

# Walter S Kiefer

## List of Publications by Year in descending order

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59  
papers

3,510  
citations

136950

32  
h-index

149698

56  
g-index

60  
all docs

60  
docs citations

60  
times ranked

2279  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Physics of Changing Tectonic Regimes: Implications for the Temporal Evolution of Mantle Convection and the Thermal History of Venus. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE005960.	3.6	49
2	Long-duration Venus lander for seismic and atmospheric science. <i>Planetary and Space Science</i> , 2020, 190, 104961.	1.7	13
3	Availability of previously lost data and metadata from the Apollo Lunar Surface Experiments Package (ALSEP). <i>Planetary and Space Science</i> , 2020, 191, 105039.	1.7	2
4	A survey of the natural remanent magnetization and magnetic susceptibility of Apollo whole rocks. <i>Physics of the Earth and Planetary Interiors</i> , 2019, 290, 36-43.	1.9	6
5	Ring faults and ring dikes around the Orientale basin on the Moon. <i>Icarus</i> , 2018, 310, 1-20.	2.5	31
6	Examination of the Long-Term Subsurface Warming Observed at the Apollo 15 and 17 Sites Utilizing the Newly Restored Heat Flow Experiment Data From 1975 to 1977. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1125-1139.	3.6	18
7	Olivine-bearing lithologies on the Moon: Constraints on origins and transport mechanisms from M3 spectroscopy, radiative transfer modeling, and GRAIL crustal thickness. <i>Icarus</i> , 2018, 300, 287-304.	2.5	27
8	Lunar Interior, <i>Geophysical Models.</i> , 2018, , 1-7.		0
9	Small-scale density variations in the lunar crust revealed by GRAIL. <i>Icarus</i> , 2017, 291, 107-123.	2.5	34
10	The influence of crustal radioactivity on mantle convection and lithospheric thickness on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 2463-2466.	3.6	1
11	Thicknesses of mare basalts on the Moon from gravity and topography. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 854-870.	3.6	51
12	GRAIL, LLR, and LOLA constraints on the interior structure of the Moon. <i>Geophysical Research Letters</i> , 2016, 43, 8365-8375.	4.0	57
13	Water undersaturated mantle plume volcanism on present-day Mars. <i>Meteoritics and Planetary Science</i> , 2016, 51, 1993-2010.	1.6	24
14	A review of volatiles in the Martian interior. <i>Meteoritics and Planetary Science</i> , 2016, 51, 1935-1958.	1.6	43
15	Gravity field of the Orientale basin from the Gravity Recovery and Interior Laboratory Mission. <i>Science</i> , 2016, 354, 438-441.	12.6	38
16	Gravitational search for cryptovolcanism on the Moon: Evidence for large volumes of early igneous activity. <i>Icarus</i> , 2016, 273, 284-295.	2.5	27
17	The Syrtis Major volcano, Mars: A multidisciplinary approach to interpreting its magmatic evolution and structural development. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 1476-1496.	3.6	16
18	Lunar impact basins revealed by Gravity Recovery and Interior Laboratory measurements. <i>Science Advances</i> , 2015, 1, e1500852.	10.3	173

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19	The effects of mantle composition on the peridotite solidus: Implications for the magmatic history of Mars. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 162, 247-258.	3.9	30
20	Volatiles in Mars: Constraints, Questions, and Future Directions. <i>Eos</i> , 2015, 96, .	0.1	1
21	The relationship between radar scattering and surface roughness of lunar volcanic features. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2331-2348.	3.6	15
22	Wireless seismometer for venus. , 2014, , .		1
23	GRAIL gravity constraints on the vertical and lateral density structure of the lunar crust. <i>Geophysical Research Letters</i> , 2014, 41, 5771-5777.	4.0	126
24	Structure and evolution of the lunar Procellarum region as revealed by GRAIL gravity data. <i>Nature</i> , 2014, 514, 68-71.	27.8	85
25	Lunar interior properties from the GRAIL mission. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1546-1578.	3.6	185
26	Ancient Igneous Intrusions and Early Expansion of the Moon Revealed by GRAIL Gravity Gradiometry. <i>Science</i> , 2013, 339, 675-678.	12.6	177
27	The Crust of the Moon as Seen by GRAIL. <i>Science</i> , 2013, 339, 671-675.	12.6	726
28	Numerical modeling of the formation and structure of the Orientale impact basin. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 963-979.	3.6	67
29	Large shield volcanoes on the Moon. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1063-1081.	3.6	76
30	Gravity constraints on the subsurface structure of the Marius Hills: The magmatic plumbing of the largest lunar volcanic dome complex. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 733-745.	3.6	38
31	High temperature, wireless seismometer sensor for Venus. , 2012, , .		8
32	Constraining the size of the South Pole-Aitken basin impact. <i>Icarus</i> , 2012, 220, 730-743.	2.5	131
33	Degassing history of Mars and the lifespan of its magnetic dynamo. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	21
34	The density and porosity of lunar rocks. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	134
35	Estimating transient crater size using the crustal annular bulge: Insights from numerical modeling of lunar basinâ€scale impacts. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	40
36	Lunar heat flow experiments: Science objectives and a strategy for minimizing the effects of lander-induced perturbations. <i>Planetary and Space Science</i> , 2012, 60, 155-165.	1.7	14

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37	High pressure, near-liquidus phase equilibria of the Home Plate basalt Fastball and melting in the Martian mantle. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	37
38	Mantle convection controls the observed lateral variations in lithospheric thickness on present-day Mars. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	39
39	Forming the martian great divide. <i>Nature</i> , 2008, 453, 1191-1192.	27.8	10
40	Melt propagation and volcanism in mantle convection simulations, with applications for Martian volcanic and atmospheric evolution. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	43
41	Mantle convection and magma production on present-day Mars: Effects of temperature-dependent rheology. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	50
42	Experimental petrology of the basaltic shergottite Yamato-980459: Implications for the thermal structure of the Martian mantle. <i>Meteoritics and Planetary Science</i> , 2006, 41, 1271-1290.	1.6	129
43	Topographic analysis of Devana Chasma, Venus: implications for rift system segmentation and propagation. <i>Journal of Structural Geology</i> , 2006, 28, 2144-2155.	2.3	18
44	Buried mass anomalies along the hemispheric dichotomy in eastern Mars: Implications for the origin and evolution of the dichotomy. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	4.0	19
45	Gravity evidence for an extinct magma chamber beneath Syrtis Major, Mars: a look at the magmatic plumbing system. <i>Earth and Planetary Science Letters</i> , 2004, 222, 349-361.	4.4	53
46	Mantle and crustal structure in Phoebe Regio and Devana Chasma, Venus. <i>Geophysical Research Letters</i> , 2003, 30, 5-1-5-4.	4.0	65
47	Melting in the martian mantle: Shergottite formation and implications for present-day mantle convection on Mars. <i>Meteoritics and Planetary Science</i> , 2003, 38, 1815-1832.	1.6	105
48	Geoid anomalies and dynamic topography from time-dependent, spherical axisymmetric mantle convection. <i>Physics of the Earth and Planetary Interiors</i> , 1998, 106, 237-256.	1.9	21
49	An inversion of gravity and topography for mantle and crustal structure on Mars. <i>Journal of Geophysical Research</i> , 1996, 101, 9239-9252.	3.3	35
50	Mantle viscosity stratification and flow geometry: Implications for surface motions on Earth and Venus. <i>Geophysical Research Letters</i> , 1993, 20, 265-268.	4.0	5
51	Geoid anomalies and dynamic topography from convection in cylindrical geometry: applications to mantle plumes on Earth and Venus. <i>Geophysical Journal International</i> , 1992, 108, 198-214.	2.4	44
52	Mantle downwelling and crustal convergence: A model for Ishtar Terra, Venus. <i>Journal of Geophysical Research</i> , 1991, 96, 20967-20980.	3.3	33
53	A mantle plume model for the equatorial highlands of Venus. <i>Journal of Geophysical Research</i> , 1991, 96, 20947-20966.	3.3	97
54	A reexamination of the spreading center hypothesis for Ovda and Thetis Regiones, Venus. <i>Geophysical Research Letters</i> , 1990, 17, 1373-1376.	4.0	1

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55	Venus gravity: A harmonic analysis. Journal of Geophysical Research, 1987, 92, 10335-10351.	3.3	63
56	The formation of Mercury's smooth plains. Icarus, 1987, 72, 477-491.	2.5	34
57	A dynamic model of Venus's gravity field. Geophysical Research Letters, 1986, 13, 14-17.	4.0	90
58	Characterization of Circle Cliffs tar sands. 1. Application of the FT-i.r. technique to mineral matter. Fuel, 1986, 65, 1261-1264.	6.4	8
59	Xenolith digestion in large magma bodies. Journal of Geophysical Research, 1985, 90, C585.	3.3	25