Yuk L Yung

List of Publications by Year
in descending order

125 papers	8,024 citations	76322 40 h-index	54911 84 g-index
135 all docs	135 docs citations	135 times ranked	6942 citing authors

#	Article	IF	Citations
1	Photochemistry of the atmosphere of Titan - Comparison between model and observations. Astrophysical Journal, Supplement Series, 1984, 55, 465.	7.7	930
2	Unexpected air pollution with marked emission reductions during the COVID-19 outbreak in China. Science, 2020, 369, 702-706.	12.6	563
3	Greenhouse Effects due to Man-Mad Perturbations of Trace Gases. Science, 1976, 194, 685-690.	12.6	485
4	A Photochemical Model of the Martian Atmosphere. Icarus, 1994, 111, 124-150.	2.5	330
5	The ACOS CO₂ retrieval algorithm â€“ Part II: Global X_{CO₂} data characterization. Atmospheric Measurement Techniques, 2012, 5, 687-707.	3.1	320
6	Photochemistry of Planetary Atmospheres. , 1999, , .		312
7	Photochemistry of the stratosphere of Venus: Implications for atmospheric evolution. Icarus, 1982, 51, 199-247.	2.5	274
8	Vertical transport and photochemistry in the terrestrial mesosphere and lower thermosphere (50â€“120 km). Journal of Geophysical Research, 1981, 86, 3617-3627.	3.3	262
9	The vertical distribution of ozone in the mesosphere and lower thermosphere. Journal of Geophysical Research, 1984, 89, 4841-4872.	3.3	249
10	The Cassini Ultraviolet Imaging Spectrograph Investigation. Space Science Reviews, 2004, 115, 299-361.	8.1	210
11	PRODUCTION, ISOTOPICCOMPOSITION, ANDATMOSPHERICFATE OFBIOLOGICALLYPRODUCEDNITROUSOXIDE. Annual Review of Earth and Planetary Sciences, 2003, 31, 329-356.	11.0	191
12	Sulfur chemistry in the middle atmosphere of Venus. Icarus, 2012, 217, 714-739.	2.5	176
13	Isotopic Fractionation of Stratospheric Nitrous Oxide. Science, 1997, 278, 1778-1780.	12.6	165
14	Satellite remote sounding of midâ€tropospheric CO₂. Geophysical Research Letters, 2008, 35, .	4.0	151
15	HDO in the Martian atmosphere: Implications for the abundance of crustal water. Icarus, 1988, 76, 146-159.	2.5	140
16	Dust: A Diagnostic of the Hydrologic Cycle During the Last Glacial Maximum. Science, 1996, 271, 962-963.	12.6	127
17	Atmospheric Trace Molecule Spectroscopy (ATMOS) Experiment Version 3 data retrievals. Applied Optics, 2002, 41, 6968.	2.1	111
18	Spaceborne measurements of atmospheric CO2by high-resolution NIR spectrometry of reflected sunlight: An introductory study. Geophysical Research Letters, 2002, 29, 11-1-11-4.	4.0	111

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19	Tightening of tropical ascent and high clouds key to precipitation change in a warmer climate. Nature Communications, 2017, 8, 15771.	12.8	107
20	Photolytically Generated Aerosols in the Mesosphere and Thermosphere of Titan. Astrophysical Journal, 2007, 661, L199-L202.	4.5	106
21	Weakening and strengthening structures in the Hadley Circulation change under global warming and implications for cloud response and climate sensitivity. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5787-5805.	3.3	104
22	Vertical profiling of SO2 and SO above Venusâ€™ clouds by SPICAV/SOIR solar occultations. Icarus, 2012, 217, 740-751.	2.5	103
23	Scattering and absorbing aerosols in the climate system. Nature Reviews Earth & Environment, 2022, 3, 363-379.	29.7	93
24	Tracing the fate of carbon and the atmospheric evolution of Mars. Nature Communications, 2015, 6, 10003.	12.8	90
25	Measured HDO/H2O ratios across the tropical tropopause. Geophysical Research Letters, 2003, 30, .	4.0	89
26	Greenhouse effect due to atmospheric nitrous oxide. Geophysical Research Letters, 1976, 3, 619-621.	4.0	82
27	Photolysis of sulphuric acid as the source of sulphur oxides in the mesosphere of Venus. Nature Geoscience, 2010, 3, 834-837.	12.9	75
28	Long-term drying of Mars by sequestration of ocean-scale volumes of water in the crust. Science, 2021, 372, 56-62.	12.6	73
29	Toward consistency between trends in bottom-up CO₂ emissions and top-down atmospheric measurements in the Los Angeles megacity. Atmospheric Chemistry and Physics, 2016, 16, 3843-3863.	4.9	72
30	Mapping CH₄ : CO₂ ratios in Los Angeles with CLARS-FTS from Mount Wilson, California. Atmospheric Chemistry and Physics, 2015, 15, 241-252.	4.9	69
31	Evidence for carbonyl sulfide (OCS) conversion to CO in the lower atmosphere of Venus. Journal of Geophysical Research, 2009, 114, .	3.3	56
32	Application of principal component analysis to high spectral resolution radiative transfer: A case study of the band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 95, 539-556.	2.3	55
33	Isotopic fractionation of nitrous oxide in the stratosphere: Comparison between model and observations. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	54
34	Interannual variability of midâ€tropospheric CO₂ from Atmospheric Infrared Sounder. Geophysical Research Letters, 2010, 37, .	4.0	52
35	Atmospheric composition, chemistry, and clouds. Geophysical Monograph Series, 2007, , 73-100.	0.1	50
36	Methane on Mars and Habitability: Challenges and Responses. Astrobiology, 2018, 18, 1221-1242.	3.0	50

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37	From COVID-19 to future electrification: Assessing traffic impacts on air quality by a machine-learning model. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	50
38	Methane bursts as a trigger for intermittent lake-forming climates on post-Noachian Mars. Nature Geoscience, 2017, 10, 737-740.	12.9	49
39	A semianalytic model for photo-induced isotopic fractionation in simple molecules. Journal of Geophysical Research, 2004, 109, .	3.3	47
40	Seasonal cycle of N2 O: Analysis of data. Global Biogeochemical Cycles, 2007, 21, .	4.9	47
41	Isotopic composition of stratospheric ozone. Journal of Geophysical Research, 2006, 111, .	3.3	45
42	Tropical mid-tropospheric CO ₂ variability driven by the Maddenâ€“Julian oscillation. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 19171-19175.	7.1	45
43	Societal shifts due to COVID-19 reveal large-scale complexities and feedbacks between atmospheric chemistry and climate change. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	42
44	Laboratory evidence for a key intermediate in the Venus atmosphere: Peroxychloroformyl radical. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14007-14010.	7.1	41
45	Monthly trends of methane emissions in Los Angeles from 2011 to 2015 inferred by CLARS-FTS observations. Atmospheric Chemistry and Physics, 2016, 16, 13121-13130.	4.9	39
46	CO2in the upper troposphere: Influence of stratosphere-troposphere exchange. Geophysical Research Letters, 2006, 33, .	4.0	37
47	Using Deep Space Climate Observatory Measurements to Study the Earth as an Exoplanet. Astronomical Journal, 2018, 156, 26.	4.7	37
48	Coordinated Hubble Space Telescope and Venus Express Observations of Venusâ€™ upper cloud deck. Icarus, 2015, 258, 309-336.	2.5	35
49	A Born-Oppenheimer photolysis model of N2O fractionation. Geophysical Research Letters, 2003, 30, .	4.0	34
50	Atmospheric Methane Emissions Correlate With Natural Gas Consumption From Residential and Commercial Sectors in Los Angeles. Geophysical Research Letters, 2019, 46, 8563-8571.	4.0	32
51	Quasi-biennial oscillation and quasi-biennial oscillationâ€“annual beat in the tropical total column ozone: A two-dimensional model simulation. Journal of Geophysical Research, 2004, 109, .	3.3	31
52	On the use of principal component analysis to speed up radiative transfer calculations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 810-816.	2.3	30
53	Reduced European aerosol emissions suppress winter extremes over northern Eurasia. Nature Climate Change, 2020, 10, 225-230.	18.8	29
54	Evaluation of Radiative Transfer Models With Clouds. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6142-6157.	3.3	28

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55	Elucidating the Role of Anthropogenic Aerosols in Arctic Sea Ice Variations. Journal of Climate, 2018, 31, 99-114.	3.2	27
56	Earth as an Exoplanet: A Two-dimensional Alien Map. Astrophysical Journal Letters, 2019, 882, L1.	8.3	27
57	Constraining the vertical distribution of coastal dust aerosol using OCO-2 O2 A-band measurements. Remote Sensing of Environment, 2020, 236, 111494.	11.0	27
58	Sensitivity study of advection and diffusion coefficients in a twoâ€dimensional stratospheric model using excess carbon 14 data. Journal of Geophysical Research, 1989, 94, 18467-18484.	3.3	25
59	Meridional Transport in the Stratosphere of Jupiter. Astrophysical Journal, 2005, 635, L177-L180.	4.5	25
60	VERTICAL DISTRIBUTION OF <i>C</i> ₃ -HYDROCARBONS IN THE STRATOSPHERE OF TITAN. Astrophysical Journal Letters, 2015, 803, L19.	8.3	25
61	Hypotheses for Near-Surface Exchange of Methane on Mars. Astrobiology, 2016, 16, 539-550.	3.0	25
62	The seasonal cycle of N2O. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	23
63	Influence of Doubled CO2 on Ozone via Changes in the Brewerâ€“Dobson Circulation. Journals of the Atmospheric Sciences, 2007, 64, 2751-2755.	1.7	23
64	A non-monotonic eddy diffusivity profile of Titan's atmosphere revealed by Cassini observations. Planetary and Space Science, 2014, 104, 48-58.	1.7	23
65	Twoâ€dimensional atmospheric transport and chemistry model: Numerical experiments with a new advection algorithm. Journal of Geophysical Research, 1990, 95, 7467-7483.	3.3	22
66	Heterogeneous reactions with NaCl in the El Chichon volcanic aerosols. Geophysical Research Letters, 1991, 18, 673-676.	4.0	22
67	A multilayer cloud detection algorithm for the Suomi-NPP Visible Infrared Imager Radiometer Suite (VIIRS). Remote Sensing of Environment, 2019, 227, 1-11.	11.0	22
68	CO 2 semiannual oscillation in the middle troposphere and at the surface. Global Biogeochemical Cycles, 2012, 26, .	4.9	21
69	Aerosol scattering effects on water vapor retrievals over the Los Angeles Basin. Atmospheric Chemistry and Physics, 2017, 17, 2495-2508.	4.9	21
70	Simulated retrievals for the remote sensing of CO₂, CH₄, CO, and H₂O from geostationary orbit. Atmospheric Measurement Techniques, 2015, 8, 4817-4830.	3.1	20
71	Constraining Aerosol Vertical Profile in the Boundary Layer Using Hyperspectral Measurements of Oxygen Absorption. Geophysical Research Letters, 2018, 45, 10,772.	4.0	20
72	Simulation of upper tropospheric CO₂ from chemistry and transport models. Global Biogeochemical Cycles, 2008, 22, .	4.9	18

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73	Sources of the oxygen isotopic anomaly in atmospheric N₂O. Journal of Geophysical Research, 2007, 112, .	3.3	17
74	Midlatitude atmospheric OH response to the most recent 11-y solar cycle. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2023-2028.	7.1	17
75	Remote sensing of angular scattering effect of aerosols in a North American megacity. Remote Sensing of Environment, 2020, 242, 111760.	11.0	17
76	Seasonal cycle of C¹⁶O¹⁶O, C¹⁶O¹⁷O, and C¹⁶O¹⁸O in the middle atmosphere: Implications for mesospheric dynamics and biogeochemical sources and sinks of CO₂. Journal of Geophysical Research, 2008, 113, .	3.3	16
77	Influence of Stratospheric Sudden Warming on AIRS Midtropospheric CO2. Journals of the Atmospheric Sciences, 2013, 70, 2566-2573.	1.7	16
78	The influence of tropospheric biennial oscillation on mid-tropospheric CO₂. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	15
79	A fast and accurate PCA based radiative transfer model: Extension to the broadband shortwave region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 173, 65-71.	2.3	15
80	Searching for Planets Orbiting <i>Î±</i> Cen A with the <i>James Webb Space Telescope</i>. Publications of the Astronomical Society of the Pacific, 2020, 132, 015002.	3.1	14
81	First evidence of middle atmospheric <scp>HO₂</scp> response to 27 day solar cycles from satellite observations. Geophysical Research Letters, 2015, 42, 10,004.	4.0	13
82	Accounting for aerosol scattering in the CLARS retrieval of column averaged CO₂ mixing ratios. Journal of Geophysical Research D: Atmospheres, 2015, 120, 7205-7218.	3.3	13
83	Tracking the atmospheric pulse of a North American megacity from a mountaintop remote sensing observatory. Remote Sensing of Environment, 2020, 248, 112000.	11.0	13
84	PCA-based radiative transfer: Improvements to aerosol scheme, vertical layering and spectral binning. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 198, 104-111.	2.3	12
85	Retrieval of Iceâ€Overâ€Water Cloud Microphysical and Optical Properties Using Passive Radiometers. Geophysical Research Letters, 2020, 47, e2020GL088941.	4.0	12
86	Observed Tightening of Tropical Ascent in Recent Decades and Linkage to Regional Precipitation Changes. Geophysical Research Letters, 2020, 47, e2019GL085809.	4.0	12
87	A two-stage mechanism for escape of Na and K from Io. Nature, 1983, 304, 710-712.	27.8	11
88	X_{CO2} retrieval error over deserts near critical surface albedo. Earth and Space Science, 2016, 3, 36-45.	2.6	11
89	Impact of Amazonian Fires on Atmospheric CO₂. Geophysical Research Letters, 2021, 48, e2020GL091875.	4.0	11
90	Sulfur monoxide dimer chemistry as a possible source of polysulfur in the upper atmosphere of Venus. Nature Communications, 2021, 12, 175.	12.8	11

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91	Assessing planetary complexity and potential agnostic biosignatures using epsilon machines. Nature Astronomy, 2022, 6, 387-392.	10.1	11
92	Evidence for O-atom exchange in the O(1D) + N2O reaction as the source of mass-independent isotopic fractionation in atmospheric N2O. Geophysical Research Letters, 2004, 31, .	4.0	10
93	Inducing Factors and Impacts of the October 2017 California Wildfires. Earth and Space Science, 2019, 6, 1480-1488.	2.6	10
94	A dichotomy between model responses of tropical ascent and descent to surface warming. Npj Climate and Atmospheric Science, 2019, 2, .	6.8	10
95	Earth as a Proxy Exoplanet: Deconstructing and Reconstructing Spectrophotometric Light Curves. Astronomical Journal, 2021, 161, 122.	4.7	9
96	Study of Terrestrial Glints Based on DSCOVR Observations. Earth and Space Science, 2019, 6, 166-173.	2.6	8
97	Quantifying the impact of aerosol scattering on the retrieval of methane from airborne remote sensing measurements. Atmospheric Measurement Techniques, 2020, 13, 6755-6769.	3.1	8
98	Mars Methane Sources in Northwestern Gale Crater Inferred From Back Trajectory Modeling. Earth and Space Science, 2021, 8, e2021EA001915.	2.6	8
99	Seasonal Variations of Solarâ€Induced Fluorescence, Precipitation, and Carbon Dioxide Over the Amazon. Earth and Space Science, 2022, 9, .	2.6	8
100	Retrieval of Chemical Abundances in Titan's Upper Atmosphere From Cassini UVIS Observations With Pointing Motion. Earth and Space Science, 2019, 6, 1057-1066.	2.6	7
101	OH column abundance over Table Mountain Facility, California: Intra-annual variations and comparisons to model predictions for 1997-2001. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	6
102	Resolving the Modelâ€Observation Discrepancy in the Mesospheric and Stratospheric HO_{<i>x</i>} Chemistry. Earth and Space Science, 2017, 4, 607-624.	2.6	6
103	A Comparative Study of Atmospheric Moisture Recycling Rate between Observations and Models. Journal of Climate, 2018, 31, 2389-2398.	3.2	6
104	Observing Oceans in Tightly Packed Planetary Systems: Perspectives from Polarization Modeling of the TRAPPIST-1 System. Astronomical Journal, 2018, 156, 143.	4.7	6
105	Estimating nitrous oxide (N2O) emissions for the Los Angeles Megacity using mountaintop remote sensing observations. Remote Sensing of Environment, 2021, 259, 112351.	11.0	6
106	FUNDAMENTAL MODES OF ATMOSPHERIC CFC-11 FROM EMPIRICAL MODE DECOMPOSITION. Advances in Adaptive Data Analysis, 2012, 04, 1250024.	0.6	5
107	Resolving a longâ€standing modelâ€observation discrepancy on ozone solar cycle response. Earth and Space Science, 2016, 3, 431-440.	2.6	5
108	GFIT3: a full physics retrieval algorithm for remote sensing of greenhouse gases in the presence of aerosols. Atmospheric Measurement Techniques, 2021, 14, 6483-6507.	3.1	5

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109	Solar 11-Year Cycle Signal in Stratospheric Nitrogen Dioxideâ€"Similarities and Discrepancies Between Model and NDACC Observations. Solar Physics, 2020, 295, 1.	2.5	3
110	Detecting supercooled water clouds using passive radiometer measurements. Geophysical Research Letters, 0, , .	4.0	3
111	Rotation Period Detection for Earth-like Exoplanets. Astronomical Journal, 2022, 163, 27.	4.7	3
112	Vertical Distribution of Cyclopropenylidene and Propadiene in the Atmosphere of Titan. Astrophysical Journal, 2022, 933, 230.	4.5	3
113	Analysis of Thermal Emission Spectrometer data using spectralÂEOF andÂtri-spectral methods. Icarus, 2003, 165, 301-314.	2.5	2
114	Reply to comment by RÃ¶ckmann and Kaiser on â€œEvidence for O-atom exchange in the O(1D) + N2O reaction as the source of mass-independent isotopic fractionation in atmospheric N2Oâ€ Geophysical Research Letters, 2005, 32, .	4.0	2
115	A decadal microwave record of tropical air temperature from AMSU-A/aqua observations. Climate Dynamics, 2013, 41, 1385-1405.	3.8	2
116	Diurnal variability of stratospheric column NO₂ measured using direct solar and lunar spectra over Table Mountain, California (34.38Â°â€‰N). Atmospheric Measurement Techniques, 2021, 14, 7495-7510.	3.1	2
117	Reaction of methane and UV-activated perchlorate: Relevance to heterogeneous loss of methane in the atmosphere of Mars. Icarus, 2022, 376, 114832.	2.5	2
118	Seasonality in Mars atmospheric methane driven by microseepage, barometric pumping, and adsorption. Icarus, 2022, 383, 115079.	2.5	2
119	Evaluation of Modeled Hyperspectral Infrared Spectra Against Allâ€Sky AIRS Observations Using Different Cloud Overlap Schemes. Earth and Space Science, 2022, 9, .	2.6	2
120	Effect of the Quasiâ€Biennial Oscillation on Carbon Monoxide in the Stratosphere. Earth and Space Science, 2019, 6, 1273-1283.	2.6	1
121	Surface Mapping of Earth-like Exoplanets using Single Point Light Curves. Journal of Visualized Experiments, 2020, , .	0.3	1
122	Remote sensing of atmospheric HDO/H2O in southern California from CLARS-FTS. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, , 108254.	2.3	1
123	Earth as a Proxy Exoplanet: Simulating DSCOVR/EPIC Observations Using the Earth Spectrum Simulator. Astronomical Journal, 2022, 163, 285.	4.7	1
124	Does the Nile reflect solar variability?. Proceedings of the International Astronomical Union, 2006, 2, 511.	0.0	0
125	Seasonal Variations of Chemical Species and Haze in Titan's Upper Atmosphere. Planetary Science Journal, 2022, 3, 130.	3.6	0