

Lori L Neary

List of Publications by Year in descending order

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Version: 2024-02-01

52
papers

1,663
citations

257101

24
h-index

301761

39
g-index

74
all docs

74
docs citations

74
times ranked

1474
citing authors

#	ARTICLE	IF	CITATIONS
1	No detection of methane on Mars from early ExoMars Trace Gas Orbiter observations. <i>Nature</i> , 2019, 568, 517-520.	13.7	111
2	Martian dust storm impact on atmospheric H ₂ O and D/H observed by ExoMars Trace Gas Orbiter. <i>Nature</i> , 2019, 568, 521-525.	13.7	107
3	NOMAD, an Integrated Suite of Three Spectrometers for the ExoMars Trace Gas Mission: Technical Description, Science Objectives and Expected Performance. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	95
4	Water Vapor Vertical Profiles on Mars in Dust Storms Observed by TGO/NOMAD. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 3482-3497.	1.5	88
5	Connecting surface emissions, convective uplifting, and long-range transport of carbon monoxide in the upper troposphere: New observations from the Aura Microwave Limb Sounder. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	86
6	GEM-AQ, an on-line global multiscale chemical weather modelling system: model description and evaluation of gas phase chemistry processes. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 3255-3281.	1.9	84
7	Science objectives and performances of NOMAD, a spectrometer suite for the ExoMars TGO mission. <i>Planetary and Space Science</i> , 2015, 119, 233-249.	0.9	77
8	Analysis of reactive bromine production and ozone depletion in the Arctic boundary layer using 3-D simulations with GEM-AQ: inference from synoptic-scale patterns. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 3949-3979.	1.9	75
9	The climatology of carbon monoxide and water vapor on Mars as observed by CRISM and modeled by the GEM-Mars general circulation model. <i>Icarus</i> , 2018, 301, 117-131.	1.1	74
10	Independent confirmation of a methane spike on Mars and a source region east of Gale Crater. <i>Nature Geoscience</i> , 2019, 12, 326-332.	5.4	63
11	Explanation for the Increase in High-Altitude Water on Mars Observed by NOMAD During the 2018 Global Dust Storm. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL084354.	1.5	62
12	Mars atmospheric chemistry simulations with the GEM-Mars general circulation model. <i>Icarus</i> , 2019, 326, 197-224.	1.1	52
13	The GEM-Mars general circulation model for Mars: Description and evaluation. <i>Icarus</i> , 2018, 300, 458-476.	1.1	46
14	First space-based observations of formic acid (HCOOH): Atmospheric Chemistry Experiment austral spring 2004 and 2005 Southern Hemisphere tropical-mid-latitude upper tropospheric measurements. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	42
15	GEM/POPs: a global 3-D dynamic model for semi-volatile persistent organic pollutants – Part 2: Global transports and budgets of PCBs. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 4015-4025.	1.9	38
16	A solar escalator on Mars: Self-lifting of dust layers by radiative heating. <i>Geophysical Research Letters</i> , 2015, 42, 7319-7326.	1.5	38
17	Multi-model Meteorological and Aeolian Predictions for Mars 2020 and the Jezero Crater Region. <i>Space Science Reviews</i> , 2021, 217, 20.	3.7	35
18	Saltation under Martian gravity and its influence on the global dust distribution. <i>Icarus</i> , 2018, 306, 25-31.	1.1	33

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19	Hydrogen cyanide in the upper troposphere: GEM-AQ simulation and comparison with ACE-FTS observations. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 4301-4313.	1.9	32
20	Methane on Mars: New insights into the sensitivity of CH ₄ with the NOMAD/ExoMars spectrometer through its first in-flight calibration. <i>Icarus</i> , 2019, 321, 671-690.	1.1	32
21	Expected performances of the NOMAD/ExoMars instrument. <i>Planetary and Space Science</i> , 2016, 124, 94-104.	0.9	31
22	Water heavily fractionated as it ascends on Mars as revealed by ExoMars/NOMAD. <i>Science Advances</i> , 2021, 7, .	4.7	31
23	Evaluation of the GEM-AQ air quality model during the QuÃ©bec smoke event of 2002: Analysis of extensive and intensive optical disparities. <i>Atmospheric Environment</i> , 2006, 40, 3737-3749.	1.9	27
24	Comprehensive investigation of Mars methane and organics with ExoMars/NOMAD. <i>Icarus</i> , 2021, 357, 114266.	1.1	27
25	Optical and radiometric models of the NOMAD instrument part I: the UVIS channel. <i>Optics Express</i> , 2015, 23, 30028.	1.7	26
26	Optical and radiometric models of the NOMAD instrument part II: the infrared channels - SO and LNO. <i>Optics Express</i> , 2016, 24, 3790.	1.7	25
27	Formation of layers of methane in the atmosphere of Mars after surface release. <i>Geophysical Research Letters</i> , 2016, 43, 1868-1875.	1.5	20
28	Studying methane and other trace species in the Mars atmosphere using a SOIR instrument. <i>Planetary and Space Science</i> , 2011, 59, 292-298.	0.9	19
29	Annual Appearance of Hydrogen Chloride on Mars and a Striking Similarity With the Water Vapor Vertical Distribution Observed by TGO/NOMAD. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092506.	1.5	15
30	The Deuterium Isotopic Ratio of Water Released From the Martian Caps as Measured With TGO/NOMAD. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	15
31	Radiation Environment and Doses on Mars at Oxia Planum and Mawrth Vallis: Support for Exploration at Sites With High Biosignature Preservation Potential. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006488.	1.5	14
32	ExoMars TGO/NOMADâ€™UVIS Vertical Profiles of Ozone: 2. The Highâ€™Altitude Layers of Atmospheric Ozone. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006834.	1.5	14
33	First application of MC2-AQ to multiscale air quality modelling over Europe. <i>Physics and Chemistry of the Earth</i> , 2002, 27, 1517-1524.	1.2	12
34	First Detection and Thermal Characterization of Terminator CO ₂ Ice Clouds With ExoMars/NOMAD. <i>Geophysical Research Letters</i> , 2021, 48, .	1.5	12
35	The climatology of carbon monoxide on Mars as observed by NOMAD nadir-geometry observations. <i>Icarus</i> , 2021, 362, 114404.	1.1	11
36	Explaining NOMAD D/H Observations by Cloudâ€™Induced Fractionation of Water Vapor on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	11

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37	Ground-based infrared mapping of H ₂ O ₂ on Mars near opposition. <i>Astronomy and Astrophysics</i> , 2019, 627, A60.	2.1	8
38	Impact of gradients at the martian terminator on the retrieval of ozone from SPICAM/MEx. <i>Icarus</i> , 2021, 353, 113598.	1.1	8
39	A Global and Seasonal Perspective of Martian Water Vapor From ExoMars/NOMAD. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, .	1.5	8
40	Two test-cases for synergistic detections in the Martian atmosphere: Carbon monoxide and methane. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 189, 86-104.	1.1	7
41	Probing the Atmospheric Cl Isotopic Ratio on Mars: Implications for Planetary Evolution and Atmospheric Chemistry. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092650.	1.5	7
42	Variations in Vertical CO ₂ Profiles in the Martian Mesosphere and Lower Thermosphere Measured by the ExoMars TGO/NOMAD: Implications of Variations in Eddy Diffusion Coefficient. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	7
43	Planet-Wide Ozone Destruction in the Middle Atmosphere on Mars During Global Dust Storm. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	7
44	Seasonal and Spatial Variability of Carbon Monoxide (CO) in the Martian Atmosphere From PFS/MEX Observations. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006480.	1.5	6
45	Assessment of emissions data for the Toronto region using aircraft-based measurements and an air quality model. <i>Atmospheric Environment</i> , 2001, 35, 6453-6463.	1.9	5
46	Machine learning for automatic identification of new minor species. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 259, 107361.	1.1	2
47	Developments and Results from a Global Multiscale Air Quality Model (GEM-AQ). , 2007, , 403-410.		2
48	High Resolution Air Quality Simulations with MC2-AQ and GEM-AQ. , 2007, , 714-720.		2
49	Evaluating a Canadian regional air quality model using ground-based observations in north-eastern Canada and United States. <i>Journal of Environmental Monitoring</i> , 2003, 5, 40-46.	2.1	1
50	Observation Capability of a Ground-Based Terahertz Radiometer for Vertical Profiles of Oxygen and Water Abundances in Martian Atmosphere. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2022, 60, 1-11.	2.7	1
51	Multiscale Atmospheric Chemistry Modelling with GEM-AQ. , 2010, , 55-60.		0
52	The Use of Meso-Scale Atmospheric Circulation Types as a Strategy for Modelling Long-Term Trends in Air Pollution. <i>NATO Security Through Science Series C: Environmental Security</i> , 2008, , 145-153.	0.1	0