

Acronyms

ADC:	analogue to digital converter
ASIC:	application specific integrated circuit
ATLAS:	one of the LHC experiments at CERN
BNL:	Brookhaven National Laboratory, USA
CAT:	compteur à trous
CEN-Saclay:	Centre d'Etudes Nucléaires, Saclay, France
CERN:	European Organization for Nuclear Research, Geneva, Switzerland
CGS:	electrostatic units: centimetres, grams, seconds
COG:	centre of gravity
CRID:	Cherenkov ring imaging detector
CSC:	cathode strip chamber
CsI:	caesium iodide
CVD:	carbon vapour deposition
DC:	drift chambers
DME:	dimethyl ether (CH ₃) ₂ O
FERMILAB:	Fermi National Laboratory, Batavia, Illinois, USA
FGLD:	field gradient lattice detector
FWHM:	full width at half maximum
GDD:	Gas Detectors Development group at CERN
GEM:	gas electron multiplier
GSPC:	gas proportional scintillation counter
HADC:	high-accuracy drift chamber
HBD:	hadron blind detector
HMPID:	high momentum particle identification detector
IHEP:	Institute of High Energy Physics, Protvino, Russia Federation
ILC:	International Linear Collider
ILL:	Institut Laue-Langevin, Grenoble, France

INFN:	Istituto Nazionale di Fisica Nucleare, Italy
ISIS:	identification of secondary particles by ionization sampling
IVI:	interaction vertex imaging
KEK:	High Energy Accelerator Research Organization, Kamiokande, Japan
LAr:	liquid argon
LBL:	Lawrence Berkeley Laboratory
LEM:	large electron multiplier
LEP:	Large Electron–Positron collider at CERN
LHC:	Large Hadron Collider at CERN
LNF:	Laboratori Nazionali Frascati, Italy
LNGS:	Laboratori Nazionali Gran Sasso, Italy
MDT:	monitored drift tubes
Micromegas:	micro-mesh gaseous structure
MIPA:	micro-pin array
MPGD:	micro-pattern gas detector
MRPC:	multi-gap resistive plate chamber
MSC:	multi-step chamber
MSGC:	micro-strip gas counter
MWDC:	multi-wire drift chamber
MWPC:	multi-wire proportional chamber
μPIC:	micro-pixel chamber
NSR:	nuclear scattering radiography
NTP:	normal temperature and pressure: 0°C, 1 atmosphere
PEP:	Electron Positron Collider at SLAC
PET:	positron emission tomography
PPAC:	parallel plate avalanche counter
PRR:	proton range radiography
PST:	plastic streamer tubes
P10:	mixture of 10% methane in argon
QE:	quantum efficiency
RHIC:	Relativistic Heavy Ion Collider, Brookhaven, USA
RICH:	ring imaging Cherenkov counter
RMS (rms):	root mean square (Gaussian standard deviation)
RPC:	resistive plate counter
SLAC:	Stanford Linear Accelerator Center
SLHC:	Super LHC at CERN
SPECT:	single photon emission computed tomography
SQS:	self-quenching streamer
SSC:	Superconducting Supercollider

STP:	standard temperature and pressure: 20°, 1 atmosphere
SWDC:	single-wire drift chambers
TEA:	triethyl amine (C ₂ H ₅) ₃ N
TEC:	time expansion chamber
TERA:	Fondazione per Adroterapia Oncologica, Novara, Italy
TGC:	thin-gap chambers
TGEM:	thick gas electron multiplier
TMAE:	tetrakis dimethyl amino ethylene C[(CH ₃) ₂ N] ₄
TPC:	time projection chamber
TRIUMF:	Canada's National Laboratory for Particle and Nuclear Physics, Vancouver
TRT:	transition radiation tracker
UV:	ultra-violet
VUV:	vacuum ultra-violet
WIMP:	weakly interacting massive particle
WLS:	wavelength shifter

