StÃ©phane Erard

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6749903/publications.pdf

Version: 2024-02-01

106 papers	5,612 citations	66343 42 h-index	79698 73 g-index
116 all docs	116 docs citations	116 times ranked	3623 citing authors

#	Article	IF	Citations
1	Water ortho-to-para ratio in the coma of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2022, 663, A43.	5.1	3
2	Mars Crater Database: A participative project for the classification of the morphological characteristics of large Martian craters. , 2021, , 629-644.		5
3	Ammonium salts are a reservoir of nitrogen on a cometary nucleus and possibly on some asteroids. Science, 2020, 367, .	12.6	115
4	SIMBIO-SYS: Scientific Cameras and Spectrometer for the BepiColombo Mission. Space Science Reviews, 2020, 216, 1.	8.1	47
5	Infrared detection of aliphatic organics on a cometary nucleus. Nature Astronomy, 2020, 4, 500-505.	10.1	41
6	An orbital water-ice cycle on comet 67P from colour changes. Nature, 2020, 578, 49-52.	27.8	36
7	Virtual European Solar & Planetary Access (VESPA): A Planetary Science Virtual Observatory Cornerstone. Data Science Journal, 2020, 19, .	1.3	7
8	MASER: A Science Ready Toolbox for Low Frequency Radio Astronomy. Data Science Journal, 2020, 19, .	1.3	4
9	Analysis of night-side dust activity on comet 67P observed by VIRTIS-M: a new method to constrain the thermal inertia on the surface. Astronomy and Astrophysics, 2019, 630, A21.	5.1	8
10	Bridging the Gap Between Geographical Information Systems and Planetary Virtual Observatory. Earth and Space Science, 2019, 6, 515-526.	2.6	1
11	The changing temperature of the nucleus of comet 67P induced by morphological and seasonal effects. Nature Astronomy, 2019, 3, 649-658.	10.1	34
12	VIRTIS-H observations of the dust coma of comet 67P/Churyumov-Gerasimenko: spectral properties and color temperature variability with phase and elevation. Astronomy and Astrophysics, 2019, 630, A22.	5.1	17
13	Diurnal variation of dust and gas production in comet 67P/Churyumov-Gerasimenko at the inbound equinox as seen by OSIRIS and VIRTIS-M on board Rosetta. Astronomy and Astrophysics, 2019, 630, A23.	5.1	9
14	67P/Churyumovâ€“Gerasimenko active areas before perihelion identified by GIADA and VIRTIS data fusion. Monthly Notices of the Royal Astronomical Society, 2019, 483, 2165-2176.	4.4	8
15	Production and 3D visualization of high-level data of minor bodies: The MATISSE tool in the framework of VESPA-Europlanet 2020 activity. Advances in Space Research, 2018, 62, 2317-2325.	2.6	4
16	VESPA: A community-driven Virtual Observatory in Planetary Science. Planetary and Space Science, 2018, 150, 65-85.	1.7	28
17	The Planetary Virtual Observatory and Laboratory (PVOL) and its integration into the Virtual European Solar and Planetary Access (VESPA). Planetary and Space Science, 2018, 150, 22-35.	1.7	25
18	Description, accessibility and usage of SOIR/Venus Express atmospheric profiles of Venus distributed in VESPA (Virtual European Solar and Planetary Access). Planetary and Space Science, 2018, 150, 60-64.	1.7	8

#	Article	IF	Citations
19	Laboratory simulations of the Vis-NIR spectra of comet 67P using sub-Âµm sized cosmochemical analogues. Icarus, 2018, 306, 306-318.	2.5	23
20	Science data visualization in planetary and heliospheric contexts with 3DView. Planetary and Space Science, 2018, 150, 111-130.	1.7	18
21	FITS Format for Planetary Surfaces: Definitions, Applications, and Best Practices. Earth and Space Science, 2018, 5, 640-651.	2.6	2
22	Summer outbursts in the coma of comet 67P/Churyumovâ€“Gerasimenko as observed by Rosettaâ€“VIRTIS. Monthly Notices of the Royal Astronomical Society, 2018, 481, 1235-1250.	4.4	20
23	Comet 67P outbursts and quiescent coma at 1.3 au from the Sun: dust properties from Rosetta/VIRTIS-H observations. Monthly Notices of the Royal Astronomical Society, 2017, 469, S443-S458.	4.4	56
24	Rosetta Alice/VIRTIS observations of the water vapour UV electroglow emissions around comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S416-S426.	4.4	12
25	Cometary coma dust size distribution from in situ IR spectra. Monthly Notices of the Royal Astronomical Society, 2017, 469, S598-S605.	4.4	12
26	How pristine is the interior of the comet 67P/Churyumovâ€“Gerasimenko?. Monthly Notices of the Royal Astronomical Society, 2017, 469, S685-S694.	4.4	22
27	Photometric behaviour of 67P/Churyumovâ€“Gerasimenko and analysis of its pre-perihelion diurnal variations. Monthly Notices of the Royal Astronomical Society, 2017, 469, S346-S356.	4.4	16
28	Properties of the dust in the coma of 67P/Churyumov-Gerasimenko observed with VIRTIS- M. Monthly Notices of the Royal Astronomical Society, 2016, , stw3197.	4.4	2
29	Three-dimensional direct simulation Monte-Carlo modeling of the coma of comet 67P/Churyumov-Gerasimenko observed by the VIRTIS and ROSINA instruments on board Rosetta. Astronomy and Astrophysics, 2016, 588, A134.	5.1	88
30	Detection of exposed H₂O ice on the nucleus of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2016, 595, A102.	5.1	67
31	Water and carbon dioxide distribution in the 67P/Churyumov-Gerasimenko coma from VIRTIS-M infrared observations. Astronomy and Astrophysics, 2016, 589, A45.	5.1	62
32	Investigation into the disparate origin of CO2 and H2O outgassing for Comet 67/P. Icarus, 2016, 277, 78-97.	2.5	61
33	Refractory and semi-volatile organics at the surface of comet 67P/Churyumov-Gerasimenko: Insights from the VIRTIS/Rosetta imaging spectrometer. Icarus, 2016, 272, 32-47.	2.5	127
34	The global surface composition of 67P/CG nucleus by Rosetta/VIRTIS. (I) Prelanding mission phase. Icarus, 2016, 274, 334-349.	2.5	54
35	Direct Simulation Monte Carlo modelling of the major species in the coma of comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S156-S169.	4.4	87
36	Evolution of CO₂, CH₄, and OCS abundances relative to H₂O in the coma of comet 67P around perihelion fromRosetta/VIRTIS-H observations. Monthly Notices of the Royal Astronomical Society, 2016, 462, S170-S183.	4.4	72

#	Article	IF	Citations
37	Seasonal exposure of carbon dioxide ice on the nucleus of comet 67P/Churyumov-Gerasimenko. Science, 2016, 354, 1563-1566.	12.6	61
38	Exposed water ice on the nucleus of comet 67P/Churyumovâ€“Gerasimenko. Nature, 2016, 529, 368-372.	27.8	104
39	First observations of H₂O and CO₂vapor in comet 67P/Churyumov-Gerasimenko made by VIRTIS onboard Rosetta. Astronomy and Astrophysics, 2015, 583, A6.	5.1	77
40	Photometric properties of comet 67P/Churyumov-Gerasimenko from VIRTIS-M onboard Rosetta. Astronomy and Astrophysics, 2015, 583, A31.	5.1	71
41	The organic-rich surface of comet 67P/Churyumov-Gerasimenko as seen by VIRTIS/Rosetta. Science, 2015, 347, aaa0628.	12.6	293
42	The diurnal cycle of water ice on comet 67P/Churyumovâ€“Gerasimenko. Nature, 2015, 525, 500-503.	27.8	199
43	VIRTIS on Rosetta: a unique technique to observe comet 67P/Churyumov-Gerasimenko â€“ first results and prospects. Proceedings of SPIE, 2015, , .	0.8	4
44	Planetary Science Virtual Observatory architecture. Astronomy and Computing, 2014, 7-8, 71-80.	1.7	10
45	The EPN-TAP protocol for the Planetary Science Virtual Observatory. Astronomy and Computing, 2014, 7-8, 52-61.	1.7	20
46	Dwarf planet Ceres: Ellipsoid dimensions and rotational pole from Keck and VLT adaptive optics images. Icarus, 2014, 236, 28-37.	2.5	28
47	History of telescopic observations of the Martian satellites. Planetary and Space Science, 2014, 102, 2-8.	1.7	6
48	Rotation period of Venus estimated from Venus Express VIRTIS images and Magellan altimetry. Icarus, 2012, 217, 474-483.	2.5	28
49	The light curve of asteroid 21 Lutetia measured by VIRTIS-M during the Rosetta fly-by. Planetary and Space Science, 2012, 66, 9-22.	1.7	12
50	Thermal properties of the asteroid (2867) Steins as observed by VIRTIS/Rosetta. Astronomy and Astrophysics, 2011, 531, A168.	5.1	29
51	Mercury resolved spectroscopy from NTT. Planetary and Space Science, 2011, 59, 1842-1852.	1.7	2
52	Venusâ€™s Southern Polar Vortex Reveals Precessing Circulation. Science, 2011, 332, 577-580.	12.6	54
53	The Surface Composition and Temperature of Asteroid 21 Lutetia As Observed by Rosetta/VIRTIS. Science, 2011, 334, 492-494.	12.6	110
54	Physical properties of (2) Pallas. Icarus, 2010, 205, 460-472.	2.5	58

#	Article	IF	Citations
55	SIMBIO-SYS: The spectrometer and imagers integrated observatory system for the BepiColombo planetary orbiter. Planetary and Space Science, 2010, 58, 125-143.	1.7	70
56	PHEBUS: A double ultraviolet spectrometer to observe Mercury's exosphere. Planetary and Space Science, 2010, 58, 201-223.	1.7	42
57	Mercury's surface and composition to be studied by BepiColombo. Planetary and Space Science, 2010, 58, 21-39.	1.7	31
58	The light curve of asteroid 2867 Steins measured by VIRTIS-M during the Rosetta fly-by. Planetary and Space Science, 2010, 58, 1066-1076.	1.7	11
59	Resolved spectroscopy of Mercury in the near-IR with SpeX/IRTF. Icarus, 2010, 209, 125-137.	2.5	7
60	Martian atmosphere as observed by VIRTISâ€M on Rosetta spacecraft. Journal of Geophysical Research, 2010, 115, .	3.3	10
61	METALLIC SPECIES IN MERCURYâ€™S EXOSPHERE: EMMI/NEW TECHNOLOGY TELESCOPE OBSERVATIONS. Astronomical Journal, 2009, 137, 3859-3863.	4.7	9
62	The Aristarchus Plateau on the Moon: Mineralogical and structural study from integrated Clementine UVâ€“Visâ€“NIR spectral data. Icarus, 2009, 199, 9-24.	2.5	36
63	Analysis of thermal emission from the nightside of Venus at 1.51 and 1.55 Î¼m. Icarus, 2009, 201, 814-817.	2.5	7
64	Limb observations of CO₂ and CO nonâ€LTE emissions in the Venus atmosphere by VIRTIS/Venus Express. Journal of Geophysical Research, 2009, 114, .	3.3	27
65	Multivariate analysis of Visible and Infrared Thermal Imaging Spectrometer (VIRTIS) Venus Express nightside and limb observations. Journal of Geophysical Research, 2009, 114, .	3.3	19
66	VIRTIS: An Imaging Spectrometer for the ROSETTA Mission. , 2009, , 563-585.		3
67	Distribution of the O₂ infrared nightglow observed with VIRTIS on board Venus Express. Geophysical Research Letters, 2008, 35, .	4.0	50
68	Variable winds on Venus mapped in three dimensions. Geophysical Research Letters, 2008, 35, .	4.0	119
69	Venus surface thermal emission at 1 Î¼m in VIRTIS imaging observations: Evidence for variation of crust and mantle differentiation conditions. Journal of Geophysical Research, 2008, 113, .	3.3	84
70	First detection of hydroxyl in the atmosphere of Venus. Astronomy and Astrophysics, 2008, 483, L29-L33.	5.1	86
71	Scientific goals for the observation of Venus by VIRTIS on ESA/Venus express mission. Planetary and Space Science, 2007, 55, 1653-1672.	1.7	155
72	A dynamic upper atmosphere of Venus as revealed by VIRTIS on Venus Express. Nature, 2007, 450, 641-645.	27.8	95

#	Article	IF	Citations
73	South-polar features on Venus similar to those near the north pole. Nature, 2007, 450, 637-640.	27.8	110
74	Virtis: An Imaging Spectrometer for the Rosetta Mission. Space Science Reviews, 2007, 128, 529-559.	8.1	181
75	Phyllosilicates on Mars and implications for early martian climate. Nature, 2005, 438, 623-627.	27.8	825
76	ISM observation of Phobos reinvestigated: Identification of a mixture of olivine and low-calcium pyroxene. Journal of Geophysical Research, 2005, 110, .	3.3	14
77	Numerical simulation of the visible and near infrared radiance of Mars: effects of atmospheric scattering. Advances in Space Research, 2004, 34, 1683-1689.	2.6	3
78	Nonlinear spectral mixing: Quantitative analysis of laboratory mineral mixtures. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	89
79	Reflectance spectra of regolith analogs in the mid-infrared: effects of grain size. Planetary and Space Science, 2003, 51, 281-294.	1.7	34
80	Observation of pressure variations in the Martian atmosphere. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	6
81	A new view of dark Martian regions from geomorphic and spectroscopic analysis of Syrtis Major. Astronomy and Astrophysics, 2003, 412, L19-L23.	5.1	13
82	Virtis-H: an infrared spectrometer for the Rosetta mission -- calibration results. , 2002, 4818, 14.		2
83	A Spectro-Photometric Model of Mars in the near-infrared. Geophysical Research Letters, 2001, 28, 1291-1294.	4.0	18
84	Exocam: Mars in a box to simulate soil-atmosphere interactions. Advances in Space Research, 2001, 27, 189-193.	2.6	10
85	MARS-IRMA: in-situ infrared microscope analysis of Martian soil and rock samples.. Advances in Space Research, 2001, 28, 1219-1224.	2.6	5
86	The Mars flyby of ROSETTA: an opportunity for infrared and microwave high-resolution sounding. Planetary and Space Science, 2001, 49, 673-687.	1.7	8
87	The Martian Surface Composition. Space Science Reviews, 2001, 96, 293-316.	8.1	21
88	The Martian Surface Composition. Space Sciences Series of ISSI, 2001, , 293-316.	0.0	5
89	The 1994â€“1995 apparition of Mars observed from Pic-du-Midi. Planetary and Space Science, 2000, 48, 1271-1287.	1.7	13
90	The 2.4â€“ spectrum of Mars observed with the infrared space observatory. Planetary and Space Science, 2000, 48, 1393-1405.	1.7	79

#	Article	IF	Citations
91	Discrimination between maturity and composition of lunar soils from integrated Clementine UV-visible/near-infrared data: Application to the Aristarchus Plateau. Journal of Geophysical Research, 2000, 105, 9445-9455.	3.3	72
92	A new data reduction approach for the Clementine NIR data set: Application to Aristillus, Aristarchus and Kepler. Journal of Geophysical Research, 1999, 104, 3833-3843.	3.3	18
93	The distribution of olivine in the Crater Aristarchus inferred from Clementine NIR data. Geophysical Research Letters, 1999, 26, 1195-1198.	4.0	23
94	Virtis : an imaging spectrometer for the rosetta mission. Planetary and Space Science, 1998, 46, 1291-1304.	1.7	72
95	In situ compositions of Martian volcanics: Implications for the mantle. Journal of Geophysical Research, 1997, 102, 25605-25615.	3.3	97
96	New Composite Spectra of Mars, 0.4â€“5.7 Î¼m. Icarus, 1997, 130, 449-460.	2.5	78
97	Spectral Properties and Heterogeneity of Phobos from Measurements byPhobos 2. Icarus, 1996, 123, 63-86.	2.5	91
98	Martian Aerosols: Near-Infrared Spectral Properties and Effects on the Observation of the Surface. Icarus, 1994, 111, 317-337.	2.5	55
99	Spatial Variations in the Spectral Properties of Bright Regions on Mars. Icarus, 1993, 105, 454-468.	2.5	89
100	The surface of Syrtis Major: Composition of the volcanic substrate and mixing with altered dust and soil. Journal of Geophysical Research, 1993, 98, 3387-3400.	3.3	112
101	Minor constituents in the Martian atmosphere from the ISM/Phobos experiment. Icarus, 1992, 98, 254-270.	2.5	42
102	Martian atmosphere studies from the ISM experiment. Planetary and Space Science, 1991, 39, 189-197.	1.7	27
103	Topography of the Martian tropical regions with ISM. Planetary and Space Science, 1991, 39, 225-236.	1.7	15
104	Results from the ISM experiment. Nature, 1989, 341, 591-593.	27.8	124
105	The temporal evolution of exposed water ice-rich areas on the surface of 67P/Churyumov-Gerasimenko: spectral analysis. Monthly Notices of the Royal Astronomical Society, 0, , stw3281.	4.4	13
106	and seasonal variability. Monthly Notices of the Royal Astronomical Society, 0, , stw3177.	4.4	10