John P Burrows

List of Publications by Citations

744 papers	30,296 citations	83 h-index	145 g-index
836 ext. papers	34,120 ext. citations	4.9 avg, IF	6.85 L-index

#	Paper	IF	Citations
744	SCIAMACHY: Mission Objectives and Measurement Modes. *Journals of the Atmospheric Sciences*, **1999**, 56, 127-150	2.1	1367
743	Increase in tropospheric nitrogen dioxide over China observed from space. *Nature*, **2005**, 437, 129-32	50.4	1116
742	The Global Ozone Monitoring Experiment (GOME): Mission Concept and First Scientific Results. *Journals of the Atmospheric Sciences*, **1999**, 56, 151-175	2.1	888
741	The nitrate radical: Physics, chemistry, and the atmosphere. *Atmospheric Environment Part A General Topics*, **1991**, 25, 1-203		551
740	Measurements of molecular absorption spectra with the SCIAMACHY pre-flight model: instrument characterization and reference data for atmospheric remote-sensing in the 230–380 nm region. *Journal of Photochemistry and Photobiology A: Chemistry*, **2003**, 157, 167-184	4.7	496
739	Global budgets of atmospheric glyoxal and methylglyoxal, and implications for formation of secondary organic aerosols. *Journal of Geophysical Research*, **2008**, 113,		495
738	Halogens and their role in polar boundary-layer ozone depletion. *Atmospheric Chemistry and Physics* , **2007**, 7, 4375-4418	6.8	494
737	The Orbiting Carbon Observatory (OCO) mission. *Advances in Space Research*, **2004**, 34, 700-709	2.4	480
736	NOx emission trends for China, 1995–2004: The view from the ground and the view from space. *Journal of Geophysical Research*, **2007**, 112,		386
735	ATMOSPHERIC REMOTE-SENSING REFERENCE DATA FROM GOME–2. TEMPERATURE-DEPENDENT ABSORPTION CROSS SECTIONS OF O3 IN THE 231–794NM RANGE. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **1999**, 61, 509-517	2.1	337
734	SCIAMACHY–canning imaging absorption spectrometer for atmospheric chartography. *Acta Astronautica*, **1995**, 35, 445-451	2.9	333
733	Tropospheric NO2 from GOME measurements. *Advances in Space Research*, **2002**, 29, 1673-1683	2.4	306
732	Antarctic springtime depletion of atmospheric mercury. *Environmental Science & Technology*, **2002**, 36, 1238-44	10.3	273
731	Global estimates of CO sources with high resolution by adjoint inversion of multiple satellite datasets (MOPITT, AIRS, SCIAMACHY, TES). *Atmospheric Chemistry and Physics*, **2010**, 10, 855-876	6.8	241
730	Simultaneous global observations of glyoxal and formaldehyde from space. *Geophysical Research Letters*, **2006**, 33,	4.9	237
729	SCIATRAN 2.0 – A new radiative transfer model for geophysical applications in the 175–2400nm spectral region. *Advances in Space Research*, **2005**, 36, 1015-1019	2.4	231
728	GOME observations of tropospheric BrO in northern hemispheric spring and summer 1997. *Geophysical Research Letters*, **1998**, 25, 2683-2686	4.9	217

727	MAX-DOAS measurements of atmospheric trace gases in Ny-Ålesund - Radiative transfer studies and their application. *Atmospheric Chemistry and Physics*, **2004**, 4, 955-966	6.8	209
726	Absorption cross-sections of NO2 in the UV and visible region (200 - 700 nm) at 298 K. *Journal of Photochemistry and Photobiology A: Chemistry*, **1987**, 40, 195-217	4.7	206
725	Atmospheric methane and carbon dioxide from SCIAMACHY satellite data: initial comparison with chemistry and transport models. *Atmospheric Chemistry and Physics*, **2005**, 5, 941-962	6.8	201
724	High spectral resolution ozone absorption cross-sections - Part 2: Temperature dependence. *Atmospheric Measurement Techniques*, **2014**, 7, 625-636	4	198
723	Megacities as hot spots of air pollution in the East Mediterranean. *Atmospheric Environment*, **2011**, 45, 1223-1235	5.3	196
722	ATMOSPHERIC REMOTE-SENSING REFERENCE DATA FROM GOME: PART 1. TEMPERATURE-DEPENDENT ABSORPTION CROSS-SECTIONS OF NO2 IN THE 231-794 nm RANGE. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **1998**, 60, 1025-1031	2.1	193
721	Long-term changes of tropospheric NO₂ over megacities derived from multiple satellite instruments. *Atmospheric Chemistry and Physics*, **2013**, 13, 4145-4169	6.8	192
720	Satellite-observed U.S. power plant NOx emission reductions and their impact on air quality. *Geophysical Research Letters*, **2006**, 33,	4.9	191
719	High-resolution absorption cross-section of glyoxal in the UV-vis and IR spectral ranges. *Journal of Photochemistry and Photobiology A: Chemistry*, **2005**, 172, 35-46	4.7	190
718	Radiative transfer through terrestrial atmosphere and ocean: Software package SCIATRAN. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2014**, 133, 13-71	2.1	179
717	Frost flowers on sea ice as a source of sea salt and their influence on tropospheric halogen chemistry. *Geophysical Research Letters*, **2004**, 31,	4.9	174
716	RING EFFECT: IMPACT OF ROTATIONAL RAMAN SCATTERING ON RADIATIVE TRANSFER IN EARTH'S ATMOSPHERE. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **1998**, 60, 943-961	2.1	171
715	Tropospheric Ozone Assessment Report: Present-day distribution and trends of tropospheric ozone relevant to climate and global atmospheric chemistry model evaluation. *Elementa*, **2018**, 6,	3.6	160
714	A remote sensing technique for global monitoring of power plant CO₂ emissions from space and related applications. *Atmospheric Measurement Techniques*, **2010**, 3, 781-811	4	159
713	The temperature dependence (203-293 K) of the absorption cross sections of O3 in the 230-850 nm region measured by Fourier-transform spectroscopy. *Journal of Photochemistry and Photobiology A: Chemistry*, **2001**, 143, 1-9	4.7	159
712	Peroxy radicals from night-time reaction of N03 with organic compounds. *Nature*, **1990**, 348, 147-149	50.4	156
711	The temperature and pressure dependence of the absorption cross-sections of NO2 in the 250-800 nm region measured by Fourier-transform spectroscopy. *Journal of Photochemistry and Photobiology A: Chemistry*, **2002**, 149, 1-7	4.7	152
710	MAX-DOAS measurements of formaldehyde in the Po-Valley. *Atmospheric Chemistry and Physics*, **2005**, 5, 909-918	6.8	152

709	New ultraviolet absorption cross-sections of BrO at atmospheric temperatures measured by time-windowing Fourier transform spectroscopy. *Journal of Photochemistry and Photobiology A: Chemistry*, **2004**, 168, 117-132	4.7	151
708	The influence of natural and anthropogenic secondary sources on the glyoxal global distribution. *Atmospheric Chemistry and Physics*, **2008**, 8, 4965-4981	6.8	149
707	A method for improved SCIAMACHY CO₂ retrieval in the presence of optically thin clouds. *Atmospheric Measurement Techniques*, **2010**, 3, 209-232	4	145
706	Tropospheric sulfur dioxide observed by the ERS-2 GOME instrument. *Geophysical Research Letters*, **1998**, 25, 4177-4180	4.9	140
705	Comparison of box-air-mass-factors and radiances for Multiple-Axis Differential Optical Absorption Spectroscopy (MAX-DOAS) geometries calculated from different UV/visible radiative transfer models. *Atmospheric Chemistry and Physics*, **2007**, 7, 1809-1833	6.8	135
704	Carbon monoxide, methane and carbon dioxide columns retrieved from SCIAMACHY by WFM-DOAS: year 2003 initial data set. *Atmospheric Chemistry and Physics*, **2005**, 5, 3313-3329	6.8	135
703	Long-term analysis of carbon dioxide and methane column-averaged mole fractions retrieved from SCIAMACHY. *Atmospheric Chemistry and Physics*, **2011**, 11, 2863-2880	6.8	132
702	NO2 columns in the western United States observed from space and simulated by a regional chemistry model and their implications for NOx emissions. *Journal of Geophysical Research*, **2009**, 114,		131
701	Three years of greenhouse gas column-averaged dry air mole fractions retrieved from satellite Part 1: Carbon dioxide. *Atmospheric Chemistry and Physics*, **2008**, 8, 3827-3853	6.8	131
700	A near-infrared optimized DOAS method for the fast global retrieval of atmospheric CH4, CO, CO2, H2O, and N2O total column amounts from SCIAMACHY Envisat-1 nadir radiances. *Journal of Geophysical Research*, **2000**, 105, 15231-15245		128
699	Space-based near-infrared CO2 measurements: Testing the Orbiting Carbon Observatory retrieval algorithm and validation concept using SCIAMACHY observations over Park Falls, Wisconsin. *Journal of Geophysical Research*, **2006**, 111,		127
698	Atmospheric carbon gases retrieved from SCIAMACHY by WFM-DOAS: version 0.5 CO and CH₄ and impact of calibration improvements on CO₂ retrieval. *Atmospheric Chemistry and Physics*, **2006**, 6, 2727-2751	6.8	125
697	Ozone profiles from GOME satellite data: Algorithm description and first validation. *Journal of Geophysical Research*, **1999**, 104, 8263-8280		124
696	Observations of iodine monoxide columns from satellite. *Atmospheric Chemistry and Physics*, **2008**, 8, 637-653	6.8	123
695	Retrieval of atmospheric CO2 with enhanced accuracy and precision from SCIAMACHY: Validation with FTS measurements and comparison with model results. *Journal of Geophysical Research*, **2011**, 116,		122
694	The continental source of glyoxal estimated by the synergistic use of spaceborne measurements and inverse modelling. *Atmospheric Chemistry and Physics*, **2009**, 9, 8431-8446	6.8	122
693	Analysis for BrO in zenith-sky spectra: An intercomparison exercise for analysis improvement. *Journal of Geophysical Research*, **2002**, 107, ACH 10-1		121
692	Satellite measurements of NO2 from international shipping emissions. *Geophysical Research Letters* , **2004**, 31,	4.9	117

691	Ozone in the remote marine boundary layer: A possible role for halogens. *Journal of Geophysical Research*, **1999**, 104, 21385-21395		117
690	Quantitative observation of cyanobacteria and diatoms from space using PhytoDOAS on SCIAMACHY data. *Biogeosciences*, **2009**, 6, 751-764	4.6	116
689	Inverse modelling of the spatial distribution of NO_x emissions on a continental scale using satellite data. *Atmospheric Chemistry and Physics*, **2006**, 6, 1747-1770	6.8	115
688	State of the Climate in 2010. *Bulletin of the American Meteorological Society*, **2011**, 92, S1-S236	6.1	114
687	Validation of ozone measurements from the Atmospheric Chemistry Experiment (ACE). *Atmospheric Chemistry and Physics*, **2009**, 9, 287-343	6.8	112
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685	Remote sensing of fugitive methane emissions from oil and gas production in North American tight geologic formations. *Earth's Future*, **2014**, 2, 548-558	7.9	109
684	State of the Climate in 2012. *Bulletin of the American Meteorological Society*, **2013**, 94, S1-S258	6.1	109
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682	Halogen oxides: Radicals, sources and reservoirs in the laboratory and in the atmosphere. *Atmospheric Environment*, **1995**, 29, 2677-2881	5.3	106
681	GOMETRAN: A radiative transfer model for the satellite project GOME, the plane-parallel version. *Journal of Geophysical Research*, **1997**, 102, 16683-16695		101
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679	The Brewer-Dobson circulation and total ozone from seasonal to decadal time scales. *Atmospheric Chemistry and Physics*, **2011**, 11, 11221-11235	6.8	98
678	Tropospheric ozone over the tropical Atlantic: A satellite perspective. *Journal of Geophysical Research*, **2003**, 108,		98
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676	GOME-2 observations of oxygenated VOCs: what can we learn from the ratio glyoxal to formaldehyde on a global scale?. *Atmospheric Chemistry and Physics*, **2010**, 10, 10145-10160	6.8	97
675	Fire in the Air: Biomass Burning Impacts in a Changing Climate. *Critical Reviews in Environmental Science and Technology*, **2013**, 43, 40-83	11.1	96
674	A study of the UV–visible absorption spectrum of molecular chlorine. *Journal of Photochemistry and Photobiology A: Chemistry*, **1993**, 70, 205-214	4.7	95

673	Kinetics and mechanism of the disproportionation of hydroperoxyl radical in the gas phase. *The Journal of Physical Chemistry*, **1979**, 83, 2560-2568		95
672	Temporal and spatial variability of glyoxal as observed from space. *Atmospheric Chemistry and Physics*, **2009**, 9, 4485-4504	6.8	94
671	First direct observation of the atmospheric CO₂ year-to-year increase from space. *Atmospheric Chemistry and Physics*, **2007**, 7, 4249-4256	6.8	94
670	Gome measurements of stratospheric and tropospheric BrO. *Advances in Space Research*, **2002**, 29, 1667-1672	2.4	94
669	On the improvement of NO₂ satellite retrievals aerosol impact on the airmass factors. *Atmospheric Measurement Techniques*, **2010**, 3, 475-493	4	93
668	Total ozone retrieval from GOME UV spectral data using the weighting function DOAS approach. *Atmospheric Chemistry and Physics*, **2005**, 5, 1015-1025	6.8	93
667	Remote Sensing of Tropospheric Pollution from Space. *Bulletin of the American Meteorological Society*, **2008**, 89, 805-822	6.1	91
666	A numerical radiative transfer model for a spherical planetary atmosphere: combined differential integral approach involving the Picard iterative approximation. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2001**, 69, 491-512	2.1	91
665	On the possible causes of recent increases in northern hemispheric total ozone from a statistical analysis of satellite data from 1979 to 2003. *Atmospheric Chemistry and Physics*, **2006**, 6, 1165-1180	6.8	89
664	Satellite measurements of atmospheric ozone profiles, including tropospheric ozone, from ultraviolet/visible measurements in the nadir geometry: a potential method to retrieve tropospheric ozone. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **1997**, 57, 467-476	2.1	86
663	Evolution of stratospheric ozone and water vapour time series studied with satellite measurements. *Atmospheric Chemistry and Physics*, **2009**, 9, 6055-6075	6.8	85
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658	Global tropospheric NO2 column distributions: Comparing three-dimensional model calculations with GOME measurements. *Journal of Geophysical Research*, **2001**, 106, 12643-12660		82
657	Calibrated chemical amplifier for atmospheric ROx measurements. *Analytical Chemistry*, **1991**, 63, 2048-2057	7.8	82
656	The Greenhouse Gas Climate Change Initiative (GHG-CCI): Comparison and quality assessment of near-surface-sensitive satellite-derived CO2 and CH4 global data sets. *Remote Sensing of Environment*, **2015**, 162, 344-362	13.2	79

655	A semianalytical cloud retrieval algorithm using backscattered radiation in 0.42.4 μm spectral region. *Journal of Geophysical Research*, **2003**, 108, AAC 4-1		79
654	Ozone depletion during the solar proton events of October/November 2003 as seen by SCIAMACHY. *Journal of Geophysical Research*, **2005**, 110,		78
653	Carbonate precipitation in brine a potential trigger for tropospheric ozone depletion events. *Atmospheric Chemistry and Physics*, **2006**, 6, 4653-4658	6.8	78
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651	Trend analysis of aerosol optical thickness and Ångström exponent derived from the global AERONET spectral observations. *Atmospheric Measurement Techniques*, **2012**, 5, 1271-1299	4	77
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649	Variations of the increasing trend of tropospheric NO2 over central east China during the past decade. *Atmospheric Environment*, **2007**, 41, 4865-4876	5.3	77
648	Decreasing emissions of NOx relative to CO2 in East Asia inferred from satellite observations. *Nature Geoscience*, **2014**, 7, 792-795	18.3	76
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645	NO2 and BrO vertical profile retrieval from SCIAMACHY limb measurements: Sensitivity studies. *Advances in Space Research*, **2005**, 36, 846-854	2.4	75
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641	Analysis of global water vapour trends from satellite measurements in the visible spectral range. *Atmospheric Chemistry and Physics*, **2008**, 8, 491-504	6.8	72
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636	Satellite measurements of daily variations in soil NOx emissions. *Geophysical Research Letters*, **2005**, 32,	4.9	70
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634	Intercomparison of oxygenated volatile organic compound measurements at the SAPHIR atmosphere simulation chamber. *Journal of Geophysical Research*, **2008**, 113,		69
633	Three years of global carbon monoxide from SCIAMACHY: comparison with MOPITT and first results related to the detection of enhanced CO over cities. *Atmospheric Chemistry and Physics*, **2007**, 7, 2399-2411	6.8	69
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621	MAMAP – a new spectrometer system for column-averaged methane and carbon dioxide observations from aircraft: instrument description and performance analysis. *Atmospheric Measurement Techniques*, **2011**, 4, 215-243	4	61
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612	Stratospheric ozone trends and variability as seen by SCIAMACHY from 2002 to 2012. *Atmospheric Chemistry and Physics*, **2014**, 14, 831-846	6.8	58
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590	Comparison of satellite observed tropospheric NO2 over India with model simulations. *Atmospheric Environment*, **2010**, 44, 3314-3321	5.3	51
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