

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
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121
all docs

121
docs citations

121
times ranked

2070
citing authors

#	ARTICLE	IF	CITATIONS
1	OSIRIS-REx: Sample Return from Asteroid (101955) Bennu. <i>Space Science Reviews</i> , 2017, 212, 925-984.	3.7	426
2	The unexpected surface of asteroid (101955) Bennu. <i>Nature</i> , 2019, 568, 55-60.	13.7	364
3	Evidence for widespread hydrated minerals on asteroid (101955) Bennu. <i>Nature Astronomy</i> , 2019, 3, 332-340.	4.2	251
4	Orbit and bulk density of the OSIRIS-REx target Asteroid (101955) Bennu. <i>Icarus</i> , 2014, 235, 5-22.	1.1	193
5	Properties of rubble-pile asteroid (101955) Bennu from OSIRIS-REx imaging and thermal analysis. <i>Nature Astronomy</i> , 2019, 3, 341-351.	4.2	188
6	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
7	Shape of (101955) Bennu indicative of a rubble pile with internal stiffness. <i>Nature Geoscience</i> , 2019, 12, 247-252.	5.4	179
8	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
9	Craters, boulders and regolith of (101955) Bennu indicative of an old and dynamic surface. <i>Nature Geoscience</i> , 2019, 12, 242-246.	5.4	161
10	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
11	The dynamic geophysical environment of (101955) Bennu based on OSIRIS-REx measurements. <i>Nature Astronomy</i> , 2019, 3, 352-361.	4.2	132
12	Episodes of particle ejection from the surface of the active asteroid (101955) Bennu. <i>Science</i> , 2019, 366, .	6.0	129
13	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
14	OCAMS: The OSIRIS-REx Camera Suite. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	119
15	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
16	The operational environment and rotational acceleration of asteroid (101955) Bennu from OSIRIS-REx observations. <i>Nature Communications</i> , 2019, 10, 1291.	5.8	99
17	The OSIRIS-REx Laser Altimeter (OLA) Investigation and Instrument. <i>Space Science Reviews</i> , 2017, 212, 899-924.	3.7	97
18	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. <i>Science</i> , 2023, 379, .	6.0	97

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19	Mineralogy of fine-grained rims in the alh 81002 cm chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 3263-3273.	1.6	94
20	The OSIRIS-REx Spacecraft and the Touch-and-Go Sample Acquisition Mechanism (TAGSAM). <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	92
21	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
22	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
23	Variations in color and reflectance on the surface of asteroid (101955) Bennu. <i>Science</i> , 2020, 370, .	6.0	84
24	Asteroid (101955) Bennu's weak boulders and thermally anomalous equator. <i>Science Advances</i> , 2020, 6, .	4.7	83
25	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
26	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
27	THE ORIGIN OF ASTEROID 101955 (1999 RQ ₃₆). <i>Astrophysical Journal Letters</i> , 2010, 721, L53-L57.	3.0	75
28	Bright carbonate veins on asteroid (101955) Bennu: Implications for aqueous alteration history. <i>Science</i> , 2020, 370, .	6.0	71
29	Lightcurve, Color and Phase Function Photometry of the OSIRIS-REx Target Asteroid (101955) Bennu. <i>Icarus</i> , 2013, 226, 663-670.	1.1	63
30	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
31	In situ evidence of thermally induced rock breakdown widespread on Bennu's surface. <i>Nature Communications</i> , 2020, 11, 2913.	5.8	62
32	Global Patterns of Recent Mass Movement on Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006475.	1.5	60
33	Hemispherical differences in the shape and topography of asteroid (101955) Bennu. <i>Science Advances</i> , 2020, 6, .	4.7	57
34	Ground and In-Flight Calibration of the OSIRIS-REx Camera Suite. <i>Space Science Reviews</i> , 2020, 216, 12.	3.7	57
35	Exogenic basalt on asteroid (101955) Bennu. <i>Nature Astronomy</i> , 2021, 5, 31-38.	4.2	57
36	OSIRIS-REx Flight Dynamics and Navigation Design. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	56

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37	Widespread carbon-bearing materials on near-Earth asteroid (101955) Bennu. <i>Science</i> , 2020, 370, .	6.0	56
38	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
39	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
40	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
41	Heterogeneous mass distribution of the rubble-pile asteroid (101955) Bennu. <i>Science Advances</i> , 2020, 6, .	4.7	50
42	Fine-regolith production on asteroids controlled by rock porosity. <i>Nature</i> , 2021, 598, 49-52.	13.7	45
43	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
44	Spacecraft sample collection and subsurface excavation of asteroid (101955) Bennu. <i>Science</i> , 2022, 377, 285-291.	6.0	39
45	Detection of Rotational Acceleration of Bennu Using HST Light Curve Observations. <i>Geophysical Research Letters</i> , 2019, 46, 1956-1962.	1.5	36
46	Interpreting the Cratering Histories of Bennu, Ryugu, and Other Spacecraft-explored Asteroids. <i>Astronomical Journal</i> , 2020, 160, 14.	1.9	34
47	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
48	OSIRIS-REx at Bennu: Overcoming challenges to collect a sample of the early Solar System. , 2021, , 163-194.		32
49	Near-zero cohesion and loose packing of Bennu's near subsurface revealed by spacecraft contact. <i>Science Advances</i> , 2022, 8, .	4.7	31
50	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
51	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
52	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
53	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
54	Ephemeris and hazard assessment for near-Earth asteroid (101955) Bennu based on OSIRIS-REx data. <i>Icarus</i> , 2021, 369, 114594.	1.1	28

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55	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
56	Photometry of asteroid (101955) Bennu with OVIRS on OSIRIS-REx. <i>Icarus</i> , 2021, 358, 114183.	1.1	25
57	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
58	In-Flight Calibration and Performance of the OSIRIS-REx Visible and IR Spectrometer (OVIRS). <i>Remote Sensing</i> , 2018, 10, 1486.	1.8	23
59	Photometry of Particles Ejected From Active Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006381.	1.5	23
60	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
61	Dynamical Evolution of Simulated Particles Ejected From Asteroid Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006229.	1.5	23
62	OSIRIS-REx spectral analysis of (101955) Bennu by multivariate statistics. <i>Astronomy and Astrophysics</i> , 2020, 637, L4.	2.1	23
63	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
64	Phase reddening on asteroid Bennu from visible and near-infrared spectroscopy. <i>Astronomy and Astrophysics</i> , 2020, 644, A142.	2.1	22
65	Weak spectral features on (101995) Bennu from the OSIRIS-REx Visible and InfraRed Spectrometer. <i>Astronomy and Astrophysics</i> , 2020, 644, A148.	2.1	22
66	Practical Stereophotoclinometry for Modeling Shape and Topography on Planetary Missions. <i>Planetary Science Journal</i> , 2022, 3, 102.	1.5	22
67	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
68	The Morphometry of Impact Craters on Bennu. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089672.	1.5	20
69	Crater population on asteroid (101955) Bennu indicates impact armouring and a young surface. <i>Nature Geoscience</i> , 2022, 15, 440-446.	5.4	20
70	Photometric models of disk-integrated observations of the OSIRIS-REx target Asteroid (101955) Bennu. <i>Icarus</i> , 2015, 252, 393-399.	1.1	19
71	Low surface strength of the asteroid Bennu inferred from impact ejecta deposit. <i>Nature Geoscience</i> , 2022, 15, 447-452.	5.4	19
72	Reconstruction of Bennu Particle Events From Sparse Data. <i>Earth and Space Science</i> , 2020, 7, e2019EA000938.	1.1	18

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73	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
74	The Use of Digital Terrain Models for Natural Feature Tracking at Asteroid Bennu. <i>Planetary Science Journal</i> , 2022, 3, 100.	1.5	17
75	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
76	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
77	The Role of Hydrated Minerals and Space Weathering Products in the Bluening of Carbonaceous Asteroids. <i>Planetary Science Journal</i> , 2021, 2, 68.	1.5	14
78	The Formation of Terraces on Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	14
79	Quality Assessment of Stereophotoclinometry as a Shape Modeling Method Using a Synthetic Asteroid. <i>Planetary Science Journal</i> , 2022, 3, 103.	1.5	14
80	The global surface roughness of 25143 Itokawa. <i>Icarus</i> , 2019, 325, 141-152.	1.1	13
81	Particle Ejection Contributions to the Rotational Acceleration and Orbit Evolution of Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006284.	1.5	12
82	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
83	Machine Learning Mid-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
84	Alignment of fractures on Bennu's boulders indicative of rapid asteroid surface evolution. <i>Nature Geoscience</i> , 2022, 15, 453-457.	5.4	11
85	Composition of organics on asteroid (101955) Bennu. <i>Astronomy and Astrophysics</i> , 2021, 653, L1.	2.1	10
86	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
87	Autonomous Detection of Particles and Tracks in Optical Images. <i>Earth and Space Science</i> , 2020, 7, e2019EA000843.	1.1	9
88	In search of Bennu analogs: Hapke modeling of meteorite mixtures. <i>Astronomy and Astrophysics</i> , 2021, 648, A88.	2.1	9
89	Spectrophotometric Modeling and Mapping of (101955) Bennu. <i>Planetary Science Journal</i> , 2021, 2, 117.	1.5	9
90	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

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91	Towards understanding the dynamical evolution of asteroid 25143 Itokawa: constraints from sample analysis. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	8
92	OSIRIS-REx Visible and Near-Infrared Observations of the Moon. <i>Geophysical Research Letters</i> , 2019, 46, 6322-6326.	1.5	8
93	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
94	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
95	Visible-“near infrared spectral indices for mapping mineralogy and chemistry with OSIRIS-REx. <i>Meteoritics and Planetary Science</i> , 2020, 55, 744-765.	0.7	7
96	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
97	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
98	Inter-Calibration of the OSIRIS-REx NavCams with Earth-Viewing Imagers. <i>Remote Sensing</i> , 2019, 11, 2717.	1.8	5
99	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
100	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
101	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
102	OSIRIS-REx Proximity Operations and Navigation Performance at Bennu. , 2022, , .		5
103	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
104	The Fukang pallasite: Characterization and implications for the history of the Main-group parent body. <i>Meteoritics and Planetary Science</i> , 2019, 54, 1781-1807.	0.7	4
105	Regional Photometric Modeling of Asteroid (101955) Bennu. <i>Planetary Science Journal</i> , 2021, 2, 124.	1.5	4
106	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
107	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
108	Small Body Proximity Operations & TAG: Navigation Experiences & Lessons Learned from the OSIRIS-REx Mission. , 2022, , .		4

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109	The Dynamics about Asteroid (101955) Bennu. , 2022, , .		3
110	OSIRIS-REx Pointing Performance. , 2022, , .		3
111	Navigation Prediction Performance During the OSIRIS-REx Proximity Operations at (101955) Bennu. , 2022, , .		2
112	Development and Flight Performance of the Autonomous Navigation Feature Catalog for OSIRIS-REx Asteroid Sample Collection. , 2022, , .		2
113	Cross-Instrument Comparison of MapCam and OVIRS on OSIRIS-REx. Space Science Reviews, 2022, 218, 5.	3.7	2