Miguel Ãngel LÃ³pez-Valverde

List of Publications by Year
in descending order

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45 papers	1,849 citations	236925 25 h-index	265206 42 g-index
45 all docs	45 docs citations	45 times ranked	1219 citing authors

#	Article	IF	Citations
1	Polar warming in the Mars thermosphere: Seasonal variations owing to changing insolation and dust distributions. Geophysical Research Letters, 2006, 33, .	4.0	121
2	The Atmospheric Chemistry Suite (ACS) of Three Spectrometers for the ExoMars 2016 Trace Gas Orbiter. Space Science Reviews, 2018, 214, 1.	8.1	119
3	Threeâ€dimensional Martian ionosphere model: I. The photochemical ionosphere below 180 km. Journal of Geophysical Research E: Planets, 2013, 118, 2105-2123.	3.6	118
4	South-polar features on Venus similar to those near the north pole. Nature, 2007, 450, 637-640.	27.8	110
5	A groundâ€toâ€exosphere Martian general circulation model: 1. Seasonal, diurnal, and solar cycle variation of thermospheric temperatures. Journal of Geophysical Research, 2009, 114, .	3.3	107
6	A dynamic upper atmosphere of Venus as revealed by VIRTIS on Venus Express. Nature, 2007, 450, 641-645.	27.8	95
7	Water Vapor Vertical Profiles on Mars in Dust Storms Observed by TGO/NOMAD. Journal of Geophysical Research E: Planets, 2019, 124, 3482-3497.	3.6	88
8	Variability of the Martian thermosphere during eight Martian years as simulated by a ground-to-exosphere global circulation model. Journal of Geophysical Research E: Planets, 2015, 120, 2020-2035.	3.6	67
9	The first Mars thermospheric general circulation model: The Martian atmosphere from the ground to 240 km. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	65
10	Extension of a Martian general circulation model to thermospheric altitudes: UV heating and photochemical models. Journal of Geophysical Research, 2005, 110, .	3.3	65
11	Upper atmosphere of Mars up to 120 km: Mars Global Surveyor accelerometer data analysis with the LMD general circulation model. Journal of Geophysical Research, 2004, 109, .	3.3	62
12	Observations of Middle Atmosphere CO from theUARSISAMS during the Early Northern Winter 1991/92. Journals of the Atmospheric Sciences, 1999, 56, 563-583.	1.7	60
13	Analysis of the upper atmosphere CO₂(v₂) vibrational temperatures retrieved from ATMOS/Spacelab 3 observations. Journal of Geophysical Research, 1992, 97, 20469-20478.	3.3	55
14	Local thermodynamic equilibrium of carbon dioxide in the upper atmosphere. Geophysical Research Letters, 1992, 19, 589-592.	4.0	49
15	A groundâ€toâ€exosphere Martian general circulation model: 2. Atmosphere during solstice conditionsâ€”Thermospheric polar warming. Journal of Geophysical Research, 2009, 114, .	3.3	43
16	A non-local thermodynamic equilibrium radiative transfer model for infrared emissions in the atmosphere of Mars: 1. Theoretical basis and nighttime populations of vibrational levels. Journal of Geophysical Research, 1994, 99, 13093.	3.3	39
17	Validation of measurements of carbon monoxide from the improved stratospheric and mesospheric sounder. Journal of Geophysical Research, 1996, 101, 9929-9955.	3.3	39
18	Antarctic polar descent and planetary wave activity observed in ISAMS CO from April to July 1992. Geophysical Research Letters, 2000, 27, 665-668.	4.0	36

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19	Venus's major cloud feature as an equatorially trapped wave distorted by the wind. Geophysical Research Letters, 2015, 42, 705-711.	4.0	36
20	ANALYTICAL SOLUTION FOR WAVES IN PLANETS WITH ATMOSPHERIC SUPERROTATION. II. LAMB, SURFACE, AND CENTRIFUGAL WAVES. Astrophysical Journal, Supplement Series, 2014, 213, 18.	7.7	34
21	Aeronomy of the Venus Upper Atmosphere. Space Science Reviews, 2017, 212, 1617-1683.	8.1	33
22	The EChO science case. Experimental Astronomy, 2015, 40, 329-391.	3.7	31
23	Water heavily fractionated as it ascends on Mars as revealed by ExoMars/NOMAD. Science Advances, 2021, 7, .	10.3	31
24	ANALYTICAL SOLUTION FOR WAVES IN PLANETS WITH ATMOSPHERIC SUPERROTATION. I. ACOUSTIC AND INERTIA-GRAVITY WAVES. Astrophysical Journal, Supplement Series, 2014, 213, 17.	7.7	30
25	A non-local thermodynamic equilibrium radiative transfer model for infrared emissions in the atmosphere of Mars: 2. Daytime populations of vibrational levels. Journal of Geophysical Research, 1994, 99, 13117.	3.3	28
26	Limb observations of CO₂ and CO nonâ€LTE emissions in the Venus atmosphere by VIRTIS/Venus Express. Journal of Geophysical Research, 2009, 114, .	3.3	27
27	On the Origins of Mars' Exospheric Nonthermal Oxygen Component as Observed by MAVEN and Modeled by HELIOSARES. Journal of Geophysical Research E: Planets, 2017, 122, 2401-2428.	3.6	27
28	Comprehensive investigation of Mars methane and organics with ExoMars/NOMAD. Icarus, 2021, 357, 114266.	2.5	27
29	An extremely high-altitude plume seen at Marsâ€™ morning terminator. Nature, 2015, 518, 525-528.	27.8	24
30	Studies of Solar Heating by CO2in the Upper Atmosphere Using a Non-LTE Model and Satellite Data. Journals of the Atmospheric Sciences, 1990, 47, 809-822.	1.7	22
31	MAVEN/NGIMS Thermospheric Neutral Wind Observations: Interpretation Using the Mâ€GITM General Circulation Model. Journal of Geophysical Research E: Planets, 2019, 124, 3283-3303.	3.6	20
32	Nonâ€localâ€thermodynamicâ€equilibrium populations of the first vibrational excited state of CO in the middle atmosphere. Journal of Geophysical Research, 1993, 98, 8933-8947.	3.3	19
33	Global and seasonal variations in middle atmosphere CO from UARS/ISAMS. Geophysical Research Letters, 1993, 20, 1247-1250.	4.0	18
34	Vibrational Temperatures and Radiative Cooling of the Co2 15 Mum Bands In the Middle Atmosphere. Quarterly Journal of the Royal Meteorological Society, 1992, 118, 499-532.	2.7	17
35	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.	4.0	15
36	Dayside temperatures in the Venus upper atmosphere from Venus Express/VIRTIS nadir measurements at 4.3Î¼m. Astronomy and Astrophysics, 2016, 585, A53.	5.1	12

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37	MAVEN and the total electron content of the Martian ionosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 3526-3537.	2.4	12
38	The Mars Climate Database (version 4.3). , 0, , .		9
39	First Observation of the Oxygen 630Ânm Emission in the Martian Dayglow. Geophysical Research Letters, 2021, 48, e2020GL092334.	4.0	8
40	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, .	4.0	7
41	CO 2 nonâ€LTE limb emissions in Mars' atmosphere as observed by OMEGA/Mars Express. Journal of Geophysical Research E: Planets, 2016, 121, 1066-1086.	3.6	6
42	CO2 retrievals in the Mars daylight thermosphere from its 4.3â€Î¼m limb emission measured by OMEGA/MEx. Icarus, 2021, 353, 113830.	2.5	6
43	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, .	3.6	6
44	ON THE RETRIEVAL OF MESOSPHERIC WINDS ON MARS AND VENUS FROM GROUND-BASED OBSERVATIONS AT 10 Î¼m. Astrophysical Journal, 2016, 816, 103.	4.5	4
45	On the derivation of thermospheric temperatures from dayglow emissions on Mars. Icarus, 2021, 358, 114284.	2.5	2