# Vivienne H Payne

List of Publications by Year
in descending order



| 61 | 2,814 | 186265 28 | 182427 51 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 64 | 64 | 64 | 3111 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Development and recent evaluation of the MT_CKD model of continuum absorption. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 2520-2556. | 3.4 | 333 |
| 2 | Estimating global and North American methane emissions with high spatial resolution using GOSAT satellite data. Atmospheric Chemistry and Physics, 2015, 15, 7049-7069. | 4.9 | 225 |
| 3 | 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 |
| 4 | The Orbiting Carbon Observatory-2: first 18Âmonths of science data products. Atmospheric Measurement Techniques, 2017, 10, 549-563. | 3.1 | 180 |
| 5 | TES ammonia retrieval strategy and global observations of the spatial and seasonal variability of ammonia. Atmospheric Chemistry and Physics, 2011, 11, 10743-10763. | 4.9 | 129 |
| 6 | 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. Atmospheric Chemistry and Physics, 2013, 13, 6687-6711. | 4.9 | 107 |
| 7 | Performance of the line-by-line radiative transfer model (LBLRTM) for temperature and species retrievals: IASI case studies from JAIVEx. Atmospheric Chemistry and Physics, 2009, 9, 7397-7417. | 4.9 | 99 |
| 8 | Intercalibration of the GPM Microwave Radiometer Constellation. Journal of Atmospheric and Oceanic Technology, 2016, 33, 2639-2654. | 1.3 | 93 |
| 9 | Validation of TES methane with HIPPO aircraft observations: implications for inverse modeling of methane sources. Atmospheric Chemistry and Physics, 2012, 12, 1823-1832. | 4.9 | 83 |
| 10 | Quantification of uncertainties in OCO-2 measurements of XCO<sub>2</sub>: simulations and linear error analysis. Atmospheric Measurement Techniques, 2016, 9, 5227-5238. | 3.1 | 79 |
| 11 | Air-Broadened Half-Widths of the 22- and 183-GHz Water-Vapor Lines. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 3601-3617. | 6.3 | 71 |
| 12 | Multispectrum analysis of the oxygen A-band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 186, 118-138. | 2.3 | 67 |
| 13 | A farâ€infrared radiative closure study in the Arctic: Application to water vapor. Journal of Geophysical Research, 2010, 115, . | 3.3 | 62 |
| 14 | Water Vapor Continuum Absorption in the Microwave. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2194-2208. | 6.3 | 62 |
| 15 | Updated tropospheric chemistry reanalysis and emission estimates, TCR-2, for 2005â€“2018. Earth System Science Data, 2020, 12, 2223-2259. | 9.9 | 54 |
| 16 | Satellite isoprene retrievals constrain emissions and atmospheric oxidation. Nature, 2020, 585, 225-233. | 27.8 | 53 |
| 17 | Line parameters including temperature dependences of self- and air-broadened line shapes of 12C16O2: 1.6-Î¼m region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 177, 117-144. | 2.3 | 52 |
| 18 | Impact of intercontinental pollution transport on North American ozone air pollution: an HTAP phase 2 multi-model study. Atmospheric Chemistry and Physics, 2017, 17, 5721-5750. | 4.9 | 51 |

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|---|---|---|---|
| 19 | Line parameters including temperature dependences of air- and self-broadened line shapes of 12C16O2: 2.06-Î¼m region. Journal of Molecular Spectroscopy, 2016, 326, 21-47. | 1.2 | 42 |
| 20 | Direct retrieval of isoprene from satellite-based infrared measurements. Nature Communications, 2019, 10, 3811. | 12.8 | 42 |
| 21 | A review of sources of systematic errors and uncertainties in observations and simulations at 183â€¯GHz. Atmospheric Measurement Techniques, 2016, 9, 2207-2221. | 3.1 | 41 |
| 22 | Air pollution trends measured from Terra: CO and AOD over industrial, fire-prone, and background regions. Remote Sensing of Environment, 2021, 256, 112275. | 11.0 | 41 |
| 23 | El NiÃ±o, the 2006 Indonesian peat fires, and the distribution of atmospheric methane. Geophysical Research Letters, 2013, 40, 4938-4943. | 4.0 | 40 |
| 24 | Emission Ratios for Ammonia and Formic Acid and Observations of Peroxy Acetyl Nitrate (PAN) and Ethylene in Biomass Burning Smoke as Seen by the Tropospheric Emission Spectrometer (TES). Atmosphere, 2011, 2, 633-654. | 2.3 | 37 |
| 25 | Quantifying lower tropospheric methane concentrations using GOSAT near-IR and TES thermal IR measurements. Atmospheric Measurement Techniques, 2015, 8, 3433-3445. | 3.1 | 34 |
| 26 | High accuracy absorption coefficients for the Orbiting Carbon Observatory-2 (OCO-2) mission: Validation of updated carbon dioxide cross-sections using atmospheric spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 213-223. | 2.3 | 32 |
| 27 | Comparison of Ground-Based Millimeter-Wave Observations and Simulations in the Arctic Winter. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 3098-3106. | 6.3 | 31 |
| 28 | Overview: Estimating and reporting uncertainties in remotely sensed atmospheric composition and temperature. Atmospheric Measurement Techniques, 2020, 13, 4393-4436. | 3.1 | 31 |
| 29 | Effect of the Oxygen Line-Parameter Modeling on Temperature and Humidity Retrievals From Ground-Based Microwave Radiometers. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2216-2223. | 6.3 | 30 |
| 30 | Methanol from TES global observations: retrieval algorithm and seasonal and spatial variability. Atmospheric Chemistry and Physics, 2012, 12, 8189-8203. | 4.9 | 28 |
| 31 | Analysis of Water Vapor Absorption in the Farâ€Infrared and Submillimeter Regions Using Surface Radiometric Measurements From Extremely Dry Locations. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8134-8160. | 3.3 | 26 |
| 32 | Ozone export from East Asia: The role of PAN. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6555-6563. | 3.3 | 24 |
| 33 | 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 |
| 34 | An Assessment of SAPHIR Calibration Using Quality Tropical Soundings. Journal of Atmospheric and Oceanic Technology, 2015, 32, 61-78. | 1.3 | 23 |
| 35 | Long-term stability of TES satellite radiance measurements. Atmospheric Measurement Techniques, 2011, 4, 1481-1490. | 3.1 | 22 |
| 36 | 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. | 3.1 | 19 |

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| 37 | Modeling Study of the Air Quality Impact of Recordâ€Breaking Southern California Wildfires in December 2017. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6554-6570. | 3.3 | 19 |
| 38 | Satellite observations of peroxyacetyl nitrate from the Aura Tropospheric Emission Spectrometer. Atmospheric Measurement Techniques, 2014, 7, 3737-3749. | 3.1 | 18 |
| 39 | Impacts of updated spectroscopy on thermal infrared retrievals of methane evaluated with HIPPO data. Atmospheric Measurement Techniques, 2015, 8, 965-985. | 3.1 | 18 |
| 40 | Characterization and evaluation of AIRS-based estimates of the deuterium content of water vapor. Atmospheric Measurement Techniques, 2019, 12, 2331-2339. | 3.1 | 18 |
| 41 | A joint data record of tropospheric ozone from Aura-TES and MetOp-IASI. Atmospheric Chemistry and Physics, 2016, 16, 10229-10239. | 4.9 | 17 |
| 42 | PAN in the eastern Pacific free troposphere: A satellite view of the sources, seasonality, interannual variability, and timeline for trend detection. Journal of Geophysical Research D: Atmospheres, 2017, 122, 3614-3629. | 3.3 | 17 |
| 43 | Pressure broadening of oxygen by water. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 133, 190-198. | 2.3 | 15 |
| 44 | TES observations of the interannual variability of PAN over Northern Eurasia and the relationship to springtime fires. Geophysical Research Letters, 2015, 42, 7230-7237. | 4.0 | 15 |
| 45 | Lower-tropospheric CO<sub>2</sub> from near-infrared ACOS-GOSAT observations. Atmospheric Chemistry and Physics, 2017, 17, 5407-5438. | 4.9 | 15 |
| 46 | Evaluation of single-footprint AIRS CH<sub>4</sub> profile retrieval uncertainties using aircraft profile measurements. Atmospheric Measurement Techniques, 2021, 14, 335-354. | 3.1 | 15 |
| 47 | Nextâ€Generation Isoprene Measurements From Space: Detecting Daily Variability at High Resolution. Journal of Geophysical Research D: Atmospheres, 2022, 127, . | 3.3 | 11 |
| 48 | Spatial variability in tropospheric peroxyacetyl nitrate in the tropics from infrared satellite observations in 2005 and 2006. Atmospheric Chemistry and Physics, 2017, 17, 6341-6351. | 4.9 | 9 |
| 49 | Using TES retrievals to investigate PAN in North American biomass burning plumes. Atmospheric Chemistry and Physics, 2018, 18, 5639-5653. | 4.9 | 9 |
| 50 | Spectroscopic uncertainty impacts on OCO-2/3 retrievals of XCO2. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 257, 107360. | 2.3 | 9 |
| 51 | Evolution of Acyl Peroxynitrates (PANs) in Wildfire Smoke Plumes Detected by the Crossâ€Track Infrared Sounder (CrIS) Over the Western U.S. During Summer 2018. Geophysical Research Letters, 2021, 48, . | 4.0 | 9 |
| 52 | Seasonal and spatial changes in trace gases over megacities from Aura TES observations: two case studies. Atmospheric Chemistry and Physics, 2017, 17, 9379-9398. | 4.9 | 8 |
| 53 | FTS measurements of O2 collision-induced absorption in the 565â€“700â€¯nm region using a high pressure gas absorption cell. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 235, 232-243. | 2.3 | 7 |
| 54 | Satellite observations of ethylene (C2H4) from the Aura Tropospheric Emission Spectrometer: A scoping study. Atmospheric Environment, 2016, 141, 388-393. | 4.1 | 6 |

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| 55 | Comparison of optimal estimation HDOâˆ•H<sub>2</sub>O retrievals from AIRS with ORACLES measurements. Atmospheric Measurement Techniques, 2020, 13, 1825-1834. | 3.1 | 6 |
| 56 | Amazonian terrestrial water balance inferred from satellite-observed water vapor isotopes. Nature Communications, 2022, 13, 2686. | 12.8 | 5 |
| 57 | Validation and error estimation of AIRS MUSES CO profiles with HIPPO, ATom, and NOAA GML aircraft observations. Atmospheric Measurement Techniques, 2022, 15, 205-223. | 3.1 | 4 |
| 58 | Simulated multispectral temperature and atmospheric composition retrievals for the JPL GEO-IR Sounder. Atmospheric Measurement Techniques, 2022, 15, 1251-1267. | 3.1 | 4 |
| 59 | Satellite measurements of peroxyacetyl nitrate from the Cross-Track Infrared Sounder: comparison with ATom aircraft measurements. Atmospheric Measurement Techniques, 2022, 15, 3497-3511. | 3.1 | 3 |
| 60 | 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. | 3.3 | 1 |
| 61 | 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 |