Helen M Worden

List of Publications by Year
in descending order

97 papers	5,072 citations	81743 39 h-index	110170 64 g-index
174 all docs	174 docs citations	174 times ranked	4528 citing authors

#	Article	IF	Citations
1	Validation and error estimation of AIRS MUSES CO profiles with HIPPO, ATom, and NOAA GML aircraft observations. Atmospheric Measurement Techniques, 2022, 15, 205-223.	1.2	4
2	Sectorâ€Based Topâ€Down Estimates of NO_{<i>x</i>}, SO₂, and CO Emissions in East Asia. Geophysical Research Letters, 2022, 49, .	1.5	21
3	Decadal Variabilities in Tropospheric Nitrogen Oxides Over United States, Europe, and China. Journal of Geophysical Research D: Atmospheres, 2022, 127, e2021JD035872.	1.2	14
4	Deep Learning to Evaluate US NO_x Emissions Using Surface Ozone Predictions. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	6
5	Analysis of improvements in MOPITT observational coverage over Canada. Atmospheric Measurement Techniques, 2022, 15, 701-719.	1.2	1
6	The MOPITT Version 9 CO product: sampling enhancements and validation. Atmospheric Measurement Techniques, 2022, 15, 2325-2344.	1.2	14
7	New seasonal pattern of pollution emerges from changing North American wildfires. Nature Communications, 2022, 13, 2043.	5.8	18
8	Satellite Observations of the Tropical Terrestrial Carbon Balance and Interactions With the Water Cycle During the 21st Century. Reviews of Geophysics, 2021, 59, e2020RG000711.	9.0	13
9	Regional and Urban Column CO Trends and Anomalies as Observed by MOPITT Over 16ÂYears. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033967.	1.2	10
10	Air pollution trends measured from Terra: CO and AOD over industrial, fire-prone, and background regions. Remote Sensing of Environment, 2021, 256, 112275.	4.6	41
11	Fate of Pollution Emitted During the 2015 Indonesian Fire Season. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033474.	1.2	3
12	Assessing sub-grid variability within satellite pixels over urban regions using airborne mapping spectrometer measurements. Atmospheric Measurement Techniques, 2021, 14, 4639-4655.	1.2	6
13	Chinese Regulations Are Workingâ€"Why Is Surface Ozone Over Industrialized Areas Still High? Applying Lessons From Northeast US Air Quality Evolution. Geophysical Research Letters, 2021, 48, e2021GL092816.	1.5	50
14	Attribution of Chemistry-Climate Model Initiative (CCMI) ozone radiative flux bias from satellites. Atmospheric Chemistry and Physics, 2020, 20, 281-301.	1.9	6
15	Assessing Measurements of Pollution in the Troposphere (MOPITT) carbon monoxide retrievals over urban versus non-urban regions. Atmospheric Measurement Techniques, 2020, 13, 1337-1356.	1.2	16
16	Fire decline in dry tropical ecosystems enhances decadal land carbon sink. Nature Communications, 2020, 11, 1900.	5.8	30
17	Correcting model biases of CO in East Asia: impact on oxidant distributions during KORUS-AQ. Atmospheric Chemistry and Physics, 2020, 20, 14617-14647.	1.9	34
18	1.5Âyears of TROPOMI CO measurements: comparisons to MOPITT and ATom. Atmospheric Measurement Techniques, 2020, 13, 4841-4864.	1.2	29

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19	Lagged effects regulate the inter-annual variability of the tropical carbon balance. Biogeosciences, 2020, 17, 6393-6422.	1.3	26
20	Updated tropospheric chemistry reanalysis and emission estimates, TCR-2, for 2005â€"2018. Earth System Science Data, 2020, 12, 2223-2259.	3.7	54
21	Radiance-based retrieval bias mitigation for the MOPITT instrument: the version 8 product. Atmospheric Measurement Techniques, 2019, 12, 4561-4580.	1.2	60
22	Satellite data reveal a common combustion emission pathway for major cities in China. Atmospheric Chemistry and Physics, 2019, 19, 4269-4288.	1.9	15
23	Quantifying Emissions of CO and NO_x Using Observations From MOPITT, OMI, TES, and OSIRIS. Journal of Geophysical Research D: Atmospheres, 2019, 124, 1170-1193.	1.2	9
24	Evaluation of MOPITT VersionÂ7 joint TIRâ€"NIR X_{CO} retrievals with TCCON. Atmospheric Measurement Techniques, 2019, 12, 5547-5572.	1.2	21
25	New constraints on biogenic emissions using satellite-based estimates of carbon monoxide fluxes. Atmospheric Chemistry and Physics, 2019, 19, 13569-13579.	1.9	12
26	Interannual Variation of Upper Tropospheric CO over the Western Pacific Linked with Indonesian Fires. Scientific Online Letters on the Atmosphere, 2019, 15, 205-210.	0.6	5
27	Global atmospheric carbon monoxide budget 2000â€"2017 inferred from multi-species atmospheric inversions. Earth System Science Data, 2019, 11, 1411-1436.	3.7	96
28	Rapid decline in carbon monoxide emissions and export from East Asia between years 2005 and 2016. Environmental Research Letters, 2018, 13, 044007.	2.2	95
29	Unexpected slowdown of US pollutant emission reduction in the past decade. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5099-5104.	3.3	137
30	Links Between Carbon Monoxide and Climate Indices for the Southern Hemisphere and Tropical Fire Regions. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9786-9800.	1.2	15
31	The CHRONOS mission: capability for sub-hourly synoptic observations of carbon monoxide and methane to quantify emissions and transport of air pollution. Atmospheric Measurement Techniques, 2018, 11, 1061-1085.	1.2	3
32	Tropospheric Ozone Assessment Report: Present-day distribution and trends of tropospheric ozone relevant to climate and global atmospheric chemistry model evaluation. Elementa, 2018, 6, .	1.1	240
33	Chemical Feedback From Decreasing Carbon Monoxide Emissions. Geophysical Research Letters, 2017, 44, 9985-9995.	1.5	49
34	Commentary on â€œO 3 variability in the troposphere as observed by IASI over 2008â€"2016: Contribution of atmospheric chemistry and dynamicsâ€•by Wespes et al.. Journal of Geophysical Research D: Atmospheres, 2017, 122, 6130-6134.	1.2	1
35	Reduced biomass burning emissions reconcile conflicting estimates of the post-2006 atmospheric methane budget. Nature Communications, 2017, 8, 2227.	5.8	129
36	Quantification of CO emissions from the city of Madrid using MOPITT satellite retrievals and WRF simulations. Atmospheric Chemistry and Physics, 2017, 17, 14675-14694.	1.9	21

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37	A 15-year record of CO emissions constrained by MOPITT CO observations. Atmospheric Chemistry and Physics, 2017, 17, 4565-4583.	1.9	92
38	Lower-tropospheric CO₂ from near-infrared ACOS-GOSAT observations. Atmospheric Chemistry and Physics, 2017, 17, 5407-5438.	1.9	15
39	A climate-scale satellite record for carbon monoxide: the MOPITT Version 7 product. Atmospheric Measurement Techniques, 2017, 10, 2533-2555.	1.2	69
40	Validation of MOPITT carbon monoxide using ground-based Fourier transform infrared spectrometer data from NDACC. Atmospheric Measurement Techniques, 2017, 10, 1927-1956.	1.2	44
41	Hydrological controls on the tropospheric ozone greenhouse gas effect. Elementa, 2017, 5, .	1.1	5
42	High-resolution tropospheric carbon monoxide profiles retrieved from CrIS and TROPOMI. Atmospheric Measurement Techniques, 2016, 9, 2567-2579.	1.2	46
43	Toward a chemical reanalysis in a coupled chemistryâ€climate model: An evaluation of MOPITT CO assimilation and its impact on tropospheric composition. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7310-7343.	1.2	37
44	Indonesian fire activity and smoke pollution in 2015 show persistent nonlinear sensitivity to El NiÃ±o-induced drought. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9204-9209.	3.3	253
45	A joint data record of tropospheric ozone from Aura-TES and MetOp-IASI. Atmospheric Chemistry and Physics, 2016, 16, 10229-10239.	1.9	17
46	Interpreting space-based trends in carbon monoxide with multiple models. Atmospheric Chemistry and Physics, 2016, 16, 7285-7294.	1.9	31
47	On the feasibility of monitoring carbon monoxide in the lower troposphere from a constellation of northern hemisphere geostationary satellites: Global scale assimilation experiments (Part II). Atmospheric Environment, 2016, 140, 188-201.	1.9	7
48	Information content of MOPITT CO profile retrievals: Temporal and geographical variability. Journal of Geophysical Research D: Atmospheres, 2015, 120, 12723-12738.	1.2	23
49	Regional data assimilation of multi-spectral MOPITT observations of CO over North America. Atmospheric Chemistry and Physics, 2015, 15, 6801-6814.	1.9	30
50	Instantaneous longwave radiative impact of ozone: an application on IASI/MetOp observations. Atmospheric Chemistry and Physics, 2015, 15, 12971-12987.	1.9	14
51	Sensitivity of top-down CO source estimates to the modeled vertical structure in atmospheric CO. Atmospheric Chemistry and Physics, 2015, 15, 1521-1537.	1.9	33
52	Assessing the impacts of assimilating IASI and MOPITT CO retrievals using CESMâ€CAMâ€chem and DART. Journal of Geophysical Research D: Atmospheres, 2015, 120, 10,501.	1.2	21
53	An examination of the long-term CO records from MOPITT and IASI: comparison of retrieval methodology. Atmospheric Measurement Techniques, 2015, 8, 4313-4328.	1.2	50
54	On the feasibility of monitoring carbon monoxide in the lower troposphere from a constellation of Northern Hemisphere geostationary satellites. (Part 1). Atmospheric Environment, 2015, 113, 63-77.	1.9	8

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55	Remote-sensing constraints on South America fire traits by Bayesian fusion of atmospheric and surface data. Geophysical Research Letters, 2015, 42, 1268-1274.	1.5	22
56	The MOPITT Version 6 product: algorithm enhancements and validation. Atmospheric Measurement Techniques, 2014, 7, 3623-3632.	1.2	92
57	Extending the satellite data record of tropospheric ozone profiles from Aura-TES to MetOp-IASI: characterisation of optimal estimation retrievals. Atmospheric Measurement Techniques, 2014, 7, 4223-4236.	1.2	19
58	Measured and modeled CO and NO y in DISCOVER-AQ: An evaluation of emissions and chemistry over the eastern US. Atmospheric Environment, 2014, 96, 78-87.	1.9	114
59	Retrieval algorithm development and product validation for TERRA/MOPITT. , 2014, , .		0
60	Improved monitoring of surface ozone by joint assimilation of geostationary satellite observations of ozone and CO. Atmospheric Environment, 2014, 84, 254-261.	1.9	28
61	Comparison of upper tropospheric carbon monoxide from MOPITT, ACEâ€FTS, and HIPPOâ€QCLS. Journal of Geophysical Research D: Atmospheres, 2014, 119, 14,144.	1.2	9
62	13 years of MOPITT operations: lessons from MOPITT retrieval algorithm development. Annals of Geophysics, 2014, , .	0.5	18
63	Validation of MOPITT Version 5 thermalâ€infrared, nearâ€infrared, and multispectral carbon monoxide profile retrievals for 2000â€“2011. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6710-6725.	1.2	119
64	Averaging kernel prediction from atmospheric and surface state parameters based on multiple regression for nadir-viewing satellite measurements of carbon monoxide and ozone. Atmospheric Measurement Techniques, 2013, 6, 1633-1646.	1.2	21
65	Decadal record of satellite carbon monoxide observations. Atmospheric Chemistry and Physics, 2013, 13, 837-850.	1.9	207
66	CH₄ and CO distributions over tropical fires during October 2006 as observed by the Aura TES satellite instrument and modeled by GEOS-Chem. Atmospheric Chemistry and Physics, 2013, 13, 3679-3692.	1.9	39
67	Technical Note: Temporal change in averaging kernels as a source of uncertainty in trend estimates of carbon monoxide retrieved from MOPITT. Atmospheric Chemistry and Physics, 2013, 13, 11307-11316.	1.9	18
68	Evaluation of ACCMIP outgoing longwave radiation from tropospheric ozone using TES satellite observations. Atmospheric Chemistry and Physics, 2013, 13, 4057-4072.	1.9	61
69	Trends in emissions and concentrations of air pollutants in the lower troposphere in the Baltimore/Washington airshed from 1997 to 2011. Atmospheric Chemistry and Physics, 2013, 13, 7859-7874.	1.9	55
70	Toward anthropogenic combustion emission constraints from spaceâ€based analysis of urban CO₂/CO sensitivity. Geophysical Research Letters, 2013, 40, 4971-4976.	1.5	59
71	El NiÃ±o, the 2006 Indonesian peat fires, and the distribution of atmospheric methane. Geophysical Research Letters, 2013, 40, 4938-4943.	1.5	40
72	Impact of model errors in convective transport on CO source estimates inferred from MOPITT CO retrievals. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2073-2083.	1.2	62

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73	Impact of Southern California anthropogenic emissions on ozone pollution in the mountain states: Model analysis and observational evidence from space. Journal of Geophysical Research D: Atmospheres, 2013, 118, 12,784.	1.2	21
74	First satellite identification of volcanic carbon monoxide. Geophysical Research Letters, 2012, 39, .	1.5	8
75	Satelliteâ€based estimates of reduced CO and CO₂ emissions due to traffic restrictions during the 2008 Beijing Olympics. Geophysical Research Letters, 2012, 39, .	1.5	41
76	Evaluation of MOPITT retrievals of lowerâ€tropospheric carbon monoxide over the United States. Journal of Geophysical Research, 2012, 117, .	3.3	60
77	The vertical distribution of ozone instantaneous radiative forcing from satellite and chemistry climate models. Journal of Geophysical Research, 2011, 116, .	3.3	40
78	Sensitivity of outgoing longwave radiative flux to the global vertical distribution of ozone characterized by instantaneous radiative kernels from Aura-TES. Journal of Geophysical Research, 2011, 116, .	3.3	36
79	MOPITT multispectral CO retrievals: Origins and effects of geophysical radiance errors. Journal of Geophysical Research, 2011, 116, .	3.3	61
80	Multi-spectral sensitivity studies for the retrieval of tropospheric and lowermost tropospheric ozone from simulated clear-sky GEO-CAPE measurements. Atmospheric Environment, 2011, 45, 7151-7165.	1.9	59
81	Lightning NO_x emissions over the USA constrained by TES ozone observations and the GEOS-Chem model. Atmospheric Chemistry and Physics, 2010, 10, 107-119.	1.9	40
82	The impact of MOPITT data on tropospheric chemistry. , 2010, , .		0
83	Observations of nearâ€surface carbon monoxide from space using MOPITT multispectral retrievals. Journal of Geophysical Research, 2010, 115, .	3.3	137
84	A global comparison of carbon monoxide profiles and column amounts from Tropospheric Emission Spectrometer (TES) and Measurements of Pollution in the Troposphere (MOPITT). Journal of Geophysical Research, 2009, 114, .	3.3	31
85	Observed vertical distribution of tropospheric ozone during the Asian summertime monsoon. Journal of Geophysical Research, 2009, 114, .	3.3	59
86	Satellite measurements of the clear-sky greenhouse effect from tropospheric ozone. Nature Geoscience, 2008, 1, 305-308.	5.4	84
87	Effects of the 2006 El NiÃ±o on tropospheric composition as revealed by data from the Tropospheric Emission Spectrometer (TES). Geophysical Research Letters, 2008, 35, .	1.5	113
88	Validation of Tropospheric Emission Spectrometer (TES) measurements of the total, stratospheric, and tropospheric column abundance of ozone. Journal of Geophysical Research, 2008, 113, .	3.3	80
89	Validation of Tropospheric Emission Spectrometer (TES) nadir ozone profiles using ozonesonde measurements. Journal of Geophysical Research, 2008, 113, .	3.3	181
90	Tropospheric Emission Spectrometer nadir spectral radiance comparisons. Journal of Geophysical Research, 2008, 113, .	3.3	38

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91	Improved tropospheric ozone profile retrievals using OMI and TES radiances. Geophysical Research Letters, 2007, 34, .	1.5	85
92	Comparisons of Tropospheric Emission Spectrometer (TES) ozone profiles to ozonesondes: Methods and initial results. Journal of Geophysical Research, 2007, 112, .	3.3	184
93	Tropospheric Emission Spectrometer observations of the tropospheric HDO/H2O ratio: Estimation approach and characterization. Journal of Geophysical Research, 2006, 111, .	3.3	167
94	Ozone-CO correlations determined by the TES satellite instrument in continental outflow regions. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	92
95	Nadir measurements of carbon monoxide distributions by the Tropospheric Emission Spectrometer instrument onboard the Aura Spacecraft: Overview of analysis approach and examples of initial results. Geophysical Research Letters, 2006, 33, .	1.5	82
96	Predicted errors of tropospheric emission spectrometer nadir retrievals from spectral window selection. Journal of Geophysical Research, 2004, 109, .	3.3	165
97	Capturing time and vertical variability of tropospheric ozone: A study using TES nadir retrievals. Journal of Geophysical Research, 2002, 107, ACH 21-1-ACH 21-11.	3.3	87