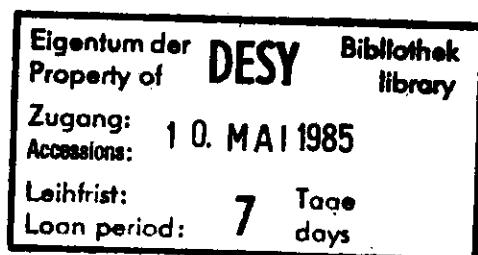Internal Report
DESY L-85-01
April 1985

THE HIGH ENERGY PHYSICS INDEX Keywords 1985

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

F
  F+
  F−

B
  B+
  B−
  B⁰
  anti-B
  anti-B⁰

(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

A+

(meson resonances)

rho(770)
  rho(770)+
  rho(770)−
  rho(770)⁰
omega(783)
eta(958)
S*(975)
delta(980)
Phi(1020)
H(1190)
B(1235)
A1(1270)
f(1270)
D(1285)
epsilon(1300)
pi(1300)
A2(1320)
E(1420)
iota(1440)
f(1525)
rho(1600)
omega(1670)
A3(1680)
Phi(1680)
g(1690)
Theta(1690)
Phi(1850)
h(2030)

K*(892)
Q1(1280)
kappa(1350)
Q2(1400)
K*(1430)
L(1770)
K*(1780)
K*(2060)

D*(2010)

psi mesons
  eta/c(2980)
  J/psi(3100)
  chi(3415)
  chi(3510)
  chi(3555)
  psi(3685)
  psi(3770)
  psi(4030)
  psi(4160)
  psi(4415)

upsilon mesons
  Upsilon(9460)
  chi/b(9875)
  chi/b(9895)
  chi/b(9915)
  Upsilon(10020)
  chi/b(10235)
  chi/b(10255)
  chi/b(10270)
  Upsilon(10350)
  Upsilon(10570)

(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)
N(3030)

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)

(other keywords)

particle
  antiparticle
  charged particle
    negative particle
    positive particle
  neutral particle
  new particle
  postulated particle
    mass enhancement
    search for
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
  baryonium
  baryon
    antibaryon
    nucleon
  antinucleon
    nucleon resonance
    baryon resonance

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

quark
  antiquark
  quarkonium

gluon
  glueball

nucleus
  light nucleus
    deuteron
excited nucleus
hyperfragment
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

gravitation

gravitational radiation

weak interaction

charged current
neutral current

electromagnetic interaction

bremsstrahlung
Compton scattering
ionization
photoelectron
radiative correction

electroweak interaction

strong interaction

charge exchange

(other keywords)

absorption
backscatter
capture
decay
diffraction
diffusion
exchange
final-state interaction
fragmentation function
inclusive reaction
multiple production
  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)

aberration
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

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

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

(electronics and computers)

analog-to-digital converter
CAMAC system
computer
digital logic
electronics
fast logic
FASTBUS system
microprocessor
preprocessing
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
coil
control system
data acquisition
feedback
magnet
  bending magnet
  pulsed magnet
  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
light cone behavior
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
  Mandelstam representation
symmetry
  mass formula
  mixing angle
‹ multiplet
  symmetry breaking
unitarity
universality

(other keywords)

conservation law
coupling
  coupling constant
invariance
inverse scattering method
jet
n-point function
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
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
velocity

OTHER FIELDS

(mathematics)

algebra
approximation
functional analysis
group theory
mathematical methods
numerical mathematics
statistics
transformation

(engineering)

buildings
communications

cryogenics
electrical engineering
heat engineering
mechanical engineering
power engineering
safety
  health physics
    dosimetry
    radiation protection
    shielding

molecular biology

nuclear medicine

MATERIALS

(for elements see
alphabetical list)

alloy
ceramics
concrete
crystal
elements
gas
glass
inorganic compounds
liquid
metal
mineral
organic compounds
plastics
semiconductor
solids
water

MODAL KEYWORDS

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

Guide

for the Use of the HIGH ENERGY PHYSICS INDEX Keywords 1985

The terms in this keyword list are used by the DESY Documentation Service for the indexing of papers on high energy (beam energy above 100 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 100 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)
> final state, (n p 0lepton)
> bound state, (nucleon 2pi)
> mass spectrum, (pi^+ pi^- pi^0)

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

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

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

*A(2050) (postulated particle, A(2050))
*A(2100) (postulated particle, A(2100))
A+ (csu – baryon)
*A0 ('postulated particle, A0'; csd –
     baryon)
A1(1270)
A2(1320)
A3(1680)
–Abelian field theory (field theory)
 aberration
 absorption
–absorptive model (model, absorption)
*acceleration (used for astrophysics and
     cosmic radiation)
 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)
–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)
*air (showers, air)
*ALEPH (at LEP; 'magnetic detector,
     ALEPH')
 algebra
 alignment (see also 'polarization')
 alloy
–alpha particle (helium)
*Altarelli-Parisi equation (quantum
     chromodynamics, Altarelli-Parisi
     equation)
 aluminum
 americium
*amplifier (e.g. 'microwaves, amplifier')
 amplitude analysis
*Amsterdam MEA (0.5 GeV electrons)
 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–K0 deuteron
 anti–K0 light nucleus
 anti–K0 n
 anti–K0 nucleon
 anti–K0 nucleus
 anti–K0 p
 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 antineutrino
 antineutrino baryon
 antineutrino deuteron
 antineutrino electron
 antineutrino light nucleus
 antineutrino meson
 antineutrino muon
 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 deuteron
antinucleon light nucleus
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)
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)
*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
axiomatic field theory
*axion (postulated particle, axion)

B
B anti-B
B(1235)
B+
B(5320) ('postulated particle, B*(5320)';
    excited B)
B-
B-L number
B0
B0 anti-B0
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 deuteron
baryon light nucleus
baryon nucleon
baryon nucleus
baryon number
baryon quark
baryon resonance (see also 'nucleon
    resonance')
baryon vector meson
-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)
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 (see also '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 measurement of
    polarization degree. See also
    'polarized beam')
*beam profile
beam transport
*beam-beam (scattering, beam-beam)
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
*Berkeley Bevalac (2 GeV/A ions)
*Berkeley PS
berkelium
*Berlin BESSY Stor (synchrotron
    radiation)
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 (gravitation)
-Blumlein line ('power supply' and
    'streamer chamber')
*Bogolyubov (transformation,
    Bogolyubov)
*Bonn ELSA Stor (electron stretcher
    ring)
*Bonn ES (2.5 GeV electrons)
book
*booster
bootstrap
*Borel ('transformation, Borel'; see also
    'transformation, asymptotic expan-
    sion')
*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
-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 Linac
*Brookhaven PS (33 GeV protons)
-BRS (transformation, Becchi-Rouet-Stora)
bubble chamber
bubble chamber(deuterium)
bubble chamber(heavy liquid)
-bubble chamber(helium) (use 'bubble chamber' and 'helium')
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)
*Caltech ES
 CAMAC system
*Cambridge ES
 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
-cascade evaporation model (model,
    cascade)
*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')
*CELLO (at PETRA; 'magnetic detector,
    CELLO')
*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; 540/900
    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')
 charge
*charge conjugation ('invariance, charge
    conjugation' or 'violation, charge
    conjugation' or 'quantum number,
    charge conjugation')
*charge correlation (jet, charge
    correlation)
*charge distribution (for 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')
-chemicals (use 'elements', 'inorganic
    compounds', 'mineral', etc.)
 chemistry
*Cherenkov (radiation, Cherenkov)
 Cherenkov counter
-Chew-Frautschi plot (Regge poles)
*Chew-Low (model, Chew-Low)
 chi mesons (for chi/c and chi/b)
 chi(3415) (chi0)
 chi(3510) (chi1, also called PC(3510))
 chi(3555) (chi2)
 chi/b(10235) (2P0 state)
 chi/b(10255) (2P1 state)
 chi/b(10270) (2P2 state)
 chi/b(9875) (1P0 state)
 chi/b(9895) (1P1 state)
 chi/b(9915) (1P2 state)
*Chicago Cycl
-Chilton PS (NIMROD 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)
-cluster expansion (expansion, 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)
*completely integrable (e.g. 'field theory,
    completely integrable')
*composite (e.g. 'model, composite')
Compton scattering
computer
concrete
*condensation (e.g. 'pi, condensation' or
    'n, 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)
*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-)
*Cornell ES (12 GeV electrons)

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. 'hadron
    nucleus, cumulative production')
curium
current (restricted use, see also 'neu-
    tral current', 'charged current')
current algebra
-current commutators (current algebra,
    commutation relations)
*current-current (e.g. 'model,
    current-current' or 'interference,
    current-current')
-current-current mixing (interference,
    current-current)
*CUSB (at Cornell CESR;
    'four-pi-detector, CUSB')
*CVC (model, CVC)
cyclotron

D
D anti-D
D(1285)
*D(1530) (postulated particle, D(1530))
D+
D*(2010)
D-
D0
D0 anti-D0
*Dalitz plot (multidimensional analysis,
    Dalitz plot)
*damage (radiation, damage)
-damping ('energy loss' or 'beam
    damping')
-Daresbury ES (NINA ES)
*DASP (at DORIS; 'magnetic detector,
    DASP')
data acquisition
-data analysis ('statistical analysis',
    'multidimensional analysis', 'partial
    wave analysis', 'data compilation',
    'data analysis method', 'interpreta-
    tion of experiments')
data analysis method (restricted use)
data compilation
 data handling (programming)
-data processing ('computer' or
    'programming')
-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 (also 'model,
    deep inelastic scattering')
*deep underground (counters and
    detectors, deep underground)
-deep-water (deep underground)
*delay line (e.g. 'proportional chamber,
    delay line')
*Delbrueck (scattering, Delbrueck)
*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
    > 1232 MeV))
Delta(1232) (partial wave P'33)
Delta(1232)+
Delta(1232)++
Delta(1232)-
Delta(1232)0
*Delta(1550) (partial wave P'31;
    'postulated particle, Delta(1550)')
*Delta(1600) (partial wave P''33;
    'postulated particle, Delta(1600)')
Delta(1620) (partial wave S'31)

Delta(1700) (partial wave D33)
Delta(1900) (partial wave S''31)
Delta(1905) (partial wave F35)
Delta(1910) (partial wave P''31)
Delta(1920) (partial wave P'''33)
Delta(1930) (partial wave D35)
*Delta(1940) (partial wave D''33;
    'postulated particle, Delta(1940)')
Delta(1950) (partial wave F37)
*delta(2040) (postulated particle,
    delta(2040))
*Delta(2150) (partial wave S'''31;
    '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 D''35;
    'postulated particle, Delta(2350)')
*Delta(2390) (partial wave F''37;
    'postulated particle, Delta(2390)')
*Delta(2400) (partial wave G39;
    'postulated particle, Delta(2400)')
Delta(2420) (partial wave H311)
*delta(2450) (postulated particle,
    delta(2450))
*Delta(2750) (partial wave I313;
    'postulated particle, Delta(2750)')
*Delta(2950) (partial wave K315;
    'postulated particle, Delta(2950)')
delta(980)
*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 DORIS Stor (at Hamburg)
*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 (see also 'deuterium')
deuteron deuteron
deuteron light nucleus
deuteron nucleus
*dibaryon ('baryon resonance, dibaryon';
    see also specific particles like 'N
    N(2170)', 'Lambda N(2130)')
*difference (see also 'mass difference')
differential cross section
*differential geometry (mathematical
    methods, differential geometry)
diffraction
-diffraction dissociation (diffraction,
    dissociation)

-diffractive production ('diffraction' or if important 'diffraction, production')
diffusion
digital logic ('digital logic, readout' or 'digital logic, interface')
-dilatation (symmetry, dilation)
*dilation (symmetry, dilation)
*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
-discharge chamber (spark chamber)
-discriminator (analog-to-digital converter)
*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')
-DORIS (DESY DORIS Stor)
-DORIS II (DESY DORIS II Stor)
dosimetry
-double absorption (use 'absorption' and 'final-state interaction')
-double capture (capture, multiple)

-double exchange ('Regge poles, multi-Regge' or 'radiative correction' or 'final-state interaction' or 'charge exchange, multiple' or 'exchange, two-particle')
-double excitation (excited state)
-double peripheral (model, peripheral)
-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 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
*Dubna PS (10 GeV protons, 20 GeV/A ions)
-DWBA (approximation, distorted wave Born)
*dynamically broken ('symmetry, dynamically broken'; see also 'symmetry, spontaneously broken')
*dyon (field equations, dyon)
Dyson—Schwinger equation
dysprosium

E(1420)

*E(6) (e.g. 'symmetry, E(6)')

*e+e-(1100-2200) (postulated particle,
    e+e-(1100-2200))

 effect (restricted use)

*effective action (if possible use
    'effective Hamiltonians' or 'effective
    Lagrangians')

*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, Ein-
    stein-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 due to 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 baryon

 electron boson

*electron cooling (beam cooling,
    electron cooling)

 electron deuteron

 electron electron (also used when char-
    ge 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 ring (accelerator, electron
    ring)

 electron synchrotron

 electronics (restricted use)

*electroproduction (for particle
    production by electrons or muons)

*electrostatic

-electrostatic separator (particle
    separator)

 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 (see also 'model, independent
    · emission')

-emulsion chamber (use 'nuclear
    emulsion' and possibly
    'total-absorption counter')

 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)

-energy-range relation (energy loss)

*enhancement (e.g. 'differential cross
    section, enhancement'; see also
    'mass enhancement')

*entropy

*epsilon expansion (approximation,
    epsilon expansion)

 epsilon(1300)

*epsilon(2150) (postulated particle,
    epsilon(2150))

*epsilon(2300) (postulated particle,
    epsilon(2300))

-equilibrium ('statistical mechanics' or
    'thermodynamics')

*equivalent photon (approximation,
    equivalent photon)

erbium
*Erevan ES (6 GeV electrons)
eta
*eta(1275) (postulated particle,
    eta(1275))
*eta(1700) (postulated particle,
    eta(1700))
eta(958)
*eta/b (postulated particle, eta/b)
eta/c(2980)
*eta/c(3590) (postulated particle,
    eta/c(3590))
-ETC (model, technicolor)
*Euclidean (field theory, Euclidean)
europium
-evaporation model (multiple
    production)
event shape analysis
*exceptional group (e.g. 'group theory,
    exceptional group')
exchange
*exchange degeneracy (used in
    connection with Regge poles)
-excitation ('excited state' or 'excited
    nucleus')

excited nucleus
excited state
*exclusive reaction
*exotic ('resonance, exotic' or 'meson
    resonance, exotic' or 'baryon
    resonance, exotic' or 'atom, exotic')
expansion (see also 'asymptotic expan-
    sion', 'topological 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)

F
f(1270)
f(1525)
*f(1815) (postulated particle, f(1815))
F+
F(2140) (postulated particle, F*(2140))
F−
*factorization
-Faddeev equations (many-body
    problem)
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 intermediate boson
*fermion magnetic monopole
    (scattering, fermion magnetic mono-
    pole)
fermion number
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 inte-
    gral' 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 (atomic physics, fine
    structure)

*finite energy (sum rule, finite energy)
*finite mass (sum rule, finite mass)
*finite momentum
*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'. For new
    methods 'data analysis method' is
    used.)
*five-dimensional (e.g. 'field theory,
    five-dimensional')
*fixed-angle
*flash tube (spark chamber, flash tube)
*flavor (quark, flavor)
*flavor changing ('current, flavor
    changing' or 'decay, flavor changing')
*fluid (only used for 'model, fluid';
    otherwise use 'liquid')
fluorine
flux
*flux tube (model, flux tube)
-FNAL (see 'Batavia ...')
*Foldy-Wouthuysen (transformation,
    Foldy-Wouthuysen)
forces
form factor (no specifier is used for
    electromagnetic form factor,
    otherwise 'form factor, electric' or
    'form factor, magnetic')
*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)
*fractionally charged
*fragmentation ('beam, fragmentation'
    or 'target, fragmentation' or, more
    general, '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')
*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(1690)
-g-2 (magnetic moment)
*g/s(1240) (postulated particle,
    g/s(1240))
*g/t(2240) (postulated particle,
    g/t(2240))
gadolinium
gallium
*GAMS (at Serpukhov and CERN;
    'calorimeter, GAMS')
gas
*gauge ('invariance, gauge' or
    'transformation, gauge'; see also
    'gauge field theory')
gauge boson (only in connection with a
    more specific term)
gauge field theory
*gaugino (postulated particle, gaugino)
*Gell-Mann-Low (renormalization group,
    Gell-Mann-Low)
*Gell-Mann-Okubo ('model,
    Gell-Mann-Okubo' or 'mass formula,
    Gell-Mann-Okubo')
*general (relativity theory, general)
-generalized vector dominance (model,
    vector dominance)
*geometrical (e.g. 'scaling, geometrical')
*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)
-gluonium (glueball)
gold
-Goldberger-Treiman relation ('model,
    PCAC' and 'pi, decay')
*Goldstino (postulated particle,
    Goldstino)
*Goldstone boson (postulated particle,
    Goldstone boson)
-Goldstone model (symmetry,
    spontaneously broken)
*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(1190)
h(2030)
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 (use 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')
health physics (see also 'nuclear
    medicine' or 'dosimetry')
heat engineering
*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 (postulated particle,
    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; used only when not
    implicated by other keywords given)
*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, line-
    ar spaces)
*history (e.g. 'particle physics, history')
hodoscope
-hodoscope chamber (spark chamber,
    flash tube)
holmium
*holography
*hopping parameter (expansion, hopping
    parameter)
*horizontal symmetry (gauge field
    theory, horizontal symmetry)
*HRS (at PEP; 'magnetic spectrometer,
    HRS)
-hybrid model ('model, absorption' and
    'Regge poles')
*hydrodynamical (model,
    hydrodynamical)
hydrogen
*hypercharge
*hypercolor
*hyperfine structure
hyperfragment
-hypernucleus (hyperfragment)
hyperon
hyperon antihyperon
hyperon deuteron
hyperon hyperon
hyperon light nucleus
hyperon nucleus
hyperon quark
*hyperonic atom (atom, hyperonic atom)

-IHEP (Serpukhov PS)
*Iizuka-Okubo-Zweig (selection rule, Iizuka-Okubo-Zweig)
-image chamber ('proportional chamber, time projection' or 'drift chamber, time projection')
-imaging (for Cherenkov counter use 'ring imaging')
*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')
*independent emission (model, independent emission)
*independent particle (model, independent particle)
*index theorem (e.g. 'mathematical methods, index theorem')
*Indiana Cycl (at Bloomington)
 indium
*inelastic scattering
*inflationary universe (model, inflationary universe)
*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
-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)
-internuclear cascade (nucleus, cascade)
*interpretation of experiments (the name of a detector may 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
 inverse scattering method
 iodine
 ion (see also 'heavy ion')
-ion ring accelerator (ion, accelerator)
 ionization
 ionization chamber
 iota(1440)
 iridium
 iron
*Ising (statistical mechanics, Ising)
*isobar ('model, isobar'; for the nucleon isobar use 'nucleon resonance')
*isobar doorway (model, isobar doorway)
*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)

-Jost function (potential scattering)

-Jost-Lehmann-Dyson representation (spectral representation)

-JWKB (approximation, WKB)

K
K anti-K
K baryon
K deuteron
K K
K light nucleus
K n
K nucleon
K nucleus
K p
*K(1400) ('postulated particle, K(1400)'
    (JP = 0-))
*K(1830) ('postulated particle, K(1830)'
    (JP = 0-))
*K(2200) ('postulated particle, K(2200)'
    (JP = 2-))
K+
K+ deuteron
K+ K+
K+ K-
K+ light nucleus
K+ n
K+ nucleon
K+ nucleus
K+ p
K*(1430)
K(1650) (postulated particle, K*(1650))
K*(1780)
K*(2060)
-K*(2200) (new name 'K(2200)')
K*(892)
K-
K- deuteron
K- K-
K- light nucleus
K- n
K- nucleon
K- nucleus
K- p
K0
K0 anti-K0
K0 deuteron
K0 K+

K0 K-
K0 K0
K0 light nucleus
K0 n
K0 nucleon
K0 nucleus
K0 p
K0(L)
K0(S)
*Kac-Moody (algebra, Kac-Moody)
*Kaehler ('potential, Kaehler'; see also
    'field equations, Dirac-Kaehler')
*Kaluza-Klein (field theoretical model,
    Kaluza-Klein)
kappa(1350)
*KEK GEMINI (at Tsukuba)
*KEK Linac (at Tsukuba)
*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
-Kibble-Higgs (field theoretical model,
    Salam-Weinberg)
-kicker magnet (pulsed magnet)
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

*L(1580) (postulated particle, L(1580))
L(1770)
*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 (lattice field theory, Langevin equation)
lanthanum
-large-angle (wide-angle)
*laser ('optics, laser' or 'accelerator, 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
lead
*lead-glass (e.g. 'total-absorption 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)')
*LENA (at DORIS; 'four-pi-detector, LENA')
*length ('fundamental constant, length' or 'correlation, length'; see also 'scattering length', 'path length')
*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 meson
lepton n
lepton nucleon
lepton nucleus
lepton number
lepton p
lepton pi
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 (e.g. 'pi0, 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')
-limiting fragmentation (model, fragmentation)
*linear
linear accelerator
linear collider
*linear spaces (functional analysis, linear spaces)
*Liouville (field equations, Liouville)
*Lippmann-Schwinger (field equations, Lippmann-Schwinger)
liquid

*liquid argon (total-absorption counter, liquid argon)
lithium
-live target (counters and detectors, target)
-locality (axiomatic field theory)
-location detection (see 'position sensitive' or 'track data analysis')
*long-range (e.g. 'correlation, long-range')
*longitudinal
-longitudinal beam oscillation (synchrotron oscillation)
longitudinal momentum
*longitudinal phase space (multidimensional analysis, longitudinal phase space)
-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')
-LPS analysis ('multiple production, longitudinal phase space' or 'multidimensional analysis, longitudinal phase space')
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)
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; '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
    generation)
*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 ('health physics' or 'nuclear
    medicine')
-membran model (model, bag)
mendelevium
mercury
*meron (field equations, meron)
*mesic atom (atom, mesic atom)
-mesic molecule (molecule, 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
meson resonance light nucleus
meson resonance nucleon
meson resonance nucleus
meson vector meson
metal
-microcomputer (microprocessor)
microprocessor
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')
-mixing ('interference' (restricted use))
mixing angle
model
-Moeller scattering ('electron electron,
    elastic scattering' or 'positron
    positron, elastic scattering')
molecular biology
*molecular physics
*molecule
molybdenum
moment
momentum
*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 (7 GeV protons)
*Moscow Linac
*Moscow RI PS
*multi-Regge ('Regge poles, multi-Regge'
    or 'exchange, multi-Regge')
multidimensional analysis
*multigluon (exchange, multigluon)

-multiloop (Feynman graph,
    higher-order)
*multimeson (exchange, multimeson)
-multiparticle scattering (use
    'many-body problem' or 'multiple
    production' but not 'multiple
    scattering')
*multiperipheral (model,
    multiperipheral)
*multipion (exchange, multipion)
*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 (pro-
    portional chamber)
 muon
 muon baryon
 muon deuteron

 muon hadron
 muon K
 muon light nucleus
 muon meson
 muon muon
 muon n
 muon nucleon
 muon nucleus
 muon number
 muon p
 muon pi
 muon quark
 muon+
 muon+ deuteron
 muon+ light nucleus
 muon+ muon+
 muon+ muon−
 muon+ n
 muon+ nucleon
 muon+ nucleus
 muon+ p
 muon−
 muon− deuteron
 muon− light nucleus
 muon− muon−
 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 baryon
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(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 baryon

neutrino deuteron
neutrino electron
neutrino hadron
neutrino K
neutrino lepton
neutrino light nucleus
neutrino muon
neutrino n
neutrino neutrino
neutrino nucleon
neutrino nucleus
neutrino p
neutrino pi
neutrino positron
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')
*new interaction (model, new
    interaction)
new particle
nickel
*NIMROD PS (at Chilton, Rutherford)
*NINA ES (at Daresbury; 2 GeV electrons)
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 GeV-cms e+e-)
*Novosibirsk Stor4 (14 GeV-cms e+e-)
-nuclear cascade ('nucleus, cascade'; see
    also 'model, intranuclear cascade')
nuclear emulsion
-nuclear emulsion chamber (use
    'nuclear emulsion' and possibly
    'total-absorption counter')
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 n
nucleon nucleon
nucleon nucleus
nucleon quark
nucleon resonance
nucleon Sigma
nucleus
nucleus nucleus
nucleus quark
nuclide
*numerical calculations
numerical mathematics

*O(10) (e.g. 'symmetry, O(10)')
*O(2) (e.g. 'symmetry, O(2)')
*O(3) (e.g. 'symmetry, O(3)')
*O(3,1) (e.g. 'symmetry, O(3,1)')
*O(4) (e.g. 'symmetry, O(4)')
*O(4,2) (e.g. 'symmetry, O(4,2)')
*O(N) (e.g. 'symmetry, O(N)')
*Oak Ridge Linac
-OBE (exchange, one-boson)
*octet (quark, octet)
*octonion (algebra, octonion)
-octupole lens (quadrupole lens, special
    focusing)
*off-line (track data analysis, 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(1670)
 omega(783)
 Omega-
 Omega- Antiomega-
*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 algebra (restricted use)
*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 ('beam optics, orbit'
    or 'beam transport, orbit' or
    'programming, 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')
*oscillator (model, oscillator)
 osmium
 oxygen
-OZI (selection rule, Iizuka-Okubo-Zweig)

p (denominates proton)
p anti-n
p antihyperon
p Antilambda
p antinucleon
p Antisigma
p Antixi
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
*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)
*parton ('model, parton'; see also 'model,
    quark parton')
*path integral ('field theory, path inte-
    gral' or 'perturbation theory, path
    integral')
*path length
*Pati-Salam (field theoretical model,
    Pati-Salam)
-pattern recognition (track data
    analysis)
-PC(3510) (chi(3510))
*PCAC (model, PCAC)
*Peking Stor
-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(1850)
-phi-to-the-nth model (field theoretical
    model, scalar)
 phosphorus
*photino (postulated particle, photino)
-photoabsorption (photon, absorption)
-photodiode (if possible use
    'semiconductor, optical')
-photodisintegration (photofission)
 photoelectron (e.g. 'photoelectron,
    amplifier')
-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 K
 photon lepton
 photon light nucleus
 photon meson
 photon n
 photon neutrino
 photon nucleon
 photon nucleus
 photon p
 photon photon
 photon pi
 photon quark
*photoproduction
-phototransistor (semiconductor,
    optical)
 pi
 pi baryon
 pi deuteron
 pi K
 pi light nucleus
 pi n
 pi nucleon
 pi nucleus
 pi p
 pi pi
 pi quark
 pi vector meson
 pi(1300)

*pi(1770) (postulated particle, pi(1770))
-pi(2050) (new name 'A(2050)')
-pi(2100) (new name 'A(2100)')
 pi+
 pi+ deuteron
 pi+ K+
 pi+ K-
 pi+ K0
 pi+ light nucleus
 pi+ n
 pi+ nucleon
 pi+ nucleus
 pi+ p
 pi+ pi+
 pi+ pi-
 pi-
 pi- deuteron
 pi- K+
 pi- K-
 pi- K0
 pi- light nucleus
 pi- n
 pi- nucleon
 pi- nucleus
 pi- p
 pi- pi-
 pi0
 pi0 deuteron
 pi0 K+
 pi0 K-
 pi0 K0
 pi0 light nucleus
 pi0 n
 pi0 nucleon
 pi0 nucleus
 pi0 p
 pi0 pi+
 pi0 pi-
 pi0 pi0
-pionic form factor (vertex function)
*pionization (multiple production,
    pionization)
*Pittsburgh Cycl
*planar (Feynman graph, planar)
*planarity (event shape analysis,
    planarity)
 plasma
 plastics (e.g. 'plastics, track sensitive')
 platinum
-plotting methods (see 'data analysis
    method' (restricted use) or
    'multidimensional analysis, Dalitz
    plot' or 'statistical analysis')
*PLUTO (at DORIS and 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
*Pomeranchuk theorem (total cross
    section, Pomeranchuk theorem)
*pomeron (e.g. 'exchange, pomeron')
*position dependence (e.g. 'efficiency,
    position dependence')
*position sensitive (e.g. 'proportional
    chamber, position sensitive')
 positive particle
-positivity (axiomatic field theory)
 positron
 positron deuteron
 positron hadron
 positron light nucleus
 positron n
 positron nucleon
 positron nucleus
 positron p
 positron positron
 positronium
 postulated particle
 potassium
 potential
 potential scattering
*Potts (model, Potts)
 power engineering
 power supply
 praseodymium
-preon (model, prequark)
 preprocessing
*prequark (model, prequark)
*pressure
*Primakoff (effect, Primakoff)
*primary (use in 'cosmic radiation,
    primary')
-probability (statistics)
 production (restricted use, if possible
    use more specific term)
-production cross section (channel cross
    section)
 programming
-project ('experimental equipment,
    proposed' or e.g. 'accelerator,
    proposed' or 'proposed experiment')
 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 (Also used
    connected with the name of the
    accelerator)
 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)
*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-height analyzer
    (analog-to-digital converter)
pulsed magnet

-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
    prequark 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')
*quintet (quark, quintet)
 Q1(1280)
 Q2(1400)

*r(2510) (postulated particle, r(2510))
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
*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
*representation ('group theory,
   representation'; see also 'Mandelstam

representation' or 'spectral
   representation')
-rescattering ('multiple scattering' or
   'final-state interaction')
*resolution (e.g. 'counters and detectors,
   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
   'electromagnetic field' or
   'microwaves')
-RF separator (use 'particle separator'
   and possibly 'beam transport')
RF system
rhenium
-rho dominance model (model, vector
   dominance)
*rho(1250) (postulated particle,
   rho(1250))
rho(1600)
*rho(2150) (postulated particle,
   rho(2150))
*rho(2250) (postulated particle,
   rho(2250))
*rho(2350) (postulated particle,
   rho(2350))
rho(770)
rho(770)+
rho(770)-
rho(770)0
rhodium
*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 ES (NINA ES)
-Rutherford PS (NIMROD PS)

*S(1730) (postulated particle, S(1730))
*S(1935) (postulated particle, S(1935))
S*(975) (also called 'S(975)')
S—matrix
S wave (partial wave)
*Saclay Linac
*Saclay PS (3 GeV protons)
safety (For aspects other than nuclear.
    See also 'health physics', 'dosimetry',
    'shielding' or 'radiation protection'.)
*Salam-Weinberg (field theoretical
    model, Salam Weinberg)
samarium
*sandwich (scintillation counter,
    sandwich)
*Saskatoon Linac (0.3 GeV electrons)
*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)
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, inst-
    anton)

-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
*Sendai Linac
*separable potential (model, separable
    potential)
*separated beam
-separator (particle separator)
*septum (magnet, septum)
*Serpukhov PS (70 GeV protons)
*Serpukhov UNK Stor (600/3000 GeV
    protons; 2200 GeV cms pp)
*sextet (quark, sextet)
-sextupole lens (quadrupole lens, special
    focusing)
-SFM (magnetic detector, Split Field)
-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+ deuteron
 Sigma+ light nucleus
 Sigma+ nucleus
 Sigma-
 Sigma- deuteron
 Sigma- light nucleus
 Sigma- nucleus
 Sigma/c
 Sigma0
 silicon
 silver
*SIN Cycl (at Villigen; meson factory; 0.6
    GeV protons)
*sine-Gordon ('field equations,
    sine-Gordon' or 'quantum mechanics,
    sine-Gordon')
-single particle (see 'one-particle'; also
    'inclusive reaction')
-single-loop approximation (Feynman
    graph, higher-order)
*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(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)
*slepton (postulated particle, slepton)
*slope
*small-angle
*sneutrino (postulated particle,
    sneutrino)
*SO(10) (e.g. 'symmetry, SO(10)')
*SO(14) (e.g. 'symmetry, SO(14)')
*SO(2) (e.g. 'symmetry, SO(2)')
*SO(3) (e.g. 'symmetry, SO(3)')
*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)')
 sodium
*sodium-iodide (e.g. 'scintillation
    counter, sodium-iodide')
-soft photon (radiative correction)
-soft pions ('current algebra, effective
    Lagrangians' or 'model, PCAC')
-software (programming)
*solenoid (magnet, solenoid)
 solid-state counter (see also
    'semiconductor detector')
 solids
*soliton (field equations, soliton)
-soliton solution (field equations,
    soliton)
*solution ('field equations, solution'; if
    possible use more specific term)
-Sommerfeld-Watson transformation
    (Regge poles)
-sonic spark chamber (spark chamber,
    acoustic)
-source ('field theory' or 'particle
    source')
-source algebra (current algebra)
*Sp(N) (e.g. 'symmetry, Sp(N)')
*space
*space charge (for accelerators only)
*Space Rad Lab Linac
*space-time (field theory, space-time)
-spallation (fission)
 spark chamber
*spatial distribution (only used for
    cosmic radiation; see also 'angular
    distribution')
*spatial resolution (e.g. 'drift chamber,
    spatial resolution')
-SPEAR (SLAC SPEAR Stor)
*special focusing ('quadrupole lens, spe-
    cial 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-orbit (spin, orbit)
- spin parity analysis (partial wave
    analysis)
- spin-spin correlation (spin, correlation)
*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)
*squark (postulated particle, squark)
- SQUID (superconducting, interference)
*stability (see also 'beam instability')
*stacking ('injection, stacking' and
    'storage ring')
static model (model, Chew-Low)
- stationary phase (mathematical
    methods, path integral)
*statistical
statistical analysis (restricted to basic
    papers)
- statistical bootstrap (bootstrap,
    statistical)
statistical mechanics
statistical tensor (spin, density matrix)
statistics
- status report (activity report)
- steel (use 'iron')
*stochastic (restricted use;
    'quantization, 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 particle
*strangeness ('quark, strangeness' or
    'quarkonium, strangeness')
straton (quark)
streamer chamber
- streamer tube (spark chamber,
    streamer chamber)
- stress-energy (see 'energy-momentum')
*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(10) (e.g. 'symmetry, SU(10)')
*SU(16) (e.g. 'symmetry, SU(16)')
*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(4)**4 (e.g. 'symmetry, SU(4)**4')
*SU(5) (e.g. 'symmetry, SU(5)')
*SU(6) (e.g. 'symmetry, SU(6)')
*SU(6) x O(3) (e.g. 'symmetry, SU(6) x
    O(3)')
*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)')
- substructure ('model, composite' or
    'model, prequark')
sulfur
sum rule
superconducting
- superfield (supersymmetry)
superfragment (charmed or beautiful
    nucleus)
supergravity
- supermultiplet ('multiplet' and
    'supersymmetry')
*superpropagator (propagator,
    superpropagator)
*superrenormalizable (field theoretical
    model, superrenormalizable)

*superselection rule (sum rule,
    superselection rule)
 supersymmetry
*superweak interaction (weak
    interaction, superweak interaction)
-SVZ (quantum chromodynamics, sum
    rule)
 symmetry
 symmetry breaking

 synchro-cyclotron
-synchrophasotron ('synchrotron' or
    'proton synchrotron' or 'electron
    synchrotron')
 synchrotron
 synchrotron oscillation
 synchrotron radiation
-SYRIUS (Tomsk ES)

-T–invariance (invariance, time reversal)
-T–matrix (S–matrix)
*T0 (css – baryon, mass 2740; 'postulated
    particle, T0')
*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 measurement of
    polarization degree. See also
    'polarized target'.)
*TASSO (at PETRA; 'magnetic detector,
    TASSO')
tau
tau+
tau–
TCP (see 'CPT')
TDC (time–to–digital converter)
technetium
*technicolor (model, 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)
Theta(1690)
*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 distribution (see 'time variation')
*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)
*Tomsk ES (1.5 GeV electrons)
-top (quark, truth)
*TOPAZ (at TRISTAN; 'magnetic detector,
    TOPAZ')
*topological (charge, topological)
-topological cross section (channel cross
    section)
*topological expansion (duality,
    topological expansion)
*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' or 'glass, track
    sensitive')
tracks
-trajectory ('Regge poles'; for particle
    trajectory, see 'tracks')
transformation
*transition
*transition radiation (e.g. 'counters and
    detectors, transition radiation'; not
    used for radiative decay)
-transmission (absorption)
*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')
tungsten
*tunneling (effect, tunneling)
*twistor (e.g. 'mathematical methods,
   twistor')
-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(3) x U(3) (e.g. 'symmetry, U(3) x U(3)')
*U(4) (e.g. 'symmetry, U(4)')
*U(4) x U(4) (e.g. 'symmetry, U(4) x U(4)')
*U(6) (e.g. 'symmetry, U(6)')
*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)
-underground (deep underground)
*undulator (radiation, undulator)
-unified fermion (fermion, model)
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, 'postulated particle, Upsilon(10870)')
*Upsilon(11020) (6S state, 'postulated particle, Upsilon(11020)')
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 Hove plot (multidimensional analysis, longitudinal phase space)
vanadium
*variational (restricted use; 'mathematical methods, variational')
*vector
-vector boson (see 'intermediate boson' or 'vector meson' or 'gauge boson')
*vector dominance (model, vector dominance)

vector meson
vector meson deuteron
vector meson light nucleus
vector meson nucleon
vector meson nucleus
vector meson quark
velocity
*Veneziano (model, Veneziano)
-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 (very restricted use; e.g. '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)
*Weyl (algebra, Weyl)
*wide-angle ('spectrometer, wide-angle' or, e.g., 'scattering, wide-angle')
*width (used for resonances or enhancements; see also 'dispersion', 'diffusion' or 'beam profile')
*wiggler (magnet, wiggler)
-Wightman fields (axiomatic field theory)
-Wilson expansion (field theory, short-distance behavior)
*Wilson loop (gauge field theory, Wilson loop)
*Wino (postulated particle, Wino)
*wire (spark chamber, wire)
*WKB (approximation, WKB)
-Wolf method (correction, off-shell)
-Woods-Saxon ('potential' or 'potential scattering')

*X(1900-3600) (postulated particle,
    X(1900-3600))
*x-dependence (use more specific term
    if possible)
 xenon
 Xi
 Xi deuteron
 Xi light nucleus
 Xi nucleus
 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(2220) (postulated particle, xi(2220))
*Xi(2250) (postulated particle, Xi(2250))
*Xi(2370) (postulated particle, Xi(2370))
*Xi(2500) (postulated particle, Xi(2500))
 Xi−
 Xi− deuteron
 Xi− light nucleus
 Xi− nucleus
 Xi0
 Xi0 deuteron
 Xi0 light nucleus
 Xi0 nucleus
*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)')
*zeta(8300) (postulated particle,
    zeta(8300))
-ZGS (Argonne PS)
 zinc
*Zino (postulated particle, Zino)
 zirconium
-Zweig rule (selection rule,
    Iizuka-Okubo-Zweig)

Z0
*Z0(1780) (partial wave P01; 'postulated
    particle, Z0(1780)')
*Z0(1865) (partial wave D03; 'postulated
    particle, Z0(1865)')
*Z1(1900) (partial wave P13; 'postulated
    particle, Z1(1900)')
*Z1(2150) (postulated particle, Z1(2150))
*Z1(2500) (postulated particle, Z1(2500))