

Dorian S Abbot

List of Publications by Year in descending order

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64
papers

3,573
citations

126907

33
h-index

149698

56
g-index

66
all docs

66
docs citations

66
times ranked

2864
citing authors

#	ARTICLE	IF	CITATIONS
1	Snowball Earth climate dynamics and Cryogenian geology-geobiology. <i>Science Advances</i> , 2017, 3, e1600983.	10.3	424
2	STABILIZING CLOUD FEEDBACK DRAMATICALLY EXPANDS THE HABITABLE ZONE OF TIDALLY LOCKED PLANETS. <i>Astrophysical Journal Letters</i> , 2013, 771, L45.	8.3	297
3	Quantifying the seasonal and interannual variability of North American isoprene emissions using satellite observations of the formaldehyde column. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	240
4	STRONG DEPENDENCE OF THE INNER EDGE OF THE HABITABLE ZONE ON PLANETARY ROTATION RATE. <i>Astrophysical Journal Letters</i> , 2014, 787, L2.	8.3	207
5	Constraining global isoprene emissions with Global Ozone Monitoring Experiment (GOME) formaldehyde column measurements. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	140
6	Seasonal and interannual variability of North American isoprene emissions as determined by formaldehyde column measurements from space. <i>Geophysical Research Letters</i> , 2003, 30, n/a-n/a.	4.0	125
7	INDICATION OF INSENSITIVITY OF PLANETARY WEATHERING BEHAVIOR AND HABITABLE ZONE TO SURFACE LAND FRACTION. <i>Astrophysical Journal</i> , 2012, 756, 178.	4.5	118
8	The Jormungand global climate state and implications for Neoproterozoic glaciations. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	116
9	WATER CYCLING BETWEEN OCEAN AND MANTLE: SUPER-EARTHS NEED NOT BE WATERWORLDS. <i>Astrophysical Journal</i> , 2014, 781, 27.	4.5	84
10	A Statistical Comparative Planetology Approach to the Hunt for Habitable Exoplanets and Life Beyond the Solar System. <i>Astrophysical Journal Letters</i> , 2017, 841, L24.	8.3	80
11	THERMAL PHASES OF EARTH-LIKE PLANETS: ESTIMATING THERMAL INERTIA FROM ECCENTRICITY, OBLIQUITY, AND DIURNAL FORCING. <i>Astrophysical Journal</i> , 2012, 757, 80.	4.5	78
12	No Snowball on Habitable Tidally Locked Planets. <i>Astrophysical Journal</i> , 2017, 845, 132.	4.5	78
13	TEMPERATURE STRUCTURE AND ATMOSPHERIC CIRCULATION OF DRY TIDALLY LOCKED ROCKY EXOPLANETS. <i>Astrophysical Journal</i> , 2016, 825, 99.	4.5	76
14	Mudball: Surface dust and Snowball Earth deglaciation. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	73
15	WATER TRAPPING ON TIDALLY LOCKED TERRESTRIAL PLANETS REQUIRES SPECIAL CONDITIONS. <i>Astrophysical Journal Letters</i> , 2014, 796, L22.	8.3	70
16	DIFFERENCES IN WATER VAPOR RADIATIVE TRANSFER AMONG 1D MODELS CAN SIGNIFICANTLY AFFECT THE INNER EDGE OF THE HABITABLE ZONE. <i>Astrophysical Journal</i> , 2016, 826, 222.	4.5	68
17	DECIPHERING THERMAL PHASE CURVES OF DRY, TIDALLY LOCKED TERRESTRIAL PLANETS. <i>Astrophysical Journal</i> , 2015, 802, 21.	4.5	65
18	A LOW-ORDER MODEL OF WATER VAPOR, CLOUDS, AND THERMAL EMISSION FOR TIDALLY LOCKED TERRESTRIAL PLANETS. <i>Astrophysical Journal</i> , 2014, 784, 155.	4.5	63

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19	Persistence of a freshwater surface ocean after a snowball Earth. <i>Geology</i> , 2017, 45, 615-618.	4.4	63
20	Clouds and Snowball Earth deglaciation. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	60
21	Feedback temperature dependence determines the risk of high warming. <i>Geophysical Research Letters</i> , 2015, 42, 4973-4980.	4.0	59
22	A FALSE POSITIVE FOR OCEAN GLINT ON EXOPLANETS: THE LATITUDE-ALBEDO EFFECT. <i>Astrophysical Journal Letters</i> , 2012, 752, L3.	8.3	57
23	The Atmospheric Circulation and Climate of Terrestrial Planets Orbiting Sun-like and M Dwarf Stars over a Broad Range of Planetary Parameters. <i>Astrophysical Journal</i> , 2019, 871, 245.	4.5	55
24	ANALYTICAL INVESTIGATION OF THE DECREASE IN THE SIZE OF THE HABITABLE ZONE DUE TO A LIMITED CO ₂ OUTGASSING RATE. <i>Astrophysical Journal</i> , 2016, 827, 117.	4.5	54
25	A high-latitude convective cloud feedback and equable climates. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2008, 134, 165-185.	2.7	51
26	Resolved Snowball Earth Clouds. <i>Journal of Climate</i> , 2014, 27, 4391-4402.	3.2	51
27	Ocean Dynamics and the Inner Edge of the Habitable Zone for Tidally Locked Terrestrial Planets. <i>Astrophysical Journal</i> , 2019, 871, 29.	4.5	51
28	Identifying Candidate Atmospheres on Rocky M Dwarf Planets via Eclipse Photometry. <i>Astrophysical Journal</i> , 2019, 886, 140.	4.5	46
29	Simulations of Water Vapor and Clouds on Rapidly Rotating and Tidally Locked Planets: A 3D Model Intercomparison. <i>Astrophysical Journal</i> , 2019, 875, 46.	4.5	44
30	Clouds will Likely Prevent the Detection of Water Vapor in JWST Transmission Spectra of Terrestrial Exoplanets. <i>Astrophysical Journal Letters</i> , 2020, 888, L20.	8.3	44
31	Continental constriction and oceanic ice-cover thickness in a Snowball Earth scenario. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	39
32	Robust elements of Snowball Earth atmospheric circulation and oases for life. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 6017-6027.	3.3	39
33	Oceanographic Considerations for Exoplanet Life Detection. <i>Astrophysical Journal</i> , 2020, 895, 19.	4.5	36
34	UTILITY OF THE WEAK TEMPERATURE GRADIENT APPROXIMATION FOR EARTH-LIKE TIDALLY LOCKED EXOPLANETS. <i>Astrophysical Journal Letters</i> , 2013, 774, L17.	8.3	33
35	A PROPOSAL FOR CLIMATE STABILITY ON H ₂ -GREENHOUSE PLANETS. <i>Astrophysical Journal Letters</i> , 2015, 815, L3.	8.3	28
36	No Snowball on Habitable Tidally Locked Planets with a Dynamic Ocean. <i>Astrophysical Journal Letters</i> , 2019, 884, L46.	8.3	26

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37	Controls on the Activation and Strength of a High-Latitude Convective Cloud Feedback. <i>Journals of the Atmospheric Sciences</i> , 2009, 66, 519-529.	1.7	25
38	Practical rare event sampling for extreme mesoscale weather. <i>Chaos</i> , 2019, 29, 053109.	2.5	25
39	The Importance of Ice Vertical Resolution for Snowball Climate and Deglaciation. <i>Journal of Climate</i> , 2010, 23, 6100-6109.	3.2	24
40	Why Tropical Sea Surface Temperature is Insensitive to Ocean Heat Transport Changes. <i>Journal of Climate</i> , 2013, 26, 6742-6749.	3.2	19
41	The Effect of Substellar Continent Size on Ocean Dynamics of Proxima Centauri b. <i>Astrophysical Journal Letters</i> , 2020, 896, L16.	8.3	19
42	EFFECT OF SURFACE-MANTLE WATER EXCHANGE PARAMETERIZATIONS ON EXOPLANET OCEAN DEPTHS. <i>Astrophysical Journal</i> , 2016, 832, 54.	4.5	17
43	Probing the Capability of Future Direct-imaging Missions to Spectrally Constrain the Frequency of Earth-like Planets. <i>Astronomical Journal</i> , 2021, 161, 150.	4.7	17
44	Learning Forecasts of Rare Stratospheric Transitions from Short Simulations. <i>Monthly Weather Review</i> , 2021, 149, 3647-3669.	1.4	17
45	Decrease in Hysteresis of Planetary Climate for Planets with Long Solar Days. <i>Astrophysical Journal</i> , 2018, 854, 3.	4.5	16
46	Path Properties of Atmospheric Transitions: Illustration with a Low-Order Sudden Stratospheric Warming Model. <i>Journals of the Atmospheric Sciences</i> , 2020, 77, 2327-2347.	1.7	16
47	Effects of Radius and Gravity on the Inner Edge of the Habitable Zone. <i>Astrophysical Journal Letters</i> , 2019, 876, L27.	8.3	15
48	Spatial Radiative Feedbacks from Internal Variability Using Multiple Regression. <i>Journal of Climate</i> , 2020, 33, 4121-4140.	3.2	15
49	Simple Rules Govern the Patterns of Arctic Sea Ice Melt Ponds. <i>Physical Review Letters</i> , 2018, 120, 148701.	7.8	14
50	Rare Event Sampling Improves Mercury Instability Statistics. <i>Astrophysical Journal</i> , 2021, 923, 236.	4.5	14
51	Maximizing Simulated Tropical Cyclone Intensity With Action Minimization. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 863-891.	3.8	13
52	Scaling Relations for Terrestrial Exoplanet Atmospheres from Baroclinic Criticality. <i>Astrophysical Journal</i> , 2019, 883, 46.	4.5	11
53	A Tropical and Subtropical Landâ€œSeaâ€œ Atmosphere Drought Oscillation Mechanism. <i>Journals of the Atmospheric Sciences</i> , 2007, 64, 4458-4468.	1.7	9
54	The Effect of Ocean Salinity on Climate and Its Implications for Earth's Habitability. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	9

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55	No Snowball Cycles at the Outer Edge of the Habitable Zone for Habitable Tidally Locked Planets. <i>Astrophysical Journal Letters</i> , 2019, 887, L3.	8.3	7
56	Robustness of Gaian feedbacks to climate perturbations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 492, 2572-2577.	4.4	5
57	Hurricane Genesis is Favorable on Terrestrial Exoplanets Orbiting Late-type M Dwarf Stars. <i>Astrophysical Journal</i> , 2020, 898, 115.	4.5	5
58	Validation of the BASALT model for simulating off-axis hydrothermal circulation in oceanic crust. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 5871-5889.	3.4	4
59	Critical Percolation Threshold Restricts Late-Summer Arctic Sea Ice Melt Pond Coverage. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2019JC016029.	2.6	4
60	Evolving CO ₂ Rather Than SST Leads to a Factor of Ten Decrease in GCM Convergence Time. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2021MS002505.	3.8	4
61	Distinguishing meanders of the Kuroshio using machine learning. <i>Journal of Geophysical Research: Oceans</i> , 2014, 119, 6593-6604.	2.6	3
62	The Snowball Stratosphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 11819-11836.	3.3	3
63	Rotation Period Detection for Earth-like Exoplanets. <i>Astronomical Journal</i> , 2022, 163, 27.	4.7	3
64	Snow Topography on Undeformed Arctic Sea Ice Captured by an Idealized "Snow Dune" Model. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2019JC016034.	2.6	1