H J Eskes

List of Publications by Year
in descending order

116 papers	11,635 citations	36303 51 h-index	33894 99 g-index
227 all docs	227 docs citations	227 times ranked	7453 citing authors

#	Article	IF	Citations
1	On the use of MOZAIC-IAGOS data to assess the ability of the MACC reanalysis to reproduce the distribution of ozone and CO in the UTLS over Europe. Tellus, Series B: Chemical and Physical Meteorology, 2022, 67, 27955.	1.6	11
2	Decadal Variabilities in Tropospheric Nitrogen Oxides Over United States, Europe, and China. Journal of Geophysical Research D: Atmospheres, 2022, 127, e2021JD035872.	3.3	14
3	A comparison of the impact of TROPOMI and OMI tropospheric NO₂ on global chemical data assimilation. Atmospheric Measurement Techniques, 2022, 15, 1703-1728.	3.1	11
4	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
5	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
6	Improved monitoring of shipping NO₂ with TROPOMI: decreasing NO_{<i>x</i>} emissions in European seas during the COVID-19 pandemic. Atmospheric Measurement Techniques, 2022, 15, 1415-1438.	3.1	20
7	Sentinel-5P TROPOMI NO₂ retrieval: impact of version v2.2 improvements and comparisons with OMI and ground-based data. Atmospheric Measurement Techniques, 2022, 15, 2037-2060.	3.1	74
8	Photochemical sensitivity to emissions and local meteorology in BogotÃ¡, Santiago, and SÃ£o Paulo. Elementa, 2022, 10, .	3.2	6
9	NOx emissions in India derived from OMI satellite observations. Atmospheric Environment: X, 2022, 14, 100174.	1.4	4
10	Influence of convection on the upper-tropospheric O₃ and NO_{<i>x</i>} budget in southeastern China. Atmospheric Chemistry and Physics, 2022, 22, 5925-5942.	4.9	9
11	Quantification of lightning-produced NO_{<i>x</i>} over the Pyrenees and the Ebro Valley by using different TROPOMI-NO₂ and cloud research products. Atmospheric Measurement Techniques, 2022, 15, 3329-3351.	3.1	6
12	Biomass burning combustion efficiency observed from space using measurements of CO and NO₂ by the TROPOspheric Monitoring Instrument (TROPOMI). Atmospheric Chemistry and Physics, 2021, 21, 597-616.	4.9	20
13	The global impacts of COVID-19 lockdowns on urban air pollution. Elementa, 2021, 9, .	3.2	94
14	Ground-based validation of the Copernicus Sentinel-5P TROPOMI NO₂ measurements with the NDACC ZSL-DOAS, MAX-DOAS and Pandonia global networks. Atmospheric Measurement Techniques, 2021, 14, 481-510.	3.1	142
15	Sudden changes in nitrogen dioxide emissions over Greece due to lockdown after the outbreak of COVID-19. Atmospheric Chemistry and Physics, 2021, 21, 1759-1774.	4.9	32
16	New observations of NO₂ in the upper troposphere from TROPOMI. Atmospheric Measurement Techniques, 2021, 14, 2389-2408.	3.1	18
17	Evaluation of the LOTOS-EUROS NO₂ simulations using ground-based measurements and S5P/TROPOMI observations over Greece. Atmospheric Chemistry and Physics, 2021, 21, 5269-5288.	4.9	12
18	Observations of Lightning NO_x Production From Tropospheric Monitoring Instrument Case Studies Over the United States. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034174.	3.3	10

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19	Catalog of NO_{<i>x</i>} emissions from point sources as derived from the divergence of the NO₂ flux for TROPOMI. Earth System Science Data, 2021, 13, 2995-3012.	9.9	37
20	Global tropospheric ozone responses to reduced NO _{<i>x</i>} emissions linked to the COVID-19 worldwide lockdowns. Science Advances, 2021, 7, .	10.3	72
21	Impacts of Horizontal Resolution on Global Data Assimilation of Satellite Measurements for Tropospheric Chemistry Analysis. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002180.	3.8	7
22	Changes in Power Plant NOx Emissions over Northwest Greece Using a Data Assimilation Technique. Atmosphere, 2021, 12, 900.	2.3	5
23	First Concurrent Observations of NO 2 and CO 2 From Power Plant Plumes by Airborne Remote Sensing. Geophysical Research Letters, 2021, 48, e2021GL092685.	4.0	10
24	A New Divergence Method to Quantify Methane Emissions Using Observations of Sentinelâ€5P TROPOMI. Geophysical Research Letters, 2021, 48, e2021GL094151.	4.0	22
25	Assessment of the TROPOMI tropospheric NO₂ product based on airborne APEX observations. Atmospheric Measurement Techniques, 2021, 14, 615-646.	3.1	36
26	Reductions in nitrogen oxides over the Netherlands between 2005 and 2018 observed from space and on the ground: Decreasing emissions and increasing O3 indicate changing NOx chemistry. Atmospheric Environment: X, 2021, 9, 100104.	1.4	17
27	Comprehensive evaluation of the Copernicus Atmosphere Monitoring Service (CAMS) reanalysis against independent observations. Elementa, 2021, 9, .	3.2	11
28	A New Separation Methodology for the Maritime Sector Emissions over the Mediterranean and Black Sea Regions. Atmosphere, 2021, 12, 1478.	2.3	5
29	Assessment of Updated Fuelâ€Based Emissions Inventories Over the Contiguous United States Using TROPOMI NO₂ Retrievals. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035484.	3.3	18
30	Air Quality Response in China Linked to the 2019 Novel Coronavirus (COVIDâ€19) Lockdown. Geophysical Research Letters, 2020, 47, e2020GL089252.	4.0	74
31	Validation of Aura-OMI QA4ECV NO₂ climate data records with ground-based DOAS networks: the role of measurement and comparison uncertainties. Atmospheric Chemistry and Physics, 2020, 20, 8017-8045.	4.9	29
32	Connecting the dots: NOx emissions along a West Siberian natural gas pipeline. Npj Climate and Atmospheric Science, 2020, 3, .	6.8	21
33	NOx Emissions Reduction and Rebound in China Due to the COVIDâ€19 Crisis. Geophysical Research Letters, 2020, 47, e2020GL089912.	4.0	74
34	Assessing the Impact of Corona-Virus-19 on Nitrogen Dioxide Levels over Southern Ontario, Canada. Remote Sensing, 2020, 12, 4112.	4.0	13
35	Impact of Coronavirus Outbreak on NO₂ Pollution Assessed Using TROPOMI and OMI Observations. Geophysical Research Letters, 2020, 47, e2020GL087978.	4.0	479
36	Abrupt decline in tropospheric nitrogen dioxide over China after the outbreak of COVID-19. Science Advances, 2020, 6, eabc2992.	10.3	208

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37	Comparison of tropospheric NO₂ columns from MAX-DOAS retrievals and regional air quality model simulations. Atmospheric Chemistry and Physics, 2020, 20, 2795-2823.	4.9	12
38	Evaluation of the CAMS global atmospheric trace gas reanalysis 2003â€“2016 using aircraft campaign observations. Atmospheric Chemistry and Physics, 2020, 20, 4493-4521.	4.9	16
39	S5P TROPOMI NO₂ slant column retrieval: method, stability, uncertainties and comparisons with OMI. Atmospheric Measurement Techniques, 2020, 13, 1315-1335.	3.1	170
40	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
41	Benefit of ozone observations from Sentinel-5P and future Sentinel-4 missions on tropospheric composition. Atmospheric Measurement Techniques, 2020, 13, 131-152.	3.1	12
42	Comparison of TROPOMI/Sentinel-5 Precursor NO₂ observations with ground-based measurements in Helsinki. Atmospheric Measurement Techniques, 2020, 13, 205-218.	3.1	153
43	Quantifying burning efficiency in megacities using the NO₂âˆ•CO ratio from the Tropospheric Monitoring Instrument (TROPOMI). Atmospheric Chemistry and Physics, 2020, 20, 10295-10310.	4.9	23
44	A complex aerosol transport event over Europe during the 2017 Storm Ophelia in CAMS forecast systems: analysis and evaluation. Atmospheric Chemistry and Physics, 2020, 20, 13557-13578.	4.9	19
45	A new TROPOMI product for tropospheric NO₂ columns over East Asia with explicit aerosol corrections. Atmospheric Measurement Techniques, 2020, 13, 4247-4259.	3.1	38
46	Evaluating Sentinel-5P TROPOMI tropospheric NO₂ column densities with airborne and Pandora spectrometers near New York City and Long Island Sound. Atmospheric Measurement Techniques, 2020, 13, 6113-6140.	3.1	85
47	Validation of tropospheric NO₂ column measurements of GOME-2A and OMI using MAX-DOAS and direct sun network observations. Atmospheric Measurement Techniques, 2020, 13, 6141-6174.	3.1	31
48	Updated tropospheric chemistry reanalysis and emission estimates, TCR-2, for 2005â€“2018. Earth System Science Data, 2020, 12, 2223-2259.	9.9	54
49	Enhanced Capabilities of TROPOMI NO₂: Estimating NO_{<i>X</i>} from North American Cities and Power Plants. Environmental Science & Technology, 2019, 53, 12594-12601.	10.0	103
50	Impact of synthetic space-borne NO₂ observations from the Sentinel-4 and Sentinel-5P missions on tropospheric NO₂ analyses. Atmospheric Chemistry and Physics, 2019, 19, 12811-12833.	4.9	15
51	Improved aerosol correction for OMI tropospheric NO₂ retrieval over East Asia: constraint from CALIOP aerosol vertical profile. Atmospheric Measurement Techniques, 2019, 12, 1-21.	3.1	75
52	Trends and trend reversal detection in 2Âdecades of tropospheric NO₂ satellite observations. Atmospheric Chemistry and Physics, 2019, 19, 6269-6294.	4.9	119
53	The CAMS reanalysis of atmospheric composition. Atmospheric Chemistry and Physics, 2019, 19, 3515-3556.	4.9	524
54	Quantification of nitrogen oxides emissions from build-up of pollution over Paris with TROPOMI. Scientific Reports, 2019, 9, 20033.	3.3	104

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55	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
56	Balance of Emission and Dynamical Controls on Ozone During the Koreaâ€United States Air Quality Campaign From Multiconstituent Satellite Data Assimilation. Journal of Geophysical Research D: Atmospheres, 2019, 124, 387-413.	3.3	51
57	Evaluation of modeling NO₂ concentrations driven by satellite-derived and bottom-up emission inventories using in situ measurements over China. Atmospheric Chemistry and Physics, 2018, 18, 4171-4186.	4.9	34
58	A deep stratosphere-to-troposphere ozone transport event over Europe simulated in CAMS global and regional forecast systems: analysis and evaluation. Atmospheric Chemistry and Physics, 2018, 18, 15515-15534.	4.9	34
59	Improving algorithms and uncertainty estimates for satellite NO₂ retrievals: results from the quality assurance for the essential climate variables (QA4ECV) project. Atmospheric Measurement Techniques, 2018, 11, 6651-6678.	3.1	187
60	GOME-2A retrievals of tropospheric NO₂ in different spectral ranges â€" influence of penetration depth. Atmospheric Measurement Techniques, 2018, 11, 2769-2795.	3.1	5
61	Top-Down NOX Emissions of European Cities Based on the Downwind Plume of Modelled and Space-Borne Tropospheric NO2 Columns. Sensors, 2018, 18, 2893.	3.8	24
62	Algorithm theoretical baseline for formaldehyde retrievals from S5P TROPOMI and from the QA4ECV project. Atmospheric Measurement Techniques, 2018, 11, 2395-2426.	3.1	127
63	Improved slant column density retrieval of nitrogen dioxide and formaldehyde for OMI and GOME-2A from QA4ECV: intercomparison, uncertainty characterisation, and trends. Atmospheric Measurement Techniques, 2018, 11, 4033-4058.	3.1	74
64	The Ozone Monitoring Instrument: overview of 14 years in space. Atmospheric Chemistry and Physics, 2018, 18, 5699-5745.	4.9	259
65	Vertical Profiles of Tropospheric Ozone From MAXâ€DOAS Measurements During the CINDIâ€2 Campaign: Part 1â€"Development of a New Retrieval Algorithm. Journal of Geophysical Research D: Atmospheres, 2018, 123, 10,637.	3.3	18
66	Impact of spaceborne carbon monoxide observations from the S-5P platform on tropospheric composition analyses and forecasts. Atmospheric Chemistry and Physics, 2017, 17, 1081-1103.	4.9	16
67	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
68	Decadal changes in global surface NO_{<i>x</i>} emissions from multi-constituent satellite data assimilation. Atmospheric Chemistry and Physics, 2017, 17, 807-837.	4.9	228
69	Curriculum vitae of the LOTOSâ€"EUROS (v2.0) chemistry transport model. Geoscientific Model Development, 2017, 10, 4145-4173.	3.6	100
70	C-IFS-CB05-BASCOE: stratospheric chemistry in the Integrated Forecasting System of ECMWF. Geoscientific Model Development, 2016, 9, 3071-3091.	3.6	24
71	Representativeness errors in comparing chemistry transport and chemistry climate models with satellite UVâ€"Vis tropospheric column retrievals. Geoscientific Model Development, 2016, 9, 875-898.	3.6	55
72	Limbâ€"nadir matching using non-coincident NO₂ observations: proof of concept and the OMI-minus-OSIRIS prototype product. Atmospheric Measurement Techniques, 2016, 9, 4103-4122.	3.1	9

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73	MAX-DOAS tropospheric nitrogen dioxide column measurements compared with the Lotos-Euros air quality model. Atmospheric Chemistry and Physics, 2015, 15, 1313-1330.	4.9	23
74	Data assimilation of satellite-retrieved ozone, carbon monoxide and nitrogen dioxide with ECMWF's Composition-IFS. Atmospheric Chemistry and Physics, 2015, 15, 5275-5303.	4.9	109
75	Evaluation of the MACC operational forecast system â€“ potential and challenges of global near-real-time modelling with respect to reactive gases in the troposphere. Atmospheric Chemistry and Physics, 2015, 15, 14005-14030.	4.9	21
76	Copernicus stratospheric ozone service, 2009â€“2012: validation, system intercomparison and roles of input data sets. Atmospheric Chemistry and Physics, 2015, 15, 2269-2293.	4.9	27
77	Data assimilation in atmospheric chemistry models: current status and future prospects for coupled chemistry meteorology models. Atmospheric Chemistry and Physics, 2015, 15, 5325-5358.	4.9	201
78	OMI tropospheric NO₂ profiles from cloud slicing: constraints on surface emissions, convective transport and lightning NO_{<i>x</i>}. Atmospheric Chemistry and Physics, 2015, 15, 13519-13553.	4.9	16
79	A tropospheric chemistry reanalysis for the years 2005â€“2012 based on an assimilation of OMI, MLS, TES, and MOPITT satellite data. Atmospheric Chemistry and Physics, 2015, 15, 8315-8348.	4.9	70
80	Evaluation of near-surface ozone over Europe from the MACC reanalysis. Geoscientific Model Development, 2015, 8, 2299-2314.	3.6	34
81	Validation of reactive gases and aerosols in the MACC global analysis and forecast system. Geoscientific Model Development, 2015, 8, 3523-3543.	3.6	49
82	Extended and refined multi sensor reanalysis of total ozone for the period 1970â€“2012. Atmospheric Measurement Techniques, 2015, 8, 3021-3035.	3.1	68
83	A regional air quality forecasting system over Europe: the MACC-II daily ensemble production. Geoscientific Model Development, 2015, 8, 2777-2813.	3.6	214
84	Validation of nine years of MOPITT V5 NIR using MOZAIC/IAGOS measurements: biases and long-term stability. Atmospheric Measurement Techniques, 2014, 7, 3783-3799.	3.1	11
85	Intercomparison of daytime stratospheric NO₂ satellite retrievals and model simulations. Atmospheric Measurement Techniques, 2014, 7, 2203-2225.	3.1	25
86	Global lightning NO_x production estimated by an assimilation of multiple satellite data sets. Atmospheric Chemistry and Physics, 2014, 14, 3277-3305.	4.9	84
87	Constraints on surface NO<i>_x</i> emissions by assimilating satellite observations of multiple species. Geophysical Research Letters, 2013, 40, 4745-4750.	4.0	26
88	Hindcast experiments of tropospheric composition during the summer 2010 fires over western Russia. Atmospheric Chemistry and Physics, 2012, 12, 4341-4364.	4.9	62
89	Global NO_x emission estimates derived from an assimilation of OMI tropospheric NO₂ columns. Atmospheric Chemistry and Physics, 2012, 12, 2263-2288.	4.9	153
90	Simultaneous assimilation of satellite NO₂, O₃, CO, and HNO₃ data for the analysis of tropospheric chemical composition and emissions. Atmospheric Chemistry and Physics, 2012, 12, 9545-9579.	4.9	130

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91	Improving ozone forecasts over Europe by synergistic use of the LOTOS-EUROS chemical transport model and in-situ measurements. Atmospheric Environment, 2012, 60, 217-226.	4.1	54
92	The global economic cycle and satelliteâ€derived NO₂ trends over shipping lanes. Geophysical Research Letters, 2012, 39, .	4.0	42
93	Forecasts and assimilation experiments of the Antarctic ozone hole 2008. Atmospheric Chemistry and Physics, 2011, 11, 1961-1977.	4.9	33
94	Six-day PM10 air quality forecasts for the Netherlands with the chemistry transport model Lotos-Euros. Atmospheric Environment, 2011, 45, 5586-5594.	4.1	11
95	An improved tropospheric NO₂ column retrieval algorithm for the Ozone Monitoring Instrument. Atmospheric Measurement Techniques, 2011, 4, 1905-1928.	3.1	550
96	Comparison of OMI NO₂ tropospheric columns with an ensemble of global and European regional air quality models. Atmospheric Chemistry and Physics, 2010, 10, 3273-3296.	4.9	165
97	Multi sensor reanalysis of total ozone. Atmospheric Chemistry and Physics, 2010, 10, 11277-11294.	4.9	125
98	The global chemistry transport model TM5: description and evaluation of the tropospheric chemistry version 3.0. Geoscientific Model Development, 2010, 3, 445-473.	3.6	251
99	Validation of urban NO₂ concentrations and their diurnal and seasonal variations observed from the SCIAMACHY and OMI sensors using in situ surface measurements in Israeli cities. Atmospheric Chemistry and Physics, 2009, 9, 3867-3879.	4.9	205
100	The 2005 and 2006 DANDELIONS NO₂ and aerosol intercomparison campaigns. Journal of Geophysical Research, 2008, 113, .	3.3	116
101	Trends, seasonal variability and dominant NO_x source derived from a ten year record of NO₂ measured from space. Journal of Geophysical Research, 2008, 113, .	3.3	352
102	TOWARD A MONITORING AND FORECASTING SYSTEM FOR ATMOSPHERIC COMPOSITION. Bulletin of the American Meteorological Society, 2008, 89, 1147-1164.	3.3	253
103	Twelve years of global observations of formaldehyde in the troposphere using GOME and SCIAMACHY sensors. Atmospheric Chemistry and Physics, 2008, 8, 4947-4963.	4.9	215
104	The Assimilation of Envisat data (ASSET) project. Atmospheric Chemistry and Physics, 2007, 7, 1773-1796.	4.9	69
105	Near-real time retrieval of tropospheric NO₂ from OMI. Atmospheric Chemistry and Physics, 2007, 7, 2103-2118.	4.9	469
106	Multimodel ensemble simulations of present-day and near-future tropospheric ozone. Journal of Geophysical Research, 2006, 111, .	3.3	743
107	Multimodel simulations of carbon monoxide: Comparison with observations and projected near-future changes. Journal of Geophysical Research, 2006, 111, .	3.3	254
108	The ASSET intercomparison of ozone analyses: method and first results. Atmospheric Chemistry and Physics, 2006, 6, 5445-5474.	4.9	110

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109	Multi-model ensemble simulations of tropospheric NO₂ compared with GOME retrievals for the year 2000. Atmospheric Chemistry and Physics, 2006, 6, 2943-2979.	4.9	127
110	Comparison of GOME tropospheric NO₂ columns with NO₂ profiles deduced from ground-based in situ measurements. Atmospheric Chemistry and Physics, 2006, 6, 3211-3229.	4.9	57
111	Estimates of lightning NO_x production from GOME satellite observations. Atmospheric Chemistry and Physics, 2005, 5, 2311-2331.	4.9	111
112	Ozone Forecasts of the Stratospheric Polar Vortexâ€“Splitting Event in September 2002. Journals of the Atmospheric Sciences, 2005, 62, 812-821.	1.7	20
113	Error analysis for tropospheric NO2retrieval from space. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	606
114	Assimilation of GOME total-ozone satellite observations in a three-dimensional tracer-transport model. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 1663-1681.	2.7	124
115	Averaging kernels for DOAS total-column satellite retrievals. Atmospheric Chemistry and Physics, 2003, 3, 1285-1291.	4.9	266
116	Global ozone forecasting based on ERS-2 GOME observations. Atmospheric Chemistry and Physics, 2002, 2, 271-278.	4.9	34