

The NASA Science Explorer: ADS for all of NASA Science

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CENTER FOR

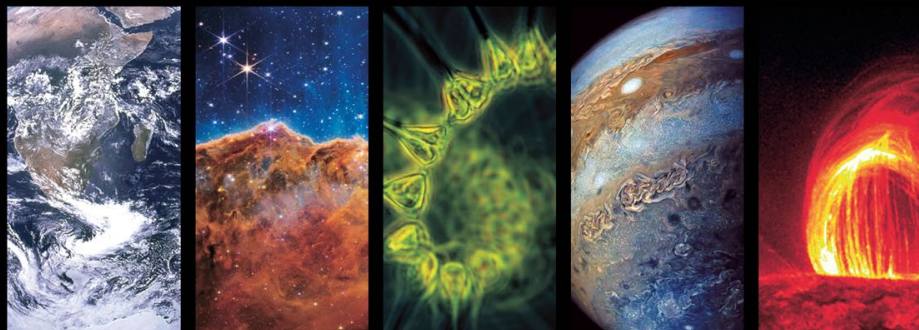
ASTROPHYSICS

HARVARD & SMITHSONIAN



SciX

[SciXplorer.org]



NASA Science Explorer

Accelerating the discovery of NASA Science.

What is the NASA Science Explorer?

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

QUICK FIELD: [author](#) [first author](#) [abstract](#) [year](#) [fulltext](#)

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.



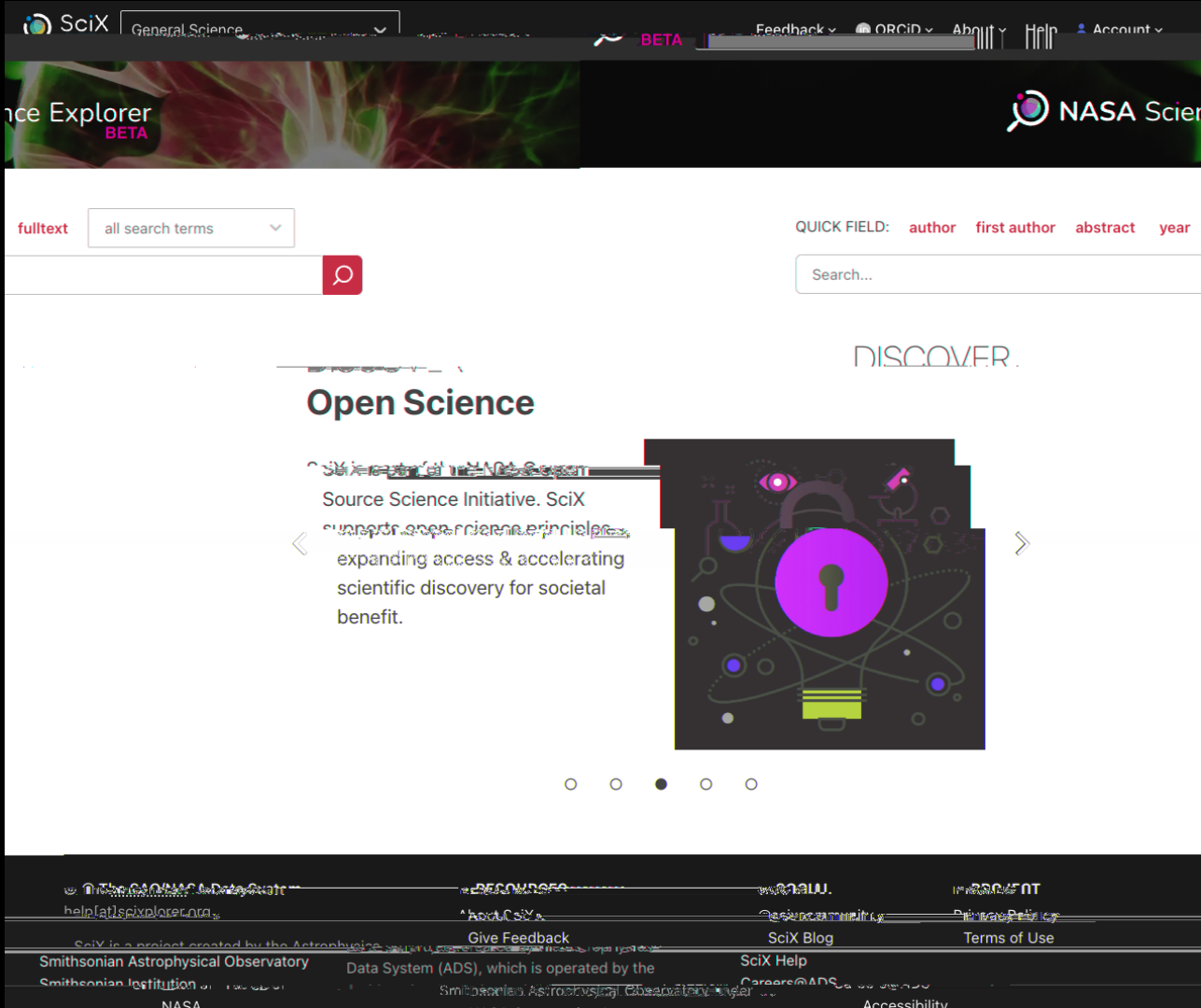
What is the NASA Science Explorer?

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

The screenshot shows the NASA SciX website interface. At the top, there is a navigation bar with the SciX logo, a dropdown menu for "General Science", a "BETA" badge, and links for "Feedback", "ORCID", "About", "Help", and "Account". Below the navigation bar is a header section with the text "Science Explorer BETA" and the NASA Science logo. The main content area features a search bar with a "fulltext" dropdown and "all search terms" as the selected option. To the right of the search bar is a "QUICK FIELD:" section with buttons for "author", "first author", "abstract", and "year". Below the search bar is a "Science Focus Areas" section with a row of five colorful images representing different scientific fields. The text below the images states: "NASA SciX covers and unifies the fields of Earth Science, Planetary Science, and Biological and Physical Sciences." The interface is clean and modern, with a white background and colorful accents.

What is the NASA Science Explorer?

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

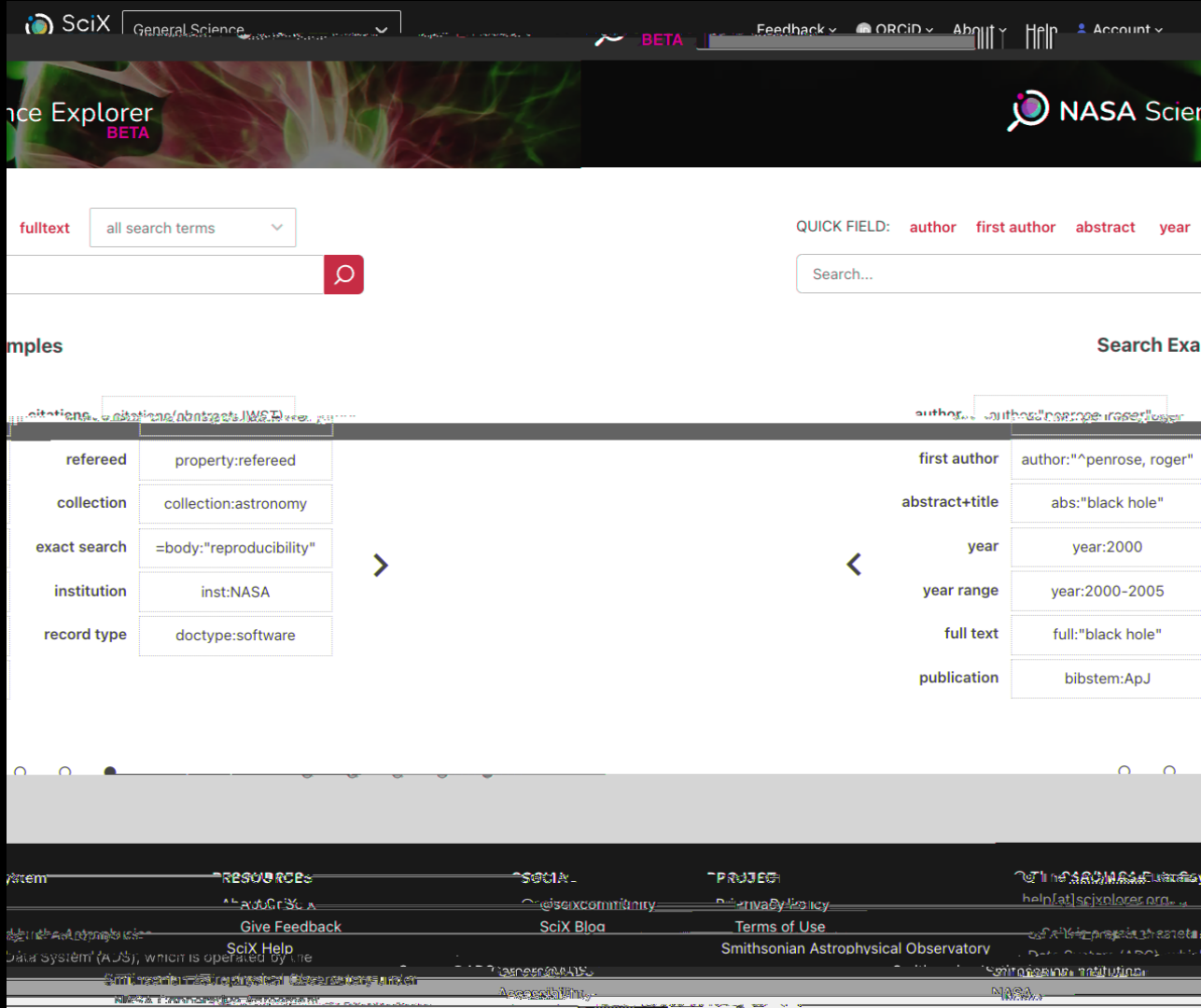


What is the NASA Science Explorer?

The NASA Science Explorer, or SciX for short, is available as a beta release at the following website:

<https://SciXplorer.org>

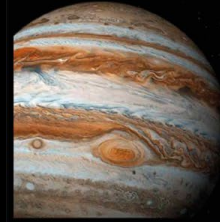
While the system is still under development, it already provides a wealth of information and functionality ready for use.



Why the NASA Science Explorer?

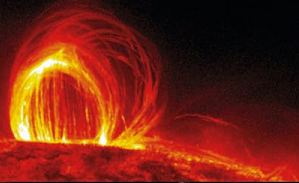
NASA's Science Mission Directorate in 2019 calls for the creation of interdisciplinary literature portal spanning across SMD in support of Open Science.

Earth Science



Planetary Science

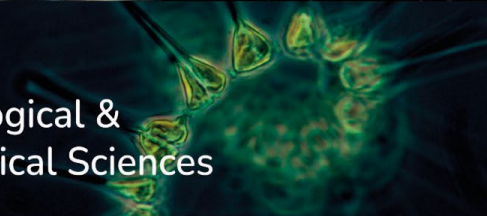
Heliophysics



Astrophysics



Biological &
Physical Sciences



<https://SciXplorer.org>

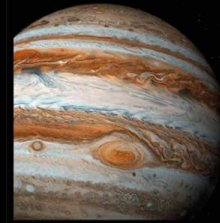
Why the NASA Science Explorer?

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

ADS has been selected for its support of open science goals: facilitating discovery and dissemination of OA publications, data, and software by aggregating and linking them.

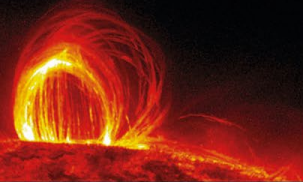
<https://SciXplorer.org>

Earth Science



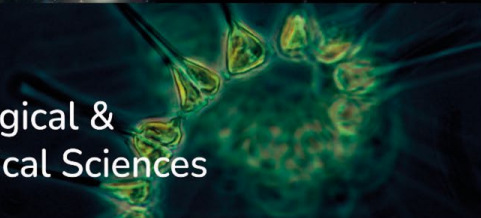
Planetary Science

Heliophysics



Astrophysics

Biological &
Physical Sciences



Why the NASA Science Explorer?

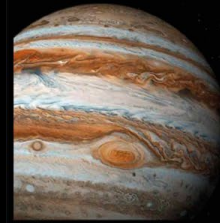
NASA's Science Mission Directorate in 2019 calls for the creation of interdisciplinary literature portal spanning across SMD in support of Open Science.

ADS has been selected for its support of open science goals: facilitating discovery and dissemination of OA publications, data, and software by aggregating and linking them.

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

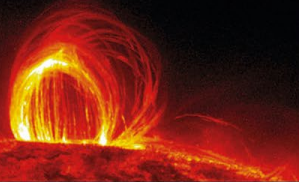
<https://SciXplorer.org>

Earth Science



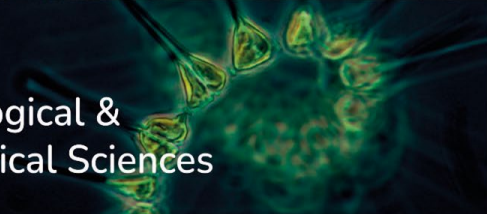
Planetary Science

Heliophysics



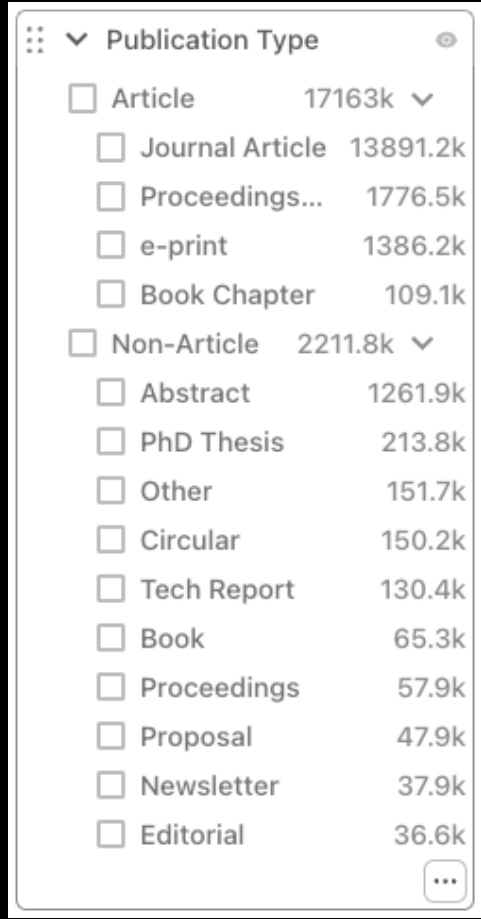
Astrophysics

Biological &
Physical Sciences



Why the NASA Science Explorer?

All discipline-specific research content is aggregated, connected, and indexed for each of the SMD divisions



Publication Type	
<input type="checkbox"/> Article	17163k
<input type="checkbox"/> Journal Article	13891.2k
<input type="checkbox"/> Proceedings...	1776.5k
<input type="checkbox"/> e-print	1386.2k
<input type="checkbox"/> Book Chapter	109.1k
<input type="checkbox"/> Non-Article	2211.8k
<input type="checkbox"/> Abstract	1261.9k
<input type="checkbox"/> PhD Thesis	213.8k
<input type="checkbox"/> Other	151.7k
<input type="checkbox"/> Circular	150.2k
<input type="checkbox"/> Tech Report	130.4k
<input type="checkbox"/> Book	65.3k
<input type="checkbox"/> Proceedings	57.9k
<input type="checkbox"/> Proposal	47.9k
<input type="checkbox"/> Newsletter	37.9k
<input type="checkbox"/> Editorial	36.6k

Why the NASA Science Explorer?

All discipline-specific research content is aggregated,
connected, and indexed for each of the SMD divisions

Relevant taxonomies are used to capture the knowledge and
semantics of the subject disciplines

jupiter
Hot Jupiters
Epistellar jovians (Hot Jupiters)
Pegasean planets (Hot Jupiters)
Pegasids (Hot Jupiters)
Roaster planets (Hot Jupiters)
Moons of Jupiter (Jovian satellites)
Jupiter's satellites (Jovian satellites)
Jupiter's moons (Jovian satellites)
Jupiter
Jupiter trojans
Jupiter III (Ganymede)
Jupiter II (Europa)
Jupiter I (Io)

Why the NASA Science Explorer?

All discipline-specific research content is aggregated, connected, and indexed for each of the SMD divisions

Relevant taxonomies are used to capture the knowledge and semantics of the subject disciplines

Digital collections are enriched with links to other research objects such as datasets, software, notebooks, and funding information



Source	Count
DATASOURCE	13.2k
Zenodo	6.4k
NOAA	3.2k
GSFC	2.3k
GITHUB	2.2k
FigShare	1.5k
ECMWF	1.2k
Astromat	1.1k
CopernicusEU	1.1k
ESA	1k

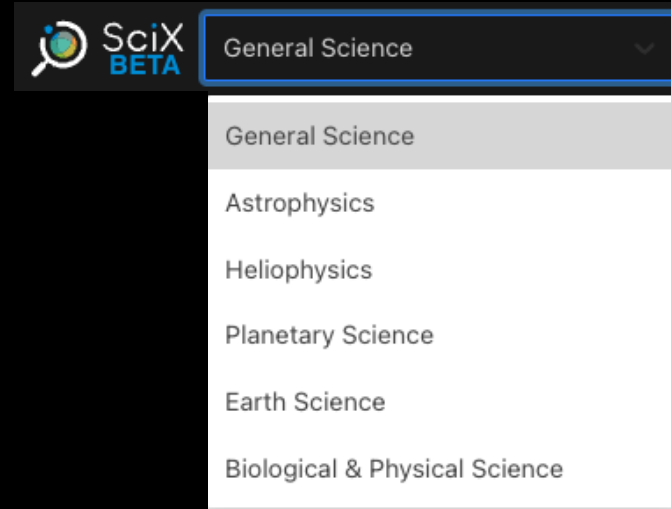
Why the NASA Science Explorer?

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Relevant taxonomies are used to capture the knowledge and semantics of the subject disciplines

Digital collections are enriched with links to other research objects such as datasets, software, notebooks, and funding information

Discipline-specific capabilities and analytic services are exposed to the relevant research communities



QUICK FIELD: author first author abstract year fulltext all search terms

Search... 

Search Examples

author	author:"penrose, roger"	citations	citations(abstract:JWST)
first author	author:"^penrose, roger"	refereed	property:refereed
abstract+title	abs:"black hole"	collection	collection:astronomy
year	year:2000...	exact search	=body;"reproducibility"
record type	doctype:software	full text	full:"black hole"
		publication	bibstem:ApJ

SOCIAL

@scixcommunity
SciX Blog

PROJECT

Privacy Policy
Terms of Use

© The SAO/NASA Data System

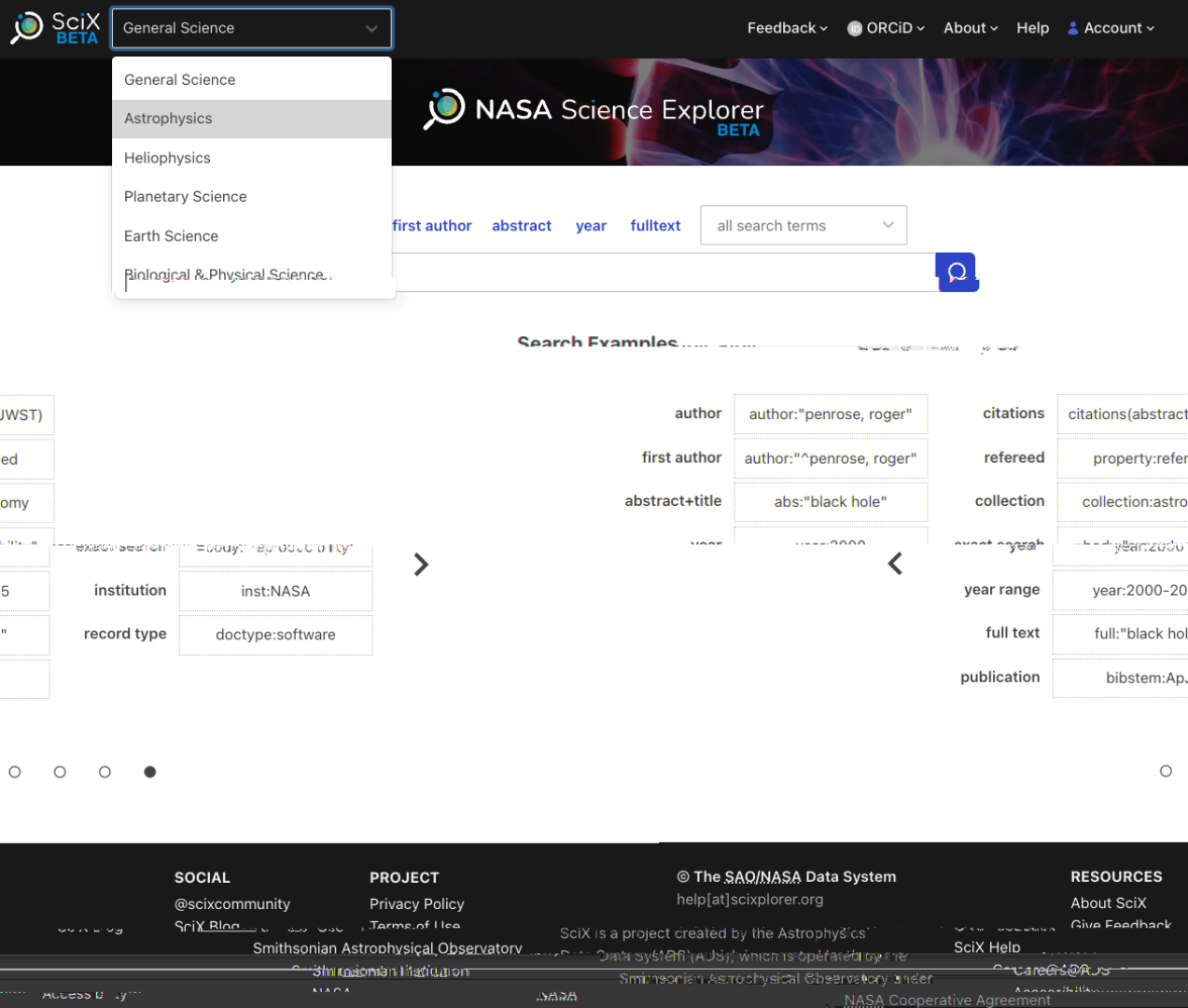
help[at]scixplorer.org

RESOURCES

About SciX
Give Feedback

How is it different from ADS?

SciX is built on top of the same database and API, but has a few different features:



How is it different from ADS?

SciX is built on top of the same database and API, but has a few different features:

- Improved accessibility

QUICK FIELD: author first author abstract year fulltext all search terms

Search... 

Search Examples

author	author:"huchra, john"	citations	citations(abstract:JWST)
first author	first author:"huchra, john"	year	year:2000
abstract+title	abs:"dark energy"	collection	collection:astronomy
year	year:2000	exact search	=body:"reproducibility"
year range	year:2000-2005	institution	inst:NASA
full text	full:"super Earth"	record type	doctype:software
publication	publication:2000	publication	publication:2000

How is it different from ADS?

SciX is built on top of the same database and API, but has a few different features:

- Improved accessibility
- Discipline specific “skins”

Limit Query

Astronomy Physics General Earth Science

Author

And Or

Smith, John A
Smith, Jane B

Author names, enter (Last, First M) one per line.

Example Operators:

Use `-` to filter out an author. (Ex: `-Smith, John`)

Use `=` to restrict name expansion. For example `=Smith, Jim` will match "Smith, Jim" but not "Smith, James".

Surround name with `^ $` to match papers with only one particular author. (Ex: `^Smith, J$`)

[Learn More](#)

Object

And Or

M 31
HD 187642
Sgr A*

SIMBAD object search, one per line.

Publication Date Start

Ex: "2011/04"

Publication Date End

Ex: "2014/12"

Title

And Or Boolean

Ex: "Content of the Future in the ADS"

How is it different from ADS?

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- Improved accessibility
- Discipline specific “skins” (including the “Classic Form”)

QUICK FIELD: author first author abstract year fulltext all search terms

AGN X 🔍

Your search returned 50,006 results

Filters

Year(s)

Bulk Actions **Explore**

1 **The host galaxies of active galactic nuclei**
 Kauffmann, Guinevere; Heckman, Timothy M.; Tremontj, Christ; Brinchmann, Jarle; Charlot, Stéphane; White, Simon D. M.; Ridgway, Susan E.; Brinkmann, Jon; Fukugita, Masataka; Hall, Patrick B.; and 3 more
 2003/12 - Monthly Notices of the Royal Astronomical Society - cited: 3152

2 **Unified Schemes for Radio-Loud Active Galactic Nuclei**
 Urry, C. Megan; Padovani, Paolo; show list
 1995/09 - Publications of the Astronomical Society of the Pa... - cited: 4149

3 **Unified models for active galactic nuclei and quasars.**
 Antonucci, Robert; show list
 1993/00 - Annual Review of Astronomy and Astrophysics - cited: 3587

4 **Astrophysics of gaseous nebulae and active galactic nuclei**
 Osterbrock, Donald E.; show list; explore
 1989/00 - Astrophysics of Gaseous Nebulae and Active Galactic Nuclei - cited: 3861

5 **Observational Evidence of Active Galactic Nuclei Feedback**
 Fabian, A. C.; show list
 2012/09 - Annual Review of Astronomy and Astrophysics - cited: 1974

6 **Astrophysics of gaseous nebulae and active galactic nuclei**
 Osterbrock, Donald E.; show list; explore

Author

Fabian, A

2024

73 >

Stern, D. 546 >

Wang, J. 492 >

Vignali, C. 446 >

Brandt, W. 445 >

Elvis, M. 444 >

Mushotzky, R. 407 >

Comastri, A. 400 >

Urry, C. 383 >

Collections

astronomy 49k

physics 3.8k

general

earthscience 139

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SciX is built on top of the same database and API, but has a few different features:

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- Better handling of filters

How is it different from ADS?

SciX is built on top of the same database and API, but has a few different features:

- Improved accessibility
- Discipline specific “skins”
- Better handling of filters (paging, sorting & searching)

Author

Search [x] Count [v] [≡]

<input type="checkbox"/>	Fabian, A	573 >
<input type="checkbox"/>	Stern, D	546 >
<input type="checkbox"/>	Wang, J	492 >
<input type="checkbox"/>	Vignali, C	446 >
<input type="checkbox"/>	Brandt, W	445 >
<input type="checkbox"/>	Elvis, M	444 >
<input type="checkbox"/>	Ho, L	425 >
<input type="checkbox"/>	Mushotzky, R	407 >
<input type="checkbox"/>	Comastri, A	400 >
<input type="checkbox"/>	Urry, C	383 >

Showing 1 to 10 of 35,354 results

< Prev 1 of 3,536 Next >

Author

- Fabian, A
- Stern, D
- Wang, J
- Vignali, C 446 >
- Brandt, W 445 >
- Elvis, M 444 >
- Ho, L 425 >
- Mushotzky, R 407 >
- Comastri, A 400 >
- Urry, C 383 >

Collections

- astronomy 49k
- physics 3.8k
- general 383
- earthscience 139

3 Antonucci, Robert; *show list*
1993/00 · Annual Review of Astronomy and Astrophysics · cited: 3587

4 **Astrophysics of gaseous nebulae and active galactic nuclei**
Osterbrock, Donald E.; *show list*
1989/00 · Astrophysics of Gaseous Nebulae and Active Galacti... · cited: 3861

5 **Observational Evidence of Active Galactic Nuclei Feedback**
Fabian, A. C.; *show list*
2012/09 · Annual Review of Astronomy and Astrophysics · cited: 1974

6 **Astrophysics of gaseous nebulae and active galactic nuclei**
Osterbrock, Donald E.; Ferland, Gary J.; *show list*
2006/00 · Astrophysics of gaseous nebulae and active galacti... · cited: 2123

How is it different from ADS?

SciX is built on top of the same database and API, but has a few different features:

- Improved accessibility
- Discipline specific “skins”
- Better handling of filters
- Discipline-specific enhancements

The screenshot displays the SciX search interface. At the top, there is a search bar with the query "mars craters" and a dropdown menu for "all search terms". Below the search bar, there are filters for "range: 1950-2024" and "Remove all filters". The main search results are displayed in a list format, with each result showing a title, author(s), year, journal, and citation count. The results are filtered by "Relevance".

Search results include:

- 1 **Evidence for recent volcanism on Mars from crater counts**
Hartmann, William K.; Malin, Michael; McEwen, Alfred; Carr, Michael; Soderblom, Larry; Thomas, Peter; Danielson, Edward; James, Phillip; Veverka, Joseph; [show list](#)
1999/02 · Nature · cited: 174
- 2 **The martian hemispheric dichotomy may be due to a giant impact**
Wilhelms, D. E.; Squyres, S. W.; [show list](#)
1984/05 · Nature · cited: 227
- 3 **Pseudocraters on Mars.**
Frazee, H.; Levard, T.; Soderblom, L.; [show list](#)
1979/12 · Journal of Geophysical Research · cited: 98
- 4 **Impact crater and basin control of igneous processes on Mars.**
Schultz, P. H.; Glicken, H.; [show list](#)
1979/12 · Journal of Geophysical Research · cited: 88
- 5 **Martian Cratering**
Hartmann, William K.; [show list](#)
1966/00 · Icarus · cited: 91
- 6 **Martian cratering 8: Isochron refinement and the chronology of Mars**
Hartmann, William K.; [show list](#)

On the right side, there is a "Year(s)" histogram showing the distribution of results over time. Below the histogram, there is a "Planetary Features" sidebar with a tree view showing "Mars" (1.5k), "Crater" (1.1k), and "Gale" (520).

At the bottom, there is a "Filters" sidebar with a tree view showing "Jezero" (142), "Eberswalde" (57), "Victoria" (53), "Eagle" (47), "Zunil" (42), "Hale" (41), "Endeavour" (39), "Vallis" (586), and "Planum" (559).

How is it different from ADS?

SciX is built on top of the same database and API, but has a few different features:

- Improved accessibility
- Discipline specific “skins”
- Better handling of filters
- Discipline-specific enhancements (with links to additional resources)


The screenshot displays the SciX interface for a search result. At the top left, there is a navigation menu with options: Abstract, Citations, References (90), Co-Reads, Similar Papers, Volume Content, Graphics, Metrics, and Export Citation. The main content area features the title "Ma'adim Vallis, Mars: Insights into episodic and late-stage water activity from an impact crater" by Tuhi, S.; Harish; Kimi, K. B.; Vigneshwaran, K.; Sharini, K. S.; Priya, R. K. S.; Vijayan, S. Below the title are buttons for "Full Text Sources" and "Other Resources". The abstract text discusses alluvial fans on Mars and the geological history of Ma'adim Vallis. At the bottom, a metadata table provides details such as Publication Date (2022-11-00), DOI (10.1016/j.icarus.2022.115214), and Bibcode (2022icar..38715214T). The keywords section includes Mars, Crater, Mineralogy, Water, and Astrobiology. The Planetary Features section lists Mars/Crater/Gale, Mars/Crater/Gusev, Mars/Crater/Jezero, Mars/Crater/Reuy, Mars/Terra/Terra Cimmeria, Mars/Terra/Terra Sirenum, and a link to the USGS page for this feature.

Publication Date	2022-11-00
DOI	10.1016/j.icarus.2022.115214
Bibcode	2022icar..38715214T
Keywords	Mars Crater Mineralogy Water Astrobiology
Planetary Features	Mars/Crater/Gale Mars/Crater/Gusev Mars/Crater/Jezero Mars/Crater/Reuy Mars/Terra/Terra Cimmeria Mars/Terra/Terra Sirenum Go to the USGS page for this feature

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- Better handling of filters
- Discipline-specific enhancements
- Improved ORCID integration

Alberto Accomazzi
 0000-0002-4110-3511

Academic Affiliation
 Center for Astrophysics | Harvard & Smithsonian

Aliases
 No aliases found

Add new alias +

Search by alias Q

Logout from ORCID

My ORCID Page

Learn about using ORCID with NASA SciX

Claims take up to 24 hours to be indexed in SciX

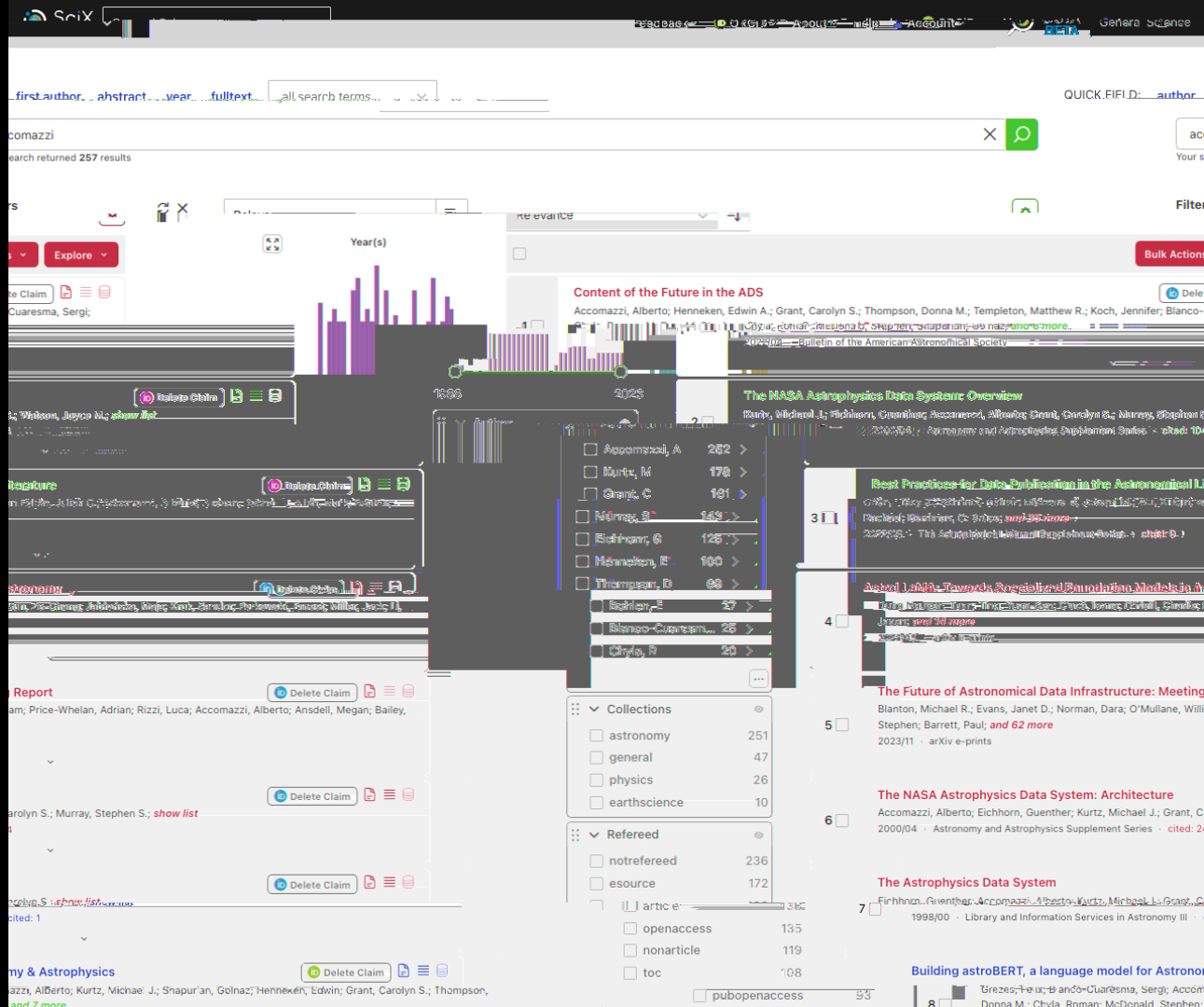
All my papers

TITLE	SOURCE	UPDATED	STATUS	ACTIONS
The Future of Astronomical Data Infrastructure: Meeting Report	NASA SciX	2 months ago	Verified	⚙️
AstroLLaMA: Towards Specialized Foundation Models in Astronomy	NASA SciX	3 months ago	Verified	⚙️
Expansion of the NASA Astrophysics Data System to Earth and Space Sciences	Crossref NASA SciX	3 months ago	Verified	⚙️
Expansion and Enhancement of FAIR Content in the ADS	Crossref NASA SciX	3 months ago	Verified	⚙️
Expansion and Enhancement of FAIR Content in the ADS	Crossref NASA SciX	3 months ago	Verified	⚙️
Best Practices for Data Publication in the Astronomical Literature	NASA SciX Crossref	3 months ago	Pending	⚙️
Expansion and Enhancement of FAIR Content in the ADS	NASA SciX	3 months ago	Verified	⚙️
Building the UAT as a Community	NASA SciX	3 months ago	Verified	⚙️
Content of the Future in the ADS	NASA SciX	3 months ago	Verified	⚙️
Automatically detecting facilities in the scientific literature using Deep Learning techniques	NASA SciX	3 months ago	Verified	⚙️
Introducing the New ADS OpenAPI Exploration Tool: Making API Access More User-Friendly	NASA SciX	3 months ago	Verified	⚙️
Asclepias: Software Citations Enter the Scholarly Literature World	NASA SciX	3 months ago	Verified	⚙️
ADS Support of Open Science in Heliophysics	NASA SciX	3 months ago	Verified	⚙️
The Earth and Space Science Knowledge Commons: Building capacity and community	NASA SciX	3 months ago	Verified	⚙️
ADS Support of Open Science in Heliophysics	NASA SciX	3 months ago	Verified	⚙️
Improving astroBERT using Semantic Textual Similarity	NASA SciX	3 months ago	Verified	⚙️
Proceedings of the first Workshop on Information Extraction from Scientific Publications	NASA SciX	3 months ago	Verified	⚙️
ADS Machine Learning and Deep Learning Efforts	NASA SciX	3 months ago	Verified	⚙️
Software Citation and Discoverability in ADS with the Citation Capture Pipeline	NASA SciX	3 months ago	Verified	⚙️
Advancing Space Science Requires NASA Support for Coordination Between the Science Mission Directorate Communities	NASA SciX	3 months ago	Verified	⚙️

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- Discipline specific “skins”
- Better handling of filters
- Discipline-specific enhancements
- Improved ORCID integration
- New default for search ranking (customizable)



QUICK FIELD: author first author abstract year fulltext all search terms

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.



How is SciX similar to ADS?

SciX is built on the same database and search engine, so no need to learn new search syntax or workflows:

- Type your query
- Filter the results
- Rank, analyze, visualize, refine
- Find citations, software, data products

QUICK FIELD: [author](#) [first author](#) [abstract](#) [year](#) [fulltext](#) 

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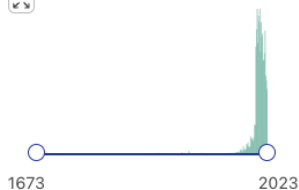
QUICK FIELD: [author](#) [first author](#) [abstract](#) [year](#) [fulltext](#)

all search terms

cassini saturn

Your search returned 8,660 results

Filters



1673

2023

- Author
- Collections
 - astronomy 8.3k
 - physics 4.2k
 - earthscience 1.4k
 - general 154

- Refereed
 - notrefereed 6.2k
 - refereed 2.4k

- Institutions
- Keywords
- Publications

Relevance



Bulk Actions

Explore

1 **The formation of the Cassini division in Saturn's rings**Goldreich, P.; Tremaine, S. D.; [show list](#)

1978/05 · Icarus · cited: 211

2 **Cassini Observes the Active South Pole of Enceladus**Porco, C. C.; Helfenstein, P.; Thomas, P. C.; Ingersoll, A. P.; Wisdom, J.; West, R.; Neukum, G.; Denk, T.; Wagner, R.; Roatsch, T.; [and 15 more](#)

2006/03 · Science · cited: 856

3 **Encounter with Saturn: Voyager 1 Imaging Science Results**Smith, B. A.; Soderblom, L.; Beebe, R. F.; Boyce, J. M.; Briggs, G.; Bunker, A.; Collins, S. A.; Hansen, C.; Johnson, T. V.; Mitchell, J. L.; [and 17 more](#)

1981/04 · Science · cited: 712

4 **Cassini Plasma Spectrometer Investigation**Young, D. T.; Berthelier, J. J.; Blanc, M.; Burch, J. L.; Coates, A. J.; Goldstein, R.; Grande, M.; Hill, T. W.; Johnson, R. E.; Kelha, V.; [and 48 more](#)

2004/09 · Space Science Reviews · cited: 410

5 **Saturn's Interior After the Cassini Grand Finale**Fortney, J. J.; Militzer, B.; Mankovich, C. R.; Helled, R.; Wahl, S. M.; Nettelmann, N.; Hubbard, W. B.; Stevenson, D. J.; Marley, M. S.; [and 1 more](#)

2023/04 · arXiv preprints

Example search: cassini saturn

8,660 results, sorted by relevance

QUICK FIELD: author first author abstract year fulltext all search terms

cassini saturn

range: 2004-2023 x Remove all filters

Filters Relevance Bulk Action



1 Cassini Observes the Active South Pole of Enceladus Porco, C. C.; Helfenstein, P.; Thomas, P. C.; Ingersoll, A. P.; Wisdom, J.; West, R.; Neukum, G.; De Roatsch, T.; and 15 more 2006/03 - Science - cited: 856

2 Cassini Plasma Spectrometer Investigation Young, D. T.; Berthelier, J. J.; Blanc, M.; Burch, J. L.; Coates, A. J.; Goldstein, R.; Grande, M.; Hill, Kelha, V.; and 48 more 2004/09 - Space Science Reviews - cited: 419

3 Saturn's Interior After the Cassini Grand Finale Fotney, J. L.; Mitzer, S.; Mankovich, S.; Bell, R.; Wahl, S.; Morner, D.; Hols- less, L.; Marley, M.P.S.; and 7 more 2022/06 - Icarus - cited: 127

4 Phosphine on Jupiter and Saturn from Cassini Pyle, L. N.; Orton, R. G.; Greig, D. A.; Irwin, P. G. J.; and 12 more 2009/03 - Icarus - cited: 142

5 The Cassini Visual and Infrared Mapping Spectrometer (VIMS) Investigation Brown, R. H.; Esposito, S. P.; Banfill, P. J.; Buratti, B. J.; D'Amico, S. M.; and 12 more 2004/09 - Space Science Reviews - cited: 172

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2005/02 · Science · cited: 96

2 **Magnetopause Dynamics at Saturn as Observed by Cassini**
Mo, Wenli; Vines, Sarah K.; Allen, Robert C.; Jackman, Cairtriona M.; Paranicas, Chris; *et al.*
2023/08 · Journal of Geophysical Research (Space Physics)

3 **The Orbits of the Main Saturnian Satellites, the Saturnian System Gravity Field, and the Orientation of Saturn's Pole**
Jacobson, Robert A.; *show list*

4 **The Enigmatic Abundance of Atomic Hydrogen in Saturn's Upper Atmosphere**
Ben-Jaffel, Lotfi; Moses, Julianne I.; West, Robert A.; *et al.*
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5 **The Orbits of Saturn's Small Satellites Derived from Combined Historic and Cassini Imaging Observations**
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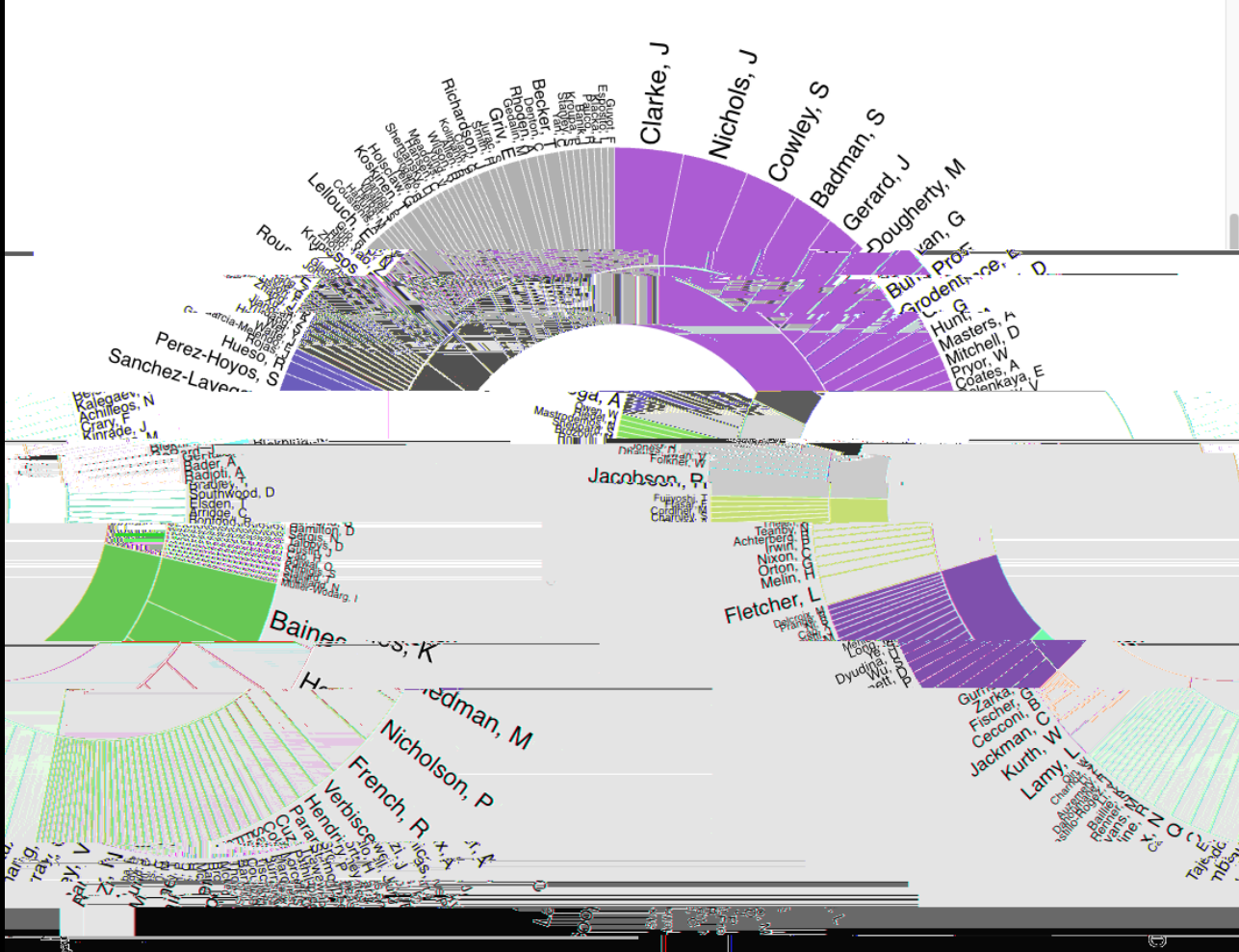
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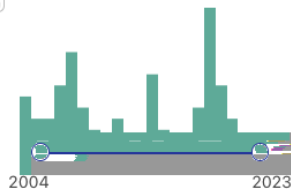
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 Clarke, J. T.; Gérard, J. -C.; Grodent, D.; Wannawichian, S.; Gustin, J.; Connerney, J.; Cray, F.; Dougherty, M.; Kurth, W.; Cowley, S. W. H.; Bunce, E. J.; [and 4 more](#)
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Recurrent energization of plasma in the midnight-to-dawn quadrant of Saturn's magnetosphere, and its relationship to auroral UV and radio emissions

 Mitchell, D. G.; Krimigis, S. M.; Paranicas, C.; Brandt, P. C.; Carbury, J. F.; Roelof, E. C.; Kurth, W. S.; Gurnett, D. A.; Clarke, J. T.; Nichols, J. D.; [and 4 more](#)
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 Grodent, D.; Gérard, J. -C.; Cowley, S. W. H.; Bunce, E. J.; Clarke, J. T.; [show list...](#)
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Open flux estimates in Saturn's magnetosphere during the January 2004 Cassini-HST campaign, and implications for reconnection rates

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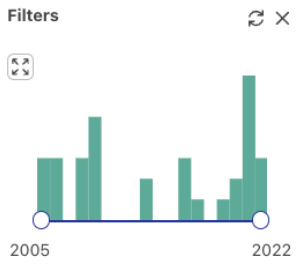
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on of plasma in the midnight-to-dawn quadrant of Saturn's
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Recurrent energization of the magnetosphere, and
 Mitchell, D. G.; Krimigis, S. M.; Clarke, J. T.; Nichols, J. D.
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1 Clarke, J. T.; Gérard, J. -C.; Grodent, D.; Wannawichian, S.; Gustin, J.; Connerney, J.; Cray, F.; Dougherty, M.; Kurth, W.; Cowley, S. W. H.; [and 3 more](#)
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3 **An auroral oval at the footprint of Saturn's kilometric radio sources, collocated with the UV aurorae**
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4 **Oscillation of Saturn's southern auroral oval**
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5 **Auroral current systems in Saturn's magnetosphere: comparison of theoretical models with Cassini and HST observations**
Cowley, S. W. H.; Arridge, C. S.; Bunce, E. J.; Clarke, J. T.; Coates, A. J.; Dougherty, M. K.; Gérard, J. -C.; Grodent, D.; Nichols, J. D.; Talboys, D. L.; [show list](#)
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6 **Signature of Saturn's auroral cusp: Simultaneous Hubble Space Telescope FUV observations and upstream solar wind monitoring**
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2005/11 · Journal of Geophysical Research (Space Physics) · cited: 51

7 **Radiation transport of heliospheric Lyman- α from combined Cassini and Voyager data sets**
Pryor, W.; Gangopadhyay, P.; Sandel, B.; Forrester, T.; Quemerais, E.; Möbius, E.; Esposito, L.; Stewart, I.; McClintock, W.; Jouchoux, A.; [and 8 more](#)
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Characterization of auroral current systems in Saturn's magnetosphere: High-latitude

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[M. K. Roussos, E. Showman](#)

auroral field-aligned currents in the northern hemisphere. ...
... to examine the response of the ...
... currents to compressions and expansions of the Saturnian ...
... resulting in tail reconnection, the currents within the downward ...
... increases in strength with increasing total ring current and location of ...
... the inverse relation occurs during intervals of quiet or expanded ...
... increase in the energetic particle intensities, in particular in the ...
... current system is akin to an Earth-like "region 2" field aligned ...
... curren when the magnetosphere is compressed resulting in a ...
... of dawn. Within the upward current sheet, mapping to Saturn's ...
... e rotating Planetary Period Oscillations (PPOs) currents flow. The ...
... ses in strength, with enhanced high-energy protons, during ...
... We conclude that the enhanced plasma injected into the ...
... n enhanced subcorotation current system.

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magnetosphere. For co ...
current sheet, located ...

the peak downward current moves inward toward Saturn. While ...
magnetospheric conditions. During compression events there is e ...
protons (35–506 keV), within the downward current region. This ...
current within Saturn's magnetosphere, with tail reconnection oer ...
partial nightside ring current closed by a downward current near ...
main auroral oval, both non-rotating subcorotating current and th ...
upward current is strongly modulated by the PPOs but also increa ...
intervals of magnetospheric compressions and tail reconnection. ...
midnight-dawn sector during tail reconnection events results in a


Publication	Journal of Geophysical Research: Space Physics
Publication Date	2022-06-00
DOI	10.1029/2021JA029852
Bibcode	2022JGRA..12729852H
Keyword(s)	Saturn magnetosphere field-align

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Cassini : MAG

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Start Time: 1997-10-28 12:45:37 - Stop Time: 2017-09-15 20:31:49

Cassini Orbiter Magnetometer Raw Data MAG REDRs covering the period 1997-10-28 (DOY 301) to 2017-09-15 (DOY 285). This product version 2.0 was released on 2019-05-17 with an updated calibration.

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CO-E/SW/J/S-MAG-1-RDR-GALIB-SHM-V2.0 CERTIFIED

Start Time: 1999-08-26 00:00:00 - Stop Time: 2005-10-11 16:58:00

Cassini Orbiter Magnetometer Raw Data MAG SHM RDRs, Version 2, covering the period 1999-08-26 (DOY 230) to 2005-10-11 (DOY 284).

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Cassini Orbiter Magnetometer Calibrated MAG RDRs at the highest time resolution available covering the period 1998-12-30 (DOY 364) to 2017-09-15 (DOY 258). New versions of this product are in development and will be released as they become available. The data from 2001-01-01 through 2017-09-15 are version 5 products. Prior to this interval the products use an older calibration. The data are in RTN format.

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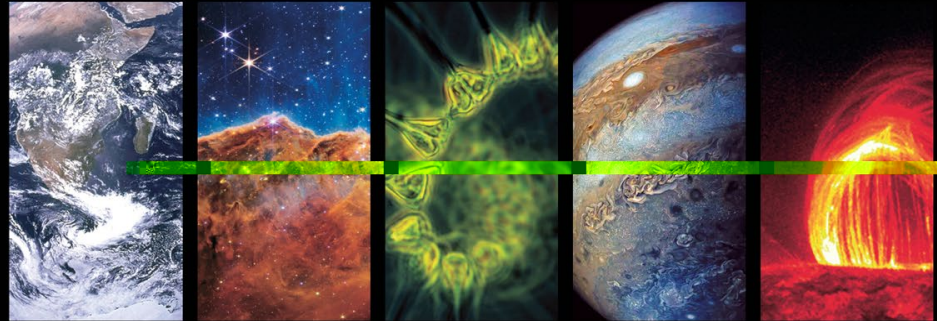
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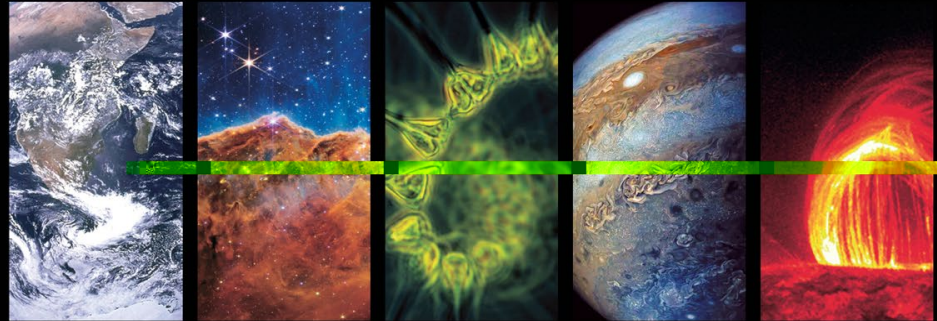
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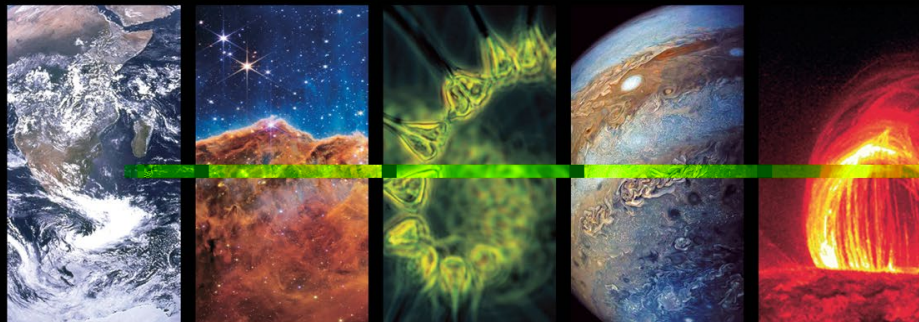
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