Anne K Smith

List of Publications by Year
in descending order

135 papers	5,800 citations	76294 40 h-index	91828 69 g-index
147 all docs	147 docs citations	147 times ranked	3260 citing authors

#	Article	IF	Citations
1	Assessment of the quality of the Version 1.07 temperatureâ€versusâ€pressure profiles of the middle atmosphere from TIMED/SABER. Journal of Geophysical Research, 2008, 113, .	3.3	369
2	Chemistry of the 1991â€“1992 stratospheric winter: Three-dimensional model simulations. Journal of Geophysical Research, 1994, 99, 8183.	3.3	285
3	The Whole Atmosphere Community Climate Model Version 6 (WACCM6). Journal of Geophysical Research D: Atmospheres, 2019, 124, 12380-12403.	1.2	261
4	Modification of the Gravity Wave Parameterization in the Whole Atmosphere Community Climate Model: Motivation and Results. Journals of the Atmospheric Sciences, 2017, 74, 275-291.	0.6	180
5	Global Dynamics of the MLT. Surveys in Geophysics, 2012, 33, 1177-1230.	2.1	161
6	Thermosphere extension of the Whole Atmosphere Community Climate Model. Journal of Geophysical Research, 2010, 115, .	3.3	144
7	Temporal variations of atomic oxygen in the upper mesosphere from SABER. Journal of Geophysical Research, 2010, 115, .	3.3	135
8	WACCM simulations of the mean circulation and trace species transport in the winter mesosphere. Journal of Geophysical Research, 2011, 116, .	3.3	123
9	Representation of the Community Earth System Model (CESM1) CAM4-chem within the Chemistry-Climate Model Initiative (CCMI). Geoscientific Model Development, 2016, 9, 1853-1890.	1.3	122
10	Seasonal and quasiâ€biennial variations in the migrating diurnal tide observed by Thermosphere, Ionosphere, Mesosphere, Energetics and Dynamics (TIMED). Journal of Geophysical Research, 2009, 114, .	3.3	117
11	Simulation of the combined effects of solar cycle, quasi-biennial oscillation, and volcanic forcing on stratospheric ozone changes in recent decades. Journal of Geophysical Research, 2003, 108, .	3.3	112
12	Planetary waves in coupling the stratosphere and mesosphere during the major stratospheric warming in 2003/2004. Journal of Geophysical Research, 2008, 113, .	3.3	109
13	The Origin of Stationary Planetary Waves in the Upper Mesosphere. Journals of the Atmospheric Sciences, 2003, 60, 3033-3041.	0.6	108
14	Atomic oxygen in the mesosphere and lower thermosphere derived from SABER: Algorithm theoretical basis and measurement uncertainty. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5724-5735.	1.2	101
15	Longitudinal Variations in Mesospheric Winds: Evidence for Gravity Wave Filtering by Planetary Waves. Journals of the Atmospheric Sciences, 1996, 53, 1156-1173.	0.6	93
16	On the distribution of CO₂ and CO in the mesosphere and lower thermosphere. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5700-5718.	1.2	90
17	SABER observations of the OH Meinel airglow variability near the mesopause. Journal of Geophysical Research, 2006, 111, .	3.3	88
18	On the composite response of the MLT to major sudden stratospheric warming events with elevated stratopause. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4518-4537.	1.2	87

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19	The existence of a tertiary ozone maximum in the high-latitude middle mesosphere. Geophysical Research Letters, 2001, 28, 4531-4534.	1.5	81
20	Using TIMED/SABER nightglow observations to investigate hydroxyl emission mechanisms in the mesopause region. Journal of Geophysical Research, 2012, 117, .	3.3	76
21	Mesopause structure from Thermosphere, Ionosphere, Mesosphere, Energetics, and Dynamics (TIMED)/Sounding of the Atmosphere Using Broadband Emission Radiometry (SABER) observations. Journal of Geophysical Research, 2007, 112, .	3.3	72
22	The impact of solar spectral irradiance variability on middle atmospheric ozone. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	70
23	Modeling and Analysis of the Structure and Generation of the Terdiurnal Tide. Journals of the Atmospheric Sciences, 2001, 58, 3116-3134.	0.6	65
24	Global structure and longâ€term variations of zonal mean temperature observed by TIMED/SABER. Journal of Geophysical Research, 2007, 112, .	3.3	64
25	Stationary Planetary Waves in Upper Mesospheric Winds. Journals of the Atmospheric Sciences, 1997, 54, 2129-2145.	0.6	63
26	Structure of the terdiurnal tide at 95 km. Geophysical Research Letters, 2000, 27, 177-180.	1.5	63
27	Physics and chemistry of the mesopause region. Journal of Atmospheric and Solar-Terrestrial Physics, 2004, 66, 839-857.	0.6	63
28	Satellite observations of ozone in the upper mesosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5803-5821.	1.2	63
29	Sensitivity of Sudden Stratospheric Warmings to Previous Stratospheric Conditions. Journals of the Atmospheric Sciences, 2017, 74, 2857-2877.	0.6	62
30	Processes that account for the ozone maximum at the mesopause. Journal of Geophysical Research, 2005, 110, .	3.3	61
31	On the Dynamical Control of the Mesosphereâ€“Lower Thermosphere by the Lower and Middle Atmosphere. Journals of the Atmospheric Sciences, 2017, 74, 933-947.	0.6	58
32	SABER observations of mesospheric ozone during NH late winter 2002â€“2009. Geophysical Research Letters, 2009, 36, .	1.5	57
33	Mesospheric ozone response to changes in water vapor. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	56
34	The diurnal and semidiurnal tides over Ascension Island (Â° S, 14Â° W) and their interaction with the stratospheric quasi-biennial oscillation: studies with meteor radar, eCMAM and WACCM. Atmospheric Chemistry and Physics, 2013, 13, 9543-9564.	1.9	55
35	Stratospheric Temperature Trends over 1979â€“2015 Derived from Combined SSU, MLS, and SABER Satellite Observations. Journal of Climate, 2016, 29, 4843-4859.	1.2	54
36	Response of the mesosphere to human-induced perturbations and solar variability calculated by a 2-D model. Journal of Geophysical Research, 2002, 107, ACH 7-1.	3.3	52

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37	Strong longitudinal variations in the OH nightglow. Geophysical Research Letters, 2010, 37, .	1.5	52
38	An observational estimate of gravity wave drag from the momentum balance in the middle atmosphere. Journal of Geophysical Research, 1985, 90, 2233-2241.	3.3	46
39	Satellite observations of high nighttime ozone at the equatorial mesopause. Journal of Geophysical Research, 2008, 113, .	3.3	46
40	The influence of major sudden stratospheric warming and elevated stratopause events on the effects of energetic particle precipitation in WACCM. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,636.	1.2	42
41	Wintertime Northern Hemisphere Response in the Stratosphere to the Pacific Decadal Oscillation Using the Whole Atmosphere Community Climate Model. Journal of Climate, 2016, 29, 1031-1049.	1.2	42
42	Insignificant influence of the 11-year solar cycle on the North Atlantic Oscillation. Nature Geoscience, 2019, 12, 94-99.	5.4	42
43	The Global Residual Mean Circulation in the Middle Atmosphere for the Northern Winter Period. Journals of the Atmospheric Sciences, 1987, 44, 1437-1454.	0.6	41
44	Atomic hydrogen in the mesopause region derived from SABER: Algorithm theoretical basis, measurement uncertainty, and results. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3516-3526.	1.2	41
45	Evaluation of the Quasiâ€Biennial Oscillation in global climate models for the SPARC QBOâ€initiative. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1459-1489.	1.0	41
46	Wave Transience and Wave-Mean Flow Interaction Caused by the Interference of Stationary and Traveling Waves. Journals of the Atmospheric Sciences, 1985, 42, 529-535.	0.6	40
47	Nighttime secondary ozone layer during major stratospheric sudden warmings in specifiedâ€dynamics WACCM. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8346-8358.	1.2	40
48	The Semiannual Oscillation of the Tropical Zonal Wind in the Middle Atmosphere Derived from Satellite Geopotential Height Retrievals. Journals of the Atmospheric Sciences, 2017, 74, 2413-2425.	0.6	40
49	Evidence for nonmigrating tides produced by the interaction between tides and stationary planetary waves in the stratosphere and lower mesosphere. Journal of Geophysical Research D: Atmospheres, 2014, 119, 471-489.	1.2	39
50	Observations and modeling of the 6-hour tide in the upper mesosphere. Journal of Geophysical Research, 2004, 109, .	3.3	38
51	Perturbations of the sodium layer: controlled by chemistry or dynamics?. Geophysical Research Letters, 2003, 30, .	1.5	36
52	Signature of an overturning gravity wave in the mesospheric sodium layer: Comparison of a nonlinear photochemical-dynamical model and lidar observations. Journal of Geophysical Research, 2006, 111, .	3.3	36
53	Numerical simulation of the seasonal variation of mesospheric water vapor. Journal of Geophysical Research, 1991, 96, 7553-7563.	3.3	35
54	A numerical study of the effect of gravity-wave propagation on minor species distributions in the mesopause region. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	35

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55	A link between variability of the semidiurnal tide and planetary waves in the opposite hemisphere. Geophysical Research Letters, 2007, 34, .	1.5	35
56	Global distribution and variability of quasi 2â€‰day waves based on the NOGAPSâ€ALPHA reanalysis model. Journal of Geophysical Research: Space Physics, 2016, 121, 11,422.	0.8	35
57	Numerical simulation of global variations of temperature, ozone, and trace species in the stratosphere. Journal of Geophysical Research, 1995, 100, 1253-1269.	3.3	34
58	Observation of Wave-Wave Interactions in the Stratosphere. Journals of the Atmospheric Sciences, 1983, 40, 2484-2496.	0.6	33
59	Interaction of chemical heating and the diurnal tide in the mesosphere. Journal of Geophysical Research, 2003, 108, .	3.3	33
60	Decadalâ€scale periodicities in the stratosphere associated with the solar cycle and the QBO. Journal of Geophysical Research, 2008, 113, .	3.3	33
61	Transport of mesospheric H₂O during and after the stratospheric sudden warming of January 2010: observation and simulation. Atmospheric Chemistry and Physics, 2012, 12, 5413-5427.	1.9	33
62	An observational and theoretical study of the longitudinal variation in neutral temperature induced by aurora heating in the lower thermosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 7410-7425.	0.8	32
63	Stationary Waves in the Winter Stratosphere: Seasonal and Interannual Variability. Journals of the Atmospheric Sciences, 1983, 40, 245-261.	0.6	31
64	Spatio-temporal observations of the tertiary ozone maximum. Atmospheric Chemistry and Physics, 2009, 9, 4439-4445.	1.9	29
65	Simulations of the response of mesospheric circulation and temperature to the Antarctic ozone hole. Geophysical Research Letters, 2010, 37, .	1.5	29
66	CO₂(Î½₂)-O quenching rate coefficient derived from coincidental SABER/TIMED and Fort Collins lidar observations of the mesosphere and lower thermosphere. Atmospheric Chemistry and Physics, 2012, 12, 9013-9023.	1.9	27
67	Radiative and energetic constraints on the global annual mean atomic oxygen concentration in the mesopause region. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5796-5802.	1.2	26
68	Features of the seasonal variation of the semidiurnal, terdiurnal and 6-h components of ozone heating evaluated from Aura/MLS observations. Annales Geophysicae, 2012, 30, 259-281.	0.6	25
69	Stratospheric O₃ changes during 2001â€“2010: the small role of solar flux variations in a chemical transport model. Atmospheric Chemistry and Physics, 2013, 13, 10113-10123.	1.9	25
70	Interhemispheric Coupling Mechanisms in the Middle Atmosphere of WACCM6. Journals of the Atmospheric Sciences, 2019, 77, 1101-1118.	0.6	25
71	The Mesospheric Diabatic Circulation and the Parameterized Thermal Effect of Gravity Wave Breaking on the Circulation. Journals of the Atmospheric Sciences, 1991, 48, 1093-1111.	0.6	24
72	Interactions Between the Lower, Middle and Upper Atmosphere. Space Science Reviews, 2012, 168, 1-21.	3.7	24

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73	Comparison of Six Lightning Parameterizations in CAM5 and the Impact on Global Atmospheric Chemistry. Earth and Space Science, 2019, 6, 2317-2346.	1.1	24
74	Significant reduction in the stratospheric ozone deficit using a three-dimensional model constrained with UARS data. Journal of Geophysical Research, 1998, 103, 16203-16219.	3.3	23
75	Odin observations of Antarctic nighttime NO densities in the mesosphereâ€“lower thermosphere and observations of a lower NO layer. Journal of Geophysical Research D: Atmospheres, 2013, 118, 7414-7425.	1.2	23
76	Southern Hemisphere Summer Mesopause Responses to El NiÃ±oâ€“Southern Oscillation. Journal of Climate, 2016, 29, 6319-6328.	1.2	23
77	Waveâ€“Wave Interactions in the Stratosphere: Observations during Quiet and Active Wintertime Periods. Journals of the Atmospheric Sciences, 1984, 41, 363-373.	0.6	22
78	The effects of gravity waves on distributions of chemically active constituents in the mesopause region. Journal of Geophysical Research, 2000, 105, 26593-26602.	3.3	21
79	Climatology of the migrating terdiurnal tide (TW3) in SABER/TIMED temperatures. Journal of Geophysical Research: Space Physics, 2013, 118, 1755-1767.	0.8	21
80	Cryogenic Infrared Spectrometers and Telescopes for the Atmosphere (CRISTA) observations of tracer transport by inertially unstable circulations. Journal of Geophysical Research, 1999, 104, 19171-19182.	3.3	20
81	Comparison of rotational temperature derived from groundâ€based OH airglow observations with TIMED/SABER to evaluate the Einstein coefficients. Journal of Geophysical Research: Space Physics, 2015, 120, 10069-10082.	0.8	20
82	The role of the solar irradiance variability in the evolution of the middle atmosphere during 2004â€“2009. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3781-3793.	1.2	19
83	Temporal Variability of Atomic Hydrogen From the Mesopause to the Upper Thermosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 1006-1017.	0.8	19
84	The Effect of the Maddenâ€Julian Oscillation on the Mesospheric Migrating Diurnal Tide: A Study Using SDâ€WACCM. Geophysical Research Letters, 2018, 45, 5105-5114.	1.5	19
85	Preconditioning for Stratospheric Sudden Warmings: Sensitivity Studies with a Numerical Model. Journals of the Atmospheric Sciences, 1992, 49, 1003-1019.	0.6	18
86	Middle atmosphere Kelvin waves observed in Cryogenic Infrared Spectrometers and Telescopes for the Atmosphere (CRISTA) 1 and 2 temperature and trace species. Journal of Geophysical Research, 2002, 107, CRI 5-1-CRI 5-22.	3.3	18
87	Comparison of mesospheric and lower thermospheric residual wind with High Resolution Doppler Imager, medium frequency, and meteor radar winds. Journal of Geophysical Research, 2000, 105, 27023-27035.	3.3	17
88	A climatology of planetary waveâ€driven mesospheric inversion layers in the extratropical winter. Journal of Geophysical Research D: Atmospheres, 2015, 120, 399-413.	1.2	17
89	Natural and human-induced perturbations in the middle atmosphere: A short tutorial. Geophysical Monograph Series, 2000, , 7-20.	0.1	16
90	WACCM climate chemistry sensitivity to sprite perturbations. Journal of Geophysical Research D: Atmospheres, 2014, 119, 6958-6970.	1.2	16

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91	Estimation of the equivalent Rayleigh friction in mesosphere/lower thermosphere region from the migrating diurnal tides observed by TIMED. Journal of Geophysical Research, 2009, 114, .	3.3	15
92	Doubleâ€layer structure of OH dayglow in the mesosphere. Journal of Geophysical Research: Space Physics, 2015, 120, 5778-5787.	0.8	15
93	The Response of the Southern Hemisphere Middle Atmosphere to the Maddenâ€"Julian Oscillation during Austral Winter Using the Specified-Dynamics Whole Atmosphere Community Climate Model. Journal of Climate, 2017, 30, 8317-8333.	1.2	15
94	Seasonal variation of the Hough modes of the diurnal component of ozone heating evaluated from Aura Microwave Limb Sounder observations. Journal of Geophysical Research, 2010, 115, .	3.3	14
95	Nighttime ozone variability in the high latitude winter mesosphere. Journal of Geophysical Research D: Atmospheres, 2014, 119, 13,547.	1.2	14
96	Examining the stratospheric response to the solar cycle in a coupled WACCM simulation with an internally generated QBO. Atmospheric Chemistry and Physics, 2014, 14, 4843-4856.	1.9	14
97	First Observations of Shortâ€Period Eastward Propagating Planetary Waves From the Stratosphere to the Lower Thermosphere (110Âkm) in Winter Antarctica. Geophysical Research Letters, 2017, 44, 10,744.	1.5	14
98	Winds and tides of the Antarctic mesosphere and lower thermosphere: One year of meteor-radar observations over Rothera (68Â°S, 68Â°W) and comparisons with WACCM and eCMAM. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 212, 105510.	0.6	14
99	Representation of the equatorial stratopause semiannual oscillation in global atmospheric reanalyses. Atmospheric Chemistry and Physics, 2020, 20, 9115-9133.	1.9	14
100	Conditions for the photochemical destabilization of gravity waves in the mesopause region. Journal of Atmospheric and Solar-Terrestrial Physics, 2001, 63, 1821-1829.	0.6	13
101	Temporal evolution of nightglow emission responses to SSW events observed by TIMED/SABER. Journal of Geophysical Research, 2011, 116, .	3.3	13
102	The Integrated Enstrophy Budget of the Winter Stratosphere Diagnosed from LIMS Data. Journals of the Atmospheric Sciences, 1986, 43, 1074-1086.	0.6	12
103	Salaries and Advancement of Women Faculty in Atmospheric Science: Some Reasons for Concern. Bulletin of the American Meteorological Society, 1996, 77, 473-490.	1.7	12
104	Evaluation of the Mesospheric Polar Vortices in WACCM. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10626-10645.	1.2	12
105	The equatorial stratospheric semiannual oscillation and timeâ€mean winds in QBOi models. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 1593-1609.	1.0	12
106	A retrieval algorithm for satellite remote sensing of the nighttime global distribution of the sodium layer. Journal of Atmospheric and Solar-Terrestrial Physics, 2005, 67, 739-748.	0.6	11
107	Global Occurrence and Chemical Impact of Stratospheric Blue Jets Modeled With WACCM4. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2841-2864.	1.2	11
108	Studies of gravity waveâ€"induced fluctuations of the sodium layer using linear and nonlinear models. Journal of Geophysical Research, 2004, 109, .	3.3	10

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109	Longâ€Term Variability and Tendencies in Middle Atmosphere Temperature and Zonal Wind From WACCM6 Simulations During 1850â€“2014. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033579.	1.2	10
110	Spatial and Temporal Structure of the Tertiary Ozone Maximum in the Polar Winter Mesosphere. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4373-4389.	1.2	8
111	The eddy transport of nonconserved trace species derived from satellite data. Journal of Geophysical Research, 1988, 93, 11103-11122.	3.3	7
112	Observation of low frequency Kelvin waves in the mesosphere. Earth, Planets and Space, 1999, 51, 649-656.	0.9	7
113	Comparison of horizontal winds from the LIMS satellite instrument with rocket measurements. Journal of Geophysical Research, 1985, 90, 3897-3901.	3.3	6
114	Lagrangian Mean Circulations in the Stratosphere. Journals of the Atmospheric Sciences, 1987, 44, 2252-2266.	0.6	6
115	A Resonant Wave in a Numerical Model of the 1979 Sudden Stratospheric Warming. Journals of the Atmospheric Sciences, 1987, 44, 3150-3161.	0.6	6
116	Longitudinal variability of the mesopause SAO. Geophysical Research Letters, 1997, 24, 1991-1994.	1.5	6
117	Stratoâ€mesospheric ozone measurements using groundâ€based millimeterâ€wave spectroscopy at Thule, Greenland. Journal of Geophysical Research, 2012, 117, .	3.3	6
118	Nonmigrating tidal variability in the SABER/TIMED mesospheric ozone. Geophysical Research Letters, 2014, 41, 4059-4067.	1.5	6
119	Dynamical and chemical feedback in a two-dimensional interactive model of the middle atmosphere. Journal of Geophysical Research, 1995, 100, 11085.	3.3	5
120	The heating efficiency of the exothermic reaction HÂ+ÂO₃ in the mesosphere. Journal of Geophysical Research D: Atmospheres, 2015, 120, 12739-12747.	1.2	5
121	An upper-branch Brewerâ€“Dobson circulation index for attribution of stratospheric variability and improved ozone and temperature trend analysis. Atmospheric Chemistry and Physics, 2016, 16, 15485-15500.	1.9	5
122	Longâ€Term Variability and Tendencies in Migrating Diurnal Tide From WACCM6 Simulations During 1850â€“2014. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033644.	1.2	5
123	SABER Observations of Daytime Atomic Oxygen and Ozone Variability in the Mesosphere. , 2011, , 75-82.		5
124	The dependence of constituent transport on chemistry in a twoâ€dimensional model of the middle atmosphere. Journal of Geophysical Research, 1990, 95, 13749-13764.	3.3	3
125	Effects of solar proton events on dayglow observed by the TIMED/SABER satellite. Journal of Geophysical Research: Space Physics, 2017, 122, 7619-7635.	0.8	3
126	Mesospheric Nitric Oxide Transport in WACCM. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	3

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127	Global Middle-Atmosphere Response to Winter Stratospheric Variability in SABER and MLS Mean Temperature. Journals of the Atmospheric Sciences, 2022, 79, 1727-1741.	0.6	3
128	Simulations of Zonal Mean Gravity Wave Drag Shortâ€Term Variability in the Southern Hemisphere Mesosphere. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11,849.	1.2	2
129	Can the Maddenâ€Julian Oscillation Affect the Antarctic Total Column Ozone?. Geophysical Research Letters, 2020, 47, e2020GL088886.	1.5	2
130	Longâ€Term Variability and Tendencies in Nonâ€Migrating Diurnal Tide From WACCM6 Simulations During 1850â€“2014. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028904.	0.8	2
131	Impact of averaged photolysis rates on stratospheric chemical models. Journal of Geophysical Research, 1995, 100, 11173.	3.3	1
132	The study and applications of photochemical-dynamical gravity wave model II. Science in China Series A: Mathematics, 2002, 45, 175-182.	0.5	0
133	Interactions Between the Lower, Middle and Upper Atmosphere. Space Sciences Series of ISSI, 2011, , 1-21.	0.0	0
134	Data Availability Principles and Practice. Journals of the Atmospheric Sciences, 2020, 77, 3983-3984.	0.6	0
135	Significance Statements Communicate Our Science More Widely. Journals of the Atmospheric Sciences, 2020, 77, 3981-3981.	0.6	0