Bianca M Dinelli

List of Publications by Year
in descending order

118 papers	2,864 citations	172457 29 h-index	233421 45 g-index
155 all docs	155 docs citations	155 times ranked	1950 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	MIPAS level 2 operational analysis. Atmospheric Chemistry and Physics, 2006, 6, 5605-5630.	4.9	174
3	LARGE ABUNDANCES OF POLYCYCLIC AROMATIC HYDROCARBONS IN TITAN'S UPPER ATMOSPHERE. Astrophysical Journal, 2013, 770, 132.	4.5	106
4	JIRAM, the Jovian Infrared Auroral Mapper. Space Science Reviews, 2017, 213, 393-446.	8.1	91
5	Clusters of cyclones encircling Jupiterâ€™s poles. Nature, 2018, 555, 216-219.	27.8	90
6	Geo-fit approach to the analysis of limb-scanning satellite measurements. Applied Optics, 2001, 40, 1872.	2.1	72
7	GMTR: Two-dimensional geo-fit multitarget retrieval model for Michelson Interferometer for Passive Atmospheric Sounding/Environmental Satellite observations. Applied Optics, 2006, 45, 716.	2.1	67
8	Past changes in the vertical distribution of ozone â€“ Part 1: Measurement techniques, uncertainties and availability. Atmospheric Measurement Techniques, 2014, 7, 1395-1427.	3.1	67
9	Ten years of MIPAS measurements with ESA Level 2 processor V6 â€“ Part 1: Retrieval algorithm and diagnostics of the products. Atmospheric Measurement Techniques, 2013, 6, 2419-2439.	3.1	66
10	Infrared spectroscopy of carboâ€‹ions. IV. TheAâ€‰2Îuâ€“Xâ€‰2Î£+gelectronic transition of Câˆ'2. Journal of Chemical Physics, 1988, 89, 129-137.	3.0	63
11	Extreme ozone depletion in the 2010â€“2011 Arctic winter stratosphere as observed by MIPAS/ENVISAT using a 2-D tomographic approach. Atmospheric Chemistry and Physics, 2012, 12, 9149-9165.	4.9	59
12	Infrared spectroscopy and equilibrium structure of H2O+(XÌƒâ€‰2B1). Journal of Chemical Physics, 1992, 97, 5977-5987.	3.0	58
13	Ab initio ro-vibrational levels of H3+ beyond the Born-Oppenheimer approximation. Chemical Physics Letters, 1995, 232, 295-300.	2.6	57
14	Infrared spectroscopy of the Î½3 band of H2O+. Journal of Molecular Spectroscopy, 1988, 127, 1-11.	1.2	53
15	Juno observations of spot structures and a split tail in Io-induced aurorae on Jupiter. Science, 2018, 361, 774-777.	12.6	53
16	First results of MIPAS/ENVISAT with operational Level 2 code. Advances in Space Research, 2004, 33, 1012-1019.	2.6	51
17	Bands of H3+ up to 4Î½2: Rovibrational transitions from first principles calculations. Journal of Molecular Spectroscopy, 1992, 153, 718-725.	1.2	50
18	The MIPAS2D database of MIPAS/ENVISAT measurements retrieved with a multi-target 2-dimensional tomographic approach. Atmospheric Measurement Techniques, 2010, 3, 355-374.	3.1	46

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19	An unidentified emission in Titan's upper atmosphere. Geophysical Research Letters, 2013, 40, 1489-1493.	4.0	44
20	New Assignments for the Infrared Spectrum of H3+. Journal of Molecular Spectroscopy, 1997, 181, 142-150.	1.2	41
21	The mixing ratio of the stratospheric hydroxyl radical from far infrared emission measurements. Journal of Geophysical Research, 1989, 94, 11049-11058.	3.3	40
22	A Spectroscopically Determined Potential Energy Surface for H+3. Journal of Molecular Spectroscopy, 1994, 163, 71-79.	1.2	40
23	Seeking spriteâ€induced signatures in remotely sensed middle atmosphere NO₂. Geophysical Research Letters, 2008, 35, .	4.0	40
24	FORUM: Unique Far-Infrared Satellite Observations to Better Understand How Earth Radiates Energy to Space. Bulletin of the American Meteorological Society, 2020, 101, E2030-E2046.	3.3	40
25	Optical bistability of a CO2 laser with intracavity saturable absorber: Experiment and model. Optics Communications, 1983, 44, 277-282.	2.1	39
26	Spectroscopically determined Bornâ€“Oppenheimer and adiabatic surfaces for H3+, H2D+, D2H+, and D3+. Journal of Chemical Physics, 1995, 103, 10433-10438.	3.0	38
27	Observation and analysis of the Î½3 band of NH+3. Journal of Chemical Physics, 1989, 90, 5910-5917.	3.0	36
28	MARC: A code for the retrieval of atmospheric parameters from millimeter-wave limb measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 105, 476-491.	2.3	33
29	Multi-target retrieval (MTR): the simultaneous retrieval of pressure, temperature and volume mixing ratio profiles from limb-scanning atmospheric measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 84, 141-157.	2.3	32
30	Asymmetric adiabatic correction to the rotationâ€“vibration levels of H2D+and D2H+. Journal of Chemical Physics, 1995, 102, 9322-9326.	3.0	30
31	Distribution of HCN in Titanâ€™s upper atmosphere from Cassini/VIMS observations at 3Î¼m. Icarus, 2011, 214, 584-595.	2.5	30
32	Infrared observations of Jovian aurora from Juno's first orbits: Main oval and satellite footprints. Geophysical Research Letters, 2017, 44, 5308-5316.	4.0	30
33	Balloon Intercomparison Campaigns: Results of remote sensing measurements of HCl. Journal of Atmospheric Chemistry, 1990, 10, 237-272.	3.2	29
34	Impact of temperature field inhomogeneities on the retrieval of atmospheric species from MIPAS IR limb emission spectra. Atmospheric Measurement Techniques, 2010, 3, 1487-1507.	3.1	28
35	Difference frequency laser spectroscopy of the Î½3 fundamental band of NH+2. Journal of Chemical Physics, 1989, 90, 5918-5923.	3.0	26
36	Measurement of stratospheric distributions of H₂¹⁶O, H₂¹⁸O, H₂¹⁷O, and HD¹⁶O from far infrared spectra. Journal of Geophysical Research, 1991, 96, 7509-7514.	3.3	25

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37	UKIRT Observations of the Impact and Consequences of Comet Shoemakerâ€"Levy 9 on Jupiterâ˜†. Icarus, 1997, 126, 107-125.	2.5	24
38	Comparison of measurements made with two different instruments of the same atmospheric vertical profile. Applied Optics, 2003, 42, 6465.	2.1	24
39	The SPARC water vapour assessment II: comparison of annual, semi-annual and quasi-biennial variations in stratospheric and lower mesospheric water vapour observed from satellites. Atmospheric Measurement Techniques, 2017, 10, 1111-1137.	3.1	24
40	First Estimate of Wind Fields in the Jupiter Polar Regions From JIRAMâ€Juno Images. Journal of Geophysical Research E: Planets, 2018, 123, 1511-1524.	3.6	24
41	Twoâ€Year Observations of the Jupiter Polar Regions by JIRAM on Board Juno. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006098.	3.6	24
42	Analysis of Titan CH4 3.3Î¼m upper atmospheric emission as measured by Cassini/VIMS. Icarus, 2011, 214, 571-583.	2.5	22
43	Seeking sprite-induced signatures in remotely sensed middle atmosphere NO₂: latitude and time variations. Plasma Sources Science and Technology, 2009, 18, 034014.	3.1	21
44	The ozone climate change initiative: Comparison of four Level-2 processors for the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS). Remote Sensing of Environment, 2015, 162, 316-343.	11.0	20
45	Preliminary results on the composition of Jupiter's troposphere in hot spot regions from the JIRAM/Juno instrument. Geophysical Research Letters, 2017, 44, 4615-4624.	4.0	20
46	Preliminary JIRAM results from Juno polar observations: 2. Analysis of the Jupiter southern H₃⁺ emissions and comparison with the north aurora. Geophysical Research Letters, 2017, 44, 4633-4640.	4.0	20
47	MIPAS-ENVISAT limb-sounding measurements: trade-off study for improvement of horizontal resolution. Applied Optics, 2004, 43, 5814.	2.1	19
48	Submillimeter detection of stratospheric OH and further line assignments in the stratospheric emission spectrum. Journal of Infrared, Millimeter and Terahertz Waves, 1983, 4, 475-488.	0.6	18
49	Jupiterâ€™s hot spots: Quantitative assessment of the retrieval capabilities of future IR spectro-imagers. Planetary and Space Science, 2010, 58, 1265-1278.	1.7	18
50	Preliminary JIRAM results from Juno polar observations: 1. Methodology and analysis applied to the Jovian northern polar region. Geophysical Research Letters, 2017, 44, 4625-4632.	4.0	18
51	Concurrent ultraviolet and infrared observations of the north Jovian aurora during Juno's first perijove. Icarus, 2018, 312, 145-156.	2.5	18
52	Submillimeter measurement of stratospheric chlorine monoxide. Journal of Geophysical Research, 1988, 93, 7063-7068.	3.3	17
53	The effect of the impact of comet Shoemaker Levy-9 on Jupiter's aurorae. Geophysical Research Letters, 1995, 22, 1629-1632.	4.0	17
54	JIRAM, the Image Spectrometer in the Near Infrared on Board the Juno Mission to Jupiter. Astrobiology, 2008, 8, 613-622.	3.0	17

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55	WACCM climate chemistry sensitivity to sprite perturbations. Journal of Geophysical Research D: Atmospheres, 2014, 119, 6958-6970.	3.3	16
56	Technical Note: Measurement of the tropical UTLS composition in presence of clouds using millimetre-wave heterodyne spectroscopy. Atmospheric Chemistry and Physics, 2009, 9, 1191-1207.	4.9	15
57	Characterization of the white ovals on Jupiter's southern hemisphere using the first data by the Juno/JIRAM instrument. Geophysical Research Letters, 2017, 44, 4660-4668.	4.0	15
58	Morphology of the Auroral Tail of Io, Europa, and Ganymede From JIRAM Lâ€Band Imager. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029450.	2.4	15
59	On the Spatial Distribution of Minor Species in Jupiter's Troposphere as Inferred From Juno JIRAM Data. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006206.	3.6	14
60	Intercomparison of stratospheric water vapor profiles obtained during the Balloon Intercomparison Campaign. Journal of Atmospheric Chemistry, 1990, 10, 159-179.	3.2	13
61	Total column water vapour from along track scanning radiometer series using thermal infrared dual view ocean cloud free measurements: The Advanced Infra-Red WAter Vapour Estimator (AIRWAVE) algorithm. Remote Sensing of Environment, 2016, 172, 1-14.	11.0	13
62	Preliminary JIRAM results from Juno polar observations: 3. Evidence of diffuse methane presence in the Jupiter auroral regions. Geophysical Research Letters, 2017, 44, 4641-4648.	4.0	13
63	The SPARC water vapor assessment II: intercomparison of satellite and ground-based microwave measurements. Atmospheric Chemistry and Physics, 2017, 17, 14543-14558.	4.9	13
64	The SPARC water vapour assessment II: profile-to-profile comparisons of stratospheric and lower mesospheric water vapour data sets obtained from satellites. Atmospheric Measurement Techniques, 2019, 12, 2693-2732.	3.1	13
65	FORUM Earth Explorer 9: Characteristics of Level 2 Products and Synergies with IASI-NG. Remote Sensing, 2020, 12, 1496.	4.0	13
66	Hyperfine structure analysis of stibine in the ground and in the v4 = 1 states. Journal of Molecular Spectroscopy, 1992, 153, 307-315.	1.2	12
67	Measurement of the isotopic ratio distribution of HD16O and H216O in the 20-38 km altitude range from far-infrared spectra. Geophysical Research Letters, 1997, 24, 2003-2006.	4.0	11
68	Two-dimensional tomographic retrieval of MIPAS/ENVISAT measurements of ozone and related species. International Journal of Remote Sensing, 2010, 31, 477-483.	2.9	11
69	Monthly mean vertical profiles of pressure, temperature and water vapour volume mixing ratio in the polar stratosphere and low mesosphere from a multi-year set of MIPAS-ENVISAT limb-scanning measurements. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2237-2271.	1.6	11
70	H3+ characteristics in the Jupiter atmosphere as observed at limb with Juno/JIRAM. Icarus, 2019, 329, 132-139.	2.5	11
71	Oscillations and Stability of the Jupiter Polar Cyclones. Geophysical Research Letters, 2021, 48, e2021GL094235.	4.0	11
72	A Preliminary Study of Magnetosphereâ€Ionosphereâ€Thermosphere Coupling at Jupiter: Juno Multiâ€Instrument Measurements and Modeling Tools. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029469.	2.4	11

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73	Differences in ozone retrieval in MIPAS channels A and AB: a spectroscopic issue. Atmospheric Measurement Techniques, 2018, 11, 4707-4723.	3.1	10
74	JUNO/JIRAM's view of Jupiter's H ₃ ⁺ emissions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180406.	3.4	10
75	On the determination of potential energy surfaces of spectroscopic accuracy. Computational and Theoretical Chemistry, 1995, 341, 133-140.	1.5	9
76	Assessment of the horizontal resolution of retrieval products derived from MIPAS observations. Optics Express, 2007, 15, 10458.	3.4	9
77	Retrieval of minor constituents in a cloudy atmosphere with remote-sensing millimetre-wave measurements. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 163-170.	2.7	9
78	Retrieval of atmospheric H¹⁵NO₃/H¹⁴NO₃ isotope ratio profile from MIPAS/ENVISAT limbâ€scanning measurements. Journal of Geophysical Research, 2009, 114, .	3.3	9
79	Comparison of measured and calculated high-resolution spectra of far-infra-red stratospheric emission. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1985, 8, 631-646.	0.2	8
80	Analysis of IR-bright regions of Jupiter in JIRAM-Juno data: Methods and validation of algorithms. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 202, 200-209.	2.3	8
81	Turbulence Power Spectra in Regions Surrounding Jupiter's South Polar Cyclones From Juno/JIRAM. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006096.	3.6	8
82	Synergy between middle infrared and millimeter-wave limb sounding of atmospheric temperature and minor constituents. Atmospheric Measurement Techniques, 2016, 9, 2267-2289.	3.1	8
83	Phosgene in the UTLS: seasonal and latitudinal variations from MIPAS observations. Atmospheric Measurement Techniques, 2016, 9, 4655-4663.	3.1	7
84	Mapping of hydrocarbons and H 3 + emissions at Jupiter's north pole using Galileo/NIMS data. Geophysical Research Letters, 2016, 43, 11,558.	4.0	7
85	Measurement of the Arctic UTLS composition in presence of clouds using millimetre-wave heterodyne spectroscopy. Atmospheric Measurement Techniques, 2013, 6, 2683-2701.	3.1	6
86	ITCZ trend analysis via Geodesic P-spline smoothing of the AIRWAVE TCWV and cloud frequency datasets. Atmospheric Research, 2018, 214, 228-238.	4.1	6
87	Comparison of the MIPAS products obtained by four different level 2 processors. Annals of Geophysics, 2014, 56, .	1.0	6
88	Hyperfine Structure Analysis of Arsine in the Ground, v2 = 1, and v4 = 1 States. Journal of Molecular Spectroscopy, 1993, 157, 413-418.	1.2	5
89	The impact of comet Shoemaker-Levy 9 on the jovian ionosphere and aurorae. Planetary and Space Science, 1997, 45, 1237-1250.	1.7	5
90	Discrete representation and resampling in limb-sounding measurements. Applied Optics, 2001, 40, 1261.	2.1	5

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91	Position error in profiles retrieved from MIPAS observations with a 1-D algorithm. Atmospheric Measurement Techniques, 2013, 6, 419-429.	3.1	5
92	CHIMTEAâ€"Chemical Impact of Thunderstorms on Earthâ€™s Atmosphere. Springer Earth System Sciences, 2016, , 1-14.	0.2	5
93	CO concentration in the upper stratosphere and mesosphere of Titan from VIMS dayside limb observations at 4.7â€‰Âµm. Icarus, 2017, 293, 119-131.	2.5	5
94	Climatology of CH4, HCN and C2H2 in Titan's upper atmosphere from Cassini/VIMS observations. Icarus, 2019, 331, 83-97.	2.5	5
95	Juno/JIRAM: Planning and commanding activities. Advances in Space Research, 2020, 65, 598-615.	2.6	5
96	On the clouds and ammonia in Jupiterâ€™s upper troposphere from Juno JIRAM reflectivity observations. Monthly Notices of the Royal Astronomical Society, 2021, 503, 4892-4907.	4.4	5
97	The ESA MIPAS/Envisat level2-v8 dataset: 10 years of measurements retrieved with ORM v8.22. Atmospheric Measurement Techniques, 2021, 14, 7975-7998.	3.1	5
98	Level 2 near-real-time analysis of MIPAS measurements on ENVISAT. , 2003, , .		4
99	Retrieving cloud geometrical extents from MIPAS/ENVISAT measurements with a 2-D tomographic approach. Optics Express, 2011, 19, 20704.	3.4	4
100	Errors induced by different approximations in handling horizontal atmospheric inhomogeneities in MIPAS/ENVISAT retrievals. Atmospheric Measurement Techniques, 2016, 9, 5499-5508.	3.1	4
101	The Advanced Infra-Red WAter Vapour Estimator (AIRWAVE) version 2: algorithm evolution, dataset description and performance improvements. Atmospheric Measurement Techniques, 2019, 12, 371-388.	3.1	4
102	JIRAM, the Jovian Infrared Auroral Mapper. , 2014, , 271-324.		4
103	Validation of the Advanced Infra-Red Water Vapour Estimator (AIRWAVE) Total Column Water Vapour using Satellite and Radiosonde products.. Annals of Geophysics, 2018, 61, .	1.0	4
104	The SPARC Water Vapor Assessment II: assessment of satellite measurements of upper tropospheric humidity. Atmospheric Measurement Techniques, 2022, 15, 3377-3400.	3.1	4
105	The global picture of the atmospheric composition provided by MIPAS on Envisat. , 2012, , .		3
106	Lagrangian analysis of microphysical and chemical processes in the Antarctic stratosphere: a case study. Atmospheric Chemistry and Physics, 2015, 15, 6651-6665.	4.9	3
107	Merged ozone profiles from four MIPAS processors. Atmospheric Measurement Techniques, 2017, 10, 1511-1518.	3.1	3
108	Stability of the Jupiter Southern Polar Vortices Inspected Through Vorticity Using Juno/JIRAM Data. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	3

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109	High-resolution far-infrared ft spectroscopy of the stratosphere. Rendiconti Lincei, 1995, 6, 95-110.	2.2	2
110	LevelÂ2 processor and auxiliary data for ESA Version 8 final full mission analysis of MIPAS measurements on ENVISAT. Atmospheric Measurement Techniques, 2022, 15, 1871-1901.	3.1	2
111	Phosgene distribution derived from MIPAS ESA v8 data: intercomparisons and trends. Atmospheric Measurement Techniques, 2021, 14, 7959-7974.	3.1	2
112	A strategy for the measurement of CO₂ distribution in the stratosphere. Atmospheric Measurement Techniques, 2016, 9, 5853-5867.	3.1	1
113	Precise Measurements on Optical Bistability and Passive Q- Switch in a CO2 Laser with Saturable Absorber. , 1984, , 317-324.		1
114	Results of the preparatory study â€œPREMIER Analysis of Campaign Dataâ€ Annals of Geophysics, 2014, , .	1.0	1
115	Validation of minor species of the MIPAS2D database. Annals of Geophysics, 2014, , .	1.0	1
116	Geo-fit approach to the analysis of limb-scanning satellite measurements. , 2002, 4539, 369.		0
117	Performance study and analysis method for a new-generation MIPAS experiment. Optics Express, 2014, 22, 27769.	3.4	0
118	Lee wave detection over the Mediterranean Sea using the Advanced Infra-Red WAter Vapour Estimator (AIRWAVE) total column water vapour (TCWV) dataset. Atmospheric Measurement Techniques, 2019, 12, 6683-6693.	3.1	0