Scott L Murchie

List of Publications by Year in Descending Order

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	Science Goals and Mission Concept for a Landed Investigation of Mercury. *Planetary Science Journal* , **2022**, 3, 68	2.9	0
234	The Mars Orbiter for Resources, Ices, and Environments (MORIE) Science Goals and Instrument Trades in Radar, Imaging, and Spectroscopy. *Planetary Science Journal*, **2021**, 2, 76	2.9	1
233	Multiple mineral horizons in layered outcrops at Mawrth Vallis, Mars, signify changing geochemical environments on early Mars. *Icarus*, **2020**, 341, 113634-113634	3.8	12
232	A search for early- to mid-Noachian chloride-rich deposits on Mars. *Icarus*, **2020**, 338, 113552	3.8	4
231	Anomalous Phyllosilicate-Bearing Outcrops South of Coprates Chasma: A Study of Possible Emplacement Mechanisms. *Journal of Geophysical Research E: Planets*, **2020**, 125, e2019JE006043	4.1	3
230	Composition of Amazonian volcanic materials in Tharsis and Elysium, Mars, from MRO/CRISM reflectance spectra. *Icarus*, **2019**, 328, 274-286	3.8	17
229	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
228	Measuring the Elemental Composition of Phobos: The Mars-moon Exploration with GAmma rays and NEutrons (MEGANE) Investigation for the Martian Moons eXploration (MMX) Mission. *Earth and Space Science*, **2019**, 6, 2605-2623	3.1	17
227	Spectral Analyses of Mercury **2019**, 351-367		
226	Visible to Short-Wave Infrared Spectral Analyses of Mars from Orbit Using CRISM and OMEGA **2019**, 453-483		4
225	Global Distribution and Spectral Properties of Low-Reflectance Material on Mercury. *Geophysical Research Letters*, **2018**, 45, 2945-2953	4.9	27
224	Calibration, Projection, and Final Image Products of MESSENGER's Mercury Dual Imaging System. *Space Science Reviews*, **2018**, 214, 1	7.5	38
223	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
222	Spectral Reflectance Constraints on the Composition and Evolution of Mercury's Surface **2018**, 191-216		6
221	Mercury's Hollows **2018**, 324-345		9
220	The structural, stratigraphic, and paleoenvironmental record exposed on the rim and walls of Iazu Crater, Mars. *Journal of Geophysical Research E: Planets*, **2017**, 122, 1138-1156	4.1	5
219	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

218	Extending MESSENGER's Mercury dual imager's eight-color photometric standardization to cover all eleven filters. *Icarus*, **2017**, 297, 83-89	3.8	3
217	Compositional and structural constraints on the geologic history of eastern Tharsis Rise, Mars. *Icarus*, **2017**, 284, 43-58	3.8	25
216	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
215	Determining shape of a seasonally shadowed asteroid using stellar occultation imaging. *Planetary and Space Science*, **2016**, 131, 24-32	2	
214	Smectite deposits in Marathon Valley, Endeavour Crater, Mars, identified using CRISM hyperspectral reflectance data. *Geophysical Research Letters*, **2016**, 43, 4885-4892	4.9	32
213	Methodology for finding and evaluating safe landing sites on small bodies. *Planetary and Space Science*, **2016**, 134, 71-81	2	7
212	Imaging Mercury's Polar Deposits during MESSENGER's Low-altitude Campaign. *Geophysical Research Letters*, **2016**, 43, 9461-9468	4.9	22
211	Mineralogical indicators of Mercury's hollows composition in MESSENGER color observations. *Geophysical Research Letters*, **2016**, 43, 1450-1456	4.9	28
210	Orbital evidence for more widespread carbonate-bearing rocks on Mars. *Journal of Geophysical Research E: Planets*, **2016**, 121, 652-677	4.1	84
209	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
208	Remote sensing evidence for an ancient carbon-bearing crust on Mercury. *Nature Geoscience*, **2016**, 9, 273-276	18.3	90
207	Characterization of artifacts introduced by the empirical volcano-scan atmospheric correction commonly applied to CRISM and OMEGA near-infrared spectra. *Icarus*, **2016**, 269, 111-121	3.8	15
206	Discovery of alunite in cross crater, terra sirenum, mars: evidence for acidic, sulfurous waters. *American Mineralogist*, **2016**, 101, 1527-1542	2.9	39
205	Evidence from MESSENGER for sulfur- and carbon-driven explosive volcanism on Mercury. *Geophysical Research Letters*, **2016**, 43, 3653-3661	4.9	35
204	Mars-Moons Exploration, Reconnaissance, and Landed Investigation (MERLIN) **2016**,		1
203	New insights into gully formation on Mars: Constraints from composition as seen by MRO/CRISM. *Geophysical Research Letters*, **2016**, 43, 8893-8902	4.9	16
202	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
201	Mineralogy, morphology and stratigraphy of the light-toned interior layered deposits at Juventae Chasma. *Icarus*, **2015**, 251, 315-331	3.8	18

200	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
199	Spectral evidence for hydrated salts in recurring slope lineae on Mars. *Nature Geoscience*, **2015**, 8, 829-832	13.3	415
198	Embedded clays and sulfates in Meridiani Planum, Mars. *Icarus*, **2015**, 248, 269-288	3.8	32
197	Stratigraphy of the Caloris basin, Mercury: Implications for volcanic history and basin impact melt. *Icarus*, **2015**, 250, 413-429	3.8	37
196	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
195	Mercury global color mosaic: An update from MESSENGER orbital observations. *Icarus*, **2015**, 257, 477-488	3.8	23
194	Phobos and Deimos **2015**,		9
193	The low-iron, reduced surface of Mercury as seen in spectral reflectance by MESSENGER. *Icarus*, **2014**, 228, 364-374	3.8	65
192	Spectral absorptions on Phobos and Deimos in the visible/near infrared wavelengths and their compositional constraints. *Icarus*, **2014**, 229, 196-205	3.8	48
191	Ancient aqueous environments at Endeavour crater, Mars. *Science*, **2014**, 343, 1248097	33.3	132
190	Images of surface volatiles in Mercury polar craters acquired by the MESSENGER spacecraft. *Geology*, **2014**, 42, 1051-1054	5	55
189	Composition of Surface Materials on the Moons of Mars. *Planetary and Space Science*, **2014**, 102, 144-151	2	33
188	MESSENGER at Mercury: Early orbital operations. *Acta Astronautica*, **2014**, 93, 509-515	2.9	2
187	Mineral abundances at the final four curiosity study sites and implications for their formation. *Icarus*, **2014**, 231, 65-76	3.8	55
186	SciBox, an end-to-end automated science planning and commanding system. *Acta Astronautica*, **2014**, 93, 490-496	2.9	5
185	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
184	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
183	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

182	Recurring slope lineae in equatorial regions of Mars. *Nature Geoscience*, **2014**, 7, 53-58	18.3	212
181	Phase-ratio images of the surface of Mercury: Evidence for differences in sub-resolution texture. *Icarus*, **2014**, 242, 142-148	3.8	21
180	The value of Phobos sample return. *Planetary and Space Science*, **2014**, 102, 176-182	2	22
179	MERLIN: Mars-Moon Exploration, Reconnaissance and Landed Investigation. *Acta Astronautica*, **2014**, 93, 475-482	2.9	5
178	A hematite-bearing layer in Gale Crater, Mars: Mapping and implications for past aqueous conditions. *Geology*, **2013**, 41, 1103-1106	5	91
177	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
176	Prolonged magmatic activity on Mars inferred from the detection of felsic rocks. *Nature Geoscience*, **2013**, 6, 1013-1017	18.3	99
175	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
174	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
173	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
172	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
171	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
170	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
169	Spectral constraints on the formation mechanism of recurring slope lineae. *Geophysical Research Letters*, **2013**, 40, 5621-5626	4.9	29
168	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
167	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
166	The distribution and origin of smooth plains on Mercury. *Journal of Geophysical Research E: Planets*, **2013**, 118, 891-907	4.1	160
165	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

164	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
163	GETEMME□ mission to explore the Martian satellites and the fundamentals of solar system physics. *Experimental Astronomy*, **2012**, 34, 243-271	1.3	15
162	Extensive MRO CRISM observations of 1.27 □m 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
161	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
160	Analysis of disk-resolved OMEGA and CRISM spectral observations of Phobos and Deimos. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		37
159	A spectroscopic analysis of Martian crater central peaks: Formation of the ancient crust. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		29
158	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
157	The morphology of craters on Mercury: Results from MESSENGER flybys. *Icarus*, **2012**, 219, 414-427	3.8	49
156	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
155	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
154	Columbus crater and other possible groundwater-fed paleolakes of Terra Sirenum, Mars. *Journal of Geophysical Research*, **2011**, 116,		116
153	New near-IR observations of mesospheric CO2 and H2O clouds on Mars. *Journal of Geophysical Research*, **2011**, 116,		54
152	Subsurface water and clay mineral formation during the early history of Mars. *Nature*, **2011**, 479, 53-60	50.4	519
151	Flood volcanism in the northern high latitudes of Mercury revealed by MESSENGER. *Science*, **2011**, 333, 1853-6	33.3	180
150	Journey to the innermost planet. *Scientific American*, **2011**, 304, 34-9	0.5	
149	Eminescu impact structure: Insight into the transition from complex crater to peak-ring basin on Mercury. *Planetary and Space Science*, **2011**, 59, 1949-1959	2	13
148	Photometric correction of Mercury's global color mosaic. *Planetary and Space Science*, **2011**, 59, 1873-1887	2	18
147	The global distribution of pyroclastic deposits on Mercury: The view from MESSENGER flybys 1□. *Planetary and Space Science*, **2011**, 59, 1895-1909	2	86

146	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
145	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
144	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
143	Seasonal flows on warm Martian slopes. *Science*, **2011**, 333, 740-3	33.3	381
142	Hollows on Mercury: MESSENGER evidence for geologically recent volatile-related activity. *Science*, **2011**, 333, 1856-9	33.3	97
141	Stratigraphy, mineralogy, and origin of layered deposits inside Terby crater, Mars. *Icarus*, **2011**, 211, 273-304	3.04	116
140	Robust unmixing of hyperspectral images: Application to Mars **2011**,		4
139	Silica deposits in the Nili Patera caldera on the Syrtis Major volcanic complex on Mars. *Nature Geoscience*, **2010**, 3, 838-841	18.3	149
138	Detection of hydrated silicates in crustal outcrops in the northern plains of Mars. *Science*, **2010**, 328, 1682-6	33.3	113
137	Near-tropical subsurface ice on Mars. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	66
136	Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) south polar mapping: First Mars year of observations. *Journal of Geophysical Research*, **2010**, 115,		43
135	Spectrally distinct ejecta in Syrtis Major, Mars: Evidence for environmental change at the Hesperian-Amazonian boundary. *Journal of Geophysical Research*, **2010**, 115,		19
134	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
133	Stratigraphy of hydrated sulfates in the sedimentary deposits of Aram Chaos, Mars. *Journal of Geophysical Research*, **2010**, 115,		63
132	Spectral and stratigraphic mapping of hydrated sulfate and phyllosilicate-bearing deposits in northern Sinus Meridiani, Mars. *Journal of Geophysical Research*, **2010**, 115,		59
131	Investigation of an Argyre basin ring structure using Mars Reconnaissance Orbiter/Compact Reconnaissance Imaging Spectrometer for Mars. *Journal of Geophysical Research*, **2010**, 115,		23
130	Definitive evidence of Hesperian basalt in Acidalia and Chryse planitiae. *Journal of Geophysical Research*, **2010**, 115,		66
129	Geologic setting of serpentine deposits on Mars. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	244

128	Whole-disk spectrophotometric properties of Mercury: Synthesis of MESSENGER and ground-based observations. *Icarus*, **2010**, 209, 101-124	3.8	28
127	Geomorphic knobs of Candor Chasma, Mars: New Mars Reconnaissance Orbiter data and comparisons to terrestrial analogs. *Icarus*, **2010**, 205, 138-153	3.8	15
126	Hydrated mineral stratigraphy of Ius Chasma, Valles Marineris. *Icarus*, **2010**, 206, 253-268	3.8	100
125	A Late Amazonian alteration layer related to local volcanism on Mars. *Icarus*, **2010**, 207, 265-276	3.8	37
124	Diagenetic haematite and sulfate assemblages in Valles Marineris. *Icarus*, **2010**, 207, 659-674	3.8	54
123	Exposure of spectrally distinct material by impact craters on Mercury: Implications for global stratigraphy. *Icarus*, **2010**, 209, 210-223	3.8	57
122	Diverse aqueous environments on ancient Mars revealed in the southern highlands. *Geology*, **2009**, 37, 1043-1046	5	125
121	Distribution of mid-latitude ground ice on Mars from new impact craters. *Science*, **2009**, 325, 1674-6	33.3	241
120	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
119	The tectonics of Mercury: The view after MESSENGER's first flyby. *Earth and Planetary Science Letters*, **2009**, 285, 283-296	5.3	104
118	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
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	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
114	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
113	Phyllosilicates and sulfates at Endeavour Crater, Meridiani Planum, Mars. *Geophysical Research Letters*, **2009**, 36,	4.9	72
112	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
111	A synthesis of Martian aqueous mineralogy after 1 Mars year of observations from the Mars Reconnaissance Orbiter. *Journal of Geophysical Research*, **2009**, 114,		354

110	Evidence for the origin of layered deposits in Candor Chasma, Mars, from mineral composition and hydrologic modeling. *Journal of Geophysical Research*, **2009**, 114,		131
109	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
108	Compact Reconnaissance Imaging Spectrometer for Mars observations of northern Martian latitudes in summer. *Journal of Geophysical Research*, **2009**, 114,		19
107	Composition, Morphology, and Stratigraphy of Noachian Crust around the Isidis basin. *Journal of Geophysical Research*, **2009**, 114,		120
106	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
105	Testing evidence of recent hydration state change in sulfates on Mars. *Journal of Geophysical Research*, **2009**, 114,		64
104	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
103	Wavelength dependence of dust aerosol single scattering albedo as observed by the Compact Reconnaissance Imaging Spectrometer. *Journal of Geophysical Research*, **2009**, 114,		153
102	Compact Reconnaissance Imaging Spectrometer observations of water vapor and carbon monoxide. *Journal of Geophysical Research*, **2009**, 114,		113
101	In-flight performance of MESSENGER's Mercury Dual Imaging System **2009**,		15
100	Evolution of the Rembrandt impact basin on Mercury. *Science*, **2009**, 324, 618-21	33.3	38
99	The evolution of Mercury's crust: a global perspective from MESSENGER. *Science*, **2009**, 324, 613-8	33.3	155
98	Hydrated silicate minerals on Mars observed by the Mars Reconnaissance Orbiter CRISM instrument. *Nature*, **2008**, 454, 305-9	50.4	547
97	Clay minerals in delta deposits and organic preservation potential on Mars. *Nature Geoscience*, **2008** , 1, 355-358	18.3	227
96	. *IEEE Transactions on Geoscience and Remote Sensing*, **2008**, 46, 4020-4040	8.1	32
95	An Efficient Uplink Pipeline for the MRO CRISM Instrument **2008**,		1
94	Phyllosilicate and sulfate-hematite deposits within Miyamoto crater in southern Sinus Meridiani, Mars. *Geophysical Research Letters*, **2008**, 35,	4.9	59
93	Geomorphologic and mineralogic characterization of the northern plains of Mars at the Phoenix Mission candidate landing sites. *Journal of Geophysical Research*, **2008**, 113,		21

92	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
91	Geology of the Caloris basin, Mercury: a view from MESSENGER. *Science*, **2008**, 321, 73-6	33.3	114
90	Reflectance and color variations on Mercury: regolith processes and compositional heterogeneity. *Science*, **2008**, 321, 66-9	33.3	143
89	Opaline silica in young deposits on Mars. *Geology*, **2008**, 36, 847	5	259
88	Orbital identification of carbonate-bearing rocks on Mars. *Science*, **2008**, 322, 1828-32	33.3	470
87	Spectroscopic observations of Mercury's surface reflectance during MESSENGER's first Mercury flyby. *Science*, **2008**, 321, 62-5	33.3	85
86	Volcanism on Mercury: evidence from the first MESSENGER flyby. *Science*, **2008**, 321, 69-72	33.3	152
85	Return to Mercury: a global perspective on MESSENGER's first Mercury flyby. *Science*, **2008**, 321, 59-62	33.3	143
84	Phyllosilicate diversity and past aqueous activity revealed at Mawrth Vallis, Mars. *Science*, **2008**, 321, 830-3	33.3	283
83	New Horizons: Anticipated Scientific Investigations at the Pluto System. *Space Science Reviews*, **2008**, 140, 93-127	7.5	71
82	Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) on Mars Reconnaissance Orbiter (MRO). *Journal of Geophysical Research*, **2007**, 112,		640
81	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
80	The Geology of Mercury: The View Prior to the MESSENGER Mission. *Space Science Reviews*, **2007**, 131, 41-84	7.5	29
79	The Mercury Dual Imaging System on the MESSENGER Spacecraft. *Space Science Reviews*, **2007**, 131, 247-338	7.5	199
78	A closer look at water-related geologic activity on Mars. *Science*, **2007**, 317, 1706-9	33.3	165
77	CRISM multispectral summary products: Parameterizing mineral diversity on Mars from reflectance. *Journal of Geophysical Research*, **2007**, 112,		266
76	The Mercury Dual Imaging System on the MESSENGER Spacecraft **2007**, 247-338		0
75	The Geology of Mercury: The View Prior to the MESSENGER Mission **2007**, 41-84		

74	CRISM (Compact Reconnaissance Imaging Spectrometer for Mars) on MRO (Mars Reconnaissance Orbiter) **2004**,		10
73	The CONTOUR remote imager and spectrograph. *Acta Astronautica*, **2003**, 52, 427-431	2.9	
72	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
71	Preliminary Remediation of Scattered Light in NEAR MSI Images. *Icarus*, **2002**, 155, 244-252	3.8	16
70	Inflight Calibration of the NEAR Multispectral Imager. *Icarus*, **2002**, 155, 229-243	3.8	15
69	Detection of Temperature-Dependent Spectral Variation on the Asteroid Eros and New Evidence for the Presence of an Olivine-Rich Silicate Assemblage. *Icarus*, **2002**, 155, 181-188	3.8	18
68	An Estimate of Eros's Porosity and Implications for Internal Structure. *Icarus*, **2002**, 155, 94-103	3.8	52
67	Near-IR Reflectance Spectroscopy of 433 Eros from the NIS Instrument on the NEAR Mission. *Icarus*, **2002**, 155, 119-144	3.8	59
66	Eros: Shape, Topography, and Slope Processes. *Icarus*, **2002**, 155, 18-37	3.8	136
65	Color Variations on Eros from NEAR Multispectral Imaging. *Icarus*, **2002**, 155, 145-168	3.8	69
64	433 Eros Global Basemap from NEAR Shoemaker MSI Images. *Icarus*, **2002**, 155, 38-50	3.8	12
63	The NEAR shoemaker mission to asteroid 433 eros. *Acta Astronautica*, **2002**, 51, 491-500	2.9	26
62	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
61	The geology of 433 Eros. *Meteoritics and Planetary Science*, **2002**, 37, 1651-1684	2.8	117
60	The MESSENGER mission to Mercury: scientific objectives and implementation. *Planetary and Space Science*, **2001**, 49, 1445-1465	2	317
59	The MESSENGER mission to Mercury: scientific payload. *Planetary and Space Science*, **2001**, 49, 1467-1479	2	104
58	The landing of the NEAR-Shoemaker spacecraft on asteroid 433 Eros. *Nature*, **2001**, 413, 390-3	50.4	141
57	Shoemaker crater as the source of most ejecta blocks on the asteroid 433 Eros. *Nature*, **2001**, 413, 394-6	50.4	87

56	The nature of ponded deposits on Eros. *Nature*, **2001**, 413, 396-400	50.4	135
55	Laser altimetry of small-scale features on 433 Eros from NEAR-Shoemaker. *Science*, **2001**, 292, 488-91	33.3	34
54	Imaging of small-scale features on 433 Eros from NEAR: evidence for a complex regolith. *Science*, **2001**, 292, 484-8	33.3	122
53	Space weathering on Eros: Constraints from albedo and spectral measurements of Psyche crater. *Meteoritics and Planetary Science*, **2001**, 36, 1617-1637	2.8	76
52	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
51	NEAR Lightcurves of Asteroid 433 Eros. *Icarus*, **2000**, 145, 641-644	3.8	2
50	Near-Infrared Spectral Variations of Martian Surface Materials from ISM Imaging Spectrometer Data. *Icarus*, **2000**, 147, 444-471	3.8	78
49	In-Flight Calibration of the Near Earth Asteroid Rendezvous Mission's Near Infrared Spectrometer I. Initial Calibrations. *Icarus*, **2000**, 148, 550-571	3.8	10
48	NEAR at eros: imaging and spectral results. *Science*, **2000**, 289, 2088-97	33.3	191
47	Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder. *Journal of Geophysical Research*, **2000**, 105, 1721-1755		225
46	Inflight Calibration of the NEAR Multispectral Imager. *Icarus*, **1999**, 140, 66-91	3.8	30
45	NEAR Encounter with Asteroid 253 Mathilde: Overview. *Icarus*, **1999**, 140, 3-16	3.8	99
44	Mathilde: Size, Shape, and Geology. *Icarus*, **1999**, 140, 17-27	3.8	69
43	NEAR Photometry of Asteroid 253 Mathilde. *Icarus*, **1999**, 140, 53-65	3.8	86
42	Imaging of asteroid 433 eros during NEAR's flyby reconnaissance. *Science*, **1999**, 285, 562-4	33.3	50
41	Preliminary results on photometric properties of materials at the Sagan Memorial Station, Mars. *Journal of Geophysical Research*, **1999**, 104, 8809-8830		60
40	Mars Pathfinder spectral measurements of Phobos and Deimos: Comparison with previous data. *Journal of Geophysical Research*, **1999**, 104, 9069-9079		31
39	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

38	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
37	Observations of Phobos, Deimos, and bright stars with the Imager for Mars Pathfinder. *Journal of Geophysical Research*, **1999**, 104, 9055-9068		26
36	Rocks at the Mars Pathfinder Landing Site. *American Scientist*, **1999**, 87, 36	2.7	3
35	An overview of the NEAR multispectral imager-near-infrared spectrometer investigation. *Journal of Geophysical Research*, **1997**, 102, 23709-23727		34
34	In situ compositions of Martian volcanics: Implications for the mantle. *Journal of Geophysical Research*, **1997**, 102, 25605-25615		88
33	Results from the Mars Pathfinder camera. *Science*, **1997**, 278, 1758-65	33.3	216
32	NEAR's flyby of 253 mathilde: images of a C asteroid. *Science*, **1997**, 278, 2109-14	33.3	160
31	Near Infrared Spectrometer for the Near Earth Asteroid Rendezvous Mission. *Space Science Reviews* , **1997**, 82, 101-167	7.5	14
30	Multi-Spectral Imager on the Near Earth Asteroid Rendezvous Mission. *Space Science Reviews*, **1997**, 82, 31-100	7.5	20
29	Multi-Spectral Imager On the Near Earth Asteroid Rendezvous Mission **1997**, 31-100		2
28	Near Infrared Spectrometer for the Near Earth Asteroid Rendezvous Mission **1997**, 101-167		3
27	Spectral properties and rotational spectral heterogeneity of 433 Eros. *Journal of Geophysical Research*, **1996**, 101, 2201-2214		52
26	Spectral Properties and Heterogeneity of Phobos from Measurements byPhobos 2. *Icarus*, **1996**, 123, 63-86	3.8	68
25	Mass spectrometer instrumentation for landers on small bodies and planetary moons. *Acta Astronautica*, **1996**, 38, 377-384	2.9	5
24	The Galileo Imaging Team plan for observing the satellites of Jupiter. *Journal of Geophysical Research*, **1995**, 100, 18935		28
23	Diagenetic layers in the upper walls of Valles Marineris, Mars: Evidence for drastic climate change since the mid-Hesperian. *Journal of Geophysical Research*, **1995**, 100, 26339		16
22	Galileo Photometry of Asteroid 951 Gaspra. *Icarus*, **1994**, 107, 37-60	3.8	101
21	The Geology of Gaspra. *Icarus*, **1994**, 107, 61-71	3.8	79

20	Martian Aerosols: Near-Infrared Spectral Properties and Effects on the Observation of the Surface. *Icarus*, **1994**, 111, 317-337	3.8	53
19	Galileo imaging observations of lunar maria and related deposits. *Journal of Geophysical Research*, **1993**, 98, 17183		78
18	Crustal diversity of the moon: Compositional analyses of Galileo solid state imaging data. *Journal of Geophysical Research*, **1993**, 98, 17127		73
17	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
16	Spatial Variations in the Spectral Properties of Bright Regions on Mars. *Icarus*, **1993**, 105, 454-468	3.8	83
15	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
14	Galileo encounter with 951 gaspra: first pictures of an asteroid. *Science*, **1992**, 257, 1647-52	33.3	150
13	Preliminary assessment of Termoskan observations of Mars. *Planetary and Space Science*, **1991**, 39, 237-265		11
12	Results of TV imaging of Phobos (Experiment VSK-Fregat). *Planetary and Space Science*, **1991**, 39, 281-952		29
11	A possible interpretation of bright features on the surface of Phobos. *Planetary and Space Science*, **1991**, 39, 341-347	2	13
10	Phobos: Spectrophotometry between 0.3 and 0.6 μm and IR-radiometry. *Planetary and Space Science*, **1991**, 39, 311-326	2	18
9	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
8	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
7	The tectonics of icy satellites. *Advances in Space Research*, **1990**, 10, 173-182	2.4	2
6	The geologic evolution of Ganymede and its implications for the origin of the Ganymede-Callisto dichotomy. *Advances in Space Research*, **1990**, 10, 183-186	2.4	
5	Crater densities and crater ages of different terrain types on Ganymede. *Icarus*, **1989**, 81, 271-297	3.8	16
4	Television observations of Phobos. *Nature*, **1989**, 341, 585-587	50.4	31
3	Possible breakup of dark terrain on Ganymede by large-scale shear faulting. *Journal of Geophysical Research*, **1988**, 93, 8795		26

2	Terrain types and local-scale stratigraphy of grooved terrain on Ganymede. *Journal of Geophysical Research*, **1986**, 91, E222		23
1	Global reorientation and its effect on tectonic patterns on Ganymede. *Geophysical Research Letters*, **1986**, 13, 345-348	4.9	14