Contents	Temperature records from the University of Alabama data series
Metadata	Information about this file
NonSmooth	Annual average land and ocean temperatures, base period 1981-2010, without smooth, worldwide, 1978-2019, (degrees celsius)
3ySmooth	Annual average land and ocean temperatures, base period 1981-2010, with the 3-year smooth, worldwide, 1978-2019, (degrees celsius)
7ySmooth	Annual average land and ocean temperatures, base period 1981-2010, with the 7-year smooth, worldwide, 1978-2019, (degrees celsius)
11ySmooth	Annual average land and ocean temperatures, base period 1981-2010, with the 11-year smooth, worldwide, 1978-2019, (degrees celsius)

http://www.dannydorling.org/

Metadata

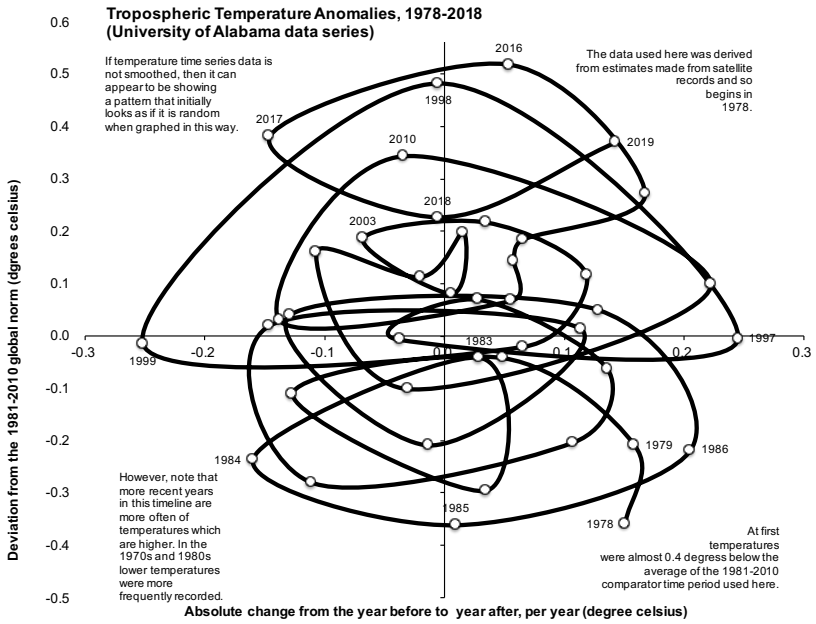
These reference tables contain statistics of the temperatures from the UAH temperature dataset by Roy W.Spencer, John R. Christy and William D. Braswell. Here we use varying length periods to smooth the data, and the readers can see the apparent differences this creates in graphs. The graph besides each table shows the temperature anomaly of that year as compared to the average temperature of 1981-2010, and the absolute change over time. The x-axis is the absolute change while the y-axis is the anomaly (difference from the 1981-2010 average). Each circle represents a certain year.

Contents

Annual average land and ocean temperatures, base period 1981-2010, without smooth, worldwide, 1978-2019, (degrees celsius)

Source: Version 6.0 of the UAH Temperature Dataset Released: New LT Trend = +0.11 C/decade; http://www.drroyspencer.com/2015/04/version-6-0-of-the-uah-temperature-dataset-released-new-lt-trend-0-11-cdecade/; 24 June 2019
Frequency: Yearly, End of period

Observation date	Absolute change (degree celsius)	Non-Average (degree celsius)	Temperature anomaly (degree celsius)	Label
1978	0.1508	-0.36	-0.36	1978
1979	0.1588	-0.21	-0.21	1979
1980	0.0492	-0.04	-0.04	
1981	-0.1267	-0.11	-0.11	
1982	0.0346	-0.30	-0.30	
1983	0.0292	-0.04	-0.04	1983
1984	-0.1600	-0.24	-0.24	1984
1985	0.0096	-0.36	-0.36	1985
1986	0.2054	-0.22	-0.22	1986
1987	0.1288	0.05	0.05	
1988	-0.1292	0.04	0.04	
1989	-0.0133	-0.21	-0.21	
1990	0.1142	0.01	0.01	
1991	-0.1463	0.02	0.02	
1992	-0.1113	-0.28	-0.28	
1993	0.1079	-0.20	-0.20	
1994	0.1363	-0.06	-0.06	
1995	0.0283	0.07	0.07	
1996	-0.0375	-0.01	-0.01	
1997	0.2450	-0.01	-0.01	1997
1998	-0.0050	0.48	0.48	1998
1999	-0.2517	-0.02	-0.02	1999
2000	0.0658	-0.02	-0.02	
2001	0.1188	0.12	0.12	
2002	0.0350	0.22	0.22	
2003	-0.0679	0.19	0.19	2003
2004	0.0062	0.08	0.08	
2005	0.0158	0.20	0.20	
2006	-0.0196	0.11	0.11	
2007	-0.1071	0.16	0.16	
2008	-0.0300	-0.10	-0.10	
2009	0.2225	0.10	0.10	
2010	-0.0346	0.34	0.34	2010
2011	-0.1379	0.03	0.03	
2012	0.0563	0.07	0.07	
2013	0.0579	0.14	0.14	
2014	0.0650	0.18	0.18	
2015	0.1675	0.27	0.27	
2016	0.0542	0.52	0.52	2016
2017	-0.1458	0.38	0.38	2017
2018	-0.0054	0.23	0.23	2018
2019	0.1433	0.37	0.37	2019

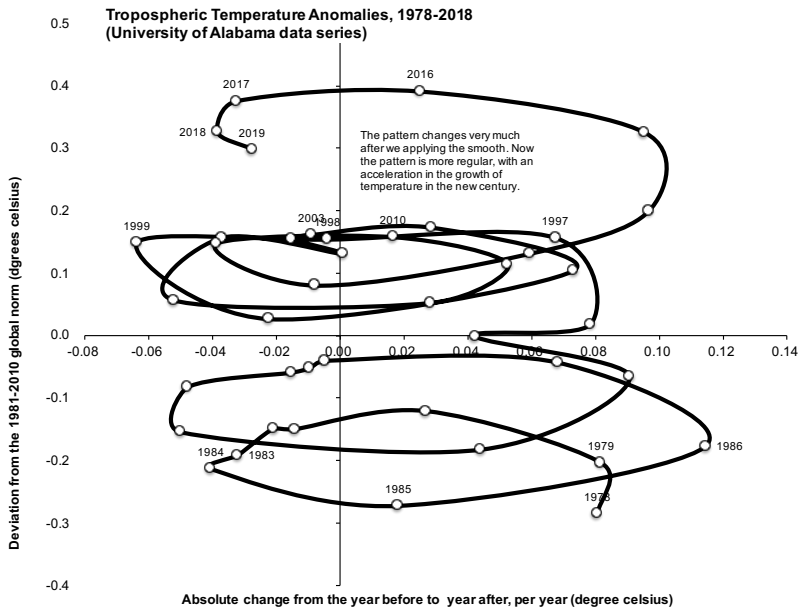


Contents

Annual average land and ocean temperatures, base period 1981-2010, with the 3-year smooth, worldwide, 1978-2019, (degrees celsius)

Source: Version 6.0 of the UAH Temperature Dataset Released: New LT Trend = +0.11 C/decade; http://www.drroyspencer.com/2015/04/version-6-0-of-the-uah-temperature-dataset-released-new-lt-trend-0-11-cdecade/; 24 June 2019
Frequency: Yearly, End of period

Observation date	Absolute change (degree celsius)	Average over three years (degree celsius)	Temperature anomaly (degree celsius)	Label
1978	0.0807	-0.28	-0.36	1978
1979	0.0819	-0.20	-0.21	1979
1980	0.0271	-0.12	-0.04	
1981	-0.0143	-0.15	-0.11	
1982	-0.0210	-0.15	-0.30	
1983	-0.0321	-0.19	-0.04	1983
1984	-0.0404	-0.21	-0.24	1984
1985	0.0183	-0.27	-0.36	1985
1986	0.1146	-0.18	-0.22	1986
1987	0.0683	-0.04	0.05	
1988	-0.0046	-0.04	0.04	
1989	-0.0094	-0.05	-0.21	
1990	-0.0151	-0.06	0.01	
1991	-0.0478	-0.08	0.02	
1992	-0.0499	-0.15	-0.28	
1993	0.0443	-0.18	-0.20	
1994	0.0908	-0.07	-0.06	
1995	0.0424	0.00	0.07	
1996	0.0786	0.02	-0.01	
1997	0.0675	0.16	-0.01	1997
1998	-0.0039	0.15	0.48	1998
1999	-0.0636	0.15	-0.02	1999
2000	-0.0224	0.03	-0.02	
2001	0.0732	0.10	0.12	
2002	0.0286	0.17	0.22	
2003	-0.0089	0.16	0.19	2003
2004	-0.0153	0.16	0.08	
2005	0.0008	0.13	0.20	
2006	-0.0369	0.16	0.11	
2007	-0.0522	0.06	0.16	
2008	0.0285	0.05	-0.10	
2009	0.0526	0.11	0.10	
2010	0.0167	0.16	0.34	2010
2011	-0.0388	0.15	0.03	
2012	-0.0079	0.08	0.07	
2013	0.0597	0.13	0.14	
2014	0.0968	0.20	0.18	
2015	0.0956	0.32	0.27	
2016	0.0253	0.39	0.52	2016
2017	-0.0324	0.38	0.38	2017
2018	-0.0385	0.33	0.23	2018
2019	-0.0275	0.30	0.37	2019

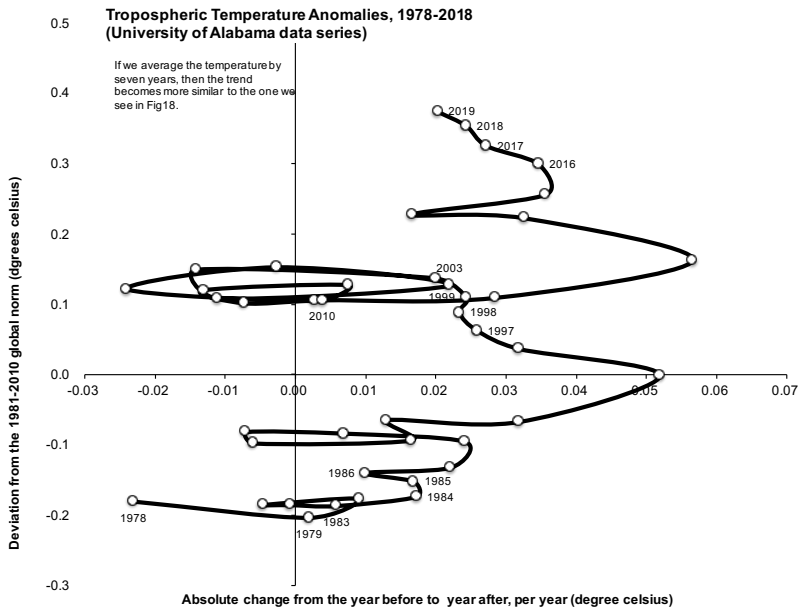


Contents

Annual average land and ocean temperatures, base period 1981-2010, with the 7-year smooth, worldwide, 1978-2019, (degrees celsius)

Source: Version 6.0 of the UAH Temperature Dataset Released: New LT Trend = +0.11 C/decade; http://www.drroyspencer.com/2015/04/version-6-0-of-the-uah-temperature-dataset-released-new-lt-trend-0-11-cdecade/; 24 June 2019
Frequency: Yearly, End of period

Observation date	Absolute change (degree celsius)	Average over seven years (degree celsius)	Temperature anomaly (degree celsius)	Label
1978	-0.0230	-0.18	-0.36	1978
1979	0.0020	-0.20	-0.21	1979
1980	0.0092	-0.18	-0.04	
1981	-0.0045	-0.19	-0.11	
1982	-0.0008	-0.19	-0.30	
1983	0.0059	-0.19	-0.04	1983
1984	0.0173	-0.17	-0.24	1984
1985	0.0169	-0.15	-0.36	1985
1986	0.0101	-0.14	-0.22	1986
1987	0.0222	-0.13	0.05	
1988	0.0242	-0.10	0.04	
1989	0.0069	-0.08	-0.21	
1990	-0.0070	-0.08	0.01	
1991	-0.0060	-0.10	0.02	
1992	0.0165	-0.09	-0.28	
1993	0.0131	-0.06	-0.20	
1994	0.0318	-0.07	-0.06	
1995	0.0520	0.00	0.07	
1996	0.0319	0.04	-0.01	
1997	0.0259	0.06	-0.01	1997
1998	0.0234	0.09	0.48	1998
1999	0.0243	0.11	-0.02	1999
2000	0.0200	0.14	-0.02	
2001	-0.0141	0.15	0.12	
2002	-0.0111	0.11	0.22	
2003	0.0220	0.13	0.19	2003
2004	-0.0027	0.15	0.08	
2005	-0.0239	0.12	0.20	
2006	0.0029	0.10	0.11	
2007	0.0076	0.13	0.16	
2008	-0.0130	0.12	-0.10	
2009	-0.0072	0.10	0.10	
2010	0.0039	0.11	0.34	2010
2011	0.0285	0.11	0.03	
2012	0.0567	0.16	0.07	
2013	0.0326	0.22	0.14	
2014	0.0167	0.23	0.18	
2015	0.0357	0.26	0.27	
2016	0.0347	0.30	0.52	2016
2017	0.0273	0.33	0.38	2017
2018	0.0243	0.35	0.23	2018
2019	0.0203	0.37	0.37	2019



Contents

Annual average land and ocean temperatures, base period 1981-2010, with the 11-year smooth, worldwide, 1978-2019, (degrees celsius)

Source: Version 6.0 of the UAH Temperature Dataset Released: New LT Trend = +0.11 C/decade; http://www.drroyspencer.com/2015/04/version-6-0-of-the-uah-temperature-dataset-released-new-lt-trend-0-11-cdecade/; 24 June 2019
Frequency: Yearly, End of period

Observation date	Absolute change (degree celsius)	Average over 11 years (degree celsius)	Temperature anomaly (degree celsius)	Label
1978	0.0270	-0.20	-0.36	1978
1979	0.0092	-0.18	-0.21	1979
1980	-0.0154	-0.19	-0.04	
1981	-0.0116	-0.21	-0.11	
1982	0.0123	-0.21	-0.30	
1983	0.0328	-0.18	-0.04	1983
1984	0.0200	-0.14	-0.24	1984
1985	0.0027	-0.14	-0.36	1985
1986	0.0093	-0.14	-0.22	1986
1987	0.0073	-0.12	0.05	
1988	-0.0073	-0.12	0.04	
1989	0.0006	-0.14	-0.21	
1990	0.0302	-0.12	0.01	
1991	0.0321	-0.08	0.02	
1992	0.0078	-0.06	-0.28	
1993	0.0194	-0.06	-0.20	
1994	0.0318	-0.02	-0.06	
1995	0.0080	0.00	0.07	
1996	0.0032	0.00	-0.01	
1997	0.0297	0.01	-0.01	1997
1998	0.0443	0.06	0.48	1998
1999	0.0267	0.10	-0.02	1999
2000	0.0137	0.11	-0.02	
2001	0.0125	0.12	0.12	
2002	0.0143	0.14	0.22	
2003	-0.0210	0.15	0.19	2003
2004	-0.0235	0.09	0.08	
2005	0.0240	0.10	0.20	
2006	0.0139	0.14	0.11	
2007	-0.0118	0.13	0.16	
2008	-0.0096	0.12	-0.10	2008
2009	0.0030	0.11	0.10	
2010	0.0088	0.12	0.34	2010
2011	0.0240	0.13	0.03	
2012	0.0314	0.17	0.07	
2013	0.0275	0.19	0.14	
2014	0.0300	0.23	0.18	
2015	0.0086	0.25	0.27	
2016	0.0084	0.24	0.52	2016
2017	0.0278	0.27	0.38	2017
2018	0.0275	0.30	0.23	2018
2019	0.0261	0.33	0.37	2019