Thomas von Clarmann

List of Publications by Year
in descending order

91	3,337	147786	197805
papers	citations	31 h-index	49 g-index

92	92	92	1952
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optimized forward model and retrieval scheme for MIPAS near-real-time data processing. Applied Optics, 2000, 39, 1323.	2.1	188
2	Observed temporal evolution of global mean age of stratospheric air for the 2002 to 2010 period. Atmospheric Chemistry and Physics, 2012, 12, 3311-3331.	4.9	181
3	Sensitivity of trace gas abundances retrievals from infrared limb emission spectra to simplifying approximations in radiative transfer modelling. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 72, 249-280.	2.3	148
4	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
5	Observation of NOxenhancement and ozone depletion in the Northern and Southern Hemispheres after the October-November 2003 solar proton events. Journal of Geophysical Research, 2005, 110, .	3.3	132
6	Downward transport of upper atmospheric NOxinto the polar stratosphere and lower mesosphere during the Antarctic 2003 and Arctic 2002/2003 winters. Journal of Geophysical Research, 2005, 110, .	3.3	131
7	Arctic winter 2010/2011 at the brink of an ozone hole. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	88
8	Retrieval of stratospheric NOxfrom 5.3 and 6.2 Î¼m nonlocal thermodynamic equilibrium emissions measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. Journal of Geophysical Research, 2005, 110, .	3.3	84
9	Evidence for dynamical coupling from the lower atmosphere to the thermosphere during a major stratospheric warming. Geophysical Research Letters, 2010, 37, .	4.0	80
10	Global observations of stratospheric bromine monoxide from SCIAMACHY. Geophysical Research Letters, 2005, 32, .	4.0	79
11	Selection of optimized microwindows for atmospheric spectroscopy. Applied Optics, 1998, 37, 7661.	2.1	76
12	Constrained profile retrieval applied to the observation mode of the Michelson Interferometer for Passive Atmospheric Sounding. Applied Optics, 2001, 40, 3559.	2.1	75
13	Validation of MIPAS IMK/IAA temperature, water vapor, and ozone profiles with MOHAVE-2009 campaign measurements. Atmospheric Measurement Techniques, 2012, 5, 289-320.	3.1	74
14	HNO3, N2O5, and ClONO2enhancements after the October-November 2003 solar proton events. Journal of Geophysical Research, 2005, 110, .	3.3	69
15	GLObal limb Radiance Imager for the Atmosphere (GLORIA): Scientific objectives. Advances in Space Research, 2005, 36, 989-995.	2.6	68
16	Water vapor distributions measured with the Michelson Interferometer for Passive Atmospheric Sounding on board Envisat (MIPAS/Envisat). Journal of Geophysical Research, 2005, 110, .	3.3	63
17	Model, software and database for line-mixing effects in the Î½3 and Î½4 bands of CH4 and tests using laboratory and planetary measurementsâ€"I: N2 (and air) broadenings and the earth atmosphere. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 101, 284-305.	2.3	60
18	Experimental evidence of perturbed odd hydrogen and chlorine chemistry after the October 2003 solar proton events. Journal of Geophysical Research, 2005, 110, .	3.3	55

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19	An enhanced HNO3second maximum in the Antarctic midwinter upper stratosphere 2003. Journal of Geophysical Research, 2005, 110, .	3.3	52
20	Tropical dehydration processes constrained by the seasonality of stratospheric deuterated water. Nature Geoscience, 2010, 3, 262-266.	12.9	50
21	NOypartitioning and budget and its correlation with N2O in the Arctic vortex and in summer midlatitudes in 1997. Journal of Geophysical Research, 2002, 107, ACH 3-1.	3.3	49
22	Technical Note: Trend estimation from irregularly sampled, correlated data. Atmospheric Chemistry and Physics, 2010, 10, 6737-6747.	4.9	49
23	Global CFC-11 (CCl₃F) and CFC-12 (CCl₂F₂) measurements with the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS): retrieval, climatologies and trends. Atmospheric Chemistry and Physics, 2012, 12, 11857-11875.	4.9	49
24	Global observations of thermospheric temperature and nitric oxide from MIPAS spectra at 5.3Î¼m. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	46
25	Optimized spectral microwindows for data analysis of the Michelson Interferometer for Passive Atmospheric Sounding on the Environmental Satellite. Applied Optics, 2000, 39, 5531.	2.1	45
26	Global distributions of C₂H₆, C₂H₂, HCN, and PAN retrieved from MIPAS reduced spectral resolution measurements. Atmospheric Measurement Techniques, 2012, 5, 723-734.	3.1	44
27	Tomographic retrieval of atmospheric parameters from infrared limb emission observations. Applied Optics, 2005, 44, 3291.	2.1	43
28	Spaceborne ClO observations by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) before and during the Antarctic major warming in September/October 2002. Journal of Geophysical Research, 2004, 109, .	3.3	41
29	Global distribution and variability of formic acid as observed by MIPASâ€ENVISAT. Journal of Geophysical Research, 2010, 115, .	3.3	41
30	First spaceborne observations of Antarctic stratospheric ClONO2recovery: Austral spring 2002. Journal of Geophysical Research, 2004, 109, .	3.3	40
31	Groundâ€based microwave ozone radiometer measurements compared with Auraâ€MLS v2.2 and other instruments at two Network for Detection of Atmospheric Composition Change sites. Journal of Geophysical Research, 2007, 112, .	3.3	40
32	About the increase of HNO₃ in the stratopause region during the Halloween 2003 solar proton event. Geophysical Research Letters, 2008, 35, .	4.0	39
33	Ozone loss driven by nitrogen oxides and triggered by stratospheric warmings can outweigh the effect of halogens. Journal of Geophysical Research, 2007, 112, .	3.3	38
34	A thermal infrared instrument onboard a geostationary platform for CO and O₃ measurements in the lowermost troposphere: Observing System Simulation Experiments (OSSE). Atmospheric Measurement Techniques, 2011, 4, 1637-1661.	3.1	36
35	Remote sensing of the middle atmosphere with MIPAS. , 2003, , .		35
36	On the role of non-random errors in inverse problems in radiative transfer and other applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2001, 71, 39-46.	2.3	34

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37	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
38	Overview: Estimating and reporting uncertainties in remotely sensed atmospheric composition and temperature. Atmospheric Measurement Techniques, 2020, 13, 4393-4436.	3.1	31
39	On the quality of MIPAS kinetic temperature in the middle atmosphere. Atmospheric Chemistry and Physics, 2012, 12, 6009-6039.	4.9	30
40	Global stratospheric HOCl distributions retrieved from infrared limb emission spectra recorded by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). Journal of Geophysical Research, 2006, 111, .	3.3	29
41	The Stratospheric and Mesospheric NOy in the 2002â€“2004 Polar Winters as measured by MIPAS/ENVISAT. Space Science Reviews, 2007, 125, 403-416.	8.1	29
42	The geostationary tropospheric pollution explorer (GeoTROPE) mission: objectives, requirements and mission concept. Advances in Space Research, 2004, 34, 682-687.	2.6	28
43	Spectra calculations in central and wing regions of CO2 IR bands between 10 and . III: atmospheric emission spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 90, 61-76.	2.3	28
44	Cross-validation of MIPAS/ENVISAT and GPS-RO/CHAMP temperature profiles. Journal of Geophysical Research, 2004, 109, .	3.3	27
45	Vibrationally excited ozone in the middle atmosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2006, 68, 202-212.	1.6	26
46	Stratospheric N2O5in the austral spring 2002 as retrieved from limb emission spectra recorded by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). Journal of Geophysical Research, 2004, 109, .	3.3	25
47	Comparison of HDO measurements from Envisat/MIPAS with observations by Odin/SMR and SCISAT/ACE-FTS. Atmospheric Measurement Techniques, 2011, 4, 1855-1874.	3.1	25
48	MIPAS observations of volcanic sulfate aerosol and sulfur dioxide in the stratosphere. Atmospheric Chemistry and Physics, 2018, 18, 1217-1239.	4.9	24
49	Karlsruhe optimized and precise radiative transfer algorithm: II. Interface to retrieval applications. , 1998, , .		24
50	Analysis of nonlocal thermodynamic equilibrium CO 4.7Î¼m fundamental, isotopic, and hot band emissions measured by the Michelson Interferometer for Passive Atmospheric Sounding on Envisat. Journal of Geophysical Research, 2007, 112, .	3.3	23
51	Intercomparison of radiative transfer codes under non-local thermodynamic equilibrium conditions. Journal of Geophysical Research, 2002, 107, ACH 12-1.	3.3	22
52	Comment on â€œOrigin of the Januaryâ€“April 2004 increase in stratospheric NO2observed in northern polar latitudesâ€•by Jean-Baptiste Renard et al.. Geophysical Research Letters, 2007, 34, .	4.0	22
53	Intercomparison of three microwave/infrared high resolution line-by-line radiative transfer codes. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 211, 64-77.	2.3	22
54	Retrieval of stratospheric and mesospheric O3 from high resolution MIPAS spectra at 15 and 10 Î¼m. Advances in Space Research, 2005, 36, 943-951.	2.6	21

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55	Atmospheric non-local thermodynamic equilibrium emissions as observed by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). Comptes Rendus Physique, 2005, 6, 848-863.	0.9	20
56	Impact of January 2005 solar proton events on chlorine species. Atmospheric Chemistry and Physics, 2012, 12, 4159-4179.	4.9	19
57	A characterization of the warm 1999 Arctic winter by observations and modeling: NOypartitioning and dynamics. Journal of Geophysical Research, 2002, 107, ACH 4-1.	3.3	18
58	The geostationary scanning imaging absorption spectrometer (GeoSCIA) as part of the geostationary tropospheric pollution explorer (GeoTROPE) mission: requirements, concepts and capabilities. Advances in Space Research, 2004, 34, 694-699.	2.6	17
59	Validation of stratospheric temperatures measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. Journal of Geophysical Research, 2005, 110, .	3.3	16
60	Global distributions of HO2NO2as observed by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). Journal of Geophysical Research, 2007, 112, .	3.3	16
61	Trends of atmospheric water vapour in Switzerland from ground-based radiometry, FTIR and GNSS data. Atmospheric Chemistry and Physics, 2020, 20, 11223-11244.	4.9	16
62	Measurements of polar mesospheric clouds in infrared emission by MIPAS/ENVISAT. Journal of Geophysical Research, 2009, 114, .	3.3	15
63	State parameter data base for MIPAS data analysis. Advances in Space Research, 2002, 30, 2387-2392.	2.6	14
64	The Geostationary Fourier Imaging Spectrometer (GeoFIS) as part of the Geostationary Tropospheric Pollution Explorer (GeoTroPE) mission: objectives and capabilities. Advances in Space Research, 2004, 34, 688-693.	2.6	14
65	IMK/IAA MIPAS temperature retrieval version 8: nominal measurements. Atmospheric Measurement Techniques, 2021, 14, 4111-4138.	3.1	13
66	Ground-based ozone profiles over central Europe: incorporating anomalous observations into the analysis of stratospheric ozone trends. Atmospheric Chemistry and Physics, 2019, 19, 4289-4309.	4.9	12
67	Measurements of global distributions of polar mesospheric clouds during 2005â€“2012 by MIPAS/Envisat. Atmospheric Chemistry and Physics, 2016, 16, 6701-6719.	4.9	10
68	Comparisons of MIPAS/ENVISAT ozone profiles with SMR/ODIN and HALOE/UARS observations. Advances in Space Research, 2005, 36, 927-931.	2.6	9
69	Longitudinal variations of temperature and ozone profiles observed by MIPAS during the Antarctic stratosphere sudden warming of 2002. Journal of Geophysical Research, 2005, 110, .	3.3	9
70	Do vibrationally excited OH molecules affect middle and upper atmospheric chemistry?. Atmospheric Chemistry and Physics, 2010, 10, 9953-9964.	4.9	9
71	Global distributions of CO₂ volume mixing ratio in the middle and upper atmosphere from daytime MIPAS high-resolution spectra. Atmospheric Measurement Techniques, 2016, 9, 6081-6100.	3.1	9
72	Evidence for CH47.6 Î¼m non-local thermodynamic equilibrium emission in the mesosphere. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	8

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73	<title>Intercomparison of the KOPRA and the RFM radiative transfer codes</title>. , 1999, 3867, 348.		7
74	Early IMK/IAA MIPAS/ENVISAT results. , 2003, 4882, 184.		7
75	Global stratospheric hydrogen peroxide distribution from MIPAS-Envisat full resolution spectra compared to KASIMA model results. Atmospheric Chemistry and Physics, 2012, 12, 4923-4933.	4.9	6
76	Comparisons of MIPAS-observed temperature profiles with other satellite measurements. , 2004, , .		5
77	Evidence for N2OÎ½34.5Î¼m non-local thermodynamic equilibrium emission in the atmosphere. Geophysical Research Letters, 2007, 34, .	4.0	5
78	Retrievals of heavy ozone with MIPAS. Atmospheric Measurement Techniques, 2016, 9, 6069-6079.	3.1	5
79	The application of mean averaging kernels to mean trace gas distributions. Atmospheric Measurement Techniques, 2019, 12, 5155-5160.	3.1	5
80	Analysis of averaged broadband residuals between MIPAS-Envisat spectra and line-by-line calculations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1330-1339.	2.3	3
81	Merged ozone profiles from four MIPAS processors. Atmospheric Measurement Techniques, 2017, 10, 1511-1518.	3.1	3
82	<title>Optimized spectral microwindows for midlatitude and polar trace gas retrieval from MIPAS-ENVISAT measurements</title>. , 2001, , .		2
83	Non-LTE studies for the analysis of MIPAS/ENVISAT data. , 2002, , .		2
84	New non-LTE retrieval method for atmospheric parameters from MIPAS/ENVISAT emission spectra at 5.3 Î¼m. , 2002, 4539, 396.		2
85	A reassessment of the discrepancies in the annual variation of Î´D-H₂O in the tropical lower stratosphere between the MIPAS and ACE-FTS satellite data sets. Atmospheric Measurement Techniques, 2020, 13, 287-308.	3.1	1
86	Retrievability of Upper Tropospheric Species and Parameters from MIPAS/ENVISAT Data. , 2004, , 167-180.		1
87	<title>Determination of optical and microphysical properties of volcanic stratospheric aerosols from MIPAS-B limb emission spectra</title>. , 1996, , .		0
88	<title>Retrieval of pressure and temperature from MIPAS-ENVISAT limb emission spectra</title>. , 1996, , .		0
89	<title>Retrieval of PSC properties from MIPAS-ENVISAT measurements</title>. , 2001, 4150, 52.		0
90	Feasibility of measurements of water vapor and ice clouds in the tropical UT/LS region with MIPAS/Envisat. Advances in Space Research, 2004, 34, 815-819.	2.6	0

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91	Tropopause altitude determination from temperature profile measurements of reduced vertical resolution. Atmospheric Measurement Techniques, 2019, 12, 4113-4129.	3.1	0