

Mark W Shephard

List of Publications by Year in descending order

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Version: 2024-02-01

59
papers

6,617
citations

147566

31
h-index

138251

58
g-index

83
all docs

83
docs citations

83
times ranked

7072
citing authors

#	ARTICLE	IF	CITATIONS
1	Radiative forcing by long-lived greenhouse gases: Calculations with the AER radiative transfer models. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	3,199
2	The EarthCARE Satellite: The Next Step Forward in Global Measurements of Clouds, Aerosols, Precipitation, and Radiation. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1311-1332.	1.7	443
3	Predicted errors of tropospheric emission spectrometer nadir retrievals from spectral window selection. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	165
4	Space-based detection of missing sulfur dioxide sources of global air pollution. <i>Nature Geoscience</i> , 2016, 9, 496-500.	5.4	149
5	TES ammonia retrieval strategy and global observations of the spatial and seasonal variability of ammonia. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 10743-10763.	1.9	129
6	Satellite monitoring of ammonia: A case study of the San Joaquin Valley. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	118
7	Cross-track Infrared Sounder (CrIS) satellite observations of tropospheric ammonia. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 1323-1336.	1.2	117
8	First satellite observations of lower tropospheric ammonia and methanol. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	111
9	Constraining U.S. ammonia emissions using TES remote sensing observations and the GEOS-Chem adjoint model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 3355-3368.	1.2	110
10	Comparison of carbon monoxide measurements by TES and MOPITT: Influence of a priori data and instrument characteristics on nadir atmospheric species retrievals. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	108
11	The QME AERI LBLRTM: A Closure Experiment for Downwelling High Spectral Resolution Infrared Radiance. <i>Journals of the Atmospheric Sciences</i> , 2004, 61, 2657-2675.	0.6	107
12	Implementation of cloud retrievals for Tropospheric Emission Spectrometer (TES) atmospheric retrievals: part 1. Description and characterization of errors on trace gas retrievals. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	107
13	Performance of the Line-By-Line Radiative Transfer Model (LBLRTM) for temperature, water vapor, and trace gas retrievals: recent updates evaluated with IASI case studies. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 6687-6711.	1.9	107
14	Performance of the line-by-line radiative transfer model (LBLRTM) for temperature and species retrievals: IASI case studies from JAIVEx. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 7397-7417.	1.9	99
15	NH ₃ emissions from large point sources derived from CrIS and IASI satellite observations. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 12261-12293.	1.9	89
16	Improved Daytime Column-Integrated Precipitable Water Vapor from Vaisala Radiosonde Humidity Sensors. <i>Journal of Atmospheric and Oceanic Technology</i> , 2008, 25, 873-883.	0.5	86
17	Current updates of the water-vapor line list in HITRAN: A new "Diet" for air-broadened half-widths. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2007, 108, 389-402.	1.1	71
18	Sources and Impacts of Atmospheric NH ₃ : Current Understanding and Frontiers for Modeling, Measurements, and Remote Sensing in North America. <i>Current Pollution Reports</i> , 2015, 1, 95-116.	3.1	69

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19	Global evaluation of ammonia bidirectional exchange and livestock diurnal variation schemes. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 12823-12843.	1.9	68
20	Dry Deposition of Reactive Nitrogen From Satellite Observations of Ammonia and Nitrogen Dioxide Over North America. <i>Geophysical Research Letters</i> , 2018, 45, 1157-1166.	1.5	62
21	Information-centered representation of retrievals with limited degrees of freedom for signal: Application to methane from the Tropospheric Emission Spectrometer. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	58
22	Quantifying spatial and seasonal variability in atmospheric ammonia with in situ and space-based observations. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	54
23	Validation of the CrIS fast physical NH ₃ retrieval with ground-based FTIR. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 2645-2667.	1.2	52
24	Satellite observations of tropospheric ammonia and carbon monoxide: Global distributions, regional correlations and comparisons to model simulations. <i>Atmospheric Environment</i> , 2015, 106, 262-277.	1.9	48
25	Ammonia measurements from space with the Cross-track Infrared Sounder: characteristics and applications. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 2277-2302.	1.9	47
26	Observed Trends in Severe Weather Conditions Based on Humidex, Wind Chill, and Heavy Rainfall Events in Canada for 1953–2012. <i>Atmosphere - Ocean</i> , 2015, 53, 383-397.	0.6	44
27	Trends in Canadian Short-Duration Extreme Rainfall: Including an Intensity-Duration-Frequency Perspective. <i>Atmosphere - Ocean</i> , 2014, 52, 398-417.	0.6	41
28	Tropospheric methanol observations from space: retrieval evaluation and constraints on the seasonality of biogenic emissions. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 5897-5912.	1.9	39
29	A Large Underestimate of Formic Acid from Tropical Fires: Constraints from Space-Borne Measurements. <i>Environmental Science & Technology</i> , 2016, 50, 5631-5640.	4.6	39
30	Comparison of Tropospheric Emission Spectrometer nadir water vapor retrievals with in situ measurements. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	38
31	Tropospheric Emission Spectrometer nadir spectral radiance comparisons. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	38
32	Tropospheric Emission Spectrometer (TES) satellite observations of ammonia, methanol, formic acid, and carbon monoxide over the Canadian oil sands: validation and model evaluation. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 5189-5211.	1.2	37
33	Satellite-derived emissions of carbon monoxide, ammonia, and nitrogen dioxide from the 2016 Horse River wildfire in the Fort McMurray area. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 2577-2599.	1.9	37
34	Quantifying global terrestrial methanol emissions using observations from the TES satellite sensor. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 2555-2570.	1.9	36
35	HCOOH measurements from space: TES retrieval algorithm and observed global distribution. <i>Atmospheric Measurement Techniques</i> , 2014, 7, 2297-2311.	1.2	34
36	OMI satellite observations of decadal changes in ground-level sulfur dioxide over North America. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 5921-5929.	1.9	31

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37	Contributions of natural and anthropogenic sources to ambient ammonia in the Athabasca Oil Sands and north-western Canada. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 2011-2034.	1.9	31
38	New Bidirectional Ammonia Flux Model in an Air Quality Model Coupled With an Agricultural Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2934-2957.	1.3	31
39	Methanol from TES global observations: retrieval algorithm and seasonal and spatial variability. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 8189-8203.	1.9	28
40	Probability of Tornado Occurrence across Canada. <i>Journal of Climate</i> , 2013, 26, 9415-9428.	1.2	27
41	Inverse modeling of NH ₃ sources using CrIS remote sensing measurements. <i>Environmental Research Letters</i> , 2020, 15, 104082.	2.2	27
42	An integrated approach for identifying homogeneous regions of extreme rainfall events and estimating IDF curves in Southern Ontario, Canada: Incorporating radar observations. <i>Journal of Hydrology</i> , 2015, 528, 734-750.	2.3	26
43	Regionalization of heavy rainfall to improve climatic design values for infrastructure: case study in Southern Ontario, Canada. <i>Hydrological Sciences Journal</i> , 2011, 56, 1067-1089.	1.2	25
44	Unprecedented Atmospheric Ammonia Concentrations Detected in the High Arctic From the 2017 Canadian Wildfires. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 8178-8202.	1.2	25
45	Atmospheric ammonia variability and link with particulate matter formation: a case study over the Paris area. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 577-596.	1.9	24
46	UK Ammonia Emissions Estimated With Satellite Observations and GEOS-Chem. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035237.	1.2	24
47	Tropospheric emission spectrometer (TES) and atmospheric chemistry experiment (ACE) measurements of tropospheric chemistry in tropical southeast Asia during a moderate El Niño in 2006. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 1931-1942.	1.1	22
48	Long-term stability of TES satellite radiance measurements. <i>Atmospheric Measurement Techniques</i> , 2011, 4, 1481-1490.	1.2	22
49	10-year satellite-constrained fluxes of ammonia improve performance of chemistry transport models. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 4431-4451.	1.9	21
50	Water Vapor Measurements by Howard University Raman Lidar during the WAVES 2006 Campaign. <i>Journal of Atmospheric and Oceanic Technology</i> , 2010, 27, 42-60.	0.5	17
51	Assessing the Iterative Finite Difference Mass Balance and 4D-Var Methods to Derive Ammonia Emissions Over North America Using Synthetic Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 4222-4236.	1.2	14
52	A High-Resolution Canadian Lightning Climatology. <i>Atmosphere - Ocean</i> , 2013, 51, 50-59.	0.6	11
53	Assessment of the aerosol optical depths measured by satellite-based passive remote sensors in the Alberta oil sands region. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 1931-1943.	1.9	11
54	Estimation of errors associated with the EarthCARE 3D scene construction algorithm. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 2260-2271.	1.0	7

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55	Assessing the quality of active—passive satellite retrievals using broad—band radiances. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1294-1305.	1.0	7
56	4D—Var Inversion of European NH₃ Emissions Using CrIS NH₃ Measurements and GEOS—Chem Adjoint With Bi—Directional and Uni—Directional Flux Schemes. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	7
57	Data assimilation of CrIS NH&lt;sub&gt;3&lt;/sub&gt; satellite observations for improving spatiotemporal NH&lt;sub&gt;3&lt;/sub&gt; distributions in LOTOS-EUROS. Atmospheric Chemistry and Physics, 2022, 22, 951-972.	1.9	5
58	An ensemble-variational inversion system for the estimation of ammonia emissions using CrIS satellite ammonia retrievals. Atmospheric Chemistry and Physics, 2022, 22, 6595-6624.	1.9	3
59	Satellite observations of ammonia over South Asia. , 2022, , 227-237.		0