Alexander Marshak

List of Publications by Year
in descending order

80	3,362	159585 30	155660 55
papers	citations	h-index	g-index

86	86	86	2650
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hyperspectral remote sensing of foliar nitrogen content. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E185-92.	7.1	389
2	THE I3RC: Bringing Together the Most Advanced Radiative Transfer Tools for Cloudy Atmospheres. Bulletin of the American Meteorological Society, 2005, 86, 1275-1294.	3.3	192
3	Remote Sensing of Droplet Number Concentration in Warm Clouds: A Review of the Current State of Knowledge and Perspectives. Reviews of Geophysics, 2018, 56, 409-453.	23.0	185
4	Impact of three-dimensional radiative effects on satellite retrievals of cloud droplet sizes. Journal of Geophysical Research, 2006, 111, .	3.3	182
5	The Landsat Scale Break in Stratocumulus as a Three-Dimensional Radiative Transfer Effect: Implications for Cloud Remote Sensing. Journals of the Atmospheric Sciences, 1997, 54, 241-260.	1.7	180
6	3â€Ð aerosolâ€cloud radiative interaction observed in collocated MODIS and ASTER images of cumulus cloud fields. Journal of Geophysical Research, 2007, 112, .	3.3	150
7	A simple model for the cloud adjacency effect and the apparent bluing of aerosols near clouds. Journal of Geophysical Research, 2008, 113, .	3.3	141
8	MODIS observations of enhanced clear sky reflectance near clouds. Geophysical Research Letters, 2009, 36, .	4.0	130
9	Earth Observations from DSCOVR EPIC Instrument. Bulletin of the American Meteorological Society, 2018, 99, 1829-1850.	3.3	108
10	Observations of Three-Dimensional Radiative Effects that Influence MODIS Cloud Optical Thickness Retrievals. Journals of the Atmospheric Sciences, 2002, 59, 1607-1618.	1.7	89
11	Racoro Extended-Term Aircraft Observations of Boundary Layer Clouds. Bulletin of the American Meteorological Society, 2012, 93, 861-878.	3.3	81
12	The verisimilitude of the independent pixel approximation used in cloud remote sensing. Remote Sensing of Environment, 1995, 52, 71-78.	11.0	76
13	Solar radiation transport in the cloudy atmosphere: a 3D perspective on observations and climate impacts. Reports on Progress in Physics, 2010, 73, 026801.	20.1	70
14	Passive remote sensing of altitude and optical depth of dust plumes using the oxygen A and B bands: First results from EPIC/DSCOVR at Lagrangeâ€1 point. Geophysical Research Letters, 2017, 44, 7544-7554.	4.0	69
15	Statistical Analysis of the Uncertainties in Cloud Optical Depth Retrievals Caused by Three-Dimensional Radiative Effects. Journals of the Atmospheric Sciences, 2001, 58, 1540-1548.	1.7	67
16	Impact of 3-D Clouds on Clear-Sky Reflectance and Aerosol Retrieval in a Biomass Burning Region of Brazil. IEEE Geoscience and Remote Sensing Letters, 2006, 3, 169-172.	3.1	61
17	View angle dependence of cloud optical thicknesses retrieved by Moderate Resolution Imaging Spectroradiometer (MODIS). Journal of Geophysical Research, 2007, 112, .	3.3	54
18	A framework based on 2â€Ð Taylor expansion for quantifying the impacts of subpixel reflectance variance and covariance on cloud optical thickness and effective radius retrievals based on the bispectral method. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7007-7025.	3.3	53

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19	Solar zenith and viewing geometryâ€dependent errors in satellite retrieved cloud optical thickness: Marine stratocumulus case. Journal of Geophysical Research, 2009, 114, .	3.3	52
20	Global CALIPSO Observations of Aerosol Changes Near Clouds. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 19-23.	3.1	52
21	Cloud characterization and clear-sky correction from Landsat-7. Remote Sensing of Environment, 2001, 78, 83-98.	11.0	51
22	A method of retrieving cloud top height and cloud geometrical thickness with oxygen A and B bands for the Deep Space Climate Observatory (DSCOVR) mission: Radiative transfer simulations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 122, 141-149.	2.3	47
23	Terrestrial glint seen from deep space: Oriented ice crystals detected from the Lagrangian point. Geophysical Research Letters, 2017, 44, 5197-5202.	4.0	46
24	CALIPSO observations of transatlantic dust: vertical stratification and effect of clouds. Atmospheric Chemistry and Physics, 2012, 12, 11339-11354.	4.9	45
25	Cloud three-dimensional effects evidenced in Landsat spatial power spectra and autocorrelation functions. Journal of Geophysical Research, 2000, 105, 14777-14788.	3.3	37
26	Calibration of the DSCOVR EPIC visible and NIR channels using MODIS Terra and Aqua data and EPIC lunar observations. Atmospheric Measurement Techniques, 2018, 11, 359-368.	3.1	37
27	The Effects of Scattering Angle and Cumulus Cloud Geometry on Satellite Retrievals of Cloud Droplet Effective Radius. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 1039-1045.	6.3	36
28	Multiple Scattering in Clouds: Insights from Three-Dimensional Diffusion/P₁ Theory. Nuclear Science and Engineering, 2001, 137, 251-280.	1.1	35
29	Physical interpretation of the spectral radiative signature in the transition zone between cloud-free and cloudy regions. Atmospheric Chemistry and Physics, 2009, 9, 1419-1430.	4.9	35
30	Multi-satellite aerosol observations in the vicinity of clouds. Atmospheric Chemistry and Physics, 2013, 13, 3899-3908.	4.9	34
31	Analysis of co-located MODIS and CALIPSO observations near clouds. Atmospheric Measurement Techniques, 2012, 5, 389-396.	3.1	33
32	Cloud droplet size and liquid water path retrievals from zenith radiance measurements: examples from the Atmospheric Radiation Measurement Program and the Aerosol Robotic Network. Atmospheric Chemistry and Physics, 2012, 12, 10313-10329.	4.9	33
33	Importance of molecular Rayleigh scattering in the enhancement of clear sky reflectance in the vicinity of boundary layer cumulus clouds. Journal of Geophysical Research, 2008, 113, .	3.3	31
34	Cloud products from the Earth Polychromatic Imaging Camera (EPIC): algorithms and initial evaluation. Atmospheric Measurement Techniques, 2019, 12, 2019-2031.	3.1	27
35	Effect of CALIPSO cloudâ€“aerosol discrimination (CAD) confidence levels on observations of aerosol properties near clouds. Atmospheric Research, 2012, 116, 134-141.	4.1	25
36	The spectral invariant approximation within canopy radiative transfer to support the use of the EPIC/DSCOVR oxygen B-band for monitoring vegetation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 191, 7-12.	2.3	24

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37	A Simple Stochastic Model for Generating Broken Cloud Optical Depth and Cloud-Top Height Fields. Journals of the Atmospheric Sciences, 2009, 66, 92-104.	1.7	19
38	Improvement of MODIS aerosol retrievals near clouds. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9168-9181.	3.3	19
39	Extending 3D near-cloud corrections from shorter to longer wavelengths. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 147, 79-85.	2.3	19
40	Effect of Cloud Fraction on Near-Cloud Aerosol Behavior in the MODIS Atmospheric Correction Ocean Color Product. Remote Sensing, 2015, 7, 5283-5299.	4.0	19
41	Satellite Observations of Cloud-Related Variations in Aerosol Properties. Atmosphere, 2018, 9, 430.	2.3	18
42	EPIC Spectral Observations of Variability in Earthâ€™s Global Reflectance. Remote Sensing, 2018, 10, 254.	4.0	17
43	Exploring Aerosols Near Clouds With Highâ€Spatialâ€Resolution Aircraft Remote Sensing During SEAC⁴RS. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2148-2173.	3.3	17
44	Analyzing changes in the complexity of climate in the last four decades using MERRA-2 radiation data. Scientific Reports, 2020, 10, 922.	3.3	17
45	Nearâ€cloud aerosol properties from the 1 km resolution MODIS ocean product. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1546-1554.	3.3	16
46	Implications of Whole-Disc DSCOVR EPIC Spectral Observations for Estimating Earthâ€™s Spectral Reflectivity Based on Low-Earth-Orbiting and Geostationary Observations. Remote Sensing, 2018, 10, 1594.	4.0	16
47	Spectral invariant behavior of zenith radiance around cloud edges observed by ARM SWS. Geophysical Research Letters, 2009, 36, .	4.0	15
48	Spectrally-invariant behavior of zenith radiance around cloud edges simulated by radiative transfer. Atmospheric Chemistry and Physics, 2010, 10, 11295-11303.	4.9	14
49	Cloud information content in EPIC/DSCOVRâ€™s oxygen A- and B-band channels: An optimal estimation approach. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 216, 6-16.	2.3	14
50	Cloud information content in EPIC/DSCOVRâ€™s oxygen A- and B-band channels: A physics-based approach. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 220, 84-96.	2.3	12
51	Retrievals of Aerosol Optical Depth and Spectral Absorption From DSCOVR EPIC. Frontiers in Remote Sensing, 2021, 2, .	3.5	12
52	Spectrally Invariant Approximation within Atmospheric Radiative Transfer. Journals of the Atmospheric Sciences, 2011, 68, 3094-3111.	1.7	11
53	Observationâ€Based Study on Aerosol Optical Depth and Particle Size in Partly Cloudy Regions. Journal of Geophysical Research D: Atmospheres, 2017, 122, 10013-10024.	3.3	11
54	Aerosol Properties in Cloudy Environments from Remote Sensing Observations: A Review of the Current State of Knowledge. Bulletin of the American Meteorological Society, 2021, 102, E2177-E2197.	3.3	11

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55	CALIPSO observations of nearâ€cloud aerosol properties as a function of cloud fraction. Geophysical Research Letters, 2014, 41, 9150-9157.	4.0	10
56	Observation of the spectrally invariant properties of clouds in cloudy-to-clear transition zones during the MAGIC field campaign. Atmospheric Research, 2016, 182, 294-301.	4.1	10
57	Spectral Signature of the Biosphere: NISTAR Finds It in Our Solar System From the Lagrangian Lâ€1 Point. Geophysical Research Letters, 2019, 46, 10679-10686.	4.0	10
58	A Relationship Between Blue and Nearâ€IR Global Spectral Reflectance and the Response of Global Average Reflectance to Change in Cloud Cover Observed From EPIC. Earth and Space Science, 2019, 6, 1416-1429.	2.6	9
59	Deep Space Observations of Sun Glints from Marine Ice Clouds. IEEE Geoscience and Remote Sensing Letters, 2020, 17, 735-739.	3.1	9
60	Daytime Variability of Cloud Fraction From DSCOVR/EPIC Observations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031488.	3.3	9
61	Deep Space Observations of Terrestrial Glitter. Earth and Space Science, 2021, 8, .	2.6	7
62	Effect of Scattering Angle on Earth Reflectance. Frontiers in Remote Sensing, 2021, 2, .	3.5	7
63	Testing the twoâ€layer model for correcting nearâ€cloud reflectance enhancement using LES/SHDOMâ€simulated radiances. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9661-9674.	3.3	6
64	Reduction in 317â€“780â€‰nm radiance reflected from the sunlit Earth during the eclipse of 21ÂAugust 2017. Atmospheric Measurement Techniques, 2018, 11, 4373-4388.	3.1	5
65	Cloud Edge Properties Measured by the ARM Shortwave Spectrometer Over Ocean and Land. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8707-8721.	3.3	5
66	Deep Space Observations of Cloud Glints: Spectral and Seasonal Dependence. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	5
67	Calibration of the DSCOVR EPIC Visible and NIR Channels using Multiple LEO Radiometers. Frontiers in Remote Sensing, 2021, 2, .	3.5	5
68	Raw EPIC Data Calibration. Frontiers in Remote Sensing, 2021, 2, .	3.5	5
69	Earth Imaging From the Surface of the Moon With a DSCOVR/EPIC-Type Camera. Frontiers in Remote Sensing, 2021, 2, .	3.5	5
70	Global Daytime Variability of Clouds From DSCOVR/EPIC Observations. Geophysical Research Letters, 2021, 48, e2020GL091511.	4.0	4
71	Analysis of Near-Cloud Changes in Atmospheric Aerosols Using Satellite Observations and Global Model Simulations. Remote Sensing, 2021, 13, 1151.	4.0	3
72	Lagrange Point Missions: The Key to next Generation Integrated Earth Observations. DSCOVR Innovation. Frontiers in Remote Sensing, 2021, 2, .	3.5	2

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73	Cloud Height Daytime Variability From DSCOVR/EPIC and GOES-R/ABI Observations. Frontiers in Remote Sensing, 2022, 3, .	3.5	2
74	A framework for quantifying the impacts of sub-pixel reflectance variance and covariance on cloud optical thickness and effective radius retrievals based on the bi-spectral method. AIP Conference Proceedings, 2017, , .	0.4	1
75	Unique NISTAR-Based Climate GCM Diagnostics of the Earthâ€™s Planetary Albedo and Spectral Absorption Through Longitudinal Data Slicing. Frontiers in Remote Sensing, 2022, 3, .	3.5	1
76	Reduction of Spectral Radiance Reflectance During the Annular Solar Eclipse of 21 June 2020 Observed by EPIC. Frontiers in Remote Sensing, 2022, 3, .	3.5	1
77	On spectral invariance of single scattering albedo for water droplets and ice crystals at weakly absorbing wavelengths. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 715-720.	2.3	0
78	3D radiative processes in satellite measurements of aerosol properties. , 2013, , .		0
79	Precipitable Water Vapor Variation in the Clear-Cloud Transition Zone From the ARM Shortwave Spectrometer. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	0
80	Operational Detection of Sun Glints in DSCOVR EPIC Images. Frontiers in Remote Sensing, 2021, 2, .	3.5	0