Abbreviations and Acronyms

ADT	anomalous diffraction theory
AERI	atmospheric emitted radiance interferometer
AERI-X	Atmospheric Emitted Radiance Interferometer-Extended Resolution
AGL	above ground level
ARCS	Atmospheric Radiation and Cloud Station
ARESE	ARM Enhanced Shortwave Experiment
ARM	Atmospheric Radiation Measurement
ASRC	Atmospheric Sciences Research Center
ASTEX	Atlantic Stratocumulus Transition Experiment
ASTI	Absolute Solar Transmission Interferometer
AVHRR	advanced very high resolution radiometer
BARFEX	Boardman ARM Region Flux Experiment
BBSSs	Balloon-Borne Sounding Systems
BLP	boundary layer profiler
BNL	Brookhaven National Laboratory
BORCAL	broadband outdoor radiometer calibration
BTAs	back trajectory analyses
CART	Cloud and Radiation Testbed
CCD	charge-coupled device
CCM2	Version 2 of the NCAR Community Climate Model
CCN	cloud condensation nucleus
CIMMS	Cooperative Institute of Mesoscale Meteorological Studies
CIRA	Cooperative Institute for Research in the Atmosphere
CMDL	Climate Monitoring and Diagnostics Laboratory
CN	condensation nuclei
COAMPS	Coupled Ocean/Atmosphere Mesoscale Prediction System
COARE	Coupled Ocean Atmosphere Response Experiment
COR	Coriolis
CPRS	Cloud Profiling Radar System
CRF	cloud radiative forcing
CRM	cloud resolving model
CSU	Colorado State University
DAR	Division of Atmospheric Research
DIAL	infrared differential absorption lidar
DISORT	discrete ordinate radiative transfer
DMSP	Defense Meteorological Satellite Program
DOE	U.S. Department of Energy
DVN	daytime versus nighttime
DWR	dual wavelength ratio
EBBR	Energy Balance Bowen Ratio
EBTs	Equivalent Blackbody Temperatures
ECMWF	European Centre for Medium Range Weather Forecasting
EM	explicit microphysics
EML	Environmental Measurements Laboratory
ENSO	El Nino-Southern Oscillation
ER	equivalent radius

ERBE	Earth Radiation Budget Experiment
ETL	Environmental Technology Laboratory
FASE	FASCODE for the Environment
FCC	fractional cloud cover
FDDA	four-dimensional data assimilation
FDI	field data ingestor
FFT	fast Fourier transform
FIRE	First ISCCP Regional Experiment
FIRE-II	Second ISCCP Regional Experiment
FOV	field-of-view
GCM	general circulation model
GCSS	Global Energy and Water Cycle Experiment Cloud Systems Study
GISS	Goddard Institute for Space Studies
GMS	geostationary meteorological satellite
GOES	Geostationary Operational Environmental Satellite
GSFC	Goddard Space Flight Center
HAcc	horizontal advective acceleration
HAD	horizontal diffusion
HDiv	horizontal divergence
HIS	High-resolution Interferometer Sounder
ICET	Integrated Cumulus Ensemble and Turbulence
ICRCCM	intercomparison of radiative codes in climate models
IMC	ice mass content
IN	ice nuclei
IOP	intensive observation period
IPA	independent pixel approximation
IR	infrared
IRF	Instantaneous Radiative Flux
ISCCP	International Satellite Cloud Climatology Project
ITCZ	intertropical convergence zone
JFD	joint frequency distribution
KF	Kain-Fristch (deep convection model)
LBLRTM	Line-by-Line Radiative Transfer Model
LCL	lifting condensation levels
LDRD	Laboratory Directed Research and Development
LDRs	linear depolarization ratios
LES	large-eddy simulation
LFC	level of free convection
LIAR	lidar/radiometer
LLJ	low-level jet
LST	local solar time
LW	longwave
LWC	liquid water content
LWP	liquid water path
MAPS	Mesoscale Analysis and Prediction System
MAS	MODIS Airborne Simulator

MBL	marine boundary layer
MC	Monte Carlo (simulation)
MCS	mesoscale convection system
MFRSR	multifilter rotating shadowband radiometer
ML	mixed layer
MLS	mid-latitude summer
MPL	Micro Pulse Lidar
MPL	Marine Physical Laboratory (Sun and Thorne article only, p. 331)
MSL	mean sea level
MWR	microwave water radiometer
NASA	National Aeronautics and Space Administration
NCAR	National Center for Atmospheric Research
NDVI	normalized-difference vegative index
NIGEC	National Institute for Global and Environmental Change
NOAA	National Ocean and Atmospheric Administration
NREL	National Renewable Energy Laboratory
NWS	National Weather Service
OLR	outgoing longwave radiation
OLS	Operation Line Scanner
OML	ocean mixed layer
PBL	planetary boundary layer
PCMDI	Program for Climate Model Diagnosis and Intercomparison
PDF	probability distribution function
PDL	Polarization Diversity Lidar
PGF	pressure gradient force
PIR	precision infrared radiometer
PMS	particle measuring system
PNNL	Pacific Northwest National Laboratory
PRF	pulse repetition frequency
PROBE	Pilot Radiation Observation Experiment
PRT	precision radiation thermometer
PW	precipitable water
QME	Quality Measurement Experiment
RAMS	regional atmospheric modeling system
RASSs	Radio Acoustic Sounding Systems
RCM	Regional Circulation Model
RCMs	radar coded messages
RCS	Remote Cloud Sensing
RH	relative humidity
RH_c	critical relative humidity
Rn	net radiometer
RRTM	rapid radiative transfer model
RSS	rotating shadowband spectroradiometer
RT	radiation transport
RTNEPH	Real-Time Nephanalysis
RW	required warming
RWPs	Radar Wind Profilers

SAGE	Stratospheric Aerosol and Gas Experiment
SCMs	single column models
SEPM	stochastic entraining parcel model
SGP	Southern Great Plains
SIROS	solar and infrared observing system
SNR	signal-to-noise ratio
SORTI	Solar Radiance Transmission Interferometer
SPECTRE	Spectral Radiance Experiment
SRL	Scanning Raman Lidar
SRRB	Surface Radiation Research Branch of NOAA
SSM/T1	Special Sensor Microwave Temperature Sounder
SSM/I	Special Sensor Microwave Imager
SSM/T2	Special Sensor Microwave Water Vapor Sounder
SST	sea surface temperature
SW	shortwave
TAdv	temperature advection
TAO	Tropical Atmospheric Ocean
TEM	trajectory ensemble model
TKE	turbulent kinetic energy
TOA	top of the atmosphere
TOGA	Tropical Ocean Global Atmosphere
TOVS	TIROS Operational Vertical Sounder
TP	tropospheric profiler
TRES	Tomsk Radiation Experiment in Siberia
TWP	Tropical Western Pacific
USSA	U.S. Standard Atmposphere
UT	Universal Time
UW	University of Wisconsin
VAD	Velocity-Azimuth Display
VDU	vertical diffusion
WPDA	Wind Profiler Demonstration Array
WSI	Whole Sky Imager
WWCB	Weekly Weather and Crop Bulletin (Department of Agriculture Publication)