Veronika Eyring

List of Publications by Year in Descending Order

128 papers	14,838 citations	51 h-index	121 g-index
166 ext. papers	18,550 ext. citations	7.4 avg, IF	6.09 L-index

#	Paper	IF	Citations
128	Evaluating stratospheric ozone and water vapour changes in CMIP6 models from 1850 to 2100. *Atmospheric Chemistry and Physics*, **2021**, 21, 5015-5061	6.8	16
127	Climate model projections from the Scenario Model Intercomparison Project (ScenarioMIP) of CMIP6. *Earth System Dynamics*, **2021**, 12, 253-293	4.8	60
126	Reflections and projections on a decade of climate science. *Nature Climate Change*, **2021**, 11, 279-285	21.4	3
125	Earth System Model Evaluation Tool (ESMValTool) v2.0 – diagnostics for extreme events, regional and impact evaluation, and analysis of Earth system models in CMIP. *Geoscientific Model Development*, **2021**, 14, 3159-3184	6.3	4
124	Evaluating stratospheric ozone and water vapor changes in CMIP6 models from 1850–2100 **2020**,		8
123	Earth System Model Evaluation Tool (ESMValTool) v2.0 – technical overview. *Geoscientific Model Development*, **2020**, 13, 1179-1199	6.3	31
122	Causal networks for climate model evaluation and constrained projections. *Nature Communications*, **2020**, 11, 1415	17.4	16
121	Context for interpreting equilibrium climate sensitivity and transient climate response from the CMIP6 Earth system models. *Science Advances*, **2020**, 6, eaba1981	14.3	142
120	Earth System Model Evaluation Tool (ESMValTool) v2.0 – diagnostics for emergent constraints and future projections from Earth system models in CMIP **2020**,		2
119	Spatially resolved evaluation of Earth system models with satellite column-averaged CO₂. *Biogeosciences*, **2020**, 17, 6115-6144	4.6	3
118	Emergent constraints on equilibrium climate sensitivity in CMIP5: do they hold for CMIP6?. *Earth System Dynamics*, **2020**, 11, 1233-1258	4.8	21
117	Observations for Model Intercomparison Project (Obs4MIPs): status for CMIP6. *Geoscientific Model Development*, **2020**, 13, 2945-2958	6.3	9
116	Earth System Model Evaluation Tool (ESMValTool) v2.0 – an extended set of large-scale diagnostics for quasi-operational and comprehensive evaluation of Earth system models in CMIP. *Geoscientific Model Development*, **2020**, 13, 3383-3438	6.3	32
115	Earth System Model Evaluation Tool (ESMValTool) v2.0 – diagnostics for emergent constraints and future projections from Earth system models in CMIP. *Geoscientific Model Development*, **2020**, 13, 4205-4228	6.3	9
114	Quantifying Progress Across Different CMIP Phases With the ESMValTool. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD032321	4.4	10
113	Constraining Uncertainty in Projected Gross Primary Production With Machine Learning. *Journal of Geophysical Research G: Biogeosciences*, **2020**, 125, e2019JG005619	3.7	10
112	ESD Reviews: Climate feedbacks in the Earth system and prospects for their evaluation. *Earth System Dynamics*, **2019**, 10, 379-452	4.8	31

111	Nonlinear Causal Link Estimation Under Hidden Confounding with an Application to Time Series Anomaly Detection. *Lecture Notes in Computer Science*, **2019**, 261-273	0.9	1
110	ESMValTool v2.0 – Extended set of large-scale diagnostics for quasi-operational and comprehensive evaluation of Earth system models in CMIP **2019**,		4
109	Observations for Model Intercomparison Project (Obs4MIPs): Status for CMIP6 **2019**,		1
108	Taking climate model evaluation to the next level. *Nature Climate Change*, **2019**, 9, 102-110	21.4	200
107	Prospects and Caveats of Weighting Climate Models for Summer Maximum Temperature Projections Over North America. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 4509-4526	4.4	39
106	Process-level improvements in CMIP5 models and their impact on tropical variability, the Southern Ocean, and monsoons. *Earth System Dynamics*, **2018**, 9, 33-67	4.8	11
105	Dynamics and composition of the Asian summer monsoon anticyclone. *Atmospheric Chemistry and Physics*, **2018**, 18, 5655-5675	6.8	14
104	Toward Standardized Data Sets for Climate Model Experimentation. *Eos*, **2018**, 99,	1.5	13
103	Climate feedbacks in the Earth system and prospects for their evaluation **2018**,		1
102	Benchmarking CMIP5 models with a subset of ESA CCI Phase 2 data using the ESMValTool. *Remote Sensing of Environment*, **2017**, 203, 9-39	13.2	27
101	A climate model projection weighting scheme accounting for performance and interdependence. *Geophysical Research Letters*, **2017**, 44, 1909	4.9	135
100	CMIP5 Scientific Gaps and Recommendations for CMIP6. *Bulletin of the American Meteorological Society*, **2017**, 98, 95-105	6.1	109
99	Trace gas composition in the Asian summer monsoon anticyclone: a case study based on aircraft observations and model simulations. *Atmospheric Chemistry and Physics*, **2017**, 17, 6091-6111	6.8	8
98	AerChemMIP: quantifying the effects of chemistry and aerosols in CMIP6. *Geoscientific Model Development*, **2017**, 10, 585-607	6.3	119
97	Globale Sicht des Klimawandels **2017**, 7-16		1
96	The effect of future ambient air pollution on human premature mortality to 2100 using output from the ACCMIP model ensemble. *Atmospheric Chemistry and Physics*, **2016**, 16, 9847-9862	6.8	65
95	Constraining Future Summer Austral Jet Stream Positions in the CMIP5 Ensemble by Process-Oriented Multiple Diagnostic Regression*. *Journal of Climate*, **2016**, 29, 673-687	4.4	26
94	The effect of future ambient air pollution on human premature mortality to 2100 using output from the ACCMIP model ensemble **2016**,		1

93	Towards improved and more routine Earth system model evaluation in CMIP. *Earth System Dynamics*, **2016**, 7, 813-830	4.8	48
92	The Scenario Model Intercomparison Project (ScenarioMIP) for CMIP6. *Geoscientific Model Development*, **2016**, 9, 3461-3482	6.3	814
91	The Scenario Model Intercomparison Project (ScenarioMIP) for CMIP6 **2016**,		18
90	ESMValTool (v1.0) – a community diagnostic and performance metrics tool for routine evaluation of Earth system models in CMIP. *Geoscientific Model Development*, **2016**, 9, 1747-1802	6.3	93
89	Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organization. *Geoscientific Model Development*, **2016**, 9, 1937-1958	6.3	2373
88	Projected land photosynthesis constrained by changes in the seasonal cycle of atmospheric CO. *Nature*, **2016**, 538, 499-501	50.4	99
87	Evolving Obs4MIPs to Support Phase 6 of the Coupled Model Intercomparison Project (CMIP6). *Bulletin of the American Meteorological Society*, **2015**, 96, ES131-ES133	6.1	24
86	Quantitative evaluation of ozone and selected climate parameters in a set of EMAC simulations. *Geoscientific Model Development*, **2015**, 8, 733-768	6.3	20
85	Emergent constraints on climate-carbon cycle feedbacks in the CMIP5 Earth system models. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 794-807	3.7	91
84	Climate Model Intercomparisons: Preparing for the Next Phase. *Eos*, **2014**, 95, 77-78	1.5	100
83	Global premature mortality due to anthropogenic outdoor air pollution and the contribution of past climate change. *Environmental Research Letters*, **2013**, 8, 034005	6.2	279
82	Improving Antarctic Total Ozone Projections by a Process-Oriented Multiple Diagnostic Ensemble Regression. *Journals of the Atmospheric Sciences*, **2013**, 70, 3959-3976	2.1	19
81	The Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP): overview and description of models, simulations and climate diagnostics. *Geoscientific Model Development*, **2013**, 6, 179-206	6.3	304
80	Preindustrial to present-day changes in tropospheric hydroxyl radical and methane lifetime from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). *Atmospheric Chemistry and Physics*, **2013**, 13, 5277-5298	6.8	234
79	Pre-industrial to end 21st century projections of tropospheric ozone from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). *Atmospheric Chemistry and Physics* , **2013**, 13, 2063-2090	6.8	420
78	Tropospheric ozone changes, radiative forcing and attribution to emissions in the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). *Atmospheric Chemistry and Physics* , **2013**, 13, 3063-3085	6.8	273
77	Analysis of present day and future OH and methane lifetime in the ACCMIP simulations. *Atmospheric Chemistry and Physics*, **2013**, 13, 2563-2587	6.8	209
76	Long-term ozone changes and associated climate impacts in CMIP5 simulations. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 5029-5060	4.4	200

75	Atmospheric Composition Change: Climate–Chemistry Interactions **2012**, 309-365		1
74	Global-mean temperature change from shipping toward 2050: improved representation of the indirect aerosol effect in simple climate models. *Environmental Science & Technology*, **2012**, 46, 8868-77	193	20
73	Global chemistry-climate modeling and evaluation. *Eos*, **2012**, 93, 539-539	1.5	9
72	Global air quality and climate. *Chemical Society Reviews*, **2012**, 41, 6663-83	58.5	334
71	The Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP): overview and description of models, simulations and climate diagnostics **2012**,		6
70	A community diagnostic tool for chemistry climate model validation. *Geoscientific Model Development*, **2012**, 5, 1061-1073	6.3	10
69	How Good are Chemistry-Climate Models?. *Research Topics in Aerospace*, **2012**, 763-779		
68	Climate Impact of Transport. *Research Topics in Aerospace*, **2012**, 711-725		2
67	Multimodel climate and variability of the stratosphere. *Journal of Geophysical Research*, **2011**, 116,		122
66	Ozone database in support of CMIP5 simulations: results and corresponding radiative forcing. *Atmospheric Chemistry and Physics*, **2011**, 11, 11267-11292	6.8	221
65	Attribution of observed changes in stratospheric ozone and temperature. *Atmospheric Chemistry and Physics*, **2011**, 11, 599-609	6.8	34
64	Projections of UV radiation changes in the 21st century: impact of ozone recovery and cloud effects. *Atmospheric Chemistry and Physics*, **2011**, 11, 7533-7545	6.8	61
63	Climate impact of biofuels in shipping: global model studies of the aerosol indirect effect. *Environmental Science & Technology*, **2011**, 45, 3519-25	10.3	45
62	Multi-model assessment of stratospheric ozone return dates and ozone recovery in CCMVal-2 models. *Atmospheric Chemistry and Physics*, **2010**, 10, 9451-9472	6.8	179
61	Decline and recovery of total column ozone using a multimodel time series analysis. *Journal of Geophysical Research*, **2010**, 115,		64
60	Present-day and future global bottom-up ship emission inventories including polar routes. *Environmental Science & Technology*, **2010**, 44, 1333-9	10.3	69
59	Chemistry–Climate Model Simulations of Twenty-First Century Stratospheric Climate and Circulation Changes. *Journal of Climate*, **2010**, 23, 5349-5374	4.4	242
58	Review of the formulation of present-generation stratospheric chemistry-climate models and associated external forcings. *Journal of Geophysical Research*, **2010**, 115,		134

57	Sensitivity of 21st century stratospheric ozone to greenhouse gas scenarios. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	48
56	Multimodel assessment of the upper troposphere and lower stratosphere: Extratropics. *Journal of Geophysical Research*, **2010**, 115,		56
55	Impact of stratospheric ozone on Southern Hemisphere circulation change: A multimodel assessment. *Journal of Geophysical Research*, **2010**, 115,		239
54	Multimodel assessment of the factors driving stratospheric ozone evolution over the 21st century. *Journal of Geophysical Research*, **2010**, 115,		56
53	Ship track characteristics derived from geostationary satellite observations on the west coast of southern Africa. *Atmospheric Research*, **2010**, 95, 32-39	5.4	6
52	Historical (1850–2000) gridded anthropogenic and biomass burning emissions of reactive gases and aerosols: methodology and application. *Atmospheric Chemistry and Physics*, **2010**, 10, 7017-7039	6.8	1724
51	The potential to narrow uncertainty in projections of stratospheric ozone over the 21st century. *Atmospheric Chemistry and Physics*, **2010**, 10, 9473-9486	6.8	20
50	Transport impacts on atmosphere and climate: Shipping. *Atmospheric Environment*, **2010**, 44, 4735-4771	5.3	549
49	Global Chemistry-Climate Modelling with EMAC **2010**, 663-674		
48	Atmospheric composition change: Climate–Chemistry interactions. *Atmospheric Environment*, **2009**, 43, 5138-5192	5.3	206
47	Shipping emissions: from cooling to warming of climate-and reducing impacts on health. *Environmental Science & Technology*, **2009**, 43, 9057-62	10.3	89
46	Mitigating the health impacts of pollution from oceangoing shipping: an assessment of low-sulfur fuel mandates. *Environmental Science & Technology*, **2009**, 43, 4776-82	10.3	137
45	Clear sky UV simulations for the 21st century based on ozone and temperature projections from Chemistry-Climate Models. *Atmospheric Chemistry and Physics*, **2009**, 9, 1165-1172	6.8	32
44	The Tropical Tropopause Layer 1960–2100. *Atmospheric Chemistry and Physics*, **2009**, 9, 1621-1637	6.8	65
43	Ship emitted NO₂ in the Indian Ocean: comparison of model results with satellite data. *Atmospheric Chemistry and Physics*, **2009**, 9, 7289-7301	6.8	45
42	Assessment of near-future policy instruments for oceangoing shipping: impact on atmospheric aerosol burdens and the earth's radiation budget. *Environmental Science & Technology*, **2009**, 43, 5592-8	10.3	47
41	Toward effective emissions of ships in global models. *Meteorologische Zeitschrift*, **2008**, 17, 117-129	3.1	19
40	A model intercomparison analysing the link between column ozone and geopotential height anomalies in January. *Atmospheric Chemistry and Physics*, **2008**, 8, 2519-2535	6.8	8

39	Quantitative performance metrics for stratospheric-resolving chemistry-climate models. *Atmospheric Chemistry and Physics*, **2008**, 8, 5699-5713	6.8	81
38	Mortality from ship emissions: a global assessment. *Environmental Science & Technology*, **2007**, 41, 8512-8	10.3	671
37	Multimodel projections of stratospheric ozone in the 21st century. *Journal of Geophysical Research*, **2007**, 112,		266
36	Global ship track distribution and radiative forcing from 1 year of AATSR data. *Geophysical Research Letters*, **2007**, 34,	4.9	46
35	Global model simulations of the impact of ocean-going ships on aerosols, clouds, and the radiation budget. *Atmospheric Chemistry and Physics*, **2007**, 7, 5061-5079	6.8	169
34	Multi-model simulations of the impact of international shipping on Atmospheric Chemistry and Climate in 2000 and 2030. *Atmospheric Chemistry and Physics*, **2007**, 7, 757-780	6.8	104
33	Assessment of temperature, trace species, and ozone in chemistry-climate model simulations of the recent past. *Journal of Geophysical Research*, **2006**, 111,		374
32	Impact of ship emissions on the microphysical, optical and radiative properties of marine stratus: a case study. *Atmospheric Chemistry and Physics*, **2006**, 6, 4925-4942	6.8	27
31	Hemispheric ozone variability indices derived from satellite observations and comparison to a coupled chemistry-climate model. *Atmospheric Chemistry and Physics*, **2006**, 6, 5105-5120	6.8	1
30	Emissions from international shipping: 1. The last 50 years. *Journal of Geophysical Research*, **2005**, 110,		388
29	Emissions from international shipping: 2. Impact of future technologies on scenarios until 2050. *Journal of Geophysical Research*, **2005**, 110,		176
28	Long-term changes and variability in a transient simulation with a chemistry-climate model employing realistic forcing. *Atmospheric Chemistry and Physics*, **2005**, 5, 2121-2145	6.8	95
27	A Strategy for Process-Oriented Validation of Coupled Chemistry□Climate Models. *Bulletin of the American Meteorological Society*, **2005**, 86, 1117-1134	6.1	118
26	The impact of horizontal transport on the chemical composition in the tropopause region: lightning NOx and streamers. *Advances in Space Research*, **2004**, 33, 1058-1061	2.4	10
25	Satellite measurements of NO2 from international shipping emissions. *Geophysical Research Letters* , **2004**, 31,	4.9	117
24	Impact of large solar zenith angles on lower stratospheric dynamical and chemical processes in a coupled chemistry-climate model. *Atmospheric Chemistry and Physics*, **2003**, 3, 1981-1990	6.8	12
23	Climatologies of subtropical mixing derived from 3D models. *Atmospheric Chemistry and Physics*, **2003**, 3, 1007-1021	6.8	8
22	Impact of Accurate Photolysis Calculations on the Simulation of Stratospheric Chemistry. *Journal of Atmospheric Chemistry*, **2003**, 44, 225-240	3.2	4

21	Interpretation of Mid-Stratospheric Arctic Ozone Measurements Using a Photochemical Box-Model. *Journal of Atmospheric Chemistry*, **1999**, 34, 281-290	3.2	6
20	A harmonic substitute model sheds light upon the rotational tunnelling spectrum of infinitely many coupled methyl groups. *Physica B: Condensed Matter*, **1995**, 212, 379-390	2.8	1
19	Evaluation of Climate Models741-866		264
18	Multi-model assessment of stratospheric ozone return dates and ozone recovery in CCMVal-2 models		5
17	Historical (1850–2000) gridded anthropogenic and biomass burning emissions of reactive gases and aerosols: methodology and application		24
16	Projections of UV radiation changes in the 21st century: impact of ozone recovery and cloud effects		3
15	Ozone database in support of CMIP5 simulations: results and corresponding radiative forcing		26
14	Pre-industrial to end 21st century projections of tropospheric ozone from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP)		8
13	Analysis of present day and future OH and methane lifetime in the ACCMIP simulations		10
12	Tropospheric ozone changes, radiative forcing and attribution to emissions in the Atmospheric Chemistry and Climate Model Inter-comparison Project (ACCMIP)		8
11	Preindustrial to present day changes in tropospheric hydroxyl radical and methane lifetime from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP)		5
10	A model intercomparison analysing the link between ozone and geopotential height anomalies in January		1
9	Global model simulations of the impact of ocean-going ships on aerosols, clouds, and the radiation budget		3
8	Quantitative performance metrics for stratospheric-resolving chemistry-climate models		2
7	The Tropical Tropopause Layer 1960–2100		8
6	Ship emitted NO₂ in the Indian Ocean: comparison of model results with satellite data		4
5	Climate model projections from the Scenario Model Intercomparison Project (ScenarioMIP) of CMIP6		4
4	AerChemMIP: Quantifying the effects of chemistry and aerosols in CMIP6		7

List of Publications

3	Earth System Model Evaluation Tool (ESMValTool) v2.0 – diagnostics for extreme events, regional and impact evaluation and analysis of Earth system models in CMIP	7
2	Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organisation	63
1	ESMValTool (v1.0) – a community diagnostic and performance metrics tool for routine evaluation of Earth System Models in CMIP	8