Miriam Sinnhuber

List of Publications by Year
in descending order

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80 papers	2,920 citations	218677 26 h-index	197818 49 g-index
115 all docs	115 docs citations	115 times ranked	2789 citing authors

#	Article	IF	Citations
1	Solar forcing for CMIP6 (v3.2). Geoscientific Model Development, 2017, 10, 2247-2302.	3.6	293
2	The Detection of Large HNO3-Containing Particles in the Winter Arctic Stratosphere. Science, 2001, 291, 1026-1031.	12.6	279
3	Energetic Particle Precipitation and the Chemistry of the Mesosphere/Lower Thermosphere. Surveys in Geophysics, 2012, 33, 1281-1334.	4.6	188
4	Neutral atmospheric influences of the solar proton events in October-November 2003. Journal of Geophysical Research, 2005, 110, .	3.3	160
5	Composition changes after the "Halloween" solar proton event: the High Energy Particle Precipitation in the Atmosphere (HEPPA) model versus MIPAS data intercomparison study. Atmospheric Chemistry and Physics, 2011, 11, 9089-9139.	4.9	145
6	The contribution of anthropogenic bromine emissions to past stratospheric ozone trends: a modelling study. Atmospheric Chemistry and Physics, 2009, 9, 2863-2871.	4.9	112
7	Chemical depletion of Arctic ozone in winter 1999/2000. Journal of Geophysical Research, 2002, 107, SOL 18-1.	3.3	95
8	NO2 and BrO vertical profile retrieval from SCIAMACHY limb measurements: Sensitivity studies. Advances in Space Research, 2005, 36, 846-854.	2.6	93
9	Ozone depletion during the solar proton events of October/November 2003 as seen by SCIAMACHY. Journal of Geophysical Research, 2005, 110, .	3.3	90
10	Global observations of stratospheric bromine monoxide from SCIAMACHY. Geophysical Research Letters, 2005, 32, .	4.0	79
11	The influence of the several very large solar proton events in years 2000â€“2003 on the neutral middle atmosphere. Advances in Space Research, 2005, 35, 445-450.	2.6	74
12	Validation of MIPAS-ENVISAT NO₂ operational data. Atmospheric Chemistry and Physics, 2007, 7, 3261-3284.	4.9	57
13	A model study of the impact of magnetic field structure on atmospheric composition during solar proton events. Geophysical Research Letters, 2003, 30, .	4.0	55
14	HEPPA-II modelâ€“measurement intercomparison project: EPP indirect effects during the dynamically perturbed NH winter 2008â€“2009. Atmospheric Chemistry and Physics, 2017, 17, 3573-3604.	4.9	55
15	On the disappearance of noctilucent clouds during the January 2005 solar proton events. Geophysical Research Letters, 2007, 34, .	4.0	53
16	Modeling impacts of geomagnetic field variations on middle atmospheric ozone responses to solar proton events on long timescales. Journal of Geophysical Research, 2008, 113, .	3.3	45
17	Using a photochemical model for the validation of NO₂ satellite measurements at different solar zenith angles. Atmospheric Chemistry and Physics, 2005, 5, 393-408.	4.9	39
18	Energetic particles in the paleomagnetosphere: Reduced dipole configurations and quadrupolar contributions. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	39

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19	Conversion of mesospheric HCl into active chlorine during the solar proton event in July 2000 in the northern polar region. Journal of Geophysical Research, 2009, 114, .	3.3	37
20	Interannual variation of NO_{<i>x</i>}from the lower thermosphere to the upper stratosphere in the years 1991-2005. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	37
21	Global investigation of the Mg atom and ion layers using SCIAMACHY/Envisat observations between 70 and 150 km altitude and WACCM-Mg model results. Atmospheric Chemistry and Physics, 2015, 15, 273-295.	4.9	36
22	NO_{<i>y</i>} production, ozone loss and changes in net radiative heating due to energetic particle precipitation in 2002â€“2010. Atmospheric Chemistry and Physics, 2018, 18, 1115-1147.	4.9	35
23	Validation of ozone measurements from the Improved Limb Atmospheric Spectrometer. Journal of Geophysical Research, 2002, 107, ILS 9-1.	3.3	34
24	Cross comparisons of O3 and NO2 measured by the atmospheric ENVISAT instruments GOMOS, MIPAS, and SCIAMACHY. Advances in Space Research, 2005, 36, 855-867.	2.6	34
25	Annual variation of strato-mesospheric carbon monoxide measured by ground-based Fourier transform infrared spectrometry. Atmospheric Chemistry and Physics, 2007, 7, 1305-1312.	4.9	34
26	Large decadal scale changes of polar ozone suggest solar influence. Atmospheric Chemistry and Physics, 2006, 6, 1835-1841.	4.9	33
27	Energetic particle induced intra-seasonal variability of ozone inside the Antarctic polar vortex observed in satellite data. Atmospheric Chemistry and Physics, 2015, 15, 3327-3338.	4.9	33
28	Ozone depletion observed by the Airborne Submillimeter Radiometer (ASUR) during the Arctic winter 1999/2000. Journal of Geophysical Research, 2002, 107, SOL 19-1.	3.3	27
29	NO_{<i>x</i>} production due to energetic particle precipitation in the MLT region: Results from ion chemistry model studies. Journal of Geophysical Research: Space Physics, 2014, 119, 2137-2148.	2.4	26
30	The response of mesospheric NO to geomagnetic forcing in 2002â€“2012 as seen by SCIAMACHY. Journal of Geophysical Research: Space Physics, 2016, 121, 3603-3620.	2.4	26
31	Vortexwide denitrification of the Arctic polar stratosphere in winter 1999/2000 determined by remote observations. Journal of Geophysical Research, 2002, 107, SOL 48-1-SOL 48-11.	3.3	23
32	A new model suite to determine the influence of cosmic rays on (exo)planetary atmospheric biosignatures. Astronomy and Astrophysics, 2019, 631, A101.	5.1	23
33	Validation and data characteristics of nitrous oxide and methane profiles observed by the Improved Limb Atmospheric Spectrometer (ILAS) and processed with the Version 5.20 algorithm. Journal of Geophysical Research, 2003, 108, .	3.3	21
34	Proxima Centauri b: A Strong Case for Including Cosmic-Ray-induced Chemistry in Atmospheric Biosignature Studies. Astrophysical Journal, 2020, 893, 12.	4.5	21
35	SCIAMACHY limb measurements in the UV/Vis spectral region: first results. Advances in Space Research, 2004, 34, 775-779.	2.6	20
36	Global column density retrievals of mesospheric and thermospheric Mg I and Mg II from SCIAMACHY limb and nadir radiance data. Journal of Geophysical Research, 2008, 113, .	3.3	19

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37	Evaluation of stratospheric chlorine chemistry for the Arctic spring 2005 using modelled and measured OClO column densities. Atmospheric Chemistry and Physics, 2011, 11, 689-703.	4.9	18
38	Variability of NO_x in the polar middle atmosphere from October 2003 to March 2004: vertical transport vs. local production by energetic particles. Atmospheric Chemistry and Physics, 2014, 14, 7681-7692.	4.9	18
39	The 27â€‰day solar rotational effect on mesospheric nighttime OH and O 3 observations induced by geomagnetic activity. Journal of Geophysical Research: Space Physics, 2015, 120, 7926-7936.	2.4	18
40	Retrieval of nitric oxide in the mesosphere and lower thermosphere from SCIAMACHY limb spectra. Atmospheric Measurement Techniques, 2013, 6, 2521-2531.	3.1	17
41	Comparison of nitric oxide measurements in the mesosphere and lower thermosphere from ACE-FTS, MIPAS, SCIAMACHY, and SMR. Atmospheric Measurement Techniques, 2015, 8, 4171-4195.	3.1	17
42	Intercomparison of ozone profile measurements from ASUR, SCIAMACHY, MIPAS, OSIRIS, and SMR. Journal of Geophysical Research, 2007, 112, .	3.3	16
43	Space-borne measurements of mesospheric magnesium species â€“ a retrieval algorithm and preliminary profiles. Atmospheric Chemistry and Physics, 2008, 8, 1963-1983.	4.9	16
44	HEPPA III Intercomparison Experiment on Electron Precipitation Impacts: 1. Estimated Ionization Rates During a Geomagnetic Active Period in April 2010. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	16
45	Atmospheric Ionization Module OsnabrÃ¼ck (AIMOS): 2. Total particle inventory in the Octoberâ€“November 2003 event and ozone. Journal of Geophysical Research, 2010, 115, .	3.3	14
46	Using gas-phase nitric acid as an indicator of PSC composition. Journal of Geophysical Research, 2002, 107, SOL 8-1.	3.3	13
47	Rapid meridional transport of tropical airmasses to the Arctic during the major stratospheric warming in January 2003. Atmospheric Chemistry and Physics, 2005, 5, 1291-1299.	4.9	13
48	Lifetime and production rate of NO_x in the upper stratosphere and lower mesosphere in the polar spring/summer after the solar proton event in Octoberâ€“November 2003. Atmospheric Chemistry and Physics, 2013, 13, 2531-2539.	4.9	13
49	On the climatological probability of the vertical propagation of stationary planetary waves. Atmospheric Chemistry and Physics, 2016, 16, 8447-8460.	4.9	13
50	Retrieval algorithm for densities of mesospheric and lower thermospheric metal atom and ion species from satellite-borne limb emission signals. Atmospheric Measurement Techniques, 2014, 7, 29-48.	3.1	13
51	Retrieval of O₂(¹Î£) and O₂(¹Î”) volume emission rates in the mesosphere and lower thermosphere using SCIAMACHY MLT limb scans. Atmospheric Measurement Techniques, 2018, 11, 473-487.	3.1	12
52	Model results of OH airglow considering four different wavelength regions to derive night-time atomic oxygen and atomic hydrogen in the mesopause region. Atmospheric Chemistry and Physics, 2019, 19, 1835-1851.	4.9	12
53	SCIAMACHYâ€™s View of the Changing Earthâ€™s Environment. , 2011, , 175-216.		11
54	Heppa III Intercomparison Experiment on Electron Precipitation Impacts: 2. Modelâ€Measurement Intercomparison of Nitric Oxide (NO) During a Geomagnetic Storm in April 2010. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	10

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55	Do vibrationally excited OH molecules affect middle and upper atmospheric chemistry?. Atmospheric Chemistry and Physics, 2010, 10, 9953-9964.	4.9	9
56	Local impact of solar variation on NO₂ in the lower mesosphere and upper stratosphere from 2007 to 2012. Atmospheric Chemistry and Physics, 2014, 14, 4055-4064.	4.9	9
57	Retrieval of nitric oxide in the mesosphere from SCIAMACHY nominal limb spectra. Atmospheric Measurement Techniques, 2017, 10, 209-220.	3.1	8
58	Expected performance of the Superconducting Submillimeter-Wave Limb Emission Sounder compared with aircraft data. Radio Science, 2005, 40, n/a-n/a.	1.6	7
59	Effects of Geomagnetic Variations on System Earth. Advances in Geophysical and Environmental Mechanics and Mathematics, 2009, , 159-208.	0.2	7
60	Arctic ozone depletion in 2002-2003 measured by ASUR and comparison with POAM observations. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	7
61	Exceptional middle latitude electron precipitation detected by balloon observations: implications for atmospheric composition. Atmospheric Chemistry and Physics, 2022, 22, 6703-6716.	4.9	7
62	Trajectory studies of large HNO3-containing PSC particles in the Arctic: Evidence for the role of NAT. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	6
63	Stratomesospheric CO measured by a groundâ€based Fourier Transform Spectrometer over Poker Flat, Alaska: Comparisons with Odin/SMR and a 2â€D model. Journal of Geophysical Research, 2007, 112, .	3.3	6
64	Ozone profile retrieval from limb scatter measurements in the HARTLEY bands: further retrieval details and profile comparisons. Atmospheric Chemistry and Physics, 2008, 8, 2509-2517.	4.9	6
65	Correction to â€œConversion of mesospheric HCl into active chlorine during the solar proton event in July 2000 in the northern polar regionâ€• Journal of Geophysical Research, 2011, 116, .	3.3	6
66	Energetic electron precipitation into the atmosphere. , 2020, , 279-321.		6
67	Retrieval of sodium number density profiles in the mesosphere and lower thermosphere from SCIAMACHY limb emission measurements. Atmospheric Measurement Techniques, 2016, 9, 295-311.	3.1	5
68	Particle precipitation: How the spectrum fit impacts atmospheric chemistry. Journal of Atmospheric and Solar-Terrestrial Physics, 2016, 149, 191-206.	1.6	5
69	Model studies of short-term variations induced in trace gases by particle precipitation in the mesosphere and lower thermosphere. Journal of Geophysical Research: Space Physics, 2016, 121, 10,431-10,447.	2.4	5
70	Influence of Solar Radiation on the Diurnal and Seasonal Variability of O3 and H2O in the Stratosphere and Lower Mesosphere, Based on Continuous Observations in the Tropics and the High Arctic. Springer Atmospheric Sciences, 2013, , 125-147.	0.3	5
71	Commentary on â€œAtmospheric ionization by highâ€fluence, hardâ€spectrum solar proton events and their probable appearance in the ice core archiveâ€•by A.L. Melott et al. and â€œNitrate ion spikes in ice cores not suitable as proxies for solar proton eventsâ€•by K.A. Duderstadt et al.. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3034-3035.	3.3	4
72	Mesospheric nitric oxide model from SCIAMACHY data. Atmospheric Chemistry and Physics, 2019, 19, 2135-2147.	4.9	4

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73	Multiple Airglow Chemistry approach for atomic oxygen retrievals on the basis of insitu nightglow emissions. Journal of Atmospheric and Solar-Terrestrial Physics, 2019, 194, 105096.	1.6	3
74	Quantifying uncertainties of climate signals in chemistry climate models related to the 11-year solar cycle â€“ Part 1: Annual mean response in heating rates, temperature, and ozone. Atmospheric Chemistry and Physics, 2020, 20, 6991-7019.	4.9	3
75	Atmospheric processes affecting methane on Mars. Icarus, 2022, 382, 114940.	2.5	3
76	Inner-tropical ozone measurements at the MÃ©rida Atmospheric Research Station (MARS) using ground-based microwave radiometry. International Journal of Remote Sensing, 2009, 30, 4019-4032.	2.9	2
77	The Impact of Energetic Particle Precipitation on the Chemical Composition of the Middle Atmosphere: Measurements and Model Predictions. Springer Atmospheric Sciences, 2013, , 275-299.	0.3	2
78	<scp>INCREASE</scp>: An updated model suite to study the <scp>INfluence</scp> of Cosmic Rays on Exoplanetary <scp>AtmoSpherEs</scp>. Astronomische Nachrichten, 2022, 343, .	1.2	2
79	Energetic electron precipitation and their atmospheric effect. E3S Web of Conferences, 2020, 196, 01005.	0.5	1
80	Atmospheric Effects during the Precipitation of Energetic Electrons. Bulletin of the Russian Academy of Sciences: Physics, 2021, 85, 1310-1313.	0.6	1