

The Joint IPWG/GEWEX Precipitation Analysis

Annex 1 - Acronyms

1D-VAR	One-dimensional variational
4D	Four-dimensional
ABI	Advanced Baseline Imager sensor
ACCP	Aerosols, Clouds, Convection and Precipitation mission
AIP	Algorithm Intercomparison Programme
AIRS	Advanced Infrared Sounder
AMeDAS	Automated Meteorological Data Acquisition System
AMO	Atlantic Multidecadal Oscillation
AMSR	Advanced Microwave Scanning Radiometer
AMSR-2	Advanced Microwave Scanning Radiometer version 2
APHRODITE	Asian Precipitation–Highly Resolved Observational Data Integration Toward Evaluation of Water Resources dataset
AR5	Intergovernmental Panel on Climate Change Fifth Assessment Report
ASO	Airborne Snow Observatory
ATBD	Algorithm Theoretical Basis Document
ATMS	Advanced Technology Microwave Sounder
AVHRR	Advanced Very High Resolution Radiometer
AWAP	Australian Water Availability Project
AWS	Arctic Weather Satellite
CDR	Climate Data Record
CERES EBAF	Clouds and the Earth's Radiant Energy System (CERES) Energy Balanced and Filled (EBAF)
CF	Correction factor
CF-F	Fuchs dynamic correction model
CF-L	Legates climatology correction factor
CFSR	Climate Forecast System Reanalysis
CHIRPS v2.0	Climate Hazards Group InfraRed Precipitation with Station version 2 data archive
CHUVA	Cloud Processes of the Main Precipitation Systems in Brazil: A Contribution to Cloud-Resolving Modeling and to the Global Precipitation Measurement (GPM)
CIMR	Copernicus Imaging Microwave Radiometer
CMA	China Meteorological Administration
CMIP	Coupled Model Intercomparison Project (phases 1–6)
CMORPH	NOAA Climate Prediction Center Morphing Technique
CNES	French Centre National d'Etudes Spatiales
CONUS	Continental United States
CORDEX	Coordinated Regional Climate Downscaling Experiment
CORRA	Combined Ku Radar-Radiometer Algorithm
CPC	National Weather Service Climate Prediction Center retrospective analysis
CPC 2020	Climate Prediction Center (CPC) Global 4-km Merged Infrared dataset
CPI	Convective Percent Index
CrIS	Cross-track Infrared Sounder
CRM	Cloud resolving models
CRU	The University of East Anglia's Climatic Research Unit's global climate dataset
CSH	Goddard Convective-Stratiform Heating algorithm

DoD	U.S. Department of Defense
DPR	Dual-Frequency Precipitation Radar
ECMWF	European Centre for Medium-Range Weather Forecasts
ECMWF IFS	European Centre for Medium-Range Weather Forecasts (ECMWF) Integrated Forecast System
ENSEMBLES	Ensemble-based Predictions of Climate Changes and their Impacts project
ENSO	El Niño Southern Oscillation
E-OBS	European daily high-resolution Observational Gridded Dataset
EOBS	Ensemble-based Predictions of Climate Changes and their Impacts (ENSEMBLES) Observation dataset
EPC	Emissivity principal components
EPS SG	European Polar-orbiting System, Second Generation
ERA5	European Centre for Medium-Range Weather Forecasts Reanalysis version 5 dataset
ERA-Interim	European Centre for Medium-Range Weather Forecasts Re-Analysis dataset
ETCCDI	Expert Team on Climate Change Detection and Indices
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
EURO-CORDEX	European Coordinated Regional Downscaling Experiment
FAR	False alarm ratio
FEWS NET	Famine Early Warning Systems Network
FOV	Field of view
FROGS	Frequent Rainfall Observations on GridS
GCE	Goddard Cumulus Ensemble model
GCM	General circulation model
GCMS	Coordinating Group for Meteorological Satellites
G-CRM	Global cloud-resolving model
GEO	Group on Earth Observations
GEO-IR	Geostationary Earth Orbit Infrared
GEV	Generalized Extreme Value framework
GEWEX	Global Energy and Water Exchanges project
GLOBE	Global Learning and Observations to Benefit the Environment program
GMI	Global Precipitation Measurement (GPM) Microwave Imager
GOES-R	Geostationary Operational Environmental Satellites
GOSAT-3	Global Observations SATellite for Greenhouse gasses and Water Cycle satellite 3
GPCP	Global Precipitation Climatology Centre
GPCP	Global Precipitation Climatology Project
GPM	Global Precipitation Measurement
GPM CO	Global Precipitation Measurement Core Observatory
GPROF	Goddard profiling algorithm
GRACE	Gravity Recovery and Climate Experiment
GRACE-FO	Gravity Recovery and Climate Experiment (GRACE)-Follow On
GridSat	Gridded Satellite
GSMaP	Global Satellite Mapping of Precipitation
GV	Ground validation
GV-MRMS	Ground Validation Multi-Radar/Multi-Sensor
HH	Hydrometeor Heating algorithm
HOAPS	Hamburg Ocean Atmosphere Parameters and Fluxes from Satellite Data
HRPP	High-Resolution Precipitation Products
HSS	Heidke Skill Scores

IASI	Infrared Atmospheric Sounding Interferometer
ICESat-2	Ice, cloud and land elevation satellite
ICI	Ice Cloud Imager
IMERG	Integrated Multi-Satellite Retrievals for Global Precipitation Measurement (GPM)
IMERG-T	Test mode for the Integrated Multi-Satellite Retrievals for Global Precipitation Measurement (GPM)
IOD	Indian Ocean Dipole
IPCC	Intergovernmental Panel on Climate Change
IPHEX	Integrated Precipitation and Hydrology Experiment
IPWG	International Precipitation Working Group
IR	Infrared
ISO	International Organization for Standardization
ISRO	Indian Space Research Organization
ITCZ	Intertropical Convergence Zone
JAXA	Japanese Aerospace Exploration Agency
JRA25	Japanese 25-year ReAnalysis
LEO	Low Earth Orbit
LH	Latent heat
MCTA	Merged precipitation estimate from the CloudSat, Tropical Rainfall Measuring Mission (TRMM) and Aqua platforms
MCTG	Merged precipitation estimate from the CloudSat, Tropical Rainfall Measuring Mission (TRMM) and Global Precipitation Measurement (GPM) platforms
MERRA-2	Second Modern-Era Retrospective analysis for Research and Applications
MetOp	Meteorological Operational satellites (MetOp-A, MetOp-B and MetOp-C)
MHS	Microwave Humidity Sounder
MJO	Madden-Julian Oscillation
MODIS	Moderate resolution Imaging Spectroradiometer
MRMS	Multi-radar multi-sensor
MS	Matched Scan
MSWEP	Multi-Source Weighted-Ensemble Precipitation dataset
M-T	Megha-Tropiques
MW	Microwave
MWI	MicroWave Imager
MWS	MicroWave Sounder
NASA	National Aeronautics and Space Administration
NCEP2	National Centers for Environmental Prediction-Department of Energy Reanalysis 2
NEWS	National Aeronautics and Space Administration's Energy and Water cycle Study
NOAA	National Oceanic and Atmospheric Administration
NOAA-20	Satellite of the Joint Polar Satellite System constellation
NRL	Naval Research Laboratory
NRL-Blend	Naval Research Laboratory (NRL) blended satellite
NRSCC	National Remote Sensing Center of China
NS	Normal Scan
NSCE	Nash–Sutcliffe coefficient of efficiency
OIB	Operation IceBridge
OISST	Optimum Interpolation Sea Surface Temperature
OLR	Outgoing longwave radiation
OLYMPEX	Olympic Mountain Experiment

OSTIA	Operational Sea Surface Temperature (SST) and Sea Ice Analysis
PERSIANN	Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks
PERSIANN-CCS	Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks-Cloud Classification System
PERSIANN-CDR	Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks-Climate Data Record
PERSIANN-MSA	Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks–Multispectral Analysis
PDF	Probability density function
PDO	Pacific Decadal Oscillation
PIP	Precipitation Intercomparison Projects
PMW	Passive microwave
POD	Probability of detection
PR	Precipitation Radar
PRH	Precipitation Radar Heating algorithm
PRPS	Precipitation Retrieval and Processing Scheme
PRUDENCE	Prediction of Regional scenarios and Uncertainties for Defining European Climate change risks and Effects project
PUSH	Precipitation Uncertainties for Satellite Hydrology
Q ₁	Apparent heat source Q ₁
QA	Quality Assurance
QC	Quality Control
QPE	Quantitative precipitation estimation
RAMS	Regional Atmospheric Modeling System
RCM	Regional climate model
REFAME	Rain Estimation Using Forward-Adjusted Advection of Microwave Estimates
REGEN	Rainfall Estimates on a Gridded Network dataset
RMS	Root mean square
SBM	Spectral bin microphysics
SCaMPR	Self-Calibrating Multivariate Precipitation Retrieval
SF	SeaFlux
SG-A	MetOp Second Generation group A satellites
SHARPEN	Scheme for Histogram Adjustment of Ranked Precipitation Estimates in the Neighborhood
SLH	Spectral Latent Heating algorithm
SMART	Soil Moisture Analysis Rainfall Tool
SNPP	Suomi National Polar-orbiting Partnership
SREM2D	Two-Dimensional Satellite Rainfall Error Model
SSMIS	Special Sensor Microwave Imager/Sounder
SST	Sea surface temperature
SWE	Snow water equivalent
TAPEER	Tropical Amount of Rainfall with Estimation of Errors algorithm
TB	Brightness temperature
TIROS	Television-Infrared Operational Sounder
TMPA	Tropical Rainfall Measuring Mission (TRMM) Multi-satellite Precipitation Analysis
TOOCAN	Tracking Of Organized Convection Algorithm through a 3-D segmentation
TOVS	Television-Infrared Operational Sounder (TIROS) Operational Vertical Sounder

TRAIN	Goddard Trained Radiometer algorithm
TRMM	Tropical Rainfall Measuring Mission
TRMM 3B42 V7	Tropical Rainfall Measuring Mission (TRMM) Precipitation L3 1 day 0.25 degree x 0.25 degree V7
TROPICS	Time-Resolved Observation of Precipitation structure and storm Intensity with a Constellation of small Satellites
UA-SWE	University of Arizona snow water estimate
UDEL	Data from Willmott, Matsuura and collaborators at the University of Delaware
VIIRS	Visible Infrared Imaging Radiometer Suite
VIS	Visible
WATCH	Water and global Change
WCRP	World Climate Research Programme
WFDEI	Water and global Change (WATCH) Forcing Data methodology applied to ERA-Interim data
WSF-M	Weather Satellite Follow-on–Microwave
WSR-88D	Weather Surveillance Radar, 1988, Doppler