

Warren J Wiscombe

List of Publications by Year in descending order

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101
papers

11,013
citations

76196

40
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39575

94
g-index

105
all docs

105
docs citations

105
times ranked

6521
citing authors

#	ARTICLE	IF	CITATIONS
1	The Discrete Ordinate Algorithm, DISORT for Radiative Transfer. , 2016, , 3-65.		9
2	GEOScan: a geoscience facility from space. Proceedings of SPIE, 2012, , .	0.8	2
3	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.	1.9	33
4	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.	1.1	0
5	Cloud Impact on Surface Altimetry From a Spaceborne 532-nm Micropulse Photon-Counting Lidar: System Modeling for Cloudy and Clear Atmospheres. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 4910-4919.	2.7	21
6	Airborne Instrumentation Needs for Climate and Atmospheric Research. Bulletin of the American Meteorological Society, 2011, 92, 1193-1196.	1.7	11
7	Tomographic retrieval of cloud liquid water fields from a single scanning microwave radiometer aboard a moving platform " Part 2: Observation system simulation experiments. Atmospheric Chemistry and Physics, 2010, 10, 6699-6709.	1.9	5
8	Tomographic retrieval of cloud liquid water fields from a single scanning microwave radiometer aboard a moving platform " Part 1: Field trial results from the Wakasa Bay experiment. Atmospheric Chemistry and Physics, 2010, 10, 6685-6697.	1.9	3
9	CLOUDS AND MORE: ARM Climate Modeling Best Estimate Data. Bulletin of the American Meteorological Society, 2010, 91, 13-20.	1.7	139
10	Replacing pixel representations by point-function schemes for reducing discretization error in ill-posed remote sensing problems, with examples from cloud tomography. Remote Sensing Letters, 2010, 1, 95-102.	0.6	1
11	Cloud optical depth retrievals from the Aerosol Robotic Network (AERONET) cloud mode observations. Journal of Geophysical Research, 2010, 115, .	3.3	53
12	Uncertainties in Ice-Sheet Altimetry From a Spaceborne 1064-nm Single-Channel Lidar Due to Undetected Thin Clouds. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 250-259.	2.7	19
13	High resolution retrieval of liquid water vertical distributions using collocated Ka-band and W-band cloud radars. Geophysical Research Letters, 2009, 36, .	1.5	18
14	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.	1.9	35
15	Stratospheric Satellites for Earth Observations. Bulletin of the American Meteorological Society, 2009, 90, 1109-1119.	1.7	7
16	Improving the description of sunglint for accurate prediction of remotely sensed radiances. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 2364-2375.	1.1	39
17	Determination of cloud liquid water distribution using 3D cloud tomography. Journal of Geophysical Research, 2008, 113, .	3.3	25
18	Cloud tomography: Role of constraints and a new algorithm. Journal of Geophysical Research, 2008, 113, .	3.3	10

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19	Performance of Commercial Radiometers in Very Low Temperature and Pressure Environments Typical of Polar Regions and of the Stratosphere: A Laboratory Study. <i>Journal of Atmospheric and Oceanic Technology</i> , 2008, 25, 558-569.	0.5	6
20	Retrievals of Thick Cloud Optical Depth from the Geoscience Laser Altimeter System (GLAS) by Calibration of Solar Background Signal. <i>Journals of the Atmospheric Sciences</i> , 2008, 65, 3513-3526.	0.6	14
21	Light Reflection from Water Waves: Suitable Setup for a Polarimetric Investigation under Controlled Laboratory Conditions. <i>Journal of Atmospheric and Oceanic Technology</i> , 2008, 25, 715-728.	0.5	10
22	Thin Liquid Water Clouds: Their Importance and Our Challenge. <i>Bulletin of the American Meteorological Society</i> , 2007, 88, 177-190.	1.7	195
23	Modeling of the scattering and radiative properties of nonspherical dust-like aerosols. <i>Journal of Aerosol Science</i> , 2007, 38, 995-1014.	1.8	180
24	Cloud Optical Depth Retrievals From SolarBackground "Signals" of Micropulse Lidars. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2007, 4, 456-460.	1.4	14
25	Single-scattering properties of Platonic solids in geometrical-optics regime. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2007, 106, 595-603.	1.1	11
26	Remote sensing of cloud properties using ground-based measurements of zenith radiance. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	38
27	Small-Scale Drop-Size Variability: Empirical Models for Drop-Size-Dependent Clustering in Clouds. <i>Journals of the Atmospheric Sciences</i> , 2005, 62, 551-558.	0.6	21
28	Small-Scale Drop Size Variability: Impact on Estimation of Cloud Optical Properties. <i>Journals of the Atmospheric Sciences</i> , 2005, 62, 2555-2567.	0.6	15
29	New Cloud Micro Sensors for the Aerosonde UAV. , 2005, , .		0
30	Retrievals of Cloud Optical Properties from a Two-Channel Narrow-Field-of-View Radiometer. , 2005, , .		0
31	An algorithm for generating stochastic cloud fields from radar profile statistics. <i>Atmospheric Research</i> , 2004, 72, 263-289.	1.8	47
32	Effect of particle asphericity on single-scattering parameters: comparison between Platonic solids and spheres. <i>Applied Optics</i> , 2004, 43, 4427.	2.1	15
33	Characteristics of tropical cirrus cloud optical thickness fields using MODIS level-3 data. , 2004, , .		1
34	The "RED versus NIR" Plane to Retrieve Broken-Cloud Optical Depth from Ground-Based Measurements. <i>Journals of the Atmospheric Sciences</i> , 2004, 61, 1911-1925.	0.6	42
35	Nano/Micro Satellite Constellations for Earth and Space Science. <i>Acta Astronautica</i> , 2003, 52, 785-791.	1.7	30
36	Spectral signature of ice clouds in the far-infrared region: Single-scattering calculations and radiative sensitivity study. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	46

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37	Use of circular cylinders as surrogates for hexagonal pristine ice crystals in scattering calculations at infrared wavelengths. <i>Applied Optics</i> , 2003, 42, 2653.	2.1	25
38	Measurements of water vapor and high clouds over the Tibetan plateau with the terra modis instrument. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2003, 41, 895-900.	2.7	52
39	Have Clouds Darkened Since 1995?. <i>Science</i> , 2003, 302, 1151-1152.	6.0	24
40	Seasonal and global variations of water vapor and high clouds observed with MODIS near-IR channels. , 2003, , .		0
41	In Situ Cloud Sensing with Multiple Scattering Lidar: Simulations and Demonstration. <i>Journal of Atmospheric and Oceanic Technology</i> , 2003, 20, 1505-1522.	0.5	17
42	Methods for discerning cloud reflectivity changes due to the indirect effect of aerosol: a pilot study for Triana. , 2002, , .		0
43	Inherent and apparent scattering properties of coated or uncoated spheres embedded in an absorbing host medium. <i>Applied Optics</i> , 2002, 41, 2740.	2.1	76
44	An algorithm using visible and 1.38-1.4µm channels to retrieve cirrus cloud reflectances from aircraft and satellite data. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2002, 40, 1659-1668.	2.7	120
45	A Missing Solution to the Transport Equation and Its Effect on Estimation of Cloud Absorptive Properties. <i>Journals of the Atmospheric Sciences</i> , 2002, 59, 3572-3585.	0.6	11
46	Asymptotic solutions for optical properties of large particles with strong absorption. <i>Applied Optics</i> , 2001, 40, 1532.	2.1	26
47	Sensitivity of cirrus bidirectional reflectance to vertical inhomogeneity of ice crystal habits and size distributions for two Moderate-Resolution Imaging Spectroradiometer (MODIS) bands. <i>Journal of Geophysical Research</i> , 2001, 106, 17267-17291.	3.3	60
48	Spectral Density of Cloud Liquid Water Content at High Frequencies. <i>Journals of the Atmospheric Sciences</i> , 2001, 58, 497-503.	0.6	41
49	Radiative properties of cirrus clouds in the infrared (8-14µm) spectral region. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2001, 70, 473-504.	1.1	79
50	NASA-GSFC nano-satellite technology for Earth science missions. <i>Acta Astronautica</i> , 2000, 46, 287-296.	1.7	31
51	Cloud-vegetation interaction: Use of normalized difference cloud index for estimation of cloud optical thickness. <i>Geophysical Research Letters</i> , 2000, 27, 1695-1698.	1.5	80
52	On the Removal of the Effect of Horizontal Fluxes In Two Aircraft Measurements of Cloud Absorption. <i>Quarterly Journal of the Royal Meteorological Society</i> , 1999, 125, 2153-2170.	1.0	21
53	Horizontal structure of marine boundary layer clouds from centimeter to kilometer scales. <i>Journal of Geophysical Research</i> , 1999, 104, 6123-6144.	3.3	93
54	Nonlocal independent pixel approximation: direct and inverse problems. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1998, 36, 192-205.	2.7	67

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55	Radiative effects of sub-mean free path liquid water variability observed in stratiform clouds. Journal of Geophysical Research, 1998, 103, 19557-19567.	3.3	42
56	Corection of thin cirrus path radiances in the 0.4-1.0 $\hat{1}$ / ₄ m spectral region using the sensitive 1.375 $\hat{1}$ / ₄ m cirrus detecting channel. Journal of Geophysical Research, 1998, 103, 32169-32176.	3.3	80
57	Biases in Shortwave Column Absorption in the Presence of Fractal Clouds. Journal of Climate, 1998, 11, 431-446.	1.2	49
58	Scale Invariance in Liquid Water Distributions in Marine Stratocumulus. Part II: Multifractal Properties and Intermittency Issues. Journals of the Atmospheric Sciences, 1997, 54, 1423-1444.	0.6	87
59	Interactions: Solar and Laser Beams in Stratus Clouds, Fractals & Multifractals in Climate & Remote-Sensing Studies. Fractals, 1997, 05, 129-166.	1.8	7
60	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.	0.6	180
61	Inhomogeneity effects on cloud shortwave absorption measurements: Two-aircraft simulations. Journal of Geophysical Research, 1997, 102, 16619-16637.	3.3	37
62	Retrieval of Physical and Optical Cloud Thicknesses from Space-Borne and Wide-Angle Imaging Lidar. , 1997, , 193-196.		12
63	INSIGHT INTO THREE-DIMENSIONAL RADIATION TRANSPORT PROCESSES FROM DIFFUSION THEORY, WITH APPLICATIONS TO THE ATMOSPHERE. , 1997, , .		2
64	Scale Invariance of Liquid Water Distributions in Marine Stratocumulus. Part I: Spectral Properties and Stationarity Issues. Journals of the Atmospheric Sciences, 1996, 53, 1538-1558.	0.6	162
65	The Spectral Radiance Experiment (SPECTRE): Project Description and Sample Results. Bulletin of the American Meteorological Society, 1996, 77, 1967-1985.	1.7	32
66	An absorbing mystery. Nature, 1995, 376, 466-467.	13.7	35
67	The verisimilitude of the independent pixel approximation used in cloud remote sensing. Remote Sensing of Environment, 1995, 52, 71-78.	4.6	76
68	Radiative smoothing in fractal clouds. Journal of Geophysical Research, 1995, 100, 26247.	3.3	183
69	Independent Pixel and Monte Carlo Estimates of Stratocumulus Albedo. Journals of the Atmospheric Sciences, 1994, 51, 3776-3790.	0.6	212
70	Bounded cascade models as nonstationary multifractals. Physical Review E, 1994, 49, 55-69.	0.8	134
71	Multifractal characterizations of nonstationarity and intermittency in geophysical fields: Observed, retrieved, or simulated. Journal of Geophysical Research, 1994, 99, 8055.	3.3	308
72	The Albedo of Fractal Stratocumulus Clouds. Journals of the Atmospheric Sciences, 1994, 51, 2434-2455.	0.6	484

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73	Wavelet-Based Multifractal Analysis of Non-Stationary and/or Intermittent Geophysical Signals. Wavelet Analysis and Its Applications, 1994, 4, 249-298.	0.2	39
74	Cirrus cloud detection from Airborne Imaging Spectrometer data using the 1.38 Åµm water vapor band. Geophysical Research Letters, 1993, 20, 301-304.	1.5	168
75	Theory of near-critical-angle scattering from a curved interface. Physical Review A, 1991, 43, 1005-1038.	1.0	36
76	Complex angular momentum approximation to hard-core scattering. Physical Review A, 1991, 43, 2093-2112.	1.0	22
77	Spectral albedo and emissivity of CO ₂ in Martian polar caps: Model results. Journal of Geophysical Research, 1990, 95, 14717-14741.	3.3	72
78	Scattering from nonspherical Chebyshev particles 3: Variability in angular scattering patterns. Applied Optics, 1989, 28, 3061.	2.1	54
79	Scattering from nonspherical Chebyshev particles 2: Means of angular scattering patterns. Applied Optics, 1988, 27, 2405.	2.1	64
80	Numerically stable algorithm for discrete-ordinate-method radiative transfer in multiple scattering and emitting layered media. Applied Optics, 1988, 27, 2502.	2.1	2,812
81	Intercomparison of Radiation Codes in Climate Models (ICRCCM): Longwave Clear-Sky Results A Workshop Summary. Bulletin of the American Meteorological Society, 1988, 69, 40-48.	1.7	69
82	Diffraction as tunneling. Physical Review Letters, 1987, 59, 1667-1670.	2.9	28
83	Scattering from nonspherical Chebyshev particles I: cross sections, single-scattering albedo, asymmetry factor, and backscattered fraction. Applied Optics, 1986, 25, 1235.	2.1	124
84	Dirty snow after nuclear war. Nature, 1985, 313, 467-470.	13.7	173
85	The Role of Radiation and Other Renascent Subfields in Atmospheric Science. Bulletin of the American Meteorological Society, 1985, 66, 1278-1287.	1.7	11
86	Atmospheric radiation: 1975-1983. Reviews of Geophysics, 1983, 21, 997-1021.	9.0	10
87	Evaporation-Limited Tropical Temperatures as a Constraint on Climate Sensitivity. Journals of the Atmospheric Sciences, 1983, 40, 1659-1668.	0.6	24
88	Spectral Radiation Modeling for the Antarctic Plateau: Effects of Clouds, Ozone and CO ₂ ON THE Radiation Budget (Abstract only). Annals of Glaciology, 1982, 3, 356-356.	2.8	1
89	Note on the Scattering of Radiation by Moderately Nonspherical Particles. Journals of the Atmospheric Sciences, 1982, 39, 1886-1888.	0.6	1
90	Comment on "radiative properties of snow for clear sky solar radiation". Cold Regions Science and Technology, 1981, 5, 177-180.	1.6	6

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91	Efficiency Factors in Mie Scattering. <i>Physical Review Letters</i> , 1980, 45, 1490-1494.	2.9	168
92	A Model for the Spectral Albedo of Snow. I: Pure Snow. <i>Journals of the Atmospheric Sciences</i> , 1980, 37, 2712-2733.	0.6	1,275
93	A Model for the Spectral Albedo of Snow. II: Snow Containing Atmospheric Aerosols. <i>Journals of the Atmospheric Sciences</i> , 1980, 37, 2734-2745.	0.6	1,048
94	Forward optical glory. <i>Optics Letters</i> , 1980, 5, 455.	1.7	26
95	Mie scattering between any two angles. <i>Journal of the Optical Society of America</i> , 1977, 67, 572.	1.2	15
96	Exponential-sum fitting of radiative transmission functions. <i>Journal of Computational Physics</i> , 1977, 24, 416-444.	1.9	241
97	Doubling initialization revisited. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1977, 18, 245-248.	1.1	9
98	The range of validity of the Eddington approximation. <i>Icarus</i> , 1977, 32, 362-377.	1.1	30
99	The Backscattered Fraction in two-stream Approximations. <i>Journals of the Atmospheric Sciences</i> , 1976, 33, 2440-2451.	0.6	221
100	On initialization, error and flux conservation in the doubling method. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1976, 16, 637-658.	1.1	119
101	Extension of the doubling method to inhomogeneous sources. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1976, 16, 477-489.	1.1	73