

Dante Lauretta

List of Publications by Year in descending order

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Version: 2024-02-01

113
papers

5,912
citations

66315

42
h-index

76872

74
g-index

121
all docs

121
docs citations

121
times ranked

2070
citing authors

#	ARTICLE	IF	CITATIONS
1	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. <i>Science</i> , 2023, 379, .	6.0	97
2	OSIRIS-REx Proximity Operations and Navigation Performance at Bennu. , 2022, , .		5
3	The Dynamics about Asteroid (101955) Bennu. , 2022, , .		3
4	OSIRIS-REx Pointing Performance. , 2022, , .		3
5	Navigation Prediction Performance During the OSIRIS-REx Proximity Operations at (101955) Bennu. , 2022, , .		2
6	Small Body Proximity Operations & TAG: Navigation Experiences & Lessons Learned from the OSIRIS-REx Mission. , 2022, , .		4
7	Development and Flight Performance of the Autonomous Navigation Feature Catalog for OSIRIS-REx Asteroid Sample Collection. , 2022, , .		2
8	Cross-Instrument Comparison of MapCam and OVIRS on OSIRIS-REx. <i>Space Science Reviews</i> , 2022, 218, 5.	3.7	2
9	Pebbles and sand on asteroid (162173) Ryugu: In situ observation and particles returned to Earth. <i>Science</i> , 2022, 375, 1011-1016.	6.0	78
10	Geologic Context of the OSIRIS-REx Sample Site from High-resolution Topography and Imaging. <i>Planetary Science Journal</i> , 2022, 3, 75.	1.5	10
11	Crater population on asteroid (101955) Bennu indicates impact armouring and a young surface. <i>Nature Geoscience</i> , 2022, 15, 440-446.	5.4	20
12	The Formation of Terraces on Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	14
13	Low surface strength of the asteroid Bennu inferred from impact ejecta deposit. <i>Nature Geoscience</i> , 2022, 15, 447-452.	5.4	19
14	Assessing the Sampleability of Bennu's Surface for the OSIRIS-REx Asteroid Sample Return Mission. <i>Space Science Reviews</i> , 2022, 218, 20.	3.7	12
15	The Use of Digital Terrain Models for Natural Feature Tracking at Asteroid Bennu. <i>Planetary Science Journal</i> , 2022, 3, 100.	1.5	17
16	Practical Stereophotoclinometry for Modeling Shape and Topography on Planetary Missions. <i>Planetary Science Journal</i> , 2022, 3, 102.	1.5	22
17	Ground Testing of Digital Terrain Models to Prepare for OSIRIS-REx Autonomous Vision Navigation Using Natural Feature Tracking. <i>Planetary Science Journal</i> , 2022, 3, 104.	1.5	8
18	Autonomous Navigation Performance Using Natural Feature Tracking during the OSIRIS-REx Touch-and-Go Sample Collection Event. <i>Planetary Science Journal</i> , 2022, 3, 101.	1.5	15

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19	Quality Assessment of Stereophotoclinometry as a Shape Modeling Method Using a Synthetic Asteroid. <i>Planetary Science Journal</i> , 2022, 3, 103.	1.5	14
20	Alignment of fractures on Bennu's boulders indicative of rapid asteroid surface evolution. <i>Nature Geoscience</i> , 2022, 15, 453-457.	5.4	11
21	High-Resolution Thermophysical Analysis of the OSIRIS-REx Sample Site and Three Other Regions of Interest on Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	5
22	The ESA Hera Mission: Detailed Characterization of the DART Impact Outcome and of the Binary Asteroid (65803) Didymos. <i>Planetary Science Journal</i> , 2022, 3, 160.	1.5	82
23	Near-zero cohesion and loose packing of Bennu's near subsurface revealed by spacecraft contact. <i>Science Advances</i> , 2022, 8, .	4.7	31
24	Spacecraft sample collection and subsurface excavation of asteroid (101955) Bennu. <i>Science</i> , 2022, 377, 285-291.	6.0	39
25	Photometry of asteroid (101955) Bennu with OVIRS on OSIRIS-REx. <i>Icarus</i> , 2021, 358, 114183.	1.1	25
26	Exogenic basalt on asteroid (101955) Bennu. <i>Nature Astronomy</i> , 2021, 5, 31-38.	4.2	57
27	OSIRIS-REx at Bennu: Overcoming challenges to collect a sample of the early Solar System. , 2021, , 163-194.		32
28	Modeling optical roughness and first-order scattering processes from OSIRIS-REx color images of the rough surface of asteroid (101955) Bennu. <i>Icarus</i> , 2021, 357, 114106.	1.1	8
29	Particle Size-Frequency Distributions of the OSIRIS-REx Candidate Sample Sites on Asteroid (101955) Bennu. <i>Remote Sensing</i> , 2021, 13, 1315.	1.8	33
30	Analysis of Projection Effects in OSIRIS-REx Spectral Mapping Methods: Recommended Protocols for Facet-Based Mapping. <i>Earth and Space Science</i> , 2021, 8, e2020EA000613.	1.1	6
31	Validation of Stereophotoclinometric Shape Models of Asteroid (101955) Bennu during the OSIRIS-REx Mission. <i>Planetary Science Journal</i> , 2021, 2, 82.	1.5	17
32	The Role of Hydrated Minerals and Space Weathering Products in the Bluing of Carbonaceous Asteroids. <i>Planetary Science Journal</i> , 2021, 2, 68.	1.5	14
33	In search of Bennu analogs: Hapke modeling of meteorite mixtures. <i>Astronomy and Astrophysics</i> , 2021, 648, A88.	2.1	9
34	Derivation of the final OSIRIS-REx OVIRS in-flight radiometric calibration. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2021, 7, .	1.0	5
35	Evidence for limited compositional and particle size variation on asteroid (101955) Bennu from thermal infrared spectroscopy. <i>Astronomy and Astrophysics</i> , 2021, 650, A120.	2.1	30
36	Spectrophotometric Modeling and Mapping of (101955) Bennu. <i>Planetary Science Journal</i> , 2021, 2, 117.	1.5	9

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37	Spectral effects of varying texture and composition in two-component mudpie-simulations: Insights for asteroid (101955) Bennu. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1173-1190.	0.7	5
38	Characterization of Exogenic Boulders on the Near-Earth Asteroid (101955) Bennu from OSIRIS-REx Color Images. <i>Planetary Science Journal</i> , 2021, 2, 114.	1.5	5
39	Regional Photometric Modeling of Asteroid (101955) Bennu. <i>Planetary Science Journal</i> , 2021, 2, 124.	1.5	4
40	Modified granular impact force laws for the OSIRIS-REx touchdown on the surface of asteroid (101955) Bennu. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 507, 5087-5105.	1.6	21
41	Widely distributed exogenic materials of varying compositions and morphologies on asteroid (101955) Bennu. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 508, 2053-2070.	1.6	9
42	Composition of organics on asteroid (101955) Bennu. <i>Astronomy and Astrophysics</i> , 2021, 653, L1.	2.1	10
43	Bennu's Natural Sample Delivery Mechanism: Estimating the Flux of Bennuid Meteors at Earth. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006817.	1.5	4
44	Ephemeris and hazard assessment for near-Earth asteroid (101955) Bennu based on OSIRIS-REx data. <i>Icarus</i> , 2021, 369, 114594.	1.1	28
45	Fine-regolith production on asteroids controlled by rock porosity. <i>Nature</i> , 2021, 598, 49-52.	13.7	45
46	Mass and Shape Determination of (101955) Bennu Using Differenced Data from Multiple OSIRIS-REx Mission Phases. <i>Planetary Science Journal</i> , 2021, 2, 219.	1.5	6
47	Machine Learning Infrared Spectral Models for Predicting Modal Mineralogy of CI/CM Chondritic Asteroids and Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE007035.	1.5	11
48	Hemispherical differences in the shape and topography of asteroid (101955) Bennu. <i>Science Advances</i> , 2020, 6, .	4.7	57
49	Heterogeneous mass distribution of the rubble-pile asteroid (101955) Bennu. <i>Science Advances</i> , 2020, 6, .	4.7	50
50	Widespread carbon-bearing materials on near-Earth asteroid (101955) Bennu. <i>Science</i> , 2020, 370, .	6.0	56
51	Bright carbonate veins on asteroid (101955) Bennu: Implications for aqueous alteration history. <i>Science</i> , 2020, 370, .	6.0	71
52	Variations in color and reflectance on the surface of asteroid (101955) Bennu. <i>Science</i> , 2020, 370, .	6.0	84
53	Asteroid (101955) Bennu's weak boulders and thermally anomalous equator. <i>Science Advances</i> , 2020, 6, .	4.7	83
54	Photometry of Particles Ejected From Active Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006381.	1.5	23

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55	Trajectory Estimation for Particles Observed in the Vicinity of (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006363.	1.5	51
56	Spin-driven evolution of asteroids' top-shapes at fast and slow spins seen from (101955) Bennu and (162173) Ryugu. <i>Icarus</i> , 2020, 352, 113946.	1.1	28
57	Initial Orbit Determination and Event Reconstruction From Estimation of Particle Trajectories About (101955) Bennu. <i>Earth and Space Science</i> , 2020, 7, e2019EA000937.	1.1	14
58	The Morphometry of Impact Craters on Bennu. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089672.	1.5	20
59	Thermal Fatigue as a Driving Mechanism for Activity on Asteroid Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006325.	1.5	40
60	Reconstruction of Bennu Particle Events From Sparse Data. <i>Earth and Space Science</i> , 2020, 7, e2019EA000938.	1.1	18
61	Implications for Ice Stability and Particle Ejection From High-Resolution Temperature Modeling of Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006323.	1.5	24
62	Introduction to the Special Issue: Exploration of the Activity of Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006549.	1.5	23
63	Autonomous Detection of Particles and Tracks in Optical Images. <i>Earth and Space Science</i> , 2020, 7, e2019EA000843.	1.1	9
64	Bennu's near-Earth lifetime of 1.75 million years inferred from craters on its boulders. <i>Nature</i> , 2020, 587, 205-209.	13.7	62
65	Global Patterns of Recent Mass Movement on Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006475.	1.5	60
66	Meteoroid Impacts as a Source of Bennu's Particle Ejection Events. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006282.	1.5	30
67	Collisional formation of top-shaped asteroids and implications for the origins of Ryugu and Bennu. <i>Nature Communications</i> , 2020, 11, 2655.	5.8	87
68	Dynamical Evolution of Simulated Particles Ejected From Asteroid Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006229.	1.5	23
69	In situ evidence of thermally induced rock breakdown widespread on Bennu's surface. <i>Nature Communications</i> , 2020, 11, 2913.	5.8	62
70	Interpreting the Cratering Histories of Bennu, Ryugu, and Other Spacecraft-explored Asteroids. <i>Astronomical Journal</i> , 2020, 160, 14.	1.9	34
71	OSIRIS-REx spectral analysis of (101955) Bennu by multivariate statistics. <i>Astronomy and Astrophysics</i> , 2020, 637, L4.	2.1	23
72	In-Flight Calibration and Performance of the OSIRIS-REx Touch And Go Camera System (TAGCAMS). <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	22

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73	Particle Ejection Contributions to the Rotational Acceleration and Orbit Evolution of Asteroid (101955) Bennu. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006284.	1.5	12
74	Ground and In-Flight Calibration of the OSIRIS-REx Camera Suite. Space Science Reviews, 2020, 216, 12.	3.7	57
75	Visible- and near infrared spectral indices for mapping mineralogy and chemistry with OSIRIS-REx. Meteoritics and Planetary Science, 2020, 55, 744-765.	0.7	7
76	Phase reddening on asteroid Bennu from visible and near-infrared spectroscopy. Astronomy and Astrophysics, 2020, 644, A142.	2.1	22
77	Weak spectral features on (101995) Bennu from the OSIRIS-REx Visible and InfraRed Spectrometer. Astronomy and Astrophysics, 2020, 644, A148.	2.1	22
78	The Fukang pallasite: Characterization and implications for the history of the Main-group parent body. Meteoritics and Planetary Science, 2019, 54, 1781-1807.	0.7	4
79	Detection of Rotational Acceleration of Bennu Using HST Light Curve Observations. Geophysical Research Letters, 2019, 46, 1956-1962.	1.5	36
80	OSIRIS-REx Visible and Near-Infrared Observations of the Moon. Geophysical Research Letters, 2019, 46, 6322-6326.	1.5	8
81	The operational environment and rotational acceleration of asteroid (101955) Bennu from OSIRIS-REx observations. Nature Communications, 2019, 10, 1291.	5.8	99
82	The dynamic geophysical environment of (101955) Bennu based on OSIRIS-REx measurements. Nature Astronomy, 2019, 3, 352-361.	4.2	132
83	Evidence for widespread hydrated minerals on asteroid (101955) Bennu. Nature Astronomy, 2019, 3, 332-340.	4.2	251
84	Properties of rubble-pile asteroid (101955) Bennu from OSIRIS-REx imaging and thermal analysis. Nature Astronomy, 2019, 3, 341-351.	4.2	188
85	Craters, boulders and regolith of (101955) Bennu indicative of an old and dynamic surface. Nature Geoscience, 2019, 12, 242-246.	5.4	161
86	Shape of (101955) Bennu indicative of a rubble pile with internal stiffness. Nature Geoscience, 2019, 12, 247-252.	5.4	179
87	The unexpected surface of asteroid (101955) Bennu. Nature, 2019, 568, 55-60.	13.7	364
88	The global surface roughness of 25143 Itokawa. Icarus, 2019, 325, 141-152.	1.1	13
89	Inter-Calibration of the OSIRIS-REx NavCams with Earth-Viewing Imagers. Remote Sensing, 2019, 11, 2717.	1.8	5
90	Episodes of particle ejection from the surface of the active asteroid (101955) Bennu. Science, 2019, 366, .	6.0	129

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91	OSIRIS-REx Flight Dynamics and Navigation Design. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	56
92	Touch And Go Camera System (TAGCAMS) for the OSIRIS-REx Asteroid Sample Return Mission. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	51
93	OCAMS: The OSIRIS-REx Camera Suite. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	119
94	The OSIRIS-REx Visible and InfraRed Spectrometer (OVIRS): Spectral Maps of the Asteroid Bennu. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	84
95	Regolith X-Ray Imaging Spectrometer (REXIS) Aboard the OSIRIS-REx Asteroid Sample Return Mission. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	28
96	Overcoming the Challenges Associated with Image-Based Mapping of Small Bodies in Preparation for the OSIRIS-REx Mission to (101955) Bennu. <i>Earth and Space Science</i> , 2018, 5, 929-949.	1.1	26
97	The OSIRIS-REx Spacecraft and the Touch-and-Go Sample Acquisition Mechanism (TAGSAM). <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	92
98	In-Flight Calibration and Performance of the OSIRIS-REx Visible and IR Spectrometer (OVIRS). <i>Remote Sensing</i> , 2018, 10, 1486.	1.8	23
99	OSIRIS-REx: Sample Return from Asteroid (101955) Bennu. <i>Space Science Reviews</i> , 2017, 212, 925-984.	3.7	426
100	The OSIRIS-REx Laser Altimeter (OLA) Investigation and Instrument. <i>Space Science Reviews</i> , 2017, 212, 899-924.	3.7	97
101	Towards understanding the dynamical evolution of asteroid 25143 Itokawa: constraints from sample analysis. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	8
102	Photometric models of disk-integrated observations of the OSIRIS-REx target Asteroid (101955) Bennu. <i>Icarus</i> , 2015, 252, 393-399.	1.1	19
103	Spectral slope variations for OSIRIS-REx target Asteroid (101955) Bennu: Possible evidence for a fine-grained regolith equatorial ridge. <i>Icarus</i> , 2015, 256, 22-29.	1.1	54
104	The OSIRIS-REx target asteroid (101955) Bennu: Constraints on its physical, geological, and dynamical nature from astronomical observations. <i>Meteoritics and Planetary Science</i> , 2015, 50, 834-849.	0.7	168
105	In search of the source of asteroid (101955) Bennu: Applications of the stochastic YORP model. <i>Icarus</i> , 2015, 247, 191-217.	1.1	125
106	Orbit and bulk density of the OSIRIS-REx target Asteroid (101955) Bennu. <i>Icarus</i> , 2014, 235, 5-22.	1.1	193
107	Lightcurve, Color and Phase Function Photometry of the OSIRIS-REx Target Asteroid (101955) Bennu. <i>Icarus</i> , 2013, 226, 663-670.	1.1	63
108	Introducing the Eulalia and new Polana asteroid families: Re-assessing primitive asteroid families in the inner Main Belt. <i>Icarus</i> , 2013, 225, 283-297.	1.1	105

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109	Shape model and surface properties of the OSIRIS-REx target Asteroid (101955) Bennu from radar and lightcurve observations. <i>Icarus</i> , 2013, 226, 629-640.	1.1	186
110	Asteroid (101955) 1999 RQ36: Spectroscopy from 0.4 to 2.4 μ m and meteorite analogs. <i>Icarus</i> , 2011, 216, 462-475.	1.1	156
111	THE ORIGIN OF ASTEROID 101955 (1999 RQ ₃₆). <i>Astrophysical Journal Letters</i> , 2010, 721, L53-L57.	3.0	75
112	Mineralogy of fine-grained rims in the alh 81002 cm chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 3263-3273.	1.6	94
113	PHOTOGRAMMETRIC PROCESSING OF OSIRIS-REX IMAGES OF ASTEROID (101955) BENNU. <i>ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences</i> , 0, V-3-2020, 587-594.	0.0	4