

Martin Kaufmann

List of Publications by Year in descending order

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70
papers

1,688
citations

279798

23
h-index

345221

36
g-index

94
all docs

94
docs citations

94
times ranked

1093
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards a 3-D tomographic retrieval for the air-borne limb-imager GLORIA. Atmospheric Measurement Techniques, 2010, 3, 1647-1665.	3.1	90
2	Gimbalbed Limb Observer for Radiance Imaging of the Atmosphere (GLORIA) scientific objectives. Atmospheric Measurement Techniques, 2014, 7, 1915-1928.	3.1	85
3	Instrument concept of the imaging Fourier transform spectrometer GLORIA. Atmospheric Measurement Techniques, 2014, 7, 3565-3577.	3.1	82
4	The existence of a tertiary ozone maximum in the high-latitude middle mesosphere. Geophysical Research Letters, 2001, 28, 4531-4534.	4.0	81
5	Envisat MIPAS measurements of CFC-11: retrieval, validation, and climatology. Atmospheric Chemistry and Physics, 2008, 8, 3671-3688.	4.9	77
6	Role of gravity waves in the forcing of quasi two-day waves in the mesosphere: An observational study. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3467-3485.	3.3	76
7	Satellite observations of ozone in the upper mesosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5803-5821.	3.3	63
8	A 3-D tomographic retrieval approach with advection compensation for the air-borne limb-imager GLORIA. Atmospheric Measurement Techniques, 2011, 4, 2509-2529.	3.1	61
9	GRANADA: A Generic Radiative traNsfer AnD non-LTE population algorithm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1771-1817.	2.3	60
10	Satellite observations of middle atmosphere gravity wave absolute momentum flux and of its vertical gradient during recent stratospheric warmings. Atmospheric Chemistry and Physics, 2016, 16, 9983-10019.	4.9	59
11	Satellite observations of daytime and nighttime ozone in the mesosphere and lower thermosphere. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	51
12	First tomographic observations of gravity waves by the infrared limb imager GLORIA. Atmospheric Chemistry and Physics, 2017, 17, 14937-14953.	4.9	51
13	The vertical and horizontal distribution of CO ₂ densities in the upper mesosphere and lower thermosphere as measured by CRISTA. Journal of Geophysical Research, 2002, 107, CRI 10-1-CRI 10-19.	3.3	48
14	Retrieval of three-dimensional small-scale structures in upper-tropospheric/lower-stratospheric composition as measured by GLORIA. Atmospheric Measurement Techniques, 2015, 8, 81-95.	3.1	38
15	Global distribution of atomic oxygen in the mesopause region as derived from SCIAMACHY O(¹ S) green line measurements. Geophysical Research Letters, 2014, 41, 6274-6280.	4.0	36
16	Observations of PAN and its confinement in the Asian summer monsoon anticyclone in high spatial resolution. Atmospheric Chemistry and Physics, 2016, 16, 8389-8403.	4.9	36
17	Cross comparisons of O ₃ and NO ₂ measured by the atmospheric ENVISAT instruments GOMOS, MIPAS, and SCIAMACHY. Advances in Space Research, 2005, 36, 855-867.	2.6	34
18	A highly miniaturized satellite payload based on a spatial heterodyne spectrometer for atmospheric temperature measurements in the mesosphere and lower thermosphere. Atmospheric Measurement Techniques, 2018, 11, 3861-3870.	3.1	33

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19	Tomographic retrieval approach for mesoscale gravity wave observations by the PREMIER Infrared Limb-Sounder. <i>Atmospheric Measurement Techniques</i> , 2010, 3, 339-354.	3.1	33
20	A global measurement of lower thermosphere atomic oxygen densities. <i>Geophysical Research Letters</i> , 2000, 27, 1387-1390.	4.0	31
21	Level 2 processing for the imaging Fourier transform spectrometer GLORIA: derivation and validation of temperature and trace gas volume mixing ratios from calibrated dynamics mode spectra. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 2473-2489.	3.1	30
22	Spectral wave analysis at the mesopause from SCIAMACHY airglow data compared to SABER temperature spectra. <i>Annales Geophysicae</i> , 2009, 27, 407-416.	1.6	30
23	CRISTA-NF measurements of water vapor during the SCOUT-O3 Tropical Aircraft Campaign. <i>Advances in Space Research</i> , 2009, 43, 74-81.	2.6	28
24	Vibrationally excited ozone in the middle atmosphere. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2006, 68, 202-212.	1.6	26
25	Atmospheric neutral temperature distribution at the mesopause altitude. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2006, 68, 1684-1697.	1.6	26
26	Retrieval of CFC-11 and CFC-12 from Envisat MIPAS observations by means of rapid radiative transfer calculations. <i>Advances in Space Research</i> , 2005, 36, 915-921.	2.6	24
27	Analysis of nonlocal thermodynamic equilibrium CO 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, .	3.3	23
28	Evidence of small-scale quasi-isentropic mixing in ridges of extratropical baroclinic waves. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 12607-12630.	4.9	23
29	A comparison of night-time GOMOS and MIPAS ozone profiles in the stratosphere and mesosphere. <i>Advances in Space Research</i> , 2005, 36, 958-966.	2.6	22
30	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.	2.6	21
31	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.	0.9	20
32	Chemical heating rates derived from SCIAMACHY vibrationally excited OH limb emission spectra. <i>Advances in Space Research</i> , 2008, 41, 1914-1920.	2.6	20
33	Tomographic reconstruction of atmospheric gravity wave parameters from airglow observations. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 4601-4612.	3.1	18
34	Nighttime atomic oxygen in the mesopause region retrieved from SCIAMACHY O(¹ S) green line measurements and its response to solar cycle variation. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 9057-9073.	2.4	17
35	Validation of stratospheric temperatures measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	16
36	Atomic Oxygen Abundance Retrieved From SCIAMACHY Hydroxyl Nightglow Measurements. <i>Geophysical Research Letters</i> , 2018, 45, 9314-9322.	4.0	16

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37	Determination of Global Mean Eddy Diffusive Transport in the Mesosphere and Lower Thermosphere From Atomic Oxygen and Carbon Dioxide Climatologies. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 13519-13533.	3.3	13
38	Validation of first chemistry mode retrieval results from the new limb-imaging FTS GLORIA with correlative MIPAS-STR observations. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 2509-2520.	3.1	11
39	MIPAS observations of ozone in the middle atmosphere. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 2187-2212.	3.1	11
40	Comparisons of MIPAS/ENVISAT ozone profiles with SMR/ODIN and HALOE/UARS observations. <i>Advances in Space Research</i> , 2005, 36, 927-931.	2.6	9
41	The fine structure emission of thermospheric atomic oxygen. <i>Advances in Space Research</i> , 1997, 19, 595-598.	2.6	8
42	Thermally stable monolithic Doppler asymmetric spatial heterodyne interferometer: optical design and laboratory performance. <i>Optics Express</i> , 2020, 28, 19887.	3.4	8
43	Zonal asymmetries in middle atmosphere temperatures. <i>Advances in Space Research</i> , 2003, 32, 1771-1780.	2.6	7
44	Consistent Nighttime Atomic Oxygen Concentrations From O ₂ A-band, O(1S) Greenline, and OH Airglow Measurements as Performed by SCIAMACHY. <i>Geophysical Research Letters</i> , 2019, 46, 8536-8545.	4.0	7
45	On the assembly and calibration of a spatial heterodyne interferometer for limb sounding of the middle atmosphere. <i>CEAS Space Journal</i> , 2019, 11, 525-531.	2.3	7
46	Analysis and correction of distortions in a spatial heterodyne spectrometer system. <i>Applied Optics</i> , 2019, 58, 2190.	1.8	7
47	Effective wind and temperature retrieval from Doppler asymmetric spatial heterodyne spectrometer interferograms. <i>Applied Optics</i> , 2018, 57, 8829.	1.8	7
48	A review of the scientific results from the CRISTA missions. <i>Advances in Space Research</i> , 2004, 34, 1715-1721.	2.6	6
49	Three-dimensional tomographic reconstruction of atmospheric gravity waves in the mesosphere and lower thermosphere (MLT). <i>Atmospheric Measurement Techniques</i> , 2018, 11, 3161-3175.	3.1	6
50	The Response of Atomic Hydrogen to Solar Radiation Changes. <i>Springer Atmospheric Sciences</i> , 2013, , 171-188.	0.3	6
51	Investigation on a SmallSat CMOS image sensor for atmospheric temperature measurement. , 2019, , .		6
52	Global nighttime atomic oxygen abundances from GOMOS hydroxyl airglow measurements in the mesopause region. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 13891-13910.	4.9	5
53	AtmoCube A1: airglow measurements in the mesosphere and lower thermosphere by spatial heterodyne interferometry. <i>Journal of Applied Remote Sensing</i> , 2019, 13, 1.	1.3	5
54	System-on-module-based long-life electronics for remote sensing imaging with CubeSats in low-earth-orbits. <i>Journal of Applied Remote Sensing</i> , 2019, 13, 1.	1.3	5

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55	New calibration noise suppression techniques for the GLORIA limb imager. Atmospheric Measurement Techniques, 2015, 8, 3147-3161.	3.1	4
56	Comparison of OH nightglow volume emission rates as measured by SCIAMACHY and SABER. Atmospheric Measurement Techniques, 2020, 13, 3033-3042.	3.1	4
57	Simultaneous Retrievals of Nighttime O(³ P) and Total OH Densities From Satellite Observations of Meinel Band Emissions. Geophysical Research Letters, 2021, 48, .	4.0	4
58	Intra-Annual Variation of Eddy Diffusion (k_{zz}) in the MLT, From SABER and SCIAMACHY Atomic Oxygen Climatologies. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035343.	3.3	4
59	Thermospheric nitric oxide infrared emissions measured by CRISTA. Advances in Space Research, 1997, 19, 591-594.	2.6	3
60	Relative importance of ozone energy transfer processes in the middle and upper atmosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 805-815.	1.6	3
61	Effects of the inclusion of bending-to-stretching transitions in the non-LTE modeling of ozone vibrational temperatures. Journal of Atmospheric and Solar-Terrestrial Physics, 2010, 72, 890-899.	1.6	2
62	A novel CubeSat payload for airglow measurements in the mesosphere and lower thermosphere. , 2018, , .		2
63	Radiation Monitor Extension for CMOS Imaging Instruments in Nanosatellites. IEEE Transactions on Nuclear Science, 2022, 69, 1651-1658.	2.0	2
64	Atmospheric parameters retrieved from CRISTA measurements in the upper mesosphere and lower thermosphere. , 2002, , .		1
65	Atmospheric gravity waves observation from a lunar base. , 2016, , .		1
66	GRIPS-HI, a novel spectral imager for ground based measurements of mesopause temperatures. TM Technisches Messen, 2021, 88, 655-660.	0.7	1
67	Infra-red Radiative Cooling/Heating of the Mesosphere and Lower Thermosphere Due to the Small-Scale Temperature Fluctuations Associated with Gravity Waves. Springer Atmospheric Sciences, 2013, , 429-442.	0.3	0
68	A Miniaturized Limb Sounder Utilizing a Spatial Heterodyne Spectrometer for the Observation of the Molecular Oxygen Atmospheric Band. , 2018, , .		0
69	Optical design and performance analysis of a CubeSat-sized limb sounder utilizing a spatial heterodyne spectrometer for the measurement of mesospheric temperature. , 2019, , .		0
70	Advances in the optical design of a spatial heterodyne interferometer deployed on a 6U-CubeSat for atmospheric research. , 2019, , .		0