

# The NASA Science Explorer: ADS for all of NASA Science

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CENTER FOR

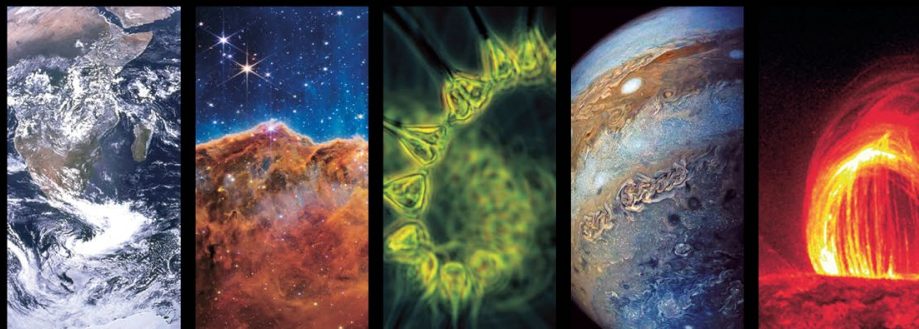
**ASTROPHYSICS**

HARVARD & SMITHSONIAN



# SciX

[ [SciXplorer.org](http://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



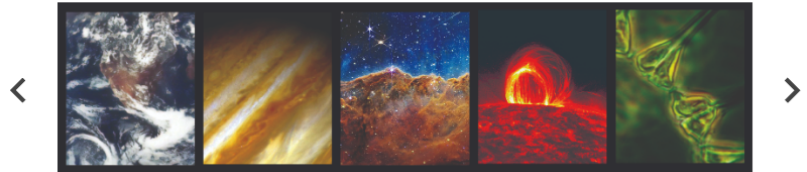
Learn more about the SciX digital library and how it can support your scientific research in this welcome video and brief user tutorial from Dr. Stephanie Jarmak.



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

Search... 

## 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.

### RESOURCES

About SciX  
Give Feedback  
SciX Help  
Careers@ADS  
Accessibility  
NASA Science Discovery Engine

### SOCIAL

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SciX Blog

### PROJECT

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Smithsonian Astrophysical Observatory  
Smithsonian Institution  
NASA

# 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.

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

## 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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### RESOURCES

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[Smithsonian Institution](#)  
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# What is the NASA Science Explorer?

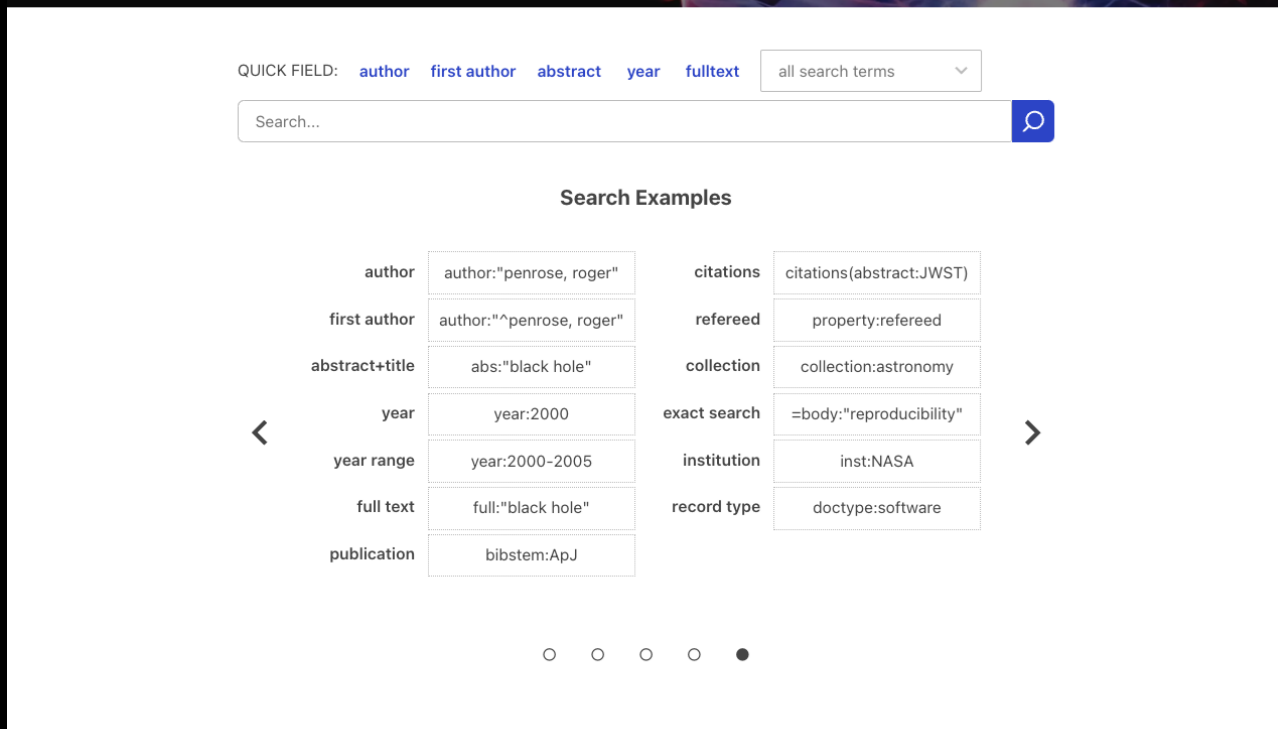
SciX supports NASA's Open Science efforts and enables interdisciplinary research and collaboration.

# 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>

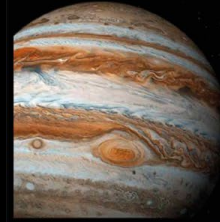
While the system is still under development, it already provides a wealth of information and functionality ready for use.



# Why the NASA Science Explorer?

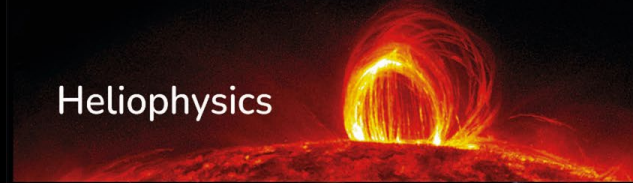
NASA's Science Mission Directorate in 2019 calls for the creation of interdisciplinary literature portal spanning across SMD in support of Open Science.

Earth Science



Planetary Science

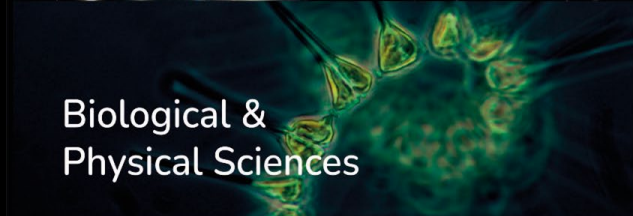
Heliophysics



Astrophysics



Biological &  
Physical Sciences



<https://SciXplorer.org>



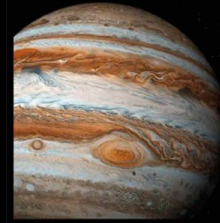
# Why the NASA Science Explorer?

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.

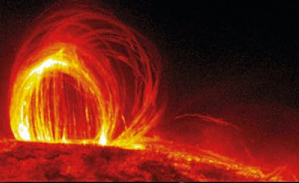
<https://SciXplorer.org>

Earth Science



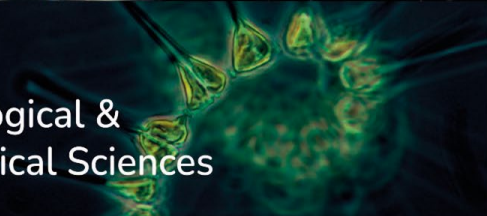
Planetary Science

Heliophysics



Astrophysics

Biological &  
Physical Sciences



# Why the NASA Science Explorer?

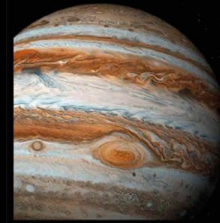
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ADS has been selected for its support of open science goals: facilitating discovery and dissemination of OA publications, data, and software by aggregating and linking them.

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

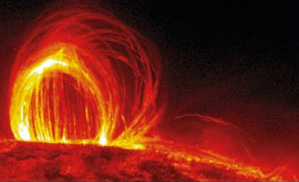
<https://SciXplorer.org>

Earth Science



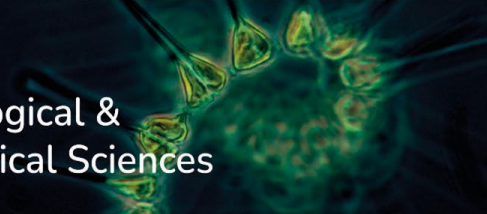
Planetary Science

Heliophysics



Astrophysics

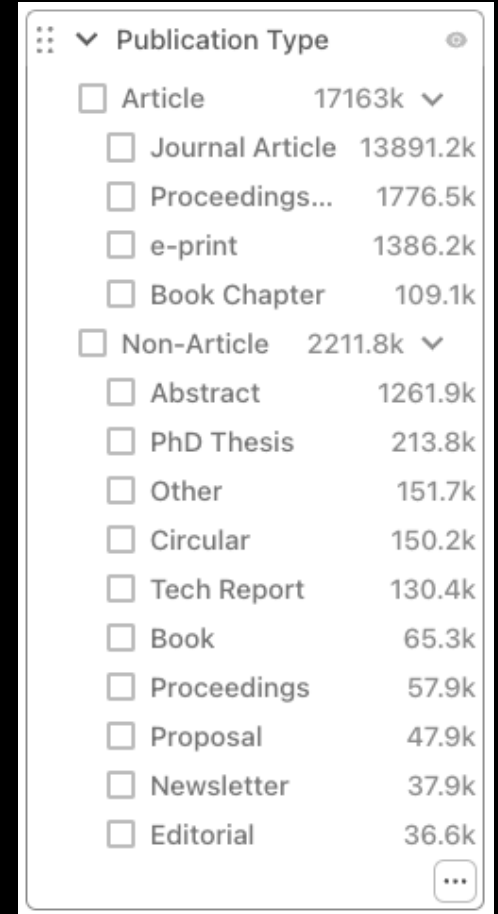
Biological &  
Physical Sciences





## Why the NASA Science Explorer?

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



A screenshot of a 'Publication Type' filter menu. The menu is titled 'Publication Type' and has a dropdown arrow on the left and a search icon on the right. Below the title, there are two main categories: 'Article' and 'Non-Article', each with a checkbox and a count. Under 'Article', there are five sub-items: 'Journal Article', 'Proceedings...', 'e-print', and 'Book Chapter'. Under 'Non-Article', there are ten sub-items: 'Abstract', 'PhD Thesis', 'Other', 'Circular', 'Tech Report', 'Book', 'Proceedings', 'Proposal', 'Newsletter', and 'Editorial'. Each sub-item has a checkbox and a count. At the bottom right of the menu, there is a three-dot menu icon.

Publication Type	Count
Article	17163k
Journal Article	13891.2k
Proceedings...	1776.5k
e-print	1386.2k
Book Chapter	109.1k
Non-Article	2211.8k
Abstract	1261.9k
PhD Thesis	213.8k
Other	151.7k
Circular	150.2k
Tech Report	130.4k
Book	65.3k
Proceedings	57.9k
Proposal	47.9k
Newsletter	37.9k
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

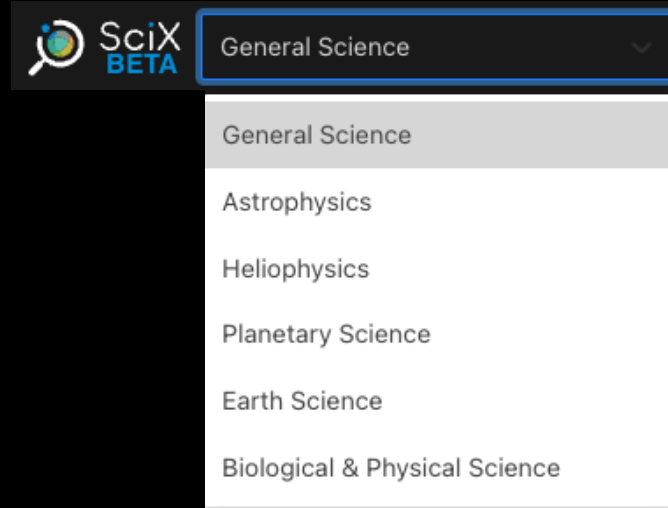
# Why the NASA Science Explorer?

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

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"
year range	year:2000-2005	institution	inst:NASA
full text	full:"black hole"	record type	doctype:software
publication	bibstem:ApJ		



# How is it different from ADS?

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

- General Science
- Astrophysics
- Heliophysics
- Planetary Science
- Earth Science
- Biological & Physical Science

first author abstract year fulltext all search terms



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"
year range	year:2000-2005	institution	inst:NASA
full text	full:"black hole"	record type	doctype:software
publication	bibstem:ApJ		



# 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	author:"^huchra, john"	refereed	property:refereed
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	bibstem:ApJ		



# 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

Publication Date End

YYYY/MM

YYYY/MM

Ex: "2011/04"

Ex: "2014/12"

Title

And Or Boolean

Ex: "Content of the Future in the ADS"

# How is it different from ADS?

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

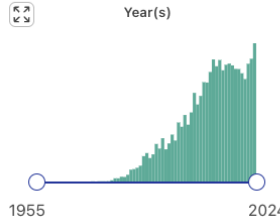
- Improved accessibility
- Discipline specific "skins" (including the "Classic Form")

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

AGN

Your search returned 50,006 results

Filters



Author

<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	>

Collections

<input type="checkbox"/> astronomy	49k
<input type="checkbox"/> physics	3.8k
<input type="checkbox"/> general	383
<input type="checkbox"/> earthscience	139

Relevance

Bulk Actions Explore

1  **The host galaxies of active galactic nuclei**  
 Kauffmann, Guinevere; Heckman, Timothy M.; Tremonti, Christy; 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](#)  
 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

# 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  Count

<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 >

QUICK FIELD: auth

AGN

Your search returned 50,0

Filters

Year(s)

1955

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

Antonucci, Robert; [show list](#)  
1993/00 - Annual Review of Astronomy and Astrophysics - cited: 3587

**Astrophysics of gaseous nebulae and active galactic nuclei**  
Osterbrock, Donald E.; [show list](#)  
1989/00 - Astrophysics of Gaseous Nebulae and Active Galacti... - cited: 3861

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

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Osterbrock, Donald E.; Ferland, Gary J.; [show list](#)  
2006/00 - Astrophysics of gaseous nebulae and active galacti... - cited: 2123

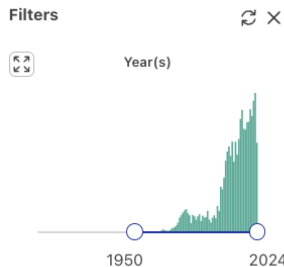
QUICK FIELD: author first author abstract year fulltext all search terms

mars craters

Your search returned 11,466 results

range: 1950-2024

Remove all filters



- Planetary Features
  - Mars 1.5k
  - Crater 1.1k
    - Gale 520
    - Gusev 366
    - Jezero 142
    - Holden 65
    - Eberswalde 57
    - Victoria 53
    - Eagle 47
    - Zunil 42
    - Hale 41
    - Endeavour 39
  - Vallis 586
  - Planum 559

Relevance

Bulk Actions Explore

- 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; Veveka, Joseph; [show list](#)

1999/02 · Nature · cited: 174
- The martian hemispheric dichotomy may be due to a giant impact**

Wilhelms, D. E.; Squyres, S. W.; [show list](#)

1984/05 · Nature · cited: 227
- Pseudocraters on Mars.**

Frey, H.; Lowry, B. L.; Chase, S. A.; [show list](#)

1979/12 · Journal of Geophysical Research · cited: 88
- 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
- Martian Cratering**

Hartmann, William K.; [show list](#)

1966/00 · Icarus · cited: 91
- Martian cratering 8: Isochron refinement and the chronology of Mars**

Hartmann, William K.; [show list](#)

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

[← Back to Results](#) Abstract Citations References 90 Co-Reads Similar Papers Volume Content Graphics Metrics Export Citation

## Ma'adim Vallis, Mars: Insights into episodic and late-stage water activity from an impact crater

Tuhi, S. ; Harish ; Kimi, K. B. ; Vigneshwaran, K. ; Sharini, K. S. ; Priya, R. K. S. ; Vijayan, S. [show list](#)

Full Text Sources

Other Resources

Alluvial fans, a form of sedimentary deposit reported on Mars, offer insight into the evolution and nature of fluvial activity on the planet. Additionally, the region's preserved mineralogy can also be used to study its hydrological history. In this context, we discuss the diverse geomorphology and mineralogy of an unnamed crater that formed on the eastern wall of Ma'adim Vallis, Mars. Ma'adim Vallis is an irregular-shaped, flat-floored valley incised due to the outflow of water from the Eridania basin. The rim of the unnamed crater is breached at multiple locations and it hosts an alluvial fan of an area ~ 50 km<sup>2</sup>. The CRISM spectral signatures show Mg-rich olivine and Mg-rich smectite. Mg smectite was plausibly transported through water or formed in situ while the underneath terrain was rich in Mg olivine. The crater retention age on the ejecta of the unnamed crater is 3.7 Ga which suggests that the crater likely formed during the Noachian-Hesperian period boundary or earlier. This unnamed crater probably witnessed the last episode of water activity in the Vallis, which was most likely fed by water overflowing from a resurged early Hesperian water activity in Eridania Basin. This study substantiates episodic, late-stage water activity in Ma'adim Vallis, and the unnamed crater formed on the floodplains of the Vallis providing an excellent opportunity for future landing missions to explore astrobiological significance of the region.

Publication Icarus, Volume 387, article id. 115214.

Publication Date 2022-11-00

DOI [10.1016/j.icarus.2022.115214](https://doi.org/10.1016/j.icarus.2022.115214)Bibcode [2022Icar..38715214T](https://ui.adsabs.org/abs/2022Icar..38715214T)Keywords [Mars](#) [Crater](#) [Mineralogy](#) [Water](#) [Astrobiology](#)Planetary Features [Mars/Crater/Gale](#) [Mars/Crater/Gusev](#) [Mars/Crater/Jezero](#) [Mars/Crater/Reuhl](#)  
[Mars/Terra/Terra Cimmeria](#) [Mars/Terra/Terra Sirenum](#) [Go to the USGS page for this feature](#)

# How is it different from ADS?

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



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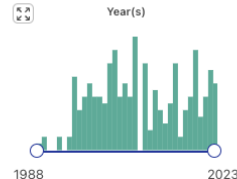
- Improved accessibility
- Discipline specific “skins”
- Better handling of filters
- Discipline-specific enhancements
- Improved ORCID integration
- New default for search ranking (customizable)

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

accomazzi

Your search returned 257 results

Filters



Author

<input type="checkbox"/> Accomazzi, A	252 >
<input type="checkbox"/> Kurtz, M	178 >
<input type="checkbox"/> Grant, C	161 >
<input type="checkbox"/> Murray, S	143 >
<input type="checkbox"/> Eichhorn, G	125 >
<input type="checkbox"/> Henneken, E	100 >
<input type="checkbox"/> Thompson, D	69 >
<input type="checkbox"/> Bohlen, E	27 >
<input type="checkbox"/> Blanco-Cuaresm...	25 >
<input type="checkbox"/> Chyla, R	20 >

Collections

<input type="checkbox"/> astronomy	251
<input type="checkbox"/> general	47
<input type="checkbox"/> physics	26
<input type="checkbox"/> earthscience	10

Refereed

<input type="checkbox"/> notrefereed	236
<input type="checkbox"/> esource	172
<input type="checkbox"/> article	138
<input type="checkbox"/> openaccess	135
<input type="checkbox"/> nonarticle	119
<input type="checkbox"/> toc	108
<input type="checkbox"/> pubopenaccess	93

Relevance

Bulk Actions 

## 1 Content of the Future in the ADS

Accomazzi, Alberto; Henneken, Edwin A.; Grant, Carolyn S.; Thompson, Donna M.; Templeton, Matthew R.; Koch, Jennifer; Blanco-Cuaresma, Sergi; Chyla, Roman; McDonald, Stephen; Shapurian, Golnaz; [and 6 more](#)  
2022/04 · Bulletin of the American Astronomical Society

## 2 The NASA Astrophysics Data System: Overview

Kurtz, Michael J.; Eichhorn, Guenther; Accomazzi, Alberto; Grant, Carolyn S.; Murray, Stephen S.; Watson, Joyce M.; [show list](#)  
2000/04 · Astronomy and Astrophysics Supplement Series · [cited: 104](#)

## 3 Best Practices for Data Publication in the Astronomical Literature

Chen, Tracy X.; Schmitz, Marion; Mazzarella, Joseph M.; Wu, Xiuqin; van Eyken, Julian C.; Accomazzi, Alberto; Akeson, Rachel L.; Allen, Mark; Beaton, Rachael; Berriman, G. Bruce; [and 35 more](#)  
2022/05 · The Astrophysical Journal Supplement Series · [cited: 9](#)

## 4 AstroLLaMA: Towards Specialized Foundation Models in Astronomy

Dung Nguyen, Tuan; Ting, Yuan-Sen; Ciucă, Ioana; O'Neill, Charlie; Sun, Ze-Chang; Jabłońska, Maja; Kruk, Sander; Perkowski, Ernest; Miller, Jack; Li, Jason; [and 14 more](#)  
2023/09 · arXiv e-prints

## 5 The Future of Astronomical Data Infrastructure: Meeting Report

Blanton, Michael R.; Evans, Janet D.; Norman, Dara; O'Mullane, William; Price-Whelan, Adrian; Rizzi, Luca; Accomazzi, Alberto; Ansdell, Megan; Bailey, Stephen; Barrett, Paul; [and 62 more](#)  
2023/11 · arXiv e-prints

## 6 The NASA Astrophysics Data System: Architecture

Accomazzi, Alberto; Eichhorn, Guenther; Kurtz, Michael J.; Grant, Carolyn S.; Murray, Stephen S.; [show list](#)  
2000/04 · Astronomy and Astrophysics Supplement Series · [cited: 24](#)

## 7 The Astrophysics Data System

Eichhorn, Guenther; Accomazzi, Alberto; Kurtz, Michael J.; Grant, Carolyn S.; [show list](#)  
1998/00 · Library and Information Services in Astronomy III · [cited: 1](#)

## 8 Building astroBERT, a language model for Astronomy & Astrophysics

Grezes, Felix; Blanco-Cuaresma, Sergi; Accomazzi, Alberto; Kurtz, Michael J.; Shapurian, Golnaz; Henneken, Edwin; Grant, Carolyn S.; Thompson, Donna M.; Chyla, Roman; McDonald, Stephen; [and 7 more](#)

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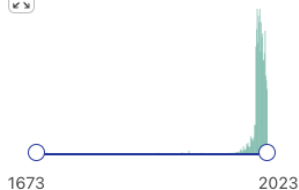
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all search terms

cassini saturn

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1673

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- earthscience 1.4k
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- refereed 2.4k

Institutions

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Relevance



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Explore

**The formation of the Cassini division in Saturn's rings**1  Goldreich, P.; Tremaine, S. D.; [show list](#)  
1978/05 · Icarus · cited: 211**Cassini Observes the Active South Pole of Enceladus**2  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**Encounter with Saturn: Voyager 1 Imaging Science Results**3  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**Cassini Plasma Spectrometer Investigation**4  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**Saturn's Interior After the Cassini Grand Finale**5  Fortney, J. J.; Militzer, B.; Mankovich, C. R.; Helled, R.; Wahl, S. M.; Nettelmann, N.; Hubbard, W. B.; Stevenson, D. J.; less, L.; Marley, M. S.; [and 1 more](#)  
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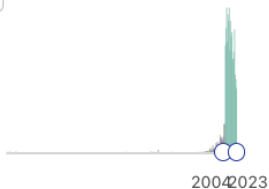


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2004 2023

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 physics 3.9k

 earthscience 1.3k

 general 127

▾ Refereed

 notrefereed 5.7k

 refereed 2.1k

&gt; Institutions

&gt; Keywords

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Relevance ▾



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### Cassini Observes the Active South Pole of Enceladus


 1 

 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

 2 

### 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

 3 

### 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.; less, L.; Marley, M. S.; [and 1 more](#)  
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 4 

### Phosphine on Jupiter and Saturn from Cassini/CIRS


 Fletcher, L. N.; Orton, G. S.; Teanby, N. A.; Irwin, P. G. J.; [show list](#)  
 2009/08 · Icarus · cited: 142

 5 

### The Cassini Visual And Infrared Mapping Spectrometer (Vims) Investigation


 Brown, R. H.; Baines, K. H.; Bellucci, G.; Bibring, J. -P.; Buratti, B. J.; Capaccioni, F.; Cerroni, P.; Clark, R. N.; Coradini, A.; Cruikshank, D. P.; [and 12 more](#)

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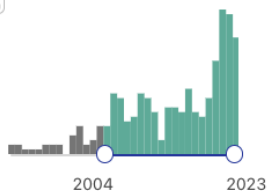
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- earthscience 127
- physics 89
- general 3

v Refereed

- refereed 210
- notrefereed 51

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&gt; Publications

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Relevance



Bulk Actions

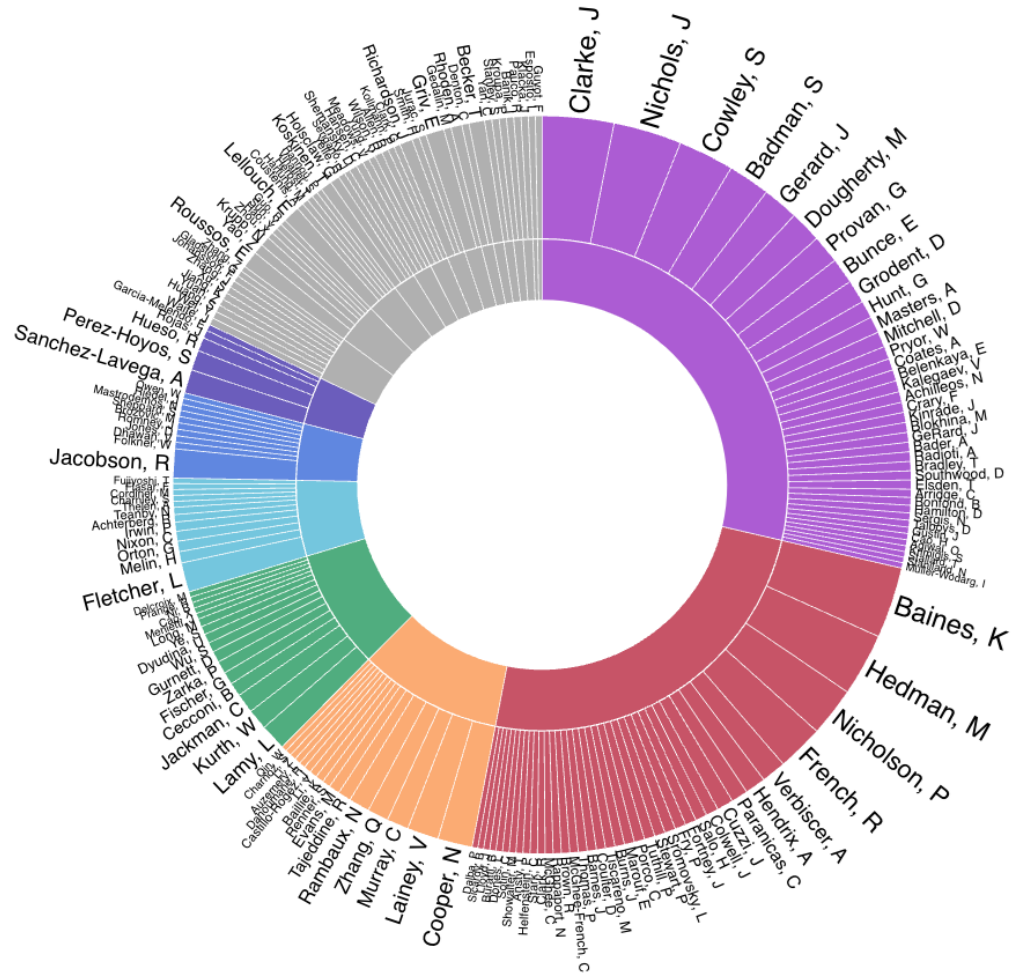
Explore

**Cassini Imaging Science: Initial Results on Saturn's Atmosphere**Porco, C. C.; Baker, E.; Barbara, J.; Beurle, K.; Brahic, A.; Burns, J. A.; Charnoz, S.; Cooper, N.; Dawson, D. D.; Del Genio, A. D.; [and 25 more](#)2005/02 · Science · [cited: 96](#)**Magnetopause Dynamics at Saturn as Observed by Cassini**Mo, Wenli; Vines, Sarah K.; Allen, Robert C.; Jackman, Cairiona M.; Paranicas, Chris; [show list](#)  
2023/08 · Journal of Geophysical Research (Space Physics)**The Orbits of the Main Saturnian Satellites, the Saturnian System Gravity Field, and the Orientation of Saturn's Pole**Jacobson, Robert. A.; [show list](#)  
2022/11 · The Astronomical Journal · [cited: 11](#)**The Enigmatic Abundance of Atomic Hydrogen in Saturn's Upper Atmosphere**Ben-Jaffel, Lotfi; Moses, Julianne I.; West, Robert A.; Aye, Klaus-Michael; Bradley, Eric T.; Clarke, John T.; Holberg, Jay B.; Ballester, Gilda E.; [show list](#)  
2023/03 · The Planetary Science Journal**The Orbits of Saturn's Small Satellites Derived from Combined Historic and Cassini Imaging Observations**Spitale, J. N.; Jacobson, R. A.; Porco, C. C.; Owen, W. M., Jr.; [show list](#)

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

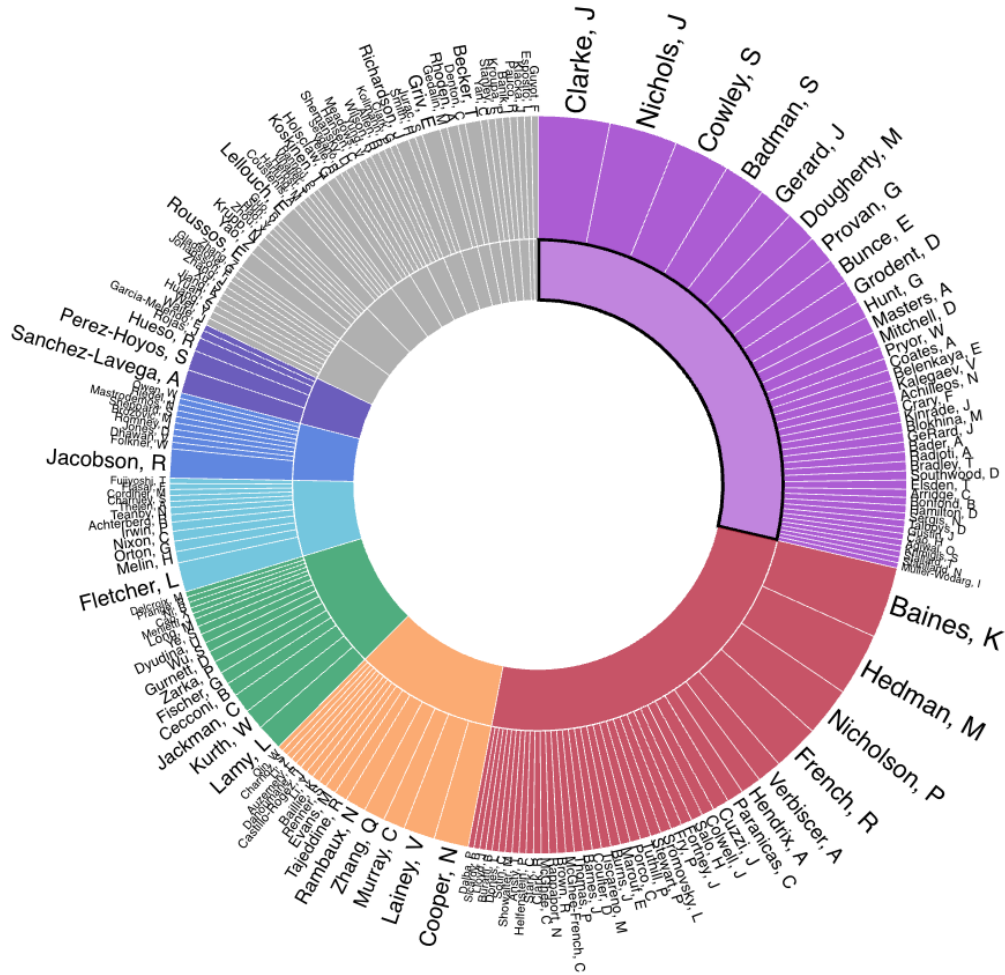
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8,660 results, sorted by relevance  
 7,803 published in the last 20 years  
 261 with data products  
 7 collaboration groups detected



# Example search:

- 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



# Example search:

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

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

QUICK FIELD: author first author abstract year **fulltext**

all search terms

cassini saturn property:data

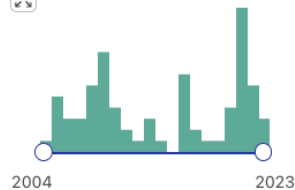
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range: 2004-2023

selection: d6fcf12231f17b83

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Filters



2004

2023

Author

Collections

- astronomy 75
- earthscience 53
- physics 45
- general 1

Refereed

- refereed 60
- notrefereed 15

Institutions

Keywords

Publications

Bibgroups

Citation Count



Bulk Actions

Explore

**Morphological differences between Saturn's ultraviolet aurorae and those of Earth and Jupiter**

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](#)  
2005/02 · Nature · cited: 129

**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.; Carbary, J. F.; Roelof, E. C.; Kurth, W. S.; Gurnett, D. A.; Clarke, J. T.; Nichols, J. D.; [and 4 more](#)  
2009/12 · Planetary and Space Science · cited: 122

**Variable morphology of Saturn's southern ultraviolet aurora**

Grodent, D.; Gérard, J. -C.; Cowley, S. W. H.; Bunce, E. J.; Clarke, J. T.; [show list](#)  
2005/07 · Journal of Geophysical Research (Space Physics) · cited: 90

**Open flux estimates in Saturn's magnetosphere during the January 2004 Cassini-HST campaign, and implications for reconnection rates**

Badman, S. V.; Bunce, E. J.; Clarke, J. T.; Cowley, S. W. H.; Gérard, J. -C.; Grodent, D.; Milan, S. E.; [show list](#)  
2005/11 · Journal of Geophysical Research (Space Physics) · cited: 84

**An auroral oval at the footprint of Saturn's kilometric radio sources, collocated with the**

## Example search:

- 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

Filter current search:

Narrow down your search results

plasma x

x

Search

Recalculate Cloud

unique

frequent



# Example search:

- 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



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

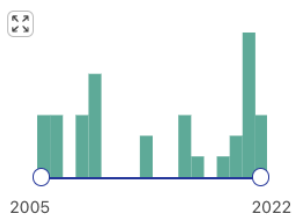
cassini saturn property:data

Your search returned 33 results with 775 total citations

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Filters



Author

Collections

- astronomy 33
- earthscience 22
- physics 20
- general 1

Refereed

- refereed 28
- notrefereed 5

Institutions

Keywords

Publications

Bibgroups

Citation Count

Bulk Actions Explore

1 Morphological differences between Saturn's ultraviolet aurorae and those of Earth and Jupiter  
 Clarke, J. T.; Gérard, J. -C.; Grodent, D.; Wannawichian, S.; Gustin, J.; Connerney, J.; Crary, F.; Dougherty, M.; Kurth, W.; Cowley, S. W. H.; *and 3 more*  
 2005/02 · Nature · cited: 129

2 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.; Carbary, J. F.; Roelof, E. C.; Kurth, W. S.; Gurnett, D. A.; Clarke, J. T.; Nichols, J. D.; *and 4 more*  
 2009/12 · Planetary and Space Science · cited: 122

3 An auroral oval at the footprint of Saturn's kilometric radio sources, collocated with the UV aurorae  
 Lamy, L.; Ceconi, B.; Prangé, R.; Zarka, P.; Nichols, J. D.; Clarke, J. T.; *show list*  
 2009/10 · Journal of Geophysical Research (Space Physics) · cited: 81


4 Oscillation of Saturn's southern auroral oval  
 Nichols, J. D.; Clarke, J. T.; Cowley, S. W. H.; Duval, J.; Farmer, A. J.; Gérard, J. -C.; Grodent, D.; Wannawichian, S.; *show list*  
 2008/11 · Journal of Geophysical Research (Space Physics) · cited: 79

# Example search:

- 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"

# Example search:

- 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 KOA containing “plasma”
- 9 of which have PDS data



2005 2022

- > Author
- ▼ Collections
  - astronomy 33
  - earthscience 22
  - physics 20
  - general 1
- ▼ Refereed
  - refereed 28
  - notrefereed 5
- > Institutions
- > Keywords
- > Publications
- > Bibgroups
- ▼ Data
  - MAST 18
  - ESA 13
  - PDS 9
  - DATASOURCE 8
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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](#)  
2005/02 · Nature · cited: 129

2  **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.; Carbary, J. F.; Roelof, E. C.; Kurth, W. S.; Gurnett, D. A.; Clarke, J. T.; Nichols, J. D.; [and 4 more](#)  
2009/12 · Planetary and Space Science · cited: 122

3  **An auroral oval at the footprint of Saturn's kilometric radio sources, collocated with the UV aurorae**  
Lamy, L.; Cecconi, B.; Prangé, R.; Zarka, P.; Nichols, J. D.; Clarke, J. T.; [show list](#)  
2009/10 · Journal of Geophysical Research (Space Physics) · cited: 81

4  **Oscillation of Saturn's southern auroral oval**  
Nichols, J. D.; Clarke, J. T.; Cowley, S. W. H.; Duval, J.; Farmer, A. J.; Gérard, J. -C.; Grodent, D.; Wannawichian, S.; [show list](#)  
2008/11 · Journal of Geophysical Research (Space Physics) · cited: 79

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](#)  
2008/09 · Annales Geophysicae · cited: 54

6  **Signature of Saturn's auroral cusp: Simultaneous Hubble Space Telescope FUV observations and upstream solar wind monitoring**  
Gérard, Jean-Claude; Bunce, Emma J.; Grodent, Denis; Cowley, Stanley W. H.; Clarke, John T.; Badman, Sarah V.; [show list](#)  
2005/11 · Journal of Geophysical Research (Space Physics) · cited: 51

7  **Radiation transport of heliospheric Lyman- $\alpha$  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](#)  
2008/11 · Astronomy and Astrophysics · cited: 42

**Characterization of auroral current systems in Saturn's magnetosphere: High-latitude**

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## 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](#)

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Cassini's 2017 proximal dawn sector in relation to examine the auroral field-aligned currents in the northern hemisphere dawn region auroral field-aligned currents. We combine three recent studies to examine the response of the magnetosphere. For current sheet, located in the northern hemisphere resulting in tail reconnection, the currents within the downward current sheet, located in the northern hemisphere, increases in strength with increasing total ring current and location of the peak downwards current moves inwards toward Saturn. While the inverse relation occurs during intervals of quiet or expanded 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.

Publication Journal of Geophysical Research: Space Physics, Volume 127, Issue 6, article id. e29852

Publication Date 2022-06-00

DOI [10.1029/2021JA029852](https://doi.org/10.1029/2021JA029852)

Bibcode [2022JGRA..12729852H](https://ui.adsabs.org/abs/2022JGRA..12729852H)

Keyword(s) [Saturn](#) [magnetosphere](#) [field-aligned currents](#) [current systems](#) [magnetospheric dynamics](#)

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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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view & select concepts in papers  
33 papers containing "plasma"  
9 of which have PDS data  
view one article



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## Cassini : MAG

5 Results

## Cassini-Saturn/Earth/Solar Wind/Venus/Jupiter-MAG

CO-E/SW/J/S-MAG-2-REDR-RAW-DATA-V2.0

CERTIFIED



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 258). These PRODUCT\_VERSION\_ID = 2 Data were released on 2019-05-17 with an updated calibration.

## Cassini-Saturn/Earth/Solar Wind/Jupiter-MAG

CO-E/SW/J/S-MAG-3-RDR-CALIB-SHM-V2.0

CERTIFIED



Start Time: 1999-08-16 17:00:03 - Stop Time: 2005-10-11 16:58:10

Cassini Orbiter Magnetometer Raw Data MAG SHM RDRs, Version 2, covering the period 1999-08-16 (DOY 230) to 2005-10-11 (DOY 284).

## Cassini-Saturn/Solar Wind/Jupiter-MAG

CO-E/SW/J/S-MAG-3-RDR-FULL-RES-V2.0

CERTIFIED



Start Time: 1998-12-30 11:38:33 - Stop Time: 2017-09-15 13:31:44

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 (PRODUCT\_VERSION\_ID 5) of these data products, processed using an updated calibration, are in the process of being released. Currently 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 coordinates prior Cassini's arrival at Saturn, and Kronographic (KRTP) coordinates at Saturn (beginning 2004-05-14, DOY 135). These data have passed PDS peer review. Every effort has been made to ensure that the data and documentation are of the best possible quality. However, users of this data set are encouraged to verify the correctness of the data prior to submitting any publications or other work.

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

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

CERTIFIED



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 ensure that the data and documentation are of the best possible quality. However, users of this data

## NEW RELEASES

More.....

## PDS RESOURCES

- Archive Planning Guide  
 Individuals  
 Missions  
 Data Dictionary Search  
 Lookup Tool  
 Document  
 PDS4 Standards  
 Documents  
 PDS Subscription  
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PDS3 Standards

## OTHER RESOURCES

- ADS Search  
 Science Data Licenses

## Example search:

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

[Recommendations](#)
[Search examples](#)

<b>author</b>	<input type="text" value='author:"Starck, Jean-Luc"'/>	<b>refereed</b>	<input type="text" value="property:refereed"/>
<b>first author</b>	<input type="text" value='author:"^Solanki, Sami"'/>	<b>astronomy</b>	<input type="text" value="collection:astronomy"/>
<b>abstract + title</b>	<input type="text" value='abs:"dark energy"'/>	<b>exact search</b>	<input type="text" value='=body:"Intracluster medium"'/>
<b>year</b>	<input type="text" value="year:2000"/>	<b>institution</b>	<input type="text" value="inst:CfA"/>
<b>year range</b>	<input type="text" value="year:2000-2005"/>	<b>author count</b>	<input type="text" value="author_count:[1 TO 10]"/>
<b>full text</b>	<input type="text" value='full:"super Earth"'/>	<b>record type</b>	<input type="text" value="doctype:software"/>
<b>publication</b>	<input type="text" value="bibstem:ApJ"/>	<b>newly ingested</b>	<input type="text" value="entdate:[NOW-7DAYS TO NOW]"/>
<b>citations</b>	<input type="text" value="citations(abstract:JWST)"/>	<b>eprint</b>	<input type="text" value='property:"eprint_openaccess"'/>

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## ADS is not going away!

### ADS will remain accessible online in its current, familiar format. All links to ADS will remain valid forever



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# What happens to ADS?

## ADS Support will continue

Existing ADS support will continue throughout the transition, ensuring you have the assistance and resources you need whether you stick to ADS “as is” or explore SciX

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# What happens to ADS?

**Astrophysics remains a key focus**

**SciX will retain a strong emphasis on astrophysics. New services will continue to be designed for astrophysics, providing models for other disciplines**

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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.



# 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



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

cassini saturn

## 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.



Why should I use SciX?

Disciplinary focus in an Interdisciplinary context

We are committed to making sure the transition will increase, not decrease, research productivity and enable interdisciplinary research

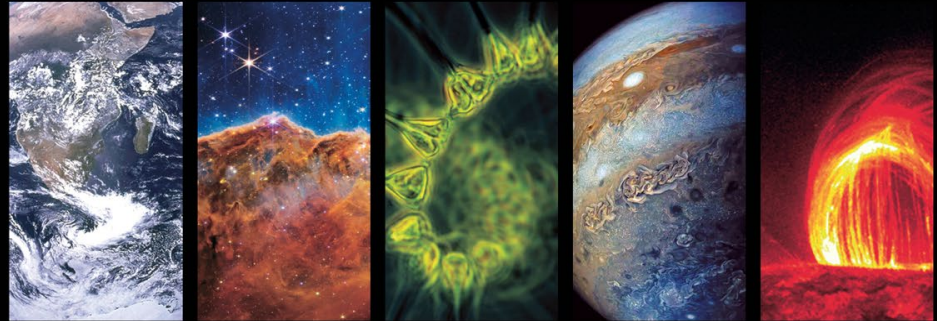
## Why the NASA Science Explorer?

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



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# NASA Science Explorer

*Accelerating the discovery of NASA Science.*

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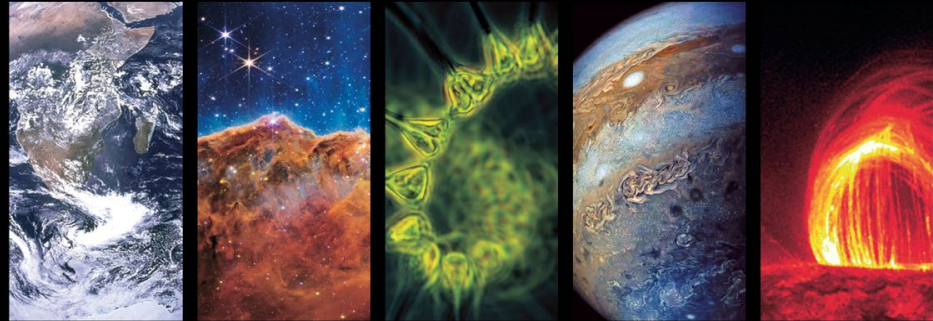
## Better than the rest...

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



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# Thank You!



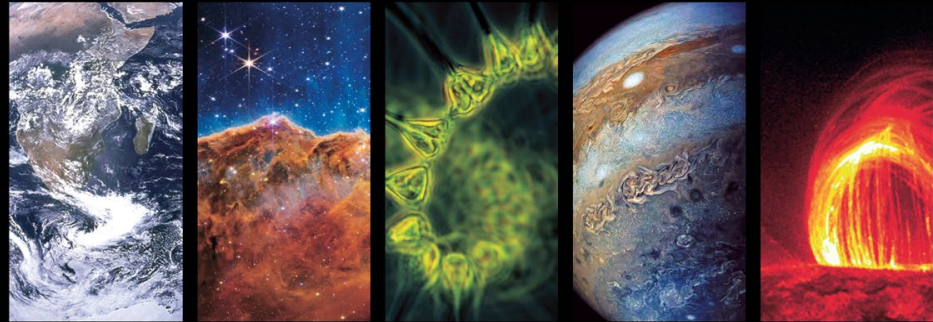
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