Report of the ADS Users Group (ADSUG)

November 20-21, 2025

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Introduction

The ADS Users Group (ADSUG) advises the ADS on the operations of the project, and recommends changes and improvements to both its services and procedures in order to maximize the scientific productivity of the community it serves. The ADSUG advocates for the user community and provides suggestions regarding content curation, technical infrastructure, management, and priority setting.

ADSUG recognizes the importance of ADS/SciX for the research community, increasingly more so today, with the proven track record of ADS and now the modernization and expansion of SciX as science becomes increasingly interdisciplinary; ADS/SciX is a demonstrated key instrument to enhance the impact of all NASA funded science.
The report below is broken into sections outlined above, the main recommendation and findings are in the executive summary that follows.

Executive Summary

NASA ADS continues to serve its community and the excellent ADS service continues to be a key part of the astronomy and astrophysics research cycle. ADS accelerates discovery and dissemination in the areas of knowledge it covers.

ADSUG commends the excellent ongoing work of the ADS team; despite the ongoing challenges, the team has followed most of the recommendations of the ADSUG 2024 report. The effort devoted to strategizing and prioritisation of the work has produced visible results: efforts are more coordinated, focussed, and directly impactful on the users. One example ADSUG particularly appreciates is the new ADS/SciX feature that connects papers to mentioned software and grants.

Ongoing uncertainty in funding represents a major threat to the project. ADSUG is concerned about the consequences of this, which may produce irreparable harm in terms of technical debt, team integrity, and retaining the know-how. Based on the ADS presentations, and more recent events that suggest ADS will be fully funded and SciX will be funded at a slightly lower level, we provide recommended prioritization of ADS activities below.

As running two systems (ADS and SciX) is not sustainable, the **highest priority should be to switch ADS to SciX**. A swift transition would free up bandwidth to focus on all the wonderful work being done and planned (see below).

Given that the ADS user base will dominate by a big margin the SciX user base, **we recommend making the switch as seamless as possible for ADS users**. To achieve this, we recommend at least two key priority areas:

1. For ADS users, **one link and one click should provide a SciX experience that is ADS-like**. It is fine if the SciX interface differs from the ADS UI, but it should be intuitive to use without the need for documentation. We discuss more details below.
2. The **messaging and communication effort about the switch** should be stepped up immediately. Notifications about the imminent switch should be extensive, coordinated and clear, even if they seem disruptive and annoying to the user.

(Note: we commend the ADS team for including a SciX "Tour" and building a 1-click "View this page in SciX" button from any ADS page, and for integrating these features before the ADSUG even finished writing this report!)

In a rapidly changing world, especially in how information is organized, managed, and retrieved, SciX's potential for enhanced functionalities is critical to the continued relevance of NASA's vision to accelerate discovery and disseminate NASA science.

In this context, we commend the more focussed and strategic AI-related effort of the team based on last year's ADSUG feedback. The AI/ML development work can improve core services such as keyword labeling via KAILAS. Strategic collaborations and postdoctoral hires reinforce ADS as leaders in this space. As the AI/ML subteam moves towards deploying cutting-edge services, we recommend that ADS selects one or two critical use cases that directly benefit users (e.g., keyword labeling, improved relevance scores, etc), and prioritize moving these into production. As part of this goal, we also recommend selecting a few high-level performance metrics, and reporting those in next year's presentation.

ADSUG encourages the appropriate parties to commit to complete financial support of SciX. In the absence of full SciX funding, we also recommend that ADS/SciX be allowed to pursue other sources of funding without hindrance, as much as possible, under the Smithsonian Institute's Office of Advancement. We further advise the Smithsonian's OA to prioritize pursuit of external funding support for ADS/SciX as much as possible, serving as an advocate for their excellent work.

Specific actions to potentially ease the ADS to SciX transition

Here, we list several specific actions that can facilitate a seamless switch to SciX for current ADS users.

- Reframe the transition as an upgrade: ADS to SciX is not just a migration of users, but rather a full upgrade of the ADS platform to the more powerful SciX platform.

    - Plan the update as soon as possible with actions such as announcements and increased user recruitment/opt-in as soon as possible.
    - Ensure that the SciX banner is more highly visible (red color, etc), with the date of the soonest possible transition. Could be a link to “read more” with a full announcement.
    - Option to accelerate SciX by opting in ADS users, if by a certain data the user base has not grown as much as desired.
    - Requesting that arXiv links to SciX instead of to ADS.
    - Create a (short) dedicated URL to SciX, such as https://scixplorer.org/astro, that preselects Astrophysics (providing the option to exclusively search Astro collection without having to go to user settings), which can be easily bookmarked without the need for logging in.
- See also “community outreach and education” below for specific messaging

Prioritization of planned work

The ADSUG recognizes the commendable effort of the ADS team in organizing and coordinating their work with greater focus, coherence, and a clear strategic direction. There is clear improvement compared to previous years. Framing the work in terms of Impact vs. Effort and Impact vs. Urgency is a strong and effective approach.

We commend the team for undertaking the mission-and-vision exercise; it represents an important and constructive step toward clarifying the long-term direction of ADS. We encourage the team to actively apply this work in practice, ensuring that strategic decisions, priorities, and project choices are consistently aligned with the mission. In doing so, it will be valuable to connect this refined mission with the broader vision for ADS presented to us in the meeting—one that recognizes the system as far more than a digital library. ADS has a unique role as an enabler of discovery, a connector across the research ecosystem, and a driver of scientific insight. At the same time, it is essential that the team remains anchored in its core mission and avoids unnecessary dispersion.

We recommend the team to prioritize the focus on astronomy, developing features on the Astronomy collection first, with a way to expand to other disciplines in the future. Astronomers are still by far the core users. While positive steps have been taken toward engaging Earth Science users, there are still only about 13k active SciX users (compared to 5M annual ADS users) and their overlap with astronomers is unknown but likely large. There is significant effort devoted to ingesting 100K articles per week for Earth Science but the number of Earth Science users is unknown (and low).

A clearer assessment is needed to determine whether the Ambassador Program has generated a measurable uptick in user engagement in Earth Sciences.

Community outreach and education

Communication around the transition from ADS to SciX needs to be strengthened and more tightly focused. We recommend preparing a newsletter or formal announcement as soon as

possible to inform users that the update to SciX is expected in 2026. The messaging should emphasize that SciX is not fundamentally different from ADS—while it introduces some benefits, there will also be transitional challenges that users should anticipate. A coordinated communication plan at AAS would be valuable, highlighting the key features of SciX (both current and forthcoming) and clearly explaining the nature of the upgrade. Even if SciX does not yet offer extensive new capabilities, sustained promotion and awareness-building within the astronomy community will be important to ensure a smooth and well-understood transition.

Understandably, other aspects of outreach than the ADS/SciX transition have been given lower priority.

The next generation of prospective ADS/SciX users should not be taken for granted. Researchers—especially early-career scientists—now routinely rely on alternative tools such as Google Scholar, Scholar Labs, and AI-based systems like ChatGPT. This landscape creates real competition, but it also presents a significant opportunity to engage new users and demonstrate clearly the unique value that ADS/SciX provides. In this context AI-powered tools and their impact on users should be closely analyzed. Not having yet a consensus on AI use should not lead to reluctance to explore AI-powered technical options at ADS/SciX.

Documentation and User Support

We acknowledge the usefulness of the existing “Don’t Panic” page and appreciate the plan to develop a dedicated guide for ADS → SciX users. However, the transition will be most effective if users can experience SciX intuitively, ideally with a one-click or frictionless interface that minimizes the need to consult documentation. The documentation page should instead serve as a supportive resource, highlighting new features available in SciX that were not present in ADS.

The proposal to produce short screen-recorded tutorial videos is excellent. Offering both written documentation and concise video walkthroughs will help reach a broader audience, recognizing that users have diverse learning preferences—some absorb information best through visual demonstrations, while others prefer structured written guidance.

Content curation

While the focus is on transitioning ADS to SciX, it is understandable that work on ingestion and content curation outside of astronomy is de-emphasised. Even for content curation, because the user-base is still astronomy-dominated, we recommend SciX to fully implement astronomy first before working on other datasets, or other keywords.

SciX inclusion of US federal awards, grants (NSF and NASA for now) and proposal information records, including publications funded by such awards, is very important and surely extremely valuable to the funders involved. It gives an insight into research productivity out of federal funding: a unique capability with immense potential. As this work demands meaningful time and resources, funder contributions could help sustain these efforts.

Data and software linking to publications offered by SciX (even if not specifically associated with DOI) is also highly valuable to researchers (and journals).

Technical infrastructure

We commend the backend progress that continues to remove software dependencies as part of the ongoing SciX transition. This investment of effort ensures that future work is built on a sustainable technical stack.

Community feedback

We commend the team for conducting the user survey, which provided informative insights into user needs and experiences. At the same time, we note that response rates are often low, and the results may be subject to response bias.

Looking ahead, we recommend considering adjustments to the survey approach to increase efficiency and relevance. Options include simplifying and shortening the survey to encourage higher participation, possibly skipping a year especially during the transition to SciX to allow time for assessment, and subsequently reconsidering the survey's content scope to better target the most useful feedback. The goal is to maintain the value of user feedback while reducing the burden on both respondents and staff especially during particularly challenging times, such as in the upcoming year.

Funding strategies and opportunities

ADSUG strongly recommends full funding for BOTH SciX and ADS at requested levels. The prioritization that we have presented is intended as a risk minimization strategy, not as an endorsement for limiting the scope. ADSUG encourages the relevant parties to commit to fully supporting SciX financially, including exploring new and innovative funding mechanisms. In light of the current severe funding challenges, we further recommend that ADS be allowed, to the fullest extent possible, to pursue additional external funding opportunities without impediment through the Smithsonian Institution's Office of Advancement (OA). We also advise that the OA prioritize the search for external support for ADS/SciX.

The ADSUG meeting was dominated by the concern over funding imposing a very short timescale for the transition from ADS to SciX. The recent announcement of confirmed substantial funding for SciX in FY26 is much welcome, providing the much needed sustained investment in the team's outstanding work; however we continue to advocate for *full* funding in line with the ADS requests and our prior recommendations.

Ultimately, as maintaining and running two systems is not sustainable, the recommendation to accelerate the transition from ADS to SciX remains critical. We recommend that this process proceeds quickly, and in a way that the community is clearly and repeatedly informed so that they can be prepared to adapt to the changes.