Paul Hartogh

List of Publications by Year
in descending order

131 papers	4,870 citations	87888 38 h-index	114465 63 g-index
149 all docs	149 docs citations	149 times ranked	3246 citing authors

#	Article	IF	Citations
1	Martian Dust Storms and Gravity Waves: Disentangling Water Transport to the Upper Atmosphere. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	10
2	Transport Characteristics of a Hierarchical Near-Surface Layer of the Nucleus of Comet 67P/Churyumovâ€“Gerasimenko. Solar System Research, 2022, 56, 100-121.	0.7	5
3	Solar System Science with the Orbiting Astronomical Satellite Investigating Stellar Systems (OASIS) Observatory. Space Science Reviews, 2022, 218, .	8.1	1
4	Gas terminal velocity from MIRO/Rosetta data using neural network approach. Astronomy and Astrophysics, 2021, 648, A21.	5.1	3
5	Gravity Wave Activity in the Martian Atmosphere at Altitudes 20â€“160Âkm From ACS/TGO Occultation Measurements. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006899.	3.6	22
6	Origins space telescope: from first light to life. Experimental Astronomy, 2021, 51, 595.	3.7	8
7	Variations of the Martian Thermospheric Gravity-wave Activity during the Recent Solar Minimum as Observed by MAVEN. Astrophysical Journal, 2021, 920, 69.	4.5	8
8	Seasonal Water â€œPumpâ€•in the Atmosphere of Mars: Vertical Transport to the Thermosphere. Geophysical Research Letters, 2019, 46, 4161-4169.	4.0	50
9	A comparison of multiple Rosetta data sets and 3D model calculations of 67P/Churyumov-Gerasimenko coma around equinox (May 2015). Icarus, 2019, 328, 104-126.	2.5	20
10	Herschel map of Saturnâ€™s stratospheric water, delivered by the plumes of Enceladus. Astronomy and Astrophysics, 2019, 630, A87.	5.1	15
11	Three-dimensional analysis of spatial resolution of MIRO/Rosetta measurements at 67P/Churyumov-Gersimenko. Astronomy and Astrophysics, 2019, 630, A34.	5.1	7
12	Density Fluctuations in the Lower Thermosphere of Mars Retrieved From the ExoMars Trace Gas Orbiter (TGO) Aerobraking. Atmosphere, 2019, 10, 620.	2.3	16
13	Modeling the Hydrological Cycle in the Atmosphere of Mars: Influence of a Bimodal Size Distribution of Aerosol Nucleation Particles. Journal of Geophysical Research E: Planets, 2018, 123, 508-526.	3.6	14
14	The Atmospheric Chemistry Suite (ACS) of Three Spectrometers for the ExoMars 2016 Trace Gas Orbiter. Space Science Reviews, 2018, 214, 1.	8.1	119
15	Influence of gravity waves on the climatology of high-altitude Martian carbon dioxide ice clouds. Annales Geophysicae, 2018, 36, 1631-1646.	1.6	22
16	Mars submillimeter sensor on microsatellite: sensor feasibility study. Geoscientific Instrumentation, Methods and Data Systems, 2018, 7, 331-341.	1.6	6
17	Solving non-LTE problems in rotational transitions using the Gaussâ€“Seidel method and its implementation in the Atmospheric Radiative Transfer Simulator. Astronomy and Astrophysics, 2018, 619, A181.	5.1	10
18	Thermal inertia and roughness of the nucleus of comet 67P/Churyumovâ€“Gerasimenko from MIRO and VIRTIS observations. Astronomy and Astrophysics, 2018, 616, A122.	5.1	42

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19	Retrieval of wind, temperature, water vapor and other trace constituents in the Martian Atmosphere. Planetary and Space Science, 2018, 161, 26-40.	1.7	4
20	Gas flow in near surface comet like porous structures: Application to 67P/Churyumov-Gerasimenko. Planetary and Space Science, 2018, 161, 57-67.	1.7	12
21	Is near-surface ice the driver of dust activity on 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2017, 600, A142.	5.1	27
22	Spatially resolved evolution of the local H₂O production rates of comet 67P/Churyumov-Gerasimenko from the MIRO instrument on Rosetta. Astronomy and Astrophysics, 2017, 603, A87.	5.1	46
23	Ion Friction and Quantification of the Geomagnetic Influence on Gravity Wave Propagation and Dissipation in the Thermosphereâ€Ionosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 12,464.	2.4	8
24	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
25	Martian magnetism with orbiting sub-millimeter sensor: simulated retrieval system. Geoscientific Instrumentation, Methods and Data Systems, 2017, 6, 27-37.	1.6	4
26	Laboratory Studies Towards Understanding Comets. , 2017, , 101-150.		0
27	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. , 2017, , 297-342.		0
28	Acceleration of cometary dust near the nucleus: application to 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 461, 3410-3420.	4.4	31
29	Global Distribution of Gravity Wave Sources and Fields in the Martian Atmosphere during Equinox and Solstice Inferred from a High-Resolution General Circulation Model. Journals of the Atmospheric Sciences, 2016, 73, 4895-4909.	1.7	20
30	Comparison of the Martian thermospheric density and temperature from IUVS/MAVEN data and general circulation modeling. Geophysical Research Letters, 2016, 43, 3095-3104.	4.0	34
31	Cooling of the Martian thermosphere by CO₂radiation and gravity waves: An intercomparison study with two general circulation models. Journal of Geophysical Research E: Planets, 2015, 120, 913-927.	3.6	51
32	MIRO observations of subsurface temperatures of the nucleus of 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A29.	5.1	81
33	Gravity waves and highâ€altitude CO₂ ice cloud formation in the Martian atmosphere. Geophysical Research Letters, 2015, 42, 4294-4300.	4.0	39
34	A global view of gravity waves in the Martian atmosphere inferred from a highâ€resolution general circulation model. Geophysical Research Letters, 2015, 42, 9213-9222.	4.0	24
35	Spatial and diurnal variation of water outgassing on comet 67P/Churyumov-Gerasimenko observed from Rosetta/MIRO in August 2014. Astronomy and Astrophysics, 2015, 583, A5.	5.1	61
36	First detection of the 63Î¼m atomic oxygen line in the thermosphere of Mars with GREAT/SOFIA. Astronomy and Astrophysics, 2015, 580, L10.	5.1	34

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37	Distribution of water around the nucleus of comet 67P/Churyumov-Gerasimenko at 3.4 AU from the Sun as seen by the MIRO instrument on Rosetta. Astronomy and Astrophysics, 2015, 583, A3.	5.1	60
38	Dark side of comet 67P/Churyumov-Gerasimenko in Aug.â€“Oct. 2014. Astronomy and Astrophysics, 2015, 583, A28.	5.1	42
39	Photochemical response to the variation of temperature in the 2011â^'2012 stratospheric vortex of Saturn. Astronomy and Astrophysics, 2015, 580, A55.	5.1	9
40	Subsurface properties and early activity of comet 67P/Churyumov-Gerasimenko. Science, 2015, 347, aaa0709.	12.6	217
41	Strong water isotopic anomalies in the martian atmosphere: Probing current and ancient reservoirs. Science, 2015, 348, 218-221.	12.6	245
42	Laboratory Studies Towards Understanding Comets. Space Science Reviews, 2015, 197, 101-150.	8.1	18
43	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. Space Science Reviews, 2015, 197, 297-342.	8.1	25
44	New constraints on the CH₄vertical profile in Uranus and Neptune fromHerschelobservations. Astronomy and Astrophysics, 2015, 579, A121.	5.1	27
45	Hydroxyl layer: trend of number density and intra-annual variability. Annales Geophysicae, 2015, 33, 749-767.	1.6	19
46	Parameterization of radiative heating and cooling rates in the stratosphere of Jupiter. Icarus, 2014, 242, 149-157.	2.5	13
47	Hydroxyl layer: Mean state and trends at midlatitudes. Journal of Geophysical Research D: Atmospheres, 2014, 119, 12,391.	3.3	40
48	Subseasonal variability of water vapor in the upper stratosphere/lower mesosphere over Northern Europe in winter 2009/2010. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 114, 9-18.	1.6	3
49	Herschelobservations of gas and dust in comet C/2006 W3 (Christensen) at 5 AU from the Sun. Astronomy and Astrophysics, 2014, 564, A124.	5.1	12
50	The first submillimeter observation of CO in the stratosphere of Uranus. Astronomy and Astrophysics, 2014, 562, A33.	5.1	52
51	Searches for HCl and HF in comets 103P/Hartley 2 and C/2009 P1 (Garradd) with theHerschelSpace Observatory. Astronomy and Astrophysics, 2014, 562, A5.	5.1	19
52	Herschel/PACS spectroscopy of trace gases of the stratosphere of Titan. Astronomy and Astrophysics, 2014, 561, A4.	5.1	35
53	From cold to warm gas giants: A three-dimensional atmospheric general circulation modeling. Icarus, 2013, 225, 228-235.	2.5	33
54	Constraints on Titan's middle atmosphere ammonia abundance from Herschel/SPIRE sub-millimetre spectra. Planetary and Space Science, 2013, 75, 136-147.	1.7	50

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55	DETERMINATION OF AN UPPER LIMIT FOR THE WATER OUTGASSING RATE OF MAIN-BELT COMET P/2012 T1 (PANSTARRS). Astrophysical Journal Letters, 2013, 774, L13.	8.3	27
56	A HERSCHEL STUDY OF D/H IN WATER IN THE JUPITER-FAMILY COMET 45P/HONDA-MRKOS-PAJDUÅÃKOVÃ•AND PROSPECTS FOR D/H MEASUREMENTS WITH CCAT. Astrophysical Journal Letters, 2013, 774, L3.	8.3	73
57	Spatial distribution of water in the stratosphere of Jupiter fromHerschelHIFI and PACS observations. Astronomy and Astrophysics, 2013, 553, A21.	5.1	32
58	A survey of volatile species in Oort cloud comets C/2001 Q4 (NEAT) and C/2002 T7 (LINEAR) at millimeter wavelengths. Astronomy and Astrophysics, 2013, 559, A48.	5.1	10
59	Carbon dioxide ice clouds, snowfalls, and baroclinic waves in the northern winter polar atmosphere of Mars. Geophysical Research Letters, 2013, 40, 1484-1488.	4.0	35
60	The D/H ratio in the atmospheres of Uranus and Neptune fromHerschel-PACS observations. Astronomy and Astrophysics, 2013, 551, A126.	5.1	76
61	General circulation modeling of the Martian upper atmosphere during global dust storms. Journal of Geophysical Research E: Planets, 2013, 118, 2234-2246.	3.6	49
62	General circulation modeling of the Martian upper atmosphere during global dust storms. Journal of Geophysical Research E: Planets, 2013, 118, n/a-n/a.	3.6	10
63	Investigations of the Solar Influence on Middle Atmospheric Water Vapour and Ozone During the Last Solar Cycleâ€"Analysis of the MPS Data Set. Springer Atmospheric Sciences, 2013, , 109-124.	0.3	1
64	First detection of tidal behaviour in polar mesospheric water vapour by ground based microwave spectroscopy. Atmospheric Chemistry and Physics, 2012, 12, 3753-3759.	4.9	13
65	Herschelmeasurements of theÂD/H and¹⁶O/¹⁸O ratios in water in the Oort-cloud comet C/2009ÂP1 (Garradd). Astronomy and Astrophysics, 2012, 544, L15.	5.1	115
66	Dynamical effects of internal gravity waves in the equinoctial thermosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2012, 90-91, 104-116.	1.6	49
67	Anthropogenic effects on the distribution of minor chemical constituents in the mesosphere/lower thermosphere â€“ A model study. Advances in Space Research, 2012, 50, 598-618.	2.6	8
68	Bright polar mesospheric clouds formed by main engine exhaust from the space shuttle's final launch. Journal of Geophysical Research, 2012, 117, .	3.3	16
69	The abundance, vertical distribution and origin of H2O in Titanâ€™s atmosphere: Herschel observations and photochemical modelling. Icarus, 2012, 221, 753-767.	2.5	61
70	Submillimetric spectroscopic observations of volatiles in comet C/2004 Q2 (Machholz). Astronomy and Astrophysics, 2012, 545, A2.	5.1	7
71	Ammonia and other parent molecules in comet 10P/Tempel 2 fromHerschel/HIFI and ground-based radio observations. Astronomy and Astrophysics, 2012, 539, A68.	5.1	31
72	An upper limit for the water outgassing rate of the main-belt comet 176P/LINEAR observed withHerschel/HIFI. Astronomy and Astrophysics, 2012, 546, L4.	5.1	29

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73	Odin space telescope monitoring of water vapor in the stratosphere of Jupiter. Planetary and Space Science, 2012, 61, 3-14.	1.7	14
74	Overview of the Martian atmospheric submillimetre sounder FIRE. Planetary and Space Science, 2012, 63-64, 62-82.	1.7	18
75	Ozone distribution in the middle latitude mesosphere as derived from microwave measurements at Lindau (51.66Â°N, 10.13Â°E). Journal of Geophysical Research, 2011, 116, .	3.3	16
76	Influence of gravity waves on the Martian atmosphere: General circulation modeling. Journal of Geophysical Research, 2011, 116, .	3.3	89
77	Influence of dust on the dynamics of the martian atmosphere above the first scale height. Aeolian Research, 2011, 3, 145-156.	2.7	23
78	First detection of hydrogen isocyanide (HNC) in Titanâ€™s atmosphere. Astronomy and Astrophysics, 2011, 536, L12.	5.1	40
79	First results ofHerschel-SPIRE observations of Titan. Astronomy and Astrophysics, 2011, 536, L2.	5.1	30
80	Direct detection of the Enceladus water torus withHerschel. Astronomy and Astrophysics, 2011, 532, L2.	5.1	59
81	HCN and CN in Comet 2P/Encke: Models of the non-isotropic, rotation-modulated coma and CN parent life time. Icarus, 2011, 215, 153-185.	2.5	5
82	Ocean-like water in the Jupiter-family comet 103P/Hartley 2. Nature, 2011, 478, 218-220.	27.8	412
83	Ozone trends in the mid-latitude stratopause region based on microwave measurements at Lindau (51.66Â° N, 10.13Â° E), the ozone reference model, and model calculations. Advances in Space Research, 2011, 47, 1937-1948.	2.6	13
84	Estimates of gravity wave drag on Mars: Indication of a possible lower thermospheric wind reversal. Icarus, 2011, 211, 909-912.	2.5	48
85	EPOXI: COMET 103P/HARTLEY 2 OBSERVATIONS FROM A WORLDWIDE CAMPAIGN. Astrophysical Journal Letters, 2011, 734, L1.	8.3	96
86	ARIS-Campaign: intercomparison of three ground based 22 GHz radiometers for middle atmospheric water vapor at the Zugspitze in winter 2009. Atmospheric Measurement Techniques, 2011, 4, 1979-1994.	3.1	11
87	First results ofHerschel-PACS observations of Neptune. Astronomy and Astrophysics, 2010, 518, L152.	5.1	60
88	TheHerschel-SPIRE submillimetre spectrum of Mars. Astronomy and Astrophysics, 2010, 518, L151.	5.1	9
89	A study of the distant activity of comet C/2006ÂW3Â(Christensen) withHerscheland ground-based radio telescopes. Astronomy and Astrophysics, 2010, 518, L149.	5.1	35
90	Herschel/HIFI observations of Mars: First detection of O₂at submillimetre wavelengths and upper limits on HCl and H₂O₂. Astronomy and Astrophysics, 2010, 521, L49.	5.1	57

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91	Sounding of Titanâ€™s atmosphere at submillimeter wavelengths from an orbiting spacecraft. Planetary and Space Science, 2010, 58, 1724-1739.	1.7	20
92	Preparation for the solar system observations with Herschel: Simulation of Jupiter observations with PACS. Planetary and Space Science, 2010, 58, 1692-1698.	1.7	2
93	The HCN molecule as a tracer of the nucleus rotation of comet 73P-C/Schwassmann-Wachmann 3. Astronomy and Astrophysics, 2010, 510, A55.	5.1	17
94	HCN SPECTROSCOPY OF COMET 73P/SCHWASSMANN-WACHMANN 3. A STUDY OF GAS EVOLUTION AND ITS LINK TO CN. Astrophysical Journal, 2010, 715, 1258-1269.	4.5	19
95	HIFI observations of water in the atmosphere of comet C/2008 Q3 (Garradd). Astronomy and Astrophysics, 2010, 518, L150.	5.1	31
96	First results on Martian carbon monoxide fromHerschel/HIFI observations. Astronomy and Astrophysics, 2010, 521, L48.	5.1	19
97	Water production in comet 81P/WildÂ2 as determined byHerschel/HIFI. Astronomy and Astrophysics, 2010, 521, L50.	5.1	25
98	Water vapor measurements at ALOMAR over a solar cycle compared with model calculations by LIMA. Journal of Geophysical Research, 2010, 115, .	3.3	42
99	A cometary origin for CO in the stratosphere of Saturn?. Astronomy and Astrophysics, 2010, 510, A88.	5.1	37
100	First observation of CO at 345GHz in the atmosphere of Saturn with the JCMT: New constraints on its origin. Icarus, 2009, 203, 531-540.	2.5	33
101	Water and related chemistry in the solar system. A guaranteed time key programme for Herschel. Planetary and Space Science, 2009, 57, 1596-1606.	1.7	58
102	Modeling the effects of gravity wave momentum deposition on the general circulation above the turbopause. Journal of Geophysical Research, 2009, 114, .	3.3	119
103	Analysis of nonlinear effects in microwave spectrometers. Journal of Geophysical Research, 2009, 114, .	3.3	8
104	Long-term behavior of the concentration of the minor constituents in the mesosphere â€“ a model study. Atmospheric Chemistry and Physics, 2009, 9, 2779-2792.	4.9	23
105	On Forcing the Winter Polar Warmings in the Martian Middle Atmosphere during Dust Storms. Journal of the Meteorological Society of Japan, 2009, 87, 913-921.	1.8	28
106	Upper stratospheric ozone decrease events due to a positive feedback between ozone and the ozone dissociation rate. Nonlinear Processes in Geophysics, 2009, 16, 409-418.	1.3	4
107	The quasi 5â€day signal in the mesospheric water vapor concentration at high latitudes in 2003â€a comparison between observations at ALOMAR and calculations. Journal of Geophysical Research, 2008, 113, .	3.3	22
108	Seasonal changes of the baroclinic wave activity in the northern hemisphere of Mars simulated with a GCM. Geophysical Research Letters, 2007, 34, .	4.0	37

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109	On the winter anomaly of the night-to-day ratio of ozone in the middle to upper mesosphere in middle to high latitudes. Advances in Space Research, 2007, 40, 846-854.	2.6	26
110	Winter polar warmings and the meridional transport on Mars simulated with a general circulation model. Icarus, 2007, 186, 97-110.	2.5	42
111	Middle atmosphere polar warmings on Mars: Simulations and study on the validation with sub-millimeter observations. Planetary and Space Science, 2007, 55, 1103-1112.	1.7	30
112	MIRO: Microwave Instrument for Rosetta Orbiter. Space Science Reviews, 2007, 128, 561-597.	8.1	173
113	A digital dispersive matching network for SAW devices in chirp transform spectrometers. IEEE Transactions on Microwave Theory and Techniques, 2006, 54, 1415-1424.	4.6	26
114	Behavior of mesospheric ozone under nearly polar night conditions. Advances in Space Research, 2006, 38, 2402-2407.	2.6	14
115	Description and climatology of a new general circulation model of the Martian atmosphere. Journal of Geophysical Research, 2005, 110, .	3.3	63
116	The High Resolution Chirp Transform Spectrometer for the Sofia-Great Instrument. Experimental Astronomy, 2004, 18, 77-91.	3.7	43
117	On the spatiotemporal behavior of ozone within the upper mesosphere/mesopause region under nearly polar night conditions. Journal of Geophysical Research, 2004, 109, .	3.3	51
118	Noctilucent clouds and the mesospheric water vapour: the past decade. Atmospheric Chemistry and Physics, 2004, 4, 2449-2464.	4.9	39
119	Polar mesospheric clouds formed from space shuttle exhaust. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	62
120	Validation of stratospheric ClO measurements from the Millimeter-wave Atmospheric Sounder (MAS). Journal of Geophysical Research, 2000, 105, 9053-9062.	3.3	6
121	A case study on middle atmospheric water vapor transport during the February 1998 stratospheric warming. Geophysical Research Letters, 2000, 27, 3309-3312.	4.0	28
122	Water vapor of the polar middle atmosphere: Annual variation and summer mesosphere Conditions as observed by ground-based microwave spectroscopy. Geophysical Research Letters, 1999, 26, 1517-1520.	4.0	100
123	High-resolution chirp transform spectrometer for middle atmospheric microwave sounding. , 1997, , .		18
124	Latitudinal distribution of upper stratospheric ClO as derived from Space Borne Microwave Spectroscopy. Geophysical Research Letters, 1996, 23, 2321-2324.	4.0	15
125	<title>Ground-based detection of middle atmospheric water vapor</title>. , 1995, 2586, 188.		23
126	<title>Ground-based microwave detection of middle atmospheric ozone</title>. , 1995, 2586, 206.		5

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127	<title>Retrieval of data from ground-based microwave sensing of the middle atmosphere: comparison of two inversion techniques</title>. , 1995, , .		7
128	<title>Multiband chirp transform spectrometer for the microwave remote sensing of middle-atmospheric trace gases</title>. , 1995, , .		2
129	A high-resolution chirp transform spectrometer for microwave measurements. Measurement Science and Technology, 1990, 1, 592-595.	2.6	73
130	A NEW, HIGH-PERFORMANCE, HETERODYNE SPECTROMETER FOR GROUND-BASED REMOTE SENSING OF MESOSPHERIC WATER VAPOUR. , 0, , 569-578.		6
131	THE DOPPLER-SONNEMANN EFFECT (DSE) ON THE PHOTOCHEMISTRY ON MARS. , 0, , 163-175.		1