

Robert F Cahalan

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72
papers

6,053
citations

32
h-index

77
g-index

77
ext. papers

6,613
ext. citations

4.4
avg, IF

5.02
L-index

#	Paper	IF	Citations
72	Sampling Errors in the Estimation of Empirical Orthogonal Functions. <i>Monthly Weather Review</i> , 1982 , 110, 699-706	2.4	2243
71	Energy balance climate models. <i>Reviews of Geophysics</i> , 1981 , 19, 91	23.1	429
70	The Albedo of Fractal Stratocumulus Clouds. <i>Journals of the Atmospheric Sciences</i> , 1994 , 51, 2434-2455	2.1	397
69	Multifractal characterizations of nonstationarity and intermittency in geophysical fields: Observed, retrieved, or simulated. <i>Journal of Geophysical Research</i> , 1994 , 99, 8055		256
68	Independent Pixel and Monte Carlo Estimates of Stratocumulus Albedo. <i>Journals of the Atmospheric Sciences</i> , 1994 , 51, 3776-3790	2.1	180
67	The Landsat Scale Break in Stratocumulus as a Three-Dimensional Radiative Transfer Effect: Implications for Cloud Remote Sensing. <i>Journals of the Atmospheric Sciences</i> , 1997 , 54, 241-260	2.1	160
66	Impact of three-dimensional radiative effects on satellite retrievals of cloud droplet sizes. <i>Journal of Geophysical Research</i> , 2006 , 111,		160
65	THE I3RC: Bringing Together the Most Advanced Radiative Transfer Tools for Cloudy Atmospheres. <i>Bulletin of the American Meteorological Society</i> , 2005 , 86, 1275-1294	6.1	157
64	Scale Invariance of Liquid Water Distributions in Marine Stratocumulus. Part I: Spectral Properties and Stationarity Issues. <i>Journals of the Atmospheric Sciences</i> , 1996 , 53, 1538-1558	2.1	147
63	Radiative smoothing in fractal clouds. <i>Journal of Geophysical Research</i> , 1995 , 100, 26247		145
62	3-D aerosol-cloud radiative interaction observed in collocated MODIS and ASTER images of cumulus cloud fields. <i>Journal of Geophysical Research</i> , 2007 , 112,		133
61	Fractal Statistics of Cloud Fields. <i>Monthly Weather Review</i> , 1989 , 117, 261-272	2.4	123
60	Bounded cascade models as nonstationary multifractals. <i>Physical Review E</i> , 1994 , 49, 55-69	2.4	113
59	A simple model for the cloud adjacency effect and the apparent bluing of aerosols near clouds. <i>Journal of Geophysical Research</i> , 2008 , 113,		112
58	Marine stratocumulus structure. <i>Remote Sensing of Environment</i> , 1989 , 28, 95-107	13.2	83
57	Scale Invariance in Liquid Water Distributions in Marine Stratocumulus. Part II: Multifractal Properties and Intermittency Issues. <i>Journals of the Atmospheric Sciences</i> , 1997 , 54, 1423-1444	2.1	77
56	Bounded cascade clouds: albedo and effective thickness. <i>Nonlinear Processes in Geophysics</i> , 1994 , 1, 156-167		70

55	Predictability in a Solvable Stochastic Climate Model. <i>Journals of the Atmospheric Sciences</i> , 1981 , 38, 504-513	5.3	63
54	Modeling Sustainability: Population, Inequality, Consumption, and Bidirectional Coupling of the Earth and Human Systems. <i>National Science Review</i> , 2016 , 3, 470-494	10.8	59
53	Impact of 3-D clouds on clear-sky reflectance and aerosol retrieval in a biomass burning region of Brazil. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2006 , 3, 169-172	4.1	56
52	Nonlocal independent pixel approximation: direct and inverse problems. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1998 , 36, 192-205	8.1	50
51	The Latitude Dependence of the Variance of Zonally Averaged Quantities. <i>Monthly Weather Review</i> , 1982 , 110, 319-326	2.4	50
50	A Stability Theorem for Energy-Balance Climate Models. <i>Journals of the Atmospheric Sciences</i> , 1979 , 36, 1178-1188	2.1	47
49	Biases in Shortwave Column Absorption in the Presence of Fractal Clouds. <i>Journal of Climate</i> , 1998 , 11, 431-446	4.4	43
48	Cloud Inhomogeneity from MODIS. <i>Journal of Climate</i> , 2005 , 18, 5110-5124	4.4	40
47	Cloud characterization and clear-sky correction from Landsat-7. <i>Remote Sensing of Environment</i> , 2001 , 78, 83-98	13.2	39
46	Radiative effects of sub-mean free path liquid water variability observed in stratiform clouds. <i>Journal of Geophysical Research</i> , 1998 , 103, 19557-19567		35
45	THORCloud Thickness from Offbeam Lidar Returns. <i>Journal of Atmospheric and Oceanic Technology</i> , 2005 , 22, 605-627	2	33
44	Cloud three-dimensional effects evidenced in Landsat spatial power spectra and autocorrelation functions. <i>Journal of Geophysical Research</i> , 2000 , 105, 14777-14788		33
43	Nearest Neighbor Spacing of Fair Weather Cumulus Clouds. <i>Journal of Applied Meteorology and Climatology</i> , 1990 , 29, 793-805		33
42	Inhomogeneity effects on cloud shortwave absorption measurements: Two-aircraft simulations. <i>Journal of Geophysical Research</i> , 1997 , 102, 16619-16637		32
41	Liquid Water Path and Plane-Parallel Albedo Bias during ASTEX. <i>Journals of the Atmospheric Sciences</i> , 1995 , 52, 3002-3012	2.1	32
40	Temperature responses to spectral solar variability on decadal time scales. <i>Geophysical Research Letters</i> , 2010 , 37, n/a-n/a	4.9	31
39	Impact of cumulus cloud spacing on Landsat atmospheric correction and aerosol retrieval. <i>Journal of Geophysical Research</i> , 2001 , 106, 12129-12138		28
38	Chaotic Rhythms of a Dripping Faucet. <i>Computers in Physics</i> , 1990 , 4, 368		28

37	Importance of molecular Rayleigh scattering in the enhancement of clear sky reflectance in the vicinity of boundary layer cumulus clouds. <i>Journal of Geophysical Research</i> , 2008 , 113,		27
36	Path radiance technique for retrieving aerosol optical thickness over land. <i>Journal of Geophysical Research</i> , 1999 , 104, 31321-31332		27
35	Cloud Fluctuation Statistics. <i>Monthly Weather Review</i> , 1982 , 110, 26-43	2.4	27
34	Off-beam lidar: an emerging technique in cloud remote sensing based on radiative green-function theory in the diffusion domain. <i>Physics and Chemistry of the Earth</i> , 1999 , 24, 177-185		25
33	The Solar Radiation and Climate Experiment (SORCE) Mission for the NASA Earth Observing System (EOS). <i>Solar Physics</i> , 2005 , 230, 3-6	2.6	24
32	New directions in the radiative transfer of cloudy atmospheres. <i>Eos</i> , 2006 , 87, 52	1.5	20
31	The Plane-Parallel Albedo Bias of Liquid Clouds from MODIS Observations. <i>Journal of Climate</i> , 2007 , 20, 5114-5125	4.4	18
30	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	6.4	17
29	Improvement of MODIS aerosol retrievals near clouds. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 9168-9181	4.4	16
28	A Variational Method to Retrieve the Extinction Profile in Liquid Clouds Using Multiple-Field-of-View Lidar. <i>Journal of Applied Meteorology and Climatology</i> , 2012 , 51, 350-365	2.7	11
27	A New Normalized Difference Cloud Retrieval Technique Applied to Landsat Radiances over the Oklahoma ARM Site. <i>Journal of Applied Meteorology and Climatology</i> , 2000 , 39, 2305-2321		11
26	Empirical orthogonal functions of monthly precipitation and temperature over the United States and homogeneous stochastic models. <i>Journal of Geophysical Research</i> , 1996 , 101, 26309-26318		11
25	The shortwave radiative forcing bias of liquid and ice clouds from MODIS observations. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 5865-5875	6.8	9
24	Windowed and Wavelet Analysis of Marine Stratocumulus Cloud Inhomogeneity. <i>Journals of the Atmospheric Sciences</i> , 1995 , 52, 3013-3030	2.1	9
23	Retrieval of Physical and Optical Cloud Thicknesses from Space-Borne and Wide-Angle Imaging Lidar 1997 , 193-196		9
22	Performance of Goddard earth observing system GCM column radiation models under heterogeneous cloud conditions. <i>Atmospheric Research</i> , 2004 , 72, 365-382	5.4	8
21	Plane-parallel biases computed from inhomogeneous Arctic clouds and sea ice. <i>Journal of Geophysical Research</i> , 2002 , 107, AAC 8-1		8
20	Interactions: Solar and Laser Beams in Stratus Clouds, Fractals & Multifractals in Climate & Remote-Sensing Studies. <i>Fractals</i> , 1997 , 05, 129-166	3.2	7

19	Consistency of ARESE II cloud absorption estimates and sampling issues. <i>Journal of Geophysical Research</i> , 2003 , 108, AAC 13-1		7
18	Solar rotational modulations of spectral irradiance and correlations with the variability of total solar irradiance. <i>Journal of Space Weather and Space Climate</i> , 2016 , 6, A33	2.5	6
17	Interannual Variability and Climatic Noise in Satellite-Observed Outgoing Longwave Radiation. <i>Monthly Weather Review</i> , 1983 , 111, 572-577	2.4	6
16	Reconciliation of modeled climate responses to spectral solar forcing. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 6281-6289	4.4	5
15	Potential for airborne offbeam lidar measurements of snow and sea ice thickness. <i>Journal of Geophysical Research</i> , 2007 , 112,		4
14	Z0 effect in lepton-pair photoproduction. <i>Physical Review D</i> , 1974 , 10, 3769-3779	4.9	3
13	Climate responses to SATIRE and SIM-based spectral solar forcing in a 3D atmosphere-ocean coupled GCM. <i>Journal of Space Weather and Space Climate</i> , 2017 , 7, A11	2.5	3
12	Landsat Observations of Fractal Cloud Structure 1991 , 281-295		3
11	Deriving historical total solar irradiance from lunar borehole temperatures. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	2
10	Effects of doubled CO2 on tropical sea surface temperatures (SSTs) for onset of deep convection and maximum SST: Simulations based inferences. <i>Geophysical Research Letters</i> , 2008 , 35, n/a-n/a	4.9	2
9	Rotationally invariant approximation to charge-monopole scattering. <i>Physical Review D</i> , 1978 , 17, 1136-1149	4.9	2
8	Z0 photoproduction at high energy. <i>Physical Review D</i> , 1974 , 9, 257-272	4.9	2
7	INSIGHT INTO THREE-DIMENSIONAL RADIATION TRANSPORT PROCESSES FROM DIFFUSION THEORY, WITH APPLICATIONS TO THE ATMOSPHERE 1997 ,		2
6	Green functions for multiple scattering as mathematical tools for dense-cloud remote sensing: theory with passive and active applications 2001 ,		1
5	Construction of planar diagrams. <i>Physical Review D</i> , 1976 , 14, 2126-2136	4.9	1
4	Analyticity of the charge-monopole scattering amplitude. <i>Physical Review D</i> , 1978 , 17, 1150-1154	4.9	1
3	Cluster Expansion in a Renormalizable Theory: The Elastic Form Factor. <i>Physical Review D</i> , 1972 , 5, 2999-3021	4.9	1
2	MULTI-SINGULAR AND MULTI-AFFINE PROPERTIES OF BOUNDED CASCADE MODELS. <i>Fractals</i> , 1993 , 01, 702-710	3.2	0

1 Solar Temperature Variations Computed from SORCE SIM Irradiances Observed During 2003–2020. *Solar Physics*, **2022**, 297, 1

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