

# Mark W Shephard

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

61  
papers

4,808  
citations

29  
h-index

69  
g-index

83  
ext. papers

5,736  
ext. citations

5.4  
avg, IF

5.15  
L-index

#	Paper	IF	Citations
61	Radiative forcing by long-lived greenhouse gases: Calculations with the AER radiative transfer models. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113,		2260
60	The EarthCARE Satellite: The Next Step Forward in Global Measurements of Clouds, Aerosols, Precipitation, and Radiation. <i>Bulletin of the American Meteorological Society</i> , <b>2015</b> , 96, 1311-1332	6.1	321
59	Predicted errors of tropospheric emission spectrometer nadir retrievals from spectral window selection. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		146
58	TES ammonia retrieval strategy and global observations of the spatial and seasonal variability of ammonia. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 10743-10763	6.8	107
57	Space-based detection of missing sulfur dioxide sources of global air pollution. <i>Nature Geoscience</i> , <b>2016</b> , 9, 496-500	18.3	105
56	Constraining U.S. ammonia emissions using TES remote sensing observations and the GEOS-Chem adjoint model. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2013</b> , 118, 3355-3368	4.4	98
55	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> , <b>2006</b> , 111,		97
54	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> , <b>2007</b> , 112,		95
53	Satellite monitoring of ammonia: A case study of the San Joaquin Valley. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115,		94
52	First satellite observations of lower tropospheric ammonia and methanol. <i>Geophysical Research Letters</i> , <b>2008</b> , 35,	4.9	91
51	The QME AERI LBLRTM: A Closure Experiment for Downwelling High Spectral Resolution Infrared Radiance. <i>Journals of the Atmospheric Sciences</i> , <b>2004</b> , 61, 2657-2675	2.1	88
50	Cross-track Infrared Sounder (CrIS) satellite observations of tropospheric ammonia. <i>Atmospheric Measurement Techniques</i> , <b>2015</b> , 8, 1323-1336	4	78
49	Improved Daytime Column-Integrated Precipitable Water Vapor from Vaisala Radiosonde Humidity Sensors. <i>Journal of Atmospheric and Oceanic Technology</i> , <b>2008</b> , 25, 873-883	2	77
48	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> , <b>2013</b> , 13, 6687-6711	6.8	72
47	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> , <b>2009</b> , 9, 7397-7417	6.8	72
46	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> , <b>2007</b> , 108, 389-402	2.1	67
45	Global evaluation of ammonia bidirectional exchange and livestock diurnal variation schemes. <i>Atmospheric Chemistry and Physics</i> , <b>2015</b> , 15, 12823-12843	6.8	53

44	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> , <b>2009</b> , 114,		46
43	NH <sub>3</sub> emissions from large point sources derived from CrIS and IASI satellite observations. <i>Atmospheric Chemistry and Physics</i> , <b>2019</b> , 19, 12261-12293	6.8	46
42	Sources and Impacts of Atmospheric NH <sub>3</sub> : Current Understanding and Frontiers for Modeling, Measurements, and Remote Sensing in North America. <i>Current Pollution Reports</i> , <b>2015</b> , 1, 95-116	7.6	43
41	Quantifying spatial and seasonal variability in atmospheric ammonia with in situ and space-based observations. <i>Geophysical Research Letters</i> , <b>2011</b> , 38, n/a-n/a	4.9	43
40	Dry Deposition of Reactive Nitrogen From Satellite Observations of Ammonia and Nitrogen Dioxide Over North America. <i>Geophysical Research Letters</i> , <b>2018</b> , 45, 1157-1166	4.9	42
39	Satellite observations of tropospheric ammonia and carbon monoxide: Global distributions, regional correlations and comparisons to model simulations. <i>Atmospheric Environment</i> , <b>2015</b> , 106, 262-277	5.7	36
38	Observed Trends in Severe Weather Conditions Based on Humidex, Wind Chill, and Heavy Rainfall Events in Canada for 1953-2012. <i>Atmosphere - Ocean</i> , <b>2015</b> , 53, 383-397	1.5	35
37	Tropospheric methanol observations from space: retrieval evaluation and constraints on the seasonality of biogenic emissions. <i>Atmospheric Chemistry and Physics</i> , <b>2012</b> , 12, 5897-5912	6.8	33
36	Trends in Canadian Short-Duration Extreme Rainfall: Including an Intensity-Duration-Frequency Perspective. <i>Atmosphere - Ocean</i> , <b>2014</b> , 52, 398-417	1.5	32
35	Quantifying global terrestrial methanol emissions using observations from the TES satellite sensor. <i>Atmospheric Chemistry and Physics</i> , <b>2014</b> , 14, 2555-2570	6.8	31
34	Validation of the CrIS fast physical NH <sub>3</sub> retrieval with ground-based FTIR. <i>Atmospheric Measurement Techniques</i> , <b>2017</b> , 10, 2645-2667	4	30
33	Tropospheric Emission Spectrometer nadir spectral radiance comparisons. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113,		29
32	A Large Underestimate of Formic Acid from Tropical Fires: Constraints from Space-Borne Measurements. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 5631-40	10.3	27
31	Contributions of natural and anthropogenic sources to ambient ammonia in the Athabasca Oil Sands and north-western Canada. <i>Atmospheric Chemistry and Physics</i> , <b>2018</b> , 18, 2011-2034	6.8	26
30	HCOOH measurements from space: TES retrieval algorithm and observed global distribution. <i>Atmospheric Measurement Techniques</i> , <b>2014</b> , 7, 2297-2311	4	25
29	Comparison of Tropospheric Emission Spectrometer nadir water vapor retrievals with in situ measurements. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113,		25
28	OMI satellite observations of decadal changes in ground-level sulfur dioxide over North America. <i>Atmospheric Chemistry and Physics</i> , <b>2017</b> , 17, 5921-5929	6.8	24
27	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> , <b>2015</b> , 8, 5189-5211	4	24

26	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> , <b>2019</b> , 19, 2577-2599	6.8	23
25	Methanol from TES global observations: retrieval algorithm and seasonal and spatial variability. <i>Atmospheric Chemistry and Physics</i> , <b>2012</b> , 12, 8189-8203	6.8	23
24	Probability of Tornado Occurrence across Canada. <i>Journal of Climate</i> , <b>2013</b> , 26, 9415-9428	4.4	22
23	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> , <b>2015</b> , 528, 734-750	6	21
22	Regionalization of heavy rainfall to improve climatic design values for infrastructure: case study in Southern Ontario, Canada. <i>Hydrological Sciences Journal</i> , <b>2011</b> , 56, 1067-1089	3.5	21
21	Ammonia measurements from space with the Cross-track Infrared Sounder: characteristics and applications. <i>Atmospheric Chemistry and Physics</i> , <b>2020</b> , 20, 2277-2302	6.8	20
20	Long-term stability of TES satellite radiance measurements. <i>Atmospheric Measurement Techniques</i> , <b>2011</b> , 4, 1481-1490	4	19
19	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> , <b>2008</b> , 109, 1931-1942	2.1	18
18	Unprecedented Atmospheric Ammonia Concentrations Detected in the High Arctic From the 2017 Canadian Wildfires. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2019</b> , 124, 8178-8202	4.4	17
17	New Bidirectional Ammonia Flux Model in an Air Quality Model Coupled With an Agricultural Model. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2019</b> , 11, 2934-2957	7.1	15
16	Water Vapor Measurements by Howard University Raman Lidar during the WAVES 2006 Campaign. <i>Journal of Atmospheric and Oceanic Technology</i> , <b>2010</b> , 27, 42-60	2	15
15	Atmospheric ammonia variability and link with particulate matter formation: a case study over the Paris area. <i>Atmospheric Chemistry and Physics</i> , <b>2020</b> , 20, 577-596	6.8	13
14	A High-Resolution Canadian Lightning Climatology. <i>Atmosphere - Ocean</i> , <b>2013</b> , 51, 50-59	1.5	10
13	Inverse modeling of NH <sub>3</sub> sources using CrIS remote sensing measurements. <i>Environmental Research Letters</i> , <b>2020</b> , 15, 104082	6.2	10
12	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> , <b>2017</b> , 17, 1931-1943	6.8	9
11	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> , <b>2019</b> , 124, 4222-4236	4.4	8
10	Estimation of errors associated with the EarthCARE 3D scene construction algorithm. <i>Quarterly Journal of the Royal Meteorological Society</i> , <b>2014</b> , 140, 2260-2271	6.4	6
9	Assessing the quality of active/passive satellite retrievals using broad-band radiances. <i>Quarterly Journal of the Royal Meteorological Society</i> , <b>2015</b> , 141, 1294-1305	6.4	4

8	Cross-track Infrared Sounder (CrIS) satellite observations of tropospheric ammonia		4
7	Tropospheric Emission Spectrometer (TES) satellite validations of ammonia, methanol, formic acid, and carbon monoxide over the Canadian oil sands		3
6	10-year satellite-constrained fluxes of ammonia improve performance of chemistry transport models. <i>Atmospheric Chemistry and Physics</i> , <b>2021</b> , 21, 4431-4451	6.8	3
5	UK Ammonia Emissions Estimated With Satellite Observations and GEOS-Chem. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2021</b> , 126, e2021JD035237	4.4	2
4	NH <sub>3</sub> emissions from large point sources derived from CrIS and IASI satellite observations <b>2019</b> ,		1
3	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		1
2	Data assimilation of CrIS NH <sub>3</sub> satellite observations for improving spatiotemporal NH <sub>3</sub> distributions in LOTOS-EUROS. <i>Atmospheric Chemistry and Physics</i> , <b>2022</b> , 22, 951-972	6.8	0
1	Satellite observations of ammonia over South Asia <b>2022</b> , 227-237		