 — Cornell

16. Photoproduction cross section for π^+ and K^+ meson at 3.4 to 4.0 GeV and their comparison with SU(3)
Elings V.B., Cohen K.J., Garelick D.A., Homma S., Lewis R.A., Luckey P.D., Coban W., Osborne L.S.
Phys. Rev. Letters 16 (1966) 474
Phys. Rev. 156 (1967) 1433
Reactions C111, C212, C213 — CEA

17. Primakoff effect and π^o lifetime
Bellettini G., Bemporad C., Foa L., Braccini P.L.
Nuovo Cimento 40A (1966) 1139
Reaction N7 — Frascati

18. Photoproduction of eta mesons around 1 BeV
Heusch C.A., Prescott C.Y., Bloom E.D., Rochester L.S.
Phys. Rev. Letters 17 (1966) 573
Reaction C116 — CIT

19. Photoproduction of eta mesons in the region from threshold to 900 MeV
Prepost R., Lundquist D., Quinn D.
Phys. Rev. Letters 18 (1967) 82
Reaction C116 — Stanford

20. Photoproduction of charged pions in hydrogen and carbon for photon energies up to 6 GeV
Blanpied W.A., Greenberg J.S., Hughes V.W., Kitching P., Lu D.C., Minehart R.C.
Hamburg Conference (1965) P. 185
Reactions N3, N4 — CEA

21. Photoproduction of charged pions by 2. to 5. GeV tagged γ-rays
Caldwell D.O., Dowd J.P., Heinloth K., Sherwood T.R.
Phys. Rev. Letters 18 (1967) 414
Reaction C111 — CEA

22. Photoproduction of K^+ mesons from hydrogen
Anderson R.L., Gabathuler E., Jones D., McDaniel B.D., Mistry N.B., Mori J., Sadoff A.J., Stanton N.R.
Hamburg Conference (1965) 203
Reactions C212, C213 — Cornell

23. Photoproduction of neutral pions at GeV energies
Alvarez R., Bar-Yam Z., Garelick D., Homma S., Kern W., Lewis R., Luckey D., Osborne L.S., Uglum J.
Hamburg Conference (1965) 207
Reaction C112 — CEA

24. Photoproduction of single positive pions between 1.2 and 3 GeV
Buschhorn G., Carroll J., Eandi R.D., Heide P., Huebner R., Kern W., Koetz U., Schmueser P., Skronn H.J.
Phys. Rev. Letters 17 (1966) 1027
Reaction C111 — DESY

25. Photoproduction of ω^o mesons
Cambridge Bubble Chamber Group,
Phys. Rev. 155 (1967) 1468
Reactions C514, N2 — CEA

26. Photoproduction on hydrogen of ρ^o mesons between threshold and 6 BeV
Cambridge Bubble Chamber Group,
Phys. Rev. 146 (1966) 994
Reactions C512, N1 — CEA

27. Photoproduction of K^+ meson in hydrogen
Anderson R.L., Gabathuler E., Jones D., McDaniel B.D., Sadoff A.J.
Phys. Rev. Letters 9 (1962) 131
Reactions C212, C213 — Cornell

28. Photoproduction of meson and baryon resonances at energies up to 5.8 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Phys. Rev. 175 (1969) 1669
Reactions C113, C115, C116, C117, C512, C514, C515, N1, N2
supersedes Ref. 13, 31, 32, 33, 61 — DESY

29. Eta photoproduction cross section for incident photon energies 800 to 1000 MeV
Bacci C., Mencuccini C., Penso G., Salvini G., Silvestrini V.
Phys. Rev. Letters 16 (1966) 157, 384
Nuovo Cimento 45A (1966) 983
Reaction C116 — Frascati

30. High energy photoproduction of neutral rho mesons on complex nuclei
Asbury J.G., Becker U., Bertram W.K., Joos P., Jordan C.L., Rohde M., Smith A.J.S., Ting S.C.C.
Phys. Rev. Letters 19 (1967) 865
Reaction N5 — DESY

Experimental tests of the vector-dominance model
Asbury J.G., Becker U., Bertram W.K., Binkley M., Coleman E., Jordan C.L., Rohde M., Smith A.J.S., Ting S.C.C.,
Phys. Rev. Letters 20 (1968) 226 — DESY

31. Photoproduction of omega, Phi, eta, and X^0 mesons at energies up to 5.8 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Nuovo Cimento 46A (1966) 795
Reactions C116, C117, C514, C515, N2
For new results see Ref. 28 DESY

The reaction $\gamma+p \to N^*(++) + \pi^-$ at energies up to 5.8 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Physics Letters 23 (1966) 707
Reaction C115; for new results see Ref. 28 DESY

32. Double production of charged pions in hydrogen by photons of energy between 600 MeV and 850 MeV
Beneventano M., Finzi R., Paoluzi L., Sebastiani F., Severi M., Villa F.
Nuovo Cimento 38 (1965) 1054
Reactions C115, N1 Frascati

33. Photoproduction of ρ and f mesons at energies up to 5.8 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Nuovo Cimento 48A (1967) 262
Reactions C115, C512, N1, N2
for new results see Ref. 28 DESY

34. π^+ photoproduction between 1.2 and 3 GeV at very small angles
Buschhorn G., Carroll J., Eandi R.D., Heide P., Huebner R., Kern W., Koetz U., Schmueser P., Skronn H.J.
Phys. Rev. Letters 18 (1967) 571
Reaction C111 DESY

35. Photoproduction of YO^* resonance states
Mistry N.R., Mori S., Sober D.I.
Phys. Letters 24B (1967) 528
Reactions N3, N6 CEA

36. Production of the $N^*(1238)$ nucleon isobar by photons of energy up to 6 GeV
Cambridge Bubble Chamber Group
Phys. Rev. 163 (1967) 1510
Reactions C113, C115, N1 CEA

37. Measurement of π^0 photoproduction cross section for incident gamma ray energies of 2 to 5 GeV
Bolon G.G., Garelick D., Honma S., Lewis R., Lobar W., Luckey D., Osborne L.S., Schwitters R., Uglum J.
Phys. Rev. Letters 18 (1967) 926
Reaction C112 CEA

38. Photoproduction of ρ^0 mesons on hydrogen, carbon and aluminium with photons of known energy
Blechschmidt H., Dowd J.P., Elsner B., Heinloth K., Hoehne K.M., Raither S., Rathje J., Schmidt D., Smith J.H., Weber J.H.
Nuovo Cimento 52A (1967) 1348
Reactions C512, N1, N5 DESY

39. Photoproduction of π^+ at 3.4 and 5.0 GeV
Joseph P.M., Hicks N., Litt L., Pipkin F.M., Russell J.J.
Phys. Rev. Letters 19 (1967) 1206
Reaction C111 CEA

40. Particle yields at SLAC and the photon nucleon interaction in the 5 - 19 GeV region
Flatté S.M., Murray J.J., Klein P.R., Johnston L.H., Wojcicki S.G.
Phys. Rev. 166 (1969) 1482

Secondary particle yields at 0° from the new Stanford Electron Accelerator
Barna A., Bellamy E.H., Cox J., Martin F., Perl M.L., Tan T.H., Toner W.T., Zipf T.F.
Phys. Rev. Letters 18 (1967) 360, 526

Small angle pion flux produced in a thick beryllium target by high energy photons
Boyarski A., Bulos F., Busza W., Covard D., Diebold R., Litt J., Minten A., Richter B., Taylor R.
Phys. Rev. Letters 18 (1967) 363
Reaction N4 SLAC

41. Photoproduction of strange particles
Cambridge Bubble Chamber Group
Phys. Rev. 156 (1967) 1426
Reactions C212, C213, C515, N2 CEA

42. Photoproduction of strange particles at energies up to 5.8 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Nuovo Cimento 49A (1967) 504
Nuovo Cimento 51A (1967) 246
Reactions C211, C212, C213, N2
For new results see Ref. 100 DESY

43. Experimental determination of the π lifetime by the measurement of the Primakoff effect
Bemporad C., Braccini P.L., Foa L., Luebelsmeyer K., Schmitz D.
Physics Letter 25B (1967) 380
Reaction N7 DESY

44. Photoproduction of single charged pions from deuterium and hydrogen
Bar-Yam Z., De Pagter J., Hoenig M.M., Kern W., Luckey D., Osborne L.S.
Phys. Rev. Letters 19 (1967) 40
Reactions C111, C122, C131 CEA

45. A polarization at 90 degrees in K^+A photoproduction
Groom D.E., Marshall J.H.
Phys. Rev. 159 (1967) 1213
Reaction C213 CIT

46. Forward peak in π^+ photoproduction
Buschhorn G., Heide P., Koetz U., Lewis R.A., Schmueser P., Skronn H.J.
Physics Letters 25B (1967) 622
Reaction C111 DESY

47. Photoproduction of π^0 in the backward direction
Buschhorn G., Heide P., Koetz U., Lewis R.A., Schmueser P., Skronn H.J.
Phys. Rev. Letters 20 (1968) 230
Reaction C112 DESY

48. Photoproduction of K^+ mesons at 3.4 and 5.0 GeV
Joseph P.M., Hicks N., Litt L., Pipkin F.M., Russell J.J.
Physics Letters 26B (1967) 41
Reactions C212, C213, N3 CEA

49. Multipion photoproduction at energies up to 6 GeV
Cambridge Bubble Chamber Group
Phys. Rev. 169 (1968) 1081
Reactions C116, C518, N2 CEA

50. Observation of photoproduced neutral K mesons
Schivell J.F., Engels E., Entis A., Hand L.N., Sadoff A.
Phys. Rev. Letters 19 (1967) 1349
Reactions C211, N4 CEA

51. 5 - 16 GeV single π^+ photoproduction from hydrogen
Boyarski A.M., Bulos F., Busza W., Diebold R., Ecklund S.D., Fischer G.E., Rees J.R., Richter B.
Phys. Rev. Letters 20 (1968) 300
Reaction C111 SLAC

52. Photoproduction of ϕ meson on hydrogen, carbon and aluminum at photon energies between 3.2 and 4.4 GeV
Hoehne K.
DESY, Interner Bericht F32/5 (1968)
Reactions C515, N5 DESY

53. Single photoproduction of neutral π mesons on hydrogen at small angles between 4 and 5.8 GeV
Braunschweig M., Braunschweig W., Husmann D., Luebelsmeyer K., Schmitz D.
Physics Letters 26B (1968) 405
Reaction C112

Single photoproduction of neutral π mesons on hydrogen at small angles between 1.3 and 3 GeV
Braunschweig M., Husmann D., Luebelsmeyer K., Schmitz D.
Phys. Letters 22 (1966) 705
Reaction C112
For new results see Ref. 149 DESY

54. Angular distribution for the eta meson photoproduction from hydrogen at 775 - 850 MeV
Bacci C., Baldini-Celio R., Mencuccini C., Reale A., Spinetti M., Zallo A.
Phys. Rev. Letters 20 (1968) 571
Reaction C116 Frascati

55. Ratio of Λ^0 and Σ^0 photoproduction cross sections; high mass hyperon resonances
Greenberg J.S., Hughes V.W., Lu D.C., Minehart R.C., Mori S., Rothberg J.E., Tyson J.
Phys. Rev. Letters 20 (1968) 221
Reactions C212, C213, N3, N6 CEA

56. Experimental limit on ϕ meson photoproduction from hydrogen at 15 GeV
Boyarski A., Bulos F., Busza A., Diebold R., Ecklund S., Fischer G., Richter B.
Phys. Rev. Letters 20 (1968) 877
Reactions C515, N3 SLAC

57. Photoproduction of K^+ mesons on deuterium
Jullian S.
L.A.L. 1187 (1968)
Reaction N4 ORSAY

58. A search for new particles produced by high energy photons
Barna A., Bellamy E.H., Cox J., Martin F., Perl M.L., Tan T.H., Toner W.T., Zipf T. F.
Phys. Rev. 173 (1968) 1391
Reaction N6 SLAC

59. Search for fractionally-charged particles
Bellamy E.H., Hofstadter R., Lakin W.L., Perl M.L., Toner W.T.
Phys. Rev. 166 (1968) 1391
Reaction N6 SLAC

60. Photoproduction of ϕ mesons from carbon at 1800 MeV
Mostek P., Eisenhandler E., McClellan G., Mistry N., Ogren H., Silverman A., Swartz J., Talman R.
Phys. Rev. Letters 20 (1968) 1057
Reaction N5 Cornell

61. Photoproduction of vector mesons on protons at energies up to 5.8 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Phys. Letters 27B (1968) 54
Reactions C512, C514, C515, N1, N2
For new results see Ref. 28 DESY

62. Photoproduction of negative pions on neutrons between 0.2 and 2.0 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Nucl. Phys. B8 (1968) 535
Reaction C122 DESY

63. High energy photon meson photoproduction from hydrogen via the u-channel
Anderson R., Gustavson D., Johnson J., Ritson D., Weinstein R., Jones W.G., Kreinick D.
Phys. Rev. Letters 21 (1968) 479
Reaction C111 SLAC

64. Measurement of π^0 and η^0 photoproduction at incident gamma ray energies of 5.0 - 17.8 GeV
Anderson R., Gustavson D., Johnson J., Ritson D., Jones W.G., Kreinick D., Murphy F., Weinstein R.
Phys. Rev. Letters 21 (1968) 384
Reactions C112, C116
For new results see Ref. 137 SLAC

65. ρ-photoproduction from hydrogen by 16 GeV bremsstrahlung
Davier M., Derado I., Drickey D., Fries D., Mozley R., Odian A., Villa F., Yount D., Zdanis R.
Phys. Rev. Letters 21 (1968) 841
Reactions C115, C512, N1 SLAC
For new results see Ref. 107

66. Measurement of single π^- and π^+ photoproduction at small momentum transfers
Heide P., Koetz U., Lewis R.A., Schmueser P., Skronn H.J., Wahl H.
Phys. Rev. Letters 21 (1968) 248
Reactions C111, C122, C131 DESY

67. π pair production with polarized X-rays
Morrison R.W., Drickey D.J., Mozley R.F.
Nuovo Cimento 56A (1968) 409
Reaction C115 Stanford

68. High energy photoproduction of ϕ mesons on complex nuclei
Becker U., Bertram W.K., Binkley M., Jordan C.C., Knasel T.M., Marshall R., Quinn D., Rohde M., Trefil J.S., Ting S.C.C.
Vienna Conference (1968) Abstr. 952
Reaction N5 DESY

69. Photoproduction search for dipion resonances in the mass range from 1400 to 1800 MeV
Hicks N., Eisner A., Feldmann G., Litt L., Lockeretz W., Pipkin F.M., Randolph J.K., Stanfield K.C.
Physics Letters 29B (1969) 602
Reactions N1, N6 CEA

70. Production of π^0 mesons by plane polarized 3 GeV photons
Bellinger D., Bordelon R., Cohen K., Deutsch S.B., Lobar W., Lockey D., Osborne L.S., Pothier E., Schwitters R.
Phys. Rev. Letters 23 (1969) 540
Reaction C112 CEA

71. Recoil proton polarization in π^0 production
Bloom E.D., Heusch C.A., Prescott C.Y., Rochester L.S.
Phys. Rev. Letters 19 (1967) 671
Reaction C112 CIT

72. Total cross section for photoproduction of hadrons up to 5 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Physics Letters 27B (1968) 474
Reaction C110 DESY

73. Forward photoproduction of vector mesons from hydrogen at energies from 6.5 to 17.8 GeV
Jones W.G., Kreinick D., Gustavson D., Johnson J., Ritson D., Gettner M., Weinstein R.
Phys. Rev. Letters 21 (1968) 586
Reactions C512, C515
for new results see Ref. 137 SLAC

74. Photoproduction of π^0 mesons from hydrogen at 180 degrees
Cassiday G.L., Fischer H., Ito A., Lou E.C., Rutherford J.
Phys. Rev. Letters 21 (1968) 933
Reaction C112 Cornell

75. Photoproduction of positive pions at backward angles in the energy range 1 - 3 GeV
Alvarez R.A., Cooperstein G., Kalata K., Lanza R.C., Luckey D.
Phys. Rev. Letters 21 (1968) 1019
Reaction C111 CEA

76. Photoproduction of vector mesons with a 16 GeV bremsstrahlung beam
Davier M., Derado I., Drickey D., Fries D., Mozley R., Odian A., Villa F., Yount D.
Physics Letters 28B (1969) 619
Reactions C512, C514, C515, N2
For new results see Ref. 107 SLAC

77. ρ-production with polarized photons
Criegee L., Carreli M.H., Gottfried C., Krolzig A., Loeffler G., Saulys A., Schueler K.P., Timm U., Zimmermann W., Werner H., Collins G.B., Dougan P.W., von Goeler E., Carrigan R.A.
Physics Letters 28B (1968) 282
Reactions C512, N1
For new results see Ref. 135 DESY

78. Partial photoproduction cross section up to 12 GeV
Ballam J., Chadwick G.B., Guiragossian Z.G.T., Klein P., Levy A., Menke M., Pickup E., Tan T.H., Seyboth P., Wolf G.
Phys. Rev. Letters 21 (1968) 1541
Reactions C512, C514, C515, N1, N2 SLAC

79. Gamma-P total hadronic cross section at 7.5 GeV
Ballam J., Chadwick G.B., Guiragossian Z.G.T., Klein P., Levy A., Menke M., Pickup E., Seyboth P., Tan T.H., Wolf G.
Phys. Rev. Letters 21 (1968) 1544
Reactions C110, N1, N2 SLAC

80. Differential cross section in eta photoproduction from .8 to 1.45 GeV
Bloom E.D., Heusch C.A., Prescott C.Y., Rochester L.S.
Phys. Rev. Letters 21 (1968) 1100
Reaction C116 CIT

81. Photoproduction of η^0 mesons at 4 GeV
Bellinger D., Deutsch S., Luckey D., Osborne L.S., Schwitters R.
Phys. Rev. Letters 21 (1968) 1205
Reaction C116 CEA

82. Photoproduction of $\pi^-\Delta^{++}(1236)$ from hydrogen from 5 to 16 GeV
Boyarski A.M., Diebold R., Ecklund S.D., Fischer G.E., Murata Y., Richter B., Williams W.S.C.
Phys. Rev. Letters 22 (1968) 148
Reactions C115, N1 SLAC

83. Ratio of π^- to π^+ photoproduction from deuterium at 8 and 16 GeV
Boyarski A.M., Diebold R., Ecklund S.D., Fischer G.E., Murata Y., Richter B., Williams W.S.C.
Phys. Rev. Letters 21 (1968) 1767
Reactions C122, C131 SLAC

84. Photoproduction of ρ^0 mesons from complex nuclei
McClellan G., Mistry C., Mostek P., Ogren H., Silverman A, Swartz J., Talman R.
Phys. Rev. Letters 22 (1969) 377
Reaction N5 Cornell

85. High energy photoproduction of ρ^0 mesons from hydrogen and deuterium
Gottfried K., Lebedev A.I., McClellan G., Mistry N., Mostek P., Ogren H., Silverman A., Swartz J., Talman R.
Phys. Rev. Letters 22 (1969) 374
Reactions C512, C532 Cornell

86. Total eta nucleon cross section by photoproduction of eta mesons in complex nuclei
Bacci C., Baldini-Celio R., Epaneshnikov, V.N., Mencuccini C., Reale A., Salvini G., Spinetti M., Zallo A.
Lettere Nuovo Cimento 1 (1969) 391
Reaction N4 Frascati

87. π^+ production with linearly polarized photons
Geveniger C., Heide P., Koetz U., Lewis R.A., Schmüser P., Skronn H.J., Wahl H., Wegener K.
Phys. Letters 29B (1969) 41
Reaction C111 DESY

88. Photoproduction of K^0 mesons
Albrov M.G., Aston D., Barber D.P., Bird L., Ellison R.J., Hallivell C., Harckham A.E., Loebinger F.K., Murphy P.G., Templeman R.F., Walters J., Wynroe A.J.
Physics Letters 29B (1969) 54
Reaction N3 NINA

89. Analysis of γp reactions in a hydrogen bubble chamber up to 6.0 BeV: cross sections and laboratory distributions
Cambridge Bubble Chamber Group
Phys. Rev. 155 (1967) 1477
Reactions C111, C112, N1, N2 CEA

90. Photoproduction of eta mesons between threshold and 900 MeV
Delcourt B., Lefrancois J., Perez-Y-Jorba J.P., Sauvage G.
Physics Letters 29B (1969) 75
Reaction C116 ORSAY

91. Photoproduction of the eta meson on deuterium
Bacci C., Baldini-Celio R., Mencuccini C., Reale M., Spinetti M., Zallo A.
Physics Letters 28B (1969) 687
Reaction N4 Frascati

92. Photoproduction of $K^+\Lambda$ and $K^+\Sigma^0$ from hydrogen from 5 to 16 GeV
Boyarski A.M., Bulos F., Busza W., Diebold R., Ecklund S.D., Fischer G.E., Murata K., Rees J.R., Richter B., Williams W.S.C.
Phys. Rev. Letters 22 (1969) 1131
Reactions C212, C213 SLAC

93. Photoproduction of ρ meson from complex nuclei at 9 GeV
Bulos F., Busza W., Diebold R., Giese R., Larsen R.R., Leith D.W.G.S., Richter B., Perez-Mendez V., Stetz A., Williams S.H., Beniston N., Rettberg J.
Phys. Rev. Letters 22 (1969) 490
Reaction N5 SLAC

94. Photoproduction of vector mesons and other resonances at 4.3 GeV
Eisenberg Y., Haber B., Carmel Z., Peleg E., Ronat E.E., Shapira A., Vishinsky G., Yaari R., Yekutieli G.
Phys. Rev. Letters 22 (1969) 669
Reactions C115, C512, C514, C518, N1, N2 SLAC

95. The photoproduction of eta mesons between 950 MeV and 2.2 GeV
Booth P.S.L., Butler M.F., Carroll L.J., Holt J.R., Jackson J.N., Range W.H., Williams E.G.H., Wormald J.R., Tait N.R.S.
Lettere Nuovo Cimento 2 (1969) 66
Reaction C116 NINA

96. Photoproduction of eta mesons on carbon nuclei
Aleksandrov Yu. A., Kutcenko A.B., Moykov V.N., Palovskaya V.V., Tsarev A.V.
Yadern Fiz 9 (1969) 1009
English translation in J. Nucl. Phys. (USSR) 9 (1969) 590
Reaction N4

97. Coherent photoproduction of the eta neutral meson from deuterium
Anderson R.L., Prepost R.
Phys. Rev. Letters 23 (1969) 46 CIT
Reaction N4

98. Search for meson suggested by the Veneziano model
McClellan G., Mistry N., Mostek P., Ogren H., Osborne A., Silverman A., Swartz J., Talman R., Diambrini-Palazzi G.
Phys. Rev. Letters 23 (1969) 718
Reaction N6 Cornell

99. Incoherent photoproduction of ρ^0 mesons from complex nuclei and comparison with vector dominance prediction
McClellan G., Mistry N., Mostek P., Ogren H., Osborne A., Silverman A., Swartz J., Talman R., Diambrini-Palazzi G.
Phys. Rev. Letters 23 (1969) 554
Reaction N5 Cornell

100. Multipion and strange particle photoproduction on protons at energies up to 5.8 GeV
Aachen-Bonn-Hamburg-Heidelberg-München Collaboration
Phys. Rev. 188 (1969) 2060
Reactions C125, C211, C212, C213, C515, C516, C517, C518, N1, N2; supersedes Ref. 42 DESY

101. Total and partial photoproduction cross section at 1.44, 2.8 and 4.7 GeV
Ballam J., Bingham H.H., Chadwick G.B., Fretter W.B., Gearhart R., Guiragossian Z.G.T., Klein P.R., Levy A., Menke M., Moffeit K.C., Murray J.J., Podolsky W.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Sinclair C.K., Windmolders R., Wolf G.
Phys. Rev. Letters 23 (1969) 498
Reactions C110, N3 SLAC

102. Photoproduction of ρ^0 mesons on deuterons between 1 and 5 GeV
Aachen-Bonn-Hamburg-Heidelberg-München Collaboration
Nucl. Phys. B23 (1970) 45
Reactions C521, C532 DESY

103. Photoproduction of ρ^- mesons on deuterons between 1 and 5 GeV
Aachen-Bonn-Hamburg-Heidelberg-München Collaboration
Nucl. Phys. B21 (1970) 93
Reaction C522 DESY

104. Total cross section for photoproduction of hadrons on deuterons up to 5 GeV
Aachen-Bonn-Hamburg-Heidelberg-München Collaboration
Liverpool Conference (1969) Abstr. 138
Reaction C120 DESY

105. High energy photoproduction of charged pions at backward angles
Anderson R.L., Gustavson D., Johnson J., Overman I., Ritson D., Wiik B.H.
Phys. Rev. Letters 23 (1969) 721
Reaction C111, C115 SLAC

106. Photoproduction of $K^+\Lambda^0$ and $K^+\Sigma^0$ from hydrogen at backward angles
Anderson R.L., Gustavson D., Johnson J., Overman I., Ritson D., Wiik B.H.
Phys. Rev. Letters 23 (1969) 890
Reaction C212, C213 SLAC

107. Multibody photoproduction between 2 and 16 GeV
Davier M., Derado I., Drickey D., Fries D., Mozley R., Odian A., Villa F., Yount D.
Phys. Rev. 1D (1969) 790
Reactions C115, C512, C514, C515
supersedes Ref. 65 and 76 SLAC

108. Photoproduction of ϕ^0 mesons from hydrogen and deuterium
McClellan G., Mistry N., Mostek P., Ogren H., Swartz J., Talman R., Diambrini-Palazzi G.
CLNS 69 (1969)
Reactions C515, C532, C535 Cornell

109. Photoproduction of ϕ^0 mesons from complex nuclei
McClellan G., Mistry N., Mostek P., Ogren H., Swartz J., Talman R., Diambrini-Palazzi G.
CLNS 70 (1969)
Reaction N5 Cornell

110. Photoproduction of rho-mesons from hydrogen and carbon by linearly polarized photons
Diambrini-Palazzi G., McClellan G., Mistry N., Mostek P., Ogren H., Swartz J., Talman R.
Phys. Rev. Letters 25 (1970) 478
Reactions C512, N5 Cornell

111. Photoproduction of $K^+\Lambda$ and $K^+\Sigma^0$ from 1.19 to 1.66 GeV at c.m. angles around 90 degrees
Göing H., Schacht W., Tietge J., Weilnböck W.
MPI-PAE/EXP.EL 6 (1969)
Reactions C212, C213 DESY

112. Total cross section for photoproduction of hadrons on protons and deuterium between 1.5 and 6.5 GeV
Meyer H., Naroska B., Weber H.J., Wong M., Heynen V., Mandelkow E., Notz D.
DESY 70/17
Reactions C110, C120, C130 DESY

113. π^0 photoproduction from hydrogen at backward angles
Anderson R., Gittelman B., Litt J., Wiik B.H., Yount D., Minten A., Tompkins D.
Phys. Rev. Letters 23 (1969) 725
Reactions C112, C116 SLAC

114. γp interaction at 5.25 GeV
Ballam J., Chadwick G.B., Guiragossian Z.G.T., Levy A., Menke M., Seyboth P., Wolf G.
Physics Letters 30B (1969) 421 SLAC
Reactions C115, C512, C514, C516, C517, C518, N1, N2, N3

115. Pion photoproduction data below 1.5 GeV
Beale J.T., Ecklund S.D., Walker R.L.
CALT-68-108 (November 66)
for total cross section data of π^+ and π^0 production were added
Reactions C110, C111, C112, C122

116. Photoproduction of single negative pions from deuterium with polarized photons
Bar-Yam Z., de Pagter S., Dowd J., Kern W., Osborne L.S., Luckey D.
Phys. Rev. Letters 24 (1970) 1078
Reaction C122 CEA

117. Single-negative-pion photoproduction on deuterium in the energy range (500 - 800) MeV. Preliminary investigation
Beneventano M., de Notaristefani F., Monacelli P., Paoluzi L., Sebastiani P., Severi M.
Lettere Nuovo Cimento 1 (1969) 113
Reaction C122 Frascati

118. Pion production with polarized photons and test of vector dominance model
Geweniger Chr., Heide P., Koetz U., Lewis R.A., Schmüser P., Skronn H.J., Wahl H., Wegener K.
Physics Letters 28B (1968) 155
Reaction C122 DESY

119. Single positive pion photoproduction with polarized photons on hydrogen
Bar-Yam Z., de Pagter S., Dowd J., Kern W., Osborne L.S., Luckey D.
Liverpool Conference (1969) Abstr. 50
Reaction C111, CEA

120. Measurement of recoil proton polarization in π^0 photoproduction with a wire spark chamber system
Cheng S.U., Prescott C.Y., Heusch C.A.
Liverpool Conference (1969) Abstr. 60
Reaction C112 CIT

121. Small momentum transfer π^+ production with polarized photons
Burfeindt H., Buschhorn G., Geweniger C., Heide P.
Liverpool Conference (1969) Abstr. 87
Reaction C111 DESY

122. π^--production with linear polarized photons
Burfeindt H., Buschhorn G., Geweniger C., Kotthaus R., Skronn H.J., Wahl H., Wegener K.
Liverpool Conference (1969) Abstr. 86
Reaction C122 DESY

123. Photoproduction of ω mesons from complex nuclei
Behrend H.J., Lobkowicz F., Thorndike E.H., Wehmann A.W., Nordberg M.E.
Phys. Rev. Letters 24 (1970) 1246
Reaction N5 Cornell

124. Single π^+ and K^+ meson photoproduction from complex nuclei at 8 and 16 GeV
Boyarski A.M., Diebold R., Ecklund S.D., Fischer G.E., Murata Y., Richter B., Sands M.
SLAC-PUB-671
Reaction N4 SLAC

125. Inelastic photoproduction of π^0 mesons between 2 and 4.6 GeV
Brenner A.E., Peterson D., Walker J.K., Weam R., Wu S.L.
Liverpool Conference (1969) Abstr. 52
Bull. Am. Phys. Soc. 15 (1970) 580
Reaction N3 CEA

126. Measurement of the $\pi^+\Delta(1236)$ photoproduction cross section of hydrogen and deuterium as a function of t at 16 GeV
Boyarski A.M., Diebold R., Ecklund S.D., Fischer G.E., Murata Y., Richter B., Sands M.
Phys. Rev. Letters 25 (1970) 695
Reactions C113, C115, C123, C125, N1 SLAC

127. $K^+\Lambda$ photoproduction cross section at 1.3 GeV and cm-angles between 6 and 90°
Bleckmann A., Herda S., Opara U., Schulz W., Schville W.S.
BONN Univ. PI 1-92 (1970)
Reactions C212, C213 Bonn

128. A new measurement of the π^0 lifetime through Primakoff effect in nuclei
Bellettini G., Bemporad C., Braccini P.L., Bradaschia C., Foa L., Lübelsmeyer K., Schmitz D.
Nuovo Cimento 66A (1970) 243
Reaction N7 DESY

129. Photoproduction of neutral ρ mesons from complex nuclei
Alvensleben H., Becker U., Bertram W.K., Chen M., Cohen K.J., Knasel T.M., Marshall R., Quinn D.J., Rohde M., Sanders G.H., Schubel H., Ting S.C.C.
Phys. Rev. Letters 24 (1970) 786
Reaction N5 DESY

Determination of strong-interaction nuclear radii
Alvensleben H., Becker U., Bertram W.K., Chen M., Cohen K.J., Knasel T.M., Marshall R., Quinn D.J., Rohde M., Sanders G.H., Schubel H., Ting S.C.C.
Phys. Rev. Letters 24 (1970) 792
Reaction N5 DESY

130. Photoproduction of π^0 from neutrons at 4 GeV
Bolon G.C., Bellenger D., Lobar W., Luckey D., Osborne L.S., Schwitters R.
Liverpool Conference (1969) Abstr. 42
Reaction C121 CEA

131. Differential cross section for $\gamma+p \to \eta+p$
Hongo M., Kikuchi K., Kobayakawa H., Mori K., Obayashi H., Ueno K., Ukai K., Yamaki T., Endo I., Sumi Y., Yoshida K.
Liverpool Conference (1969) Abstr. 32
Reaction C116 Tokyo

132. Resonance production in the reaction $\gamma+p \to p+p+\pi^+ +\pi^-+\pi^-$ at energies up to 5.3 GeV
Aachen-Bonn-Hamburg-Heidelberg-München Collaboration
Liverpool Conference (1969) Abstr. 153
Reactions N2, N4 DESY

133. Determination of the total photon-proton cross section from high energy inelastic electron scattering
Bloom E.D., Cottrell R.L., Coward D.H., de Staebler C.H., Drees J., Miller G., Mo L.W., Taylor R.E., Friedman S.I.
SLAC-PUB-653 (1969)
Reaction C110 SLAC

134. Total photoproduction cross section up to 18 GeV and the nature of photon interactions
Caldwell D.O., Elings V.B., Hesse W.P., Jahn G.E., Morrison R.J., Murphy F.V., Yount D.E.
Phys. Rev. Letters 23 (1969) 1256; 24 (1970) 796; 25 (1970) 609
Reactions C110, C120, C130 SLAC

135. ρ^0 production with polarized photons
Carrigan R.A., Criegee L., Franke G., Loeffler G., Schueler K.P., Timm U., Werner H., Zimmermann W.
DESY 70/19
Reactions C512, N1
supersedes Ref. 77 DESY

136. Photoproduction of charged pion pairs on protons
Alvensleben H., Becker U., Bertram W.K., Chen M., Cohen K.J., Knasel T.M., Marshall R., Quinn D.J., Sanders G.M., Schubel H., Ting S.C.C.
Phys. Rev. Letters 23 (1969) 1058
Reactions C512, N1 DESY

137. Neutral boson production on hydrogen at high energies
Anderson R., Gustavson D., Johnson J., Ritson D., Wiik B.H., Jonest W.G., Kreineck D., Murphy F., Weinstein R.
Phys. Rev. D1 (1970) 27
New results on π^--photoproduction through private communication
Reactions C112, C116, C512, C514, C515, N6
supersedes Ref. 64 SLAC

138. The reaction $\gamma p \to p\rho^0$ with linearly polarized photons at 2.8 and 4.7 GeV; cross sections and ρ^0 mass shift
Ballam J., Bingham H.H., Chadwick G.B., Fretter W.B., Gearhart R., Graves B.R., Guiragossian Z.G., Menke M., Milburn R.M., Moffeit K.C., Murray J.J., Podolsky W.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Shapira A., Sinclair L.K., Skillicorn I.O., Windmolders R., Wolf G.
Phys. Rev. Letters 24 (1970) 955
Reactions C512, N1 SLAC

139. Photoproduction of μ pairs, search for meson resonances with invariant masses between 900 and 1800 MeV
Earles M., Faissler W., Lutz G., Kin Min May, Tang Y.W., von Briesen H., von Goeler E., Weinstein R.
Liverpool Conference (1969) Abstr. 64
Reaction N6 SLAC

140. Study of the reactions $\gamma p \to p\pi^+\pi^-\pi^0$ and $\gamma p \to pK^+K^-$ with 2.8 and 4.7 GeV linearly polarized photons
Ballam J., Bingham H.H., Chadwick G.B., Fretter W.B., Gearhart R., Graves W.R., Guiragossian Z.G.T., Menke M., Moffeit G.C., Murray J.J., Podolsky W.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Shapira A., Sinclair C.K., Skillicorn I.O., Windmolders R., Wolf G.
Liverpool Conference (1969) Abstr. 110
Reactions C514, C515, N2 SLAC

141. High energy photodisintegration of the deuteron
Burfeindt M., Buschhorn G., Dubal L., Geveniger C., Heide P., Kotthaus R., Wahl H., Wegener K.
Liverpool Conference (1969) Abstr. 88
Reaction N8 DESY

142. Photoproduction of K^+ and hyperon from hydrogen and deuterium at 11 GeV
Boyarski A.M., Diebold R., Ecklund S.D., Fischer G.E., Murata Y., Richter B., Sands M.
Liverpool Conference (1969) Abstr. 91
Reactions C212, C213, N4 SLAC

143. Photoproduction of $\Delta^{++}\pi^-$ and a search for photoproduced η, A, B and g mesons
Ballam J., Bingham H.H., Chadwick G.B., Fretter W.B., Gearhart R., Graves W.R., Guiragossian Z.G.T., Menke M., Moffeit K.C., Murray J.J., Podolsky W.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Shapira A., Sinclair C.K., Skillicorn I.O., Windmolders R., Wolf G.
Liverpool Conference (1969) Abstr. 111
Reactions C115, N1, N2 SLAC

144. Photoproduction of antineutrons and antiprotons for photon energy between 4.0 and 5.7 BeV
Earles D., Garelick D., Gettner G., Glass G., Lachavanich Y., von Goeler E., Weinstein R.
Phys. Rev. Letters 19 (1967) 922
Reaction N3 CEA

145. Polarization of final state protons in the photoproduction of eta mesons
Heusch C.A., Prescott C.Y., Rochester L.S., Winstin B.D.
Liverpool Conference (1969) Abstr. 58
Reaction C116 CIT

146. Forward and backward photoproduction of eta mesons off protons and neutrons
McNeely W.A., Heusch C.A., Yellin S.J.
Liverpool Conference (1969) Abstr. 59
Reactions C116, N4 CIT

147. Polarization of recoil protons from proton Compton effect in the region of the second N resonance
Fujii T., Kabe S., Kamei T., Kato S., Kita I., Kiyoshima T., Yamada R., Yamagata T.
INS-REPORT 135 (1969)
Reaction C011 Tokyo

148. Recoil proton polarization in neutral pion production between 1200 and 1800 MeV
Deutsch M., Patel P., Tsipis C., Castro M., Milburn R., Richards W., Rutherford S., Sinclair C., Stearns B., Tanaka N.
Liverpool Conference (1969) Abstr. 13
Reaction C112 CEA

149. Single photoproduction of neutral π-mesons on hydrogen in the extreme forward direction at 4 and 5.8 GeV
Braunschweig H., Braunschweig W., Husmann D., Lübelsmeyer K., Schmitz D.
Nucl. Phys. B20 (1970) 191
Reaction C112
supersedes Ref. 53 DESY

150. Asymmetric electron pair production on carbon
Simonds R.M. and Richter B.
Phys. Rev. 2D (1970) 417
Reaction N9 Stanford

151. Search for S = +1 baryon states in photoproduction
Tyson J., Greenberg J.S., Hughes V.W., Lu D.C., Minehart R.C., Mori S., Rothberg J.E.
Phys. Rev. Letters 19 (1967) 255

Search for S =+1 baryon states in photoproduction
Mori S., Greenberg J.S., Hughes V.W., Lu D.C., Rothberg J.E., Thompson P.A.,
Phys. Letters 28B (1968) 152

Search for S =+1 baryon states in photoproduction
Mori S., Greenberg J.S., Hughes V.W., Lu D.C., Minehart R.C., Rothberg J.E., Thompson P.A., Tyson J.
Phys. Rev. 185 (1969) 1687
Reaction N6 CEA

152. Total cross section for photoproduction of hadrons on D, Be, C, Al, Ti and Cu between 1.5 and 6.3 GeV
Meyer H., Naroska B., Weber J.H., Wong M., Heynen V., Mandelkow E., Notz D.
Liverpool Conference (1969) Abstr. 23
Reaction N4 DESY

153. Photoproduction search for dipion resonances in the mass range from 1360 to 1780 MeV
Hicks N., Eisner A., Feldman G., Litt L., Lockeritz W., Pipkin F.M., Randolph J.K., Stanfield K.C.
Liverpool Conference (1969) Abstr. 146
Reactions N1, N6 CEA

154. Study of the reaction $\gamma p \to p\pi^+\pi^-\pi^+$ above 4.5 GeV and evidence for a πA_1 enhancement
Davier M., Derado I., Fries D.C., Lin F.F., Mozley R.F., Odian A., Park J., Svanson W.P., Villa F., Yount D.
SLAC-PUB-666
Reactions N2, N6 SLAC

155. Analysis of the reaction $\gamma+p \to p+\pi^+ +\pi^-$ at energies up to 1 GeV in a hydrogen bubble chamber
Gianello G., Piazza A., Sussino G., Fiore L., Mantovani G.C.
Nuovo Cimento 63A (1969) 892
Reactions C113, C115, C512, N1 Frascati

156. π^+ photoproduction from hydrogen at lab angles from 34° to 155° photon energies from 500 to 1350 MeV
Thiessen H.A.
Phys. Rev. 155 (1967) 1488
Reaction C111 CIT

157. $\pi^\pm$ photoproduction in forward direction
Ito A., Loe R., Loh E.C., Ramanauskas A., Ritchie D., Schmidt W.
Phys. Rev. Letters 24 (1970) 687
Reaction C122 Stanford

158. Conservation of s-channel helicity in ρ^0 photoproduction
Ballam J., Bingham H.H., Chadwick G.B., Fretter W.B., Gearhart R., Guiragossian Z.G.T., Menke M., Milburn R.M., Moffeit K.C., Murray J.J., Podolsky W.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Shapira A., Sinclair C.K., Skillicorn I.O., Windmolders R., Wolf G.
Phys. Rev. Letters 24 (1970) 960, 1467
Reactions C512, N1 SLAC

159. π-pair photoproduction below 1 GeV
Allaby J.V., Lynch H.L., Ritson D.M.
Phys. Rev. 142 (1966) 887
Reactions C115, N1 Stanford

160. Photoproduction of charged pion pairs and $N^*(1238)^{++}$ in hydrogen from 0.9 to 1.3 GeV
Hauser M.G.
Phys. Rev. 160 (1967) 1215
Reactions C115, N1 CIT

161. Photoproduction of charged pion pairs from hydrogen with gamma energies up to 1500 MeV
Fretwell L.J., Mullins J.H.
Phys. Rev. 155 (1967) 1497
Reactions C115, C512, N1 CIT

162. Experimental limit on high energy diffraction production of the ϕ-meson
Tsai Y.S., Cox J., Martin F., Perl M.L., Toner W.T., Zipf T.F.
Phys. Rev. Letters 19 (1967) 915
Reaction C515 SLAC

197. Validity of quantum electrodynamics at extremely small distances
Alvensleben H., Becker U., Bertram W.K., Binkley M., Cohen K., Jordan C., Knasel T.M., Marshall R., Quinn D.J., Rohde M., Sanders G.H., Ting S.C.C.
Phys. Rev. Letters 21 (1968) 1501
Reaction N9 DESY

198. Wide-angle electron proton bremsstrahlung
Bernardini C., Felicetti F., Meneghetti-Vitale L., Penso G., Querzoli R., Silvestrini V., Vignola G., Vitale S.
LNF 68/46
Reaction N9 Frascati

199. Wide-angle bremsstrahlung
Ash W.W., Berkelman K., Martill D.L., Lichtenstein C.A., Littauer R.M., Sieman R.H.
Phys. Rev. D1 (1970) 825
Reaction N9 Cornell

200. Photoproduction of muon pairs: $\rho^0 \to \mu^+\mu^-$ (e,μ) universality, and (ρ,ω) phase
Rothwell P.L., Chase R.C., Earles D.R., Gettner M., Glass G., Lutz G., von Goeler E., Weinstein R.
Phys. Rev. Letters 23 (1969) 1521
Reactions C512, C514, N9 CEA

201. Photoproduction of 8 GeV rho mesons from nuclei
Behrend H.-J., Lobkovicz F., Thorndike E.H., Wehmann A.A.
Phys. Rev. Letters 24 (1970) 336
Reaction N5 Cornell

202. Photoproduction of K^+ mesons and polarization of Λ^0 hyperons from the reaction $\gamma+p \to K^+ + \Lambda^0$ in the 1 GeV range
Fujii T., Imanishi A., Iwata S., Kusemegi A., Meshina M., Miyachi T., Sasaki M., Takamatsu K., Orito S., Takasaki F., Higuchi M., Amend T., Homma S.
Phys. Rev. 2D (1970) 439
Reaction C213 Tokyo

203. Search for new vector bosons and a test of quantum electrodynamics
Hayes S., Imlay R., Joseph P.M., Keizer A.S., Knowles J., Stein P.C.
Phys. Rev. Letters 24 (1970) 1369
Reaction N6 Cornell

204. Total cross sections of $\pi^+\pi^-$ and $\pi^-\pi^0$ photoproduction on neutron in a deuterium bubble chamber
Piazza A., Susinno G., Fiore L., Gialanella G., Lodi-Rizzini E., Mantovani G.C., Piazzoli A., Carbonara F., Palomba-Nicodemi G., Rinzivillo R.
Lettere Nuovo Cimento 3 (1970) 403
Reaction N4 Frascati

205. Photoproduction of the A_2 meson in the reaction $\gamma p \to n\pi^+\pi^+\pi^-$ and an estimate of the $A_2 \gamma\pi$ width
Ballam J., Chadwick B., Eisenberg Y., Guiragossian Z.G.T., Haber B., Horovitz B., Levy A., Menke M., Peleg E., Ronat E.E., Seyboth P., Shapira A., Vishinsky G., Wolf G., Yekutieli G.
Phys. Rev. Letters 23, (1969) 1322
Reactions N2, N3 SLAC

206. Photoproduction of $N^*(1236)$ from hydrogen
Ukai K., Takmatsu K., Murata Y., Mori K., Mishina U., Matsumoto S., Kusumegi A.
INSJ 107
Reaction C115 Tokyo

207. Photoproduction of symmetric electron-positron pairs
Eisner A., Feldman G., Lockeretz W., Pipkin F.M., Randolph J.K., Tennebaum J.
Phys. Rev. 2D (1970) 57
Reaction N9 CEA

208. Photoproduction of high mass dipion pairs at 15 GeV
Bulos F., Busza W., Giese R., Kluge E.E., Larsen R.R., Leith D.W.G.S., Richter B., Williams S.H.
SLAC-PUB-751
Reaction N5, N6 SLAC

209. Muon proton inelastic scattering, $|q^2|$ less than 1.2 $(GeV/c)^2$
Dieterle B.D., Braunstein T., Cox J., Martin F., Toner W.T., Perl M.L., Zipf T.F., Lakin W.L., Bryant H.C.
Phys. Rev. Letters 23 (1969) 1191
Reaction C110 SLAC

210. π^+ photoproduction from hydrogen from 5 to 16 GeV
Boyarski A.M., Bulos F., Busza W., Diebold R., Ecklund S.D., Fischer G.E., Murata Y., Richter B., Williams W.S.C.
Vienna Conference (1969) Abstr. 430
Reaction C111 SLAC

211. High energy photoproduction of φ meson on hydrogen
Becker U., Bertram W.K., Binkley M., Jordan C.L., Knasel T.M., Marshall R., Quinn D., Rohde M., Ting S.C.C.
Vienna Conference (1969) Abstr. 951
Reaction C515 DESY

212. Δ production via $\gamma p \to \Delta\pi$ by linearly polarized photons at 2.8 and 4.7 GeV
Ballam J., Bingham H.H., Chadwick G.B., Fretter W.B., Gearhart R., Guiragossian Z.G.T., Menke M., Milburn R.H., Moffeit K.C., Murray J.J., Podolsky W.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Shapira A., Sinclair C.K., Skillicorn I.O., Windmolders R., Wolf G.
SLAC-PUB-766
Reaction C115 SLAC

213. Study of $\gamma p \to p\omega$ with linearly polarized photons at 2.8 and 4.7 GeV
Ballam J., Bingham H.H., Chadvick G.B., Fretter W.B., Gearhart R., Guiragossian Z.G.T., Menke M., Milburn R.H., Moffeit K.C., Murray J.J., Podolsky W.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Shapira A., Sinclair C.K., Skillicorn I.O., Windmolders R., Wolf G.
Phys. Rev. Letters 24 (1970) 1364
Reaction C514 SLAC

214. Search for a heavy electron by electron-proton coincidence measurements
Behrend H.J., Brasse F.W., Engler J., Galster S., Gansauge E., Hartwig G., Hultschig H., Schopper H.
Phys. Rev. Letters 15 (1965) 900
Reaction N6 DESY

215. Search for an excited electron of mass in the range of several hundred MeV
Betourne C., Nguyen Ngoc H., Perez-Y-Jorba J., Tran Thank van S.
Physics Letters 17 (1965) 70
Reaction N6 Orsay

216. Unsuccessful search for an excited electron
Budnitz R., Dunning S.R., Goitein M., Ramsey N.F., Walker J.K., Wilson R.
Phys. Rev. 141 (1966) 1313
Reaction N6 CEA

217. Search for leptonic quarks in the mass range 100 to 900 MeV
Bathow G., Freytag F., Schulz H.D., Tesch K.
Physics Letters 25B (1967) 163
Reaction N6 DESY

218. A search for leptonic quarks
Foss J., Garelick D., Homma S., Lobar W.Y., Osborne L.S., Uglum J.
Physics Letters 25B (1967) 166
Reaction N6 CEA

219. Experimental search for a heavy electron
Boley C.D., de Pagter J.K., Elias J.E., Friedman J.I., Hartmann G.C., Kendall H.W., Kirk P.N., Sogard M.R., van Speybroeck L.P.
Phys. Rev. 167 (1968) 1275
Reaction N6 CEA

220. The decay into muon pairs of photoproduced φ mesons
Hayes S., Imlay R., Joseph P.M., Keizer A.S., Stein P.C.
Phys. Rev. Letters 25 (1970) 393
Reaction N5 Cornell

221. Observation of ρ-ω interference in the photoproduction of electron-positron pairs from carbon and a measurement of the ρ-ω phase
Biggs P.J., Braben D.W., Clifft R.W., Gabathuler E., Kitching P., Rand R.E.
Phys. Rev. Letters 24 (1970) 1187
Reaction N5 NINA

Measurement of the magnitude and phase of ρω interference in $\pi^+\pi^-$ photoproduction from carbon.
Biggs P.J., Clifft R.W., Gabathuler E., Kitching P., Rand R.E.
Phys. Rev. Letters 24, (1970) 1201 NINA

222. Photoproduction on neutral rho mesons
Alvensleben H., Becker U., Bertram W.K., Chen M., Cohen K.J., Knasel T.M., Marshall R., Quinn D.J., Rohde M., Sanders G.H., Schubel H., Ting S.C.C.
Nuclear Phys. B18 (1970) 333
Reactions C512, N5
supersedes Ref. 136, 129 DESY

223. Laboratory angular and momentum distribution of protons and pions from photoproduction on hydrogen at energie up to 5.8 GeV
Aachen-Berlin-Bonn-Hamburg-Heidelberg-München Collaboration
Nucl. Phys. B1 (1967) 669, B3 (1967) 364 DESY
Reaction N3

224. Backward photoproduction of K^+ mesons from hydrogen between 1 and 2 GeV
Dêcamp D., Dudelzak D., Eschstruth P., Fourneron Th.
L.A.L. 1236 Orsay
Reactions C212, C213

225. Pi-pair photoproduction below 850 MeV
Diambrini-Palazzi G., Sette G., Giannini I., Grianti F., Santroni A.
Phys. Rev. Letters 21 (1970) 1463
Reaction N1 Frascati

226. Compton scattering from hydrogen between 5 and 17 GeV
Duderson R.L., Gustavson D., Johnson J., Overman I., Ritson D., Wiik B.H., Talman R., Walker J.K., Worcester D.
SLAC-PUB-772
Reaction C011 SLAC

227. Measurement of proton Compton scattering at 6 GeV and small momentum transfers
Buschhorn G., Criegee L., Dubal L., Franke G., Geweniger C., Heide P., Kotthaus R., Poelz G., Timm U., Wegener K., Werner H., Wong M., Zimmermann W.
DESY 70/46, submitted to Phys. Letters
Reaction C011 DESY

163. Search for the decay of photoproduced ϕ mesons into $\mu^+\mu^-$
Chase R.C., Rothvell P., Weinstein R.
Phys. Rev. Letters 18 (1967) 710
Reaction C515 CEA

164. Search for charged particles with rest mass between that of the electron and μ-meson
Cowen D.H., Gittelman B., Lynch H.L., Ritson D.M.
HEPL 288 (1963)
Reaction N6 Stanford

165. Photofission of the nuclei Bi, Pb, Tl, Au, Pt, Os, Re, Ra, and Hf in the energy region up to 1600 MeV
Yadern Fiz 6 (1967) 703
English translation: J. Nucl. Phys. (USSR) 6 (1967) 512
Reaction N8 Kiev

166. Proton Compton effect
Bernhardini G., Filosofo I., Hanson A.O., Odian A.C., Yamagata T., Auerbach L.B.
Nuovo Cimento 18 (1960) 1203
Reaction C011 Illinois

167. Elastic scattering of 247 MeV gamma rays on hydrogen
Baranov P.S., Slovokhotov L.I., Sokol G.A., Shtarkov L.N.
Zh. Eksper. Teor Fiz 41 (1961) 1713
English translation: JETP 14 (1962) 1219
Reaction C011 Lebedev

168. Refinement of the experimental values of the Compton effect cross section for the proton
Baranov P.S., Slovokhotov L.I., Sokol G.A., Shtarkov L.N.
Zh. Eksper. Teor. Fiz 50 (1966) 364
English translation: JETP 23 (1966) 242
Reaction C011 Lebedev
for new results see Ref. 169

169. Elastic scattering of γ-quanta on protons at energies above the π-meson photoproduction threshold
Baranov P.S., Kutznetsova V.A., Slovokhotov L.I., Sokol G.A., Shtarkov L.N.
Yadern Fiz 3 (1966) 1083
English translation: J. Nucl. Phys. (USSR) 3 (1966) 791
supersedes Ref. 168
Reaction C011 Lebedev

170. Elastic scattering of photons by protons (parts I and II)
De Wire J.W., Feldman M., Highland V.L., Littauer R.
Phys. Rev. 124 (1961) 909 and 913
Reaction C011 Cornell

171. Proton Compton effect
Nagashima Y.
INSJ 81
Reaction C011 Tokyo

172. Proton Compton effect for 300 MeV photons
Gray E.R., Hanson A.O.
Phys. Rev. 160 (1967) 1217
Reaction C011 Illinois

173. Elastic scattering of gamma rays by protons
Stiening R.F., Loh E., Deutsch M.
Phys. Rev. Letters 10 (1963) 536
Reaction C011 Cornell

174. Proton Compton effect by polarized photons at 90° in the c.m. system in the first resonance region
Barbiellini G., Capon G., deZorzi G., Murtas G.P.
Phys. Rev. 174 (1968) 1665
Reaction C011 Frascati

175. Upper limit on cross sections for $\gamma+n \to K^0+\Lambda^0(\Sigma^0)$ below 1500 MeV
Cayne D.G., Mullins J.H.
Phys. Rev. 157 (1967) 1259
Reaction N4 CIT

176. π^+ photoproduction from hydrogen at laboratory energies from 589 to 1269 MeV
Ecklund S.D., Walker R.L.
Phys. Rev. 159 (1967) 1195
Reaction C111 CIT

177. π^- photoproduction from hydrogen at 60° between 0.85 and 1.21 GeV
Burq J.P., Chollet J., Fourneron Th., Lehmann P.
Nuovo Cimento 56A (1968) 1142
Reaction C115 Orsay

178. Double pion photoproduction on protons below 1 GeV
An investigation of the isobar excitation mechanism
DeSchreyer S., Fiore L., Focardi S., Gianella G., Mantovani G.C., Piazza A., Rossi V., Stella B., Susinno G.
Nuovo Cimento 56A (1969) 1099
Reactions C115, N1 Frascati

179. Production of antiprotons by high energy photons
Bertram W., Buschhorn G., Carroll J., Eandi R., Hübner R., Kern W., Kötz U., Schnüser P., Skronn H.J.
Physics Letters 21 (1966) 471
Reactions N3, N4 DESY

180. Polarization of the proton from the $\gamma+n \to p+\pi^-$ reaction
Kenemuth J.R., Stein P.C.
Phys. Rev. 129 (1963) 2259
Reaction C112 Cornell

181. Double π-photoproduction on medium weight nuclei
Belli B.M., di Napoli V., Laiteno F., Margadonna D., Picchi P., Salvetti E., Visentin R.
LNF 68/66
Reaction N4 Frascati

182. π^- photoproduction from deuterium at laboratory energies 600 to 1250 MeV
Scheffler P.E., Walker P.L.
Phys. Rev. Letters 24 (1970) 952
Reaction C122, C131 CIT

183. Single and double pion photoproduction on ^{3}He
Goggi G., Montavani G.G., Piazza A., Piazzoli A., Rinzivillo R., Scannicchio D.
Nuovo Cimento 58A (1969) 901
Reaction N4 Frascati

184. Asymmetry in π^+ photoproduction from a polarized target
Borghini M., Boyarski A., Chamberlain O., Diebold R., Ecklund S.D., Fuzesy R., Gorn W., Morehouse C.C., Murata Y., Powell T., Richter B., Robrich P., Rock S., Shannnon S., Shapiro G., Sieman R., Weisberg H.
Phys. Rev. Letters 25 (1970) 835
Reaction C111 SLAC

185. Elastic rho photoproduction from deuterium
Anderson R.L., Gustavson D., Johnson J., Overman I., Ritson D.M., Talman R., Wiik B.H., Worcester D.
Bull. Am. Phys. Soc. 15 (1970) 580
Reaction C532 SLAC

186. Photoproduction of resonances by linearly polarized photons
Ballam J., Bingham H.H., Chadwick G.B., Fretter W.B., Gearhart R., Graves W.R., Guiragossian Z.G.T., Menke M., Milburn R.M., Moffeit K.C., Murray J.J., Rabin M.S., Rosenfeld A.H., Seyboth P., Shapira A., Sinclair C.K., Skillicorn I.O., Windmolders R., Wolf G.
Bull. Am. Phys. Soc. 15 (1970) 581
Reactions C113, C115, C512, N1, N3 SLAC

187. Deviation from simple quantum electrodynamics
Blumenthal R.B., Ehn D.C., Faissler W.L., Joseph P.M., Lanzerotti L.J., Pipkin F.M., Stairs D.G.
Phys. Rev. Letters 14 (1965) 660

Wide-angle electron-pair production
Blumenthal R.B., Ehn D.C., Faissler W.L., Joseph P.M., Lanzerotti L.J., Pipkin F.M., Stairs D.G.
Phys. Rev. 144 (1966) 1199
Reaction N9 CEA

188. Validity of quantum electrodynamics at small distances
Asbury J.G., Bertram W.K., Becker U., Friedlander S., Joos P., Jordan C., Rohde M., Smith A.J.S., Ting C.C.
Phys. Rev. Letters 18 (1967) 65

Photoproduction of wide-angle electron-positron pairs at high energies
Asbury J.G., Bertram W.K., Becker U., Friedlander S., Joos P., Jordan C., Rohde M., Smith A.J.S., Ting S.C.C.
Phys. Rev. 161 (1967) 1344
Reaction N9 DESY

189. Wide-angle electron-positron pair production
Cohen K.J., Homma S., Luckey D., Osborne L.S.
Phys. Rev. 173 (1968) 1339
Reaction N9 CEA

190. Photoproduction of wide-angle electron pairs from carbon
Eisenhandler E., Feigenbaum J., Mistry N., Mostek P., Rust D., Silverman A., Sinclair C., Talman R.
Phys. Rev. Letters 18 (1967) 425
Reaction N9 Cornell

191. Photoproduction of electron pairs as a test of quantum electrodynamics
Biggs P.J., Braben D.W., Cliff R.W., Gabathuler E., Kitching P., Rand R.E.
Phys. Rev. D1 (1970) 1252
Reaction N9 NINA

192. Photoproduction of muon pairs in carbon
Alberigi-Quaranta A., dePretis M., Marini G., Odian A., Stoppini G., Tau L.
Phys. Rev. Letters 9 (1962) 226
Reaction N9 Frascati

193. Evidence for the electromagnetic production of μ mesons
Masek G.E., Panofsky W.K.H.
Phys. Rev. 101 (1956) 1094

Production of μ-mesons pairs by photons
Masek G.E., Lazarus A.J., Panofsky W.K.H.
Phys. Rev. 103 (1956) 374
Reaction N9 Stanford

194. The ratio of the cross sections for photoproduction of asymmetric muon and electron pairs in hydrogen and carbon
Hughes V.W., Blanpied W.A., Greenberg J.S., Kitching P., Lu D.C., Minshart R.C.
Hamburg Conference (1965) p. 361
Reaction N9 CEA

195. Wide angle photoproduction of μ-pairs
DePagter J.K., Boyarski A., Gettner M., Glass G., Friedman J.I., Kendall H.W., Larrabee J.B., Weinstein R.
Phys. Rev. Letters 12 (1964) 739
Reaction N9

Photoproduction of muon pairs: A test of quantum electrodynamics
Boyarski A.M., Chase R.C., Friedman J.I., Gettner M., Glass G., von Goeler E., Weinstein R.
Phys. Rev. Letters 17 (1966) 767
Reaction N9 CEA

196. Photoproduction of muon pairs at 7 - 9 GeV
Hayes S., Imlay R., Joseph P.M., Keizer A.S., Knowles J., Stein P.C.
Phys. Rev. Letters 22 (1969) 1134
Reaction N9 Cornell

228. Total and differential cross-sections of negative pion photoproduction off neutrons up to 1 GeV, Possible evidence for the p-11 resonance
Carbonara F., Fiore L., Gialanella G., Lodi-Rizzini E., Mantovani G.C., Napolitano M., Piazza A., Piazzoli A., Rinzivillo R., Rossi V., Susinno G.
LNF-70/16 Frascati
Reaction C122

229. Backward photoproduction of positive pions on hydrogen
Fischer G., Fischer H., Leneke M., Wessels H.
Bonn Univ. -1-100
Reaction C111 Bonn

230. Photoproduction of positive pions at backward angles in the energy range 1 - 3 GeV
Alvarez R.A., Cooperstein G., Kalata K., Lanza R.C., Luckey D.,
Phys. Rev. D1 (1970) 1946
Reaction C111 CEA

231. Pi zero photoproduction from hydrogen between 574 and 1211 MeV
Wolverton F.B.
Thesis CALTECH 1968
Reaction C112 CIT

232. Single and Double pion photoproduction on He-3
Goggi G., Mantovani G.C., Piazzoli A., Scannicchio D., Piazza A.
Nuovo Cimento A58 (1968) 901
Reaction N4 Frascati

233. Asymmetric muon-pair photoproduction from hydrogen
Quinn D.J., Ritson D.M.,
Phys. Rev. Letters 20 (1968) 890
Reaction N9 Stanford

234. Pion-neutral lifetime (in Russian)
Kryshkin V.I., Sterligov A.G., Usov Yu P., Pisma Zh.
Pisma Zh. Eksperim. i Teor. Fiz. 9 (1969) 420
English translation: JETP Letters 9 (1969) 251
Reaction N7 Tomsk

235. Experimental test of quantum electrodynamics by muon bremsstrahlung
Hoffmann C.M., Liberman A.D., Engels E., Imrie D.C., Innocenti P.G., Wilson R., Zajde C., Blanpied W.A., Stairs D.G., Drickey D.J.
Phys. Rev. Letters 22 (1969) 663
Reaction N9 SLAC

236. Production of K2-neutral mesons and neutrons by 10- and 16-GeV electrons on beryllium
Brody A.D., Johnson W.B., Leith D.W.G.S., Loew G., Loos J.S., Luste G., Miller R., Moriyasu K., Shen B.C., Swart W.M., Yamartino R.
Phys. Rev. Letters 22 (1969) 966
Reaction N4 SLAC

237. Electron triplets and pairs observed in a streamer chamber
Benaksas D., Morrison R.
Phys. Rev. 160 (1867) 1245 Stanford

Electron pair production in the field of the proton and in the field of the electron by photons of energy from 10 MeV to 1 BeV
Hart E.L., Cocconi G., Cocconi V.T., Sellen J.M.
Phys. Rev. 115 (1959) 678 Cornell

Electron triplet production by high energy photons in hydrogen
Gates D.C., Kenney R.W., Swanson W.P.
Phys. Rev. 125 (1962) 1310 Illinois
Reaction N9

238. Observation of coherent interference pattern between ρ,ω decays
Alvensleben H., Becker U.,Bertram W.K., Chen M., Cohen K.J., Knasel T.M., Marshall R., Quinn D.J., Rohde M., Sanders G.H., Schubel H., Ting S.C.C.
DESY 70/40 DESY
Reaction N5

Determination of the photoproduction phase of ρ^0 mesons
Alvensleben H., Becker U., Chen M., Cohen K.J., Knasel T.M., Marshall R., Quinn D.J., Rohde M., Sanders G.H., Schubel H., Ting Samuel C.C.
DESY 70/39
Reaction N5 DESY

239. Single photoproduction of π-mesons on hydrogen in the forward direction at 4 and 6 GeV
Braunschweig W., Erlewein W., Frese H., Lübelsmeyer K., Meyer-Wachsmuth H., Schmitz D., Schultz von Dratzig A., Wessels G.
Submitted to Physics Letters
Reaction C116 DESY

240. Photoproduction of ω mesons from nuclei
Braccini P.L., Bradaschia C., Castaldi R., Foà L., Lübelsmeyer K., Schmitz D.
DESY 70/33
Reaction N5 DESY

241. Measurement of electroproduction of muon pairs
Earles D.R., Chase R.C., Faissler W.L., Gettner M.W., Glass G., Lutz G., Parsons R.G., Rothwell P.L., Moy K.M., von Briesen H., Jr., von Goeler E., Weinstein Roy
Phys. Rev. Letters 25 (1970) 129
Reaction N9 CEA

242. Positive pion photoproduction in the backward direction
Ekstrand K., Browman A., Hand L., Nordberg E.
CLNS 124
Reaction C111 Cornell

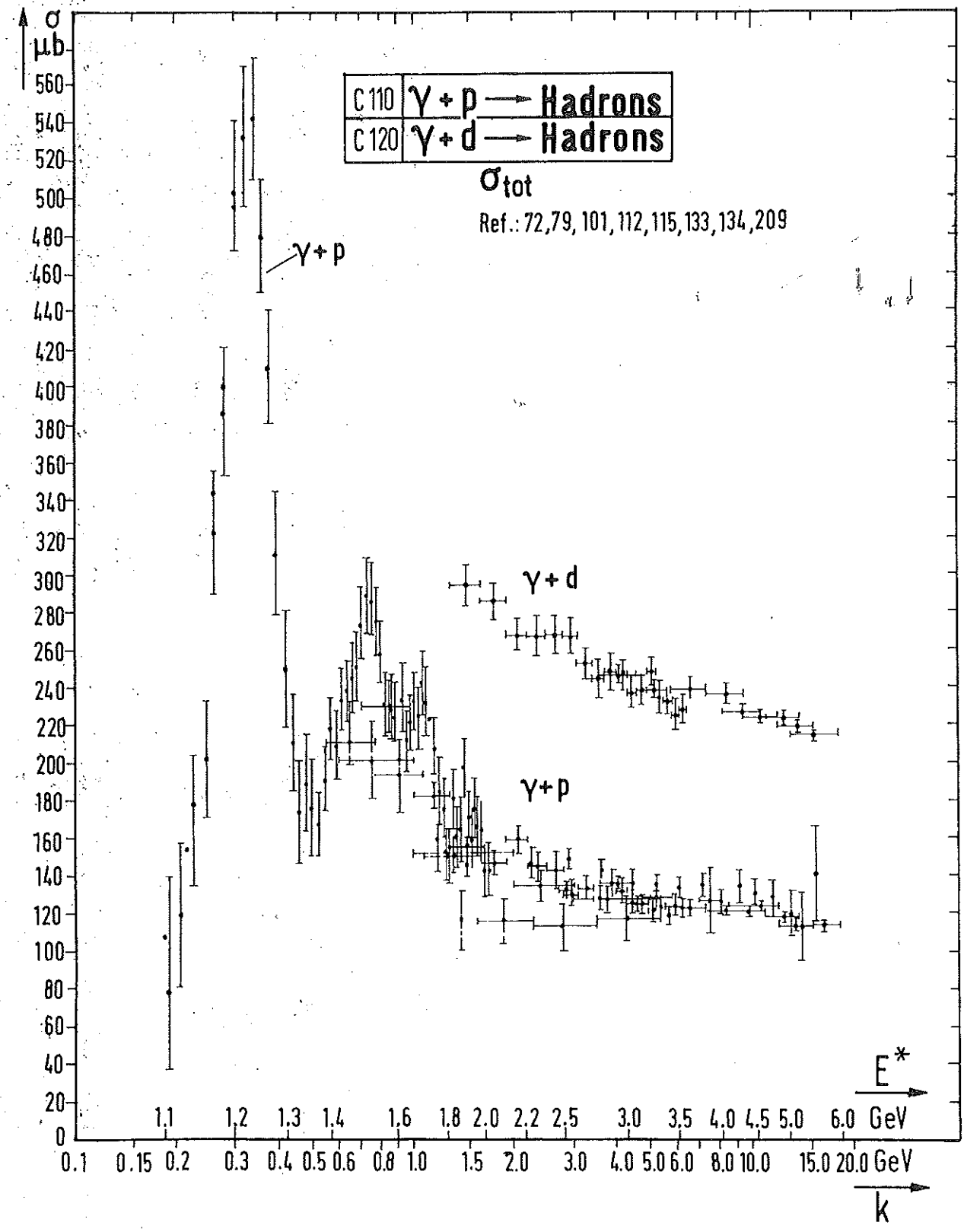
243. Photoproduction of vector mesons and A(1238) in hydrogen and deuterium and the pπγ width
Eisenberg Y., Haber B., Ronat E.E., Shapira A., Yekutieli G.
Phys. Rev. Letters 25 (1970)
Reactions C517, C518, C519 SLAC

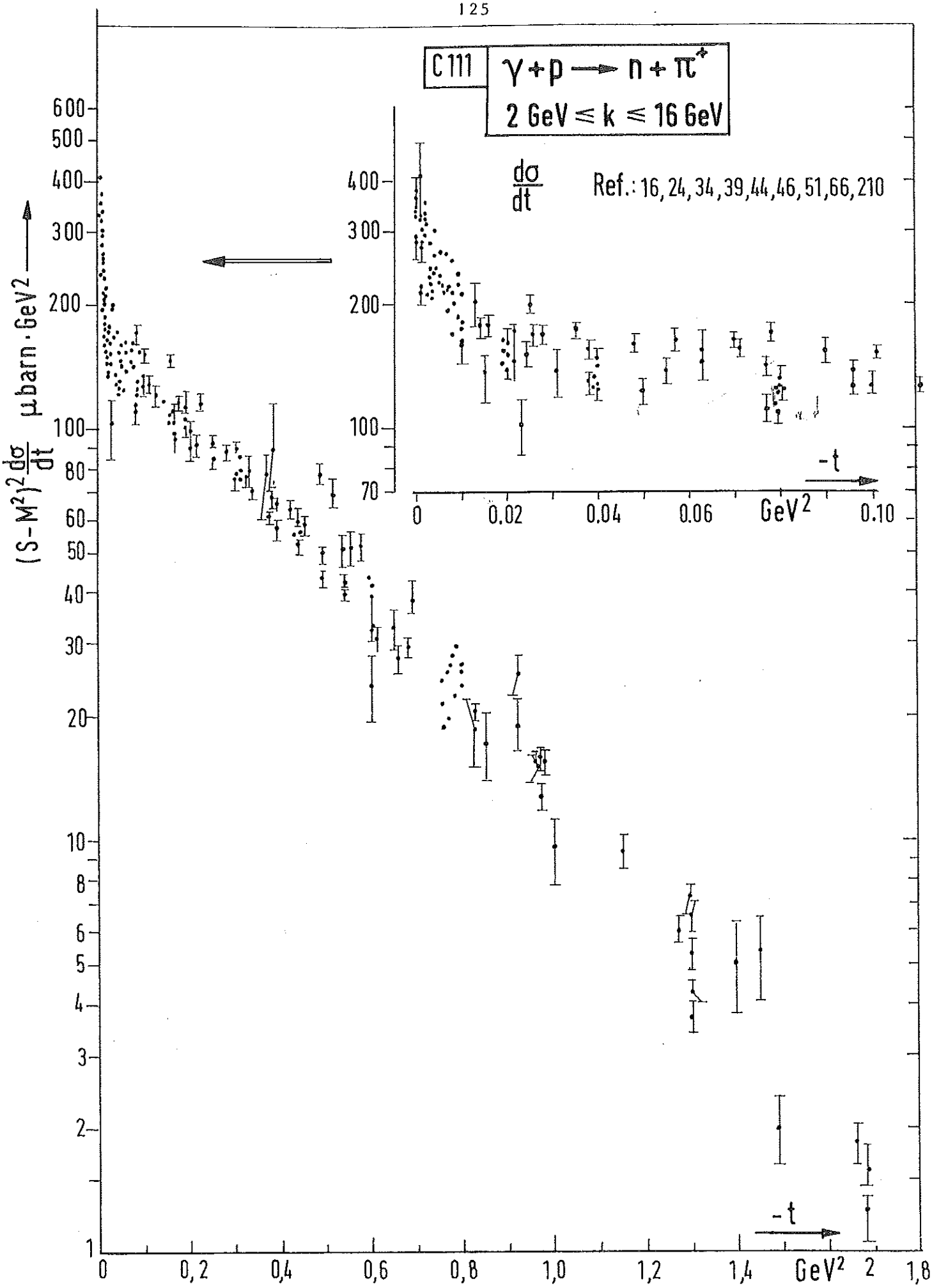
Abbreviations for Conference Proceedings

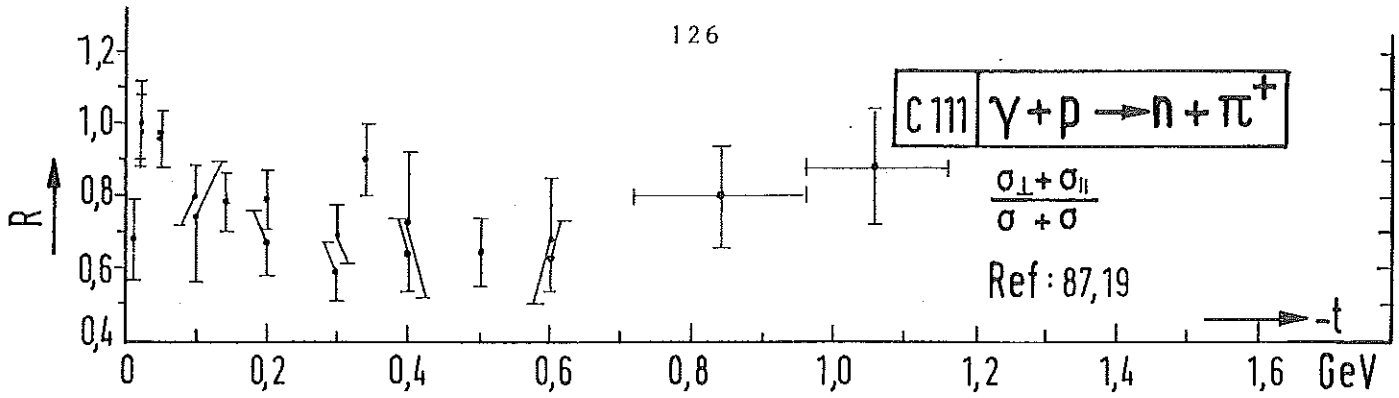
Hamburg	Proceedings of the International Symposium on Electron and Photon Interactions at High Energies Hamburg, June 8 - 12, 1965 Deutsche Physikalische Gesellschaft, Hamburg 1966
Vienna	14th International Conference on High Energy Physics Vienna, 28 August - 5 September, 1968 Proceedings European Organization for Nuclear Research, Geneva 196
Liverpool	4th International Symposium on Electron and Photon Interactions at High Energies 1969 Proceedings Daresbury Nuclear Physics Laboratory 1969

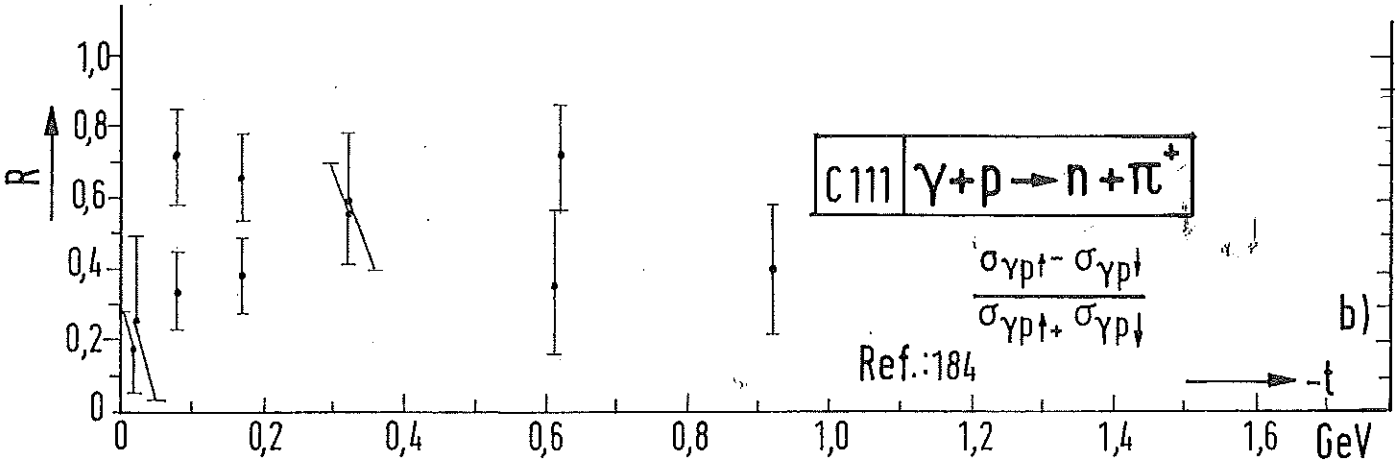
List of accelerators cited in this compilation.

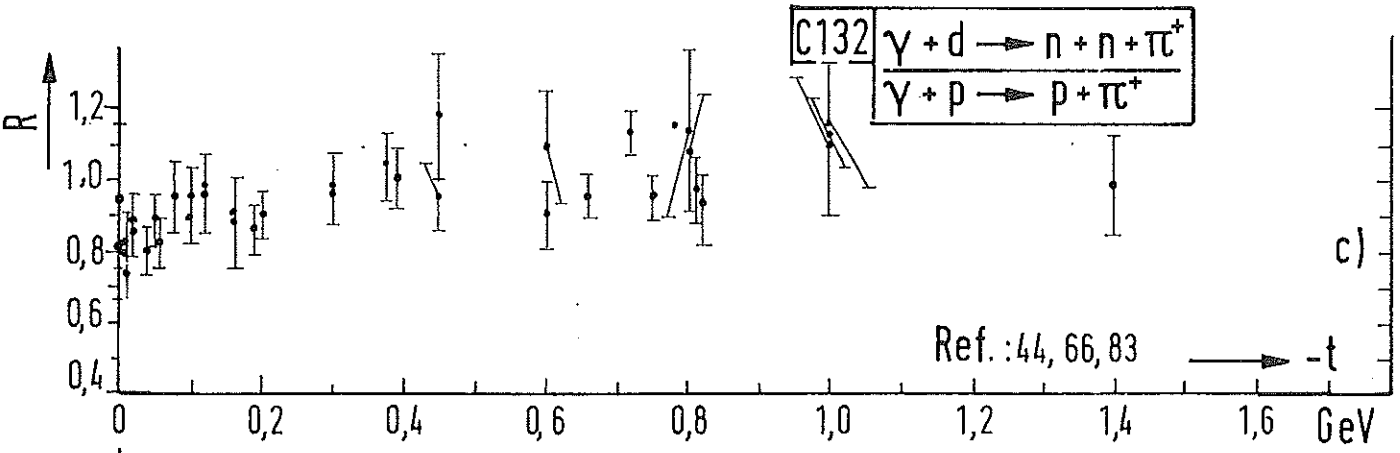
Abreviation	Accelerator		Location
Bonn	Synchrotron	2.3 GeV	Physikalisches Institut der Universität Bonn D5300 Bonn, Germany
CEA	Synchrotron	6.3 GeV	Cambridge Electron Accelerator Cambridge, MA 02138, USA
CIT	Synchrotron	1.5 GeV	California Institute of Technology Pasadena, CA 91109, USA
Cornell	Synchrotron	2.1 GeV 10 GeV	Cornell University Laboratory Nuclear Studies Ithaca, N.Y. 14950, USA
DESY	Synchrotron	7.5 GeV	Deutsches Elektronen Synchrotron D2000 Hamburg 52, Germany
Frascati	Synchrotron	1.1 GeV	Laboratori Nazionale di Frascati del CNEN Frascati (Roma), Italy
Illinois	Betatron	.3 GeV	University of Illinois Urbana, IL 61803, USA
Lebedev	Synchrotron	.3 GeV	Lebedev Physics Institute Academy of Science Moscow, USSR
NINA	Synchrotron	5.0 GeV	Daresbury Nuclear Physics Laboratory Daresbury, Nr.Warrington, U.K.
Orsay	Linear Accelerator	2.0 GeV	Ecole Normale Superieure F91 Orsay, France
Stanford	Linear Accelerator	1.2 GeV	High Energy Physics Laboratory Stanford University Stanford, CA 94305, USA
SLAC	Linear Accelerator	20 GeV	Stanford Linear Accelerator Center Stanford, CA 94305, USA
Tokyo	Synchrotron	1.3 GeV	Institute for Nuclear Studies Tokyo University Tanashi, Tokyo, Japan
Tomsk	Synchrotron	1.3 GeV	Polytechnic Institute Tomsk, USSR

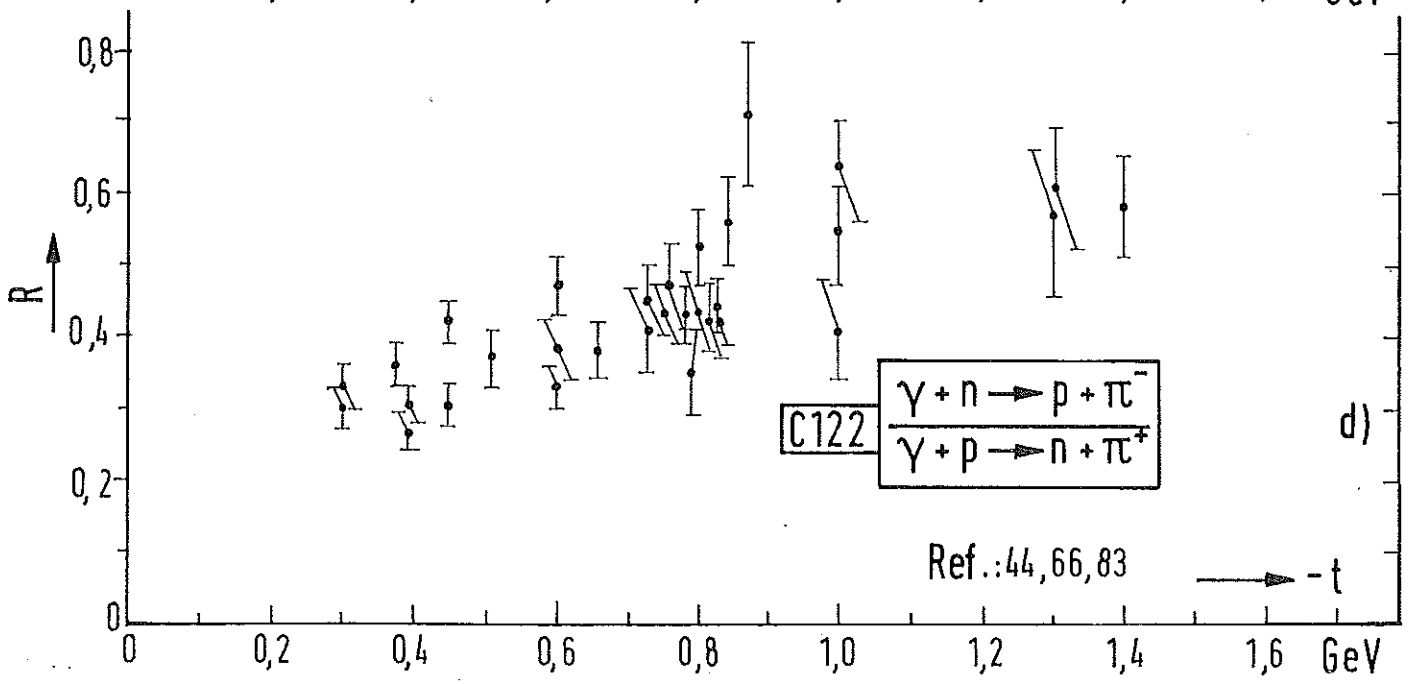

σ
μb
C 110 γ + p → Hadrons
C 120 γ + d → Hadrons
σtot
Ref.: 72,79,101,112,115,133,134,209
γ + p
γ + d
γ + p
E*
GeV
k
GeV

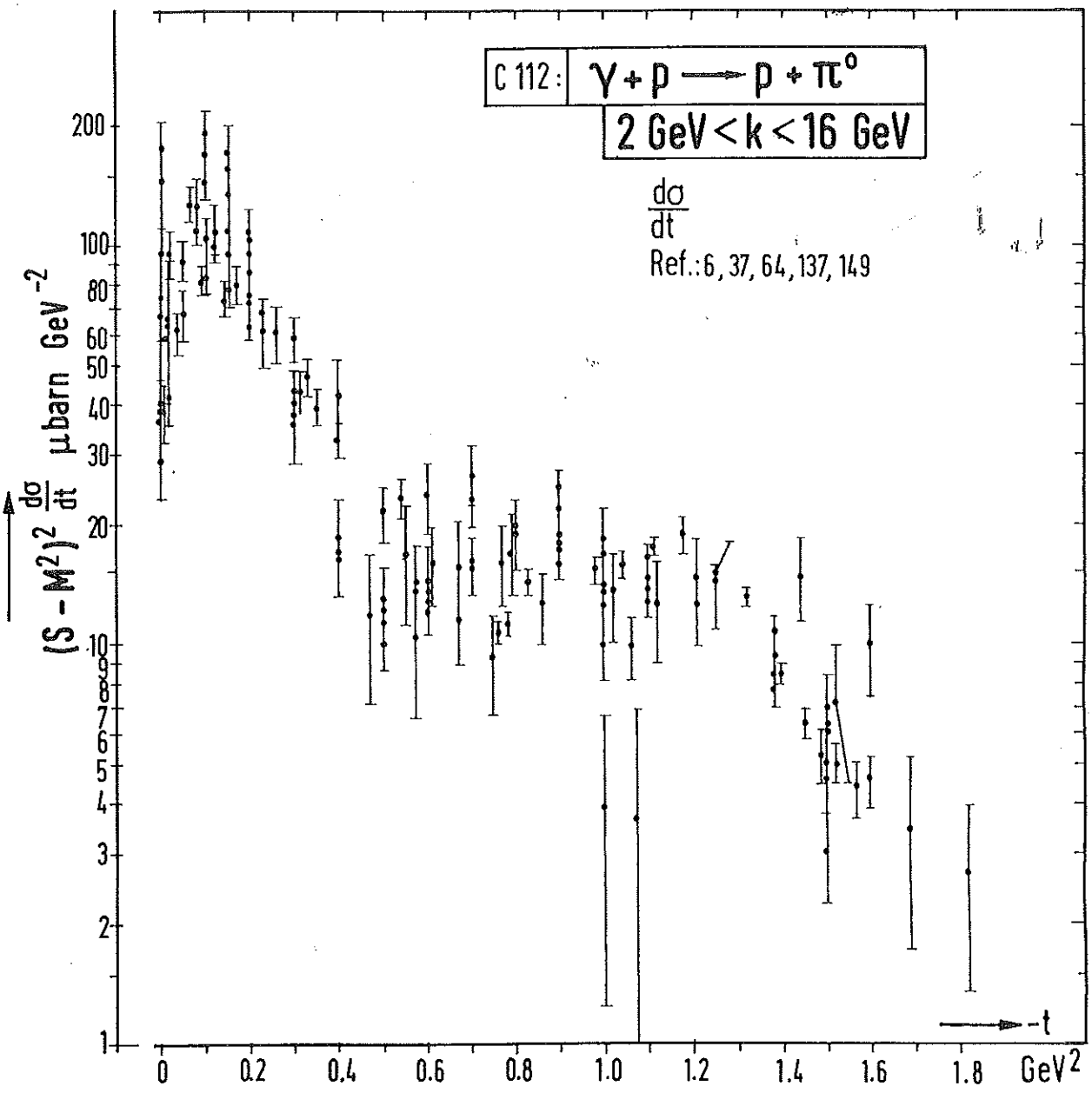

C 111
γ + p → n + π+
2 GeV ≤ k ≤ 16 GeV
dσ/dt
Ref.: 16, 24, 34, 39, 44, 46, 51, 66, 210
(S-M²)² dσ/dt μbarn · GeV²
-t
GeV²
0
0,2
0,4
0,6
0,8
1,0
1,2
1,4
1,8
2
0.02
0.04
0.06
0.10
600
500
400
300
200
100
80
70
60
50
40
30
20
10
8
6
5
4
3
2
1

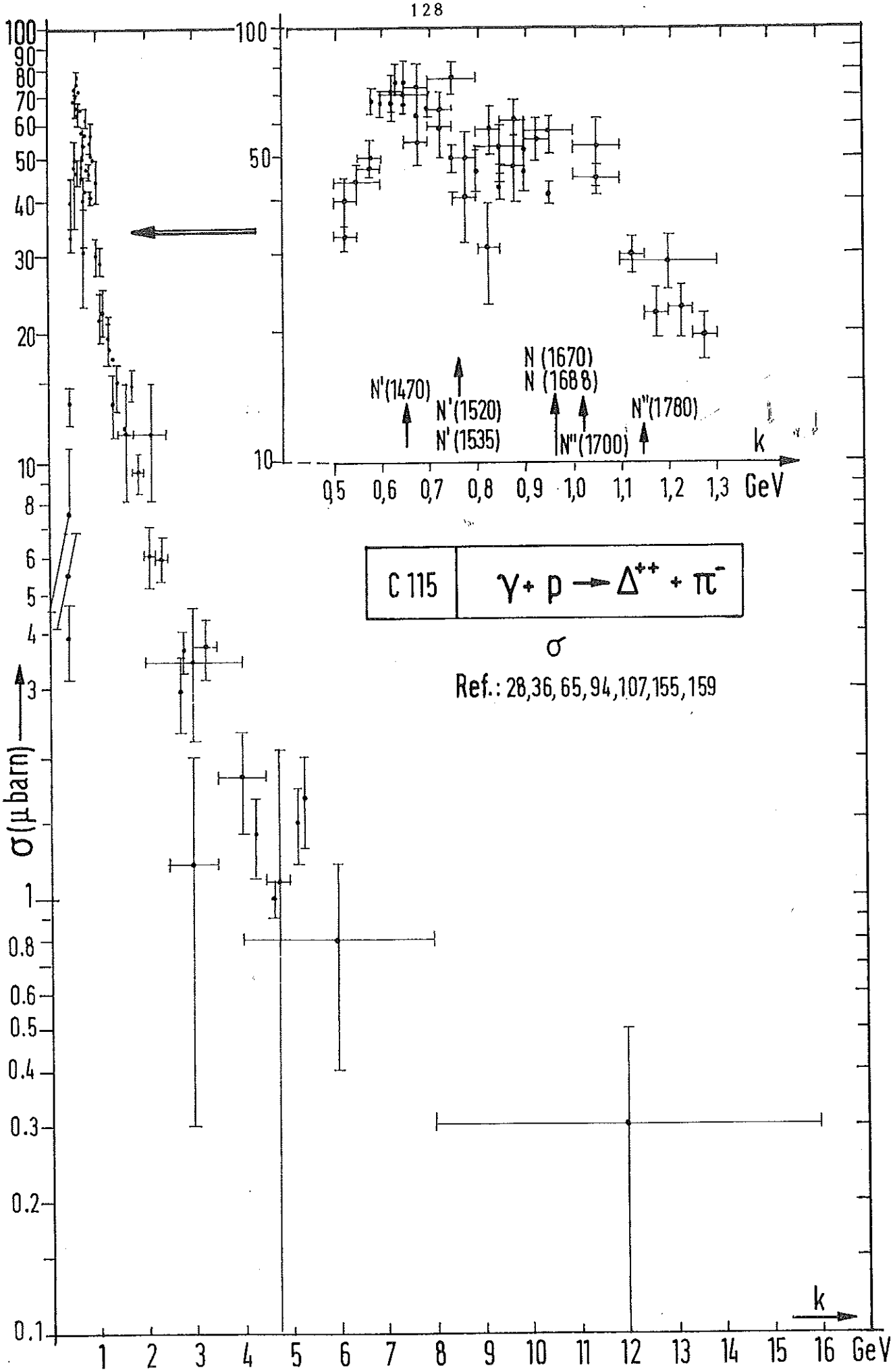

C 111
γ + p → n + π+
σ⊥ + σ∥ / σ + σ
Ref : 87,19
R
-t
GeV

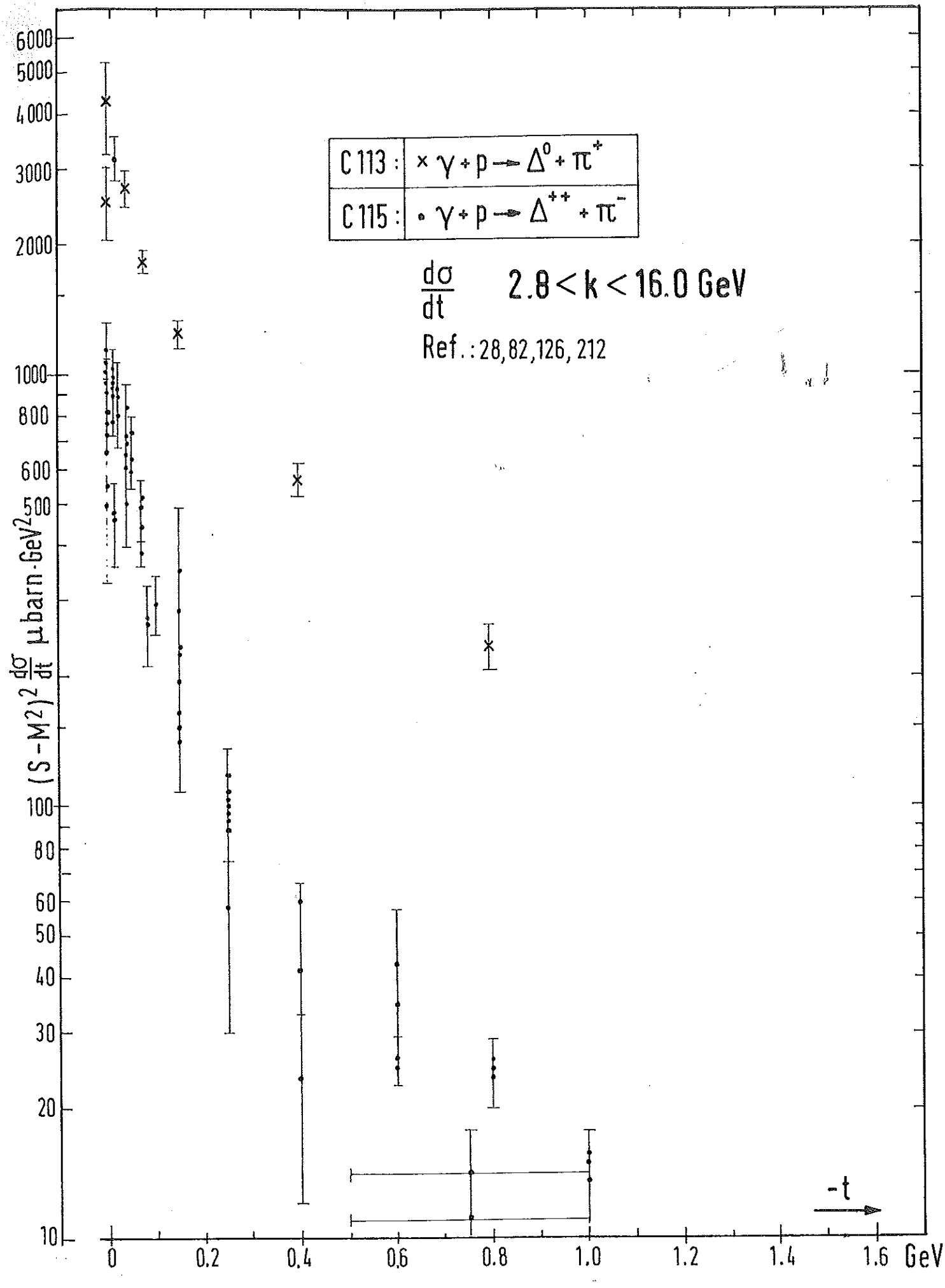

C 111
γ + p → n + π+
σγp↑− σγp↓ / σγp↑+ σγp↓
b)
Ref.:184
R
-t
GeV

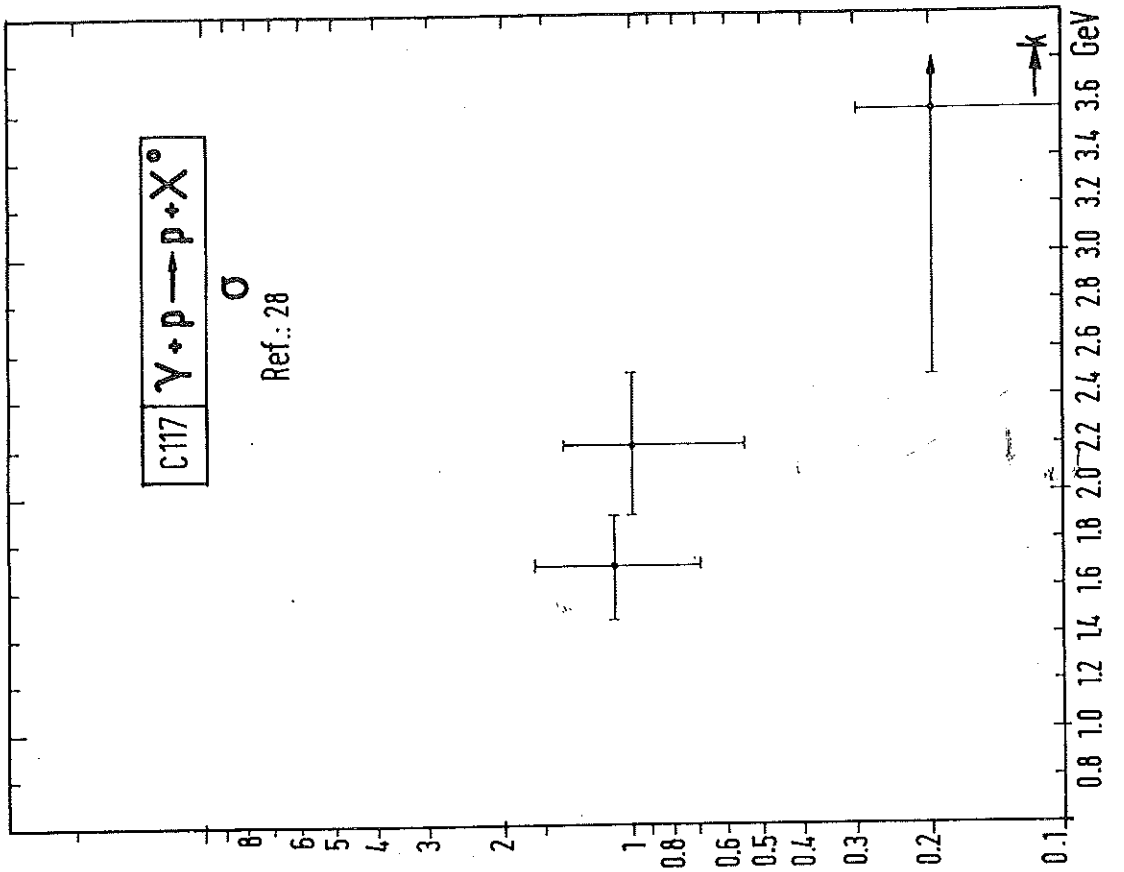

C132
γ + d → n + n + π+ / γ + p → p + π+
c)
Ref. :44, 66, 83
R
-t
GeV

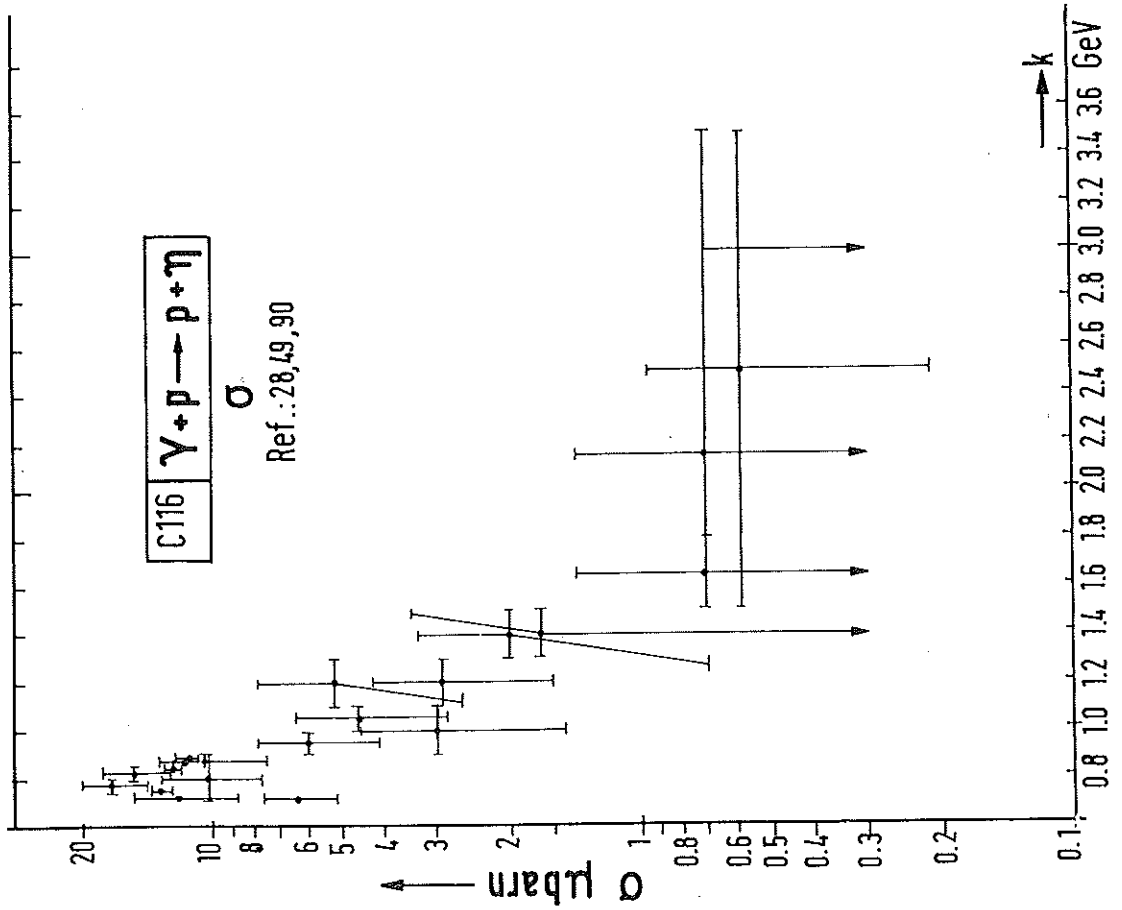

C122
γ + n → p + π− / γ + p → n + π+
d)
Ref.:44,66,83
R
-t
GeV

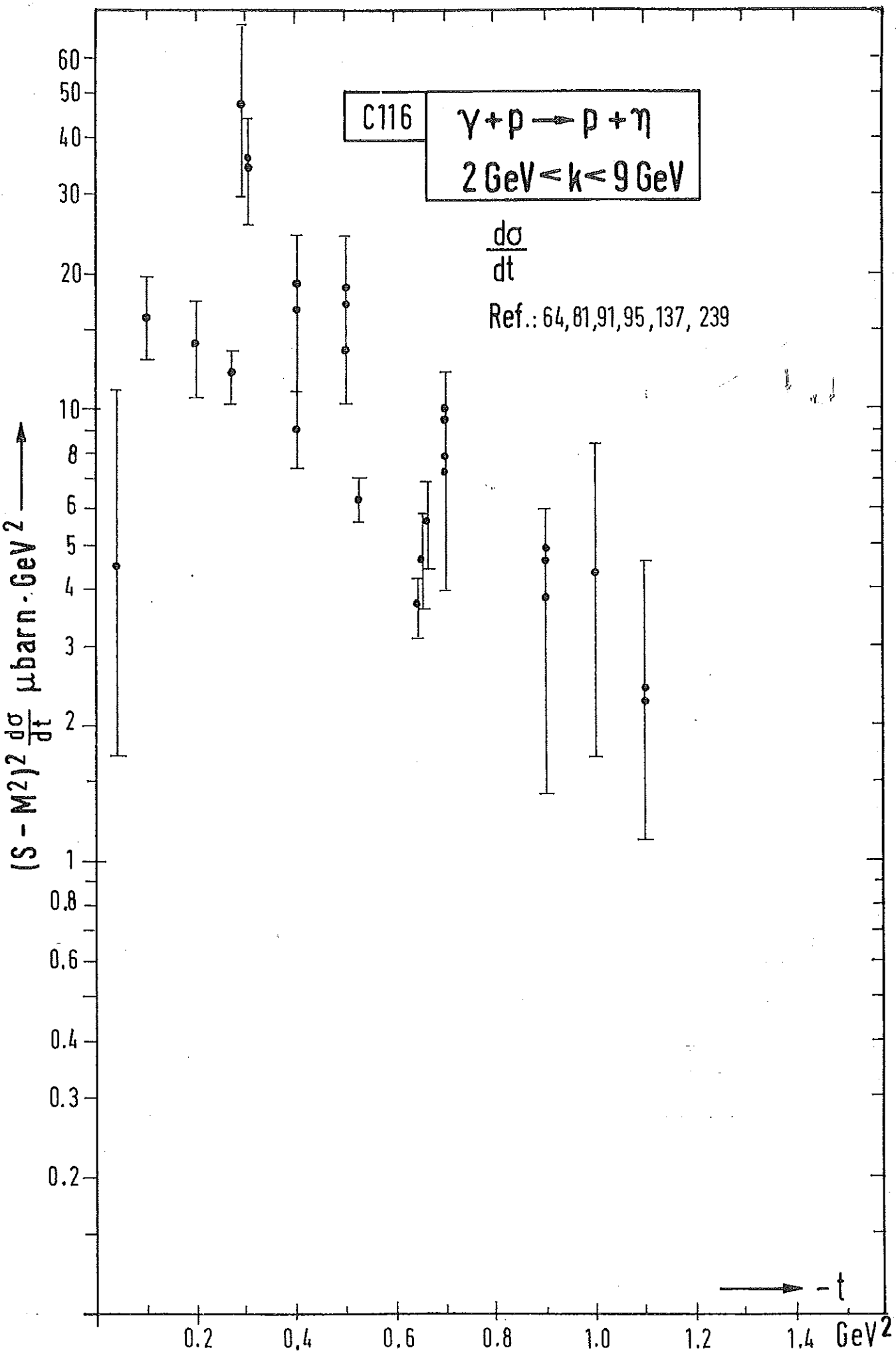

C 112: γ + p ⟶ p + π°
2 GeV < k < 16 GeV
dσ/dt
Ref.: 6, 37, 64, 137, 149
(S − M²)² dσ/dt μbarn GeV⁻²
200
100
80
60
50
40
30
20
10
9
8
7
6
5
4
3
2
1
0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
GeV²
−t

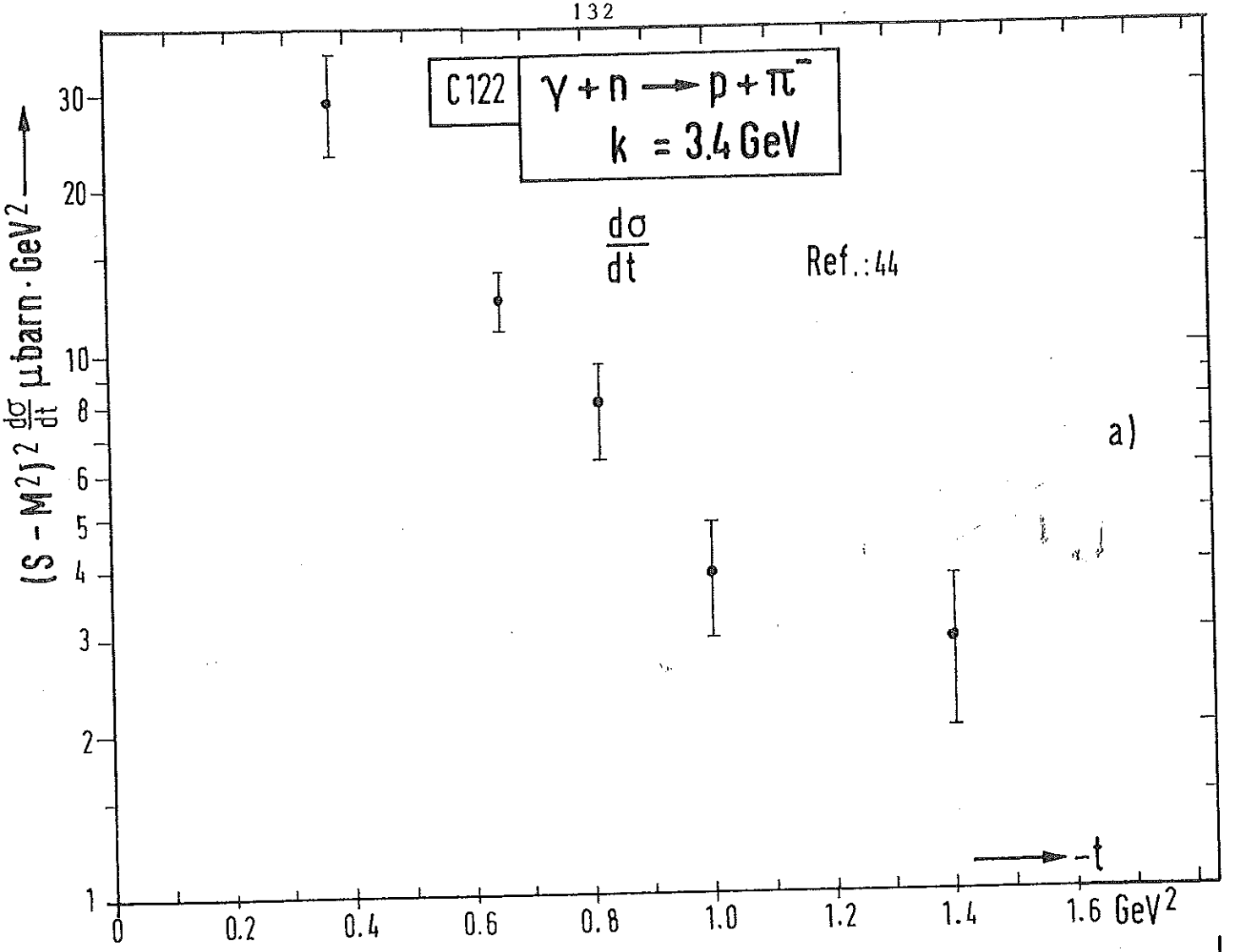

N'(1470)
N'(1520)
N'(1535)
N (1670)
N (1688)
N''(1700)
N''(1780)
k
GeV
C 115
γ + p → Δ++ + π-
σ
Ref.: 28,36,65,94,107,155,159
σ(μbarn)
k
GeV

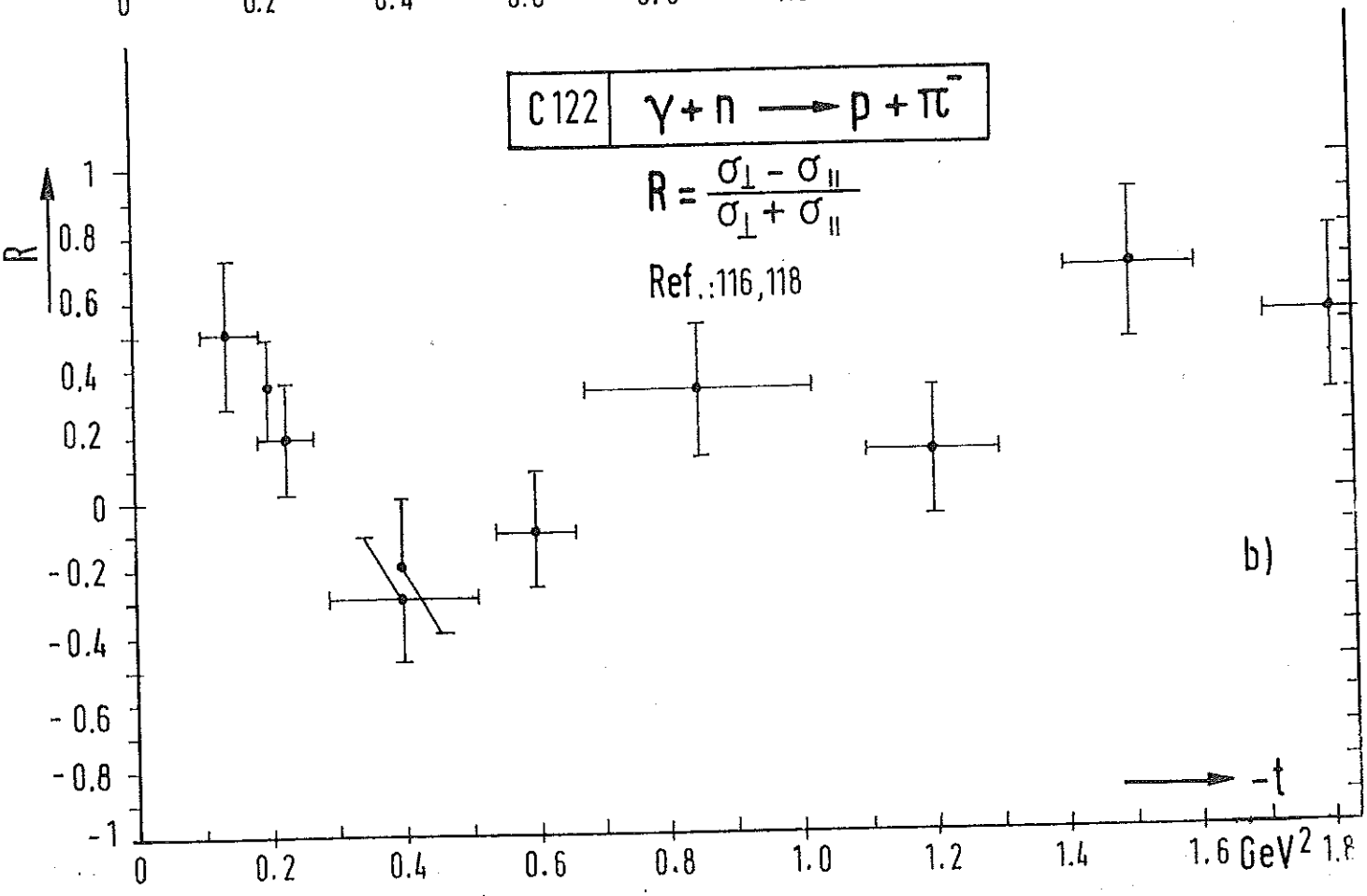

C 113 : × γ + p → Δ⁰ + π⁺
C 115 : • γ + p → Δ⁺⁺ + π⁻
dσ/dt 2.8 < k < 16.0 GeV
Ref.: 28, 82, 126, 212
(S-M²)² dσ/dt μbarn·GeV²
6000
5000
4000
3000
2000
1000
800
600
500
100
80
60
50
40
30
20
10
0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6 GeV
-t

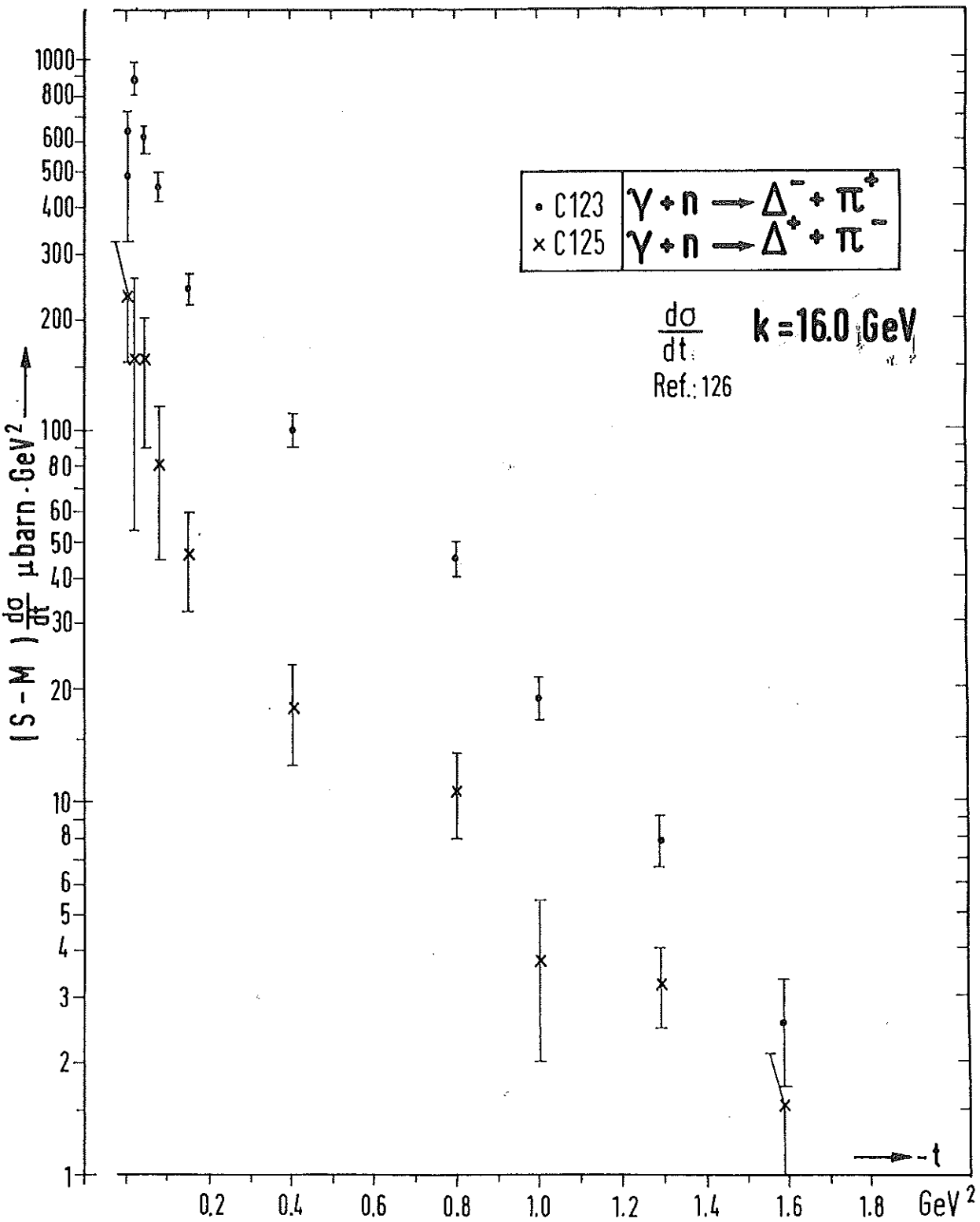

C117
γ + p → p + X°
σ
Ref.: 28
k
GeV

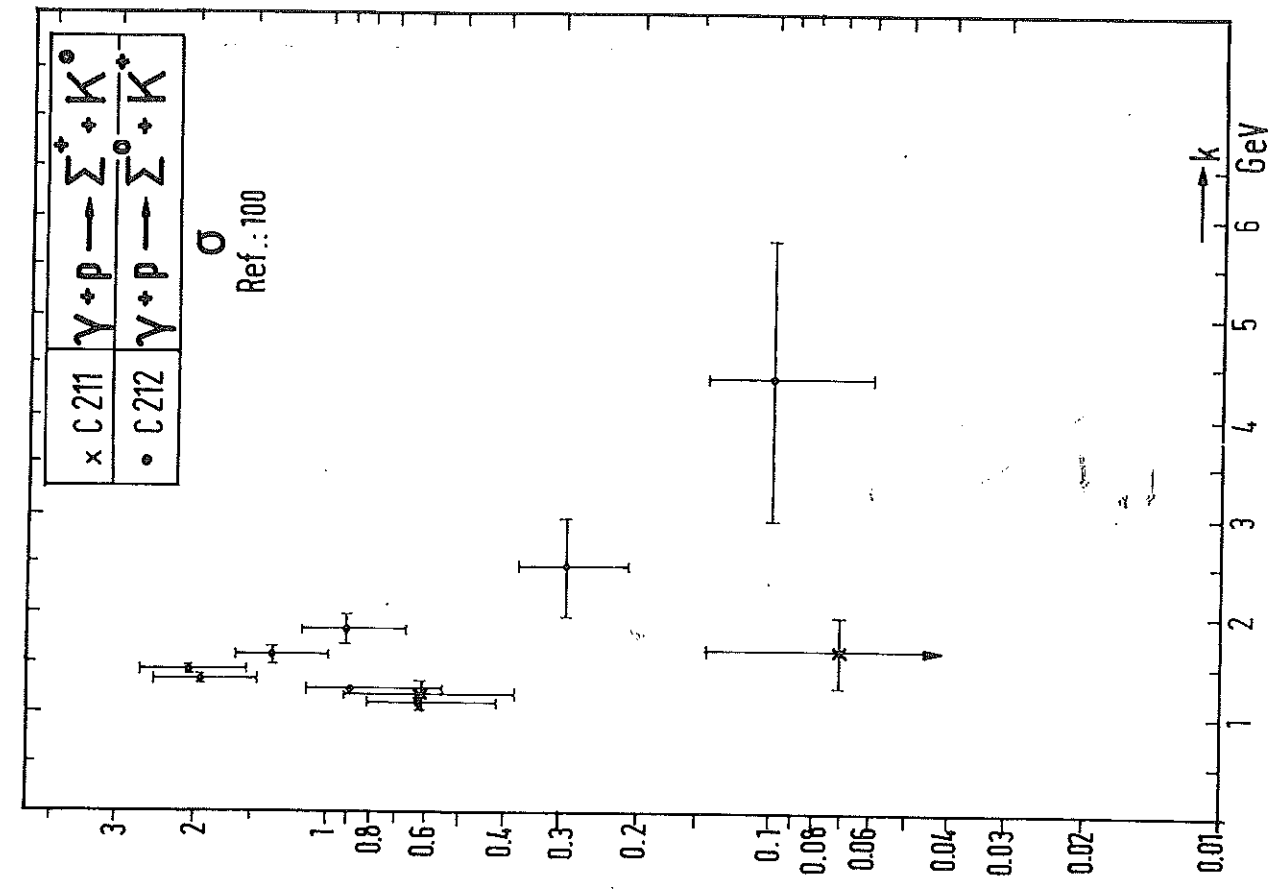

C116
γ + p → p + η
σ
Ref.: 28,49,90
σ μbarn
k
GeV

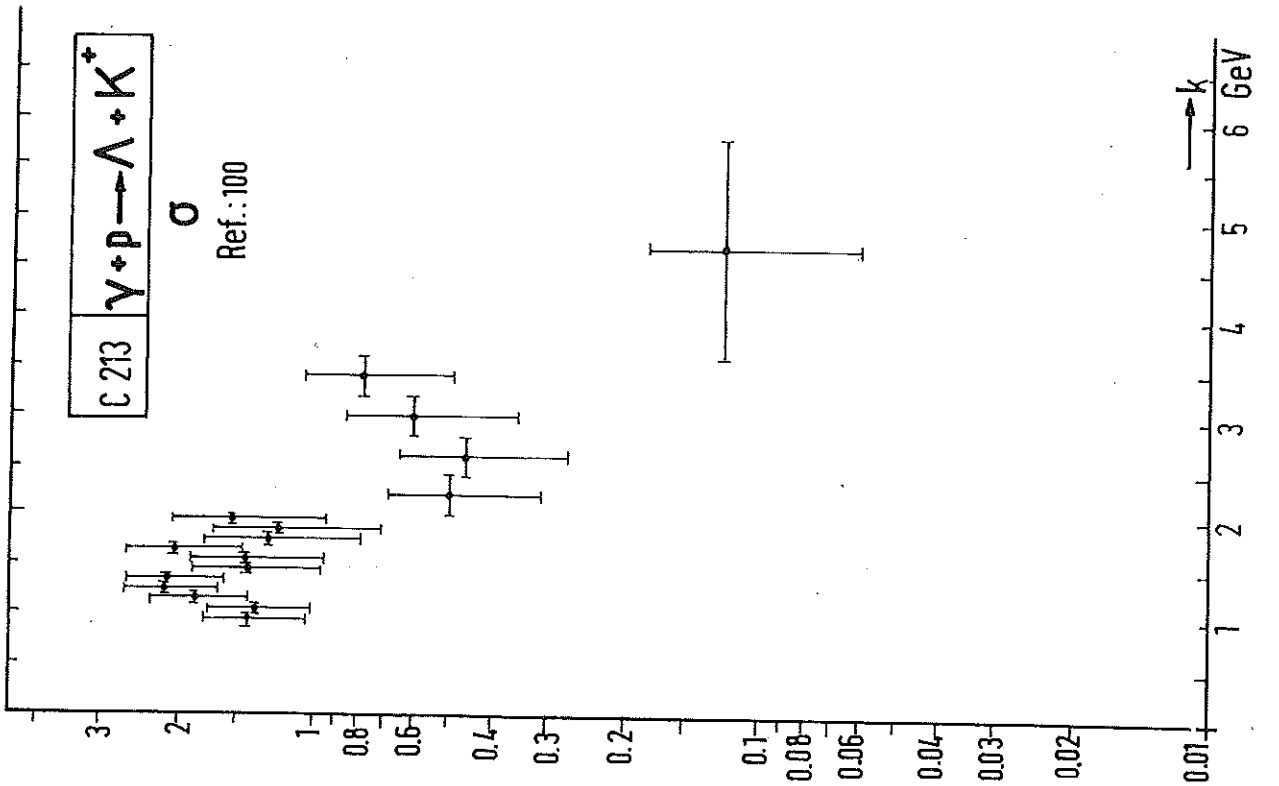

C116
γ + p → p + η
2 GeV < k < 9 GeV
dσ/dt
Ref.: 64, 81, 91, 95, 137, 239
(S - M²)² dσ/dt μbarn · GeV²
60
50
40
30
20
10
8
6
5
4
3
2
1
0.8
0.6
0.4
0.3
0.2
0.2
0.4
0.6
0.8
1.0
1.2
1.4
GeV²
-t

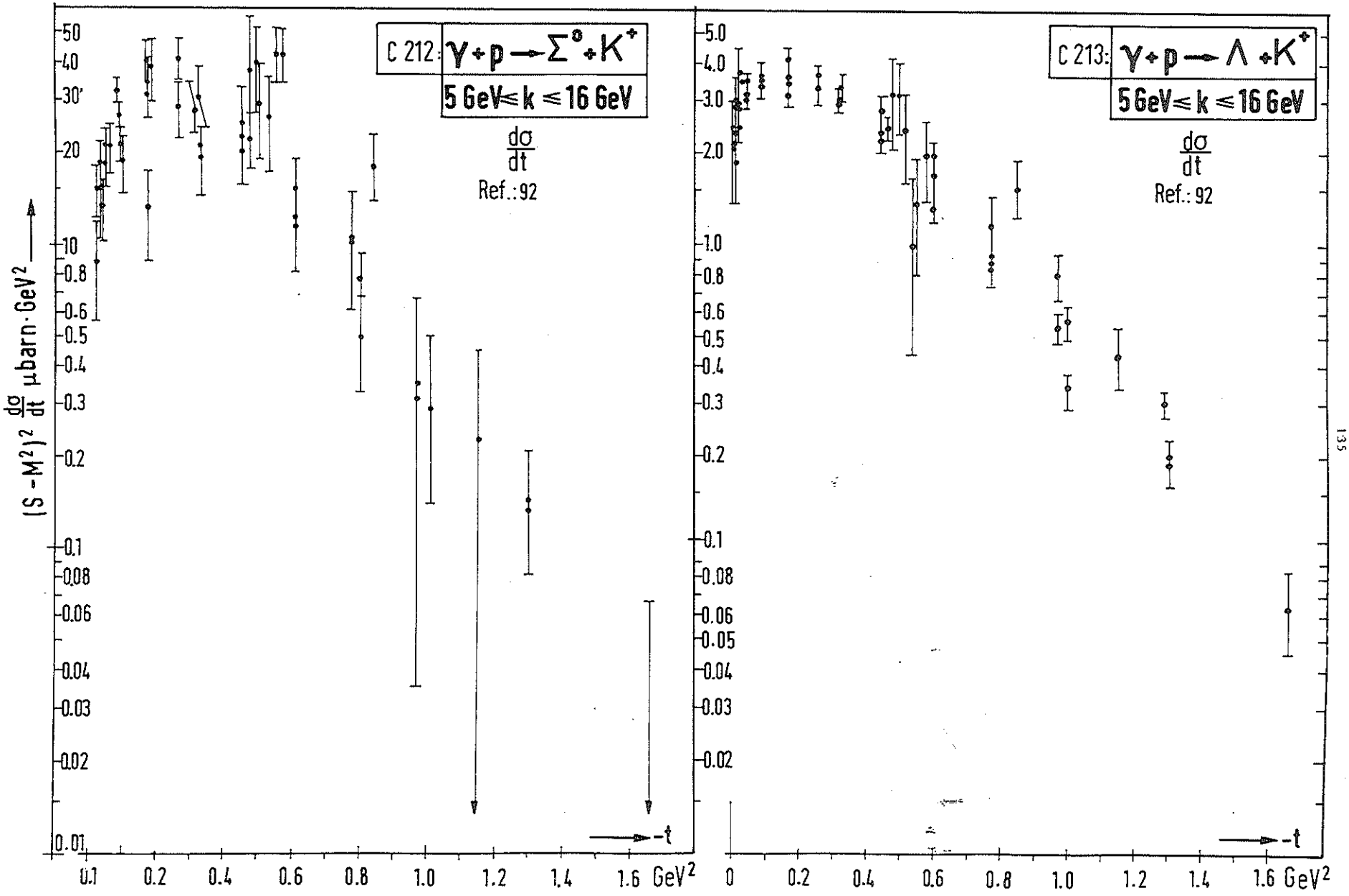

C122
γ + n → p + π⁻
k = 3.4 GeV
dσ/dt
Ref.: 44
a)
(S - M²)² dσ/dt μbarn · GeV²
30
20
10
8
6
5
4
3
2
1
0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6 GeV²
-t

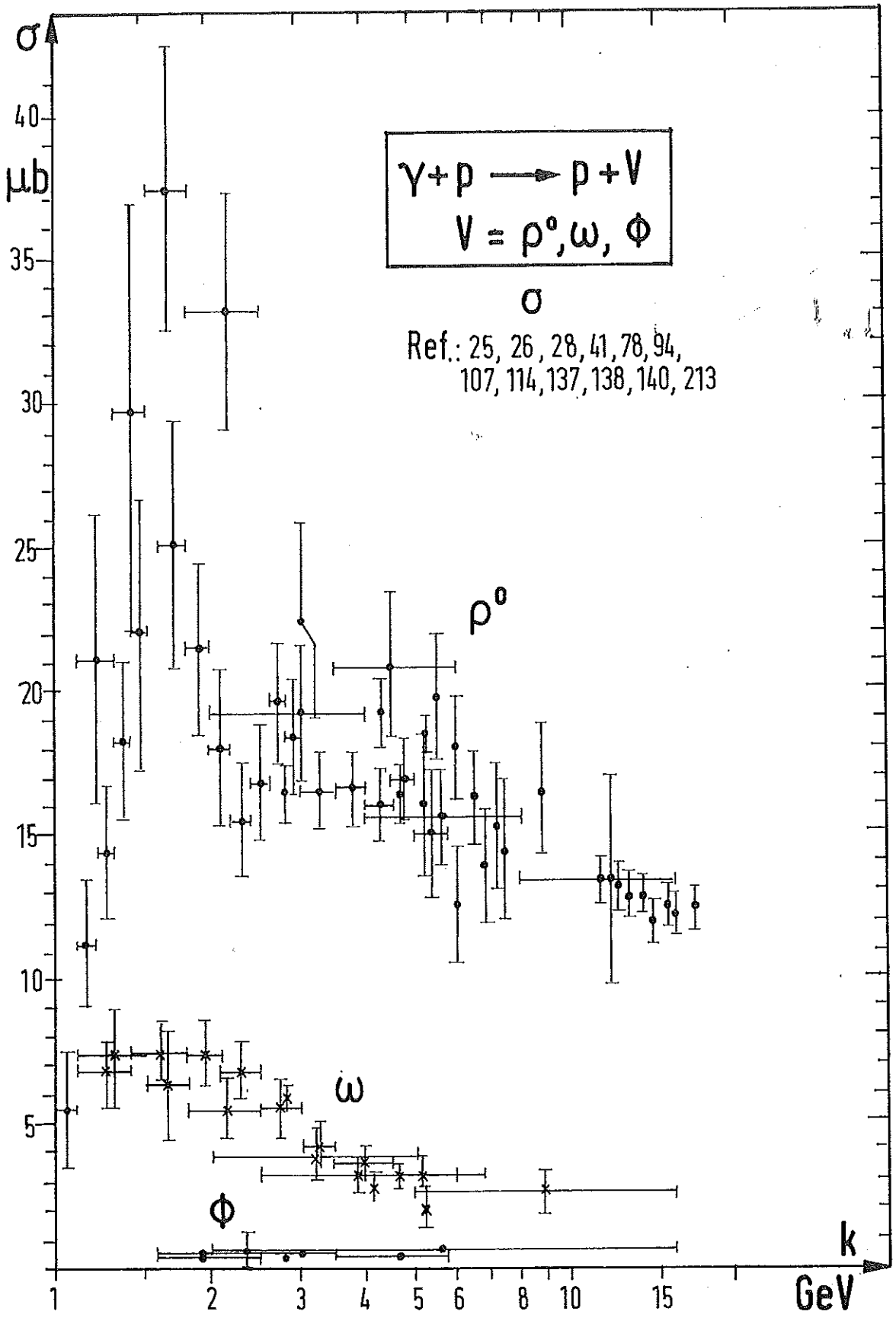

C122
γ + n → p + π⁻
R = (σ⊥ - σ∥) / (σ⊥ + σ∥)
Ref.: 116, 118
b)
R
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6 GeV²
1.8
-t

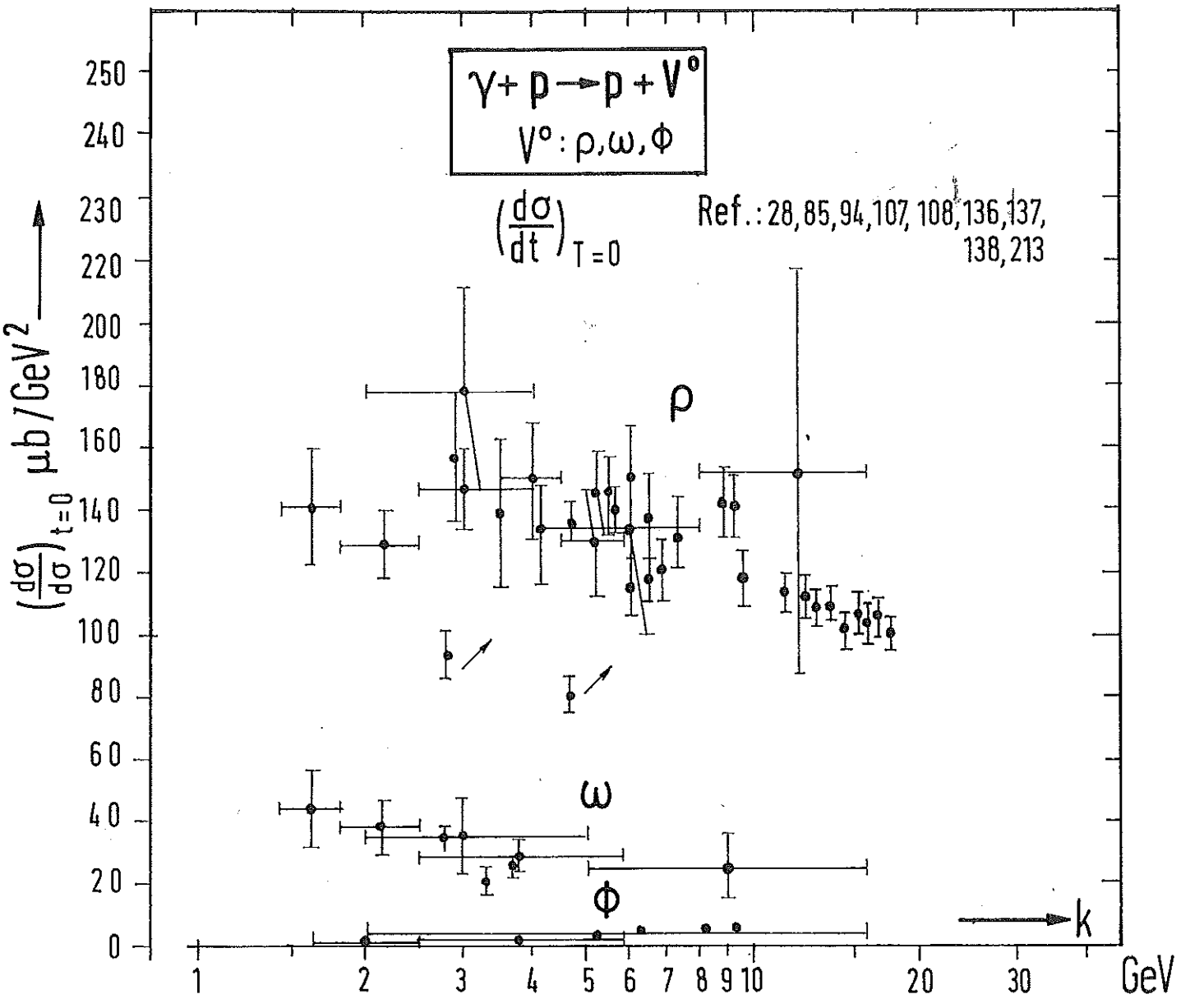

• C123 γ + n → Δ⁻ + π⁺
× C125 γ + n → Δ⁺ + π⁻
dσ/dt
Ref.: 126
k = 16.0 GeV
(S - M) dσ/dt μbarn · GeV²
-t
GeV²
1000
800
600
500
400
300
200
100
80
60
50
40
30
20
10
8
6
5
4
3
2
1
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8

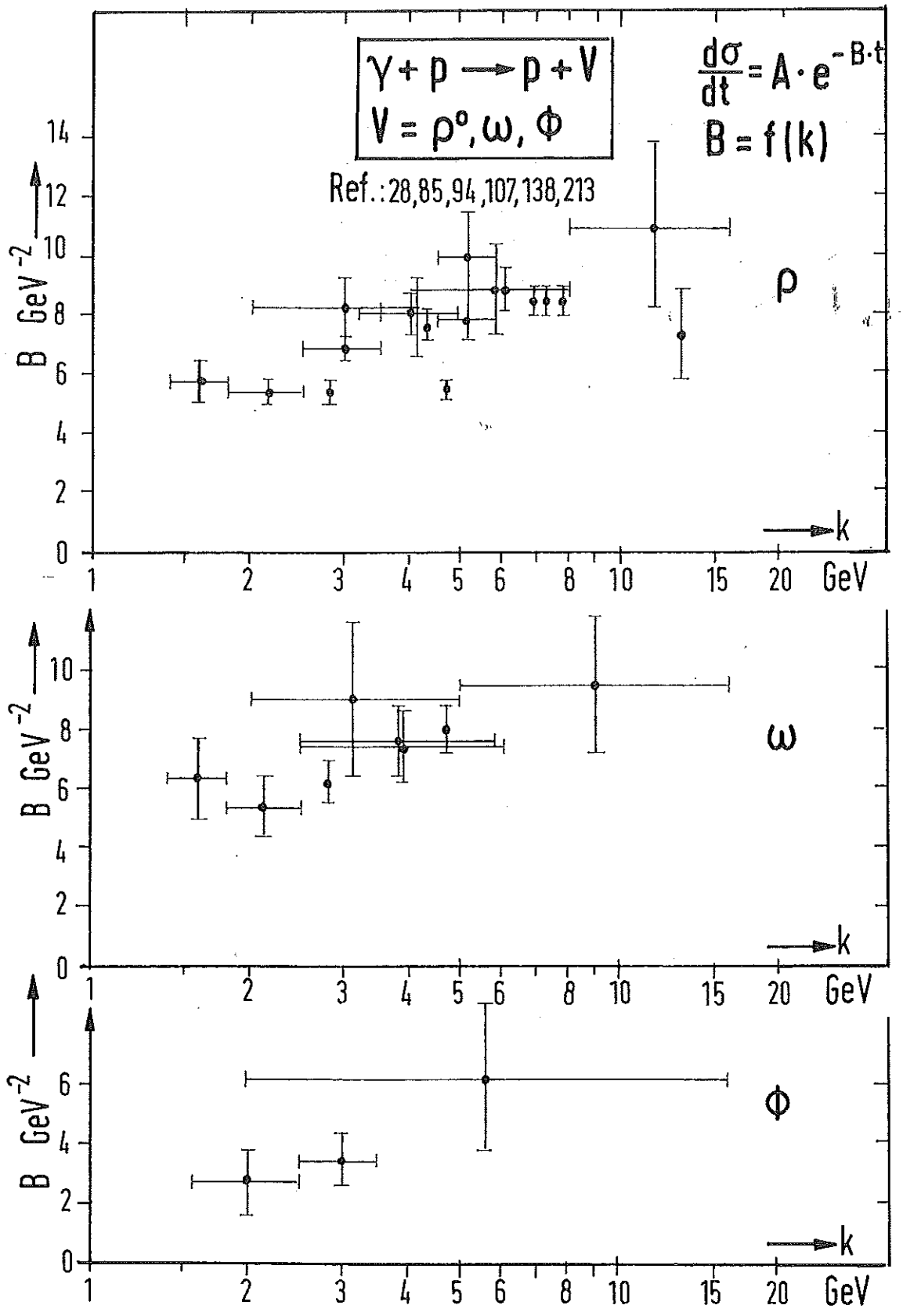

× C 211 γ + p → Σ+ + K°
• C 212 γ + p → Σ° + K+
σ
Ref.: 100
k GeV

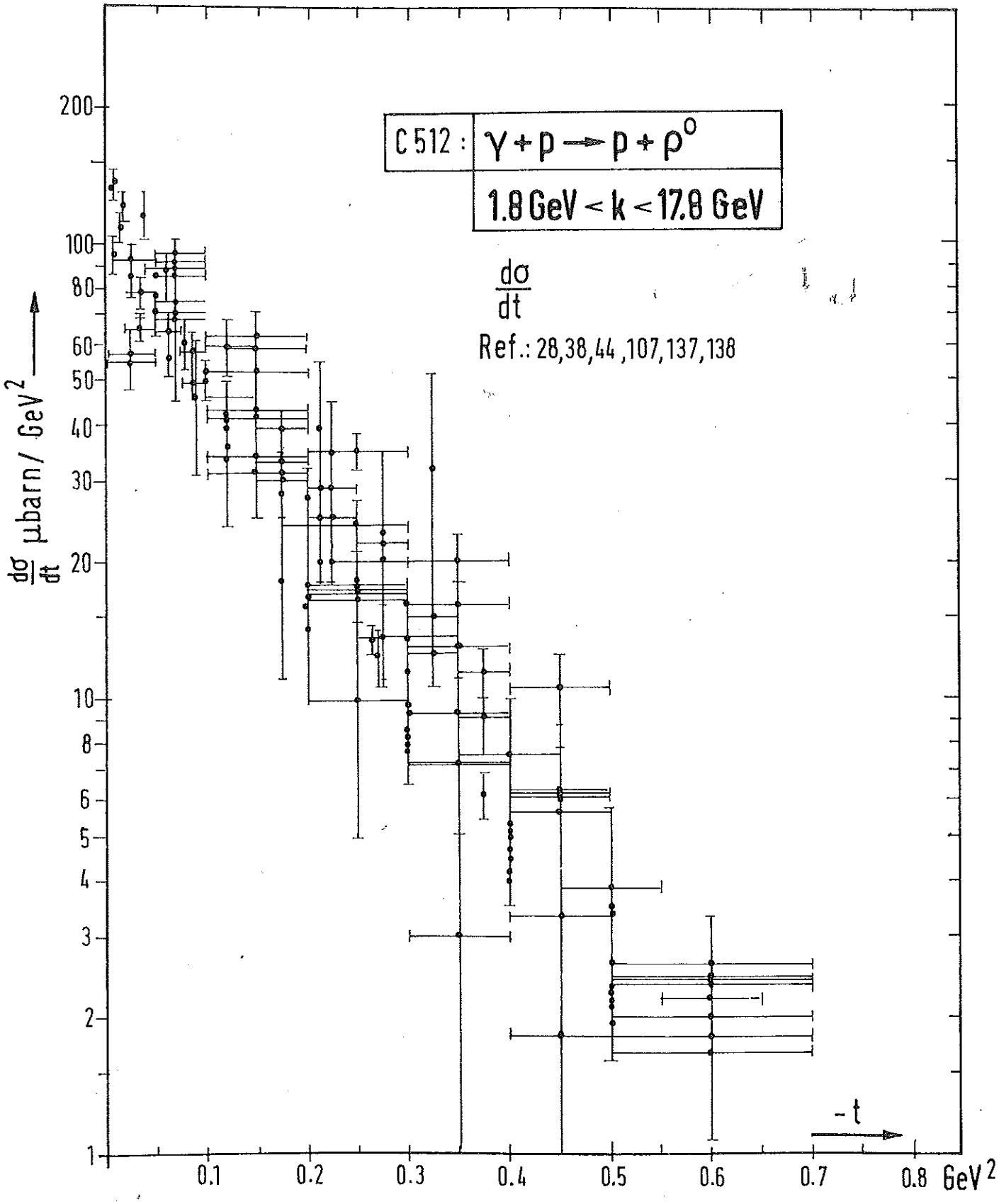

C 213 γ + p → Λ + K+
σ
Ref.: 100
k GeV

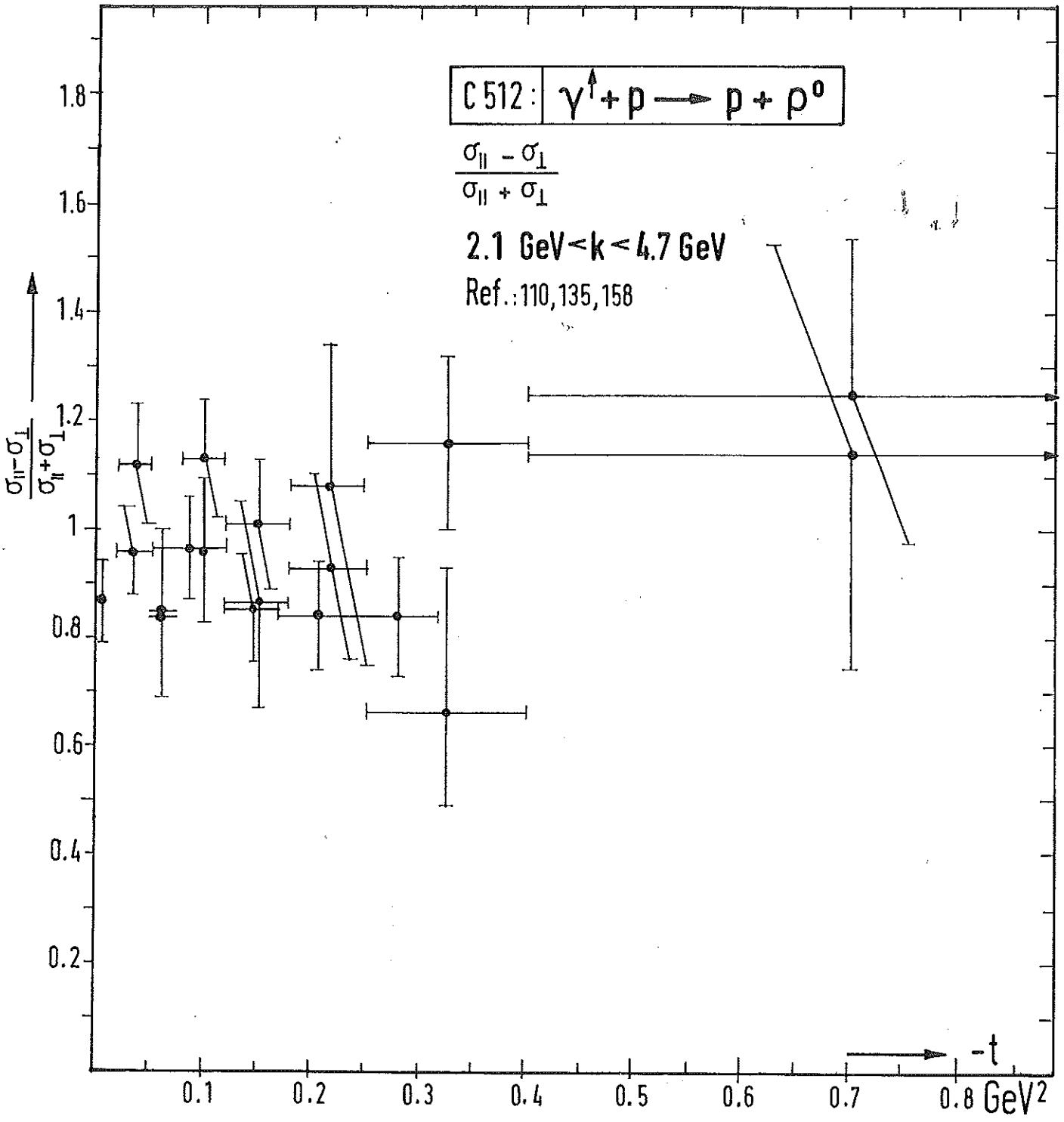

C 212: γ + p → Σ° + K⁺
5 GeV ≤ k ≤ 16 GeV
dσ/dt
Ref.: 92
C 213: γ + p → Λ + K⁺
5 GeV ≤ k ≤ 16 GeV
dσ/dt
Ref.: 92
(S - M²)² dσ/dt μbarn · GeV²
-t
GeV²

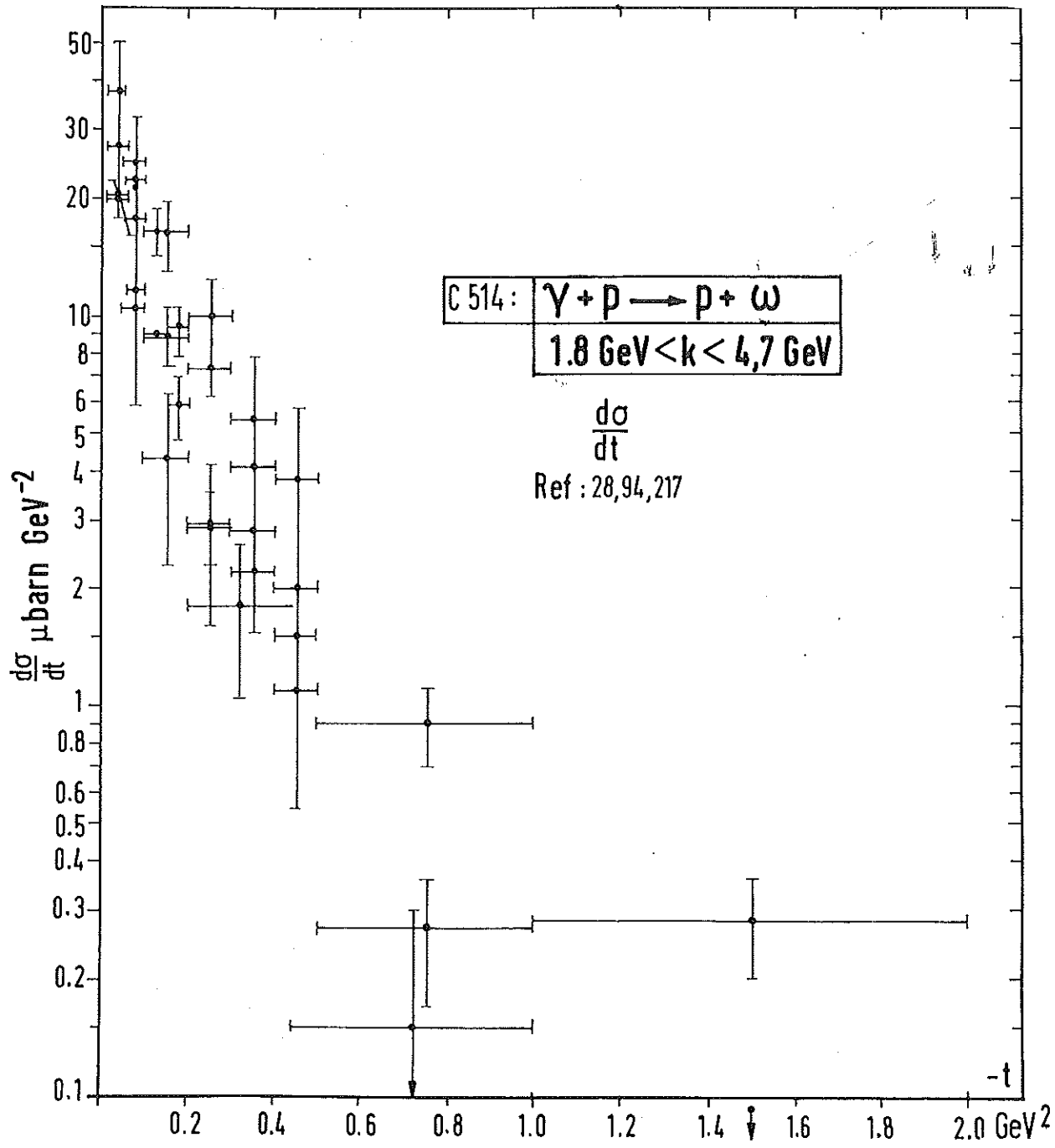

σ
μb
40
35
30
25
20
15
10
5
γ+p ⟶ p+V
V = ρ°,ω, Φ
σ
Ref.: 25, 26, 28, 41, 78, 94,
107, 114, 137, 138, 140, 213
ρ°
ω
Φ
k
GeV
1
2
3
4
5
6
8
10
15

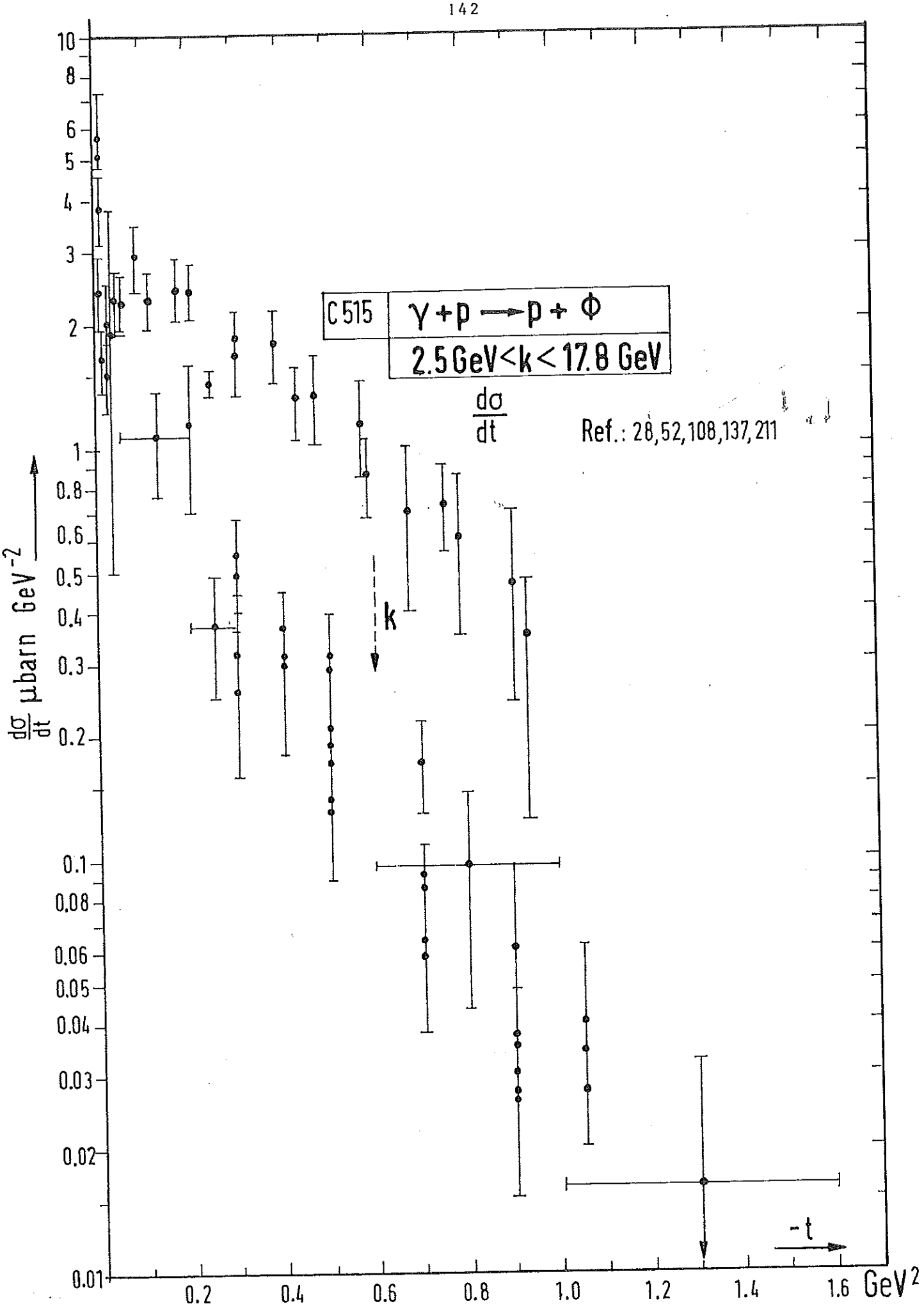

γ + p → p + V°
V°: ρ, ω, Φ
(dσ/dt)T=0
Ref.: 28, 85, 94, 107, 108, 136, 137, 138, 213
(dσ/dσ)t=0 μb/GeV2
ρ
ω
Φ
k
GeV
250
240
230
220
200
180
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
20
30


γ + p → p + V
V = ρ°, ω, Φ
Ref.: 28,85,94,107,138,213
dσ/dt = A · e^(-B·t)
B = f(k)
B GeV^-2
ρ
ω
Φ
k
GeV
0
2
4
6
8
10
12
14
1
2
3
4
5
6
8
10
15
20


C 512 : γ + p → p + ρ°
1.8 GeV < k < 17.8 GeV
dσ/dt
Ref.: 28,38,44,107,137,138
dσ/dt μbarn / GeV²
200
100
80
60
50
40
30
20
10
8
6
5
4
3
2
1
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8 GeV²
-t


C 512 : γ↑ + p → p + ρ°
σ∥ − σ⊥ / σ∥ + σ⊥
2.1 GeV < k < 4.7 GeV
Ref.: 110, 135, 158
σ∥ − σ⊥ / σ∥ + σ⊥
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8 GeV²
-t


C 514 : γ + p ⟶ p + ω
1.8 GeV < k < 4,7 GeV
dσ/dt
Ref : 28,94,217
dσ/dt μbarn GeV⁻²
-t
0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 GeV²
50 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1


C515
γ + p → p + Φ
2.5 GeV < k < 17.8 GeV
dσ/dt
Ref.: 28, 52, 108, 137, 211
k
dσ/dt μbarn GeV⁻²
-t
GeV²
10
8
6
5
4
3
2
1
0.8
0.6
0.5
0.4
0.3
0.2
0.1
0.08
0.06
0.05
0.04
0.03
0.02
0.01
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6