Aoki Shohei

List of Publications by Year
in descending order

55 papers	1,357 citations	331259 21 h-index	360668 35 g-index
81 all docs	81 docs citations	81 times ranked	825 citing authors

#	Article	IF	Citations
1	No detection of methane on Mars from early ExoMars Trace Gas Orbiter observations. Nature, 2019, 568, 517-520.	13.7	111
2	Martian dust storm impact on atmospheric H2O and D/H observed by ExoMars Trace Gas Orbiter. Nature, 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. Space Science Reviews, 2018, 214, 1.	3.7	95
4	Water Vapor Vertical Profiles on Mars in Dust Storms Observed by TGO/NOMAD. Journal of Geophysical Research E: Planets, 2019, 124, 3482-3497.	1.5	88
5	Science objectives and performances of NOMAD, a spectrometer suite for the ExoMars TGO mission. Planetary and Space Science, 2015, 119, 233-249.	0.9	77
6	Independent confirmation of a methane spike on Mars and a source region east of Gale Crater. Nature Geoscience, 2019, 12, 326-332.	5.4	63
7	Explanation for the Increase in Highâ€Altitude Water on Mars Observed by NOMAD During the 2018 Global Dust Storm. Geophysical Research Letters, 2020, 47, e2019GL084354.	1.5	62
8	Seasonal variation of the HDO/H2O ratio in the atmosphere of Mars at the middle of northern spring and beginning of northern summer. Icarus, 2015, 260, 7-22.	1.1	47
9	Martian water loss to space enhanced by regional dust storms. Nature Astronomy, 2021, 5, 1036-1042.	4.2	40
10	Strong Variability of Martian Water Ice Clouds During Dust Storms Revealed From ExoMars Trace Gas Orbiter/NOMAD. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006250.	1.5	39
11	Transient HCl in the atmosphere of Mars. Science Advances, 2021, 7, .	4.7	37
12	Mesospheric CO2 ice clouds on Mars observed by Planetary Fourier Spectrometer onboard Mars Express. Icarus, 2018, 302, 175-190.	1.1	34
13	The current weather and climate of Mars: 12â€¯years of atmospheric monitoring by the Planetary Fourier Spectrometer on Mars Express. Icarus, 2021, 353, 113406.	1.1	34
14	Methane on Mars: New insights into the sensitivity of CH4 with the NOMAD/ExoMars spectrometer through its first in-flight calibration. Icarus, 2019, 321, 671-690.	1.1	32
15	Expected performances of the NOMAD/ExoMars instrument. Planetary and Space Science, 2016, 124, 94-104.	0.9	31
16	Water heavily fractionated as it ascends on Mars as revealed by ExoMars/NOMAD. Science Advances, 2021, 7, .	4.7	31
17	Characterization of dust activity on Mars from MY27 to MY32 by PFS-MEX observations. Icarus, 2018, 310, 32-47.	1.1	28
18	Comprehensive investigation of Mars methane and organics with ExoMars/NOMAD. Icarus, 2021, 357, 114266.	1.1	27

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19	Optical and radiometric models of the NOMAD instrument part I: the UVIS channel. Optics Express, 2015, 23, 30028.	1.7	26
20	New measurements of D/H on Mars using EXES aboard SOFIA. Astronomy and Astrophysics, 2018, 612, A112.	2.1	26
21	Optical and radiometric models of the NOMAD instrument part II: the infrared channels - SO and LNO. Optics Express, 2016, 24, 3790.	1.7	25
22	Enhanced water loss from the martian atmosphere during a regional-scale dust storm and implications for long-term water loss. Earth and Planetary Science Letters, 2021, 571, 117109.	1.8	22
23	IR heterodyne spectrometer MILAHI for continuous monitoring observatory of Martian and Venusian atmospheres at Mt. HaleakalÄ, Hawaii. Planetary and Space Science, 2016, 126, 34-48.	0.9	18
24	ExoMars TGO/NOMADâ€UVIS Vertical Profiles of Ozone: 1. Seasonal Variation and Comparison to Water. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006837.	1.5	18
25	Annual Appearance of Hydrogen Chloride on Mars and a Striking Similarity With the Water Vapor Vertical Distribution Observed by TGO/NOMAD. Geophysical Research Letters, 2021, 48, e2021GL092506.	1.5	15
26	The Deuterium Isotopic Ratio of Water Released From the Martian Caps as Measured With TGO/NOMAD. Geophysical Research Letters, 2022, 49, .	1.5	15
27	Detection of green line emission in the dayside atmosphere of Mars from NOMAD-TGO observations. Nature Astronomy, 2020, 4, 1049-1052.	4.2	13
28	MIRS: an imaging spectrometer for the MMX mission. Earth, Planets and Space, 2021, 73, .	0.9	13
29	Search of SO2 in the Martian atmosphere by ground-based submillimeter observation. Planetary and Space Science, 2009, 57, 2123-2127.	0.9	12
30	First Detection and Thermal Characterization of Terminator CO₂Ice Clouds With ExoMars/NOMAD. Geophysical Research Letters, 2021, 48, .	1.5	12
31	Comparison of general circulation model atmospheric wave simulations with wind observations of venusian mesosphere. Icarus, 2013, 225, 840-849.	1.1	11
32	The Mars system revealed by the Martian Moons eXploration mission. Earth, Planets and Space, 2022, 74, .	0.9	11
33	Explaining NOMAD D/H Observations by Cloudâ€Induced Fractionation of Water Vapor on Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	11
34	Stringent upper limit of CH₄ on Mars based on SOFIA/EXES observations. Astronomy and Astrophysics, 2018, 610, A78.	2.1	10
35	Ground-based infrared mapping of H₂O₂ on Mars near opposition. Astronomy and Astrophysics, 2019, 627, A60.	2.1	8
36	Impact of gradients at the martian terminator on the retrieval of ozone from SPICAM/MEx. Icarus, 2021, 353, 113598.	1.1	8

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37	First Observation of the Oxygen 630Ânm Emission in the Martian Dayglow. Geophysical Research Letters, 2021, 48, e2020GL092334.	1.5	8
38	A Global and Seasonal Perspective of Martian Water Vapor From ExoMars/NOMAD. Journal of Geophysical Research E: Planets, 2021, 126, .	1.5	8
39	Water vapor saturation and ice cloud occurrence in the atmosphere of Mars. Planetary and Space Science, 2022, 212, 105390.	0.9	8
40	Calibration of NOMAD on ESA's ExoMars Trace Gas Orbiter: Part 1 â€“ The Solar Occultation channel. Planetary and Space Science, 2022, 218, 105411.	0.9	8
41	Search for hydrogen peroxide in the Martian atmosphere by the Planetary Fourier Spectrometer onboard Mars Express. Icarus, 2015, 245, 177-183.	1.1	7
42	Probing the Atmospheric Cl Isotopic Ratio on Mars: Implications for Planetary Evolution and Atmospheric Chemistry. Geophysical Research Letters, 2021, 48, e2021GL092650.	1.5	7
43	Variations in Vertical CO/CO₂ Profiles in the Martian Mesosphere and Lower Thermosphere Measured by the ExoMars TGO/NOMAD: Implications of Variations in Eddy Diffusion Coefficient. Geophysical Research Letters, 2022, 49, .	1.5	7
44	Planetâ€Wide Ozone Destruction in the Middle Atmosphere on Mars During Global Dust Storm. Geophysical Research Letters, 2022, 49, .	1.5	7
45	Retrieval and characterization of carbon monoxide (CO) vertical profiles in the Martian atmosphere from observations of PFS/MEX. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 238, 106498.	1.1	6
46	Vertical distribution of dust in the martian atmosphere: OMEGA/MEx limb observations. Icarus, 2022, 371, 114702.	1.1	6
47	Density and Temperature of the Upper Mesosphere and Lower Thermosphere of Mars Retrieved From the OI 557.7Ânm Dayglow Measured by TGO/NOMAD. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	6
48	Soft X-ray interferometry and holography. AIP Conference Proceedings, 1986, , .	0.3	5
49	Calibration of the NOMAD-UVIS data. Planetary and Space Science, 2022, 218, 105504.	0.9	5
50	Intense Zonal Wind in the Martian Mesosphere During the 2018 Planetâ€Encircling Dust Event Observed by Groundâ€Based Infrared Heterodyne Spectroscopy. Geophysical Research Letters, 2021, 48, e2021GL092413.	1.5	4
51	Calibration of NOMAD on ESA's ExoMars Trace Gas Orbiter: Part 2 â€“ The Limb, Nadir and Occultation (LNO) channel. Planetary and Space Science, 2021, , 105410.	0.9	3
52	The Mars Oxygen Visible Dayglow: A Martian Year of NOMAD/UVIS Observations. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	2
53	Detection of Crystalline and Fine-grained Calcic Plagioclases on Vesta. Astrophysical Journal Letters, 2019, 882, L22.	3.0	1
54	Evaluation of a method to retrieve temperature and wind velocity profiles of the Venusian nightside mesosphere from mid-infrared CO2 absorption line observed by heterodyne spectroscopy. Earth, Planets and Space, 2020, 72, .	0.9	1

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55	Can we constrain the origin of Mars' recurring slope lineae using atmospheric observations?. Icarus, 2022, 371, 114688.	1.1	0