The Science Explorer: A Revolutionary Platform for all NASA Science



Simon Anghel and the SciX Team

Astronomical Institute of the Romanian Academy IMCCE, Paris Observatory Center for Astrophysics | Harvard & Smithsonian

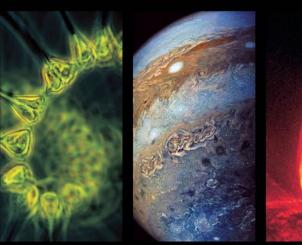














NASA Science Explorer

Accelerating the discovery of NASA Science.

What is The Science Explorer?

SciX is a new literature portal that was just launched as part of the expansion of the NASA Astrophysics Data System (ADS), a digital library focusing on Space Science research.



General Science



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WELCOME TO THE SciX Digital Library



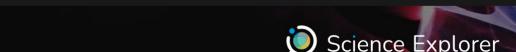
Learn more about the SciX digital library and how it can support your scientific research in this welcome video and brief user tutorial from Dr. Stephanie Jarmak.

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What is The Science Explorer?

SciX is a literature-based, open digital information system covering and unifying the research disciplines funded by the NASA Science **Mission Directorate.**



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EXPLORE ACROSS

Science Focus Areas



NASA SciX covers and unifies the fields of Earth Science, Planetary Science, Astrophysics, and Heliophysics. It will also cover NASA funded research in Biological and Physical Sciences.



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help[at]scixplorer.org

SciX is a project created by the Astrophysics Data System (ADS), which is operated by the Smithsonian Astrophysical Observatory under NASA Cooperative Agreement 80NSSC21M0056.

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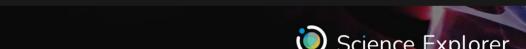
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What is The Science Explorer?

SciX supports NASA's **Open Science efforts and** enables interdisciplinary research and collaboration.







DISCOVER

Open Science

SciX is part of the NASA Open Source Science Initiative. SciX supports open science principles, expanding access & accelerating scientific discovery for societal benefit.





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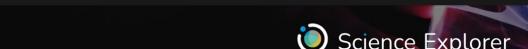
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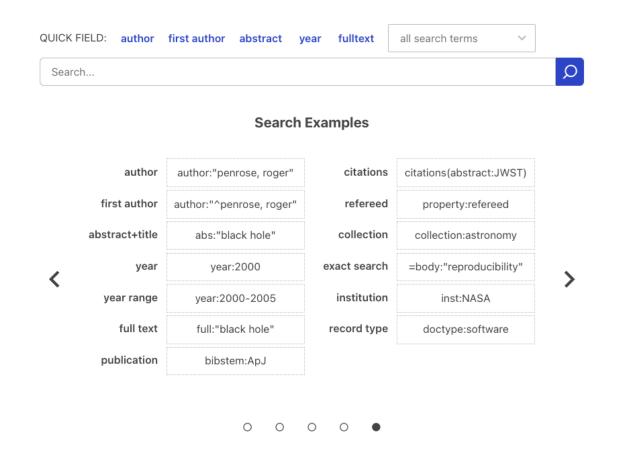
The Science Explorer, or SciX for short, is available as a beta release at the following website: https://SciXplorer.org

While the system is still under development, it already provides a wealth of information and functionality ready for use.



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Why The Science Explorer (SciX)?

NASA's Science Mission Directorate in 2019 calls for the creation of interdisciplinary literature portal in support of Open Science.

Over the next three years, the ADS team will be developing and expanding the The Science Explorer to include all relevant NASA content.

Partner: NA



https://SciXplorer.org

Historic Observatory Publications digitized in the Science Explorer

Through the mid-20th century, many observatories had **their own outlets** for disseminating their **research and administrative information**.

Astronomers reported their work in **observatory periodicals** and reviewed journals.

These historic records contain **foundational work** that remains **relevant today**, observational data of **unrepeatable sky views**, and evidence of the **evolving culture of astronomy**.

SciX continues to digitize (600 dpi, single TIFF file) legacy materials as we receive them.

<u>e.g. Astronomical Observations made at the Royal Observatory at Greenwich, Annals of the Private Observatory of Lucien Libert, Bulletin Horaire du Bureau International de l'Heur, and Yale University Observatory Reports for the year</u>



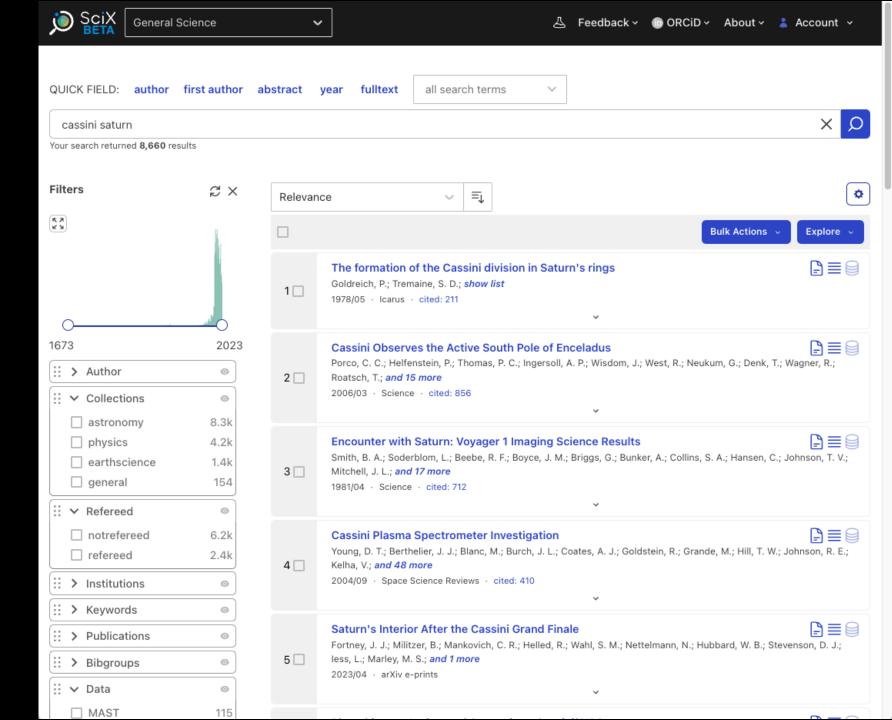


WELCOME TO THE **SciX Digital Library**

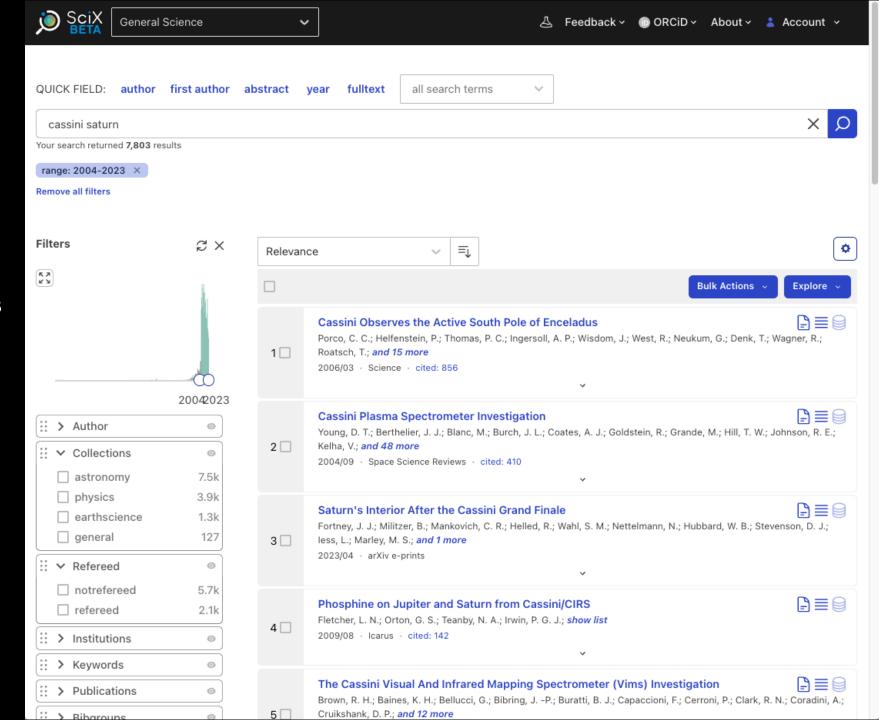


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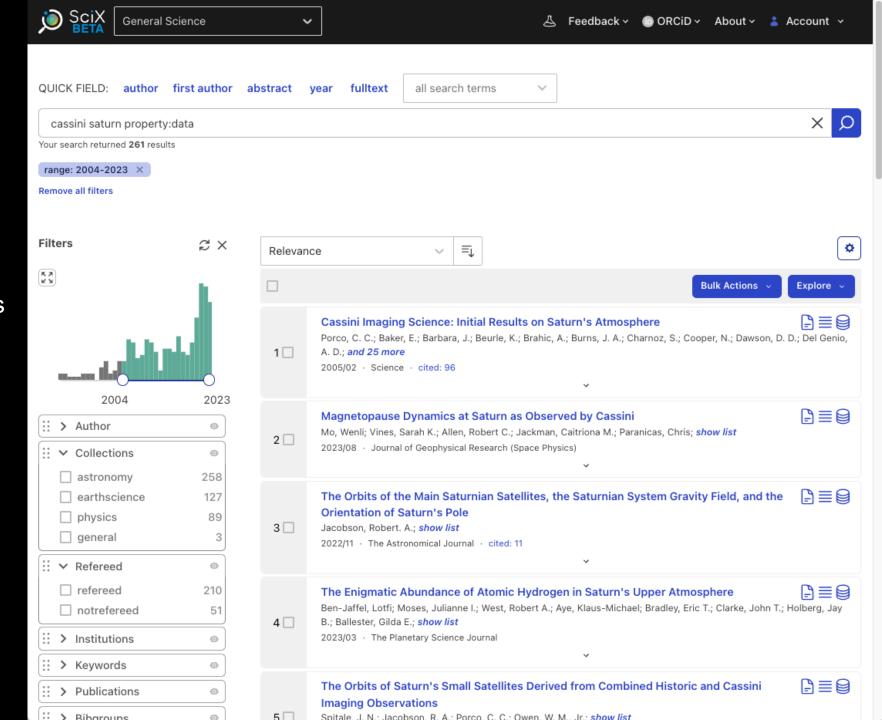
8,660 results, sorted by relevance



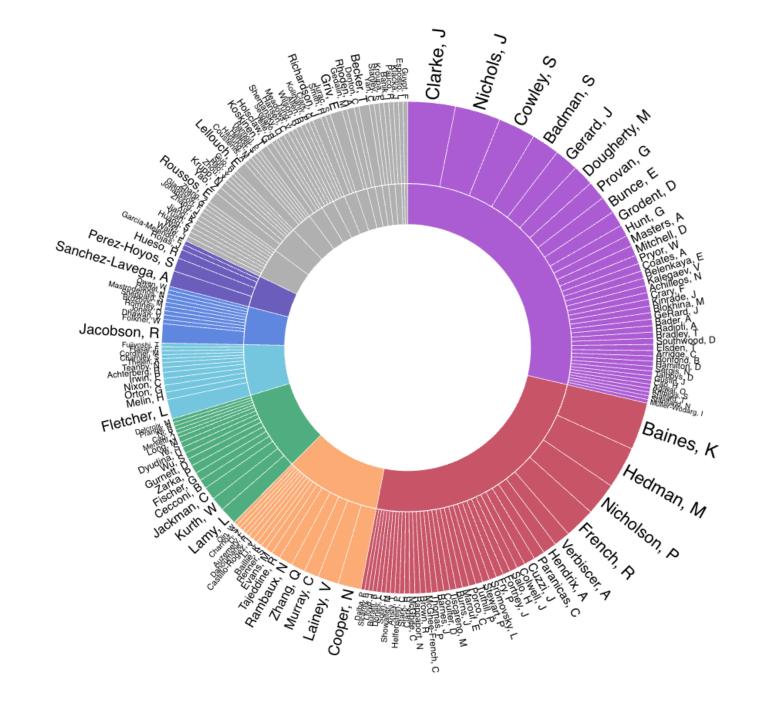
8,660 results, sorted by relevance 7,803 published in the last 20 years



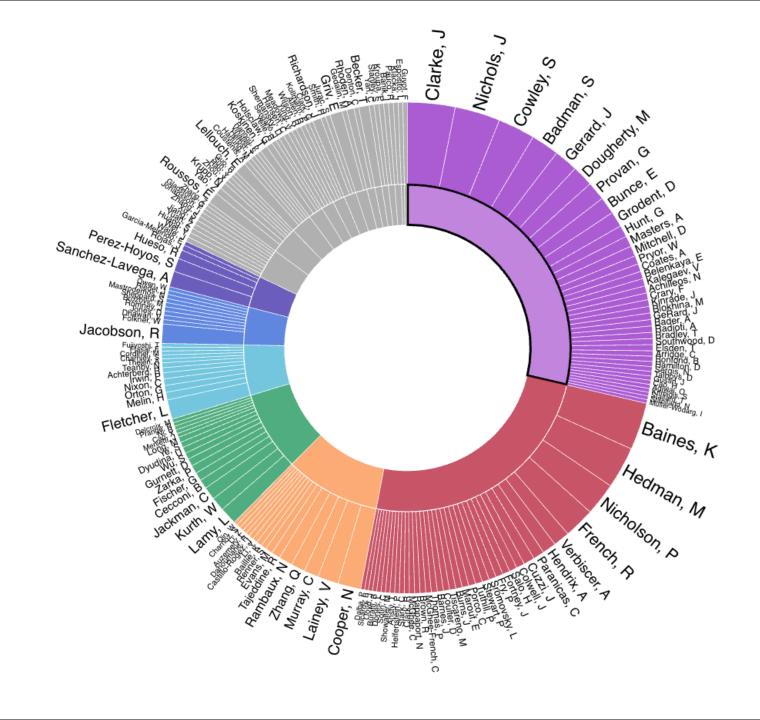
8,660 results, sorted by relevance 7,803 published in the last 20 years 261 with data products



8,660 results, sorted by relevance7,803 published in the last 20 years261 with data products7 collaboration groups detected



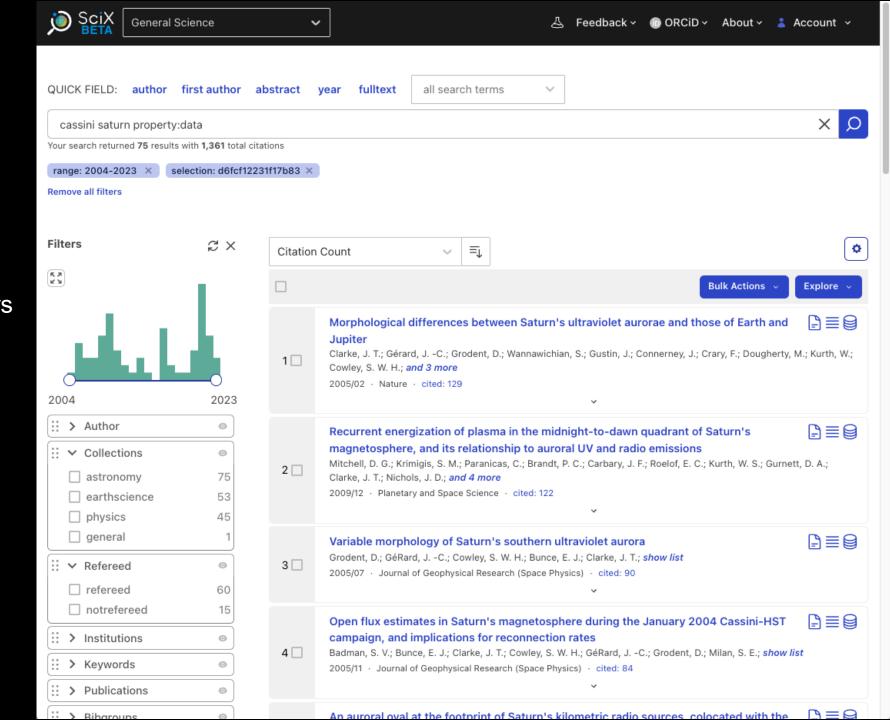
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8,660 results, sorted by relevance
7,803 published in the last 20 years
261 with data products
7 collaboration groups detected
1 group selected
75 papers authored by group

Summary Detail Group 1 Add to filter Total papers: 75, most recent: 2023 Variable morphology of Saturn's southern ultraviolet aurora cited: 90; 5 authors from this group Open flux estimates in Saturn's magnetosphere during the January 2004 Cassini-HST campaign, and implications for reconnection rates 2 cited: 84; 6 authors from this group Auroral current systems in Saturn's magnetosphere: comparison of theoretical models with Cassini and HST observations 3 cited: 54; 10 authors from this group Signature of Saturn's auroral cusp: Simultaneous Hubble Space Telescope FUV observations and upstream solar wind monitoring 4 cited: 51; 6 authors from this group Morphological differences between Saturn's ultraviolet aurorae and those of Earth and Jupiter 5 cited: 129; 8 authors from this group Recurrent energization of plasma in the midnight-to-dawn quadrant of Saturn's magnetosphere, and its relationship to auroral UV and radio emissions 6 cited: 122; 8 authors from this group On the origin of Saturn's outer auroral emission 7 cited: 44; 4 authors from this group Characterization of auroral current systems in Saturn's magnetosphere: High-latitude Cassini observations 8 cited: 36; 6 authors from this group Oscillation of Saturn's southern auroral oval 9 cited: 79; 5 authors from this group

8,660 results, sorted by relevance
7,803 published in the last 20 years
261 with data products
7 collaboration groups detected
1 group selected
75 papers authored by group
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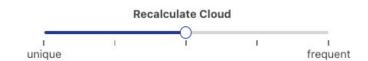


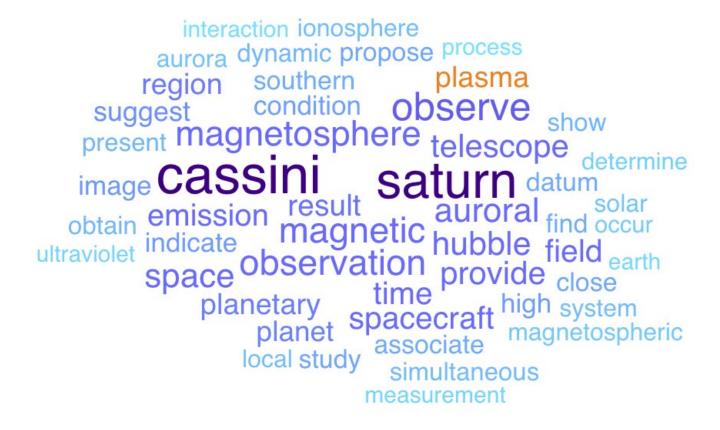
Example search:

cassini saturn

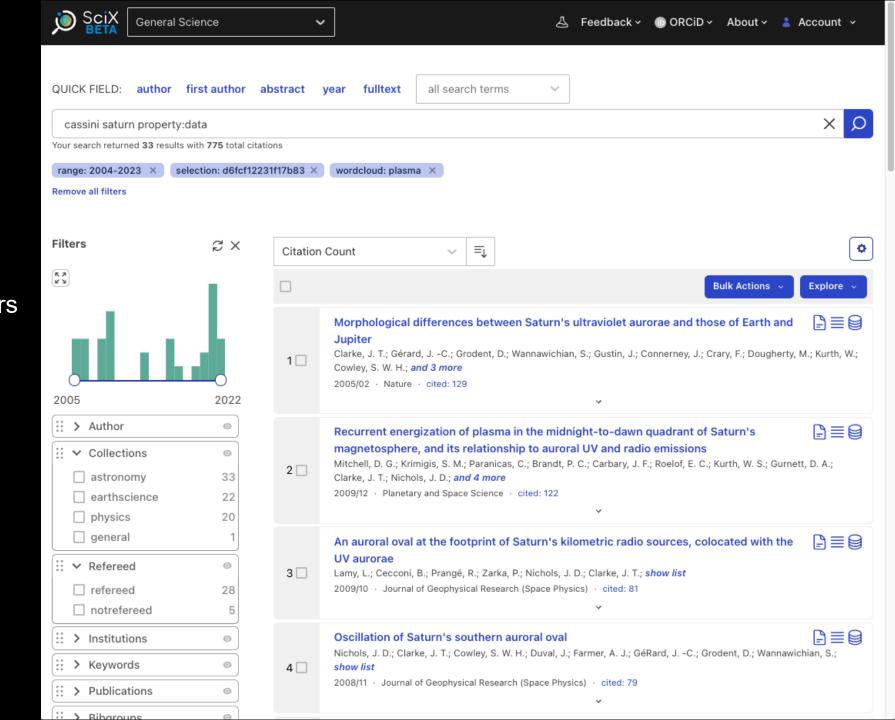
8,660 results, sorted by relevance
7,803 published in the last 20 years
261 with data products
7 collaboration groups detected
1 group selected
75 papers authored by group
view papers sorted by citations
view & select concepts in papers



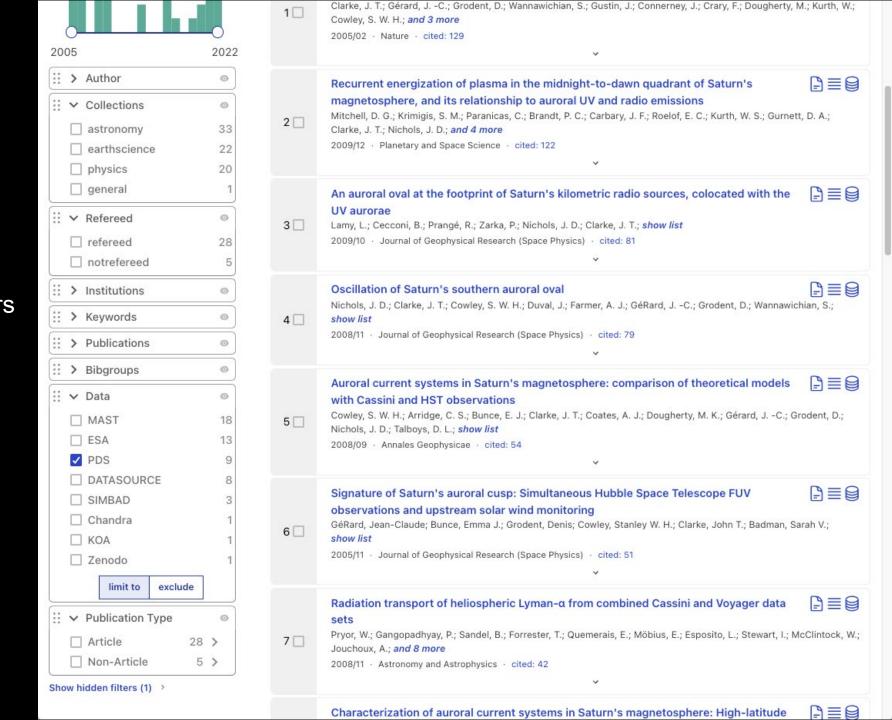




8,660 results, sorted by relevance
7,803 published in the last 20 years
261 with data products
7 collaboration groups detected
1 group selected
75 papers authored by group
view papers sorted by citations
view & select concepts in papers
33 papers containing "plasma"

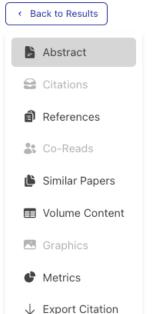


8,660 results, sorted by relevance
7,803 published in the last 20 years
261 with data products
7 collaboration groups detected
1 group selected
75 papers authored by group
view papers sorted by citations
view & select concepts in papers
33 papers containing "plasma"
9 of which have PDS data



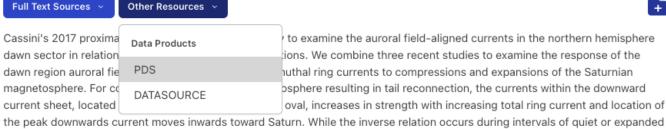
8,660 results, sorted by relevance 7,803 published in the last 20 years 261 with data products 7 collaboration groups detected 1 group selected 75 papers authored by group view papers sorted by citations view & select concepts in papers 33 papers containing "plasma" 9 of which have PDS data view one article



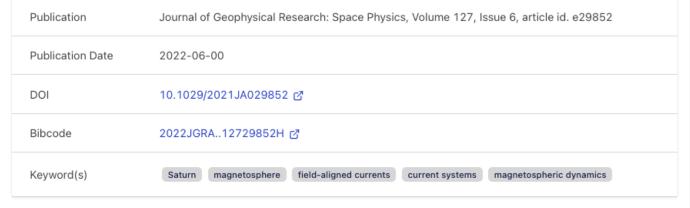


The Response of Saturn's Dawn Field-Aligned Currents to Magnetospheric and Ring Current Conditions During Cassini's Proximal Orbits: Evidence for a Region 2 Response at Saturn

Hunt, G. J.; Provan, G.; Bradley, T. J.; Cowley, S. W. H.; Dougherty, M. K.; Roussos, E. show list



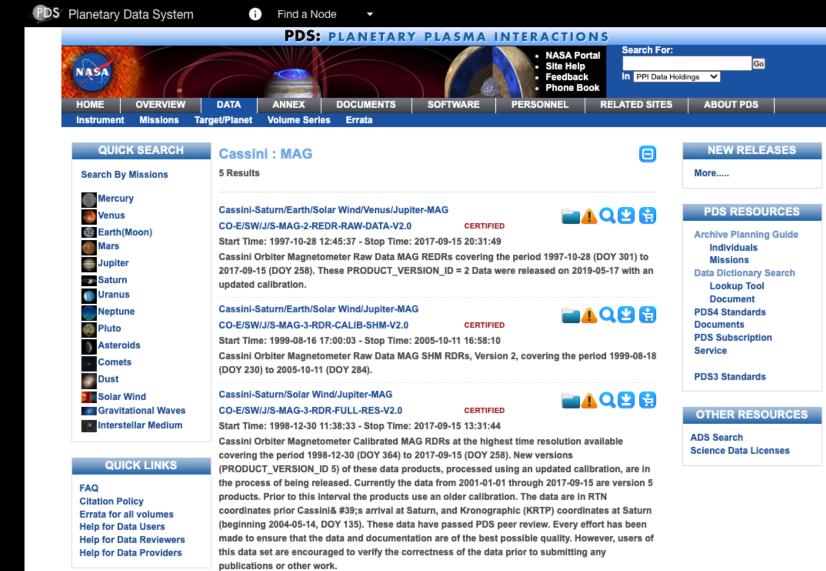
magnetospheric conditions. During compression events there is an increase in the energetic particle intensities, in particular in the protons (35-506 keV), within the downward current region. This current system is akin to an Earth-like "region 2" field aligned current within Saturn's magnetosphere, with tail reconnection occurring when the magnetosphere is compressed resulting in a partial nightside ring current closed by a downward current near to dawn. Within the upward current sheet, mapping to Saturn's main auroral oval, both non-rotating subcorotating current and the rotating Planetary Period Oscillations (PPOs) currents flow. The upward current is strongly modulated by the PPOs but also increases in strength, with enhanced high-energy protons, during intervals of magnetospheric compressions and tail reconnection. We conclude that the enhanced plasma injected into the midnight-dawn sector during tail reconnection events results in an enhanced subcorotation current system.



Example search:

cassini saturn

8,660 results, sorted by relevance 7,803 published in the last 20 years 261 with data products 7 collaboration groups detected 1 group selected 75 papers authored by group view papers sorted by citations view & select concepts in papers 33 papers containing "plasma" 9 of which have PDS data view one article view associated PDS data



Cassini-Saturn/Earth/Solar Wind/Venus/Jupiter-FGM

Start Time: 1998-12-30 19:38:29 - Stop Time: 2017-09-12 08:14:31

Cassini Orbiter Magnetometer Calibrated MAG data in 1 minute averages available covering the

period 1999-08-16 (DOY 228) to 2017-09-12 (DOY 255). This volume contains new versions (KRTP,

KSO and KSM PRODUCT VERSION ID 7 and RTN PRODUCT VERSION ID 8) of these data

products, processed using an updated calibration. The data are provided in RTN coordinates

throughout the mission, with Earth, Jupiter, and Saturn centered coordinates for the respective

flybys of those planets. These data have passed PDS peer review. Every effort has been made to

CO-E/SW/J/S-MAG-4-SUMM-1MINAVG-V2.1

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Geosciences

Small Bodies

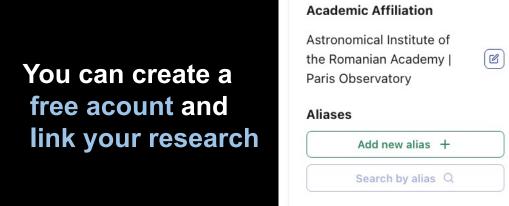
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Source Energy Estimation of Ton TNT-Scale Impacts Based on Well- Known Meteorite Falls	NASA Astrophysics Data System	2 months ago	Verified	٥
Recent results from T04	NASA Astrophysics Data System	2 months ago	Verified	٥
The current status of MOROI network. Astrometric reduction of multistation events and meteoroids orbits	NASA Astrophysics Data System	2 months ago	Verified	٥
Astrojunior: An Educational Project for Interactive Teaching of Planetary Science	NASA Astrophysics Data System	2 months ago	Verified	٠
Photometry of all-sky cameras: preliminary results for MOROI network	NASA Astrophysics Data System	2 months ago	Verified	٠
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Data ingestion methods and	NASA Astrophysics Data System	2 months ago	Verified	ô

https://SciXplorer.org

ORCID integration

→ Improved

Why should I use SciX?

- → New Features will be developed in SciX
- → The SciX platform is our development focus and the place where new capabilities and new content will be rolled out
- → Disciplinary focus in an Interdisciplinary context
 We are committed to making sure the transition will increase, not decrease, research productivity and enable interdisciplinary research





WELCOME TO THE SciX Digital Library



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Why should I use SciX?

- All of NASA Science
- Connected to the data
- Linked to the code

Better than the rest...

- Open
- Trustworthy
- Complete
- Innovative
- Interdisciplinary
- Developed by scientists, for scientists





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Accelerating the discovery of NASA Science.

Thank You!

https://SciXplorer.org @SciXCommunity



The SciX Team:

Alberto Accomazzi, Tom Allen, Jennifer Bartlett
Harry Blom, Daniel Chivvis, Shinyi (Jennifer) Chen, Fernanda de
Macedo Alves, Felix Grezes, Carolyn Stern Grant, Edwin Henneken,
Tim Hostetler, Taylor Jacovich, Stephanie Jarmak, Jennifer Koch,
Michael J. Kurtz, Kelly Lockhart, Brit Myers, Jean-Claude Paquin,
Mugdha Polimera, Pavlos Protopapas, Golnaz Shapurian, Matthew
Templeton, Donna Thompson

The SciX Ambassadors:

Simon Anghel, Thom Chaffee, Yueyi Che, Chenyue Jiao, Sarah Lamm, Vincent Ledvina, Manuel Pichardo Marcano, Amirhosein Mousavi, Anand Narayanan, Tieza Mica Santos, Olivia Wilkins





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Simon.Anghel@astro.ro