Vitali E Fioletov

List of Publications by Year
in descending order

120	7,576	50276	60623
papers	citations	46 h-index	81 g-index

172	172	172	7505
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Aura OMI observations of regional SO₂ and NO₂ pollution changes from 2005 to 2015. Atmospheric Chemistry and Physics, 2016, 16, 4605-4629.	4.9	521
2	Assessment of temperature, trace species, and ozone in chemistry-climate model simulations of the recent past. Journal of Geophysical Research, 2006, 111, .	3.3	414
3	The Ozone Monitoring Instrument: overview of 14 years in space. Atmospheric Chemistry and Physics, 2018, 18, 5699-5745.	4.9	259
4	India Is Overtaking China as the Worldâ€™s Largest Emitter of Anthropogenic Sulfur Dioxide. Scientific Reports, 2017, 7, 14304.	3.3	230
5	Highâ€Resolution Mapping of Nitrogen Dioxide With TROPOMI: First Results and Validation Over the Canadian Oil Sands. Geophysical Research Letters, 2019, 46, 1049-1060.	4.0	209
6	A global catalogue of large SO₂ sources and emissions derived from the Ozone Monitoring Instrument. Atmospheric Chemistry and Physics, 2016, 16, 11497-11519.	4.9	200
7	Global and zonal total ozone variations estimated from ground-based and satellite measurements: 1964â€“2000. Journal of Geophysical Research, 2002, 107, ACH 21-1.	3.3	193
8	Satellite estimation of spectral surface UV irradiance in the presence of tropospheric aerosols: 1. Cloud-free case. Journal of Geophysical Research, 1998, 103, 8779-8793.	3.3	177
9	State of the Climate in 2017. Bulletin of the American Meteorological Society, 2018, 99, Si-S310.	3.3	160
10	Lifetimes and emissions of SO‹sub›2‹/sub› from point sources estimated from OMI. Geophysical Research Letters, 2015, 42, 1969-1976.	4.0	152
11	Estimation of SO‹sub›2‹/sub›emissions using OMI retrievals. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	150
12	Space-based detection of missing sulfur dioxide sources of global air pollution. Nature Geoscience, 2016, 9, 496-500.	12.9	149
13	State of the Climate in 2015. Bulletin of the American Meteorological Society, 2016, 97, Si-S275.	3.3	142
14	State of the Climate in 2010. Bulletin of the American Meteorological Society, 2011, 92, S1-S236.	3.3	135
15	Improved satellite retrievals of NO₂ and SO₂ over the Canadian oil sands and comparisons with surface measurements. Atmospheric Chemistry and Physics, 2014, 14, 3637-3656.	4.9	132
16	State of the Climate in 2016. Bulletin of the American Meteorological Society, 2017, 98, Si-S280.	3.3	132
17	Estimating the global ozone characteristics during the last 30 years. Journal of Geophysical Research, 1995, 100, 16537.	3.3	129
18	Validation of daily erythemal doses from Ozone Monitoring Instrument with groundâ€based UV measurement data. Journal of Geophysical Research, 2007, 112, .	3.3	129

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19	State of the Climate in 2012. Bulletin of the American Meteorological Society, 2013, 94, S1-S258.	3.3	129
20	State of the Climate in 2011. Bulletin of the American Meteorological Society, 2012, 93, S1-S282.	3.3	121
21	Air quality over the Canadian oil sands: A first assessment using satellite observations. Geophysical Research Letters, 2012, 39, .	4.0	120
22	Total ozone trends from 1979 to 2016 derived from five merged observational datasets â€“ the emergence into ozone recovery. Atmospheric Chemistry and Physics, 2018, 18, 2097-2117.	4.9	118
23	The UV Index: Definition, Distribution and Factors Affecting It. Canadian Journal of Public Health, 2010, 101, I5-I9.	2.3	111
24	Satellite estimation of spectral surface UV irradiance: 2. Effects of homogeneous clouds and snow. Journal of Geophysical Research, 2001, 106, 11743-11759.	3.3	106
25	Application of OMI, SCIAMACHY, and GOMEâ€2 satellite SO₂ retrievals for detection of large emission sources. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,399.	3.3	102
26	Performance of the groundâ€based total ozone network assessed using satellite data. Journal of Geophysical Research, 2008, 113, .	3.3	96
27	Changes in the vertical distribution of ozone over Canada from ozonesondes: 1980â€“2001. Journal of Geophysical Research, 2005, 110, .	3.3	91
28	Surface ultraviolet radiation. Atmosphere - Ocean, 2008, 46, 159-184.	1.6	90
29	NH₃ emissions from large point sources derived from CrIS and IASI satellite observations. Atmospheric Chemistry and Physics, 2019, 19, 12261-12293.	4.9	89
30	Comparison of Brewer ultraviolet irradiance measurements with total ozone mapping spectrometer satellite retrievals. Optical Engineering, 2002, 41, 3051.	1.0	88
31	Seasonal persistence of midlatitude total ozone anomalies. Geophysical Research Letters, 2003, 30, .	4.0	86
32	Total ozone trends from quality-controlled ground-based data (1964â€“1994). Journal of Geophysical Research, 1995, 100, 25867.	3.3	80
33	UV index climatology over the United States and Canada from ground-based and satellite estimates. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	80
34	Reconciliation of halogen-induced ozone loss with the total-column ozone record. Nature Geoscience, 2014, 7, 443-449.	12.9	78
35	The Brewer reference triad. Geophysical Research Letters, 2005, 32, .	4.0	77
36	TROPOMI/S5P total ozone column data: global ground-based validation and consistency with other satellite missions. Atmospheric Measurement Techniques, 2019, 12, 5263-5287.	3.1	77

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37	Assessment of the quality of TROPOMI high-spatial-resolution NO₂ data products in the Greater Toronto Area. Atmospheric Measurement Techniques, 2020, 13, 2131-2159.	3.1	69
38	Estimating ozone variability and instrument uncertainties from SBUV(/2), ozonesonde, Umkehr, and SAGE II measurements: Short-term variations. Journal of Geophysical Research, 2006, 111, .	3.3	68
39	On the relationship between erythemal and vitamin D action spectrum weighted ultraviolet radiation. Journal of Photochemistry and Photobiology B: Biology, 2009, 95, 9-16.	3.8	65
40	A new global anthropogenic SO₂ emission inventory for the last decade: a mosaic of satellite-derived and bottom-up emissions. Atmospheric Chemistry and Physics, 2018, 18, 16571-16586.	4.9	61
41	Global Climate. Bulletin of the American Meteorological Society, 2020, 101, S9-S128.	3.3	61
42	Impact of longâ€range correlations on trend detection in total ozone. Journal of Geophysical Research, 2007, 112, .	3.3	59
43	A global tropospheric ozone climatology from trajectory-mapped ozone soundings. Atmospheric Chemistry and Physics, 2013, 13, 10659-10675.	4.9	59
44	Estimated ultraviolet exposure levels for a sufficient vitamin D status in North America. Journal of Photochemistry and Photobiology B: Biology, 2010, 100, 57-66.	3.8	56
45	Summertime total ozone variations over middle and polar latitudes. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	55
46	A global ozone climatology from ozone soundings via trajectory mapping: a stratospheric perspective. Atmospheric Chemistry and Physics, 2013, 13, 11441-11464.	4.9	52
47	A Decade of Change in NO₂ and SO₂ over the Canadian Oil Sands As Seen from Space. Environmental Science & Technology, 2016, 50, 331-337.	10.0	52
48	Multi-source SO₂ emission retrievals and consistency of satellite and surface measurements with reported emissions. Atmospheric Chemistry and Physics, 2017, 17, 12597-12616.	4.9	50
49	Continuation of long-term global SO₂ pollution monitoring from OMI to OMPS. Atmospheric Measurement Techniques, 2017, 10, 1495-1509.	3.1	50
50	Long-term ozone decline over the Canadian Arctic to early 1997 from ground-based and balloon observations. Geophysical Research Letters, 1997, 24, 2705-2708.	4.0	49
51	The relationship between total ozone and spectral UV irradiance from Brewer observations and its use for derivation of total ozone from UV measurements. Geophysical Research Letters, 1997, 24, 2997-3000.	4.0	48
52	Ozone climatology, trends, and substances that control ozone. Atmosphere - Ocean, 2008, 46, 39-67.	1.6	47
53	Estimating the 27â€day and 11â€year solar cycle variations in tropical upper stratospheric ozone. Journal of Geophysical Research, 2009, 114, .	3.3	43
54	Ozone correlation lengths and measurement uncertainties from analysis of historical ozonesonde data in North America and Europe. Journal of Geophysical Research, 2009, 114, .	3.3	42

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55	Total ozone changes over Eurasia since 1973 based on reevaluated filter ozonometer data. Journal of Geophysical Research, 1994, 99, 22985.	3.3	40
56	Changes of the lower stratospheric ozone over Europe and Canada. Journal of Geophysical Research, 1997, 102, 1337-1347.	3.3	40
57	Influence of volcanic sulfur dioxide on spectral UV irradiance as measured by Brewer Spectrophotometers. Geophysical Research Letters, 1998, 25, 1665-1668.	4.0	40
58	Technical Note: A SAGE-corrected SBUV zonal-mean ozone data set. Atmospheric Chemistry and Physics, 2009, 9, 7963-7972.	4.9	40
59	Trend and variability in ozone in the tropical lower stratosphere over 2.5 solar cycles observed by SAGE II and OSIRIS. Atmospheric Chemistry and Physics, 2014, 14, 3479-3496.	4.9	40
60	Comparison of OMI UV observations with ground-based measurements at high northern latitudes. Atmospheric Chemistry and Physics, 2015, 15, 7391-7412.	4.9	40
61	High levels of ultraviolet radiation observed by ground-based instruments below the 2011 Arctic ozone hole. Atmospheric Chemistry and Physics, 2013, 13, 10573-10590.	4.9	39
62	Anthropogenic and volcanic point source SO₂ emissions derived from TROPOMI on board Sentinel-5 Precursor: first results. Atmospheric Chemistry and Physics, 2020, 20, 5591-5607.	4.9	39
63	Global Climate. Bulletin of the American Meteorological Society, 2021, 102, S11-S142.	3.3	36
64	Climatology and trends of surface UV radiation: Survey article. Atmosphere - Ocean, 2003, 41, 121-138.	1.6	35
65	Highâ€resolution tropospheric ozone fields for INTEX and ARCTAS from IONS ozonesondes. Journal of Geophysical Research, 2010, 115, .	3.3	35
66	The relationship between solar UV irradiance and total ozone from observations over southern Argentina. Geophysical Research Letters, 1995, 22, 1249-1252.	4.0	33
67	OMI satellite observations of decadal changes in ground-level sulfur dioxide over North America. Atmospheric Chemistry and Physics, 2017, 17, 5921-5929.	4.9	31
68	Recordâ€Breaking Increases in Arctic Solar Ultraviolet Radiation Caused by Exceptionally Large Ozone Depletion in 2020. Geophysical Research Letters, 2020, 47, e2020GL090844.	4.0	30
69	The Arctic. Bulletin of the American Meteorological Society, 2020, 101, S239-S286.	3.3	29
70	Global total ozone recovery trends attributed to ozone-depleting substance (ODS) changes derived from five merged ozone datasets. Atmospheric Chemistry and Physics, 2022, 22, 6843-6859.	4.9	29
71	Further ozone decline during the northern hemisphere winter-spring of 1994-1995 and the new record low ozone over Siberia. Geophysical Research Letters, 1995, 22, 2729-2732.	4.0	27
72	Examination of ozonesonde data for trends and trend changes incorporating solar and Arctic oscillation signals. Journal of Geophysical Research, 2006, 111, .	3.3	27

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73	Quantifying stratospheric ozone trends: Complications due to stratospheric cooling. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	26
74	Study of SO Pollution in the Middle East Using MERRAâ€2, CAMS Data Assimilation Products, and Highâ€Resolution WRFâ€Chem Simulations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031993.	3.3	26
75	A new approach to estimating the albedo for snow-covered surfaces in the satellite UV method. Journal of Geophysical Research, 2003, 108, .	3.3	25
76	Sulfur dioxide (SO₂) vertical column density measurements by Pandora spectrometer over the Canadian oil sands. Atmospheric Measurement Techniques, 2016, 9, 2961-2976.	3.1	23
77	The Arctic. Bulletin of the American Meteorological Society, 2021, 102, S263-S316.	3.3	23
78	Vertical ozone distribution characteristics deduced from â¼ 44,000 re-evaluated Umkehr profiles (1957-2000). Meteorology and Atmospheric Physics, 2002, 79, 127-158.	2.0	19
79	AEROCAN, the Canadian sub-network of AERONET: Aerosol monitoring and air quality applications. Atmospheric Environment, 2017, 167, 444-457.	4.1	19
80	A sulfur dioxide Covariance-Based Retrieval Algorithm (COBRA): application to TROPOMI reveals new emission sources. Atmospheric Chemistry and Physics, 2021, 21, 16727-16744.	4.9	19
81	Detecting volcanic sulfur dioxide plumes in the Northern Hemisphere using the Brewer spectrophotometers, other networks, and satellite observations. Atmospheric Chemistry and Physics, 2017, 17, 551-574.	4.9	18
82	An Analysis of Factors Associated with 25-Hydroxyvitamin D Levels in White and Non-White Canadians. Journal of AOAC INTERNATIONAL, 2017, 100, 1345-1354.	1.5	18
83	Twenty-five years of spectral UV-B measurements over Canada, Europe and Japan: Trends and effects from changes in ozone, aerosols, clouds, and surface reflectivity. Comptes Rendus - Geoscience, 2018, 350, .	1.2	18
84	Ceramic industry at Morbi as a large source of SO2 emissions in India. Atmospheric Environment, 2020, 223, 117243.	4.1	18
85	On the statistical modeling of persistence in total ozone anomalies. Journal of Geophysical Research, 2010, 115, .	3.3	17
86	Comparison of profile total ozone from SBUV (v8.6) with GOME-type and ground-based total ozone for a 16-year period (1996 to 2011). Atmospheric Measurement Techniques, 2014, 7, 1681-1692.	3.1	17
87	The link between springtime total ozone and summer UV radiation in Northern Hemisphere extratropics. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8649-8661.	3.3	16
88	Carbon monoxide climatology derived from the trajectory mapping of global MOZAIC-IAGOS data. Atmospheric Chemistry and Physics, 2016, 16, 10263-10282.	4.9	16
89	Quantifying urban, industrial, and background changes in NO₂ during the COVID-19 lockdown period based on TROPOMI satellite observations. Atmospheric Chemistry and Physics, 2022, 22, 4201-4236.	4.9	16
90	Cloudless aerosol forcing efficiency in the UV region from AERONET and WOUDC databases. Geophysical Research Letters, 2006, 33, .	4.0	15

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91	Intercomparison of Aerosol Optical Depth from Brewer Ozone spectrophotometers and CIMEL sunphotometers measurements. Atmospheric Chemistry and Physics, 2009, 9, 733-741.	4.9	15
92	An evaluation of Odin/OSIRIS limb pointing and stratospheric ozone through comparisons with ozonesondes. Canadian Journal of Physics, 2007, 85, 1125-1141.	1.1	13
93	Validation of Environment Canada and NOAA UV Index Forecasts with Brewer Measurements from Canada. Journal of Applied Meteorology and Climatology, 2013, 52, 1477-1489.	1.5	13
94	Assessing the Impact of Corona-Virus-19 on Nitrogen Dioxide Levels over Southern Ontario, Canada. Remote Sensing, 2020, 12, 4112.	4.0	13
95	Retrieval of total column and surface NO₂ from Pandora zenith-sky measurements. Atmospheric Chemistry and Physics, 2019, 19, 10619-10642.	4.9	12
96	Accuracy, precision, and temperature dependence of Pandora total ozone measurements estimated from a comparison with the Brewer triad in Toronto. Atmospheric Measurement Techniques, 2016, 9, 5747-5761.	3.1	12
97	Spatial mapping of ground-based observations of total ozone. Atmospheric Measurement Techniques, 2015, 8, 4487-4505.	3.1	11
98	Assessment of the aerosol optical depths measured by satellite-based passive remote sensors in the Alberta oil sands region. Atmospheric Chemistry and Physics, 2017, 17, 1931-1943.	4.9	11
99	Application of satellite-based sulfur dioxide observations to support the cleantech sector: Detecting emission reduction from copper smelters. Environmental Technology and Innovation, 2018, 12, 172-179.	6.1	11
100	Inconsistencies in sulfur dioxide emissions from the Canadian oil sands and potential implications. Environmental Research Letters, 2021, 16, 014012.	5.2	11
101	Seasonal persistence of northern lowâ€•and middleâ€latitude anomalies of ozone and other trace gases in the upper stratosphere. Journal of Geophysical Research, 2008, 113, .	3.3	10
102	New method for deriving total ozone from Brewer zenith sky observations. Journal of Geophysical Research, 2011, 116, .	3.3	10
103	Comparisons of a Chemical Transport Model with a Four-Year (April to September) Analysis of Fine- and Coarse-Mode Aerosol Optical Depth Retrievals Over the Canadian Arctic. Atmosphere - Ocean, 2017, 55, 213-229.	1.6	10
104	Extreme smoke event over the high Arctic. Atmospheric Environment, 2019, 218, 117002.	4.1	9
105	Vitamin D at the Expense of Skin Cancer Protection: Is It Worth the Risk?. Journal of Investigative Dermatology, 2016, 136, 2104-2105.	0.7	7
106	Assessing the impact of clouds on ground-based UVâ€“visible total column ozone measurements in the high Arctic. Atmospheric Measurement Techniques, 2019, 12, 2463-2483.	3.1	7
107	The world Brewer reference triad â€“ updated performance assessment and new double triad. Atmospheric Measurement Techniques, 2021, 14, 2261-2283.	3.1	7
108	Unprecedented Spring 2020 Ozone Depletion in the Context of 20ÂYears of Measurements at Eureka, Canada. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034365.	3.3	7

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109	Reevaluation of Totalâ€Column Ozone Trends and of the Effective Radiative Forcing of Ozoneâ€Depleting Substances. Geophysical Research Letters, 2021, 48, e2021GL095376.	4.0	7
110	Tropospheric and Surface Nitrogen Dioxide Changes in the Greater Toronto Area during the First Two Years of the COVID-19 Pandemic. Remote Sensing, 2022, 14, 1625.	4.0	7
111	Effect of polyoxymethylene (POM-H Delrin) off-gassing within the Pandora head sensor on direct-sun and multi-axis formaldehyde column measurements in 2016â€“2019. Atmospheric Measurement Techniques, 2021, 14, 647-663.	3.1	6
112	<title>Comparison of Brewer UV irradiance measurements with TOMS satellite retrievals</title>. , 2002, , .		4
113	Validation of MAX-DOAS retrievals of aerosol extinction, SO₂, and NO₂ through comparison with lidar, sun photometer, active DOAS, and aircraft measurements in the Athabasca oil sands region. Atmospheric Measurement Techniques, 2020, 13, 1129-1155.	3.1	4
114	Evaluation of ozone total column measurements by the Ozone Monitoring Instrument using a data assimilation system. Journal of Geophysical Research, 2008, 113, .	3.3	3
115	A global picture of the seasonal persistence of stratospheric ozone anomalies. Journal of Geophysical Research, 2010, 115, .	3.3	3
116	Seasonal persistence of ozone and zonal wind anomalies in the equatorial stratosphere. Journal of Geophysical Research, 2010, 115, .	3.3	2
117	<title>UV-B over Canada measured by Brewer spectrophotometers and estimated from ozone and pyranometer observations</title>. , 2002, , .		0
118	Estimating UV index climatology over North America. , 2003, , .		0
119	Measurements of historical total ozone from the Chalonge-Divan stellar spectrum program: A reanalysis of the 1953â€“1972 data and a comparison with simultaneous Dobson Arosa measurements. Journal of Geophysical Research, 2006, 111, .	3.3	0
120	Data Quality Objectives (DQO) for Solar Ultraviolet Radiation. , 2009, , .		0