



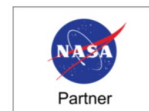
2025 Project Scientist Roadmap

Jennifer Lynn Bartlett, Stephanie Jarmak,
Anna Kelbert, & Michael Kurtz

ADS Users Group Meeting, 05-06 Dec. 2024



CENTER FOR
ASTROPHYSICS
HARVARD & SMITHSONIAN



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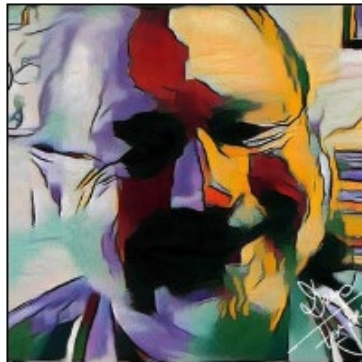


Who are our project scientists?

Dr. Jennifer Lynn Bartlett
Astrophysics Project Scientist



Joined August 2023



Dr. Michael Kurtz
Project Scientist Emeritus
Founding member 1991

Dr. Stephanie Jarmak
Planetary Project Scientist



Joined November 2023

Dr. Anna Kelbert
Earth Project Scientist



Joined August 2024



What were our FY 2024 goals?

- **Staffing**
 - Hire Planetary Science Project Scientist and ramp up Planetary Science engagement
 - Hire Earth Science Project scientist and ramp up Earth Science engagement
 - Establish an ambassador program
- **Strategic Planning**
 - Continue funding: contribute to NASA senior review, lay out 5-year plan
 - Develop multidisciplinary outreach strategy
 - Explore high level directions for future development
 - Coordinate with developers & curators to establish priorities and goals that align with community needs
- **Engagement**
 - Introduce SciX at AGU (engage with Earth Scientists)
 - Introduce SciX expansion at AAS (keep astronomers happy)
- **Science**





Major Wins



- ✓ Excellent/Very Good rating from NASA Senior Review panel
- ✓ 11 fantastic Ambassadors selected for inaugural cohort (155 applications)
- ✓ 18+ presentations on SciX expansion
- ✓ Hiring complete

Kudos



Michael Kurtz

- Major contribution to NASA Senior Review
- Successful hiring actions

Jennifer Lynn Bartlett

- Created Working Group on the Unified Astronomy Thesaurus
- Updated historic literature documentation
- Submitted 2 papers on astrophysics during 1869 total solar eclipse

Stephanie Jarmak

- 12 talks on SciX
- Created Ambassador program with Brit Myers
- Published JWST paper in Planetary Science Journal

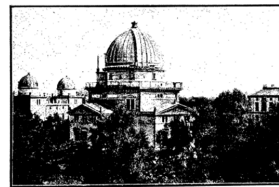
Anna Kelbert

- Taking up long list of deferred Earth Science tasks

ANNALEN
DER
KAISERLICHEN
UNIVERSITÄTS-STERNWARTE
IN
STRASSBURG.

HERAUSGEGEBEN VON DEM DIREKTOR DER STERNWARTE
E. BECKER.

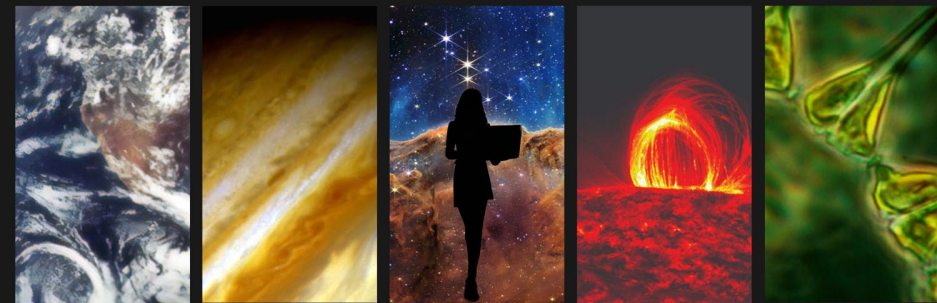
ERSTER BAND.



KARLSRUHE.
DRUCK UND COMMISSIONSVERLAG DER G. BRAUN'SCHEN HOFBUCHHANDLUNG.
1896.

What are our FY 2025 goals?

- **SciX out of beta**
 - Establish and meet metrics for Earth Science content
 - Establish and meet metrics for performance & stability
 - Keep astronomers happy as collections expand
- **Strategic Planning**
 - Continue funding: re-evaluate programs to fit current budget, seek additional funding
 - Recruit and engage SciX advisory board
 - Establish, in conjunction with developers & curators, priorities aligned with community needs
- **Continuous Improvement**
 - Establish and implement initial data-driven user personae
 - Establish and monitor metrics for increasing relevance of search results
- **Engagement**
 - Collaborate with Distributed Active Archive Centers (DAACs) to improve data linkages
 - Improve and expand user documentation focused on user personae
- **Science**



Astrophysics: 30+ years experience, community trust, loyal user community, comprehensive coverage, optimized workflows, established collaborations

Generally: for scientists, by scientists; knowledgeable, skilled, adaptable teams; open source, open science; support FAIR principles; infrastructure has demonstrated resilience; free, non-commercial service; human curation; interdisciplinary content; Ambassadors; cohesive team

Strengths

Opportunities

Rapidly evolving AI/ML technology; interdisciplinary discovery; new ideas from new disciplines; economies of scale; modernizing code; new scientific & technical collaborations; increased tracking of performance metrics; documenting and evaluating internal practices & assumptions; expanded funding base; interoperability with other search, content providers



Rapid expansion into new disciplines; lower than anticipated budget; project scientists new to digital libraries and information science; maintaining two interfaces, new interface not yet out of beta; slower than anticipated ingest of new content; aging classic architecture; workflows optimized for astrophysics rather than new disciplines; opaque documentation; non-competitive salaries for software engineers, zoology

Weaknesses

Threats

Rapidly evolving AI/ML technology; competing against well-established, well-funded Google Scholar, Web of Science, Undermind, etc.; competing internal priorities; failure to keep core astrophysics community satisfied; failure to gain acceptance in new disciplines; uncertain economic and political environment; group think or over-reliance on past practices



Mission Success



- ☐ SciX out of beta
- ☐ Quantifiable increase in user base
- ☐ Positive feedback from expansion communities
- ☐ Happy astronomers
- ☐ ADS or SciX is daily research companion for scientists in our fields

A woman with dark, curly hair and glasses, wearing a white lab coat over a blue shirt, is seated and reading an open book. She is surrounded by large stacks of books on both sides of her. The background is a dark blue wall. The word "Questions?" is written in white text on the right side of the image.

Questions?