

Niklas Edberg

List of Publications by Year in descending order

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Version: 2024-02-01

81
papers

2,210
citations

186265
28
h-index

243625
44
g-index

99
all docs

99
docs citations

99
times ranked

1571
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Birth of a comet magnetosphere: A spring of water ions. <i>Science</i> , 2015, 347, aaa0571. | 12.6 | 107 |
| 2 | Statistical analysis of the location of the Martian magnetic pileup boundary and bow shock and the influence of crustal magnetic fields. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 93 |
| 3 | Pumping out the atmosphere of Mars through solar wind pressure pulses. <i>Geophysical Research Letters</i> , 2010, 37, . | 4.0 | 88 |
| 4 | Interplanetary coronal mass ejection observed at STEREOâ€A, Mars, comet 67P/Churyumovâ€Gerasimenko, Saturn, and New Horizons en route to Pluto: Comparison of its Forbush decreases at 1.4, 3.1, and 9.9â€AU. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 7865-7890. | 2.4 | 87 |
| 5 | Evolution of the ion environment of comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 2015, 583, A20. | 5.1 | 76 |
| 6 | Spatial distribution of lowâ€energy plasma around comet 67P/CG from Rosetta measurements. <i>Geophysical Research Letters</i> , 2015, 42, 4263-4269. | 4.0 | 74 |
| 7 | Plasma boundary variability at Mars as observed by Mars Global Surveyor and Mars Express. <i>Annales Geophysicae</i> , 2009, 27, 3537-3550. | 1.6 | 70 |
| 8 | Ion densities and composition of Titan's upper atmosphere derived from the Cassini Ion Neutral Mass Spectrometer: Analysis methods and comparison of measured ion densities to photochemical model simulations. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 67 |
| 9 | RPC observation of the development and evolution of plasma interaction boundaries at 67P/Churyumov-Gerasimenko. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S9-S22. | 4.4 | 62 |
| 10 | Atmospheric erosion of Venus during stormy space weather. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 60 |
| 11 | Evolution of the plasma environment of comet 67P from spacecraft potential measurements by the Rosetta Langmuir probe instrument. <i>Geophysical Research Letters</i> , 2015, 42, 10,126. | 4.0 | 49 |
| 12 | Suprathermal electrons near the nucleus of comet 67P/Churyumovâ€Gerasimenko at 3â€%AU: Model comparisons with Rosetta data. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 5815-5836. | 2.4 | 49 |
| 13 | Detection of negative ions in the deep ionosphere of Titan during the Cassini T70 flyby. <i>Geophysical Research Letters</i> , 2012, 39, . | 4.0 | 48 |
| 14 | Mass-loading, pile-up, and mirror-mode waves at comet 67P/Churyumov-Gerasimenko. <i>Annales Geophysicae</i> , 2016, 34, 1-15. | 1.6 | 46 |
| 15 | Control of the topside Martian ionosphere by crustal magnetic fields. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 3042-3058. | 2.4 | 45 |
| 16 | Carbon Chain Anions and the Growth of Complex Organic Molecules in Titanâ€™s Ionosphere. <i>Astrophysical Journal Letters</i> , 2017, 844, L18. | 8.3 | 45 |
| 17 | Annual variations in the Martian bow shock location as observed by the Mars Express mission. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 11,474. | 2.4 | 44 |
| 18 | The Morphology of the Topside Martian Ionosphere: Implications on Bulk Ion Flow. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 734-751. | 3.6 | 43 |

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|----|---|------|-----------|
| 19 | Mars ionospheric response to solar wind variability. Journal of Geophysical Research: Space Physics, 2013, 118, 6558-6587. | 2.4 | 42 |
| 20 | CME impact on comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S45-S56. | 4.4 | 42 |
| 21 | Titan's interaction with the supersonic solar wind. Geophysical Research Letters, 2015, 42, 193-200. | 4.0 | 40 |
| 22 | In situ measurements of Saturn's ionosphere show that it is dynamic and interacts with the rings. Science, 2018, 359, 66-68. | 12.6 | 40 |
| 23 | Magnetosonic Mach number effect of the position of the bow shock at Mars in comparison to Venus. Journal of Geophysical Research, 2010, 115, . | 3.3 | 39 |
| 24 | Electron density and temperature measurements in the cold plasma environment of Titan: Implications for atmospheric escape. Geophysical Research Letters, 2010, 37, . | 4.0 | 38 |
| 25 | Determination of local plasma densities with the MARSIS radar: Asymmetries in the high-altitude Martian ionosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 6228-6242. | 2.4 | 38 |
| 26 | Solar cycle modulation of Titan's ionosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 5255-5264. | 2.4 | 38 |
| 27 | Solar wind interaction with comet 67P: Impacts of corotating interaction regions. Journal of Geophysical Research: Space Physics, 2016, 121, 949-965. | 2.4 | 33 |
| 28 | ON THE ELECTRON-TO-NEUTRAL NUMBER DENSITY RATIO IN THE COMA OF COMET 67P/CHURYUMOV-GERASIMENKO: GUIDING EXPRESSION AND SOURCES FOR DEVIATIONS. Astrophysical Journal, 2015, 812, 54. | 4.5 | 31 |
| 29 | The 67P/Churyumov-Gerasimenko observation campaign in support of the Rosetta mission. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160249. | 3.4 | 29 |
| 30 | Effective ion speeds at $\sim 1/4200 \sim 250$ km from comet 67P/Churyumov-Gerasimenko near perihelion. Monthly Notices of the Royal Astronomical Society, 2017, 469, S142-S148. | 4.4 | 29 |
| 31 | Extreme densities in Titan's ionosphere during the T85 magnetosheath encounter. Geophysical Research Letters, 2013, 40, 2879-2883. | 4.0 | 27 |
| 32 | Evaluating Local Ionization Balance in the Nightside Martian Upper Atmosphere during MAVEN Deep Dip Campaigns. Astrophysical Journal Letters, 2019, 876, L12. | 8.3 | 27 |
| 33 | Saturn's Dusty Ionosphere. Journal of Geophysical Research: Space Physics, 2019, 124, 1679-1697. | 2.4 | 27 |
| 34 | Cometary plasma response to interplanetary corotating interaction regions during 2016 June-September: a quantitative study by the Rosetta Plasma Consortium. Monthly Notices of the Royal Astronomical Society, 2018, 480, 4544-4556. | 4.4 | 26 |
| 35 | MODEL-OBSERVATION COMPARISONS OF ELECTRON NUMBER DENSITIES IN THE COMA OF 67P/CHURYUMOV-GERASIMENKO DURING 2015 JANUARY. Astronomical Journal, 2016, 152, 59. | 4.7 | 24 |
| 36 | Rosetta photoelectron emission and solar ultraviolet flux at comet 67P. Monthly Notices of the Royal Astronomical Society, 2017, 469, S626-S635. | 4.4 | 24 |

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|----|---|-----|-----------|
| 37 | Density fluctuations associated with turbulence and waves. <i>Astronomy and Astrophysics</i> , 2021, 656, A19. | 5.1 | 24 |
| 38 | Detection of currents and associated electric fields in Titan's ionosphere from Cassini data. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 23 |
| 39 | Ion and aerosol precursor densities in Titan's ionosphere: A multi-instrument case study. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 10075-10090. | 2.4 | 23 |
| 40 | Impact of a cometary outburst on its ionosphere. <i>Astronomy and Astrophysics</i> , 2017, 607, A34. | 5.1 | 21 |
| 41 | Rosetta and Mars Express observations of the influence of high solar wind pressure on the Martian plasma environment. <i>Annales Geophysicae</i> , 2009, 27, 4533-4545. | 1.6 | 21 |
| 42 | Saturn's Ionosphere: Electron Density Altitude Profiles and Ring Interaction From The Cassini Grand Finale. <i>Geophysical Research Letters</i> , 2019, 46, 9362-9369. | 4.0 | 20 |
| 43 | An empirical approach to modeling ion production rates in Titan's ionosphere I: Ion production rates on the dayside and globally. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 1264-1280. | 2.4 | 18 |
| 44 | Titan's ionosphere: A survey of solar EUV influences. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 7491-7503. | 2.4 | 17 |
| 45 | Ring Shadowing Effects on Saturn's Ionosphere: Implications for Ring Opacity and Plasma Transport. <i>Geophysical Research Letters</i> , 2018, 45, 10,084. | 4.0 | 17 |
| 46 | Hybrid simulation of Titan's interaction with the supersonic solar wind during Cassini's T96 flyby. <i>Geophysical Research Letters</i> , 2016, 43, 35-42. | 4.0 | 16 |
| 47 | Cold and warm electrons at comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 0, , . | 5.1 | 15 |
| 48 | Ultraviolet Observations of Coronal Mass Ejection Impact on Comet 67P/Churyumov-Gerasimenko by Rosetta Alice. <i>Astronomical Journal</i> , 2018, 156, 16. | 4.7 | 15 |
| 49 | Solar Orbiter's first Venus flyby: Observations from the Radio and Plasma Wave instrument. <i>Astronomy and Astrophysics</i> , 2021, 656, A18. | 5.1 | 14 |
| 50 | Tracking corotating interaction regions from the Sun through to the orbit of Mars using ACE, MEX, VEX, and STEREO. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 13 |
| 51 | Solar wind current sheets and deHoffmann-Teller analysis. First results from Solar Orbiter's DC electric field measurements. <i>Astronomy and Astrophysics</i> , 0, , . | 5.1 | 13 |
| 52 | Kinetic electrostatic waves and their association with current structures in the solar wind. <i>Astronomy and Astrophysics</i> , 2021, 656, A23. | 5.1 | 12 |
| 53 | Effects of Saturn's magnetospheric dynamics on Titan's ionosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 8884-8898. | 2.4 | 11 |
| 54 | Statistical features of the global polarity reversal of the Venusian induced magnetosphere in response to the polarity change in interplanetary magnetic field. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 3951-3962. | 2.4 | 11 |

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|----|---|-----|-----------|
| 55 | Observations of high-plasma density region in the inner coma of 67P/Churyumov-Gerasimenko during early activity. Monthly Notices of the Royal Astronomical Society, 2016, 462, S33-S44. | 4.4 | 11 |
| 56 | Current sheets in comet 67P/Churyumov-Gerasimenko's coma. Journal of Geophysical Research: Space Physics, 2017, 122, 3308-3321. | 2.4 | 11 |
| 57 | Reduced proton and alpha particle precipitations at Mars during solar wind pressure pulses: Mars Express results. Journal of Geophysical Research: Space Physics, 2013, 118, 3421-3429. | 2.4 | 10 |
| 58 | Solar cycle variations in ion composition in the dayside ionosphere of Titan. Journal of Geophysical Research: Space Physics, 2016, 121, 8013-8037. | 2.4 | 10 |
| 59 | Plasma observations during the Mars atmospheric "plume" event of March-April 2012. Journal of Geophysical Research: Space Physics, 2016, 121, 3139-3154. | 2.4 | 10 |
| 60 | Unusually high magnetic fields in the coma of 67P/Churyumov-Gerasimenko during its high-activity phase. Astronomy and Astrophysics, 2019, 630, A38. | 5.1 | 10 |
| 61 | Plasma densities, flow, and solar EUV flux at comet 67P. Astronomy and Astrophysics, 2021, 653, A128. | 5.1 | 9 |
| 62 | First observations and performance of the RPW instrument on board the Solar Orbiter mission. Astronomy and Astrophysics, 2021, 656, A41. | 5.1 | 9 |
| 63 | SUPRATHERMAL ELECTRONS IN TITAN'S SUNLIT IONOSPHERE: MODEL-OBSERVATION COMPARISONS. Astrophysical Journal, 2016, 826, 131. | 4.5 | 8 |
| 64 | A Single Deformed Bow Shock for Titan-Saturn System. Journal of Geophysical Research: Space Physics, 2017, 122, 11,058. | 2.4 | 7 |
| 65 | The Evolution of the Electron Number Density in the Coma of Comet 67P at the Location of Rosetta from 2015 November through 2016 March. Astrophysical Journal, 2019, 881, 6. | 4.5 | 7 |
| 66 | The Convective Electric Field Influence on the Cold Plasma and Diamagnetic Cavity of Comet 67P. Astronomical Journal, 2019, 158, 71. | 4.7 | 7 |
| 67 | Implications from secondary emission from neutral impact on Cassini plasma and dust measurements. Monthly Notices of the Royal Astronomical Society, 2022, 515, 2340-2350. | 4.4 | 6 |
| 68 | Statistical study of electron density turbulence and ion-cyclotron waves in the inner heliosphere: Solar Orbiter observations. Astronomy and Astrophysics, 2021, 656, A16. | 5.1 | 5 |
| 69 | Analysis of multiscale structures at the quasi-perpendicular Venus bow shock. Astronomy and Astrophysics, 2022, 660, A64. | 5.1 | 5 |
| 70 | Outflow and plasma acceleration in Titan's induced magnetotail: Evidence of magnetic tension forces. Journal of Geophysical Research: Space Physics, 2014, 119, 9992. | 2.4 | 4 |
| 71 | Solar flares observed by Rosetta at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A49. | 5.1 | 4 |
| 72 | Mars Express Observations of Cold Plasma Structures in the Martian Magnetotail. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028056. | 2.4 | 4 |

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|----|--|-----|-----------|
| 73 | Re-analysis of the Cassini RPWS/LP Data in Titan's Ionosphere: 1. Detection of Several Electron Populations. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028412. | 2.4 | 4 |
| 74 | Dynamic field line draping at comet 67P/Churyumov-Gerasimenko during the Rosetta dayside excursion. Astronomy and Astrophysics, 2019, 630, A44. | 5.1 | 4 |
| 75 | Photoionization Modeling of Titan's Dayside Ionosphere. Astrophysical Journal Letters, 2017, 850, L26. | 8.3 | 3 |
| 76 | Radial distribution of plasma at comet 67P. Astronomy and Astrophysics, 2022, 663, A42. | 5.1 | 3 |
| 77 | Titan's Variable Ionosphere During the T118 and T119 Cassini Flybys. Geophysical Research Letters, 2018, 45, 8721-8728. | 4.0 | 2 |
| 78 | MARSIS Observations of Field-Aligned Irregularities and Ducted Radio Propagation in the Martian Ionosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 6251-6263. | 2.4 | 2 |
| 79 | Re-analysis of the Cassini RPWS/LP Data in Titan's Ionosphere: 2. Statistics on 57 Flybys. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028413. | 2.4 | 2 |
| 80 | A Two-Spacecraft Study of Mars' Induced Magnetosphere's Response to Upstream Conditions. Journal of Geophysical Research: Space Physics, 2022, 127, . | 2.4 | 2 |
| 81 | The Science Case for a Titan Flagship-class Orbiter with Probes. , 2021, 53, . | | 0 |