

Thomas von Clarmann

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

90
papers

2,824
citations

32
h-index

50
g-index

92
ext. papers

3,149
ext. citations

4.3
avg, IF

4.21
L-index

#	Paper	IF	Citations
90	Optimized forward model and retrieval scheme for MIPAS near-real-time data processing. <i>Applied Optics</i> , 2000 , 39, 1323-40	1.7	168
89	Observed temporal evolution of global mean age of stratospheric air for the 2002 to 2010 period. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 3311-3331	6.8	151
88	Sensitivity of trace gas abundances retrievals from infrared limb emission spectra to simplifying approximations in radiative transfer modelling. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2002 , 72, 249-280	2.1	124
87	Observation of NO _x enhancement and ozone depletion in the Northern and Southern Hemispheres after the October/November 2003 solar proton events. <i>Journal of Geophysical Research</i> , 2005 , 110,		118
86	Downward transport of upper atmospheric NO _x into the polar stratosphere and lower mesosphere during the Antarctic 2003 and Arctic 2002/2003 winters. <i>Journal of Geophysical Research</i> , 2005 , 110,		117
85	Composition changes after the "Halloween" solar proton event: the High Energy Particle Precipitation in the Atmosphere (HEPPA) model versus MIPAS data intercomparison study. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 9089-9139	6.8	113
84	Arctic winter 2010/2011 at the brink of an ozone hole. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	73
83	Evidence for dynamical coupling from the lower atmosphere to the thermosphere during a major stratospheric warming. <i>Geophysical Research Letters</i> , 2010 , 37, n/a-n/a	4.9	70
82	Retrieval of stratospheric NO _x from 5.3 and 6.2 μ m nonlocal thermodynamic equilibrium emissions measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. <i>Journal of Geophysical Research</i> , 2005 , 110,		70
81	Global observations of stratospheric bromine monoxide from SCIAMACHY. <i>Geophysical Research Letters</i> , 2005 , 32,	4.9	69
80	Selection of optimized microwindows for atmospheric spectroscopy. <i>Applied Optics</i> , 1998 , 37, 7661-9	1.7	68
79	Validation of MIPAS IMK/IAA temperature, water vapor, and ozone profiles with MOHAVE-2009 campaign measurements. <i>Atmospheric Measurement Techniques</i> , 2012 , 5, 289-320	4	63
78	HNO ₃ , N ₂ O ₅ , and ClONO ₂ enhancements after the October/November 2003 solar proton events. <i>Journal of Geophysical Research</i> , 2005 , 110,		63
77	Constrained profile retrieval applied to the observation mode of the michelson interferometer for passive atmospheric sounding. <i>Applied Optics</i> , 2001 , 40, 3559-71	1.7	60
76	Water vapor distributions measured with the Michelson Interferometer for Passive Atmospheric Sounding on board Envisat (MIPAS/Envisat). <i>Journal of Geophysical Research</i> , 2005 , 110,		53
75	GLOBAL limb Radiance Imager for the Atmosphere (GLORIA): Scientific objectives. <i>Advances in Space Research</i> , 2005 , 36, 989-995	2.4	53
74	Model, software and database for line-mixing effects in the ν_2 and ν_4 bands of CH ₄ and tests using laboratory and planetary measurements ν_2 N ₂ (and air) broadenings and the earth atmosphere. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2006 , 101, 284-305	2.1	52

73	An enhanced HNO ₃ second maximum in the Antarctic midwinter upper stratosphere 2003. <i>Journal of Geophysical Research</i> , 2005 , 110,		50
72	Experimental evidence of perturbed odd hydrogen and chlorine chemistry after the October 2003 solar proton events. <i>Journal of Geophysical Research</i> , 2005 , 110,		49
71	Tropical dehydration processes constrained by the seasonality of stratospheric deuterated water. <i>Nature Geoscience</i> , 2010 , 3, 262-266	18.3	44
70	Technical Note: Trend estimation from irregularly sampled, correlated data. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 6737-6747	6.8	43
69	Global CFC-11 (CFC-11) and CFC-12 (CFC-12) measurements with the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS): retrieval, climatologies and trends. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 11857-11875	6.8	42
68	NO _y partitioning and budget and its correlation with N ₂ O in the Arctic vortex and in summer midlatitudes in 1997. <i>Journal of Geophysical Research</i> , 2002 , 107, ACH 3-1		42
67	Optimized spectral microwindows for data analysis of the Michelson Interferometer for Passive Atmospheric Sounding on the Environmental Satellite. <i>Applied Optics</i> , 2000 , 39, 5531-40	1.7	41
66	Tomographic retrieval of atmospheric parameters from infrared limb emission observations. <i>Applied Optics</i> , 2005 , 44, 3291-301	1.7	37
65	Spaceborne ClO observations by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) before and during the Antarctic major warming in September/October 2002. <i>Journal of Geophysical Research</i> , 2004 , 109,		37
64	Global distribution and variability of formic acid as observed by MIPAS-ENVISAT. <i>Journal of Geophysical Research</i> , 2010 , 115,		36
63	About the increase of HNO ₃ in the stratopause region during the Halloween 2003 solar proton event. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	36
62	First spaceborne observations of Antarctic stratospheric ClONO ₂ recovery: Austral spring 2002. <i>Journal of Geophysical Research</i> , 2004 , 109,		36
61	Global observations of thermospheric temperature and nitric oxide from MIPAS spectra at 5.3 μ m. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		33
60	Global distributions of C ₂ H ₆ , C ₂ H ₂ , HCN, and PAN retrieved from MIPAS reduced spectral resolution measurements. <i>Atmospheric Measurement Techniques</i> , 2012 , 5, 723-734	4	33
59	Ground-based microwave ozone radiometer measurements compared with Aura-MLS v2.2 and other instruments at two Network for Detection of Atmospheric Composition Change sites. <i>Journal of Geophysical Research</i> , 2007 , 112,		32
58	A thermal infrared instrument onboard a geostationary platform for CO and O ₃ measurements in the lowermost troposphere: Observing System Simulation Experiments (OSSE). <i>Atmospheric Measurement Techniques</i> , 2011 , 4, 1637-1661	4	30
57	Remote sensing of the middle atmosphere with MIPAS 2003 ,		30
56	Cross comparisons of O ₃ and NO ₂ measured by the atmospheric ENVISAT instruments GOMOS, MIPAS, and SCIAMACHY. <i>Advances in Space Research</i> , 2005 , 36, 855-867	2.4	30

55	On the role of non-random errors in inverse problems in radiative transfer and other applications. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2001 , 71, 39-46	2.1	30
54	Ozone loss driven by nitrogen oxides and triggered by stratospheric warmings can outweigh the effect of halogens. <i>Journal of Geophysical Research</i> , 2007 , 112,		29
53	The Stratospheric and Mesospheric NO _y in the 2002-2004 Polar Winters as measured by MIPAS/ENVISAT. <i>Space Science Reviews</i> , 2007 , 125, 403-416	7.5	26
52	Spectra calculations in central and wing regions of CO ₂ IR bands between 10 and 15 μ m. III: atmospheric emission spectra. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2005 , 90, 61-76	2.1	26
51	Global stratospheric HOCl distributions retrieved from infrared limb emission spectra recorded by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). <i>Journal of Geophysical Research</i> , 2006 , 111,		25
50	Cross-validation of MIPAS/ENVISAT and GPS-RO/CHAMP temperature profiles. <i>Journal of Geophysical Research</i> , 2004 , 109,		24
49	Stratospheric N ₂ O ₅ in the austral spring 2002 as retrieved from limb emission spectra recorded by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). <i>Journal of Geophysical Research</i> , 2004 , 109,		23
48	Comparison of HDO measurements from Envisat/MIPAS with observations by Odin/SMR and SCISAT/ACE-FTS. <i>Atmospheric Measurement Techniques</i> , 2011 , 4, 1855-1874	4	22
47	On the quality of MIPAS kinetic temperature in the middle atmosphere. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 6009-6039	6.8	22
46	Analysis of nonlocal thermodynamic equilibrium CO ₂ 4.7 μ m fundamental, isotopic, and hot band emissions measured by the Michelson Interferometer for Passive Atmospheric Sounding on Envisat. <i>Journal of Geophysical Research</i> , 2007 , 112,		22
45	Vibrationally excited ozone in the middle atmosphere. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2006 , 68, 202-212	2	22
44	MIPAS observations of volcanic sulfate aerosol and sulfur dioxide in the stratosphere. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 1217-1239	6.8	21
43	The geostationary tropospheric pollution explorer (GeoTROPE) mission: objectives, requirements and mission concept. <i>Advances in Space Research</i> , 2004 , 34, 682-687	2.4	21
42	Retrieval of stratospheric and mesospheric O ₃ from high resolution MIPAS spectra at 15 and 10 μ m. <i>Advances in Space Research</i> , 2005 , 36, 943-951	2.4	20
41	Intercomparison of radiative transfer codes under non-local thermodynamic equilibrium conditions. <i>Journal of Geophysical Research</i> , 2002 , 107, ACH 12-1		20
40	Comment on 'Origin of the January-April 2004 increase in stratospheric NO ₂ observed in northern polar latitudes' by Jean-Baptiste Renard et al.. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	19
39	Karlsruhe optimized and precise radiative transfer algorithm: II. Interface to retrieval applications 1998 ,		19
38	Atmospheric non-local thermodynamic equilibrium emissions as observed by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). <i>Comptes Rendus Physique</i> , 2005 , 6, 848-863	1.4	18

37	Impact of January 2005 solar proton events on chlorine species. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 4159-4179	6.8	17
36	Intercomparison of three microwave/infrared high resolution line-by-line radiative transfer codes. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018 , 211, 64-77	2.1	16
35	Global distributions of HO ₂ NO ₂ as observed by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). <i>Journal of Geophysical Research</i> , 2007 , 112,		16
34	Overview: Estimating and reporting uncertainties in remotely sensed atmospheric composition and temperature. <i>Atmospheric Measurement Techniques</i> , 2020 , 13, 4393-4436	4	16
33	Measurements of polar mesospheric clouds in infrared emission by MIPAS/ENVISAT. <i>Journal of Geophysical Research</i> , 2009 , 114,		13
32	A characterization of the warm 1999 Arctic winter by observations and modeling: NO _y partitioning and dynamics. <i>Journal of Geophysical Research</i> , 2002 , 107, ACH 4-1		13
31	Validation of stratospheric temperatures measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. <i>Journal of Geophysical Research</i> , 2005 , 110,		12
30	The geostationary scanning imaging absorption spectrometer (GeoSCIA) as part of the geostationary tropospheric pollution explorer (GeoTROPE) mission: requirements, concepts and capabilities. <i>Advances in Space Research</i> , 2004 , 34, 694-699	2.4	12
29	State parameter data base for MIPAS data analysis. <i>Advances in Space Research</i> , 2002 , 30, 2387-2392	2.4	11
28	The Geostationary Fourier Imaging Spectrometer (GeoFIS) as part of the Geostationary Tropospheric Pollution Explorer (GeoTroPE) mission: objectives and capabilities. <i>Advances in Space Research</i> , 2004 , 34, 688-693	2.4	10
27	Measurements of global distributions of polar mesospheric clouds during 2005-2012 by MIPAS/Envisat. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 6701-6719	6.8	9
26	Evidence for CH ₄ 7.6 μ m non-local thermodynamic equilibrium emission in the mesosphere. <i>Geophysical Research Letters</i> , 2005 , 32, n/a-n/a	4.9	8
25	Longitudinal variations of temperature and ozone profiles observed by MIPAS during the Antarctic stratosphere sudden warming of 2002. <i>Journal of Geophysical Research</i> , 2005 , 110,		8
24	Trends of atmospheric water vapour in Switzerland from ground-based radiometry, FTIR and GNSS data. <i>Atmospheric Chemistry and Physics</i> , 2020 , 20, 11223-11244	6.8	8
23	Early IMK/IAA MIPAS/ENVISAT results 2003 , 4882, 184		7
22	Comparisons of MIPAS/ENVISAT ozone profiles with SMR/ODIN and HALOE/UARS observations. <i>Advances in Space Research</i> , 2005 , 36, 927-931	2.4	7
21	Intercomparison of the KOPRA and the RFM radiative transfer codes 1999 , 3867, 348		7
20	Global distributions of CO ₂ volume mixing ratio in the middle and upper atmosphere from daytime MIPAS high-resolution spectra. <i>Atmospheric Measurement Techniques</i> , 2016 , 9, 6081-6100	4	7

19	Ground-based ozone profiles over central Europe: incorporating anomalous observations into the analysis of stratospheric ozone trends. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 4289-4309	6.8	6
18	Global stratospheric hydrogen peroxide distribution from MIPAS-Envisat full resolution spectra compared to KASIMA model results. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 4923-4933	6.8	6
17	Do vibrationally excited OH molecules affect middle and upper atmospheric chemistry?. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 9953-9964	6.8	6
16	Evidence for N ₂ O B 4.5 μ m non-local thermodynamic equilibrium emission in the atmosphere. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	5
15	Retrievals of heavy ozone with MIPAS. <i>Atmospheric Measurement Techniques</i> , 2016 , 9, 6069-6079	4	4
14	Merged ozone profiles from four MIPAS processors. <i>Atmospheric Measurement Techniques</i> , 2017 , 10, 1511-1518	4	3
13	Analysis of averaged broadband residuals between MIPAS-Envisat spectra and line-by-line calculations. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2012 , 113, 1330-1339	2.1	3
12	Comparisons of MIPAS-observed temperature profiles with other satellite measurements 2004 ,		3
11	IMK/IAA MIPAS temperature retrieval version 8: nominal measurements. <i>Atmospheric Measurement Techniques</i> , 2021 , 14, 4111-4138	4	3
10	The application of mean averaging kernels to mean trace gas distributions. <i>Atmospheric Measurement Techniques</i> , 2019 , 12, 5155-5160	4	3
9	Optimized spectral microwindows for midlatitude and polar trace gas retrieval from MIPAS-ENVISAT measurements 2001 ,		2
8	Non-LTE studies for the analysis of MIPAS/ENVISAT data 2002 ,		2
7	New non-LTE retrieval method for atmospheric parameters from MIPAS/ENVISAT emission spectra at 5.3 μ m 2002 , 4539, 396		2
6	Approach to the Cross-Validation of MIPAS and CHAMP Temperature and Water Vapour Profiles 2003 , 551-556		2
5	A reassessment of the discrepancies in the annual variation of D_2O in the tropical lower stratosphere between the MIPAS and ACE-FTS satellite data sets. <i>Atmospheric Measurement Techniques</i> , 2020 , 13, 287-308	4	1
4	Retrievability of Upper Tropospheric Species and Parameters from MIPAS/ENVISAT Data 2004 , 167-180		1
3	Tropopause altitude determination from temperature profile measurements of reduced vertical resolution. <i>Atmospheric Measurement Techniques</i> , 2019 , 12, 4113-4129	4	
2	Feasibility of measurements of water vapor and ice clouds in the tropical UT/LS region with MIPAS/Envisat. <i>Advances in Space Research</i> , 2004 , 34, 815-819	2.4	

- 1 Retrieval of PSC properties from MIPAS-ENVISAT measurements **2001**, 4150, 52