astrophysics data system

ADS User Survey 2024 Results Summary

The ADS Team

ADS Users Group Meeting, 05-06 Dec. 2024

SciX

CENTER FOR ASTROPHYSICS HARVARD & SMITHSONIAN

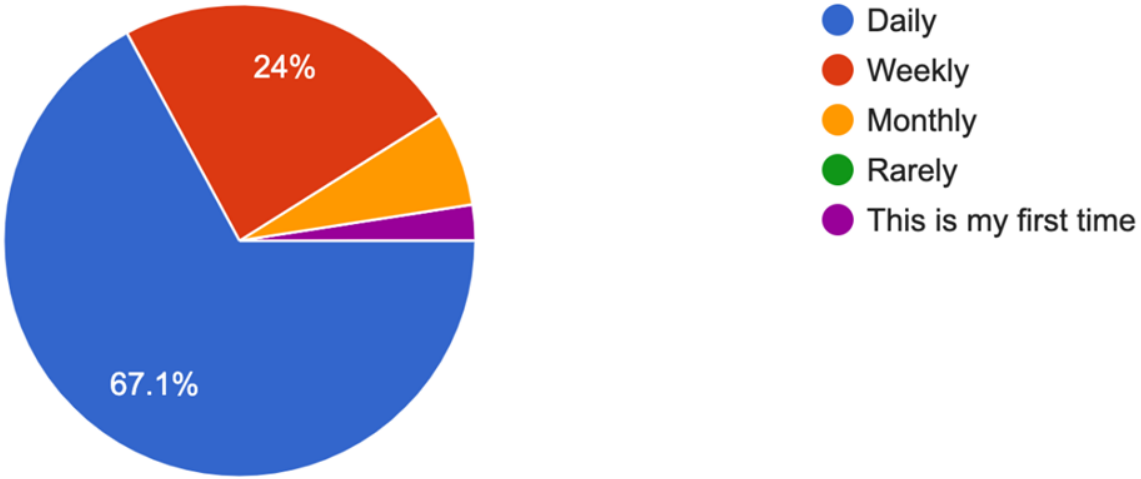
SMITHSONIAN INSTITUTION

NASA Partner

ADS User Survey 2024

How frequently do you use ADS to search for scientific literature and data?

325 responses



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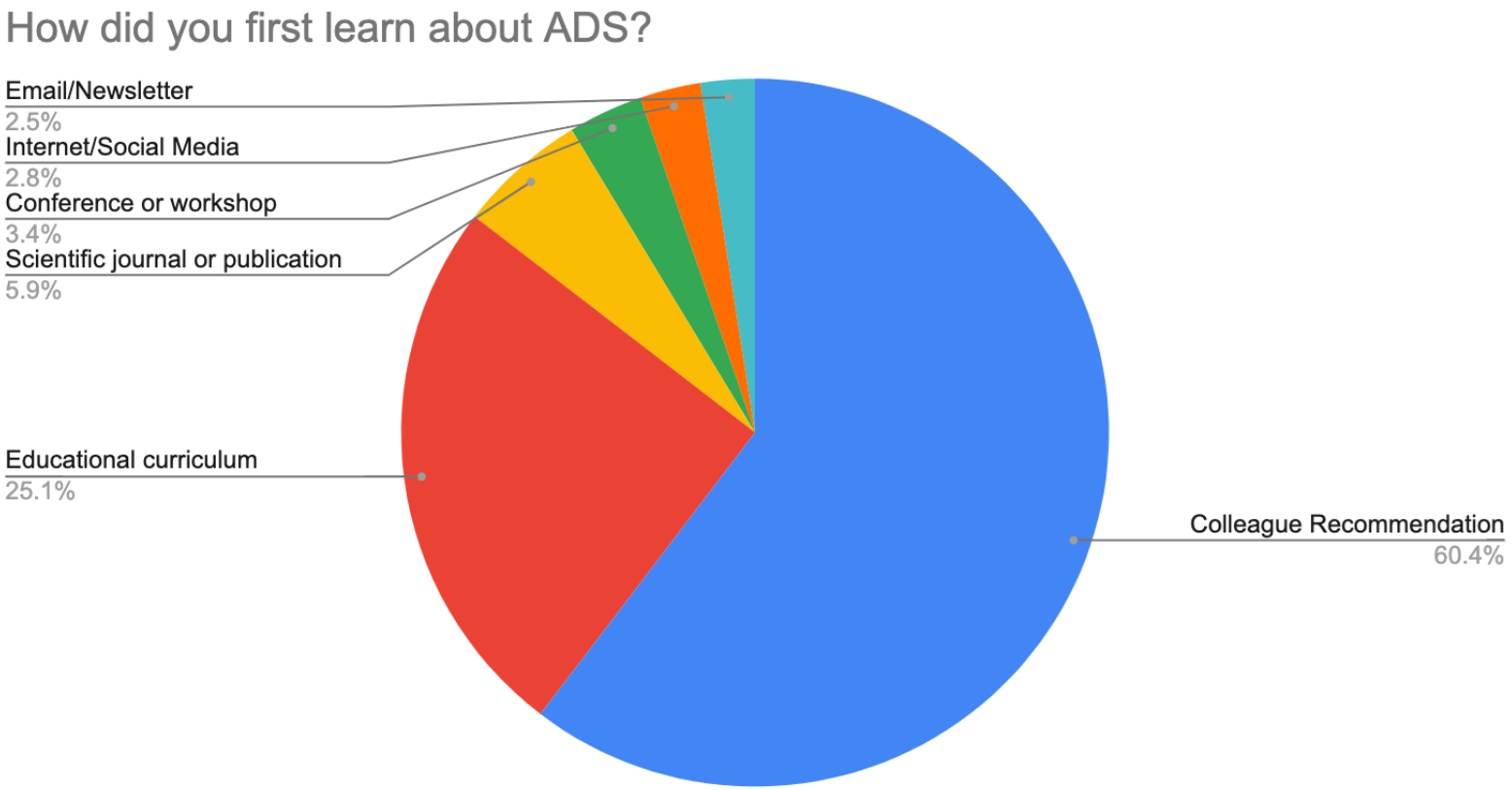

ADS User Survey 2024

What other tools do you commonly use?	# Responses
Google Scholar	144
ResearchGate	70
arXiv	61
Web of Science	21
Scopus	17
PubMed	13
Google (browser search)	13
Science Explorer (SciX)	11
benty-fields	7
Only ADS (user indicated ADS is their only tool)	7
General web search	3
none	3
DuckDuckGo	3
Vizier	3
HAL	3
Institutional Library Search Page	3
Inspire	2
NED	2
Pathfinder	2

Other Tools Commonly Used w/ 1 Mention:

Archive.org,
astro-ph,
BibCNRS,
Claude.ai,
Consensus,
Crossref,
ESO archive,
ESO Telbib,
Gallica (BNF),
GeoRef,
GeoScienceWorld,
Google Books,
Inspire-HEP,
journal ToCs,
jstor.org,
MAST Archive,
Munich Digital Archives,
oracdr,
Orcid,
Perplexity.ai,
Phys.org,
Qwant,
Colleague Recommendations,
Scholar GPT,
Sci-Hub,
Sci-net,
Scielo,
Wikipedia article references

ADS User Survey 2024

How do you most commonly use your preferred tool for searching scientific literature?	# Responses
Searching for specific articles by title or author	299
Accessing and downloading full-text articles	256
Finding references or citations for my own work	219
Exploring literature on a specific topic or keyword	203
Exploring related articles or works citing a particular paper	179
Managing bibliographies or reference lists	169
Evaluating impact metrics (e.g., citation counts, journal impact factors)	151
Saving articles to read later or adding them to a personal library	136
Using advanced search features (e.g., filters, Boolean operators)	127
Sharing articles or findings with colleagues	125
Keeping up-to-date with the latest research in my field	109
Setting up alerts or notifications for new publications	51
Browsing new publications in specific journals	22

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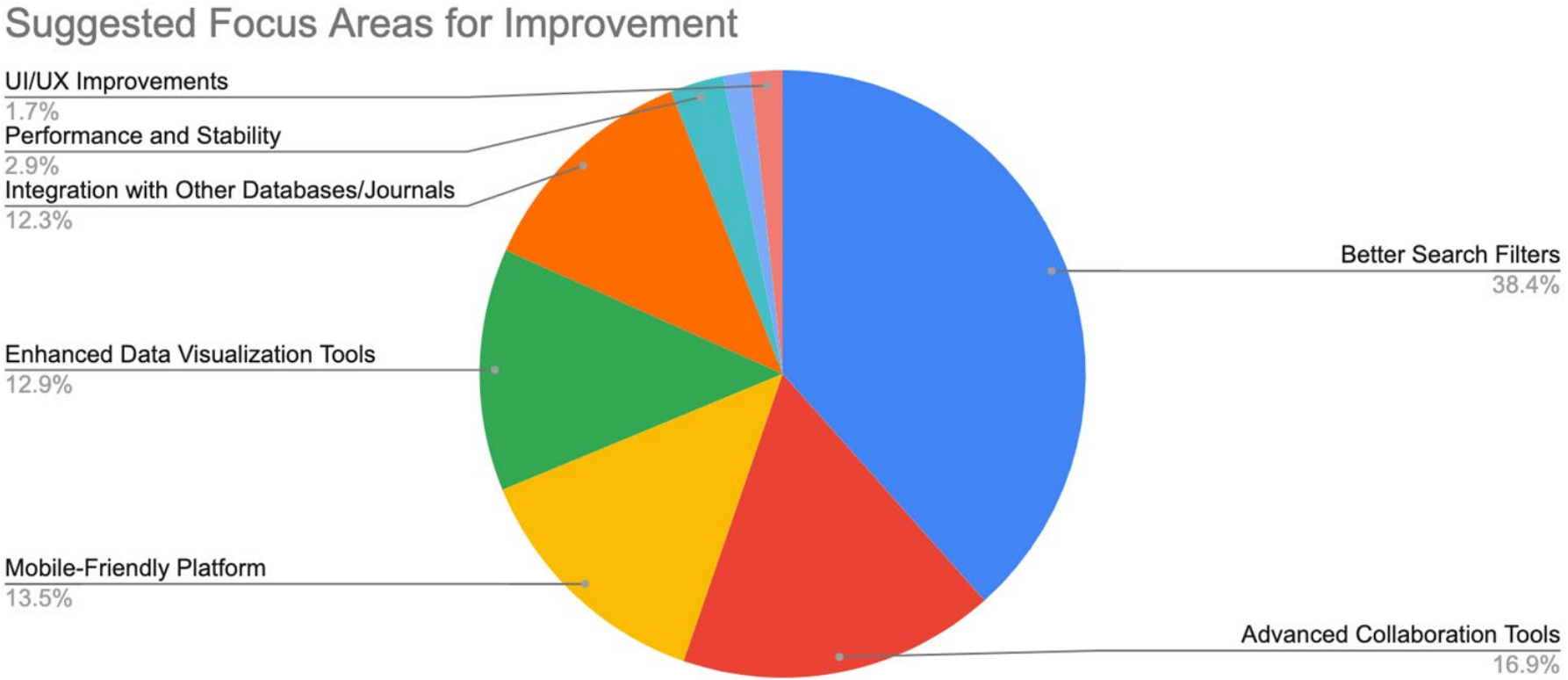
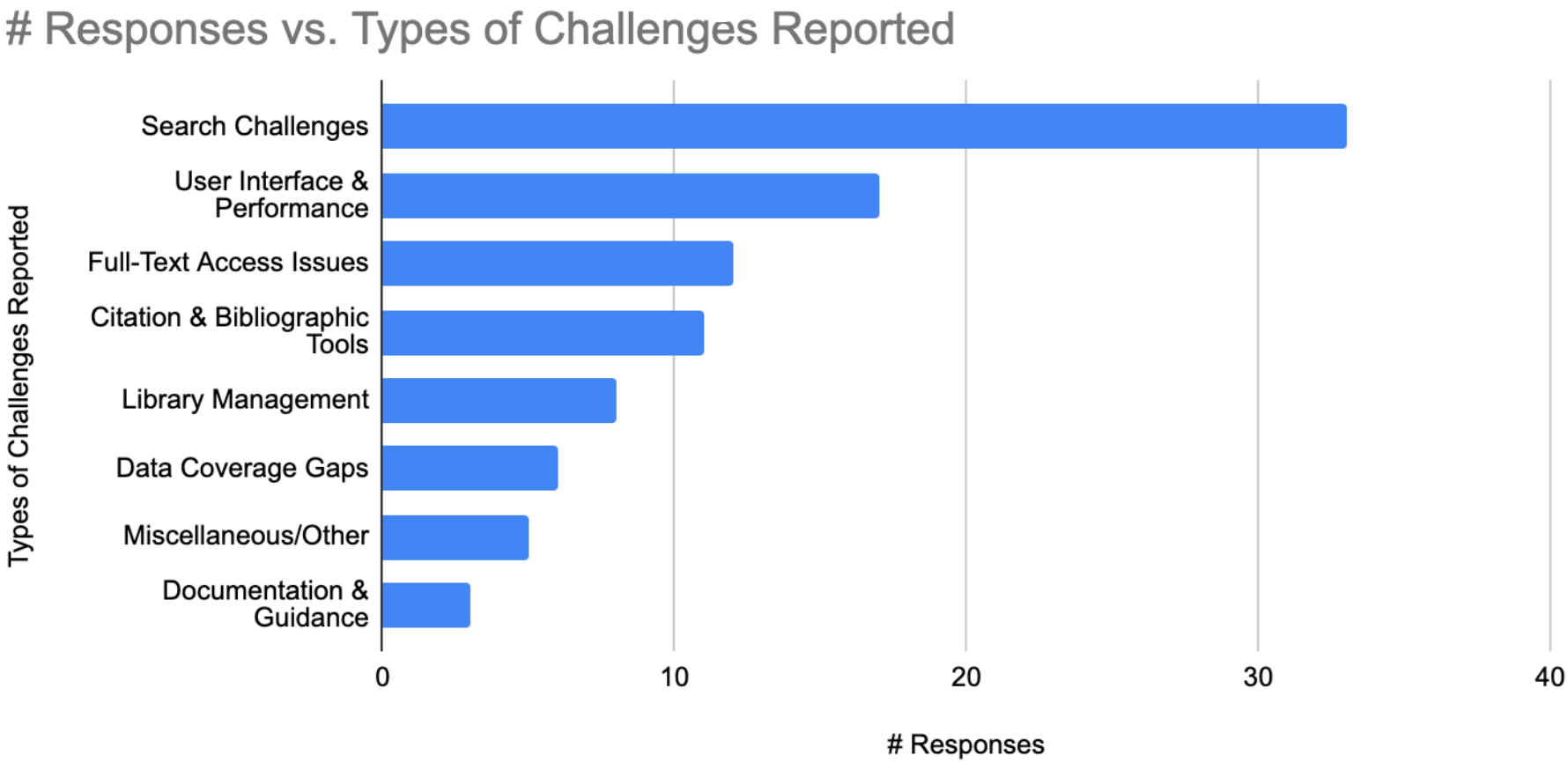


ADS User Survey 2024



ADS User Survey 2024

ADS Responses to Identified User Challenges

- **Search Functionality**
  - **Advanced Filtering Options**: Enabling users to apply granular search filters, such as excluding specific terms or restricting searches to certain metadata fields.
  - **Keyword Matching**: Refining the keyword matching algorithm to reduce irrelevant results, especially for generic terms.
  - **Intelligent Search Features**: Including features like fuzzy matching and synonym recognition to accommodate user variations in query terms.
  - **Common Names**: Helping users with disambiguation methods for authors with common names, such as linking ORCID IDs or including affiliation-based filters.

- **Full-Text & Data Access**
  - **Fixing Broken Links**: Regularly auditing full-text links to ensure accessibility.
  - **Expanding Coverage**: Including more historical and lesser-known journals to fill bibliographic gaps.
  - **PDF Usability**: Addressing compatibility issues with PDF downloads on different browsers and systems.

ADS Responses to Identified User Challenges

- **User Interface (UI)**
  - **Classic Interface Preferences**: Maintaining access to popular UI from the classic ADS interface.
  - **Performance Optimization**: Enhancing the speed and responsiveness of the platform, particularly during high-traffic periods.
  - **Customizable UI**: Allowing users to personalize their UI experiences, such as saving filter criteria or display preferences.

- **Citation & Bibliographic Tools**
  - **Multi-Library Management**: Exploring the ability to work & search across multiple user libraries simultaneously.
  - **BibTeX Formatting**: Fixing issues with exporting custom citation formats and allow saving preferred citation styles.
  - **Citation Metrics**: Providing consistent and accurate citation metrics, addressing discrepancies with external sources.

ADS Responses to Identified User Challenges

- **Documentation & Guidance**
  - **Feature Tutorials**: Developing clear guides for advanced search techniques, library management, and notification setup.
  - **Onboarding Assistance**: Offering interactive tutorials for new users to familiarize themselves with the system.
- **Other Challenges**
  - **Outage Communication**: Providing real-time updates on platform outages or scheduled maintenance.
  - **Language Consistency**: Improving detection of non-standard English terms from translated papers.
  - **New Features**: Introduce "citation chain" features or visualizations to help users trace references and citations more effectively.

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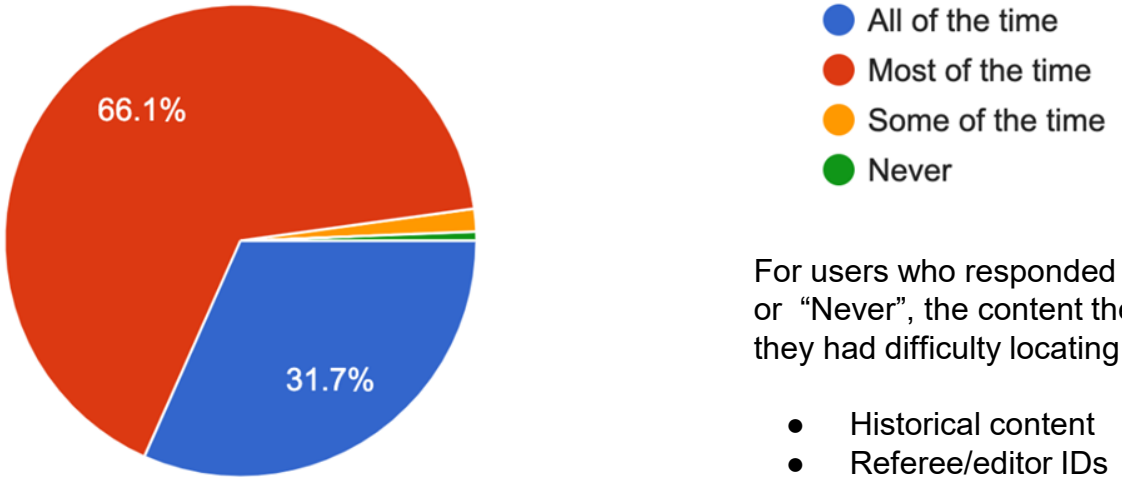
How often are you able to find what you need on ADS?

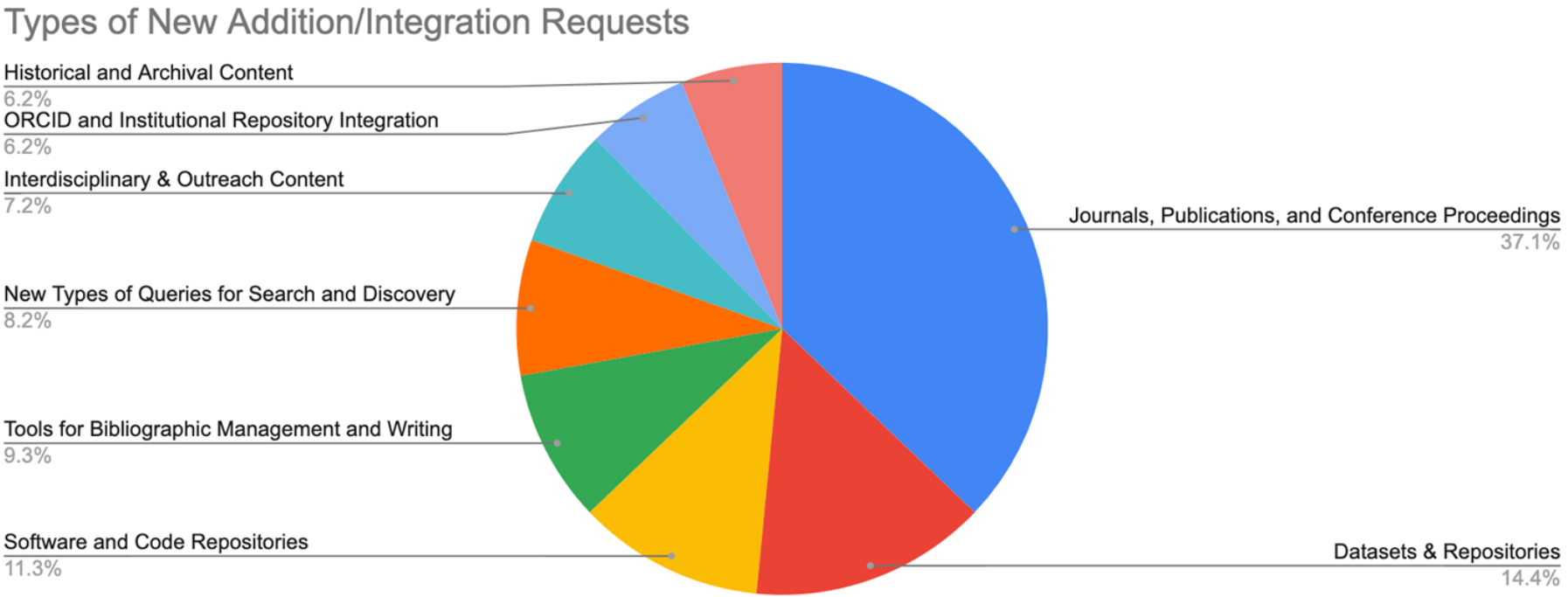
322 responses



For users who responded “Some of the time” or “Never”, the content these individuals said they had difficulty locating included:

- Historical content
- Referee/editor IDs
- Full-text search results
- Data-driven results

ADS User Survey 2024



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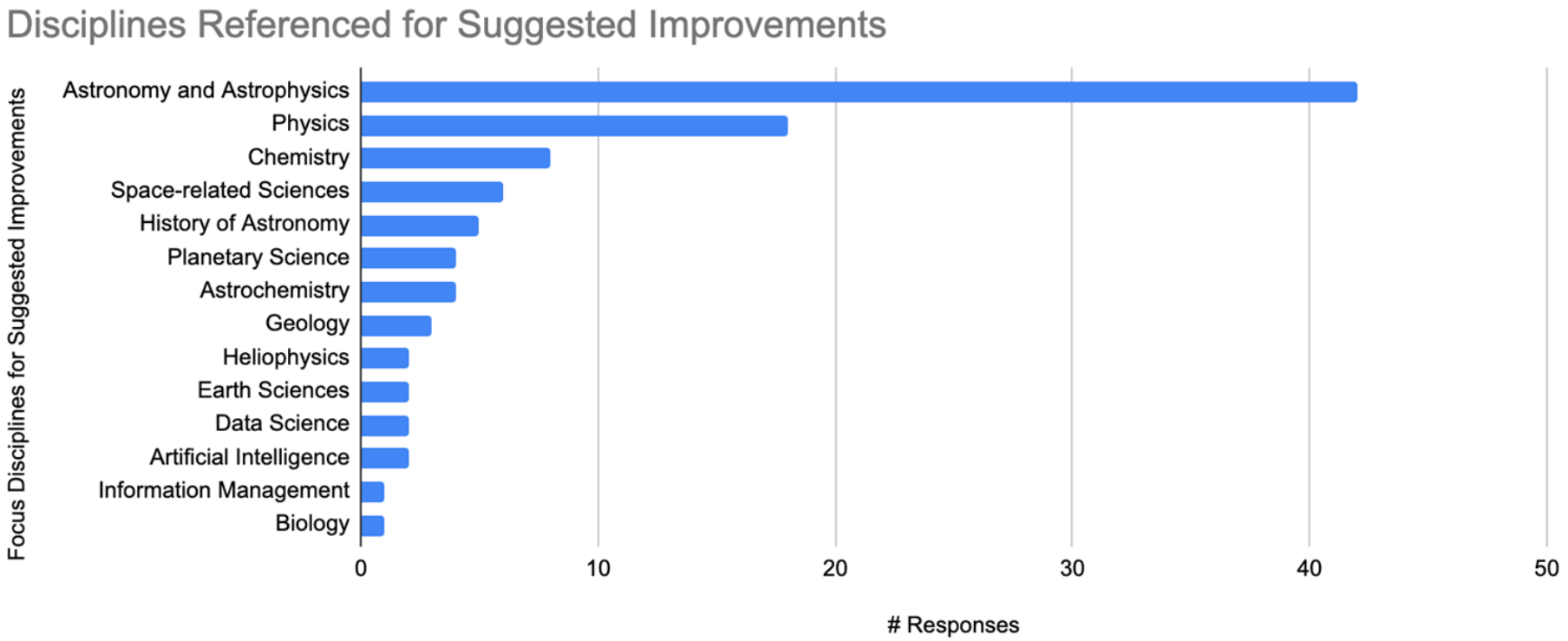

ADS User Survey 2024

Suggested Astronomy & Astrophysics Improvements

- **Expand Historical Context**
  - Include older, foundational astronomy publications.
  - Improve digitization of historical texts (e.g., observatory logs and handwritten documents) using OCR or partnerships with institutions like the Smithsonian.
  - Make these documents fully searchable for researchers in the history of astronomy.

- **Improve Object-Based Searches**
  - Enhance the ability to search for papers related to astronomical objects by their official IAU names.
  - Address challenges with object name variations and aliases (e.g., different names for exoplanets) to ensure comprehensive search results.

- **Better Integration of Preprints & Final Publications**
  - Ensure that preprints and final published articles are linked correctly to avoid having them listed as separate entries in ADS.
  - Improve the linkage between preprints and their corresponding full articles for a seamless research experience.

ADS User Survey 2024

Suggested Astronomy & Astrophysics Improvements

- **Refine Search Functionality**
  - Improve search algorithms to provide more accurate and relevant results, especially when using common terms that might have multiple meanings (e.g., “M8” for the Lagoon Nebula).
  - Address issues with irrelevant results appearing in searches (e.g., biology-related articles when searching for astrophysical terms like “Lagoon Nebula”).

- **Improve Citation and Bibliometric Tools**
  - Provide more robust citation tracking and indexing, especially for interdisciplinary research, where citation counts in ADS might not align with other databases like Google Scholar.
  - Add features that help researchers track citations, such as calculating metrics like h-index and providing advanced filtering by citation quality and impact.

- **Enhance Interdisciplinary Coverage**
  - Expand the breadth of research included in ADS to cover more interdisciplinary fields, particularly those that overlap with astrophysics, like astrochemistry, heliophysics, and planetary science.
  - Improve the integration of papers from related disciplines, ensuring that relevant research is included, even if it falls outside traditional astrophysics categories.

Suggested Astronomy & Astrophysics Improvements

- **Improve Access to Full Texts**
  - Enhance full-text availability, especially for older publications, which may currently be difficult to access.
  - Work on providing more comprehensive full-text search and indexing to improve accessibility.
- **Support for Advanced Search and Research Tools**
  - Introduce advanced tools for searching and processing articles, such as summarization tools or AI-driven search capabilities.
  - Improve the ability to search by astronomical object and sub-discipline (e.g., classifying papers by specific astrophysical topics).

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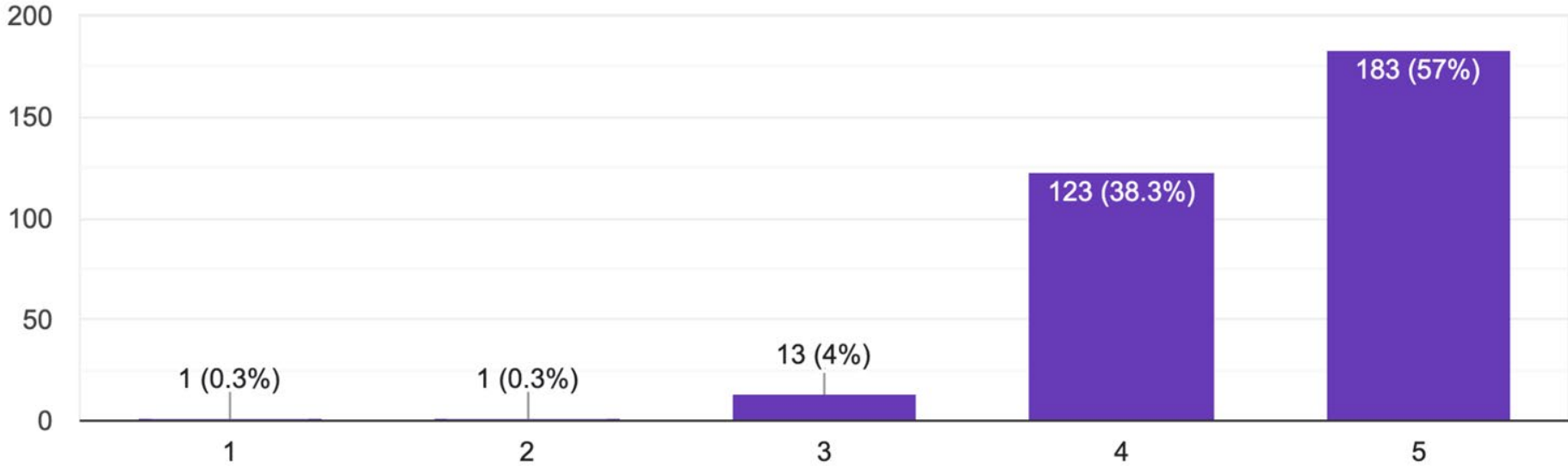
How relevant are the search results you get to your research needs?

321 responses



Not Relevant at All

Extremely Relevant

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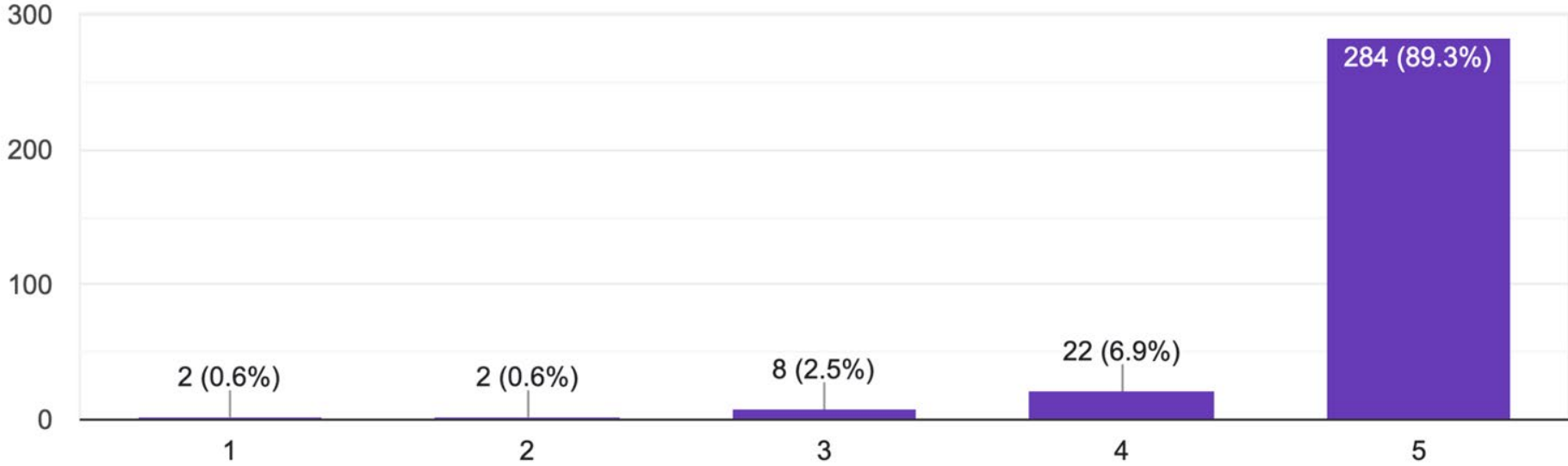
How likely is it that you would recommend the use of the ADS digital library portal to a friend or colleague?

318 responses



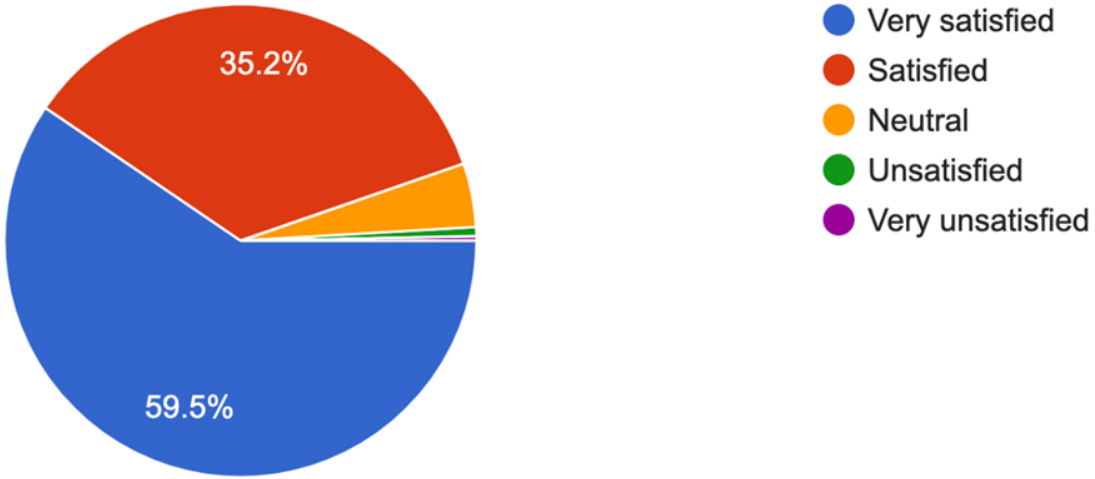
Not Likely at All

Extremely Likely

ADS User Survey 2024

How satisfied are you with the current features of ADS?

321 responses



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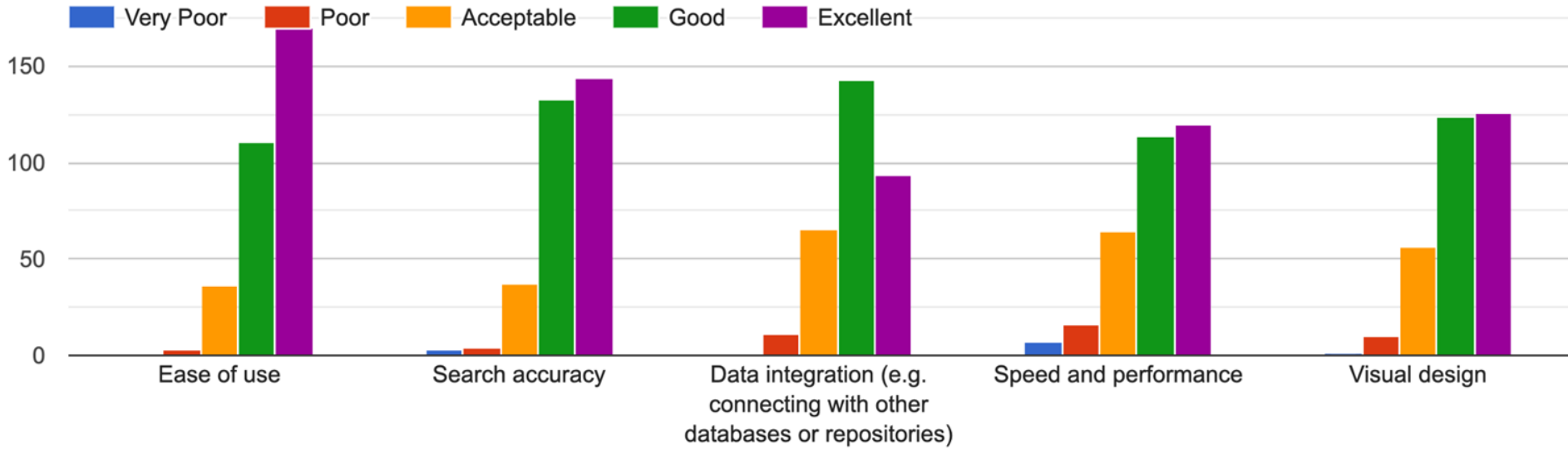
Please rate the following aspects of ADS.



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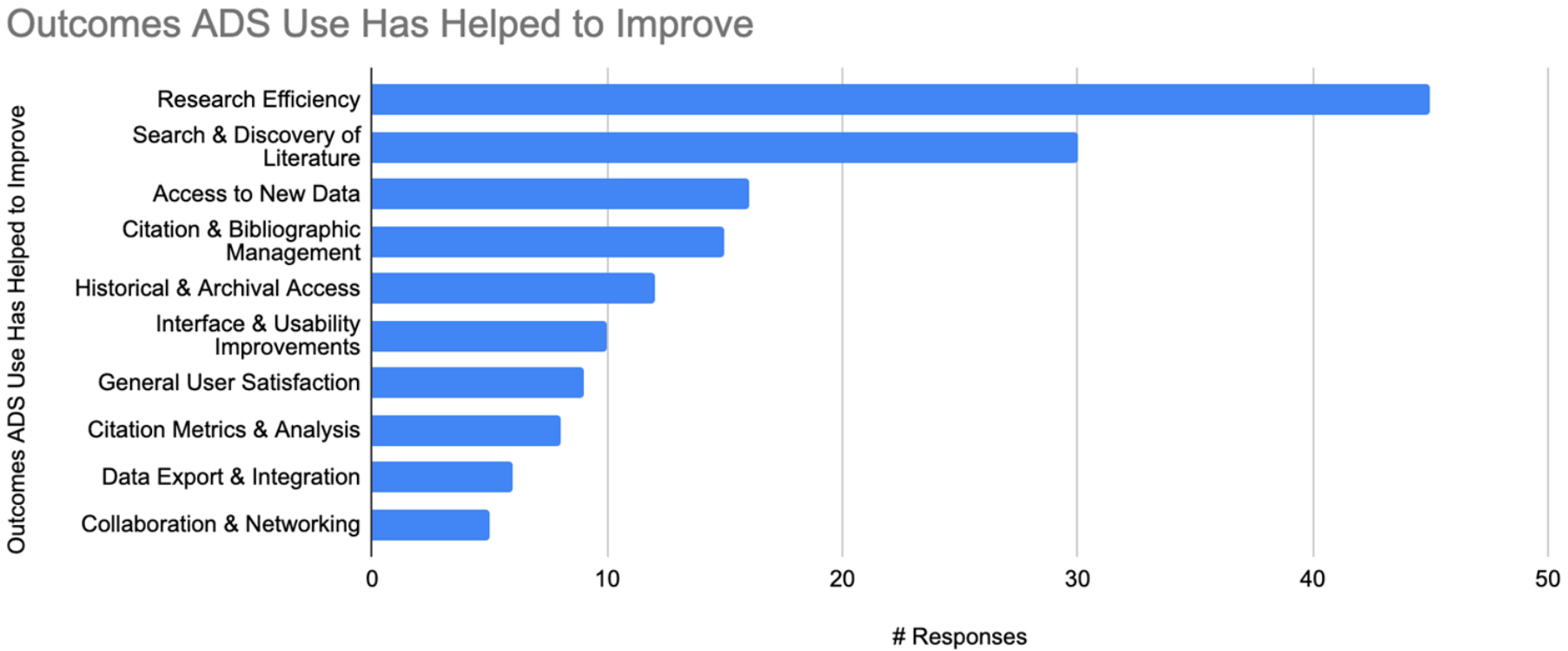

ADS User Survey 2024

What new trends or technologies do you think ADS/SciX should focus on in the future to ensure the platform remains relevant for your research?

Suggested Innovation Focus Areas	Count
Artificial Intelligence (AI) and Machine Learning (ML)	22
Interdisciplinary Research Support	8
Advanced Search and Filtering Features	7
Maintaining Simplicity and Core Functionality	6
Integration with Data Repositories and Tools	5
Author Disambiguation and ORCID Integration	4
Image/Figure Search and Data Extraction	4
Improved Similarity Recommendations	3
Astrobiology and Space Sciences Coverage	3
Enhanced Visualization and Multimedia Tools	3
Expanded Historical and Diverse Content	3
Integration with Citation Tools (e.g., Zotero)	3
Improved Impact Metrics and Altmetrics	2
Better Preprint Differentiation	2
Real-Time Data Integration	2
Accessibility and Mobile Optimization	2
Inclusion of Software and Code in Bibliographic Records	2
Other (Miscellaneous Unique Suggestions)	5

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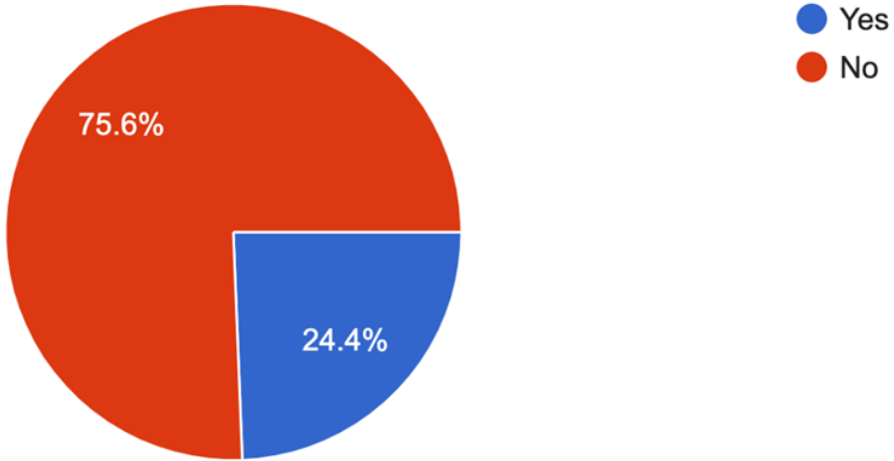
Were you aware that the ADS is currently expanding (to become SciX)?

320 responses



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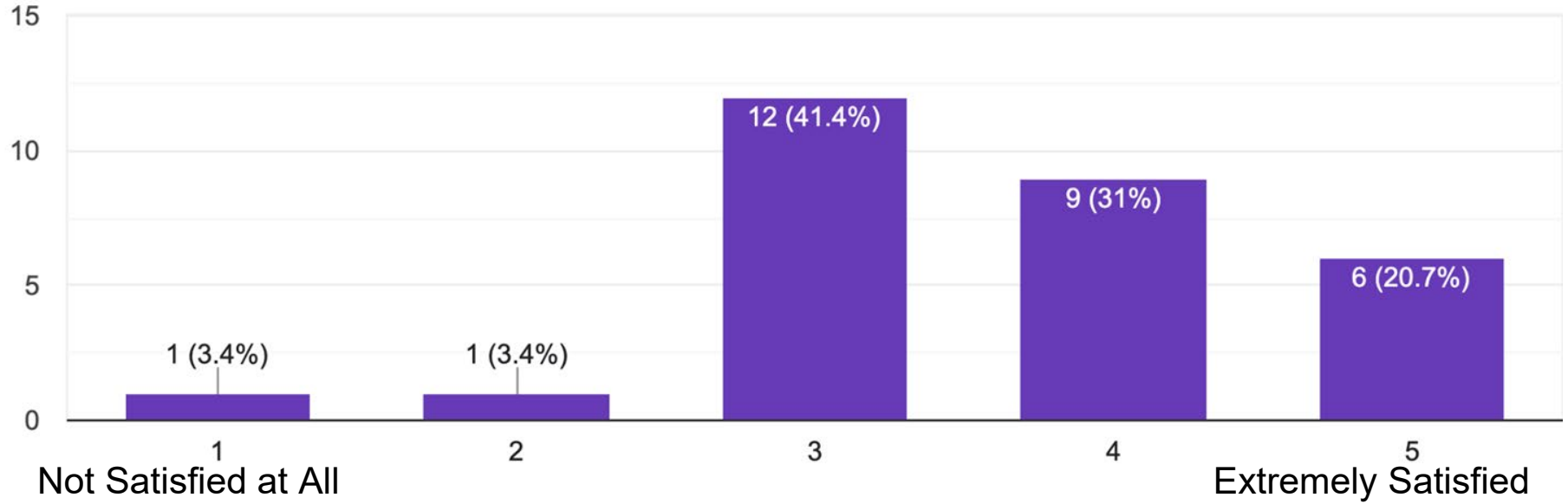
If you have tried the new interdisciplinary digital library portal found at SciXplorer.org, how satisfied were you with your experience?

29 responses



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