Johan De Keyser

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/9481955/publications.pdf

Version: 2024-02-01

170 papers 5,902 citations

35 h-index 71 g-index

200 all docs

 $\begin{array}{c} 200 \\ \\ \text{docs citations} \end{array}$

200 times ranked 3931 citing authors

| # | Article | IF | CITATIONS |
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| 1 | 67P/Churyumov-Gerasimenko, a Jupiter family comet with a high D/H ratio. Science, 2015, 347, 1261952. | 6.0 | 403 |
| 2 | Prebiotic chemicals—amino acid and phosphorus—in the coma of comet 67P/Churyumov-Gerasimenko. Science Advances, 2016, 2, e1600285. | 4.7 | 393 |
| 3 | Rosina – Rosetta Orbiter Spectrometer for Ion and Neutral Analysis. Space Science Reviews, 2007, 128, 745-801. | 3.7 | 331 |
| 4 | Inventory of the volatiles on comet 67P/Churyumov-Gerasimenko from Rosetta/ROSINA. Astronomy and Astrophysics, 2015, 583, A1. | 2.1 | 265 |
| 5 | Abundant molecular oxygen in the coma of comet 67P/Churyumov–Gerasimenko. Nature, 2015, 526, 678-681. | 13.7 | 260 |
| 6 | Time variability and heterogeneity in the coma of 67P/Churyumov-Gerasimenko. Science, 2015, 347, aaa0276. | 6.0 | 222 |
| 7 | Molecular nitrogen in comet 67P/Churyumov-Gerasimenko indicates a low formation temperature. Science, 2015, 348, 232-235. | 6.0 | 195 |
| 8 | Xenon isotopes in 67P/Churyumov-Gerasimenko show that comets contributed to Earth's atmosphere. Science, 2017, 356, 1069-1072. | 6.0 | 161 |
| 9 | Organics in comet 67P – a first comparative analysis of mass spectra from ROSINA–DFMS, COSAC and Ptolemy. Monthly Notices of the Royal Astronomical Society, 2017, 469, S130-S141. | 1.6 | 153 |
| 10 | Elemental and molecular abundances in comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2019, 489, 594-607. | 1.6 | 112 |
| 11 | Plasmaspheric Density Structures and Dynamics: Properties Observed by the CLUSTER and IMAGE Missions. Space Science Reviews, 2009, 145, 55-106. | 3.7 | 109 |
| 12 | Vlasov theory of the equilibrium structure of tangential discontinuities in space plasmas. Space Science Reviews, 1996, 76, 251-317. | 3.7 | 106 |
| 13 | Comparison of 3D kinetic and hydrodynamic models to ROSINA-COPS measurements of the neutral coma of 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A7. | 2.1 | 93 |
| 14 | Influence of spacecraft outgassing on the exploration of tenuous atmospheres with in situ mass spectrometry. Journal of Geophysical Research, 2010, 115, . | 3.3 | 91 |
| 15 | Protostellar and cometary detections of organohalogens. Nature Astronomy, 2017, 1, 703-708. | 4.2 | 89 |
| 16 | Three-dimensional direct simulation Monte-Carlo modeling of the coma of comet 67P/Churyumov-Gerasimenko observed by the VIRTIS and ROSINA instruments on board Rosetta. Astronomy and Astrophysics, 2016, 588, A134. | 2.1 | 88 |
| 17 | Detection of argon in the coma of comet 67P/Churyumov-Gerasimenko. Science Advances, 2015, 1, e1500377. | 4.7 | 87 |
| 18 | Direct Simulation Monte Carlo modelling of the major species in the coma of comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S156-S169. | 1.6 | 87 |

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| 19 | Statistical analysis of plasmaspheric plumes with Cluster/WHISPER observations. Annales Geophysicae, 2008, 26, 2403-2417. | 0.6 | 86 |
| 20 | Evidence of ammonium salts in comet 67P as explanation for the nitrogen depletion in cometary comae. Nature Astronomy, 2020, 4, 533-540. | 4.2 | 79 |
| 21 | Why an intrinsic magnetic field does not protect a planet against atmospheric escape. Astronomy and Astrophysics, 2018, 614, L3. | 2.1 | 69 |
| 22 | Change of outgassing pattern of 67P/Churyumov–Gerasimenko during the March 2016 equinox as seen by ROSINA. Monthly Notices of the Royal Astronomical Society, 2017, 469, S108-S117. | 1.6 | 66 |
| 23 | Turbulence Heating ObserveR – satellite mission proposal. Journal of Plasma Physics, 2016, 82, . | 0.7 | 60 |
| 24 | 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 |
| 25 | Density structures inside the plasmasphere: Cluster observations. Annales Geophysicae, 2004, 22, 2577-2585. | 0.6 | 56 |
| 26 | Magnetopause and Boundary Layer. Space Science Reviews, 2005, 118, 231-320. | 3.7 | 56 |
| 27 | Evolution of water production of 67P/Churyumov-Gerasimenko: An empirical model and a multi-instrument study. Monthly Notices of the Royal Astronomical Society, 0, , stw2413. | 1.6 | 54 |
| 28 | D ₂ O and HDS in the coma of 67P/Churyumov–Gerasimenko. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160253. | 1.6 | 53 |
| 29 | Krypton isotopes and noble gas abundances in the coma of comet 67P/Churyumov-Gerasimenko. Science Advances, 2018, 4, eaar6297. | 4.7 | 52 |
| 30 | Differential kinetic dynamics and heating of ions in the turbulent solar wind. New Journal of Physics, 2016, 18, 125001. | 1.2 | 51 |
| 31 | Formation and evolution of subauroral ion drifts in the course of a substorm. Journal of Geophysical Research, 1999, 104, 12339-12349. | 3.3 | 49 |
| 32 | Solar wind sputtering of dust on the surface of 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A22. | 2.1 | 47 |
| 33 | Halogens as tracers of protosolar nebula material in comet 67P/Churyumov–Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 472, 1336-1345. | 1.6 | 44 |
| 34 | ROSINA/DFMS and IES observations of 67P: Ion-neutral chemistry in the coma of a weakly outgassing comet. Astronomy and Astrophysics, 2015, 583, A2. | 2.1 | 43 |
| 35 | The magnetospheric driver of subauroral ion drifts. Geophysical Research Letters, 1998, 25, 1625-1628. | 1.5 | 42 |
| 36 | Waves in high-speed plasmoids in the magnetosheath and at the magnetopause. Annales Geophysicae, 2014, 32, 991-1009. | 0.6 | 37 |

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| 37 | Least-squares gradient calculation from multi-point observations of scalar and vector fields: methodology and applications with Cluster in the plasmasphere. Annales Geophysicae, 2007, 25, 971-987. | 0.6 | 36 |
| 38 | Aliphatic and aromatic hydrocarbons in comet 67P/Churyumov-Gerasimenko seen by ROSINA. Astronomy and Astrophysics, 2019, 630, A31. | 2.1 | 36 |
| 39 | Analysis of plasmaspheric plumes: CLUSTER and IMAGE observations. Annales Geophysicae, 2006, 24, 1737-1758. | 0.6 | 35 |
| 40 | Links between the plasmapause and the radiation belt boundaries as observed by the instruments CIS, RAPID, and WHISPER onboard Cluster. Journal of Geophysical Research: Space Physics, 2013, 118, 4176-4188. | 0.8 | 35 |
| 41 | Multi-instrument observations of the solar eclipse on 20 March 2015 and its effects on the ionosphere over Belgium and Europe. Journal of Space Weather and Space Climate, 2017, 7, A19. | 1.1 | 33 |
| 42 | From meteorites to evolution and habitability of planets. Planetary and Space Science, 2012, 72, 3-17. | 0.9 | 30 |
| 43 | NONLINEAR GENERATION OF KINETIC-SCALE WAVES BY MAGNETOHYDRODYNAMIC ALFVÉN WAVES AND NONLOCAL SPECTRAL TRANSPORT IN THE SOLAR WIND. Astrophysical Journal, 2014, 785, 139. | 1.6 | 29 |
| 44 | HIGH-TIME RESOLUTION IN SITU INVESTIGATION OF MAJOR COMETARY VOLATILES AROUND 67P/C–G AT 3.1–2.3 au MEASURED WITH ROSINA-RTOF. Astrophysical Journal, 2016, 819, 126. | 1.6 | 29 |
| 45 | The heterogeneous coma of comet 67P/Churyumov-Gerasimenko as seen by ROSINA: H ₂ 0, CO ₂ , and CO from September 2014 to February 2016. Astronomy and Astrophysics, 2017, 600, A77. | 2.1 | 29 |
| 46 | The Delayed Time Response of Geomagnetic Activity to the Solar Wind. Journal of Geophysical Research: Space Physics, 2017, 122, 11,109. | 0.8 | 29 |
| 47 | lon chemistry in the coma of comet 67P near perihelion. Monthly Notices of the Royal Astronomical Society, 2016, 462, S67-S77. | 1.6 | 28 |
| 48 | Ion acoustic waves at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2017, 600, A3. | 2.1 | 28 |
| 49 | lon composition at comet 67P near perihelion: Rosetta observations and model-based interpretation. Monthly Notices of the Royal Astronomical Society, 2017, 469, S427-S442. | 1.6 | 28 |
| 50 | Resonant amplification of MHD waves in realistic subsolar magnetopause configurations. Journal of Geophysical Research, 1999, 104, 2399-2409. | 3.3 | 27 |
| 51 | Evidence for distributed gas sources of hydrogen halides in the coma of comet 67P/Churyumov–Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S695-S711. | 1.6 | 27 |
| 52 | Spatial gradients in the plasmasphere from Cluster. Geophysical Research Letters, 2006, 33, . | 1.5 | 26 |
| 53 | Sheared magnetospheric plasma flows and discrete auroral arcs: a quasi-static coupling model. Annales Geophysicae, 2007, 25, 317-330. | 0.6 | 26 |
| 54 | Evidence for depletion of heavy silicon isotopes at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2017, 601, A123. | 2.1 | 26 |

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| 57 | Equilibrium conditions for the tangential discontinuity magnetopause. Journal of Geophysical Research, 1997, 102, 9513-9530. | 3.3 | 24 |
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| 59 | Prestellar grain-surface origins of deuterated methanol in comet 67P/Churyumov–Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2020, 500, 4901-4920. | 1.6 | 24 |
| 60 | ¹⁶ O/ ¹⁸ O ratio in water in the coma of comet 67P/Churyumov-Gerasimenko measured with the Rosetta/ROSINA double-focusing mass spectrometer. Astronomy and Astrophysics, 2019, 630, A29. | 2.1 | 23 |
| 61 | Equilibrium conditions and magnetic field rotation at the tangential discontinuity magnetopause. Journal of Geophysical Research, 1998, 103, 6653-6662. | 3.3 | 22 |
| 62 | Turbulent spectra and spectral kinks in the transition range from MHD to kinetic Alfv \tilde{A} @n turbulence. Nonlinear Processes in Geophysics, 2011, 18, 587-597. | 0.6 | 22 |
| 63 | On the origin of molecular oxygen in cometary comae. Nature Communications, 2018, 9, 2580. | 5.8 | 22 |
| 64 | A magnetospheric generator driving ion and electron acceleration and electric currents in a discrete auroral arc observed by Cluster and DMSP. Geophysical Research Letters, 2009, 36, . | 1.5 | 20 |
| 65 | Plasmaspheric Density Structures and Dynamics: Properties Observed by the CLUSTER and IMAGE Missions., 2009,, 55-106. | | 20 |
| 66 | CHO-Bearing Molecules in Comet 67P/Churyumov-Gerasimenko. ACS Earth and Space Chemistry, 2019, 3, 1854-1861. | 1.2 | 20 |
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| 68 | Impact of Radiogenic Heating on the Formation Conditions of Comet 67P/Churyumov–Gerasimenko. Astrophysical Journal Letters, 2017, 839, L4. | 3.0 | 19 |
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| 73 | Least-squares multi-spacecraft gradient calculation with automatic error estimation. Annales Geophysicae, 2008, 26, 3295-3316. | 0.6 | 17 |
| 74 | MHD–KINETIC TRANSITION IN IMBALANCED ALFVÉNIC TURBULENCE. Astrophysical Journal Letters, 2016, 832, L20. | 3.0 | 17 |
| 75 | Electrostatic analyzer design for solar wind proton measurements with high temporal, energy, and angular resolutions. Journal of Geophysical Research: Space Physics, 2017, 122, 1439-1450. | 0.8 | 17 |
| 76 | Run-time load balancing support for a parallel multiblock Euler/Navier-Stokes code with adaptive refinement on distributed memory computers. Parallel Computing, 1994, 20, 1069-1088. | 1.3 | 16 |
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| 80 | Structural analysis of periodic surface waves on the magnetospheric boundary. Planetary and Space Science, 2003, 51, 757-768. | 0.9 | 15 |
| 81 | ROSINA/DFMS capabilities to measure isotopic ratios in water at comet 67P/Churyumov–Gerasimenko. Planetary and Space Science, 2013, 84, 148-152. | 0.9 | 15 |
| 82 | Electric potential differences across auroral generator interfaces. Annales Geophysicae, 2013, 31, 251-261. | 0.6 | 15 |
| 83 | OBLIQUE ALFVÉN INSTABILITIES DRIVEN BY COMPENSATED CURRENTS. Astrophysical Journal, 2014, 780, 175. | 1.6 | 15 |
| 84 | Identification and characterization of a new ensemble of cometary organic molecules. Nature Communications, 2022, 13 , . | 5.8 | 15 |
| 85 | Empirical reconstruction and long-duration tracking of the magnetospheric boundary in single- and multi-spacecraft contexts. Annales Geophysicae, 2005, 23, 1355-1369. | 0.6 | 14 |
| 86 | The dynamics of the plasmasphere: Recent results. Journal of Atmospheric and Solar-Terrestrial Physics, 2013, 99, 53-60. | 0.6 | 14 |
| 87 | Cross-field flow and electric potential in a plasma slab. Annales Geophysicae, 2013, 31, 1297-1314. | 0.6 | 14 |
| 88 | Solar illumination control of ionospheric outflow above polar cap arcs. Geophysical Research Letters, 2015, 42, 1304-1311. | 1.5 | 14 |
| 89 | ROSINA ion zoo at Comet 67P. Astronomy and Astrophysics, 2020, 642, A27. | 2.1 | 14 |
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| 91 | Theoretical plasma distributions consistent with Ulysses magnetic field observations in a solar wind tangential discontinuity. Solar Physics, 1996, 166, 415-422. | 1.0 | 13 |
| 92 | 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 |
| 93 | Cyanogen, cyanoacetylene, and acetonitrile in comet 67P and their relation to the cyano radical. Astronomy and Astrophysics, 2021, 647, A22. | 2.1 | 13 |
| 94 | The Effect of Cosmic Rays on Cometary Nuclei. II. Impact on Ice Composition and Structure. Astrophysical Journal, 2020, 901, 136. | 1.6 | 13 |
| 95 | A Software Tool for Load Balanced Adaptive Multiple Grids on Distributed Memory Computers., 0,,. | | 12 |
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| 98 | Monopolar and bipolar auroral electric fields and their effects. Annales Geophysicae, 2010, 28, 2027-2046. | 0.6 | 12 |
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| 100 | Compensated-current instability of kinetic Alfv \tilde{A} ©n waves. Monthly Notices of the Royal Astronomical Society, 2015, 452, 4236-4246. | 1.6 | 11 |
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| 102 | The Virtual Space Weather Modelling Centre. Journal of Space Weather and Space Climate, 2020, 10, 14. | 1.1 | 11 |
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| 104 | Auroral and sub-auroral phenomena: an electrostatic picture. Annales Geophysicae, 2010, 28, 633-650. | 0.6 | 11 |
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| 106 | CLUSTER and IMAGE: New Ways to Study the Earth's Plasmasphere. Space Science Reviews, 2009, 145, 7-53. | 3.7 | 10 |
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| 110 | Run-time load balancing techniques for a parallel unstructured multi-grid Euler solver with adaptive grid refinement. Parallel Computing, 1995, 21, 179-198. | 1.3 | 9 |
| 111 | Excitation of low-frequency fluctuations at the magnetopause by intermittent broadband magnetosheath waves. Journal of Geophysical Research, 2001, 106, 29467-29477. | 3.3 | 9 |
| 112 | The Earth's Magnetopause: Reconstruction of Motion and Structure. Space Science Reviews, 2005, 121, 225-235. | 3.7 | 9 |
| 113 | CLUSTER and IMAGE: New Ways to Study the Earth's Plasmasphere. , 2009, , 7-53. | | 9 |
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| 115 | Magnetic field rotation at the dayside magnetopause: AMPTE/IRM observations. Journal of Geophysical Research, 1998, 103, 6663-6674. | 3.3 | 8 |
| 116 | The capabilities of ROSINA/DFMS to measure argon isotopes at comet 67P/Churyumov–Gerasimenko. Planetary and Space Science, 2015, 105, 175-178. | 0.9 | 8 |
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| 119 | Vlasov simulations of parallel potential drops. Annales Geophysicae, 2013, 31, 1227-1240. | 0.6 | 7 |
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| 122 | Transient development of magnetohydrodynamic wave mode conversion layers. Journal of Geophysical Research, 2001, 106, 15609-15619. | 3.3 | 6 |
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| 124 | EIDOSCOPE: particle acceleration at plasma boundaries. Experimental Astronomy, 2012, 33, 491-527. | 1.6 | 6 |
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| 127 | First in-situ detection of the cometary ammonium ion NH $_4^{+}$ \$ (protonated ammonia NH) Tj ETQq1 1 0.7843 Society, 0, , stw3370. | 14 rgBT /O 1.6 | verlock 10 6 |
| 128 | Beam tracking strategies for fast acquisition of solar wind velocity distribution functions with high energy and angular resolutions. Annales Geophysicae, 2018, 36, 1285-1302. | 0.6 | 6 |
| 129 | Adaptive irregular multiple grids on a distributed memory multiprocessor. Lecture Notes in Computer Science, 1991, , 153-162. | 1.0 | 5 |
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| 134 | High altitude electrostatic fields driving subauroral ion drifts. COSPAR Colloquia Series, 1998, , 61-64. | 0.2 | 4 |
| 135 | Spacecraft outgassing, a largely underestimated phenomenon. , 2011, , . | | 4 |
| 136 | Vlasov simulations of trapping and loss of auroral electrons. Annales Geophysicae, 2015, 33, 279-293. | 0.6 | 4 |
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| 147 | Radial distribution of plasma at comet 67P. Astronomy and Astrophysics, 2022, 663, A42. | 2.1 | 3 |
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