
1	Glossary	
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3	Aerosols	tiny particles suspended in the air
4		
5	Adjusted	refers to time series data that has been homogenized for time
6		dependent biases; owing to uncertainties inherent in data bias
7		removal, the term “adjusted” is often used instead of “corrected”
8		
9	Albedo	the fraction of incident light that is reflected
10		
11	Anthropogenic	human-induced
12		
13	Black carbon	soot particles primarily from fossil fuel burning
14		
15	Climate sensitivity:	the equilibrium change in global-average surface air temperature
16		following a change in radiative forcing; in current usage, this term
17		generally refers to the warming that would result if atmospheric
18		carbon dioxide concentrations were to double from their pre-
19		industrial levels
20		
21	Contrails	condensation trails from aircraft
22		
23	Convection	motions in a fluid or the air that are predominantly vertical and
24		driven by buoyancy forces; a principal means of vertical energy
25		transfer
26		
27	Diurnal	occurring daily; varying within the course of a day
28		
29	Dewpoint	temperature at which water vapor condenses into liquid water
30	temperature	when cooled at constant pressure
31		
32	Error	the difference between an estimated or observed value and the true
33		value
34		
35	Forcing	a factor that influences climate
36		
37	Greenhouse gases	gases including water vapor, carbon dioxide, methane, nitrous
38		oxide, and halocarbons that trap infrared heat, warming the air near
39		the surface and lower levels of the atmosphere
40		
41	Homogenization	Removing changes in time series data that might have arisen for
42		non-climatic reasons
43		
44	Internal variability	natural cycles and variations in climate
45		
46		

47	Temperature inversion	
48		a condition in which the air temperature increases with height, in
49		contrast to the more common situation in which temperature
50		decreases with altitude
51		
52	Isothermal	constant temperature; often refers to a temperature profile meaning
53		constant temperature with height
54		
55	Lapse rate	the rate at which temperature decreases with increasing elevation
56		
57	Latent heat	the heat required to change the phase of a substance (solid to
58		liquid, liquid to vapor or solid to vapor); the temperature does not
59		change during this process; the heat is released for the reverse
60		process
61		
62	Latent heat of water	the energy released or gained by water during phase changes
63		
64	Metadata	supplemental records used to interpret measurements, such as how
65		and where measurements were collected and processed
66		
67	Moist enthalpy	sensible and latent heat content of the air; includes contributions
68		from temperature and from the amount of water vapor expressed as
69		specific humidity
70		
71	Parameterization	a mathematical representation of a process that cannot be explicitly
72		resolved in a climate model
73		
74	Radiosonde	a balloon carrying a thermometer or other sensing device that takes
75		measurements in the atmosphere and transmits them by radio to a
76		data recorder on the surface
77		
78	Reanalysis	a mathematically blended record that incorporates a variety of
79		observational data sets (with adjustments) in an assimilation model
80		
81	Reference networks	a small subset of sites consisting of multiple instruments that
82		independently measure the same variable which if well
83		coordinated could provide full characterization of instrument
84		errors and biases, significantly reducing uncertainty in observed
85		climate change
86		
87	Relative humidity	the percentage of water vapor in the air relative to what is required
88		for saturation to occur at a given temperature
89		
90	Sensible heat	heat that can be measured by a thermometer
91		

92 **Specific humidity** the amount of water vapor in the air in units of kilograms of water
 93 vapor per kilogram of air
 94

95 **Trend** a systematic change over time
 96
 97
 98

99 **Acronyms, Symbols, Abbreviations**

100		
101	AATSR	Advanced Along-Track Scanning Radiometer
102	AGCM	Atmospheric General Circulation Model
103	AIRS	Atmospheric InfraRed Sounder
104	AMIP	Atmospheric Model Intercomparison Project
105	AMSR	Advanced Microwave Scanning Radiometer
106	AMSU	Advanced Microwave Sounding Unit
107	AOGCM	Atmosphere-Ocean General Circulation Model
108	ATMS	Advanced Technology Microwave Sounder
109	ATSR	Along-Track Scanning Radiometer
110	AVHRR	Advanced Very High Resolution Radiometer
111	C20C	Climate of the 20 th Century
112	CCSM	Community Climate System Model
113	CDR	Climate Data Record
114	CGCM	Coupled Atmosphere-Ocean General Circulation Model
115	CH ₄	Methane
116	CLIVAR	Climate Variability and Prediction
117	CMIP2	Coupled Model Intercomparison Project (version 2)
118	CMIS	Conical scanning Microwave Imager/Sounder
119	CO ₂	Carbon Dioxide
120	COADS	Comprehensive Ocean-Atmosphere Data Set
121	COWL	Cold Ocean Warm Land
122	CrIS	Cross-track Infrared Sounder
123	CRN	Climate Reference Network
124	EBM	Energy Balance Model
125	ECMWF	European Center for Medium-Range Weather Forecasts
126	ENSO	El Niño-Southern Oscillation
127	EOF	Empirical Orthogonal Function
128	ERA	ECMWF Re-Analysis
129	ERSST	Extended Reconstruction Sea Surface Temperature
130	GCM	General Circulation Model
131	GCOS	Global Climate Observing System
132	GCSM	Global Climate System Model (includes atmosphere, land, oceans, 133 glaciers)
134	GEOSS	Global Earth Observation System of Systems
135	GFDL	Geophysical Fluid Dynamics Laboratory
136	GHCN	Global Historical Climatology Network
137	GHGs	Greenhouse Gases

138	GHRSSST-PP	GODAE High-Resolution Sea Surface Temperature Pilot Project
139	GISS	Goddard Institute for Space Studies
140	GODAE	Global Ocean Data Assimilation Experiment
141	GPS	Global Positioning System
142	GSN	GCOS Surface Network
143	GUANGCOS	Upper Air Network
144	HadCM	Hadley Centre Climate Model
145	HadRTHadley	Centre Radiosonde Temperatures
146	hPa	hectoPascals, a measure of pressure
147	HIRS	High-resolution Infrared Radiation Sounder
148	IASI	Infrared Atmospheric Sounding Interferometer
149	ICOADS	International Comprehensive Ocean-Atmosphere Data Set
150	IGRA	Integrated Global Radiosonde Archive
151	IPCC	Intergovernmental Panel on Climate Change
152	IR	Infrared Radiation
153	ITCZ	Inter Tropical Convergence Zone
154	LECT	Local Equator Crossing Time
155	LKS	Lanzante, Klein, Seidel
156	LOSU	Level of Scientific Understanding
157	LTER	Long Term Ecological Research
158	LR	Linear Regression
159	MAT	Marine Air Temperatures
160	MPS	Median of Pair-wise Slopes
161	MSU	Microwave Sounding Unit
162	NAM	Northern Hemisphere Annual Mode
163	NAO	North Atlantic Oscillation
164	NASA	National Aeronautics and Space Administration
165	NCAR	National Center for Atmospheric Research
166	NCDC	National Climatic Data Center
167	NCEP	National Centers for Environmental Prediction
168	NEMS	Nimbus E Microwave Spectrometer
169	NESDIS	National Environmental Satellite, Data, and Information Service
170	NH	Northern Hemisphere
171	NMATNight	Marine Air Temperatures
172	N ₂ O	Nitrous Oxide
173	NOAA	National Oceanic and Atmospheric Administration
174	NPOESS	National Polar-orbiting Operational Environmental Satellite System
175	NRC	National Research Council
176	O ₃	Ozone
177	PCM	Parallel Climate Model
178	PDO	Pacific Decadal Oscillation
179	QBO	Quasi-Biennial Oscillation
180	RATPAC	Radiosonde Atmospheric Temperature Products for Assessing Climate
181	RSS	Remote Sensing Systems
182	SAM	Southern Hemisphere Annual Mode
183	SCAMS	SCAnning Microwave Spectrometer

184	SH	Southern Hemisphere
185	SMMR	Scanning Multi-spectral Microwave Radiometer
186	SO ₄	Sulfate
187	SRN	Surface Reference Network
188	SSM/I	Special Sensor Microwave Imager
189	SST	Sea Surface Temperature
190	SSU	Stratospheric Sounding Unit
191	TAO	Tropical Atmosphere Ocean
192	TIROS	Television InfraRed Observation Satellite
193	TLT	Temperature of the Lower Troposphere
194	TOGA	Tropical Ocean Global Atmosphere
195	TOVS	TIROS Operational Vertical Sounder
196	TRMM	Tropical Rainfall Measuring Mission
197	UAH	University of Alabama in Huntsville
198	UNFCCC	United Nations Framework Convention on Climate Change
199	USHCN	United States Historical Climatology Network
200	UTC	Coordinated Universal Time
201	VOS	Voluntary Observing Ships
202	VTPR	Vertical Temperature Profile Radiometer
203	WMO	World Meteorological Organization
204		