

# Jean-Loup Bertaux

## List of Publications by Year in descending order

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71  
papers

5,685  
citations

57758

44  
h-index

91884

69  
g-index

71  
all docs

71  
docs citations

71  
times ranked

2829  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the nucleus structure and activity of comet 67P/Churyumov-Gerasimenko. <i>Science</i> , 2015, 347, aaa1044.	12.6	366
2	Dust measurements in the coma of comet 67P/Churyumov-Gerasimenko inbound to the Sun. <i>Science</i> , 2015, 347, aaa3905.	12.6	310
3	The morphological diversity of comet 67P/Churyumov-Gerasimenko. <i>Science</i> , 2015, 347, aaa0440.	12.6	259
4	Discovery of an aurora on Mars. <i>Nature</i> , 2005, 435, 790-794.	27.8	203
5	Density and temperatures of the upper Martian atmosphere measured by stellar occultations with Mars Express SPICAM. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	200
6	Variations of sulphur dioxide at the cloud top of Venus's dynamic atmosphere. <i>Nature Geoscience</i> , 2013, 6, 25-28.	12.9	164
7	A warm layer in Venus' cryosphere and high-altitude measurements of HF, HCl, H <sub>2</sub> O and HDO. <i>Nature</i> , 2007, 450, 646-649.	27.8	161
8	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
9	Large heterogeneities in comet 67P as revealed by active pits from sinkhole collapse. <i>Nature</i> , 2015, 523, 63-66.	27.8	158
10	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
11	Two independent and primitive envelopes of the bilobate nucleus of comet 67P. <i>Nature</i> , 2015, 526, 402-405.	27.8	141
12	Unexpected variability of Martian hydrogen escape. <i>Geophysical Research Letters</i> , 2014, 41, 314-320.	4.0	137
13	Heterogeneous chemistry in the atmosphere of Mars. <i>Nature</i> , 2008, 454, 971-975.	27.8	130
14	Nightglow in the Upper Atmosphere of Mars and Implications for Atmospheric Transport. <i>Science</i> , 2005, 307, 566-569.	12.6	119
15	Stormy water on Mars: The distribution and saturation of atmospheric water during the dusty season. <i>Science</i> , 2020, 367, 297-300.	12.6	117
16	Subvisible CO <sub>2</sub> ice clouds detected in the mesosphere of Mars. <i>Icarus</i> , 2006, 183, 403-410.	2.5	113
17	Water vapor in the middle atmosphere of Mars during the 2007 global dust storm. <i>Icarus</i> , 2018, 300, 440-457.	2.5	111
18	No detection of methane on Mars from early ExoMars Trace Gas Orbiter observations. <i>Nature</i> , 2019, 568, 517-520.	27.8	111

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19	Size-frequency distribution of boulders $\geq 7$ m on comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 2015, 583, A37.	5.1	108
20	Martian dust storm impact on atmospheric H <sub>2</sub> O and D/H observed by ExoMars Trace Gas Orbiter. <i>Nature</i> , 2019, 568, 521-525.	27.8	107
21	Vertical profiling of SO <sub>2</sub> and SO above Venus's clouds by SPICAV/SOIR solar occultations. <i>Icarus</i> , 2012, 217, 740-751.	2.5	103
22	VEGA 1 and VEGA 2 entry probes: An investigation of local UV absorption (220-400 nm) in the atmosphere of Venus (SO <sub>2</sub> aerosols, cloud structure). <i>Journal of Geophysical Research</i> , 1996, 101, 12709-12745.	3.3	100
23	Stellar occultations observed by SPICAM on Mars Express. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	97
24	The 1.10- and 1.18- $\mu$ m nightside windows of Venus observed by SPICAV-IR aboard Venus Express. <i>Icarus</i> , 2011, 216, 173-183.	2.5	96
25	Vertical distribution of ozone on Mars as measured by SPICAM/Mars Express using stellar occultations. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	90
26	Mars's water vapor mapping by the SPICAM IR spectrometer: Five martian years of observations. <i>Icarus</i> , 2015, 251, 50-64.	2.5	90
27	SPICAM IR acousto-optic spectrometer experiment on Mars Express. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	89
28	An investigation of the SO <sub>2</sub> content of the venusian mesosphere using SPICAV-UV in nadir mode. <i>Icarus</i> , 2011, 211, 58-69.	2.5	86
29	A strong seasonal dependence in the Martian hydrogen exosphere. <i>Geophysical Research Letters</i> , 2015, 42, 8678-8685.	4.0	86
30	Rosetta-Alice observations of exospheric hydrogen and oxygen on Mars. <i>Icarus</i> , 2011, 214, 394-399.	2.5	82
31	Measurements of the near-nucleus coma of comet 67P/Churyumov-Gerasimenko with the Alice far-ultraviolet spectrograph on Rosetta. <i>Astronomy and Astrophysics</i> , 2015, 583, A8.	5.1	77
32	Mars water vapor abundance from SPICAM IR spectrometer: Seasonal and geographic distributions. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	76
33	Photolysis of sulphuric acid as the source of sulphur oxides in the mesosphere of Venus. <i>Nature Geoscience</i> , 2010, 3, 834-837.	12.9	75
34	A complete climatology of the aerosol vertical distribution on Mars from MEx/SPICAM UV solar occultations. <i>Icarus</i> , 2013, 223, 892-941.	2.5	64
35	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
36	Influence of Venus topography on the zonal wind and UV albedo at cloud top level: The role of stationary gravity waves. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1087-1101.	3.6	60

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37	Observation of O <sub>2</sub> 1.27 $\mu$ m dayglow by SPICAM IR: Seasonal distribution for the first Martian year of Mars Express. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	57
38	Optical extinction due to aerosols in the upper haze of Venus: Four years of SOIR/VEX observations from 2006 to 2010. <i>Icarus</i> , 2012, 217, 875-881.	2.5	54
39	Aswan site on comet 67P/Churyumov-Gerasimenko: Morphology, boulder evolution, and spectrophotometry. <i>Astronomy and Astrophysics</i> , 2016, 592, A69.	5.1	53
40	SPICAM observations and modeling of Mars aurorae. <i>Icarus</i> , 2016, 264, 398-406.	2.5	52
41	In-flight performance and calibration of SPICAV SOIR onboard Venus Express. <i>Applied Optics</i> , 2008, 47, 2252.	2.1	50
42	Climatology of SO <sub>2</sub> and UV absorber at Venus' cloud top from SPICAV-UV nadir dataset. <i>Icarus</i> , 2020, 335, 113368.	2.5	50
43	SPICAV IR acousto-optic spectrometer experiment on Venus Express. <i>Planetary and Space Science</i> , 2012, 65, 38-57.	1.7	49
44	Isotopic fractionation through water vapor condensation: The Deuteropause, a cold trap for deuterium in the atmosphere of Mars. <i>Journal of Geophysical Research</i> , 2001, 106, 32879-32884.	3.3	48
45	New nitric oxide (NO) nightglow measurements with SPICAM/MEx as a tracer of Mars upper atmosphere circulation and comparison with LMD-MGCM model prediction: Evidence for asymmetric hemispheres. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 2172-2179.	3.6	37
46	Coordinated Hubble Space Telescope and Venus Express Observations of Venus's upper cloud deck. <i>Icarus</i> , 2015, 258, 309-336.	2.5	35
47	Gas outflow and dust transport of comet 67P/Churyumov-Gerasimenko. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S533-S546.	4.4	34
48	Improved calibration of SOIR/Venus Express spectra. <i>Optics Express</i> , 2013, 21, 21148.	3.4	30
49	Estimate of the erosion rate from H <sub>2</sub> O mass-loss measurements from SWAN/SOHO in previous perihelions of comet 67P/Churyumov-Gerasimenko and connection with observed rotation rate variations. <i>Astronomy and Astrophysics</i> , 2015, 583, A38.	5.1	30
50	Search for horizontal and vertical variations of CO in the day and night side lower mesosphere of Venus from CSHELL/IRTF $\frac{1}{4}$ m observations. <i>Planetary and Space Science</i> , 2015, 113-114, 256-263.	1.7	30
51	Preliminary study of Venus cloud layers with polarimetric data from SPICAV/VEx. <i>Planetary and Space Science</i> , 2015, 113-114, 159-168.	1.7	30
52	Ten years of Martian nitric oxide nightglow observations. <i>Geophysical Research Letters</i> , 2015, 42, 720-725.	4.0	29
53	Atomic oxygen distribution in the Venus mesosphere from observations of O <sub>2</sub> infrared airglow by VIRTIS-Venus Express. <i>Icarus</i> , 2009, 199, 264-272.	2.5	27
54	First observation of the Venus UV dayglow at limb from SPICAV/VEX. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	27

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55	The southern hemisphere of 67P/Churyumov-Gerasimenko: Analysis of the preperihelion size-frequency distribution of boulders $\geq 7$ m. <i>Astronomy and Astrophysics</i> , 2016, 592, L2.	5.1	27
56	Isotopic fractionation of water and its photolytic products in the atmosphere of Mars. <i>Nature Astronomy</i> , 2021, 5, 943-950.	10.1	27
57	The CO <sub>2</sub> continuum absorption in the 1.10- and 1.18- $\mu$ m windows on Venus from Maxwell Montes transits by SPICAV IR onboard Venus express. <i>Planetary and Space Science</i> , 2015, 113-114, 66-77.	1.7	23
58	Geomorphological mapping of comet 67P/Churyumov-Gerasimenko's Southern hemisphere. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S573-S592.	4.4	23
59	First observation of 628 CO <sub>2</sub> isotopologue band at 3.3 $\mu$ m in the atmosphere of Venus by solar occultation from Venus Express. <i>Icarus</i> , 2008, 195, 28-33.	2.5	22
60	NO emissions as observed by SPICAV during stellar occultations. <i>Planetary and Space Science</i> , 2010, 58, 1314-1326.	1.7	21
61	Improved algorithm for the transmittance estimation of spectra obtained with SOIR/Venus Express. <i>Applied Optics</i> , 2016, 55, 9275.	2.1	21
62	Martian ice cloud distribution obtained from SPICAM nadir UV measurements. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	20
63	Discovery of cloud top ozone on Venus. <i>Icarus</i> , 2019, 319, 491-498.	2.5	19
64	Deuterium content of the Venus atmosphere. <i>Nature</i> , 1989, 338, 567-568.	27.8	18
65	AOTF-based spectrometer for Mars atmosphere sounding. , 2002, , .		18
66	Compact echelle spectrometer for occultation sounding of the Martian atmosphere: design and performance. <i>Applied Optics</i> , 2013, 52, 1054.	1.8	17
67	IUVS echelle-mode observations of interplanetary hydrogen: Standard for calibration and reference for cavity variations between Earth and Mars during MAVEN cruise. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 2089-2105.	2.4	16
68	Compact high-resolution IR spectrometer for atmospheric studies. , 2002, , .		15
69	The Rocky-Like Behavior of Cometary Landslides on 67P/Churyumov-Gerasimenko. <i>Geophysical Research Letters</i> , 2019, 46, 14336-14346.	4.0	9
70	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
71	Improved calibrations of the stellar occultation data accumulated by the SPICAV UV onboard Venus Express. <i>Planetary and Space Science</i> , 2020, 184, 104868.	1.7	4