Christopher W O'dell

List of Publications by Year
in descending order

72 papers	5,000 citations	109321 35 h-index	91884 69 g-index
76 all docs	76 docs citations	76 times ranked	4854 citing authors

#	Article	IF	Citations
1	Prospects for chlorophyll fluorescence remote sensing from the Orbiting Carbon Observatory-2. Remote Sensing of Environment, 2014, 147, 1-12.	11.0	361
2	Large Chinese land carbon sink estimated from atmospheric carbon dioxide data. Nature, 2020, 586, 720-723.	27.8	320
3	Contrasting carbon cycle responses of the tropical continents to the 2015â€“2016 El NiÃ±o. Science, 2017, 358, .	12.6	307
4	The on-orbit performance of the Orbiting Carbon Observatory-2 (OCO-2) instrument and its radiometrically calibrated products. Atmospheric Measurement Techniques, 2017, 10, 59-81.	3.1	271
5	Evidence for climate change in the satellite cloud record. Nature, 2016, 536, 72-75.	27.8	264
6	Comparisons of the Orbiting Carbon Observatory-2 (OCO-2) <i>X</i>_{CO₂} measurements with TCCON. Atmospheric Measurement Techniques, 2017, 10, 2209-2238.	3.1	252
7	Cloud Liquid Water Path from Satellite-Based Passive Microwave Observations: A New Climatology over the Global Oceans. Journal of Climate, 2008, 21, 1721-1739.	3.2	199
8	Improved retrievals of carbon dioxide from Orbiting Carbon Observatory-2 with the version 8 ACOS algorithm. Atmospheric Measurement Techniques, 2018, 11, 6539-6576.	3.1	188
9	The OCO-3 mission: measurement objectives and expected performance based on 1Âyear of simulated data. Atmospheric Measurement Techniques, 2019, 12, 2341-2370.	3.1	170
10	The Orbiting Carbon Observatory-2 early science investigations of regional carbon dioxide fluxes. Science, 2017, 358, .	12.6	157
11	Spaceborne detection of localized carbon dioxide sources. Science, 2017, 358, .	12.6	127
12	Toward robust and consistent regional CO₂ flux estimates from in situ and spaceborne measurements of atmospheric CO₂. Geophysical Research Letters, 2014, 41, 1065-1070.	4.0	126
13	The 2015â€“2016 carbon cycle as seen from OCO-2 and the global in situ network. Atmospheric Chemistry and Physics, 2019, 19, 9797-9831.	4.9	113
14	Towards monitoring localized CO₂ emissions from space: co-located regional CO₂ and NO₂ enhancements observed by the OCO-2 and S5P satellites. Atmospheric Chemistry and Physics, 2019, 19, 9371-9383.	4.9	107
15	How bias correction goes wrong: measurement of X_{CO₂} affected by erroneous surface pressure estimates. Atmospheric Measurement Techniques, 2019, 12, 2241-2259.	3.1	99
16	Influence of El NiÃ±o on atmospheric CO ₂ over the tropical Pacific Ocean: Findings from NASAâ€™s OCO-2 mission. Science, 2017, 358, .	12.6	90
17	Interpreting seasonal changes in the carbon balance of southern Amazonia using measurements of XCO₂ and chlorophyll fluorescence from GOSAT. Geophysical Research Letters, 2013, 40, 2829-2833.	4.0	89
18	OCO-3 early mission operations and initial (vEarly) XCO2 and SIF retrievals. Remote Sensing of Environment, 2020, 251, 112032.	11.0	89

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19	Consistent evaluation of ACOS-GOSAT, BESD-SCIAMACHY, CarbonTracker, and MACC through comparisons to TCCON. Atmospheric Measurement Techniques, 2016, 9, 683-709.	3.1	80
20	Quantification of uncertainties in OCO-2 measurements of XCO₂: simulations and linear error analysis. Atmospheric Measurement Techniques, 2016, 9, 5227-5238.	3.1	79
21	The Multisensor Advanced Climatology of Liquid Water Path (MAC-LWP). Journal of Climate, 2017, 30, 10193-10210.	3.2	72
22	Orbiting Carbon Observatory-2 (OCO-2) cloud screening algorithms: validation against collocated MODIS and CALIOP data. Atmospheric Measurement Techniques, 2016, 9, 973-989.	3.1	71
23	Relationships between tropical sea surface temperature and topâ€ofâ€atmosphere radiation. Geophysical Research Letters, 2010, 37, .	4.0	66
24	The Potential of the Geostationary Carbon Cycle Observatory (GeoCarb) to Provide Multi-scale Constraints on the Carbon Cycle in the Americas. Frontiers in Environmental Science, 2018, 6, .	3.3	60
25	Objective evaluation of surface- and satellite-driven carbon dioxide atmospheric inversions. Atmospheric Chemistry and Physics, 2019, 19, 14233-14251.	4.9	59
26	Global CO₂ distributions over land from the Greenhouse Gases Observing Satellite (GOSAT). Geophysical Research Letters, 2012, 39, .	4.0	58
27	Acceleration of multipleâ€scattering, hyperspectral radiative transfer calculations via lowâ€streams interpolation. Journal of Geophysical Research, 2010, 115, .	3.3	49
28	Comparison of Cloud-Screening Methods Applied to GOSAT Near-Infrared Spectra. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 295-309.	6.3	49
29	Effects of atmospheric light scattering on spectroscopic observations of greenhouse gases from space. Part 2: Algorithm intercomparison in the GOSAT data processing for CO₂ retrievals over TCCON sites. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1493-1512.	3.3	46
30	Influence of differences in current GOSATX_{CO}₂retrievals on surface flux estimation. Geophysical Research Letters, 2014, 41, 2598-2605.	4.0	45
31	A Limit on the Large Angular Scale Polarization of the Cosmic Microwave Background. Astrophysical Journal, 2001, 560, L1-L4.	4.5	45
32	Four years of global carbon cycle observed from the Orbiting Carbon Observatory 2 (OCO-2) versionÂ9 and in situ data and comparison to OCO-2 versionÂ7. Atmospheric Chemistry and Physics, 2022, 22, 1097-1130.	4.9	44
33	Effects of atmospheric light scattering on spectroscopic observations of greenhouse gases from space: Validation of PPDFâ€based CO₂ retrievals from GOSAT. Journal of Geophysical Research, 2012, 117, .	3.3	42
34	Advances in quantifying power plant CO2 emissions with OCO-2. Remote Sensing of Environment, 2021, 264, 112579.	11.0	41
35	A Revised Cloud Overlap Scheme for Fast Microwave Radiative Transfer in Rain and Cloud. Journal of Applied Meteorology and Climatology, 2009, 48, 2257-2270.	1.5	40
36	Evaluation and attribution of OCO-2 XCO₂ uncertainties. Atmospheric Measurement Techniques, 2017, 10, 2759-2771.	3.1	39

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37	Combining GOSAT XCO₂ observations over land and ocean to improve regional CO₂ flux estimates. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1896-1913.	3.3	37
38	Preflight Spectral Calibration of the Orbiting Carbon Observatory. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2793-2801.	6.3	33
39	Highâ€accuracy measurements of total column water vapor from the Orbiting Carbon Observatoryâ€2. Geophysical Research Letters, 2016, 43, 12,261.	4.0	33
40	Regional impacts of COVID-19 on carbon dioxide detected worldwide from space. Science Advances, 2021, 7, eabf9415.	10.3	33
41	Local Anomalies in the Columnâ€Averaged Dry Air Mole Fractions of Carbon Dioxide Across the Globe During the First Months of the Coronavirus Recession. Geophysical Research Letters, 2020, 47, e2020GL090244.	4.0	31
42	Validation of TANSO-FTS/GOSAT XCO₂ and XCH₄ glint mode retrievals using TCCON data from near-ocean sites. Atmospheric Measurement Techniques, 2016, 9, 1415-1430.	3.1	30
43	Can a regional-scale reduction of atmospheric CO₂ during the COVID-19 pandemic be detected from space? A case study for East China using satellite XCO₂ retrievals. Atmospheric Measurement Techniques, 2021, 14, 2141-2166.	3.1	28
44	Preflight Radiometric Calibration of the Orbiting Carbon Observatory. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2438-2447.	6.3	27
45	Computation and analysis of atmospheric carbon dioxide annual mean growth rates from satellite observations during 2003â€“2016. Atmospheric Chemistry and Physics, 2018, 18, 17355-17370.	4.9	27
46	Using airborne HIAPER Pole-to-Pole Observations (HIPPO) to evaluate model and remote sensing estimates of atmospheric carbon dioxide. Atmospheric Chemistry and Physics, 2016, 16, 7867-7878.	4.9	26
47	Preflight Spectral Calibration of the Orbiting Carbon Observatory 2. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 2499-2508.	6.3	24
48	Absorption coefficient (ABSCO) tables for the Orbiting Carbon Observatories: Version 5.1. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 255, 107217.	2.3	24
49	Fossil fuel CO2 emissions over metropolitan areas from space: A multi-model analysis of OCO-2 data over Lahore, Pakistan. Remote Sensing of Environment, 2021, 264, 112625.	11.0	24
50	Ensemble-based satellite-derived carbon dioxide and methane column-averaged dry-air mole fraction data sets (2003â€“2018) for carbon and climate applications. Atmospheric Measurement Techniques, 2020, 13, 789-819.	3.1	22
51	Quality controls, bias, and seasonality of CO₂ columns in the boreal forest with Orbiting Carbon Observatory-2, Total Carbon Column Observing Network, and EM27/SUN measurements. Atmospheric Measurement Techniques, 2020, 13, 5033-5063.	3.1	22
52	Evaluation of Cloud Liquid Water Path Trends Using a Multidecadal Record of Passive Microwave Observations. Journal of Climate, 2017, 30, 5871-5884.	3.2	20
53	Error statistics of Bayesian CO₂ flux inversion schemes as seen from GOSAT. Geophysical Research Letters, 2013, 40, 1252-1256.	4.0	19
54	Field Evaluation of Column CO₂ Retrievals From Intensityâ€Modulated Continuousâ€Wave Differential Absorption Lidar Measurements During the ACTâ€America Campaign. Earth and Space Science, 2020, 7, e2019EA000847.	2.6	18

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55	An Instrument for Investigating the Large Angular Scale Polarization of the Cosmic Microwave Background. Astrophysical Journal, Supplement Series, 2003, 144, 1-20.	7.7	17
56	The Atmospheric Carbon and Transport (ACT)-America Mission. Bulletin of the American Meteorological Society, 2021, 102, E1714-E1734.	3.3	17
57	An 11-year record of XCO₂ estimates derived from GOSAT measurements using the NASA ACOS version 9 retrieval algorithm. Earth System Science Data, 2022, 14, 325-360.	9.9	17
58	Evaluation of OCOâ€2 X Variability at Local and Synoptic Scales using Lidar and In Situ Observations from the ACTâ€America Campaigns. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031400.	3.3	16
59	Lower-tropospheric CO₂ from near-infrared ACOS-GOSAT observations. Atmospheric Chemistry and Physics, 2017, 17, 5407-5438.	4.9	15
60	Validation of OCO-2 error analysis using simulated retrievals. Atmospheric Measurement Techniques, 2019, 12, 5317-5334.	3.1	15
61	The potential of clear-sky carbon dioxide satellite retrievals. Atmospheric Measurement Techniques, 2016, 9, 1671-1684.	3.1	14
62	The impact of improved aerosol priors on near-infrared measurements of carbon dioxide. Atmospheric Measurement Techniques, 2019, 12, 1495-1512.	3.1	14
63	Analysis of 3D cloud effects in OCO-2 XCO2 retrievals. Atmospheric Measurement Techniques, 2021, 14, 1475-1499.	3.1	13
64	Testing the Polarization Model for TANSO-FTS on GOSAT Against Clear-Sky Observations of Sun Glint Over the Ocean. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 5199-5209.	6.3	11
65	Carbon Dioxide Emissions During the 2018 Kilauea Volcano Eruption Estimated Using OCOâ€2 Satellite Retrievals. Geophysical Research Letters, 2020, 47, e2020GL090507.	4.0	10
66	Solar-induced chlorophyll fluorescence from the Geostationary Carbon Cycle Observatory (GeoCarb): An extensive simulation study. Remote Sensing of Environment, 2021, 263, 112565.	11.0	9
67	A Fast Cloud Overlap Parameterization for Microwave Radiance Assimilation. Journals of the Atmospheric Sciences, 2007, 64, 3896-3909.	1.7	7
68	CO2 Retrieval over Clouds from the OCO Mission: Model Simulations and Error Analysis. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1090-1104.	1.3	6
69	Response to Comment on â€œContrasting carbon cycle responses of the tropical continents to the 2015â€“2016 El NiÃ±oâ€• Science, 2018, 362, .	12.6	6
70	Assessing the feasibility of using a neural network to filter Orbiting Carbon ObservatoryÂ2 (OCO-2) retrievals at northern high latitudes. Atmospheric Measurement Techniques, 2021, 14, 7511-7524.	3.1	4
71	Retrieved wind speed from the Orbiting Carbon Observatory-2. Atmospheric Measurement Techniques, 2020, 13, 6889-6899.	3.1	3
72	Corrigendum to â€œAbsorption coefficient (ABSCO) tables for the Orbiting Carbon Observatories: Version 5.1â€•[J. Quant. Spectrosc. Radiat. Transf. 255 (2020) 107217]. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 257, 107333.	2.3	1