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Jürg Beer • Ken McCracken • Rudolf von Steiger

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Theory and Applications in the Terrestrial and Space Environments

With 196 Figures and 9 Tables

Springer

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Contents

List of Boxes

Abbreviations

ACR	Anomalous cosmic radiation
asl	Above sea level
AU	Astronomical unit
AMS	Accelerator mass spectrometry
B/M	Brunhes/Matuyama
CERN	The European Organization for Nuclear Research
CME	Coronal mass ejection
CMP	Central meridian passage
DNA	Deoxyribonucleic acid
DYE 3	Ice core drill site in South-Greenland
DOME C	Ice core drill site within EPICA
ECHAM	European Centre/Hamburg model
EPICA	European project for ice coring in Antarctica
FLUKA	Nuclear interaction software
GCM	General circulation model
GCR	Galactic cosmic rays
GEANT	Nuclear interaction software
GISP	Greenland ice sheet project
GLE	Ground level event
GMIR	Global merged interaction regions
GRIP	Greenland ice core project
HMF	Heliomagnetic field
HTO	"Tritiated water", ^3H_2O
IGY	International geophysical year
IMP	Interplanetary monitoring platform
INTCAL04	Radiocarbon age calibration data 2004
IPCC	Intergovernmental panel on climate change
IQSY	International quiet sun year
LIS	Local interstellar spectrum
MCNP	Monte Carlo N-Particle transport code

NASA	National aeronautics and space administration
NGRIP	North GRIP
PCA	Polar cap absorption or principal component analysis
SEP	Solar energetic particle (event)
SCR	Solar cosmic rays
SFU	Solar flux unit
SN	Supernova
SPE	Solar proton event (archaic)
SPECMAP	Mapping spectral variability in global climate project
STE	Stratosphere–troposphere exchange
THC	Thermohaline circulation
TSI	Total solar irradiance
UV	Ultraviolet
VADM	Virtual axial dipole moment
YD	Younger Dryas