## Xenon isotopes in 67P/Churyumov-Gerasimenko show atmosphere

Science 356, 1069-1072 DOI: 10.1126/science.aal3496

Citation Report

#	Article	IF	CITATIONS
1	Charge States of Krypton and Xenon in the Solar Wind. Solar Physics, 2017, 292, 1.	1.0	1
2	Stepwise heating of lunar anorthosites 60025, 60215, 65315 possibly reveals an indigenous noble gas component on the Moon. Geochimica Et Cosmochimica Acta, 2017, 218, 114-131.	1.6	19
3	Sulphur isotope mass-independent fractionation observed in comet 67P/Churyumov–Gerasimenko by Rosetta/ROSINA. Monthly Notices of the Royal Astronomical Society, 2017, 469, S787-S803.	1.6	16
4	Chemical highlights from the Rosetta mission. Proceedings of the International Astronomical Union, 2017, 13, 153-162.	0.0	4
5	The proposed Caroline ESA M3 mission to a Main Belt Comet. Advances in Space Research, 2018, 62, 1921-1946.	1.2	9
6	Archean kerogen as a new tracer of atmospheric evolution: Implications for dating the widespread nature of early life. Science Advances, 2018, 4, eaar2091.	4.7	20
7	Origin of Light Noble Gases (He, Ne, and Ar) on Earth: A Review. Geochemistry, Geophysics, Geosystems, 2018, 19, 979-996.	1.0	20
8	Compatibility of Amino Acids in Ice Ih: Implications for the Origin of Life. Astrobiology, 2018, 18, 381-392.	1.5	4
9	Water Reservoirs in Small Planetary Bodies: Meteorites, Asteroids, and Comets. Space Science Reviews, 2018, 214, 1.	3.7	88
10	Bonding of xenon to oxygen in magmas at depth. Earth and Planetary Science Letters, 2018, 484, 103-110.	1.8	9
11	Mars' growth stunted by an early giant planet instability. Icarus, 2018, 311, 340-356.	1.1	108
12	Evolution of atmospheric xenon and other noble gases inferred from Archean to Paleoproterozoic rocks. Geochimica Et Cosmochimica Acta, 2018, 232, 82-100.	1.6	81
13	Chemistry During the Gas-Rich Stage of Planet Formation. , 2018, , 1-30.		1
14	Scientific rationale for Uranus and Neptune in situ explorations. Planetary and Space Science, 2018, 155, 12-40.	0.9	69
15	The Efficiency of Noble Gas Trapping in Astrophysical Environments. Astrophysical Journal, 2018, 867, 146.	1.6	3
16	Monitoring of the activity and composition of comets 41P/Tuttle–Giacobini–Kresak and 45P/Honda–Mrkos–Pajdusakova. Astronomy and Astrophysics, 2018, 619, A156.	2.1	24
17	Chemistry During the Gas-Rich Stage of Planet Formation. , 2018, , 2221-2250.		7
18	Feedstocks of the Terrestrial Planets. Space Science Reviews, 2018, 214, 1.	3.7	15

TATION REDO

ARTICLE IF CITATIONS # Noble Gas Abundance Ratios Indicate the Agglomeration of 67P/Churyumov–Gerasimenko from 19 3.0 11 Warmed-up Ice. Astrophysical Journal Letters, 2018, 865, L11. Exploring the Origins of Earth's Nitrogen: Astronomical Observations of Nitrogen-bearing Organics 1.6 in Protostellar Environments. Astrophysical Journal, 2018, 866, 156. Presolar Isotopic Signatures in Meteorites and Comets: New Insights from the Rosetta Mission to 21 3.7 20 Comet 67P/Churyumov–Gerasimenko. Space Science Reviews, 2018, 214, 1. Excitation of a Primordial Cold Asteroid Belt as an Outcome of Planetary Instability. Astrophysical Journal, 2018, 864, 50. Krypton isotopes and noble gas abundances in the coma of comet 67P/Churyumov-Gerasimenko. 23 4.7 52 Science Advances, 2018, 4, eaar6297. Xenon. Encyclopedia of Earth Sciences Series, 2018, , 1497-1500. 0.1 Venus Interior Structure and Dynamics. Space Science Reviews, 2018, 214, 1. 25 3.7 51 Noble gases in micrometeorites from the Transantarctic Mountains. Geochimica Et Cosmochimica 26 1.6 10 Acta, 2018, 242, 266-297. Impact degassing and atmospheric erosion on Venus, Earth, and Mars during the late accretion. Icarus, 27 25 1.1 20'19, 317, 48-58. Elemental and molecular abundances in comet 67P/Churyumov-Gerasimenko. Monthly Notices of the 1.6 Royal Astronomical Society, 2019, 489, 594-607. Onset of Giant Planet Migration before 4480 Million Years Ago. Astrophysical Journal, 2019, 881, 44. 29 1.6 82 Volatile Species in Comet 67P/Churyumov-Gerasimenko: Investigating the Link from the ISM to the 1.2 39 Terrestrial Planets. ACS Earth and Space Chemistry, 2019, 3, 1792-1811. Migration of D-type asteroids from the outer Solar System inferred from carbonate in meteorites.  $\mathbf{31}$ 4.2 40 Nature Astronomy, 2019, 3, 910-915. Experimenting with Mixtures of Water Ice and Dust as Analogues for Icy Planetary Material. Space Science Reviews, 2019, 215, 1. 34 Towards New Comet Missions. Space Science Reviews, 2019, 215, 1. 3.7 13 Entrapment of CO in CO<sub>2</sub> Ice. Astrophysical Journal, 2019, 883, 21. High-precision measurements of krypton and xenon isotopes with a new static-mode quadrupole ion 36 1.6 14 trap mass spectrometer. Journal of Analytical Atomic Spectrometry, 2019, 34, 104-117. The early instability scenario: Terrestrial planet formation during the giant planet instability, and the 1.1 effect of collisional fragmentation. Icarus, 2019, 321, 778-790.

#	Article	IF	CITATIONS
38	The unbiased frequency of planetary signatures around single and binary white dwarfs using Spitzer and Hubble. Monthly Notices of the Royal Astronomical Society, 2019, 487, 133-146.	1.6	62
39	Noble Gases: A Record of Earth's Evolution and Mantle Dynamics. Annual Review of Earth and Planetary Sciences, 2019, 47, 389-419.	4.6	56
40	Cometary Chemistry and the Origin of Icy Solar System Bodies: The View After <i>Rosetta</i> . Annual Review of Astronomy and Astrophysics, 2019, 57, 113-155.	8.1	108
41	Late Delivery of Nitrogen to the Earth. Astronomical Journal, 2019, 157, 80.	1.9	3
42	Susceptibility of planetary atmospheres to mass loss and growth by planetesimal impacts: the impact shoreline. Monthly Notices of the Royal Astronomical Society, 0, , .	1.6	22
43	Geochemical evidence for high volatile fluxes from the mantle at the end of the Archaean. Nature, 2019, 575, 485-488.	13.7	20
44	The Emergence of Life. Space Science Reviews, 2019, 215, 1.	3.7	53
46	Noble Gases in Martian Meteorites. , 2019, , 35-70.		9
47	Strange messenger: A new history of hydrogen on Earth, as told by Xenon. Geochimica Et Cosmochimica Acta, 2019, 244, 56-85.	1.6	109
48	Primordial heavy noble gases in the pristine Paris carbonaceous chondrite. Meteoritics and Planetary Science, 2019, 54, 395-414.	0.7	15
49	Xenon isotopes in Archean and Proterozoic insoluble organic matter: A robust indicator of syngenecity?. Precambrian Research, 2020, 336, 105505.	1.2	5
50	Determining the origin of the building blocks of the Ice Giants based on analogue measurements from comets. Monthly Notices of the Royal Astronomical Society, 2020, 491, 488-494.	1.6	8
51	Impact bombardment chronology of the terrestrial planets from 4.5â€ <sup>-</sup> Ga to 3.5â€ <sup>-</sup> Ga. Icarus, 2020, 338, 113514.	1.1	38
52	Dynamical evidence for an early giant planet instability. Icarus, 2020, 339, 113605.	1.1	60
53	Krypton storage capacity of the Earth's lower mantle. Earth and Planetary Science Letters, 2020, 532, 116032.	1.8	11
54	Diffusion of volatiles in hot stagnant-lid regime planets. Planetary and Space Science, 2020, 182, 104822.	0.9	0
55	A record of the final phase of giant planet migration fossilized in the asteroid belt's orbital structure. Monthly Notices of the Royal Astronomical Society: Letters, 2020, 492, L56-L60.	1.2	21
56	Kuiper belt: Formation and evolution. , 2020, , 25-59.		44

#	Article	IF	CITATIONS
57	Noble gas variations in ureilites and their implications for ureilite parent body formation. Geochimica Et Cosmochimica Acta, 2020, 270, 325-337.	1.6	15
58	Evolution of the Earth's atmosphere during Late Veneer accretion. Monthly Notices of the Royal Astronomical Society, 2020, 499, 5334-5362.	1.6	17
59	Enabling Isotope Ratio Measurements on an Ion Trap Mass Spectrometer. Journal of the American Society for Mass Spectrometry, 2020, 31, 1722-1729.	1.2	1
60	Identifying primitive noble gas components in lunar ferroan anorthosites. Icarus, 2020, 352, 113977.	1.1	1
61	Reviewing Martian Atmospheric Noble Gas Measurements: From Martian Meteorites to Mars Missions. Geosciences (Switzerland), 2020, 10, 439.	1.0	6
63	Tracing the Origins of the Ice Giants Through Noble Gas Isotopic Composition. Space Science Reviews, 2020, 216, 1.	3.7	13
64	On the Origin and Evolution of the Material in 67P/Churyumov-Gerasimenko. Space Science Reviews, 2020, 216, 102.	3.7	42
65	Reference Model Payload for Ice Giant Entry Probe Missions. Space Science Reviews, 2020, 216, 1.	3.7	4
66	Earth's water may have been inherited from material similar to enstatite chondrite meteorites. Science, 2020, 369, 1110-1113.	6.0	164
67	Molecule-dependent oxygen isotopic ratios in the coma of comet 67P/Churyumov–Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2020, 498, 5855-5862.	1.6	13
68	Venusian Habitable Climate Scenarios: Modeling Venus Through Time and Applications to Slowly Rotating Venusâ€Like Exoplanets. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006276.	1.5	101
69	On the Formation of the Popcorn Flavorant 2,3â€Butanedione (CH <sub>3</sub> COCOCH <sub>3</sub> ) in Acetaldehydeâ€Containing Interstellar Ices. ChemPhysChem, 2020, 21, 1531-1540.	1.0	12
70	Identification of chondritic krypton and xenon in Yellowstone gases and the timing of terrestrial volatile accretion. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13997-14004.	3.3	35
71	Noble Gas Reactivity in Planetary Interiors. Frontiers in Physics, 2020, 8, .	1.0	6
72	Key Atmospheric Signatures for Identifying the Source Reservoirs of Volatiles in Uranus and Neptune. Space Science Reviews, 2020, 216, 1.	3.7	14
73	Perspectives on Atmospheric Evolution from Noble Gas and Nitrogen Isotopes on Earth, Mars & Venus. Space Science Reviews, 2020, 216, 1.	3.7	37
74	Chemical and Isotope Composition of Comet 67P/Churyumovâ^'Gerasimenko: The Rosettaâ^'Philae Mission Results Reviewed in the Context of Cosmogony and Cosmochemistry. Solar System Research, 2020, 54, 96-120.	0.3	10
75	Volatile element chemistry during accretion of the earth. Chemie Der Erde, 2020, 80, 125594.	0.8	20

#	Article	IF	CITATIONS
76	ALMA and ROSINA detections of phosphorus-bearing molecules: the interstellar thread between star-forming regions and comets. Monthly Notices of the Royal Astronomical Society, 2020, 492, 1180-1198.	1.6	58
77	Xenon Isotopes Identify Large-scale Nucleosynthetic Heterogeneities across the Solar System. Astrophysical Journal, 2020, 889, 68.	1.6	8
78	Cometary Nuclei—From Giotto to Rosetta. Space Science Reviews, 2020, 216, 1.	3.7	25
79	The origin and fate of volatile elements on Earth revisited in light of noble gas data obtained from comet 67P/Churyumov-Gerasimenko. Scientific Reports, 2020, 10, 5796.	1.6	24
80	Refined composition of Solar Wind xenon delivered by Genesis NASA mission: Comparison with xenon captured by extraterrestrial regolith soils. Geochimica Et Cosmochimica Acta, 2020, 276, 289-298.	1.6	8
81	Early impact chronology of the icy regular satellites of the outer solar system. Icarus, 2021, 358, 114184.	1.1	8
82	Quantification of the Role of Chemical Desorption in Molecular Clouds. Accounts of Chemical Research, 2021, 54, 745-753.	7.6	15
83	D/H in the refractory organics of comet 67P/Churyumov-Gerasimenko measured by <i>Rosetta</i> /COSIMA. Monthly Notices of the Royal Astronomical Society, 2021, 504, 4940-4951.	1.6	11
84	Thermophysical evolution of planetesimals in the primordial disc. Monthly Notices of the Royal Astronomical Society, 2021, 505, 5654-5685.	1.6	29
85	AMBITION – comet nucleus cryogenic sample return. Experimental Astronomy, 2022, 54, 1077-1128.	1.6	4
86	Possible discontinuous evolution of atmospheric xenon suggested by Archean barites. Chemical Geology, 2021, 581, 120405.	1.4	4
87	The early instability scenario: Mars' mass explained by Jupiter's orbit. Icarus, 2021, 367, 114585.	1.1	11
89	The atmosphere and hydrosphere. , 2022, , 229-268.		1
90	Composition of the Earth's Atmosphere. , 2021, , 187-197.		5
91	Depletion and fractionation of nitrogen in collapsing cores. Astronomy and Astrophysics, 2020, 643, A76.	2.1	12
92	Exocomets from a Solar System Perspective. Publications of the Astronomical Society of the Pacific, 2020, 132, 101001.	1.0	16
93	Coulomb explosion of multiply ionized xenon in water ice. Geochemical Journal, 2019, 53, 69-81.	0.5	2
94	Radiolytic Destruction of Uracil in Interstellar and Solar System Ices. Astrobiology, 2021, , .	1.5	5

		CITATION R	EPORT	
#	Article		IF	CITATIONS
96	Xenon came from comets. Nature, 2017, 546, 330-330.		13.7	0
97	Xenon. Encyclopedia of Earth Sciences Series, 2018, , 1-4.		0.1	0
98	Xenon Isotopes. Encyclopedia of Earth Sciences Series, 2018, , 1-8.		0.1	0
99	Water Reservoirs in Small Planetary Bodies: Meteorites, Asteroids, and Comets. Space of ISSI, 2018, , 35-81.	Sciences Series	0.0	0
100	Xenon Isotopes. Encyclopedia of Earth Sciences Series, 2018, , 1500-1508.		0.1	0
101	The late Earth's accretion: Processes and materials. Russian Journal of Earth Sciences, 2	2018, 18, 1-16.	0.2	0
102	Introduction to the Delivery of Water to Proto-Planets, Planets and Satellites. Space So of ISSI, 2019, , 1-9.	iences Series	0.0	0
103	Preface: Evolution of molecules in space: From interstellar clouds to protoplanetary ne Geochemical Journal, 2019, 53, 1-3.	bulae.	0.5	1
104	Upper Limits for Emissions in the Coma of Comet 67P/Churyumov–Gerasimenko nea Measured by Rosetta's Alice Far-UV Spectrograph. Astronomical Journal, 2019, 158	ır Perihelion as 3, 252.	1.9	1
106	Modelling the water and carbon dioxide production rates of Comet 67P/Churyumovâ€ Monthly Notices of the Royal Astronomical Society, 2021, 509, 3065-3085.	"Gerasimenko.	1.6	19
107	Establishing consistent equations of state for solid noble gases: Implication for partitic behaviors of noble gases in the lower mantle. Earth-Science Reviews, 2022, 224, 1038	ning 72.	4.0	0
108	Cometary chemistry. Physics Today, 2022, 75, 34-41.		0.3	3
109	An exploration of whether Earth can be built from chondritic components, not bulk cho Geochimica Et Cosmochimica Acta, 2022, 318, 428-451.	ondrites.	1.6	8
110	Planet Formation: Key Mechanisms and Global Models. Astrophysics and Space Science 3-82.	e Library, 2022, ,	1.0	16
111	Xenon isotope constraints on ancient Martian atmospheric escape. Earth and Planetar Letters, 2022, 580, 117349.	y Science	1.8	13
112	Refractory elements in the gas phase for comet 67P/Churyumov-Gerasimenko. Astrono Astrophysics, 2022, 658, A87.	pmy and	2.1	1
113	Astrochemistry With the Orbiting Astronomical Satellite for Investigating Stellar System in Astronomy and Space Sciences, 2022, 8, .	ms. Frontiers	1.1	5
114	Noble gases in Dome C micrometeorites - An attempt to disentangle asteroidal and co Icarus, 2022, 376, 114884.	metary sources.	1.1	1

#	Article	IF	CITATIONS
115	The Most Volatile Elements and Compounds. , 2022, , 271-297.		0
116	Cosmochemical Models for the Formation and Evolution of Solar Systems. , 2022, , 370-399.		0
117	Cosmogenic records and noble gases in Mukundpura CM2.0 carbonaceous chondrite. Planetary and Space Science, 2022, 215, 105465.	0.9	1
118	Meteoritic noble gas constraints on the origin of terrestrial volatiles. Icarus, 2022, 381, 115020.	1.1	9
119	Deep-mantle krypton reveals Earth's early accretion of carbonaceous matter. Nature, 2021, 600, 462-467.	13.7	19
120	Did Earth Eat Its Leftovers? Impact Ejecta as a Component of the Late Veneer. Planetary Science Journal, 2022, 3, 83.	1.5	1
121	The Origin of Earth's Mantle Nitrogen: Primordial or Early Biogeochemical Cycling?. Geochemistry, Geophysics, Geosystems, 2022, 23, .	1.0	3
122	Collisional energy transfer in the CO–CO system. Physical Chemistry Chemical Physics, 2022, 24, 11910-11918.	1.3	6
123	High precision noble gas measurements of hydrothermal quartz reveal variable loss rate of Xe from the Archean atmosphere. Earth and Planetary Science Letters, 2022, 588, 117577.	1.8	4
124	Hadean isotopic fractionation of xenon retained in deep silicates. Nature, 2022, 606, 713-717.	13.7	0
125	Krypton in the Chassigny meteorite shows Mars accreted chondritic volatiles before nebular gases. Science, 2022, 377, 320-324.	6.0	10
126	Pre-subduction mantle noble gas elemental pattern reveals larger missing xenon in the deep interior compared to the atmosphere. Earth and Planetary Science Letters, 2022, 593, 117655.	1.8	1
127	ANN-LIBS analysis of mixture plasmas: detection of xenon. Journal of Analytical Atomic Spectrometry, 0, , .	1.6	4
128	The N4,5 - OO Auger and "N3―N4,5O2,3 Coster-Kronig spectra of xenon induced by electron impact. Advances in Space Research, 2023, 71, 1338-1351.	1.2	2
129	Multi-element constraints on the sources of volatiles to Earth. Geochimica Et Cosmochimica Acta, 2022, 333, 124-135.	1.6	2
130	Noble gas evolution of the martian atmosphere in the last 4 Gyr recorded by regolith breccia NWA 8114. Geochimica Et Cosmochimica Acta, 2022, 336, 372-393.	1.6	0
131	Rethinking the role of the giant planet instability in terrestrial planet formation models. Icarus, 2023, 389, 115260.	1.1	5
132	Searching For the t=0 of Planetary System Formation. EPJ Web of Conferences, 2022, 265, 00043.	0.1	0

#	Article	IF	CITATIONS
133	Sources of Nitrogen-, Sulfur-, and Phosphorus-Containing Feedstocks for Prebiotic Chemistry in the Planetary Environment. Life, 2022, 12, 1268.	1.1	4
134	The Long-Term Evolution of the Atmosphere of Venus: Processes and Feedback Mechanisms. Space Science Reviews, 2022, 218, .	3.7	20
135	Noble Gases and Stable Isotopes Track the Origin and Early Evolution of the Venus Atmosphere. Space Science Reviews, 2022, 218, .	3.7	14
136	Origin of life-forming volatile elements in the inner Solar System. Nature, 2022, 611, 245-255.	13.7	12
137	CFD–DEM simulation of gas-driven sampling on asteroid regolith: Dependence of collected mass on gas ejection. Acta Astronautica, 2023, 203, 26-35.	1.7	2
138	Xenon in the Protoplanetary Disk (PPD), in Two Planets, and a Comet. Astrophysical Journal, 2022, 940, 14.	1.6	0
139	The EXCITING Experiment Exploring the Behavior of Nitrogen and Noble Gases in Interstellar Ice Analogs. Planetary Science Journal, 2022, 3, 252.	1.5	5
140	Rosetta Spacecraft. , 2022, , 1-7.		0
141	The accretion of planet Earth. Nature Reviews Earth & Environment, 2023, 4, 19-35.	12.2	4
142	The noble gas and nitrogen relationship between Ryugu and carbonaceous chondrites. Geochimica Et Cosmochimica Acta, 2023, 345, 62-74.	1.6	5
143	Near-ultraviolet absorption distribution of primitive asteroids from spectrophotometric surveys. Astronomy and Astrophysics, 2023, 672, A189.	2.1	0
145	A Comparison of Presolar Isotopic Signatures in Laboratory-Studied Primitive Solar System Materials and Comet 67P/Churyumov-Gerasimenko: New Insights from Light Elements, Halogens, and Noble Gases. Space Science Reviews, 2023, 219, .	3.7	0
147	Rosetta Spacecraft. , 2023, , 2689-2695.		0
154	Insight intoÂtheÂOrigin ofÂCometary Ices fromÂRosetta/ROSINA Mass Spectrometer Data. Thirty Years of Astronomical Discovery With UKIRT. 2023 259-269.	0.3	0