Hbj DESY

THE HIGH ENERGY PHYSICS INDEX

Keywords 1988
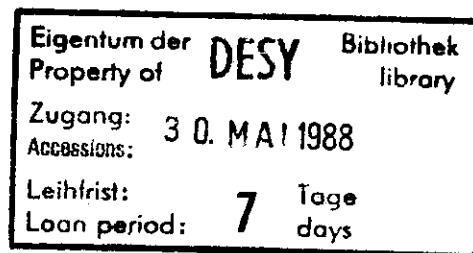
Keywords by Subjects

This list contains only the regular keywords. Upper-case headings and underscored terms in parantheses are not keywords. For standardized non-keywords the alphabetical list should be consulted.

PARTICLES

gauge boson

photon

W
  W⁺
  W⁻
Z⁰

(leptons)

neutrino
  neutrino/e
  neutrino/mu
  neutrino/tau
  neutrino/L
  antineutrino
  antineutrino/e
  antineutrino/mu
  antineutrino/tau
  antineutrino/L

electron
  positron
muon
  muon⁺
  muon⁻
tau
  tau⁺
  tau⁻

(mesons)

pi
  pi⁺
  pi⁻
  pi⁰
eta

K
  K⁺
  K⁻
  K⁰
    K⁰(L)
    K⁰(S)
  anti-K
  anti-K⁰

D
  D⁺
  D⁻

D⁰
anti-D
anti-D⁰

D/s
  D/s⁺
  D/s⁻

B
  B⁺
  B⁻
  B⁰
  anti-B
  anti-B⁰

B/s

(nucleons)

p
  anti-p
n
  anti-n

(hyperons)

Lambda
  Antilambda

Sigma
  Sigma⁺
  Sigma⁻
  Sigma⁰
  Antisigma
  Antisigma⁺
  Antisigma⁻
  Antisigma⁰

Xi
  Xi⁻
  Xi⁰
  Antixi
  Antixi⁻
  Antixi⁰

Omega⁻
  Antiomega⁻

(charmed baryons)

Lambda/c⁺
  Antilambda/c⁺

Sigma/c

Xi/c⁺

(meson resonances)

rho(770)
  rho(770)⁺
  rho(770)⁻
  rho(770)⁰
omega(783)
eta(958)
f0(975)
a0(980)
Phi(1020)
h1(1190)
b1(1235)
a1(1270)
f2(1270)
f1(1285)
f0(1300)
pi(1300)
a2(1320)
f1(1420)
eta(1440)
f2(1525)
f0(1590)
rho(1600)
omega3(1670)
pi2(1680)
Phi(1680)
rho3(1690)
f2(1720)
Phi/J(1850)
f4(2030)

K*(892)
K1(1280)
K*0(1350)
K1(1400)
K*2(1430)
K2(1770)
K*3(1780)
K*4(2060)

D*(2010)

psi mesons
  eta/c(2980)
  J/psi(3100)
  chi0(3415)
  chi1(3510)
  chi2(3555)
  psi(3685)
  psi(3770)

psi(4030)
psi(4160)
psi(4415)

upsilon mesons
  Upsilon(9460)
  chi/b0(9875)
  chi/b1(9895)
  chi/b2(9915)
  Upsilon(10020)
  chi/b0(10235)
  chi/b1(10255)
  chi/b2(10270)
  Upsilon(10350)
  Upsilon(10570)
  Upsilon(10870)
  Upsilon(11020)

(baryon resonances)

N(1440)
N(1520)
N(1535)
N(1650)
N(1675)
N(1680)
N(1700)
N(1710)
N(1720)
N(2190)
N(2220)
N(2250)
N(2600)

Delta(1232)
  Delta(1232)⁺
  Delta(1232)⁺⁺
  Delta(1232)⁻
  Delta(1232)⁰
Delta(1620)
Delta(1700)
Delta(1900)
Delta(1905)
Delta(1910)
Delta(1920)
Delta(1930)
Delta(1950)
Delta(2420)

Lambda(1405)
Lambda(1520)
Lambda(1600)
Lambda(1670)
Lambda(1690)
Lambda(1800)

Lambda(1820)
Lambda(1830)
Lambda(1890)
Lambda(2100)
Lambda(2110)
Lambda(2350)

Sigma(1385)
Sigma(1660)
Sigma(1670)
Sigma(1750)
Sigma(1775)
Sigma(1915)
Sigma(1940)
Sigma(2030)
Sigma(2250)

Xi(1530)
Xi(1820)
Xi(2030)

<u>(other keywords)</u>

particle
  antiparticle
  charged particle
    negative particle
    positive particle
  neutral particle
  new particle
  postulated particle
    mass enhancement
    search for
  pseudoscalar particle
  scalar particle

  fermion
  antifermion

boson
  intermediate boson

lepton
  antilepton
  heavy lepton

hadron
  meson
  meson resonance
    axial-vector meson
    pseudoscalar meson
    scalar meson
    tensor meson
    vector meson
  baryon
    antibaryon
    nucleon
      antinucleon
      nucleon resonance
    baryon resonance
    baryonium

strange particle
  hyperon
    antihyperon
  strange meson

charmed particle
  charmed meson
  charmed baryon

beautiful particle
  beautiful meson
  beautiful baryon

truthful particle
  truthful meson
  truthful baryon

chi mesons

colored particle
Higgs particle
sparticle

quark
  antiquark
  quarkonium

gluon
  glueball

nucleus
  excited nucleus
  hyperfragment
  light nucleus
    deuteron
  superfragment
nuclide

atom
  ion
  muonium
  positronium

(for two-particle combinations see alphabetical list)

PARTICLE PROPERTIES

charge
electric moment
isospin
magnetic moment
mass
  mass difference
  mass ratio
parity
quantum number
  B-L number
  baryon number
  electron number
  fermion number

lepton number
muon number

spin
  helicity
  polarization

INTERACTIONS

<u>gravitation</u>

gravitational radiation

<u>weak interaction</u>

charged current
neutral current

<u>electromagnetic interaction</u>

bremsstrahlung
Compton scattering
ionization
photoelectron
radiative correction

<u>electroweak interaction</u>

<u>strong interaction</u>

charge exchange

<u>(other keywords)</u>

absorption
backscatter
capture
decay
diffraction
diffusion
exchange
final-state interaction
fragmentation function
inclusive reaction
multiple production
  jet
  multiplicity
multiple scattering
potential scattering
production
recoil
scattering
structure function

INSTRUMENTS AND METHODS

(accelerators)

accelerator
  betatron
  cyclotron
    synchro-cyclotron
  linear accelerator
  linear collider
  microtron
  storage ring
  synchrotron
    electron synchrotron
    proton synchrotron

(internal and external beams)

beam
  beam cooling
  beam damping
  beam dynamics
  beam emittance
  beam focusing
  beam instability
  beam loading
  beam loss
  beam monitoring
  beam optics
  beam oscillation
    betatron oscillation
    synchrotron oscillation
  beam transport
  bunching
  ejection
  injection
  luminosity
particle separator
particle source
synchrotron radiation

(track measuring)

bubble chamber
  bubble chamber(hydrogen)
  bubble chamber(deuterium)
  bubble chamber(heavy liquid)
drift chamber
nuclear emulsion
proportional chamber
spark chamber
streamer chamber

tracks
  track photography

counters and detectors

calorimeter
  shower detector
  total-absorption counter
colliding beam detector
four-pi-detector
magnetic detector
spectrometer
  forward spectrometer
  magnetic spectrometer

Cherenkov counter
ionization chamber
scintillation counter
semiconductor detector
solid-state counter

(electronics and computers)

analog-to-digital converter
communications
  CAMAC system
  FASTBUS system
computer
electronics
fast logic
microprocessor
programming
time-to-digital converter
trigger

(data analysis)

data analysis method
  amplitude analysis
  event shape analysis
  multidimensional analysis
  partial wave analysis
  statistical analysis
particle identification
track data analysis

(other keywords)

alignment
background
calibration
control system
data acquisition
magnet
  bending magnet
  coil
  quadrupole lens
measurement
monitoring
power supply

RF system
  microwaves
superconducting
target
vacuum system

THEORY OF PARTICLES AND FIELDS

field theory

axiomatic field theory
gauge field theory
grand unified theory
lattice field theory
quantum chromodynamics
quantum electrodynamics
quantum gravity
unified field theory

Bethe-Salpeter equation
Dyson-Schwinger equation
expansion
  expansion $1/d$
  expansion $1/N$
Feynman graph
field equations
field theoretical model
Langevin equation
light cone behavior
Lippmann-Schwinger equation
propagator
quantization
renormalization
  renormalization group
scaling
Schroedinger equation
supersymmetry
  supergravity

particle physics

bootstrap
current algebra
dispersion relations
duality
hadron spectroscopy
model
Regge poles
spectral representation
symmetry
  mixing angle
  multiplet
  symmetry breaking
unitarity
universality

(other keywords)

conservation law
coupling
  coupling constant
invariance
inverse scattering method
n-point function
operator
partial wave
S-matrix
scattering amplitude
selection rule
spinor
sum rule
two-point function
vertex function
violation

NUCLEAR PHYSICS

nuclear force
nuclear matter
nuclear model
nuclear physics
nuclear properties
nuclear reaction
  fission
  fusion
radioactivity

GENERAL PHYSICS

angular distribution
angular momentum
anomaly
astrophysics
atomic physics
binding energy
bound state
chemistry
correction
correlation
  angular correlation
  correlation function
cosmic radiation
cross section
  channel cross section
  differential cross section
  total cross section
  yield
current
dependence
effect

electromagnetic field
  electric field
  magnetic field
energy
  transverse energy
energy levels
energy loss
entropy
excited state
final state
form factor
flux
fundamental constant
forces
interference
kinematics
many-body problem
  three-body problem
matter
  antimatter
mechanics
moment
momentum
  longitudinal momentum
  transverse momentum
momentum transfer
optics
perturbation theory
plasma
potential
quantum mechanics
radiation
relativity theory
resonance
showers
spectra
  energy spectrum
  mass spectrum
  momentum spectrum
statistical mechanics
  thermodynamics
temperature
threshold
time
velocity

OTHER FIELDS

(mathematics)

algebra
approximation
differential equations
functional analysis
group theory

mathematical methods
numerical mathematics
statistics
transformation

(engineering)

buildings
cryogenics
electrical engineering
heat engineering
mechanical engineering
power engineering
safety
  dosimetry
  radiation protection
  shielding

molecular biology

nuclear medicine

MATERIALS

(for elements see
alphabetical list)

crystal
elements
gas
inorganic compounds
liquid
metal
mineral
organic compounds
plastics
semiconductor
solids

MODAL KEYWORDS

activity report
bibliography
book
conference
data compilation
manual
proposal
proposed experiment
thesis

Guide

for the Use of the HIGH ENERGY PHYSICS INDEX Keywords 1988

The terms in this keyword list are used by the DESY Documentation Service for the indexing of papers on high energy (beam energy above 400 MeV) and particle physics, accelerator and detector technology and quantum field theory.

1. Purpose of Keywords Assignment

Our keywords serve the following purposes:

> they allow the generation of a subject index for the biweekly periodical HIGH ENERGY PHYSICS INDEX (HEP),

> they are important for computerized information retrieval and SDI (Selective Dissemination of Information) service at DESY and other high-energy physics centers.

The total kewords assigned to a paper may also be useful as a sort of abstract.

2. Form of Keyword Assignment

Keywords may be used singly or coupled by comma and blank (for example: 'field theory' (single) and 'field theory, nonabelian' (coupled)). While the first term is generally a regular keyword, the second term may be a keyword or a non-keyword. Regular keywords are shown in this list ordered by subject (page i) and ordered alphabetically (page 1).

Non-keywords which are frequently used are standardized; they are contained in the alphabetical list (see also point 10).

3. Depth of Indexing

Papers on peripheral topics will usually have fewer keywords per paper than papers on high energy physics. Examples of peripheral topics are quantum mechanics, statistical mechanics, gravitation, astrophysics, and nuclear physics with beam energy above 400 MeV/nucleon.

4. Classification

Beside of indexing the selected papers are classified with 16 topical fields, one main and any number of secondary fields. For example: Experimental papers on electroproduction of charmed particles are assigned to the main field ((E)) and the secondary field ((C)); books on field theory are assigned to the main field ((3)) and the secondary field ((Z)).

The 16 topical fields are the following:

I. Experimental Physics

((A)) general (also cosmic radiation, nuclear physics,
          and gravitational radiation)
((B)) weak interactions
((C)) electromagnetic interactions, photoproduction
((D)) strong interactions
((E)) charm, beauty, truth

II. Technology and Techniques in High Energy Physics

((F)) accelerators
((G)) detecting systems, experimental methods and data analysis methods

III. Theoretical Physics

((T))   general (also relativistic quantum mechanics, mathematics,
            statistical mechanics, cosmic radiation, nuclear physics, and gravitational radiation)
((U))   weak interactions
((V))   electromagnetic interactions, photoproduction
((W))   strong interactions
((X))   charm, beauty, truth
((Y))   symmetry principles (also current algebra)
((Z))   quantum field theory

IV. Monographs and Conference Proceedings

((3))   books
((4))   conferences

5. Two-Particle Initial State

Most of the combinations of any two particles (but not all) in the list are <u>single</u> regular keywords. They are to be used for the description of the initial state of interactions. The particles are arranged in order of rising masses, in case of same masses in order of charges: positive particle before negative particle (except 'electron positron' and 'anti-p p').

6. Particle Spectra and Other Particle Combinations

Particles or particle combinations in final or intermediate states in conjunction with the keywords

> angular correlation, angular distribution, bound state, correlation, coupling, coupling constant, energy spectrum, final state, interference, mass difference, mass ratio, mass spectrum, mixing angle, momentum spectrum, particle identification, universality, vertex function, yield
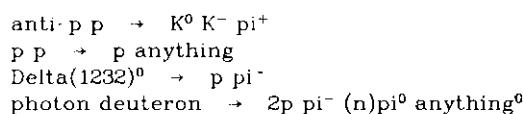
follow the keyword and are listed in parentheses in the order of falling masses, in case of same masses in the order charge (+ -).
Examples:

angular distribution, (photon)	<u>but :</u>
final state, (n p 0lepton)	K0 anti-K0, interference
bound state, (nucleon 2pi)	D0 anti-D0, interference
mass spectrum, (pi$^+$ pi$^-$ pi^0)	B0 anti-B0, interference

7. Reaction Equations

Reactions of two particles or decay modes of a particle are given as in the following examples:

anti-p p   →   K^0 K$^-$ pi$^+$
p p   →   p anything
Delta(1232)^0 →   p pi$^-$
photon deuteron   →   2p pi$^-$ (n)pi^0 anything^0

Particles on the left-hand side are arranged in the order of beam and target, particles on the right-hand side are arranged in the order of falling masses, in case of same masses in the order of charge (+ -).

8. Resonances

Meson and baryon resonances are generally named as in the Particle Data Group Tables; charge states are indicated only for the rho(770) and the Delta(1232).
For new and yet unnamed resonances the mass (in MeV) may be given in parentheses,
 e.g. mass enhancement, (1440)

9. Energy Declarations

Energy resp. momentum is given in the same way as in the paper, but always in GeV. Additionally papers are assigned to energy-ranges:

Range	E(cms) [GeV]	E(beam) [GeV] target: nucleon		
		beam: e⁻, photon, pi	beam: K	beam: p
((1))	0.0 – 3.0	0.0 – 4.32	0.0 – 4.20	0.0 – 3.85
((2))	– 10.0	– 52.8	– 52.7	– 52.3
((3))	– 30.0	– 479.	– 479.	– 478.
((4))	– 100.0	. . . .	– 5325.	. . . .
((5))	– 300.0	. . . .	– 47900.	. . . .
((6))	– 1000.0	. . . .	– 532500.	. . . .
((7))	> 1000.0	. . . .	> 532500.	. . . .

For asymmetric colliders the centre-of-mass energy is $E(cms) = 2 \cdot \sqrt{E_1 \cdot E_2}$.
Neutrino electron scattering (fixed target) up to neutrino energies of 8800 GeV is in the energy range ((1)).

No energy range is given in case of nucleus nucleus interactions. Additional information on momentum transfer, limited angular range, etc. may be included. The general rules are illustrated by the following examples :

        1.5-2.7 GeV-cms, ((1))
        1.75, 3.00, 4.50 GeV/c, ((1)), ((2))
        351 GeV (pi), 280 GeV (p), ((3))
        27.7 GeV/c/nucleon, 8.4 GeV-cms/nucleon
        < 45 GeV-cms, 2-5 degrees, ((3)), ((4))
        approx. 200 GeV/c, 0.5 < |t| < 2.5 GeV**2, ((3))

10. Alphabetical Keyword List

There are three kinds of entries in the alphabetical list:

- regular keywords (boldface and blank space in column 1);

- standardized non-keywords ("*" in column 1); these terms are generally coupled to regular keywords. There are also non-keywords which have not been standardized; they are not contained in this keyword list;

- terms which are <u>not</u> used ("–" in column 1).

Comments or rules of use are given in parentheses. "Restricted use" means that a keyword is used only in cases where it is of central importance in the paper considered.

Entries are ordered in the following <u>sorting sequence</u> :
    blank . (+ | *) ; – / < > , : ' 0....9 aA....zZ

New Names

of Particles

The new naming of particles introduced by the Particle Data Group is implemented in the HEP since the year 1988. The following list shows the new particle names as they are now used in the HEP and the corresponding old names.

New HEP name	old HEP name	New HEP name	old HEP name
a0(980)	delta(980)	f2(1720)	Theta(1690)
a1(1270)	A1(1270)	*f2(1810)	*f(1815)
a2(1320)	A2(1320)	*f2(2150)	*epsilon(2150)
*a3(2050)	*A(2050)	*f2(2240)	*g/t(2240)
*a4(2040)	*delta(2040)	f4(2030)	h(2030)
*a6(2450)	*delta(2450)	*f4(2300)	*epsilon(2300)
b1(1235)	B(1235)	*f6(2510)	*r(2510)
chi/b0(9875)	chi/b(9875)	h1(1190)	H(1190)
chi/b0(10235)	chi/b(10235)	K*0(1350)	kappa(1350)
chi/b1(9895)	chi/b(9895)	K*2(1430)	K*(1430)
chi/b1(10255)	chi/b(10255)	K*3(1780)	K*(1780)
chi/b2(9915)	chi/b(9915)	K*4(2060)	K*(2060)
chi/b2(10270)	chi/b(10270)	K1(1280)	Q1(1280)
chi0(3415)	chi(3415)	K1(1400)	Q2(1400)
chi1(3510)	chi(3510)	*K2(1580)	*L(1580)
chi2(3555)	chi(3555)	K2(1770)	L(1770)
D/s	F	*K2(2250)	*K(2200)
D/s+	F+	*Omega/c0	*T0
D/s(2110)	*F*(2140)	omega3(1670)	omega(1670)
D/s-	F-	Phi/J(1850)	Phi(1850)
eta(1440)	iota(1440)	pi2(1680)	A3(1680)
*f0(1240)	*g/s(1240)	*pi2(2100)	*A(2100)
f0(1300)	epsilon(1300)	rho3(1690)	g(1690)
f0(1590)	G(1590)	*rho3(2250)	*rho(2250)
*f0(1730)	*S(1730)	*rho5(2350)	*rho(2350)
f0(975)	S*(975)	*X(1700)	*eta(1700)
f1(1285)	D(1285)	*X(1935)	*S(1935)
f1(1420)	E(1420)	*X(2220)	*xi(2220)
*f1(1530)	*D(1530)	Xi/c+	A-
f2(1270)	f(1270)	*Xi/c0	*A0
f2(1525)	f(1525)		

(PDC: f'2(1525))

*0 (for spin 0 use 'spinless')
*1 (e.g. 'spin, 1')
*1/2 (e.g. 'spin, 1/2')
*2 (e.g. 'spin, 2')

*3 (e.g. 'spin, 3')
*3/2 (e.g. 'spin, 3/2')
*5/2 (e.g. 'spin, 5/2')

a0(980) (was delta(980))
a1(1270) (was A1(1270))
a2(1320) (was A2(1320))
*a3(2050) ('postulated particle, a3(2050)',
    was A(2050))
*a4(2040) ('postulated particle, a4(2040)',
    was delta(2040))
*a6(2450) ('postulated particle, a6(2450)',
    was delta(2450))
-Abelian field theory (field theory)
*aberration
absorption
-absorptive model (model, absorption)
*acceleration (used for astrophysics and
    cosmic radiation; also 'experimental
    methods, acceleration')
accelerator
*acceptance (e.g. 'spectrometer,
    acceptance' or 'accelerator,
    acceptance')
*accumulator (for accelerators only)
-acoplanarity (planarity)
*acoustic (spark chamber, acoustic)
actinium
*action (restricted use; 'gauge field theory,
    action'; see also 'effective action')
- action-at-a-distance (axiomatic field
    theory)
activity report
-ADC (analog-to-digital converter)
*adiabatic
-Adler-Bell-Gross-Jackiw (current algebra)
-Adler-Weisberger relation ('model, PCAC'
    and 'current algebra')
*admixture
-ADONE (Frascati Stor)
*aerogel (Cherenkov counter, aerogel)
*AFS (at CERN Stor; 'four-pi-detector, AFS')
-AGS (Brookhaven PS)
*Aharonov-Bohm (effect, Aharonov-Bohm)
*air (showers, air)
*ALEPH (at LEP; 'magnetic detector,
    ALEPH')
algebra (see also 'current algebra')
alignment (see also 'polarization')
*alloy
-alpha particle (helium)
-ALS (Saclay ALS)
*Altarelli-Parisi equation (quantum
    chromodynamics, Altarelli-Parisi
    equation)
aluminum
americium
*amplifier (e.g. 'microwaves, amplifier')
amplitude analysis
*Amsterdam MEA (0.5 GeV electrons)
*AMY (at TRISTAN; 'magnetic detector, AMY')
analog-to-digital converter
*analytic properties (restricted use)
-analyticity (analytic properties)
*analyzing power (polarization, analyzing
    power)
angular correlation
*angular dependence
angular distribution

angular momentum
*angular resolution (e.g. 'scintillation
    counter, angular resolution')
-anharmonic oscillator (model, oscillator)
*anisotropy (cosmic radiation, anisotropy)
*annihilation
-anomalon (use 'postulated particle' and
    'total cross section, anomaly')
anomaly
anti-B
anti-B0
anti-D
anti-D0
anti-K
anti-K nucleon
anti-K0
anti-n
anti-n deuteron
anti-n light nucleus
*anti-N N(1200-3600) (postulated particle,
    anti-N N(1200-3600))
anti-n nucleus
anti-p
anti-p deuteron
anti-p light nucleus
anti-p n
anti-p nucleon
anti-p nucleus
anti-p p
antibaryon
antifermion
antihyperon
Antilambda
*Antilambda/b0 (postulated particle,
    Antilambda/b0)
Antilambda/c+
antilepton
antimatter
antimony
antineutrino
antineutrino baryon
antineutrino deuteron
antineutrino electron
antineutrino light nucleus
antineutrino meson
antineutrino n
antineutrino nucleon
antineutrino nucleus
antineutrino p
antineutrino quark
antineutrino/e
antineutrino/L (i.e. heavy lepton
    antineutrino)
antineutrino/mu
antineutrino/tau
-antineutrinoproduction
    (neutrinoproduction)
-antineutron (anti-n)
antinucleon
antinucleon nucleus
*antinucleus
Antiomega-
antiparticle
-antiproton (anti-p)
antiquark

Antisigma
Antisigma+
Antisigma−
Antisigma0
Antixi
Antixi−
Antixi0
*anything (only in reactions)
*anything+ (only in reactions)
*anything- (only in reactions)
*anything0 (only in reactions)
-aperture (usually 'beam, width')
 approximation
-Argand plot (partial wave analysis)
 argon
*Argonne GEM (2 GeV electron microtron)
*Argonne PS (12.7 GeV protons)
*Argonne RCS (0.45 GeV proton
    synchrotron)
*ARGUS (at DORIS II; 'magnetic detector,
    ARGUS')
 arsenic
-ARUS (Erevan ES)
*ASP (at PEP; 'calorimeter, ASP')
*associated production
 astatine
 astrophysics
*asymmetry
*asymptotic behavior (for asymptotic
    behavior at high energies use 'high

energy behavior', at low energies use
    'infrared problem'.)
*asymptotic completeness (scattering,
    asymptotic completeness)
*asymptotic expansion ('transformation,
    asymptotic expansion', see also
    'transformation, Borel')
*asymptotic freedom ('field theory,
    asymptotic freedom'; for low energies
    use 'field theory, infrared problem')
*at rest (in energy category '0 GeV' is
    added)
 atom
-atomic number (mass number)
 atomic physics
*avalanche ('drift chamber, avalanche' or
    'proportional chamber, avalanche')
*axial
-Axial Field Spectrometer
    (four-pi-detector, AFS)
*axial gauge (gauge field theory, axial
    gauge)
*axial-vector (current, axial-vector)
 axial−vector meson
*axigluon (postulated particle, axigluon)
 axiomatic field theory
*axion (postulated particle, axion)

B
B anti—B
B+
B(5320) ('postulated particle, B*(5320)';
    excited B)
B—
B—L number
-B/d (B)
B/s
B0
B0 anti—B0
b1(1235) (was B(1235))
background
*background field (e.g. 'field theory,
    background field')
*background gauge (gauge field theory,
    background gauge)
-background radiation (radiation,
    background)
backscatter (see also 'scattering,
    wide-angle')
*Baecklund (transformation, Baecklund)
*bag (model, bag)
barium
baryon
baryon antibaryon
baryon baryon
baryon number
baryon resonance (see also 'nucleon
    resonance')
- baryon-to-entropy ratio (baryon,
    asymmetry)
-baryonic number (baryon number)
baryonium (see also 'postulated particle,
    anti-N N(1200-3600)')
*Batavia PS (400 GeV protons)
*Batavia TEVATRON Coll (2000 GeV cms
    protons)
*Batavia TEVATRON PS (1000 GeV protons)
--Bates Linac (MIT Linac)
beam
beam blowup (beam instability)
beam chopper (bunching)
beam cooling (for proton beams; see also
    'electron cooling' or 'stochastic
    cooling'; for electron beams use 'beam
    damping')
beam damping (for electron beams; for
    proton beams use 'beam cooling')
*beam dump (e.g 'experimental methods,
    beam dump')
beam dynamics
beam emittance
beam focusing
beam instability
-beam lines (beam transport)
beam loading (not used for 'injection')
beam loss
beam monitoring
beam optics
beam oscillation (For longitudinal beam
    oscillation use 'synchrotron oscillation';
    for transverse beam oscillation use
    'betatron oscillation'.)

-beam polarization (Use 'beam,
    polarization' for degree of polarization.
    See also 'polarized beam')
*beam profile
beam transport
*beam-beam (scattering, beam-beam)
*beat-wave (e.g. 'accelerator, beat-wave')
beautiful baryon
beautiful meson
beautiful particle (for hidden beauty use
    'quarkonium, beauty' or e.g. 'upsilon
    mesons')
*beauty ('quark, beauty' or 'quarkonium,
    beauty')
*Becchi-Rouet-Stora (transformation,
    Becchi-Rouet-Stora)
-Beijing Stor (Peking Stor)
bending magnet
*bent crystal
*Berkeley Bevalac (2 GeV/A ions)
*Berkeley ES (1-2 GeV electrons;
    synchrotron radiation)
*Berkeley PS
berkelium
*Berlin BESSY Stor (synchrotron radiation)
*Berry phase
beryllium
-BESSY (Berlin BESSY Stor)
-beta decay (semileptonic decay)
*beta function ('beam optics. beta
    function' or 'renormalization, beta
    function')
betatron
betatron oscillation
*Bethe-Heitler (approximation,
    Bethe Heitler)
Bethe—Salpeter equation
-BEVATRON (Berkeley PS)
-BGO (scintillation counter,
    bismuth-germanate)
-Bhabha scattering (electron positron.
    elastic scattering)
*Bianchi identity (field theory, Bianchi
    identity)
bibliography
binding energy
-biology (molecular biology)
bismuth
*bismuth-germanate (scintillation
    counter, bismuth germanate)
*Bjorken (scaling, Bjorken)
*black hole (astrophysics, black hole)
*block spin ('transformation, block spin' or
    'renormalization group, block spin')
-Blumlein line ('power supply' and
    'streamer chamber')
*Bogolyubov (transformation, Bogolyubov)
*Bonn ELSA Stor (3.5 GeV electrons;
    stretcher ring)
*Bonn ES (2.5 GeV electrons)
book
*booster
bootstrap

*Borel ('transformation, Borel'; see also
    'transformation, asymptotic
    expansion')
*Born (approximation, Born)
 boron
-Bose statistics (boson, statistics)
 boson
 boson boson
*bosonization (e.g. 'field theory,
    bosonization')
-bottom (quark, beauty)
-bound (see 'upper limit' or 'lower limit')
 bound state
*boundary condition (see also 'surface')
-BPHZ (renormalization, regularization)
*branching ratio

-breakup ('fission' or 'dissociation')
*Breit-Wigner (model, Breit-Wigner)
 bremsstrahlung
-broken symmetry ('symmetry breaking'
    or 'symmetry, spontaneously broken'
    or 'symmetry, dynamically broken')
 bromine
*Brookhaven CBA Stor (heavy ion collider)
*Brookhaven PS (33 GeV protons)
-BRS (transformation, Becchi-Rouet-Stora)
 bubble chamber
 bubble chamber(deuterium)
 bubble chamber(heavy liquid)
 bubble chamber(hydrogen)
 buildings
 bunching

-C invariance (invariance, charge
   conjugation)
C (algebra, C*)
-C-parity (quantum number, charge
   conjugation)
*Cabibbo (model, Cabibbo)
*Cabibbo angle (weak interaction, Cabibbo
   angle)
 cadmium
 calcium
 calibration
 californium
*Callan-Gross (sum rule, Callan-Gross)
*Callan-Symanzik equation
   (renormalization group,
   Callan-Symanzik equation)
-Callan-Treiman relation (use 'current
   algebra')
 calorimeter (use more specific term if
   possible)
 CAMAC system
 capture (see also 'radiative capture')
-CAR ('algebra, commutation relations'
   (restricted use))
 carbon
*cascade ('model, cascade' or 'nucleus,
   cascade'; see also 'showers', 'cascade
   decay' and 'intranuclear cascade')
*cascade decay
*Casimir (e.g. 'effect, Casimir' or 'energy,
   Casimir')
-catalysis (for proton decay via magnetic
   monopole use 'effect, Rubakov')
*causality (e.g. 'field theory, causality')
-cavity (RF system)
-CCR ('algebra, commutation relations'
   (restricted use))
*CDF (at TEVATRON Coll; 'magnetic
   detector, CDF')
-CEBAF (Newport News CEBAF Linac)
*CELLO (at PETRA; 'magnetic detector,
   CELLO')
*centauro (e.g. 'search for, centauro',
   'multiplicity, centauro')
*central charge (e.g. 'supersymmetry,
   central charge')
*central region (inclusive reaction, central
   region)
*ceramics
 cerium
*CERN Cycl (at Geneva)
*CERN LEAR (at Geneva; low energy
   antiprotons)
*CERN LEP Stor (at Geneva; ~200 GeV-cms
   e+e-)
*CERN SPS (at Geneva; 400 GeV protons)
*CERN SPS Coll (at Geneva; 900 GeV-cms
   anti-p p)
*CERN Stor (ISR, at Geneva; 63 GeV-cms
   protons (d, He))
*CERN1 PS (at Geneva; 28 GeV protons)
 cesium
-CESR (Cornell CESR Stor)
-channel (not used)
 channel cross section

*channeling (e.g. 'crystal, channeling')
*chaotic behavior
 charge
*charge conjugation ('invariance, charge
   conjugation' or 'violation, charge
   conjugation' or 'quantum number,
   charge conjugation')
*charge correlation (e.g. 'jet, charge
   correlation')
*charge distribution (for beams and
   nuclei; for particles use 'form factor,
   electric')
 charge exchange
 charged current
 charged particle
*charm ('quark, charm' or 'quarkonium,
   charm')
 charmed baryon
 charmed meson
 charmed particle (for hidden charm use
   'quarkonium, charm' or e.g. 'psi
   mesons')
*chemical (only 'potential, chemical')
-chemicals (use 'elements', 'inorganic
   compounds', 'mineral', etc.)
 chemistry
*Cherenkov (radiation, Cherenkov)
 Cherenkov counter
*Chern-Simons term (e.g. 'field theory,
   Chern-Simons term')
-Chew-Frautschi plot (Regge poles)
*Chew-Low (model, Chew-Low)
 chi mesons (for chi/c and chi/b)
 chi/b0(10235) (was chi/b(10235))
 chi/b0(9875) (was chi/b(9875))
 chi/b1(10255) (was chi/b(10255))
 chi/b1(9895) (was chi/b(9895))
 chi/b2(10270) (was chi/b(10270))
 chi/b2(9915) (was chi/b(9915))
 chi0(3415) (was chi(3415))
 chi1(3510) (was chi(3510))
 chi2(3555) (was chi(3555))
-Chilton PS (see 'Rutherford ISIS PS')
*chiral (generally 'symmetry, chiral')
 chlorine
*Chou-Yang (model, Chou-Yang)
*chromaticity (e.g. 'beam optics,
   chromaticity', 'correction,
   chromaticity')
 chromium
-CIM (model, constituent interchange)
*classical (field theory, classical)
*Clebsch-Gordan coefficients (group
   theory, Clebsch-Gordan coefficients)
*CLEO (at CESR; 'magnetic detector, CLEO')
*Clifford (algebra, Clifford)
-closed-loop diagram (Feynman graph,
   higher-order)
-closed-orbit correction (correction, orbit)
*closure (approximation, closure)
*cluster (e.g. 'model, cluster')
-cluster analysis (event shape analysis,
   cluster)
 cobalt
*coherent interaction

*coherent state (e.g. 'quantum mechanics, coherent state')
coil
-coincidence ('fast logic' or 'trigger' or 'associated production')
-Coleman-Glashow formula (baryon, mass difference)
-Coleman-Weinberg instability (symmetry breaking)
*collective (used only in connection with accelerators)
*collective phenomena ('field theory, collective phenomena' or 'nuclear physics, collective phenomena' or 'nuclear matter, collective phenomena')
-collider ('storage ring' or 'linear collider')
colliding beam detector (use only in instrumental papers)
*colliding beams (for accelerator use 'storage ring' or 'linear collider')
*color (quark, color)
colored particle
communications
*commutation relations (e.g. 'algebra, commutation relations'; restricted use)
-commutator (commutation relations)
-compactification (see 'spontaneous compactification')
-completely integrable (use 'integrability')
*composite (e.g. 'model, composite')
Compton scattering
computer
*concrete (e.g. 'shielding, concrete')
*condensation (e.g. 'pi, condensation')
conference
*confinement (e.g. 'quark, confinement', 'potential, confinement')
*conformal (invariance, conformal)
conservation law
-conserved vector current (model, CVC)
-conspiracy (Regge poles, forward scattering)
*constituent interchange (model, constituent interchange)
*constraint (e.g. 'field theory, constraint')
*constructive (field theory, constructive)
-contamination ('dosimetry' or 'background' or 'admixture')
*continuum limit (lattice field theory, continuum limit)
control system
-coplanar (planar)
-coplanarity (planarity)

copper
*Cornell CESR Stor (16 GeV-cms e+e-)
correction
correlation
correlation function
-correlation length (correlation, length)
cosmic radiation
-cosmological constant (astrophysics, fundamental constant)
-cosmology (astrophysics)
*costs
--Cottingham formula (mass difference)
*Coulomb (e.g. 'potential, Coulomb' or 'gas, Coulomb')
*Coulomb gauge (gauge field theory, Coulomb gauge)
*Coulomb scattering
counters and detectors (use more specific term if possible)
*coupled channel (partial wave analysis, coupled channel)
coupling (restricted use)
coupling constant (restricted use)
-covariance ('invariance, Lorentz' (restricted use))
*CP ('invariance, CP' or 'violation, CP')
*CP(1) (field theoretical model, CP(1))
*CP(N-1) (field theoretical model, CP(N-1))
*CPT ('invariance, CPT' or 'violation, CPT')
-critical exponent (critical phenomena)
*critical phenomena ('field theory, critical phenomena' or e.g. 'thermodynamics, critical phenomena')
-critical point (critical phenomena)
cross section (restricted use, see also 'total cross section' or 'differential cross section' or 'channel cross section')
*crossing (symmetry, crossing)
cryogenics
crystal
*Crystal Ball (at DORIS II; 'four-pi-detector, Crystal Ball')
*cumulative production (e.g. 'pi, cumulative production')
curium
current (restricted use, see also 'neutral current', 'charged current')
current algebra
*current-current (e.g. 'model, current-current' or 'interference, current-current')
*CUSB (at CESR; 'four-pi-detector, CUSB')
*CVC (model, CVC)
cyclotron

D
D anti-D
D+
D*(2010)
D(2420) (postulated particle, D*(2420))
D-
D/s (was F)
D/s+ (was F+)
D/s(2110) (postulated particle,
    D/s*(2110), was F*(2140))
D/s- (was F-)
D0 (meson; for the detector use 'DZERO')
D0 anti-D0
*Dalitz plot (multidimensional analysis,
    Dalitz plot)
*damage (radiation, damage)
 damping ('energy loss' or 'beam damping')
*Daresbury ES (SRS; synchrotron
    radiation)
·dark matter (astrophysics, missing-mass)
*Darmstadt ESR (1.3 GeV/A ions)
 data acquisition
-data analysis ('statistical analysis',
    'multidimensional analysis', 'partial
    wave analysis', 'data compilation', 'data
    analysis method', 'track data analysis',
    'interpretation of experiments')
 data analysis method (restricted use)
 data compilation
-data processing ('computer' or
    'programming')
 DC 1 (Dubna Cycl)
 DCI (Orsay Stor)
*de Sitter ('group theory, de Sitter' or
    'algebra, de Sitter')
 decay (restricted use, if possible use more
    specific term, e.g. 'hadronic decay')
*decay modes (e.g. 'pi+, decay modes')
·decay rate (use 'branching ratio' or
    'width' or 'lifetime')
-decay width (width)
*Deck (effect, Deck)
*decoupling (coupling, decoupling)
*deep inelastic scattering
*deep underground (counters and
    detectors, deep underground)
-deep-water (deep underground)
·delay line (use 'time delay')
*DELCO (at PEP; 'magnetic detector,
    DELCO')
*DELPHI (at LEP; 'magnetic detector,
    DELPHI')
*Delta ('nucleon resonance, Delta' (I=3/2,
    mass > 3000 MeV or unspecified mass))
 Delta(1232) (partial wave P33)
 Delta(1232)+
 Delta(1232)++
 Delta(1232)-
 Delta(1232)0
*Delta(1550) (partial wave P31; 'postulated
    particle, Delta(1550)')
*Delta(1600) (partial wave P33; 'postulated
    particle, Delta(1600)')
 Delta(1620) (partial wave S31)
 Delta(1700) (partial wave D33)

Delta(1900) (partial wave S31)
Delta(1905) (partial wave F35)
Delta(1910) (partial wave P31)
Delta(1920) (partial wave P33)
Delta(1930) (partial wave D35)
*Delta(1940) (partial wave D33; 'postulated
    particle, Delta(1940)')
 Delta(1950) (partial wave F37)
*Delta(2000) (partial wave F35; 'postulated
    particle, Delta(2000)')
*Delta(2150) (partial wave S31; 'postulated
    particle, Delta(2150)')
*Delta(2200) (partial wave G37; 'postulated
    particle, Delta(2200)')
*Delta(2300) (partial wave H39; 'postulated
    particle, Delta(2300)')
*Delta(2350) (partial wave D35; 'postulated
    particle, Delta(2350)')
*Delta(2390) (partial wave F37; 'postulated
    particle, Delta(2390)')
*Delta(2400) (partial wave G39; 'postulated
    particle, Delta(2400)')
 Delta(2420) (partial wave H311)
*Delta(2750) (partial wave I313; 'postulated
    particle, Delta(2750)')
*Delta(2950) (partial wave K315; 'postulated
    particle, Delta(2950)')
*density
*density matrix (generally 'spin, density
    matrix')
 dependence (restricted use)
*depolarization (polarization,
    depolarization)
*DESY DORIS II Stor (at Hamburg; 10
    GeV cms e-e)
*DESY ES (at Hamburg, 7.5 GeV electrons)
*DESY HERA Stor (at Hamburg;
    ~300 GeV cms ep)
*DESY PETRA Stor (at Hamburg;
    47 GeV cms e+e)
·detection ('measurement' or 'particle
    identification' or a specific detector)
 detector ('counters and detectors' or use
    more specific keyword)
 deuterium (see also 'deuteron')
 deuteron
 deuteron deuteron
 deuteron light nucleus
 deuteron nucleus
-deviation (use 'difference')
*dibaryon ('baryon resonance, dibaryon',
    see also specific particles like
    'N N(2170)', 'Lambda N(2130)', 'H
    baryon')
*dielectric
*difference (see also 'mass difference')
 differential cross section
 differential equations
*differential geometry (mathematical
    methods, differential geometry)
 diffraction
-diffraction dissociation (diffraction,
    dissociation)
-diffractive production ('diffraction' or if
    important 'diffraction, production')

diffusion
-dilatation (symmetry, dilation)
*dilation (symmetry, dilation)
*dilaton (e.g. 'postulated particle, dilaton')
*dilepton (e.g. 'final state, dilepton')
*dilute gas (approximation, dilute gas)
*dimensional reduction (e.g. 'field theory, dimensional reduction')
*dimuon (e.g. 'mass spectrum, dimuon')
*dip (differential cross section, dip)
-dipion (use 'two-pion' or 'final state, (2pi)')
-dipole ('form factor' or 'magnetic moment')
-dipole magnet (bending magnet)
*diquark (quark, diquark)
*Dirac (field equations, Dirac)
*Dirac-Kaehler (field equations, Dirac-Kaehler)
*direct production
*discrete (e.g. 'symmetry, discrete')
*dispersion
 dispersion relations
*dissociation (diffraction, dissociation)
*distorted wave Born (approximation, distorted wave Born)
*distorted wave impulse (approximation, distorted wave impulse)
-distribution function (for quark use 'quark, energy spectrum')
*DM1 (at Orsay; 'magnetic detector, DM1')
*DM2 (at Orsay; 'magnetic detector, DM2')
*domain wall
-DORIS II (DESY DORIS II Stor)
 dosimetry
-double absorption (use 'absorption' and 'final-state interaction')
-double beam (two-beam)
-double exchange ('Regge poles, multi-Regge' or 'radiative correction' or 'final-state interaction' or 'charge exchange, multiple' or 'exchange, two-particle')
 double scattering ('exchange' or 'multiple scattering')
-double spectral function ('Mandelstam representation' or 'spectral representation')
-double-arm spectrometer (e.g. 'magnetic spectrometer')
-doublet (use 'pair')
*down ('quark, down' or 'quarkonium, down')
*Drell-Yan ('model, Drell-Yan' or 'scattering, Drell-Yan' or 'Feynman graph, Drell-Yan')
 drift chamber
*drift tube (see also 'flash tube')
*drift velocity (only in connection with detectors)
*droplet ('model, droplet' or 'experimental methods, droplet')
-dual diffraction ('diffraction' and 'duality')
-dual model ('model, dual resonance' or 'duality')
*dual resonance (model, dual resonance)
 duality (usually without 'Regge poles')
*Dubna Cycl (1 GeV/A deuterons; also called DC-1)
*Dubna PS (10 GeV protons, 20 GeV/A ions)
*Dubna SPIN (1.5 GeV/A ion synchrotron)
-DWBA (approximation, distorted wave Born)
*dynamically broken ('symmetry, dynamically broken'; see also 'symmetry breaking')
*dyon (field equations, dyon)
 Dyson—Schwinger equation
 dysprosium
*DZERO (at TEVATRON Coll; 'four-pi-detector, DZERO')

*E(6) (e.g. 'symmetry, E(6)')
*E(7) (e.g. 'symmetry, E(7)')
*E(8) (e.g. 'symmetry, E(8)')
*E(8) x E(6) (e.g. 'symmetry, E(8) x E(6)')
*E(8) x E(8) (e.g. 'symmetry, E(8) x E(8)')
 effect (restricted use)
*effective action (if possible use 'effective
    Hamiltonians' or 'effective
    Lagrangians')
*effective gauge boson
*effective Hamiltonians ('field theory,
    effective Hamiltonians' or 'gauge field
    theory, effective Hamiltonians')
*effective Lagrangians ('current algebra,
    effective Lagrangians', or 'field theory,
    effective Lagrangians')
-effective mass (mass spectrum)
*effective potential (approximation,
    effective potential)
*effective range (approximation, effective
    range)
*efficiency (e.g. 'counters and detectors,
    efficiency')
*Eguchi-Kawai (field theoretical model,
    Eguchi-Kawai)
*EHS (at SPS; 'four pi detector, EHS')
-eigenstate (see 'energy eigenstate')
*eight dimensional (e.g. 'field theory,
    eight dimensional')
*eikonal (approximation, eikonal)
*Einstein (field equations, Einstein)
*Einstein Maxwell (field equations,
    Einstein-Maxwell)
 einsteinium
 ejection
*elastic scattering
-elastic total cross section (channel cross
    section, elastic scattering)
*electric (see also 'electromagnetic',
    'electrostatic')
 electric field
 electric moment
 electrical engineering
*electrofission (fission induced by
    electrons or muons)
*electromagnetic
*electromagnetic component (cosmic
    radiation, electromagnetic component)
*electromagnetic decay (see also 'radiative
    decay')
 electromagnetic field
-electromagnetic form factor (form
    factor)
 electromagnetic interaction
 electron (also used when charge is
    irrelevant)
*electron cooling (beam cooling, electron
    cooling)
 electron deuteron
 electron electron (also used when charge
    is irrelevant)
 electron hadron
 electron light nucleus
 electron meson
 electron muon

 electron muon+
 electron muon-
 electron n
 electron nucleon
 electron nucleus
 electron number
 electron p
 electron pi
 electron positron
 electron quark
 electron synchrotron
 electronics (restricted use)
*electroproduction (for particle
    production by electrons or muons)
*electrostatic
 electroweak interaction
-elementary length (fundamental
    constant, length)
 elements
*eleven-dimensional (e.g. 'field theory,
    eleven-dimensional')
-ELSA (Bonn ELSA Stor)
-EMC effect (use 'nucleon, structure
    function' and 'dependence, mass
    number')
*emission
 emulsion chamber (nuclear emulsion)
 energy
*energy dependence
*energy eigenstate (e.g. 'quantum
    mechanics, energy eigenstate'. Not
    used for energy levels or excited
    states.)
*energy flow (jet, energy flow)
 energy levels
 energy loss
*energy resolution (e.g. 'counters and
    detectors, energy resolution')
 energy spectrum
*energy-momentum (tensor,
    energy-momentum)
*enhancement (e.g. 'differential cross
    section, enhancement'; see also 'mass
    enhancement')
 entropy
*epsilon expansion (approximation, epsilon
    expansion)
 equilibrium ('statistical mechanics' or
    'thermodynamics')
*equivalent gauge boson (approximation,
    equivalent gauge boson)
*equivalent photon (approximation,
    equivalent photon)
 erbium
*Erevan ES (6 GeV electrons)
 error (use 'difference' or 'correction')
 eta
*eta(1275) (postulated particle, eta(1275))
 eta(1440) (was iota(1440))
 eta(958)
*eta/b (postulated particle, eta/b)
 eta/c(2980)
*eta/c(3590) (postulated particle,
    eta/c(3590))
*eta/t (postulated particle, eta/t)

-ETC (model, technicolor)
*Euclidean (field theory, Euclidean)
europium
-evaporation model (multiple production)
event shape analysis
*exceptional group (e.g. 'group theory,
    exceptional group')
exchange
excited nucleus
excited state
*exclusive reaction
*exotic ('resonance, exotic' or 'meson
    resonance, exotic' or 'baryon
    resonance, exotic' or 'atom, exotic')
expansion (see also 'asymptotic
    expansion', 'epsilon expansion',
    'operator product expansion')

expansion 1/d
expansion 1/N
*experimental equipment
*experimental methods
*experimental results
*extended particle (model, extended
    particle)
-extended technicolor (model, technicolor)
*extensive (showers, extensive)
*external ('symmetry, external' or 'beam,
    external')
*external field ('field theory, external field'
    (restricted use))
-extraction (ejection)

*f0(1240) ('postulated particle, f0(1240)',
was g/s(1240))
f0(1300) (was epsilon(1300))
f0(1590)
*f0(1730) ('postulated particle, f0(1730)',
was S(1730))
f0(975) (was S*(975))
f1(1285) (was D(1285))
f1(1420) (was E(1420))
*f1(1530) ('postulated particle, f1(1530)',
was D(1530))
f2(1270) (was f(1270))
*f2(1410) (postulated particle, f2(1410))
f2(1525) (was f(1525))
f2(1720) (was Theta(1690))
*f2(1810) ('postulated particle, f2(1810)',
was f(1815))
*f2(2150) ('postulated particle, f2(2150)',
was epsilon(2150))
*f2(2240) ('postulated particle, f2(2240)',
was g/t(2240))
f4(2030) (was h(2030))
*f4(2300) ('postulated particle, f4(2300)',
was epsilon(2300))
*f6(2510) ('postulated particle, f6(2510)',
was r(2510))
*factorization
-Faddeev equations (many-body problem)
*familon (postulated particle, familon)
fast logic (see also 'trigger')
FASTBUS system
*feedback (used only in connection with
accelerators)
-FEL (radiation, undulator)
-Fermi coupling (weak interaction,
current current)
*Fermi gas (model, Fermi gas)
-Fermi motion correction ('nuclear
physics, correction'; for partons use
e.g. 'quark, momentum')
-Fermi statistics (fermion, statistics)
-Fermilab (see 'Batavia ...')
fermion
fermion antifermion
fermion boson
fermion fermion
*fermion magnetic monopole (scattering,
fermion magnetic monopole)
fermion number
*fermionization (e.g 'field theory,
fermionization')
fermium
*ferromagnet ('model, ferromagnet' or
'magnet, ferromagnet')
-FESR (sum rule, finite energy)
*Feynman (scaling, Feynman)
-Feynman fluid ('scaling, Feynman' or
'model, fluid')
-Feynman gas ('scaling, Feynman' or
'model, gas')
*Feynman gauge (gauge field theory,
Feynman gauge)
Feynman graph (restricted use)
-Feynman integral (Feynman graph)

-Feynman path ('field theory, path
integral' or 'perturbation theory, path
integral')
-Feynman rule ('Feynman graph' or
'perturbation theory')
*fibre ('optics, fibre' or 'scintillation
counter, fibre')
*fibre bundle (field theory, fibre bundle)
field equations
field theoretical model
field theory (see also 'gauge field theory'
or 'field theoretical model' or 'unified
field theory' or 'lattice field theory' or
'grand unified theory')
final state (restricted use, examples:
'final state, (p 2pi)'; 'final state,
dimuon')
final-state interaction
*fine structure
*finite (e.g. 'field theory, finite')
*finite energy (sum rule, finite energy)
*finite size (e.g. 'effect, finite size')
*finite temperature (field theory, finite
temperature)
*fireball (model, fireball)
fission
-fit ('interpretation of experiments,
parametrization' or 'statistical
analysis, parametrization' or, for new
methods, 'data analysis method')
*five-dimensional (e.g. 'field theory,
five-dimensional')
*flash tube (spark chamber, flash tube)
*flavor (quark, flavor)
*flavor changing ('current, flavor changing'
or 'decay, flavor changing')
flow ('energy flow' or 'particle flow')
*fluid (only used for 'model, fluid';
otherwise use 'liquid')
fluorine
flux
*flux tube (model, flux tube)
-FNAL (see 'Batavia ...')
*Fokker-Planck (differential equations,
Fokker-Planck)
*Foldy-Wouthuysen (transformation,
Foldy-Wouthuysen)
forces
form factor (no specifier is used for
electromagnetic form factor, otherwise
'form factor, electric' or 'form factor,
magnetic')
*formula (see also 'mass formula')
*forward scattering (used only for
zero-degree scattering, otherwise use
'small angle')
forward spectrometer
forward-backward asymmetry (angular
distribution, asymmetry)
*four-dimensional (e.g 'field theory,
four-dimensional')
*four-fermion interaction (model,
four-fermion interaction)
four-pi-detector (restricted use)
*fractals (mathematical methods, fractals)

*fractionally charged
*fragmentation ('beam, fragmentation' or
    'target, fragmentation' or 'quark,
    fragmentation' or 'multiple production,
    fragmentation')
 fragmentation function
 francium
*Frascati ES
*Frascati Stor (3 GeV-cms e+e-)
-free electron laser (radiation, undulator)
-free path (path length)

-free quark (use 'quark, search for')
-frequency ('oscillator' or 'oscillation')
*Friedman (model, Friedman)
*Froissart bound (total cross section,
    Froissart bound)
 functional analysis
 fundamental constant
-fundamental length (fundamental
    constant, length)
 fusion (see also 'capture')

*G parity (e.g. 'violation, G parity')
-g-2 (magnetic moment)
gadolinium
*Galilei (invariance, Galilei)
gallium
*GAMS (at Serpukhov and CERN;
    'calorimeter, GAMS')
gas
*gauge ('invariance, gauge' or
    'transformation, gauge'; see also 'gauge
    field theory')
gauge boson
gauge field theory
*gaugino (postulated particle, gaugino)
*Gauss law
*Gell-Mann-Low (renormalization group,
    Gell-Mann-Low)
*Gell-Mann-Okubo ('model,
    Gell-Mann-Okubo'; see also 'mass
    formula')
*general (relativity theory, general)
-generalized vector dominance (model,
    vector dominance)
*geometrical (e.g. 'scaling, geometrical')
*geophysics
*Georgi-Glashow (model, Georgi-Glashow)
germanium
*ghost (gauge field theory, ghost)
-giant resonance (excited nucleus,
    collective phenomena)
-GIM (model, Glashow-Iliopoulos Maiani)
*Glashow-Iliopoulos-Maiani (model,
    Glashow-Iliopoulos-Maiani)
*glass
*Glauber ('model, Glauber' or 'correction,
    Glauber')
glueball
*gluino (postulated particle, gluino)

gluon
gluon gluon
-gluon photon (photon gluon)
-gluon quark (quark gluon)
-gluonium (glueball)
gold
-Goldberger-Treiman relation ('model,
    PCAC' and 'pi, decay')
*Goldstino (postulated particle, Goldstino)
-Goldstone boson (use 'postulated particle,
    Goldstone particle' or 'boson, Goldstone
    particle')
-Goldstone model (symmetry,
    spontaneously broken)
*Goldstone particle (e.g. 'postulated
    particle, Goldstone particle')
*Goldstone theorem (field theory, Golds-
    tone theorem)
grand unified theory
*Grassmann (algebra, Grassmann)
gravitation
gravitational radiation
-gravitational waves (gravitational
    radiation)
*gravitino (postulated particle, gravitino)
*graviton (postulated particle, graviton)
-Green function (use 'n-point function' or
    'propagator' or 'vertex function' or
    'two-point function')
-Gribov Pomeranchuk (partial wave,
    analytic properties)
*Gross-Neveu (field theoretical model,
    Gross-Neveu)
*ground state ('nucleus, ground state' or
    'quarkonium, ground state')
group theory
-GUT (grand unified theory)

*H baryon (di-Lambda; 'postulated
  particle, H baryon')
*H1 (at HERA; 'magnetic detector, H1')
h1(1190) (was H(1190))
hadron
hadron deuteron
hadron hadron
hadron light nucleus
hadron nucleon
hadron nucleus
-hadron resonance (use 'meson resonance'
  or 'baryon resonance' or 'nucleon
  resonance')
hadron spectroscopy (not used for
  apparatus)
*hadronic
*hadronic atom (atom, hadronic atom)
*hadronic component (cosmic radiation,
  hadronic component)
*hadronic decay (for strong decays only;
  otherwise use 'nonleptonic decay')
*hadronization (e.g. 'quark, hadronization')
*hadroproduction
hafnium
*Hall (effect, Hall)
*Hamiltonian formalism ('lattice field
  theory, Hamiltonian formalism'; not
  used for Hamiltonians)
-Han-Nambu (quark, integer charged)
*hard core (model, hard core)
-hard meson (current algebra, effective
  Lagrangians)
-hard photon (radiative correction)
-hard pion (current algebra, effective
  Lagrangians)
*hard scattering ('model, hard scattering';
  see also 'model, constituent
  interchange' or 'model, parton')
*hardware
-harmonic oscillator (model, oscillator)
*Hartree-Fock ('approximation,
  Hartree-Fock')
*Hawking (e.g. 'radiation, Hawking')
-health physics (use 'nuclear medicine' or
  'dosimetry')
heat engineering
*heat kernel
*heavy
*heavy ion
heavy lepton

*Heisenberg (field theoretical model,
  Heisenberg)
helicity
helium
-HERA (DESY HERA Stor)
*hierarchy problem (gauge field theory,
  hierarchy problem)
*Higgs ('model, Higgs' or 'potential, Higgs')
Higgs particle
-Higgs-Kibble (field theoretical model,
  Salam-Weinberg)
*Higgsino (postulated particle, Higgsino)
*high (e.g. 'momentum transfer, high')
*high energy behavior (for theoretical
  models)
*higher-dimensional (e.g. 'field theory,
  higher-dimensional'. See also e.g.
  'six-dimensional')
*higher-order (e.g. 'correction,
  higher-order')
*higher-twist (effect, higher-twist)
-Hilbert space (functional analysis, linear
  spaces)
*history (e.g. 'particle physics, history')
*hodoscope (e.g. 'scintillation counter,
  hodoscope')
*hollow beam
holmium
*holography
*hopping parameter (expansion, hopping
  parameter)
*horizontal symmetry (gauge field theory,
  horizontal symmetry)
*HRS (at PEP; 'magnetic spectrometer,
  HRS)
*hydrodynamical (model, hydrodynamical)
hydrogen
*hypercharge
*hypercolor
*hyperfine structure
hyperfragment
-hypernucleus (hyperfragment)
hyperon
hyperon deuteron
hyperon hyperon
hyperon light nucleus
hyperon nucleus
*hyperonic atom (atom, hyperonic atom)
*hyperphoton (postulated particle,
  hyperphoton)

-IHEP (Serpukhov PS)

*Iizuka-Okubo-Zweig (selection rule, Iizuka-Okubo-Zweig)

*imaging (see also 'ring imaging' and 'time projection')

*impact parameter (e.g. 'model, impact parameter'; for track data analysis see 'path length')

*impedance

*impulse (approximation, impulse)

inclusive reaction

*incoherent interaction

*indefinite metric ('field theory, indefinite metric' or 'axiomatic field theory, indefinite metric')

*index theorem (e.g. 'mathematical methods, index theorem')

*Indiana Cycl (at Bloomington; 0.2 GeV protons)

indium

*induction (e.g. 'linear accelerator, induction', 'electromagnetic field, induction')

*inelastic scattering

*inflationary universe (model, inflationary universe)

*inflaton (postulated particle, inflaton)

*infrared problem ('field theory, infrared problem' or 'quantum electrodynamics, infrared problem')

injection

inorganic compounds

*instanton ('field equations, instanton'; for one-dimensional instantons use 'effect, tunneling')

-instanton solution (field equations, instanton)

*integer charged (e.g. 'quark, integer charged'; see also 'multiply charged')

*integrability

-integral representation (spectral representation)

-intensity (see 'yield' or 'flux' or 'current')

*interaction (restricted use, if possible use more specific term)

*interface

interference

intermediate boson (see also 'W', 'W+', 'W-' or 'Z0')

-intermediate state (see 'exchange' or 'final state' or 'cascade decay')

*internal ('symmetry, internal' or 'target, internal')

-internuclear cascade (nucleus, cascade)

*interpretation of experiments (the name of a detector may be appended)

-intersection area (beam transport, colliding beams)

*intranuclear cascade (model, intranuclear cascade)

-intrinsic momentum (for partons use e.g. 'quark, momentum')

*introductory (restricted use)

invariance

-invariant phase space (model, statistical)

-inverse free-electron laser accelerator (accelerator, laser)

inverse scattering method

iodine

ion (see also 'heavy ion')

ionization

ionization chamber

iridium

iron

*Ising (statistical mechanics, Ising)

-ISIS (Rutherford ISIS PS)

*isobar ('model, isobar'; for the nucleon isobar use 'nucleon resonance')

*isochronous (cyclotron, isochronous)

*isoscalar

isospin

-isotope (nuclide)

*isovector

-ISR (CERN Stor)

-ITEF PS (Moscow ITEF PS)

J/psi(3100)
*JADE (at PETRA; 'magnetic detector, JADE')
jet
*Jona-Lasinio-Nambu (model,
    Jona-Lasinio-Nambu)

*Jordan (algebra, Jordan)
−Jost function (potential scattering)
−Jost-Lehmann-Dyson representation
    (spectral representation)
−JWKB (approximation, WKB)

K
K anti-K
K deuteron
K K
K light nucleus
K n
K nucleon
K nucleus
K p
*K(1400) (postulated particle, K(1400))
*K(1830) (postulated particle, K(1830))
K+
K+ deuteron
K+ K-
K+ light nucleus
K+ n
K+ nucleon
K+ nucleus
K+ p
K(1410) (postulated particle, K*(1410))
K(1790) (postulated particle, K*(1790))
K*(892)
K*0(1350) (was kappa(1350))
K*2(1430) (was K*(1430))
K*3(1780) (was K*(1780))
K*4(2060) (was K*(2060))
K-
K- deuteron
K- light nucleus
K- n
K- nucleon
K- nucleus
K- p
K0
K0 anti-K0
K0 deuteron
K0 light nucleus
K0 n
K0 nucleon
K0 nucleus
K0 p
K0(L)
K0(S)

K1(1280) (was Q1(1280))
K1(1400) (was Q2(1400))
*K2(1580) ('postulated particle, K2(1580)',
    was L(1580))
K2(1770) (was L(1770))
*K2(2250) ('postulated particle, K2(2250)',
    was K(2200))
*K3(2320) (postulated particle, K3(2320))
*K4(2500) (postulated particle, K4(2500))
*Kac-Moody (algebra, Kac-Moody)
*Kaehler ('potential, Kaehler'; see also
    'field equations, Dirac-Kaehler')
*Kaluza-Klein (field theoretical model,
    Kaluza-Klein)
*KEK GEMINI (at Tsukuba; 0.8 GeV protons,
    meson factory)
*KEK Linac (at Tsukuba; 2.5 GeV electrons)
*KEK PF Stor (at Tsukuba; synchrotron
    radiation)
*KEK PS (at Tsukuba; 12 GeV protons)
*KEK TRISTAN Stor (at Tsukuba; 60
    GeV-cms e+e-)
*Kharkov Linac (2 GeV electrons, 0.4 GeV
    protons)
-Kibble-Higgs (field theoretical model,
    Salam-Weinberg)
-kicker magnet (magnet, pulsed)
kinematics
*kink (field equations, kink)
*Klein-Gordon (field equations,
    Klein-Gordon)
-klystron (microwaves, amplifier)
*KNO (scaling, KNO)
-knock-out (emission)
-Koba-Nielsen (model, dual resonance)
-Koba-Nielsen-Olesen scaling (scaling,
    KNO)
*Kobayashi-Maskawa ('field theoretical
    model, Kobayashi-Maskawa' or 'mixing
    angle, Kobayashi-Maskawa')
*Korteweg-de Vries (field equations,
    Korteweg-de Vries)
krypton

*L3 (at LEP; 'magnetic detector, L3')
*ladder (approximation, ladder)
-Lagrangian formalism ('field theory,
    Euclidean'; see also 'effective
    Lagrangians')
-Lamb shift ('radiative correction' and
    'atom, energy levels')
Lambda
Lambda Antilambda
Lambda deuteron
Lambda Lambda
Lambda light nucleus
*Lambda N(2130) (dibaryon resonance;
    'postulated particle, 'Lambda N(2130)')
Lambda nucleus
*Lambda parameter (e.g. 'gauge field
    theory, Lambda parameter')
Lambda(1405) (partial wave S'01)
Lambda(1520) (partial wave D'03)
Lambda(1600) (partial wave P'01)
Lambda(1670) (partial wave S"01)
Lambda(1690) (partial wave D"03)
Lambda(1800) (partial wave S"'01 or P"01)
Lambda(1820) (partial wave F'05)
Lambda(1830) (partial wave D05)
Lambda(1890) (partial wave P03)
*Lambda(2000) (postulated particle,
    Lambda(2000))
*Lambda(2020) (partial wave F07;
    'postulated particle, Lambda(2020)')
Lambda(2100) (partial wave G07)
Lambda(2110) (partial wave F"05)
*Lambda(2325) (partial wave D"03,
    'postulated particle, Lambda(2325)')
Lambda(2350)
*Lambda(2585) (postulated particle,
    Lambda(2585))
*Lambda/b0 ('postulated particle
    Lambda/b0', mass 5500)
Lambda/c+
*LAMPF Linac (at Los Alamos; meson
    factory; 0.8 GeV protons)
*Landau gauge (gauge field theory, Landau
    gauge)
Langevin equation
lanthanum
large-angle (wide-angle)
*laser ('optics, laser' or 'radiation, laser' or
    'tracks, laser'; for free electron laser
    use 'radiation, undulator')
*LASS (at SLAC Linac; 'magnetic
    spectrometer, LASS')
*lattice (e.g. 'symmetry, lattice' or 'storage
    ring, lattice')
lattice field theory
lawrencium
*Lax pair (differential equations, Lax pair)
lead
*lead-glass (e.g. 'Cherenkov counter,
    lead-glass')
*leading logarithm (approximation, leading
    logarithm)
*leading particle (multiple production,
    leading particle)
-LEAR (CERN LEAR)

-least-squares analysis (statistical
    analysis)
*lectures
-LED (semiconductor, optical)
*Lee (field theoretical model, Lee)
*left-handed (current, left-handed)
-left-right symmetry (use specific model,
    e.g. 'gauge field theory, SU(2) x SU(2) x
    U(1)' or 'gauge field theory, SU(2) x U(1)
    x U(1)')
*length ('fundamental constant, length' or
    'correlation, length'; see also
    'scattering length', 'path length')
*Leningrad Cycl (1 GeV protons; was
    'Leningrad Nucl Inst Cycl')
-LEP (CERN LEP Stor)
lepton
lepton antilepton
lepton baryon
lepton deuteron
lepton hadron
lepton K
lepton lepton
lepton light nucleus
lepton n
lepton nucleon
lepton nucleus
lepton number
lepton p
lepton quark
*leptonic
*leptonic decay
leptonic number (lepton number)
*leptoproduction (see also
    'electroproduction' or
    'neutrinoproduction')
*leptoquark (postulated particle,
    leptoquark)
*Lie ('group theory, Lie' or 'algebra, Lie')
*lifetime
light cone behavior
*light cone gauge (gauge field theory, light
    cone gauge)
light nucleus (up to mass number 20
    (incl.))
light nucleus light nucleus
light nucleus nucleus
-limit ('lower limit', 'upper limit')
-limited streamer (avalanche, quenching)
limiting fragmentation (model,
    fragmentation)
*linear
linear accelerator
linear collider
*linear spaces (functional analysis, linear
    spaces)
*Liouville (field equations, Liouville)
Lippmann−Schwinger equation
liquid (see also 'model, fluid')
*liquid argon ('ionization chamber, liquid
    argon' or 'calorimeter, liquid argon')
lithium
-live target (counters and detectors,
    target)
-locality (axiomatic field theory)

*long-range (e.g. 'correlation, long-range')
*longitudinal
-longitudinal beam oscillation
    (synchrotron oscillation)
 longitudinal momentum
-loop diagram (Feynman graph,
    higher-order)
*Lorentz ('group theory, Lorentz'
    (restricted use) or 'invariance, Lorentz'
    (restricted use) or 'transformation,
    Lorentz')
*Lorentz gauge (gauge field theory, Lorentz
    gauge)

-Los Alamos Linac (LAMPF Linac)
*Los Alamos PSR (0.8 GeV proton storage
    ring)
*low (e.g. 'momentum transfer, low')
*low-energy theorem (field theory,
    low-energy theorem)
*lower limit (e.g. 'mass, lower limit')
 luminosity
*Lund ES (1.2 GeV electrons)
 lutetium

*MAC (at PEP; 'magnetic detector, MAC')
magnesium
magnet
*magnetic
-magnetic charge (charge, magnetic)
magnetic detector (Often used connected
    with the name of the detector. For
    small-angle detectors see also
    'magnetic spectrometer')
magnetic field
magnetic moment
*magnetic monopole ('postulated particle,
    magnetic monopole'. See also 'fermion
    magnetic monopole', 'nucleon magnetic
    monopole'.)
magnetic spectrometer (see also
    'magnetic detector')
*Mainz Linac (0.35 GeV electrons)
*Majorana (e.g. 'lepton, Majorana')
*Majoron (postulated particle, Majoron)
*Mandelstam representation
manganese
manual
many-body problem
*MARK II (at PEP and SLC; 'magnetic
    detector, MARK II')
*MARK III (at SPEAR; 'magnetic detector,
    MARK III')
*MARK J (at PETRA; 'magnetic detector,
    MARK J')
mass
mass difference
mass enhancement
*mass formula
*mass generation (field theory, mass gene-
    ration)
*mass number
mass ratio
mass spectrum (restricted use)
-mass splitting (mass difference)
*massive
*massless
mathematical methods
matter
-maximum-likelihood method (statistical
    analysis)
*Maxwell (field equations, Maxwell)
*mean field (approximation, mean field)
-mean free path (path length)
measurement
mechanical engineering
mechanics
-medicine (see 'nuclear medicine')
*membrane (model, membrane)
mendelevium
mercury
*meron (field equations, meron)
*mesic atom (atom, mesic atom)
meson
meson baryon
meson deuteron
*meson dominance ('model, meson
    dominance'; used for scalar,
    pseudoscalar and tensor mesons; see
    also 'vector dominance')

meson light nucleus
meson meson
meson n
meson nucleon
meson nucleus
meson p
meson quark
meson resonance
metal
-microcomputer (microprocessor)
microprocessor
*microstrip (semiconductor detector,
    microstrip)
microtron
microwaves
-Millikan experiment (experimental
    methods, droplet)
mineral
-Minkowski space (field theory)
*mirror particle (e.g. 'fermion, mirror
    particle')
*missing-energy (e.g. 'energy spectrum,
    missing-energy')
*missing mass (e.g. 'mass spectrum,
    missing-mass')
-missing-momentum (e.g. 'momentum,
    missing-energy' or 'transverse
    momentum, missing-energy')
*MIT Linac (at Bates; 0.8/1.0 GeV electrons)
-mixing ('interference' (restricted use))
mixing angle
model
-modular invariance (invariance,
    reparametrization)
-modulation ('time variation' or
    'oscillation')
-Moeller scattering ('electron electron,
    elastic scattering' or 'positron positron,
    elastic scattering')
molecular biology
*molecule
molybdenum
moment
momentum
*momentum dependence
*momentum resolution (e.g. 'counters and
    detectors, momentum resolution')
momentum spectrum
momentum transfer
monitoring (see also 'beam monitoring')
*monochromatic beam (photon,
    monochromatic beam)
*monopole ('field equations, monopole'; see
    also 'magnetic monopole', 'soliton',
    'instanton')
-monopole solution (field equations,
    monopole)
*Monte Carlo (numerical calculations,
    Monte Carlo)
*Moscow ITEF PS (10 GeV protons)
*multi-Regge ('Regge poles, multi-Regge' or
    'exchange, multi-Regge')
multidimensional analysis
*multigluon (exchange, multigluon)
-multiloop (Feynman graph, higher-order)

-multiparticle scattering (use 'many-body problem' or 'multiple production' but not 'multiple scattering')
*multiperipheral (model, multiperipheral)
*multiple
multiple production
multiple scattering
multiplet
multiplicity
*multiply charged
*multipole (e.g. 'partial wave analysis, multipole' or 'magnetic moment, multipole' or 'magnetic field, multipole'. For magnet use 'quadrupole lens, special focusing')
-multipomeron ('pomeron' and 'multi-Regge')
*multiprocessor (e.g. 'microprocessor, multiprocessor')
*multiquark (quark, multiquark)
-multireggeon ('Regge poles, multi-Regge' or 'exchange, multi-Regge')
multiwire proportional chamber (proportional chamber)
muon
muon deuteron

muon hadron
muon light nucleus
muon n
muon nucleon
muon nucleus
muon number
muon p
muon+
muon+ deuteron
muon+ light nucleus
muon+ muon−
muon+ n
muon+ nucleon
muon+ nucleus
muon+ p
muon−
muon− deuteron
muon− light nucleus
muon− n
muon− nucleon
muon− nucleus
muon− p
*muonic atom (atom, muonic atom)
muonium
-muoproduction (electroproduction)
MWPC (proportional chamber)

n (denominates neutron)
n anti-n
n deuteron
n Lambda
n light nucleus
n n
*N N(2170) (dibaryon resonance,
    'postulated particle, N N(2170)')
*N N(2250) (dibaryon resonance,
    'postulated particle, N N(2250)')
n nucleus
n Sigma
N(1440) (partial wave P'11)
N(1520) (partial wave D'13)
N(1535) (partial wave S'11)
*N(1540) (partial wave P'13; 'postulated
    particle, N(1540)')
N(1650) (partial wave S''11)
N(1675) (partial wave D'15)
N(1680) (partial wave F'15)
N(1700) (partial wave D''13)
N(1710) (partial wave P''11)
N(1720) (partial wave P''13)
*N(1960) (postulated particle, N(1960))
*N(1990) (partial wave F17; 'postulated
    particle, N(1990)')
*N(2000) (partial wave F''15; 'postulated
    particle, N(2000)')
*N(2080) (partial wave D'''13; 'postulated
    particle, N(2080)')
*N(2090) (partial wave S'''11; 'postulated
    particle, N(2090)')
*N(2100) (partial wave S'''11 or P'''11;
    'postulated particle, N(2100)')
N(2190) (partial wave G17)
*N(2200) (partial wave D''15; 'postulated
    particle, N(2200)')
N(2220) (partial wave H19)
N(2250) (partial wave G'19)
N(2600) (partial wave I111)
*N(2700) (partial wave K113; 'postulated
    particle, N(2700)')
-N(3000 and greater) (use 'nucleon
    resonance')
-N* (use 'nucleon resonance' for I=1/2)
n-point function
-N/D method (partial wave, dispersion
    relations)
-NaI (see 'sodium-iodide')
-Nambu-Goldstone (symmetry,
    spontaneously broken)
-NAP Stor (Novosibirsk NAP Stor)
*narrow resonance (approximation, narrow
    resonance)
negative particle
neodymium
neon
neptunium
-network (communications)
neutral current
neutral particle
-neutral weak current (neutral current)
neutrino
neutrino antineutrino
neutrino deuteron

neutrino electron
neutrino hadron
neutrino lepton
neutrino light nucleus
neutrino muon
neutrino n
neutrino neutrino
neutrino nucleon
neutrino nucleus
neutrino p
neutrino pi
neutrino quark
neutrino/e
neutrino/L (used for the heavy lepton
    neutrino)
neutrino/mu
neutrino/tau
-neutrinoless double-beta decay
    (semileptonic decay, (0neutrino))
*neutrinoproduction (used for production
    by neutrinos or antineutrinos)
-neutron (use 'n')
*Neveu-Schwarz ('algebra, Neveu-Schwarz'
    or 'model, Neveu-Schwarz')
*new interaction (model, new interaction)
new particle
*Newport News CEBAF Linac (4 GeV
    electrons)
nickel
*Nicolai map (mathematical methods,
    Nicolai map)
niobium
nitrogen
*no keywords (very restricted use)
nobelium
-Noether's theorem ('group theory' and
    'conservation law')
*nonabelian ('field theory, nonabelian'; not
    used together with 'gauge field theory,
    Yang-Mills')
*nondiffractive
*nonleptonic decay (used for weak decays
    only)
*nonlinear
*nonlocal (e.g. 'field theory, nonlocal')
*nonperturbative
*nonpolynomial (field theoretical model,
    nonpolynomial)
*nonrelativistic
*nonrenormalizable (field theoretical
    model, nonrenormalizable)
*Novosibirsk NAP Stor
*Novosibirsk Stor2 (1.4 GeV-cms e+e-)
*Novosibirsk Stor3 (4.4 GeV-cms e+e-)
*Novosibirsk Stor4 (14 GeV-cms e+e-)
-nuclear cascade ('nucleus, cascade'; see
    also 'model, intranuclear cascade')
nuclear emulsion
nuclear force
nuclear matter
nuclear medicine
nuclear model (restricted use)
nuclear physics
nuclear properties
nuclear reaction

-nuclear resonance (excited nucleus)
-nuclear structure ('nuclear properties' or
    'nuclear model')
 nucleon
 nucleon antinucleon
 nucleon deuteron
 nucleon hyperon
-nucleon isobar (nucleon resonance)
 nucleon Lambda
 nucleon light nucleus
*nucleon magnetic monopole (scattering,
    nucleon magnetic monopole)
 nucleon n

nucleon nucleon
nucleon nucleus
nucleon quark
nucleon resonance
nucleon Sigma
-nucleosynthesis (light nucleus,
    production)
nucleus (see also 'light nucleus')
nucleus nucleus
nuclide
*numerical calculations
numerical mathematics

*O(2) (e.g. 'symmetry, O(2)')
*O(3) (e.g. 'symmetry, O(3)')
*O(4) (e.g. 'symmetry, O(4)')
*O(N) (e.g. 'symmetry, O(N)')
-OBE (exchange, one-boson)
*octet (quark, octet)
*octonion (algebra, octonion)
-octupole lens (quadrupole lens, special
    focusing)
*off-line (e.g. 'trigger, off-line')
*off-shell (model, off-shell)
-Okubo-Zweig rule (selection rule,
    Iizuka-Okubo-Zweig)
-Okubo-Zweig-Iizuka rule (selection rule,
    Iizuka-Okubo-Zweig)
*OMEGA (at SPS; 'magnetic detector,
    OMEGA')
*Omega(2260) (postulated particle,
    Omega(2260))
 omega(783)
 Omega-
*Omega/c0 ('postulated particle,
    Omega/c0', mass 2740, was T0)
 omega3(1670) (was omega(1670))
*on line (e.g. 'computer, on line')
*on-shell (model, on-shell)
*one-boson (exchange, one-boson)
*one-dimensional (e.g. 'field theory,
    one-dimensional')
-one-loop approximation ('Feynman graph,
    higher-order')
*one-meson (exchange, one-meson)

*one-particle (exchange, one-particle)
*one-photon (exchange, one-photon)
*one-pion (exchange, one-pion)
*OPAL (at LEP; 'magnetic detector, OPAL')
-OPE ('exchange, one-pion' or 'operator
    product expansion')
 operator ('operator, vertex', 'operator,
    algebra')
*operator product expansion (field theory,
    operator product expansion)
*optical ('model, optical' or 'potential,
    optical' or 'semiconductor, optical')
*optical theorem (e.g. 'total cross section,
    optical theorem' or 'scattering
    amplitude, optical theorem')
 optics
*orbit
-orbit calculations ('programming, orbit'
    or 'differential equations, orbit' or
    'beam transport, orbit')
 organic compounds
*Orsay Cycl (0.5 GeV electrons)
*Orsay Linac (2.3 GeV electrons)
*Orsay Stor (7.2 GeV-cms e+e-)
*oscillation (e.g. 'neutrino, oscillation'; see
    also 'beam oscillation')
*oscillator (model, oscillator)
 osmium
*OSp(N,M) (e.g. 'symmetry, OSp(N,M)')
 oxygen
-OZI (selection rule, Iizuka-Okubo-Zweig)

p (denominates proton)
p anti-n
p antinucleon
p baryon
p deuteron
p hyperon
-P invariance (parity)
p Lambda
p light nucleus
p n
p nucleon
p nucleus
p Omega-
p p
p Sigma
p Sigma+
p Sigma-
p Sigma0
-P violation (parity, violation)
p Xi
p Xi-
p Xi0
-P-wave (partial wave)
*Pade (approximation, Pade)
*pair
*pair production
palladium
*parametrization (see also
    'reparametrization')
*parastatistics (statistics, parastatistics)
parity
partial wave
partial wave analysis
-partially conserved axial-vector current
    (model, PCAC)
particle
particle antiparticle
*particle flow
particle identification
*particle nucleus (denominates an initial
    state)
particle physics (restricted use)
particle separator (see also 'separated
    beam')
particle source (for accelerators and
    cosmic radiation)
*partition function (e.g. 'statistical
    mechanics, partition function')
*parton ('model, parton'; see also 'model,
    quark parton')
*path integral ('field theory, path integral'
    or 'perturbation theory, path integral')
*path length
*Pati-Salam (field theoretical model,
    Pati-Salam)
-pattern recognition (track data analysis)
-PC(3510) (chi1(3510))
*PCAC (model, PCAC)
*Peking Stor (5 GeV-cms e+e-)
-Penning trap (e.g. 'magnetic field,
    confinement')
-PEP (SLAC PEP Stor)
*performance
*peripheral (model, peripheral)

-permanent magnet (magnet,
    ferromagnet)
perturbation theory
-PETRA (DESY PETRA Stor)
-Peyrou plot ('transverse momentum' and
    'longitudinal momentum')
-phase shift ('partial wave' or 'partial wave
    analysis')
*phase space ('kinematics, phase space' or
    'statistical analysis, phase space')
-phase transition (see 'critical
    phenomena')
-phenomenology (not used)
Phi(1020)
Phi(1680)
-phi-to-the-nth model (field theoretical
    model, scalar)
Phi/J(1850) (was Phi(1850))
phosphorus
*photino (postulated particle, photino)
-photoabsorption (photon, absorption)
-photodiode (if possible use
    'semiconductor, optical')
-photodisintegration (photofission)
photoelectron (e.g. 'photoelectron,
    amplifier', 'photoelectron, yield')
-photoexcitation (use 'photon, absorption'
    and 'excited nucleus')
*photofission
-photomultiplier (photoelectron,
    amplifier)
photon
photon baryon
photon deuteron
photon electron
*photon gluon (fusion, photon gluon)
photon hadron
photon lepton
photon light nucleus
photon meson
photon n
photon nucleon
photon nucleus
photon p
photon photon
photon pi
photon quark
*photoproduction
-phototransistor (semiconductor, optical)
pi
pi deuteron
pi K
pi light nucleus
pi n
pi nucleon
pi nucleus
pi p
pi pi
pi quark
pi(1300)
*pi(1770) (postulated particle, pi(1770))
pi+
pi+ deuteron
pi+ light nucleus
pi+ n

pi+ nucleon
pi+ nucleus
pi+ p
pi+ pi-
pi-
pi- deuteron
pi- light nucleus
pi- n
pi- nucleon
pi- nucleus
pi- p
pi0
pi0 deuteron
pi0 light nucleus
pi0 n
pi0 nucleon
pi0 nucleus
pi0 p
pi0 pi+
pi0 pi-
pi2(1680) (was A3(1680))
*pi2(2100) ('postulated particle, pi2(2100)',
    was A(2100))
-pionic form factor (vertex function)
*pionization (multiple production,
    pionization)
*planar (Feynman graph, planar)
*planarity (event shape analysis, planarity)
plasma
plastics (e.g. 'plastics, track sensitive')
platinum
*PLUTO (at PETRA; 'magnetic detector,
    PLUTO')
plutonium
*Poincare (only 'gauge field theory,
    Poincare'; else use 'Lorentz')
-Poincare group (group theory, Lorentz)
*polarizability
polarization
*polarized beam (e.g. 'electron, polarized
    beam')
*polarized target (e.g. 'nucleon, polarized
    target')
*pole (e.g. 'approximation, pole')
-pole dominance ('model, pole' or 'model,
    resonance')
polonium
*Polyakov loop ('gauge field theory,
    Polyakov loop' or 'lattice field theory,
    Polyakov loop')
*Pomeranchuk theorem (total cross
    section, Pomeranchuk theorem)
*pomeron (e.g. 'exchange, pomeron')
*position dependence (e.g. 'efficiency, posi-
    tion dependence')
*position sensitive (e.g. 'calorimeter, posi-
    tion sensitive')
positive particle
-positivity (axiomatic field theory)
positron
positron deuteron
positron hadron
positron light nucleus
positron n

positron nucleon
positron nucleus
positron p
positronium
postulated particle
potassium
potential (see also 'separable potential')
potential scattering
*Potts (model, Potts)
power engineering
power supply
praseodymium
-preon (model, composite)
*preprocessing
-prequark ('lepton, composite' or 'quark,
    composite')
*pressure
*Primakoff (effect, Primakoff)
*primary (cosmic radiation, primary)
-probability ('statistical analysis' or
    'statistics')
production (restricted use, if possible use
    more specific term)
-production cross section (channel cross
    section)
programming
-project (use 'proposed' or 'proposed expe-
    riment')
promethium
-prompt particle (see 'direct production')
propagator
proportional chamber
proposal (only for submitted proposals)
*proposed ('experimental equipment,
    proposed' or e.g. 'accelerator,
    proposed')
proposed experiment
protactinium
-protection ('safety, damage', 'radiation
    protection' or 'shielding')
-proton (p)
proton synchrotron
*pseudoparticle (field equations,
    pseudoparticle)
-pseudopotential (quasipotential)
*pseudoscalar (restricted use)
pseudoscalar meson
-pseudoscalar meson dominance (model,
    meson dominance)
pseudoscalar particle
*pseudovector ((restricted use); see also
    'vector meson')
psi mesons
-psi(3100) (J/psi(3100))
psi(3685)
psi(3770)
psi(4030)
psi(4160)
psi(4415)
*PT ('invariance, PT' or 'violation, PT')
*pulse stretcher (e.g. 'accelerator, pulse
    stretcher')
*pulsed (e.g. 'magnet, pulsed' or
    'microwaves, pulsed')

-QCD (quantum chromodynamics)
-QED (quantum electrodynamics)
-QFT (field theory)
quadrupole lens
-quadrupole moment (e.g. 'magnetic moment, multipole')
quantization
quantum chromodynamics
quantum electrodynamics
-quantum field theory (field theory)
quantum gravity
quantum mechanics
quantum number
-quantum statistics (statistical mechanics)
quark
quark antiquark
quark gluon (see also 'field theory, asymptotic freedom')
-quark line rule (selection rule, Iizuka-Okubo-Zweig)
-quark model ('quark, model' for composite models only; otherwise use 'quark' or 'model, quark parton')

*quark parton ('model, quark parton' or 'nuclear model, quark parton')
quark quark
-quark rearrangement (model, constituent interchange)
-quark recombination (quark, recombination)
quarkonium
*quartet (quark, quartet)
*quasiclassical (approximation, quasiclassical)
-quasielastic scattering (use 'inelastic scattering')
-quasiparticle ('model, Fermi gas'; see also 'pseudoparticle')
*quasipotential (model, quasipotential)
*quaternion (algebra, quaternion)
*quenching ('approximation, quenching' or 'magnet, quenching' or 'avalanche, quenching')

*R parity
radiation
-radiation dose (dosimetry)
radiation protection (see also 'shielding', 'safety')
*radiative capture
radiative correction
*radiative decay (see also 'electromagnetic decay')
radioactivity
-radiochemistry ('radioactivity' and 'chemistry')
radium
radon
*Ramond ('algebra, Ramond' or 'model, Ramond')
*random field (field theory, random field)
*random phase (approximation, random phase)
*random surface (e.g. 'lattice field theory, random surface')
*random walk (e.g. 'statistical mechanics, random walk')
-range-energy relation (use 'energy loss' or 'path length')
*rapidity
*Rarita-Schwinger (field equations, Rarita-Schwinger)
*ratio (e.g. 'total cross section, ratio'; see also 'mass ratio')
-reaction amplitude ('scattering amplitude' (restricted use))
*readout (e.g. 'experimental equipment, readout' or 'optics, readout')
-real time ('control system' or 'computer, on-line')
recoil
*recombination (usually 'quark, recombination')
*reflection
*regeneration (K0, regeneration)
*Regge (e.g. 'field theoretical model, Regge' or 'particle, Regge'. See also 'multi-Regge')
Regge poles
-Regge trajectories (Regge poles)
*regularization (renormalization, regularization)
*relativistic
relativity theory
*renormalizable (field theoretical model, renormalizable)
renormalization
renormalization group
*reparametrization (invariance, reparametrization)

*representation ('group theory, representation'; see also 'Mandelstam representation' and 'spectral representation')
-rescattering ('multiple scattering' or 'final-state interaction')
*resolution (e.g. 'counters and detectors, resolution'; see also 'angular resolution', 'energy resolution', 'momentum resolution', 'spatial resolution', 'time resolution')
resonance (if possible use more specific term, like 'meson resonance'. See also 'beam instability')
-resonance dominance (use 'vector dominance' or 'meson dominance')
*review
-RF cavity (RF system)
-RF field ('RF system' or 'microwaves' or 'electromagnetic field')
-RF separator (use 'particle separator' and possibly 'beam transport')
RF system
-RFQ (RF system, quadrupole lens)
rhenium
*rho(1250) (postulated particle, rho(1250))
rho(1600)
*rho(2150) (postulated particle, rho(2150))
rho(770)
rho(770)+
rho(770)-
rho(770)0
rho3(1690) (was g(1690))
*rho3(2250) ('postulated particle, rho3(2250)', was rho(2250))
*rho5(2350) ('postulated particle, rho5(2350)', was rho(2350))
rhodium
*Riemann surfaces (mathematical methods, Riemann surfaces')
*right-handed (current, right-handed)
*ring imaging (Cherenkov counter, ring imaging)
*rishon (model, rishon)
-Roper resonance (N(1440))
*rotational ('symmetry, rotational' or 'excited state, rotational')
*rotator ('model, rotator' or 'spin, rotator')
-RPA (approximation, random phase)
*Rubakov (effect, Rubakov)
rubidium
ruthenium
*Rutherford ISIS PS (0.8 GeV protons)

S—matrix
-S-wave (partial wave)
*Saclay ALS (1.7 GeV electrons; stretcher ring)
*Saclay Linac
*Saclay PS (3 GeV protons)
safety (for nuclear aspects use 'dosimetry', 'shielding' or 'radiation protection')
*Salam-Weinberg (field theoretical model, Salam-Weinberg)
samarium
*sandwich (scintillation counter, sandwich)
*satellite (used in connection with cosmic radiation experiments)
-SATURNE (Saclay PS)
-Saxon-Woods ('potential' or 'potential scattering')
*scalar (restricted use)
scalar meson
-scalar meson dominance (model, meson dominance)
scalar particle
-scale invariance (scaling)
scaling
scandium
scattering (restricted use)
scattering amplitude (restricted use; see also 'S-matrix')
*scattering length
Schroedinger equation
*Schwinger (field theoretical model, Schwinger)
-Schwinger source theory (field theory)
*Schwinger terms
scintillation counter
*screening ('effect, screening' or 'correction, screening'; see also 'shadowing')
*sea (quark, sea)
*seagull (effect, seagull)
search for (only for experimental searches for postulated particles)
-second quantization (quantization)
*second-class current (weak interaction, second-class current)
*secondary beam (see also 'separated beam')
*secondary radiation (cosmic radiation, secondary radiation)
-sector-focusing cyclotron (cyclotron, isochronous)
selection rule
*selectron (postulated particle, selectron)
selenium
-self-consistent calculation ('bootstrap' or, if quantum mechanics, 'approximation, Hartree-Fock')
-self-coupling (not used)
-self-dual solution (field equations, instanton)
-self-energy (propagator, renormalization)
-self-interaction (renormalization)
-self-quenching streamer (avalanche, quenching)

-semiclassical ('approximation, quasiclassical' or 'approximation, WKB')
semiconductor
semiconductor detector (see also 'solid state counter')
-semiinclusive reaction (use 'inclusive reaction')
*semileptonic decay
*separable potential (model, separable potential)
*separated beam
-separator (particle separator)
*septum (magnet, septum)
*Serpukhov PS (70 GeV protons, 3.5 GeV/A ions)
*Serpukhov UNK Stor (600/3000 GeV protons; 2200 GeV cms pp)
*seven-dimensional (e.g. 'field theory, seven-dimensional')
*sextet (quark, sextet)
-sextupole lens (quadrupole lens, special focusing)
*sfermion (postulated particle, sfermion)
-shadow scattering ('model, optical' or 'model, vector dominance')
*shadowing ('effect, shadowing' or 'correction, shadowing'; see also 'screening')
*shell (model, shell)
shielding (see also 'radiation protection')
*shock waves (model, shock waves)
*short-distance behavior (field theory, short-distance behavior)
*short-range (e.g. 'correlation, short-range')
shower detector
showers
-shrinkage (e.g. 'high energy behavior')
*sigma ('field theoretical model, sigma'; see also 'CP(N 1)')
Sigma (only for the hyperon)
Sigma Antisigma
Sigma deuteron
Sigma light nucleus
-sigma model (field theoretical model, sigma)
Sigma nucleus
Sigma(1385) (partial wave P'13)
*Sigma(1480) (postulated particle, Sigma(1480))
*Sigma(1560) (postulated particle, Sigma(1560))
*Sigma(1580) (partial wave D'13; 'postulated particle, Sigma(1580)')
*Sigma(1620) (partial wave S'11; 'postulated particle, Sigma(1620)')
Sigma(1660) (partial wave P'11)
Sigma(1670) (partial wave D''13)
*Sigma(1670) (postulated particle, Sigma(1670))
*Sigma(1690) (postulated particle, Sigma(1690))
Sigma(1750) (partial wave S''11)
*Sigma(1770) (partial wave P''11; 'postulated particle, Sigma(1770)')

Sigma(1775) (partial wave D15)
*Sigma(1840) (partial wave P''13;
    'postulated particle, Sigma(1840)')
*Sigma(1880) (partial wave P'''11;
    'postulated particle, Sigma(1880)')
Sigma(1915) (partial wave F'15)
Sigma(1940) (partial wave D'''13)
*Sigma(2000) (partial wave S'''11;
    'postulated particle, Sigma(2000)')
Sigma(2030) (partial wave F17)
*Sigma(2070) (partial wave F''15;
    'postulated particle, Sigma(2070)')
*Sigma(2080) (partial wave P'''13;
    'postulated particle, Sigma(2080)')
*Sigma(2100) (partial wave G17; 'postulated
    particle, Sigma(2100)')
Sigma(2250)
*Sigma(2455) (postulated particle,
    Sigma(2455))
*Sigma(2620) (postulated particle,
    Sigma(2620))
*Sigma(3000) (postulated particle,
    Sigma(3000))
*Sigma(3170) (postulated particle,
    Sigma(3170))
Sigma+
Sigma−
Sigma/c (mass 2450)
Sigma/c(2600) (postulated particle,
    Sigma/c*(2600))
Sigma0
silicon
−silicon drift chamber (semiconductor
    detector, drift chamber)
silver
*SIN Cycl (at Villigen; meson factory; 0.6
    GeV protons)
*sine−Gordon (field equations,
    sine−Gordon)
−single particle (see 'one−particle'; also
    'inclusive reaction')
−single−loop approximation (Feynman
    graph, higher−order)
*sinh−Gordon (field equations,
    sinh−Gordon)
*six−dimensional (e.g. 'field theory,
    six−dimensional')
−skeleton (Feynman graph)
*Skyrme (e.g. 'model, Skyrme', 'particle,
    Skyrme')
−Skyrmion (particle, Skyrme)
*SL(2,C) (e.g. 'symmetry, SL(2,C)')
*SL(2,R) (e.g. 'symmetry, SL(2,R)')
*SL(4,R) (e.g. 'symmetry, SL(4,R)')
*SL(N,C) (e.g. 'symmetry, SL(N,C)')
*SL(N,R) (e.g. 'symmetry, SL(N,R)')
*SLAC Linac (at Stanford; 25 GeV electrons)
*SLAC PEP Stor (at Stanford; 29 GeV−cms
    e+e−)
*SLAC SLC Linac (at Stanford; 100 GeV−cms
    e+e−, linear collider)
*SLAC SPEAR Stor (at Stanford; 8 GeV−cms
    e+e−)

*Slavnov identity (gauge field theory,
    Slavnov identity)
−Slavnov−Taylor identity (gauge field
    theory, Slavnov identity)
−SLC (SLAC SLC Linac)
*SLD (at SLC; 'magnetic detector, SLD')
*slepton (postulated particle, slepton)
*slope
*small−angle
*smuon (postulated particle, smuon)
*sneutrino (postulated particle, sneutrino)
*SO(10) (e.g. 'symmetry, SO(10)')
*SO(2) (e.g. 'symmetry, SO(2)')
*SO(3) (e.g. 'symmetry, SO(3)')
*SO(3,2) (e.g. 'symmetry, SO(3,2)')
*SO(32) (e.g. 'symmetry, SO(32)')
*SO(4) (e.g. 'symmetry, SO(4)')
*SO(5) (e.g. 'symmetry, SO(5)')
*SO(7) (e.g. 'symmetry, SO(7)')
*SO(8) (e.g. 'symmetry, SO(8)')
*SO(N) (e.g. 'symmetry, SO(N)')
*SO(N,M) (e.g. 'symmetry, SO(N,M)')
sodium
*sodium−iodide (e.g. 'scintillation counter,
    sodium−iodide')
−soft photon (radiative correction)
−soft pions ('current algebra, effective
    Lagrangians' or 'model, PCAC')
−software (programming)
*solar
*solenoid (magnet, solenoid)
solid−state counter (see also
    'semiconductor detector')
solids
*soliton (field equations, soliton)
*solution (e.g. 'field equations, solution')
−Sommerfeld−Watson transformation
    (Regge poles)
−source ('field theory' or 'particle source')
−source algebra (current algebra)
*Sp(N) (e.g. 'symmetry, Sp(N)')
*space
*space charge (for accelerators only)
*space−time (field theory, space−time)
−spallation (fission)
spark chamber
sparticle (for supersymmetric particle)
*spatial distribution ('cosmic radiation,
    spatial distribution', or 'showers,
    spatial distribution')
*spatial resolution (e.g. 'drift chamber,
    spatial resolution')
−SPEAR (SLAC SPEAR Stor)
*special focusing ('quadrupole lens, special
    focusing'; see also 'beam focusing')
*spectator ('model, spectator', possibly
    also 'deuteron, model')
spectra
−spectral function ('spectral
    representation' or 'Mandelstam
    representation')
spectral representation
spectrometer (restricted use)

-spectroscopy (if possible, use 'hadron
    spectroscopy')
*sphericity ('jet, sphericity'; see also 'event
    shape analysis')
 spin
-spin flip (amplitude analysis)
*Spin(N) (e.g. 'symmetry, Spin(N)')
-spin-orbit ('spin, orbit' or 'fine structure')
-spin-parity analysis (partial wave
    analysis)
-spin-spin correlation (spin, correlation)
-spin-spin interaction (hyperfine
    structure)
*spinless ((restricted use), not used for
    bosons)
 spinor
-spinor field theory (field theory, spinor)
*Split-Field (at CERN Stor; 'magnetic
    detector, Split-Field')
-splitting (mass difference)
*spontaneous compactification (e.g. 'field
    theory, spontaneous compactification')
*spontaneously broken ('symmetry,
    spontaneously broken'; see also
    'symmetry breaking')
*squark (postulated particle, squark)
-SQUID (superconducting, interference)
*SSC Coll (proposed; 40000 GeV·cms
    protons)
*stability (see also 'beam instability')
*stacking (injection, stacking)
-static model (model, Chew-Low)
-stationary phase (mathematical methods,
    path integral)
*statistical
 statistical analysis
 statistical mechanics
-statistical tensor (spin, density matrix)
 statistics (e.g. 'statistics, parastatistics',
    'spin, statistics'; if appropriate use
    'statistical analysis')
-status report (activity report)
-steel (use 'iron')
*stochastic
*stochastic cooling (beam cooling,
    stochastic cooling)
 storage ring (for accelerator aspects only;
    for experimental results use 'colliding
    beams')
-strange baryon (hyperon)
 strange meson
-strange nucleus (hyperfragment)
 strange particle
*strangeness ('quark, strangeness' or
    'quarkonium, strangeness')
-straton (quark)
 streamer chamber
-streamer tube (streamer chamber, drift
    tube)
-stress-energy (see 'energy-momentum')
-stretcher (pulse stretcher)
*string (model, string)
*string tension (lattice field theory, string
    tension)

*strong coupling ('model, strong coupling'
    or 'expansion, strong coupling')
 strong interaction
 strontium
 structure function
*SU(1,1) (e.g. 'symmetry, SU(1,1)')
*SU(2) (e.g. 'symmetry, SU(2)')
*SU(2) x SU(2) (e.g. 'symmetry, SU(2) x
    SU(2)')
*SU(2) x SU(2) x U(1) (e.g.'symmetry, SU(2)
    x SU(2) x U(1)')
*SU(2) x U(1) (e.g. 'symmetry, SU(2) x U(1)')
*SU(2) x U(1) x U(1) (e.g. 'symmetry, SU(2)
    x U(1) x U(1)')
*SU(2,2) (e.g. 'symmetry, SU(2,2)')
*SU(3) (e.g. 'symmetry, SU(3)')
*SU(3) x SU(2) x SU(2) x U(1) (e.g.
    'symmetry, SU(3) x SU(2) x SU(2) x
    U(1)')
*SU(3) x SU(2) x U(1) (e.g. 'symmetry, SU(3)
    x SU(2) x U(1)')
*SU(3) x SU(2) x U(1) x U(1) (e.g.
    'symmetry, SU(3) x SU(2) x U(1) x U(1)')
*SU(3) x SU(3) (e.g. 'symmetry, SU(3) x
    SU(3)')
*SU(3) x U(1) (e.g. 'symmetry, SU(3) x U(1)')
*SU(4) (e.g. 'symmetry, SU(4)')
*SU(4) x SU(2) x SU(2) (e.g. 'symmetry,
    SU(4) x SU(2) x SU(2)')
*SU(4) x SU(4) (e.g. 'symmetry, SU(4) x
    SU(4)')
*SU(5) (e.g. 'symmetry, SU(5)')
*SU(6) (e.g. 'symmetry, SU(6)')
*SU(7) (e.g. 'symmetry, SU(7)')
*SU(8) (e.g. 'symmetry, SU(8)')
*SU(9) (e.g. 'symmetry, SU(9)')
*SU(N) (e.g. 'symmetry, SU(N)')
*SU(N) x SU(N) (e.g. 'symmetry, SU(N) x
    SU(N)')
*SU(N,1) (e.g. 'symmetry, SU(N,1)')
-substructure (see 'composite')
 sulfur
 sum rule
 superconducting
*superfield (supersymmetry, superfield)
 superfragment (charmed or beautiful
    nucleus)
 supergravity
-supermultiplet ('multiplet' and
    'supersymmetry')
*superselection rule (sum rule,
    superselection rule)
 supersymmetry
*superweak interaction (weak interaction,
    superweak interaction)
*surface (e.g. 'forces, surface',
    'electromagnetic field, surface')
-SVZ (quantum chromodynamics, sum
    rule)
 symmetry
 symmetry breaking
 synchro-cyclotron
-synchrophasotron ('synchrotron' or
    'proton synchrotron' or 'electron
    synchrotron')

synchrotron (see also 'electron
    synchrotron', 'proton synchrotron')

synchrotron oscillation
synchrotron radiation

-T-invariance (invariance, time reversal)
-T-matrix (S-matrix)
*tables
*tachyon (postulated particle, tachyon)
*tadpole (Feynman graph, tadpole)
*tagged beam ('photon, tagged beam' or
    'electron, tagged beam')
-tagged quark flavor (particle
    identification, flavor)
*talk
 tantalum
 target
-target polarization (Use 'target,
    polarization' for degree of polarization.
    See also 'polarized target'.)
*TASSO (at PETRA; 'magnetic detector,
    TASSO')
 tau
 tau+
 tau-
-TCP (see 'CPT')
 technetium
*technicolor ('model, technicolor' or
    'particle, technicolor')
*technipion (postulated particle,
    technipion)
-technology (use more specific keyword)
-telescope (use more specific keyword)
 tellurium
 temperature
*temporal gauge (gauge field theory,
    temporal gauge)
*ten-dimensional (field theory,
    ten-dimensional)
*tensor (restricted use)
-tensor calculus (mathematical methods,
    tensor)
 tensor meson
-tensor meson dominance (model, meson
    dominance)
 terbium
-TEVATRON ('Batavia TEVATRON PS' or
    'Batavia TEVATRON Coll')
 thallium
-theory of elementary particles (particle
    physics)
*thermodynamical (model,
    thermodynamical)
 thermodynamics
 thesis (including masters' theses)
*Thirring (field theoretical model,
    Thirring)
 thorium
 three-body problem
*three-dimensional (e.g. 'field theory,
    three-dimensional)
-three-point function (vertex function)
 threshold
*thrust ('jet, thrust'; see also 'event shape
    analysis')
 thulium
 time
*time delay (for instrumental aspects)
*time dependence

*time projection ('proportional chamber,
    time projection' or 'drift chamber, time
    projection')
*time resolution (e.g. 'spectrometer, time
    resolution')
*time reversal ('invariance, time reversal'
    or 'violation, time reversal')
*time variation (only used for cosmic
    radiation or fundamental constants)
*time-of-flight (fast logic, time-of-flight)
 time-to-digital converter
-time-to-pulse-height converter (fast
    logic)
 tin
 titanium
*Toda (lattice, Toda)
*Tokyo ES (1.3 GeV electrons)
-top (quark, truth)
*TOPAZ (at TRISTAN; 'magnetic detector,
    TOPAZ')
*topological ('charge, topological', 'expan-
    sion, topological')
-topological cross section (channel cross
    section)
*torsion
 total cross section (see also 'channel
    cross section')
-total hadronic cross section (for e+e
    annihilation use 'cross section,
    hadronic')
 total-absorption counter
*TPC (at PEP; 'magnetic detector, TPC'. For
    time-to-pulse-height converter use
    'fast logic'. for time projection
    chamber see 'time projection')
 track data analysis
-track following (track data analysis)
-track measuring (use 'track data
    analysis, on-line' or 'track data
    analysis, off-line')
 track photography
*track sensitive (only used for tracks
    visualized in matter, e.g. 'plastics,
    track sensitive')
 tracks
-trajectory ('Regge poles'; for particle
    trajectory, see 'tracks')
*transfer matrix
 transformation
*transition
*transition radiation (e.g. 'counters and
    detectors, transition radiation'; not
    used for radiative decay)
*transuranium (elements, transuranium)
*transverse
-transverse beam oscillation (betatron
    oscillation)
 transverse energy
 transverse momentum
*tree (approximation, tree)
-Treiman-Yang test (decay, angular
    distribution)
-triangle anomaly (current algebra,
    anomaly)
-triangle graph (Feynman graph)

trigger
-triple-pomeron coupling (coupling, pomeron)
-triple-Regge (see 'multi-Regge' or 'triple-Regge limit')
*triple-Regge limit (inclusive reaction, triple-Regge limit)
*triplet (quark, triplet)
-TRISTAN (KEK TRISTAN Stor)
tritium
*TRIUMF Cycl (at Vancouver; meson factory; 0.5 GeV protons)
*truth ('quark, truth' or 'quarkonium, truth'; also 'search for, truth')
truthful baryon
truthful meson
truthful particle (for hidden truth use 'quarkonium, truth')

-Tsukuba (see 'KEK ...')
*tumbling
tungsten
*tunneling (effect, tunneling)
*twistor (e.g. 'mathematical methods, twistor')
*two-beam (e.g. 'accelerator, two-beam'; see also 'scattering, beam-beam')
-two-body (see 'two-particle')
*two-dimensional (e.g. 'field theory, two-dimensional')
*Two-Gamma (at PEP; 'magnetic detector, Two-Gamma')
-two-loop (Feynman graph, higher-order)
*two-particle (exchange, two-particle)
*two-photon (exchange, two-photon)
*two-pion (exchange, two-pion)
two-point function

*U(1) (e.g. 'symmetry, U(1)')
*U(1) problem (field theory, U(1) problem)
*U(1) x U(1) (e.g. 'symmetry, U(1) x U(1)')
*U(2) (e.g. 'symmetry, U(2)')
*U(3) (e.g. 'symmetry, U(3)')
*U(N) (e.g. 'symmetry, U(N)')
*U(N) x U(N) (e.g. 'symmetry, U(N) x U(N)')
*UA1 (at CERN SPS Coll; 'magnetic detector, UA1')
*UA2 (at CERN SPS Coll; 'magnetic detector, UA2')
*UA4 (at CERN SPS Coll; 'forward spectrometer, UA4')
*UA5 (at CERN SPS Coll; 'four-pi-detector, UA5')
-ultraviolet divergence (renormalization)
*uncertainty relations
-underground (deep underground)

*undulator (radiation, undulator)
unified field theory (kinds of interaction which are unified are added; see also 'grand unified theory')
unitarity (restricted use)
universality
-UNK (Serpukhov UNK Stor)
*up (quark, up)
*upper limit (e.g. 'branching ratio, upper limit')
upsilon mesons
Upsilon(10020) (2S state)
Upsilon(10350) (3S state)
Upsilon(10570) (4S state)
Upsilon(10870) (5S state)
Upsilon(11020) (6S state)
Upsilon(9460) (1S state)
uranium

-V-A theory (model, weak interaction)
-vacuum chamber (vacuum system)
*vacuum polarization (e.g. 'field theory, vacuum polarization')
*vacuum state (e.g. 'field theory, vacuum state')
 vacuum system
*valence (quark, valence)
*validity test (restricted use for general tests but not for interpretations; e.g. 'quantum electrodynamics, validity test')
*van der Waals (forces, van der Waals)
 vanadium
-Vancouver TRIUMF (TRIUMF Cycl)
*variational ('mathematical methods, variational' or 'numerical calculations, variational')
*vector
-vector boson (see 'intermediate boson' or 'vector meson' or 'gauge boson')

*vector dominance (model, vector dominance)
 vector meson
 velocity
*Veneziano (model, Veneziano)
*VENUS (at TRISTAN; 'magnetic detector, VENUS')
-VEPP-2 (Novosibirsk Stor2)
-VEPP-3 (Novosibirsk Stor3)
-VEPP-4 (Novosibirsk Stor4)
*vertex (only for instruments and track data analysis)
 vertex function
-veto (use e.g. 'final state, (0lepton)')
-Villigen (SIN Cycl)
 violation
*Virasoro (e.g. 'algebra, Virasoro')
-virtual (not used)
*von Neumann (algebra, von Neumann)
*vortex (e.g. 'field theory, vortex')

W
W+
W−
*wake field (e.g. 'electromagnetic field, wake field')
-wake field transformer (transformation, wake field)
*Ward identity (e.g. 'field theory, Ward identity')
*Ward-Takahashi identity (e.g. 'quantum electrodynamics, Ward-Takahashi identity')
*water
-wave equation (quantum mechanics)
*wave function (e.g. 'field theory, wave function', 'deuteron, wave function')
-wave packet (quantum mechanics)
-waveguide ('RF system' or 'linear accelerator' or 'microwaves')
*weak coupling (e.g. 'expansion, weak coupling')
-weak current ('charged current' or 'neutral current')
 weak interaction
*Weinberg angle (electroweak interaction, Weinberg angle)
-Weizsaecker-Williams (approximation, equivalent photon)

*Wess-Zumino (field theoretical model, Wess-Zumino)
*Wess-Zumino term (field theory, Wess-Zumino term)
*Weyl (algebra, Weyl)
*wide-angle ('spectrometer, wide-angle' or, e.g., 'scattering, wide-angle')
*width (used for resonances or enhancements, also 'beam, width'; see also 'dispersion', 'diffusion' or 'beam profile')
*wiggler (magnet, wiggler)
-Wightman fields (axiomatic field theory)
-Wilson expansion (field theory, operator product expansion)
*Wilson loop (gauge field theory, Wilson loop)
*Wino (postulated particle, Wino)
*wire ('spark chamber, wire' or 'superconducting, wire')
*Witten index (e.g. 'supersymmetry, Witten index')
*WKB (approximation, WKB)
-Woods-Saxon ('potential' or 'potential scattering')

*X(1700) ('postulated particle, X(1700)', was
   eta(1700))
*X(1900-3600) (postulated particle,
   X(1900-3600))
*X(1935) ('postulated particle, X(1935)', was
   S(1935))
*X(2220) ('postulated particle, X(2220)', was
   xi(2220))
*x-dependence (use more specific term if
   possible)
xenon
Xi
Xi(1530) (partial wave P13)
*Xi(1630) (postulated particle, Xi(1630))

*Xi(1680) (postulated particle, Xi(1680))
Xi(1820)
*Xi(1940) (postulated particle, Xi(1940))
Xi(2030)
*Xi(2120) (postulated particle, Xi(2120))
*Xi(2250) (postulated particle, Xi(2250))
*Xi(2370) (postulated particle, Xi(2370))
*Xi(2500) (postulated particle, Xi(2500))
Xi-
Xi/c+   (was A+)
*Xi/c0 ('postulated particle, Xi/c0', was A0)
Xi0
*XY (field theoretical model, XY)

-Y* (baryon resonance, hyperon)
*y-dependence (use more specific term if
   possible)
*Yang-Mills (gauge field theory, Yang-Mills)
yield (usually with particles in
   parentheses)

ytterbium
yttrium
*Yukawa (potential, Yukawa)

*Z(2) (e.g. 'symmetry, Z(2)')
*Z(3) (e.g. 'symmetry, Z(3)')
*Z(4) (e.g. 'symmetry, Z(4)')
*Z(N) (e.g. 'symmetry, Z(N)')
Z0
*Z0(1780) (partial wave P01; 'postulated
   particle, Z0(1780)')
*Z0(1865) (partial wave D03; 'postulated
   particle, Z0(1865)')
*Z1(1725) (partial wave P11; 'postulated
   particle, Z1(1725)')

*Z1(1900) (partial wave P13; 'postulated
   particle, Z1(1900)')
*Z1(2150) (postulated particle, Z1(2150))
*Z1(2500) (postulated particle, Z1(2500))
*ZEUS (at HERA; 'magnetic detector, ZEUS')
-ZGS (Argonne PS)
zinc
*Zino (postulated particle, Zino)
zirconium
-Zweig rule (selection rule,
   Iizuka-Okubo-Zweig)