Scott L Murchie

List of Publications by Citations

235 papers	18,347 citations	78 h-index	128 g-index
245 ext. papers	20,406 ext. citations	9.5 avg, IF	6.08 L-index

#	Paper	IF	Citations
235	Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) on Mars Reconnaissance Orbiter (MRO). *Journal of Geophysical Research*, **2007**, 112,		640
234	Hydrated silicate minerals on Mars observed by the Mars Reconnaissance Orbiter CRISM instrument. *Nature*, **2008**, 454, 305-9	50.4	547
233	Subsurface water and clay mineral formation during the early history of Mars. *Nature*, **2011**, 479, 53-60	50.4	519
232	Orbital identification of carbonate-bearing rocks on Mars. *Science*, **2008**, 322, 1828-32	33.3	470
231	Spectral evidence for hydrated salts in recurring slope lineae on Mars. *Nature Geoscience*, **2015**, 8, 829-832	18.3	415
230	Seasonal flows on warm Martian slopes. *Science*, **2011**, 333, 740-3	33.3	381
229	Identification of hydrated silicate minerals on Mars using MRO-CRISM: Geologic context near Nili Fossae and implications for aqueous alteration. *Journal of Geophysical Research*, **2009**, 114,		373
228	A synthesis of Martian aqueous mineralogy after 1 Mars year of observations from the Mars Reconnaissance Orbiter. *Journal of Geophysical Research*, **2009**, 114,		354
227	Hydrous minerals on Mars as seen by the CRISM and OMEGA imaging spectrometers: Updated global view. *Journal of Geophysical Research E: Planets*, **2013**, 118, 831-858	4.1	326
226	The MESSENGER mission to Mercury: scientific objectives and implementation. *Planetary and Space Science*, **2001**, 49, 1445-1465	2	317
225	Phyllosilicate diversity and past aqueous activity revealed at Mawrth Vallis, Mars. *Science*, **2008**, 321, 830-3	33.3	283
224	CRISM multispectral summary products: Parameterizing mineral diversity on Mars from reflectance. *Journal of Geophysical Research*, **2007**, 112,		266
223	Opaline silica in young deposits on Mars. *Geology*, **2008**, 36, 847	5	259
222	Geologic setting of serpentine deposits on Mars. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	244
221	Distribution of mid-latitude ground ice on Mars from new impact craters. *Science*, **2009**, 325, 1674-6	33.3	241
220	Clay minerals in delta deposits and organic preservation potential on Mars. *Nature Geoscience*, **2008**, 1, 355-358	18.3	227
219	Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder. *Journal of Geophysical Research*, **2000**, 105, 1721-1755		225

218	Results from the Mars Pathfinder camera. *Science*, **1997**, 278, 1758-65	33.3	216
217	Recurring slope lineae in equatorial regions of Mars. *Nature Geoscience*, **2014**, 7, 53-58	18.3	212
216	The Mercury Dual Imaging System on the MESSENGER Spacecraft. *Space Science Reviews*, **2007**, 131, 247-338	7.5	199
215	Revised CRISM spectral parameters and summary products based on the currently detected mineral diversity on Mars. *Journal of Geophysical Research E: Planets*, **2014**, 119, 1403-1431	4.1	197
214	Chemical, multispectral, and textural constraints on the composition and origin of rocks at the Mars Pathfinder landing site. *Journal of Geophysical Research*, **1999**, 104, 8679-8715		193
213	NEAR at eros: imaging and spectral results. *Science*, **2000**, 289, 2088-97	33.3	191
212	Flood volcanism in the northern high latitudes of Mercury revealed by MESSENGER. *Science*, **2011**, 333, 1853-6	33.3	180
211	A closer look at water-related geologic activity on Mars. *Science*, **2007**, 317, 1706-9	33.3	165
210	The distribution and origin of smooth plains on Mercury. *Journal of Geophysical Research E: Planets*, **2013**, 118, 891-907	4.1	160
209	NEAR's flyby of 253 mathilde: images of a C asteroid. *Science*, **1997**, 278, 2109-14	33.3	160
208	The evolution of Mercury's crust: a global perspective from MESSENGER. *Science*, **2009**, 324, 613-8	33.3	155
207	Wavelength dependence of dust aerosol single scattering albedo as observed by the Compact Reconnaissance Imaging Spectrometer. *Journal of Geophysical Research*, **2009**, 114,		153
206	Volcanism on Mercury: evidence from the first MESSENGER flyby. *Science*, **2008**, 321, 69-72	33.3	152
205	Galileo encounter with 951 gaspra: first pictures of an asteroid. *Science*, **1992**, 257, 1647-52	33.3	150
204	Silica deposits in the Nili Patera caldera on the Syrtis Major volcanic complex on Mars. *Nature Geoscience*, **2010**, 3, 838-841	18.3	149
203	An improvement to the volcano-scan algorithm for atmospheric correction of CRISM and OMEGA spectral data. *Planetary and Space Science*, **2009**, 57, 809-815	2	147
202	Compact Reconnaissance Imaging Spectrometer for Mars investigation and data set from the Mars Reconnaissance Orbiter's primary science phase. *Journal of Geophysical Research*, **2009**, 114,		143
201	Reflectance and color variations on Mercury: regolith processes and compositional heterogeneity. *Science*, **2008**, 321, 66-9	33.3	143

200	Return to Mercury: a global perspective on MESSENGER's first Mercury flyby. *Science*, **2008**, 321, 59-62	33.3	143
199	The landing of the NEAR-Shoemaker spacecraft on asteroid 433 Eros. *Nature*, **2001**, 413, 390-3	50.4	141
198	Eros: Shape, Topography, and Slope Processes. *Icarus*, **2002**, 155, 18-37	3.8	136
197	The nature of ponded deposits on Eros. *Nature*, **2001**, 413, 396-400	50.4	135
196	Ancient aqueous environments at Endeavour crater, Mars. *Science*, **2014**, 343, 1248097	33.3	132
195	Evidence for the origin of layered deposits in Candor Chasma, Mars, from mineral composition and hydrologic modeling. *Journal of Geophysical Research*, **2009**, 114,		131
194	Diverse aqueous environments on ancient Mars revealed in the southern highlands. *Geology*, **2009**, 37, 1043-1046	5	125
193	Imaging of small-scale features on 433 Eros from NEAR: evidence for a complex regolith. *Science*, **2001**, 292, 484-8	33.3	122
192	Composition, Morphology, and Stratigraphy of Noachian Crust around the Isidis basin. *Journal of Geophysical Research*, **2009**, 114,		120
191	Lunar impact basins: New data for the western limb and far side (Orientale and South Pole-Aitken Basins) from the first Galileo flyby. *Journal of Geophysical Research*, **1993**, 98, 17149		120
190	Mineralogy of Juventae Chasma: Sulfates in the light-toned mounds, mafic minerals in the bedrock, and hydrated silica and hydroxylated ferric sulfate on the plateau. *Journal of Geophysical Research*, **2009**, 114,		119
189	The geology of 433 Eros. *Meteoritics and Planetary Science*, **2002**, 37, 1651-1684	2.8	117
188	Columbus crater and other possible groundwater-fed paleolakes of Terra Sirenum, Mars. *Journal of Geophysical Research*, **2011**, 116,		116
187	Stratigraphy, mineralogy, and origin of layered deposits inside Terby crater, Mars. *Icarus*, **2011**, 211, 273-304	3.0	116
186	Geology of the Caloris basin, Mercury: a view from MESSENGER. *Science*, **2008**, 321, 73-6	33.3	114
185	Detection of hydrated silicates in crustal outcrops in the northern plains of Mars. *Science*, **2010**, 328, 1682-6	33.3	113
184	Compact Reconnaissance Imaging Spectrometer observations of water vapor and carbon monoxide. *Journal of Geophysical Research*, **2009**, 114,		113
183	Explosive volcanic eruptions on Mercury: Eruption conditions, magma volatile content, and implications for interior volatile abundances. *Earth and Planetary Science Letters*, **2009**, 285, 263-271	5.3	108

182	The tectonics of Mercury: The view after MESSENGER's first flyby. *Earth and Planetary Science Letters*, **2009**, 285, 283-296	5.3	104
181	The MESSENGER mission to Mercury: scientific payload. *Planetary and Space Science*, **2001**, 49, 1467-1479	2	104
180	Overview of the Mars Pathfinder Mission: Launch through landing, surface operations, data sets, and science results. *Journal of Geophysical Research*, **1999**, 104, 8523-8553		104
179	Galileo Photometry of Asteroid 951 Gaspra. *Icarus*, **1994**, 107, 37-60	3.8	101
178	Hydrated mineral stratigraphy of Ius Chasma, Valles Marineris. *Icarus*, **2010**, 206, 253-268	3.8	100
177	Prolonged magmatic activity on Mars inferred from the detection of felsic rocks. *Nature Geoscience*, **2013**, 6, 1013-1017	18.3	99
176	NEAR Encounter with Asteroid 253 Mathilde: Overview. *Icarus*, **1999**, 140, 3-16	3.8	99
175	Hollows on Mercury: MESSENGER evidence for geologically recent volatile-related activity. *Science*, **2011**, 333, 1856-9	33.3	97
174	Volcanism on Mercury: Evidence from the first MESSENGER flyby for extrusive and explosive activity and the volcanic origin of plains. *Earth and Planetary Science Letters*, **2009**, 285, 227-242	5.3	92
173	A hematite-bearing layer in Gale Crater, Mars: Mapping and implications for past aqueous conditions. *Geology*, **2013**, 41, 1103-1106	5	91
172	Remote sensing evidence for an ancient carbon-bearing crust on Mercury. *Nature Geoscience*, **2016**, 9, 273-276	18.3	90
171	Characterization of phyllosilicates observed in the central Mawrth Vallis region, Mars, their potential formational processes, and implications for past climate. *Journal of Geophysical Research*, **2009**, 114,		89
170	In situ compositions of Martian volcanics: Implications for the mantle. *Journal of Geophysical Research*, **1997**, 102, 25605-25615		88
169	Shoemaker crater as the source of most ejecta blocks on the asteroid 433 Eros. *Nature*, **2001**, 413, 394-6	50.4	87
168	The global distribution of pyroclastic deposits on Mercury: The view from MESSENGER flybys 1. *Planetary and Space Science*, **2011**, 59, 1895-1909	2	86
167	NEAR Photometry of Asteroid 253 Mathilde. *Icarus*, **1999**, 140, 53-65	3.8	86
166	Spectroscopic observations of Mercury's surface reflectance during MESSENGER's first Mercury flyby. *Science*, **2008**, 321, 62-5	33.3	85
165	Orbital evidence for more widespread carbonate-bearing rocks on Mars. *Journal of Geophysical Research E: Planets*, **2016**, 121, 652-677	4.1	84

164	Mineralogy and stratigraphy of phyllosilicate-bearing and dark mantling units in the greater Mawrth Vallis/west Arabia Terra area: Constraints on geological origin. *Journal of Geophysical Research*, **2010**, 115,		83
163	Spatial Variations in the Spectral Properties of Bright Regions on Mars. *Icarus*, **1993**, 105, 454-468	3.8	83
162	Evidence for Low-Grade Metamorphism, Hydrothermal Alteration, and Diagenesis on Mars from Phyllosilicate Mineral Assemblages. *Clays and Clay Minerals*, **2011**, 59, 359-377	2.1	81
161	What the ancient phyllosilicates at Mawrth Vallis can tell us about possible habitability on early Mars. *Planetary and Space Science*, **2013**, 86, 130-149	2	79
160	The Geology of Gaspra. *Icarus*, **1994**, 107, 61-71	3.8	79
159	Spirit Mars Rover Mission to the Columbia Hills, Gusev Crater: Mission overview and selected results from the Cumberland Ridge to Home Plate. *Journal of Geophysical Research*, **2008**, 113,		78
158	Near-Infrared Spectral Variations of Martian Surface Materials from ISM Imaging Spectrometer Data. *Icarus*, **2000**, 147, 444-471	3.8	78
157	Galileo imaging observations of lunar maria and related deposits. *Journal of Geophysical Research*, **1993**, 98, 17183		78
156	Orbital multispectral mapping of Mercury with the MESSENGER Mercury Dual Imaging System: Evidence for the origins of plains units and low-reflectance material. *Icarus*, **2015**, 254, 287-305	3.8	77
155	Space weathering on Eros: Constraints from albedo and spectral measurements of Psyche crater. *Meteoritics and Planetary Science*, **2001**, 36, 1617-1637	2.8	76
154	Caloris impact basin: Exterior geomorphology, stratigraphy, morphometry, radial sculpture, and smooth plains deposits. *Earth and Planetary Science Letters*, **2009**, 285, 297-308	5.3	75
153	Crustal diversity of the moon: Compositional analyses of Galileo solid state imaging data. *Journal of Geophysical Research*, **1993**, 98, 17127		73
152	Phyllosilicates and sulfates at Endeavour Crater, Meridiani Planum, Mars. *Geophysical Research Letters*, **2009**, 36,	4.9	72
151	New Horizons: Anticipated Scientific Investigations at the Pluto System. *Space Science Reviews*, **2008**, 140, 93-127	7.5	71
150	Color Variations on Eros from NEAR Multispectral Imaging. *Icarus*, **2002**, 155, 145-168	3.8	69
149	Mathilde: Size, Shape, and Geology. *Icarus*, **1999**, 140, 17-27	3.8	69
148	Mineralogic constraints on sulfur-rich soils from Pancam spectra at Gusev crater, Mars. *Geophysical Research Letters*, **2007**, 34, n/a-n/a	4.9	68
147	Spectral Properties and Heterogeneity of Phobos from Measurements byPhobos 2. *Icarus*, **1996**, 123, 63-86	3.8	68

146	Near-tropical subsurface ice on Mars. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	66
145	Definitive evidence of Hesperian basalt in Acidalia and Chryse planitiae. *Journal of Geophysical Research*, **2010**, 115,		66
144	The low-iron, reduced surface of Mercury as seen in spectral reflectance by MESSENGER. *Icarus*, **2014**, 228, 364-374	3.8	65
143	Testing evidence of recent hydration state change in sulfates on Mars. *Journal of Geophysical Research*, **2009**, 114,		64
142	Stratigraphy of hydrated sulfates in the sedimentary deposits of Aram Chaos, Mars. *Journal of Geophysical Research*, **2010**, 115,		63
141	Preliminary results on photometric properties of materials at the Sagan Memorial Station, Mars. *Journal of Geophysical Research*, **1999**, 104, 8809-8830		60
140	Global inventory and characterization of pyroclastic deposits on Mercury: New insights into pyroclastic activity from MESSENGER orbital data. *Journal of Geophysical Research E: Planets*, **2014**, 119, 635-658	4.1	59
139	Spectral and stratigraphic mapping of hydrated sulfate and phyllosilicate-bearing deposits in northern Sinus Meridiani, Mars. *Journal of Geophysical Research*, **2010**, 115,		59
138	Phyllosilicate and sulfate-hematite deposits within Miyamoto crater in southern Sinus Meridiani, Mars. *Geophysical Research Letters*, **2008**, 35,	4.9	59
137	Near-IR Reflectance Spectroscopy of 433 Eros from the NIS Instrument on the NEAR Mission. *Icarus*, **2002**, 155, 119-144	3.8	59
136	Vertical distribution of dust and water ice aerosols from CRISM limb-geometry observations. *Journal of Geophysical Research E: Planets*, **2013**, 118, 321-334	4.1	58
135	Exposure of spectrally distinct material by impact craters on Mercury: Implications for global stratigraphy. *Icarus*, **2010**, 209, 210-223	3.8	57
134	Images of surface volatiles in Mercury's polar craters acquired by the MESSENGER spacecraft. *Geology*, **2014**, 42, 1051-1054	5	55
133	Mineral abundances at the final four curiosity study sites and implications for their formation. *Icarus*, **2014**, 231, 65-76	3.8	55
132	Most Mars minerals in a nutshell: Various alteration phases formed in a single environment in Noctis Labyrinthus. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		54
131	New near-IR observations of mesospheric CO2 and H2O clouds on Mars. *Journal of Geophysical Research*, **2011**, 116,		54
130	Diagenetic haematite and sulfate assemblages in Valles Marineris. *Icarus*, **2010**, 207, 659-674	3.8	54
129	Mineralogy of the MSL Curiosity landing site in Gale crater as observed by MRO/CRISM. *Geophysical Research Letters*, **2014**, 41, 4880-4887	4.9	53

128	A model for formation of dust, soil, and rock coatings on Mars: Physical and chemical processes on the Martian surface. *Journal of Geophysical Research*, **2002**, 107, 7-1-7-17		53
127	Martian Aerosols: Near-Infrared Spectral Properties and Effects on the Observation of the Surface. *Icarus*, **1994**, 111, 317-337	3.8	53
126	An Estimate of Eros's Porosity and Implications for Internal Structure. *Icarus*, **2002**, 155, 94-103	3.8	52
125	Spectral properties and rotational spectral heterogeneity of 433 Eros. *Journal of Geophysical Research*, **1996**, 101, 2201-2214		52
124	Imaging of asteroid 433 eros during NEAR's flyby reconnaissance. *Science*, **1999**, 285, 562-4	33.3	50
123	The morphology of craters on Mercury: Results from MESSENGER flybys. *Icarus*, **2012**, 219, 414-427	3.8	49
122	Constraints on the abundance of carbon in near-surface materials on Mercury: Results from the MESSENGER Gamma-Ray Spectrometer. *Planetary and Space Science*, **2015**, 108, 98-107	2	48
121	Spectral absorptions on Phobos and Deimos in the visible/near infrared wavelengths and their compositional constraints. *Icarus*, **2014**, 229, 196-205	3.8	48
120	Mineralogy and morphology of geologic units at Libya Montes, Mars: Ancient aqueously derived outcrops, mafic flows, fluvial features, and impacts. *Journal of Geophysical Research E: Planets*, **2013**, 118, 487-513	4.1	47
119	Color heterogeneity of the surface of Phobos: Relationships to geologic features and comparison to meteorite analogs. *Journal of Geophysical Research*, **1991**, 96, 5925-5945		45
118	Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) south polar mapping: First Mars year of observations. *Journal of Geophysical Research*, **2010**, 115,		43
117	Evidence for intrusive activity on Mercury from the first MESSENGER flyby. *Earth and Planetary Science Letters*, **2009**, 285, 251-262	5.3	43
116	Emplacement and tectonic deformation of smooth plains in the Caloris basin, Mercury. *Earth and Planetary Science Letters*, **2009**, 285, 309-319	5.3	42
115	Vertical profiles of Mars 1.27 μm O 2 dayglow from MRO CRISM limb spectra: Seasonal/global behaviors, comparisons to LMDGCM simulations, and a global definition for Mars water vapor profiles. *Icarus*, **2017**, 293, 132-156	3.8	41
114	First detection of Mars atmospheric hydroxyl: CRISM Near-IR measurement versus LMD GCM simulation of OH Meinel band emission in the Mars polar winter atmosphere. *Icarus*, **2013**, 226, 272-281	3.8	41
113	An Unusual Spectral Unit in West Candor Chasma: Evidence for Aqueous or Hydrothermal Alteration in the Martian Canyons. *Icarus*, **1993**, 106, 380-391	3.8	41
112	Extensive MRO CRISM observations of 1.27 μm O2 airglow in Mars polar night and their comparison to MRO MCS temperature profiles and LMD GCM simulations. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		40
111	The transition from complex crater to peak-ring basin on Mercury: New observations from MESSENGER flyby data and constraints on basin formation models. *Planetary and Space Science*, **2011**, 59, 1932-1948	2	40

110	Mineralogical interpretation of reflectance spectra of Eros from NEAR near-infrared spectrometer low phase flyby. *Meteoritics and Planetary Science*, **2001**, 36, 1711-1726	2.8	40
109	Characterization of hydrated silicate-bearing outcrops in Tyrrhena Terra, Mars: Implications to the alteration history of Mars. *Icarus*, **2012**, 219, 476-497	3.8	39
108	Discovery of alunite in cross crater, terra sirenum, mars: evidence for acidic, sulfurous waters. *American Mineralogist*, **2016**, 101, 1527-1542	2.9	39
107	Calibration, Projection, and Final Image Products of MESSENGER's Mercury Dual Imaging System. *Space Science Reviews*, **2018**, 214, 1	7.5	38
106	Evolution of the Rembrandt impact basin on Mercury. *Science*, **2009**, 324, 618-21	33.3	38
105	Stratigraphy of the Caloris basin, Mercury: Implications for volcanic history and basin impact melt. *Icarus*, **2015**, 250, 413-429	3.8	37
104	Analysis of disk-resolved OMEGA and CRISM spectral observations of Phobos and Deimos. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		37
103	A Late Amazonian alteration layer related to local volcanism on Mars. *Icarus*, **2010**, 207, 265-276	3.8	37
102	Automated processing of planetary hyperspectral datasets for the extraction of weak mineral signatures and applications to CRISM observations of hydrated silicates on Mars. *Planetary and Space Science*, **2013**, 76, 53-67	2	35
101	Evidence from MESSENGER for sulfur- and carbon-driven explosive volcanism on Mercury. *Geophysical Research Letters*, **2016**, 43, 3653-3661	4.9	35
100	Areas of permanent shadow in Mercury's south polar region ascertained by MESSENGER orbital imaging. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	34
99	An overview of the NEAR multispectral imager-near-infrared spectrometer investigation. *Journal of Geophysical Research*, **1997**, 102, 23709-23727		34
98	Laser altimetry of small-scale features on 433 Eros from NEAR-Shoemaker. *Science*, **2001**, 292, 488-91	33.3	34
97	Composition of Surface Materials on the Moons of Mars. *Planetary and Space Science*, **2014**, 102, 144-151	2	33
96	Embedded clays and sulfates in Meridiani Planum, Mars. *Icarus*, **2015**, 248, 269-288	3.8	32
95	Smectite deposits in Marathon Valley, Endeavour Crater, Mars, identified using CRISM hyperspectral reflectance data. *Geophysical Research Letters*, **2016**, 43, 4885-4892	4.9	32
94	Application of multiple photometric models to disk-resolved measurements of Mercury's surface: Insights into Mercury's regolith characteristics. *Icarus*, **2016**, 268, 172-203	3.8	32
93	. *IEEE Transactions on Geoscience and Remote Sensing*, **2008**, 46, 4020-4040	8.1	32

92	Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) north polar springtime recession mapping: First 3 Mars years of observations. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		31
91	Spectral properties and geologic processes on Eros from combined NEAR NIS and MSI data sets. *Meteoritics and Planetary Science*, **2003**, 38, 1053-1077	2.8	31
90	Mars Pathfinder spectral measurements of Phobos and Deimos: Comparison with previous data. *Journal of Geophysical Research*, **1999**, 104, 9069-9079		31
89	Television observations of Phobos. *Nature*, **1989**, 341, 585-587	50.4	31
88	Inflight Calibration of the NEAR Multispectral Imager. *Icarus*, **1999**, 140, 66-91	3.8	30
87	Craters hosting radar-bright deposits in Mercury's north polar region: Areas of persistent shadow determined from MESSENGER images. *Journal of Geophysical Research E: Planets*, **2013**, 118, 26-36	4.1	29
86	A spectroscopic analysis of Martian crater central peaks: Formation of the ancient crust. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		29
85	Spectral constraints on the formation mechanism of recurring slope lineae. *Geophysical Research Letters*, **2013**, 40, 5621-5626	4.9	29
84	The Geology of Mercury: The View Prior to the MESSENGER Mission. *Space Science Reviews*, **2007**, 131, 41-84	7.5	29
83	Results of TV imaging of Phobos (Experiment VSK-Fregat). *Planetary and Space Science*, **1991**, 39, 281-952		29
82	Challenges in the Search for Perchlorate and Other Hydrated Minerals With 2.1-μm Absorptions on Mars. *Geophysical Research Letters*, **2018**, 45, 12180-12189	4.9	29
81	Mineralogical indicators of Mercury's hollows composition in MESSENGER color observations. *Geophysical Research Letters*, **2016**, 43, 1450-1456	4.9	28
80	High spatial and temporal resolution sampling of Martian gas abundances from CRISM spectra. *Journal of Geophysical Research E: Planets*, **2013**, 118, 89-104	4.1	28
79	Whole-disk spectrophotometric properties of Mercury: Synthesis of MESSENGER and ground-based observations. *Icarus*, **2010**, 209, 101-124	3.8	28
78	The Galileo Imaging Team plan for observing the satellites of Jupiter. *Journal of Geophysical Research*, **1995**, 100, 18935		28
77	Global Distribution and Spectral Properties of Low-Reflectance Material on Mercury. *Geophysical Research Letters*, **2018**, 45, 2945-2953	4.9	27
76	Mars Reconnaissance Orbiter and Opportunity observations of the Burns formation: Crater hopping at Meridiani Planum. *Journal of Geophysical Research E: Planets*, **2015**, 120, 429-451	4.1	26
75	The NEAR shoemaker mission to asteroid 433 eros. *Acta Astronautica*, **2002**, 51, 491-500	2.9	26

74	Observations of Phobos, Deimos, and bright stars with the Imager for Mars Pathfinder. *Journal of Geophysical Research*, **1999**, 104, 9055-9068		26
73	Possible breakup of dark terrain on Ganymede by large-scale shear faulting. *Journal of Geophysical Research*, **1988**, 93, 8795		26
72	Compositional and structural constraints on the geologic history of eastern Tharsis Rise, Mars. *Icarus*, **2017**, 284, 43-58	3.8	25
71	The distribution, composition, and particle properties of Mars mesospheric aerosols: An analysis of CRISM visible/near-IR limb spectra with context from near-coincident MCS and MARCI observations. *Icarus*, **2019**, 328, 246-273	3.8	23
70	Mercury global color mosaic: An update from MESSENGER orbital observations. *Icarus*, **2015**, 257, 477-488	3.8	23
69	Investigation of an Argyre basin ring structure using Mars Reconnaissance Orbiter/Compact Reconnaissance Imaging Spectrometer for Mars. *Journal of Geophysical Research*, **2010**, 115,		23
68	Terrain types and local-scale stratigraphy of grooved terrain on Ganymede. *Journal of Geophysical Research*, **1986**, 91, E222		23
67	Imaging Mercury's Polar Deposits during MESSENGER's Low-altitude Campaign. *Geophysical Research Letters*, **2016**, 43, 9461-9468	4.9	22
66	The value of Phobos sample return. *Planetary and Space Science*, **2014**, 102, 176-182	2	22
65	Insights into the subsurface structure of the Caloris basin, Mercury, from assessments of mechanical layering and changes in long-wavelength topography. *Journal of Geophysical Research E: Planets*, **2013**, 118, 2030-2044	4.1	22
64	Hydrated minerals on Endeavour Crater's rim and interior, and surrounding plains: New insights from CRISM data. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	22
63	Phase-ratio images of the surface of Mercury: Evidence for differences in sub-resolution texture. *Icarus*, **2014**, 242, 142-148	3.8	21
62	Geomorphologic and mineralogic characterization of the northern plains of Mars at the Phoenix Mission candidate landing sites. *Journal of Geophysical Research*, **2008**, 113,		21
61	Tectonic and volcanic evolution of dark terrain and its implications for the internal structure and evolution of Ganymede. *Journal of Geophysical Research*, **1990**, 95, 10743		21
60	Analysis of MESSENGER high-resolution images of Mercury's hollows and implications for hollow formation. *Journal of Geophysical Research E: Planets*, **2016**, 121, 1798-1813	4.1	20
59	Mercury's spectrophotometric properties: Update from the Mercury Dual Imaging System observations during the third MESSENGER flyby. *Planetary and Space Science*, **2011**, 59, 1853-1872	2	20
58	Multi-Spectral Imager on the Near Earth Asteroid Rendezvous Mission. *Space Science Reviews*, **1997**, 82, 31-100	7.5	20
57	Spectrally distinct ejecta in Syrtis Major, Mars: Evidence for environmental change at the Hesperian-Amazonian boundary. *Journal of Geophysical Research*, **2010**, 115,		19

56	Compact Reconnaissance Imaging Spectrometer for Mars observations of northern Martian latitudes in summer. *Journal of Geophysical Research*, **2009**, 114,		19
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54	Dark spots on Mercury: A distinctive low-reflectance material and its relation to hollows. *Journal of Geophysical Research E: Planets*, **2013**, 118, 1752-1765	4.1	18
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