

Pascal Rannou

List of Publications by Year in descending order

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99
papers

4,569
citations

81900

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102
all docs

102
docs citations

102
times ranked

1986
citing authors

#	ARTICLE	IF	CITATIONS
1	Origin and role of water ice clouds in the Martian water cycle as inferred from a general circulation model. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	274
2	The Latitudinal Distribution of Clouds on Titan. <i>Science</i> , 2006, 311, 201-205.	12.6	187
3	Evidence for a Polar Ethane Cloud on Titan. <i>Science</i> , 2006, 313, 1620-1622.	12.6	161
4	A warm layer in Venus' cryosphere and high-altitude measurements of HF, HCl, H ₂ O and HDO. <i>Nature</i> , 2007, 450, 646-649.	27.8	161
5	SPICAV on Venus Express: Three spectrometers to study the global structure and composition of the Venus atmosphere. <i>Planetary and Space Science</i> , 2007, 55, 1673-1700.	1.7	160
6	Physical properties of the organic aerosols and clouds on Titan. <i>Planetary and Space Science</i> , 2001, 49, 79-99.	1.7	151
7	SPICAM on Mars Express: Observing modes and overview of UV spectrometer data and scientific results. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	148
8	Titan global climate model: A new 3-dimensional version of the IPSL Titan GCM. <i>Icarus</i> , 2012, 218, 707-722.	2.5	141
9	Evidence for the Exposure of Water Ice on Titan's Surface. <i>Science</i> , 2003, 300, 628-630.	12.6	133
10	A wind origin for Titan's haze structure. <i>Nature</i> , 2002, 418, 853-856.	27.8	113
11	Subvisible CO ₂ ice clouds detected in the mesosphere of Mars. <i>Icarus</i> , 2006, 183, 403-410.	2.5	113
12	A coupled dynamics-microphysics model of Titan's atmosphere. <i>Icarus</i> , 2004, 170, 443-462.	2.5	112
13	Titan's Geometric Albedo: Role of the Fractal Structure of the Aerosols. <i>Icarus</i> , 1995, 118, 355-372.	2.5	102
14	Fractal aggregates in Titan's atmosphere. <i>Planetary and Space Science</i> , 1993, 41, 257-267.	1.7	99
15	Applications of a new set of methane line parameters to the modeling of Titan's spectrum in the 1.58-1.74 μm window. <i>Planetary and Space Science</i> , 2012, 61, 85-98.	1.7	99
16	Stellar occultations at UV wavelengths by the SPICAM instrument: Retrieval and analysis of Martian haze profiles. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	93
17	Titan's surface and atmosphere from Cassini/VIMS data with updated methane opacity. <i>Icarus</i> , 2013, 226, 470-486.	2.5	92
18	Titan haze distribution and optical properties retrieved from recent observations. <i>Icarus</i> , 2010, 208, 850-867.	2.5	85

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19	Optical constants of Titan's stratospheric aerosols in the 70–1500 cm ⁻¹ spectral range constrained by Cassini/CIRS observations. <i>Icarus</i> , 2012, 219, 5-12.	2.5	82
20	Mean-field approximation of Mie scattering by fractal aggregates of identical spheres. <i>Applied Optics</i> , 1997, 36, 8791.	2.1	77
21	TandEM: Titan and Enceladus mission. <i>Experimental Astronomy</i> , 2009, 23, 893-946.	3.7	77
22	A new interpretation of scattered light measurements at Titan's limb. <i>Journal of Geophysical Research</i> , 1997, 102, 10997-11013.	3.3	76
23	Global circulation as the main source of cloud activity on Titan. <i>Nature</i> , 2009, 459, 678-682.	27.8	76
24	Titan solar occultation observed by Cassini/VIMS: Gas absorption and constraints on aerosol composition. <i>Icarus</i> , 2009, 201, 198-216.	2.5	75
25	A model of Titan's haze of fractal aerosols constrained by multiple observations. <i>Planetary and Space Science</i> , 2003, 51, 963-976.	1.7	74
26	Titan's 3-micron spectral region from ISO high-resolution spectroscopy. <i>Icarus</i> , 2006, 180, 176-185.	2.5	74
27	New insights into Martian dust distribution and water-ice cloud microphysics. <i>Journal of Geophysical Research</i> , 2002, 107, 4-1.	3.3	73
28	Titan's stratospheric composition driven by condensation and dynamics. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	72
29	Titan's cloud seasonal activity from winter to spring with Cassini/VIMS. <i>Icarus</i> , 2011, 216, 89-110.	2.5	68
30	The study of the martian atmosphere from top to bottom with SPICAM light on mars express. <i>Planetary and Space Science</i> , 2000, 48, 1303-1320.	1.7	61
31	Semi-empirical model of absorption and scattering by isotropic fractal aggregates of spheres. <i>Planetary and Space Science</i> , 1999, 47, 385-396.	1.7	60
32	Latitudinal transport by barotropic waves in Titan's stratosphere.. <i>Icarus</i> , 2003, 166, 343-358.	2.5	60
33	Titan's surface albedo variations over a Titan season from near-infrared CFHT/FTS spectra. <i>Planetary and Space Science</i> , 2006, 54, 1225-1246.	1.7	47
34	The evolution of Titan's detached haze layer near equinox in 2009. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	47
35	Titan's lakes chemical composition: Sources of uncertainties and variability. <i>Planetary and Space Science</i> , 2012, 61, 99-107.	1.7	47
36	New accurate theoretical line lists of 12CH ₄ and 13CH ₄ in the 0–13400 cm ⁻¹ spectral range: Application to the modeling of methane absorption in Titan's atmosphere. <i>Icarus</i> , 2018, 303, 114-130.	2.5	47

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37	Study of Titan's fall southern stratospheric polar cloud composition with Cassini/CIRS: Detection of benzene ice. <i>Icarus</i> , 2018, 310, 89-104.	2.5	46
38	Diagnostics of Titan's stratospheric dynamics using Cassini/CIRS data and the 2-dimensional IPSL circulation model. <i>Icarus</i> , 2008, 197, 556-571.	2.5	44
39	A Three-dimensional Map of Titan's Tropospheric Haze Distribution Based on [ITAL]Hubble Space Telescope [ITAL] Imaging. <i>Astronomical Journal</i> , 2002, 123, 3473-3486.	4.7	42
40	Monitoring atmospheric phenomena on Titan. <i>Astronomy and Astrophysics</i> , 2006, 456, 761-774.	5.1	39
41	Cassini Imaging Science Subsystem observations of Titan's south polar cloud. <i>Icarus</i> , 2016, 270, 399-408.	2.5	39
42	Titan atmosphere database. <i>Advances in Space Research</i> , 2005, 36, 2194-2198.	2.6	38
43	Probing Titan's lower atmosphere with acousto-optic tuning. <i>Icarus</i> , 2003, 163, 150-163.	2.5	33
44	Dissipation of Titan's north polar cloud at northern spring equinox. <i>Planetary and Space Science</i> , 2012, 60, 86-92.	1.7	33
45	Structure of Titan's evaporites. <i>Icarus</i> , 2016, 270, 41-56.	2.5	32
46	Dust and cloud detection at the Mars limb with UV scattered sunlight with SPICAM. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	31
47	Impact of the seasonal variations of composition on the temperature field of Titan's stratosphere. <i>Icarus</i> , 2003, 163, 164-174.	2.5	29
48	Characterization of zonal winds in the stratosphere of Titan with UVES. <i>Icarus</i> , 2005, 179, 497-510.	2.5	29
49	The coupling of winds, aerosols and chemistry in Titan's atmosphere. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2009, 367, 665-682.	3.4	23
50	Growth of aerosols in Titan's atmosphere and related time scales: A stochastic approach. <i>Geophysical Research Letters</i> , 1993, 20, 967-970.	4.0	21
51	Characterization of Aerosols in the Detached Haze Layer of Titan. <i>Icarus</i> , 2000, 147, 267-281.	2.5	21
52	Mapping polar atmospheric features on Titan with VIMS: From the dissipation of the northern cloud to the onset of a southern polar vortex. <i>Icarus</i> , 2018, 311, 371-383.	2.5	20
53	The seasonal cycle of Titan's detached haze. <i>Nature Astronomy</i> , 2018, 2, 495-500.	10.1	19
54	The DREAMS Experiment Onboard the Schiaparelli Module of the ExoMars 2016 Mission: Design, Performances and Expected Results. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	19

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55	Sensitivity of some optical properties of fractals to the cut-off functions. <i>Journal of Physics A</i> , 1995, 28, 297-316.	1.6	18
56	The 2-1/4m spectroscopy of Huygens probe landing site on Titan with Very Large Telescope/Nasmyth Adaptive Optics System Near-Infrared Imager and Spectrograph. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	18
57	Observational evidence for active dust storms on Titan at equinox. <i>Nature Geoscience</i> , 2018, 11, 727-732.	12.9	18
58	In situ inorganic and organic analysis (Pyr/CD-GC/MS) of the Martian soil, on the Mars 2005 mission. <i>Planetary and Space Science</i> , 2001, 49, 523-531.	1.7	17
59	Extinction layer detected by the 2003 star occultation on Pluto. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	16
60	DUAL ORIGIN OF AEROSOLS IN TITAN'S DETACHED HAZE LAYER. <i>Astrophysical Journal Letters</i> , 2011, 741, L32.	8.3	16
61	Constraints on Uranus's haze structure, formation and transport. <i>Icarus</i> , 2019, 333, 1-11.	2.5	16
62	Measurement of dust optical depth using the solar irradiance sensor (SIS) onboard the ExoMars 2016 EDM. <i>Planetary and Space Science</i> , 2017, 138, 33-43.	1.7	15
63	Titan: Atmospheric and surface features as observed with Nasmyth Adaptive Optics System Near-Infrared Imager and Spectrograph at the time of the Huygens mission. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	14
64	Titan's surface spectra at the Huygens landing site and Shangri-La. <i>Icarus</i> , 2016, 270, 291-306.	2.5	14
65	The DREAMS experiment on the ExoMars 2016 mission for the study of Martian environment during the dust storm season. , 2014, , .		13
66	Optical constants of Pluto aerosol analogues from UV to near-IR. <i>Icarus</i> , 2021, 362, 114398.	2.5	13
67	Near-infrared study of Titan's resolved disk in spectro-imaging with CFHT/OASIS. <i>Planetary and Space Science</i> , 2005, 53, 535-556.	1.7	12
68	Measurement of aerosol optical depth and sub-visual cloud detection using the optical depth sensor (ODS). <i>Atmospheric Measurement Techniques</i> , 2016, 9, 455-467.	3.1	12
69	Haze Seasonal Variations of Titan's Upper Atmosphere during the Cassini Mission. <i>Astrophysical Journal</i> , 2021, 907, 36.	4.5	11
70	Exocam: Mars in a box to simulate soil-atmosphere interactions. <i>Advances in Space Research</i> , 2001, 27, 189-193.	2.6	10
71	CLOUD AND HAZE IN THE WINTER POLAR REGION OF TITAN OBSERVED WITH VISUAL AND INFRARED MAPPING SPECTROMETER ON BOARD CASSINI. <i>Astrophysical Journal</i> , 2012, 748, 4.	4.5	9
72	Storms, clouds, and weather. , 2014, , 190-223.		9

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73	The optical depth sensor (ODS) for column dust opacity measurements and cloud detection on martian atmosphere. <i>Experimental Astronomy</i> , 2016, 42, 61-83.	3.7	9
74	Aerosols optical properties in Titan's detached haze layer before the equinox. <i>Icarus</i> , 2017, 292, 13-21.	2.5	9
75	Supersaturation on Pluto and elsewhere. <i>Icarus</i> , 2018, 312, 36-44.	2.5	9
76	The DREAMS experiment flown on the ExoMars 2016 mission for the study of Martian environment during the dust storm season. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 122, 484-493.	5.0	9
77	Titan's haze structure in 1999 from spatially-resolved narrowband imaging surrounding the 0.94 μ m methane window. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	8
78	Global structure and composition of the martian atmosphere with SPICAM on Mars express. <i>Advances in Space Research</i> , 2005, 35, 31-36.	2.6	8
79	Technical aspect of the optical depth sensor. <i>Advances in Space Research</i> , 2006, 38, 726-729.	2.6	8
80	Scientific aspects of the optical depth sensor. <i>Advances in Space Research</i> , 2005, 36, 2182-2186.	2.6	7
81	Distribution and intensity of water ice signature in South Xanadu and Tui Regio. <i>Icarus</i> , 2021, 364, 114464.	2.5	7
82	The Lavoisier mission : A system of descent probe and balloon flotilla for geochemical investigation of the deep atmosphere and surface of Venus. <i>Advances in Space Research</i> , 2002, 29, 255-264.	2.6	6
83	A coupled dynamics-microphysics model of Titan's atmosphere. <i>Icarus</i> , 2004, 170, 443-443.	2.5	6
84	Titan's emission processes during eclipse. <i>Icarus</i> , 2014, 241, 397-408.	2.5	6
85	Counting and Phase Function Measurements with the LONSCAPE Instrument to Determine Physical Properties of Aerosols in Ice Giant Planet Atmospheres. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	6
86	Transparency of 1.7μ m window of Titan's atmosphere. <i>Planetary and Space Science</i> , 2018, 151, 109-124.		5
87	Constraints on Neptune's haze structure and formation from VLT observations in the H-band. <i>Icarus</i> , 2020, 350, 113808.	2.5	5
88	Science goals and new mission concepts for future exploration of Titan's atmosphere, geology and habitability: titan POLar scout/orbitEr and in situ lake lander and DrONE explorer (POSEIDON). <i>Experimental Astronomy</i> , 2022, 54, 911-973.	3.7	5
89	Optical anisotropy of an ensemble of aligned fractal aggregates. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2003, 79-80, 569-576.	2.3	4
90	A new analysis of the ESO Very Large Telescope (VLT) observations of Titan at 2.1μ m. <i>Planetary and Space Science</i> , 2010, 58, 1708-1714.	1.7	4

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91	Modeling cloud microphysics using a two-moments hybrid bulk/bin scheme for use in Titan's climate models: Application to the annual and diurnal cycles. <i>Icarus</i> , 2014, 231, 310-322.	2.5	4
92	Adsorption isotherms and nucleation of methane and ethane on an analog of Titan's photochemical aerosols. <i>Astronomy and Astrophysics</i> , 2019, 631, A151.	5.1	4
93	On the latitudinal distribution of Titan's haze at the Voyager epoch. <i>Planetary and Space Science</i> , 2005, 53, 526-534.	1.7	3
94	Convection behind the Humidification of Titan's Stratosphere. <i>Astrophysical Journal</i> , 2021, 922, 239.	4.5	3
95	Titan Stratospheric Haze Bands Observed in Cassini VIMS as Tracers of Meridional Circulation. <i>Planetary Science Journal</i> , 2022, 3, 114.	3.6	3
96	Brownian coagulation of a bi-modal distribution of both spherical and fractal aerosols. <i>Journal of Aerosol Science</i> , 2017, 105, 151-165.	3.8	1
97	The DREAMS experiment flown on the ExoMars 2016 mission for the study of Martian environment during the dust storm season. , 2017, , .		1
98	Fast forward modeling of Titan's infrared spectra to invert VIMS/Cassini hyperspectral images. , 2009, , .		0
99	Systematic detection of Titan's clouds in VIMS/Cassini hyperspectral images using a new automated algorithm. , 2010, , .		0