

# ADS Update

*Alberto Accomazzi*  
*NASA Astrophysics Data System*  
*Harvard-Smithsonian Center for Astrophysics*

2 April 2014  
AAHEP7

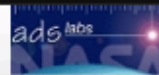


# Present and Near Future

- Launch of “ADS 2.0” in January 2014
- IT Infrastructure
- User Database and Personalization
- Content Updates
- Projects & Collaborations

# ADS 2.0

- Integrated metadata and full-text search
- Rank by relevance, pubdate, citations, popularity
- See search terms in context
- Filter results via facets
- Explore visualizations of author, citations network, word clouds, astronomical objects
- Compute metrics on any result set



Author First Author Title Year Publication Fulltext Object

citations(author:"huchra, john") "redshift survey"

+ options

Search



Trending Useful Instructive

Examples

## Limit your search

Top papers

Authors

apply

- Huchra, J (139)
- Geller, M (126)
- Lahav, O (116)
- Frenk, C (114)
- Strauss, M (96)

more...

Database

Keywords

Publications

Refereed status

Bib Groups

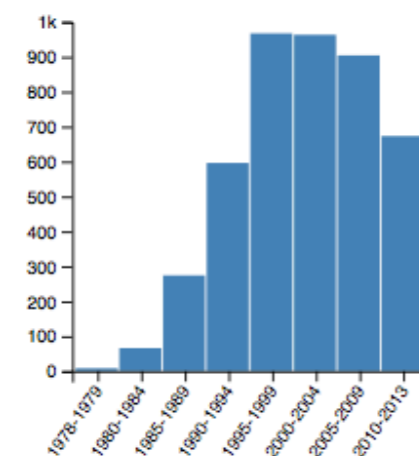
Grants

Data

VizieR Tables

Publication Year

from 1978 to 2013 apply



Database : astronomy

Clear all

Previous | 1 to 20 of 4451 | Next

Analyze

View

Export

Sort

1. [1996ApJ...470..172S](#) Cited by 442 [ FG XD RCSN ]  
**The Las Campanas Redshift Survey**  
 Shectman, Stephen A.; Landy, Stephen D.; Oemler, Augustus; Tucker, Douglas L. *and 3 coauthors*  
*Published in Oct 1996*  
 ... each  $1.5^{\text{deg}} \times 80^{\text{deg}}$ , three each in the north and south Galactic caps. The median *redshift* in the *survey* ...  
 ... The Las Campanas *Redshift Survey* (LCRS) consists of 26,418 redshifts of galaxies selected ...  
 ... The median *redshift* in the *survey* is about 30,000 km  $s^{-1}$ . Essential features of the galaxy selection ...  
 ... 1986 and Geller & Huchra 1989 ; for the Southern Sky *Redshift Survey*, see da Costa et al. 1994a). ...
2. [2002MNRAS.330..531T](#) Cited by 8 [ FG X RC ]  
**Topology of the Las Campanas Redshift Survey**  
 Trac, Hy; Mitsouras, Dimitris; Hickson, Paul; Brandenberger, Robert  
*Published in Mar 2002*  
 ... The topology of the Las Campanas *Redshift Survey* is analysed using Minkowski functional statistics, ...  
 ... Digital Sky Survey (SDSS) *redshift survey* is indistinguishable from that of a Gaussian distribution (Colley et al. 2000). ...  
 ... the important selection effects), finding evidence for filamentarity. The deepest wide-field *redshift survey* ...  
 ... is obtained. Direct comparisons between galaxy *redshift surveys* and cosmological simulations of structure formation ...
3. [1998AJ....116....1D](#) Cited by 131 [ EF XD RCSN ]  
**The Southern Sky Redshift Survey**  
 da Costa, L. Nicolaci; Willmer, C. N. A.; Pellegrini, P. S.; Chaves, O. L. *and 10 coauthors*  
*Published in Jul 1998*  
 ... at the isophotal level  $\sim 26$  mag  $\text{arcsec}^{-2}$ . The precision of the radial velocities is  $\sim 40$  km  $s^{-1}$ , and the *redshift* ...  
 ... *survey* is more than 99% complete to the  $m_{\text{SSRS2}} = 15.5$  mag limit. This sample is in the direction ...  
 ... complete slice of the CfA2 *redshift survey* (de Lapparent, Geller, Huchra 1986) soon produced striking ...  
 ... et al. 1986). Later, the diameter-limited Southern Sky *Redshift Survey* (SSRS; da Costa et al. 1988) ...
4. [1991ApJ...382...44V](#) Cited by 52 [ FG RC ]  
**Void Statistics of the CfA Redshift Survey**  
 Vogeley, Michael S.; Geller, Margaret J.; Huchra, John P.;  
*Published in Nov 1991*  
 ... We study clustering properties of two samples from the CfA *redshift survey* each containing  $\sim 2500$  ...  
 ... of two samples from the CfA *redshift survey* each containing  $\sim 2500$  galaxies. Comparison of the velocity ...  
 ... and for small, distance-limited subsamples of the CfA *redshift survey* (Hamilton, Saslaw, & Thuan 1985 ...  
 ... this region in some of our analysis ( $\sim 8$ ). We also examine the CfA *redshift survey* complete to  $m_B \leq 14$  ...
5. [1988ASPC....5...41H](#) Cited by 2 [ FG TRC ]  
**Redshift surveys and the description of clustering in the universe.**  
 Huchra, J. P.;  
*Published in 1988*  
 ... results from the first CfA *redshift survey*. ...  
 ... This has been brought about by extensive new *redshift surveys* of galaxies and clusters of galaxies. Here the author ...  
 ... reviews some of this work, in particular *redshift surveys* in progress at the CfA. Topics include voids, ...  
 ... of the statistical properties of galaxy clustering, and spectroscopic results from the first CfA *redshift survey*. I. ...

What Is The Author Network? ▾

How Do I Use It? ▾

Static Interactive

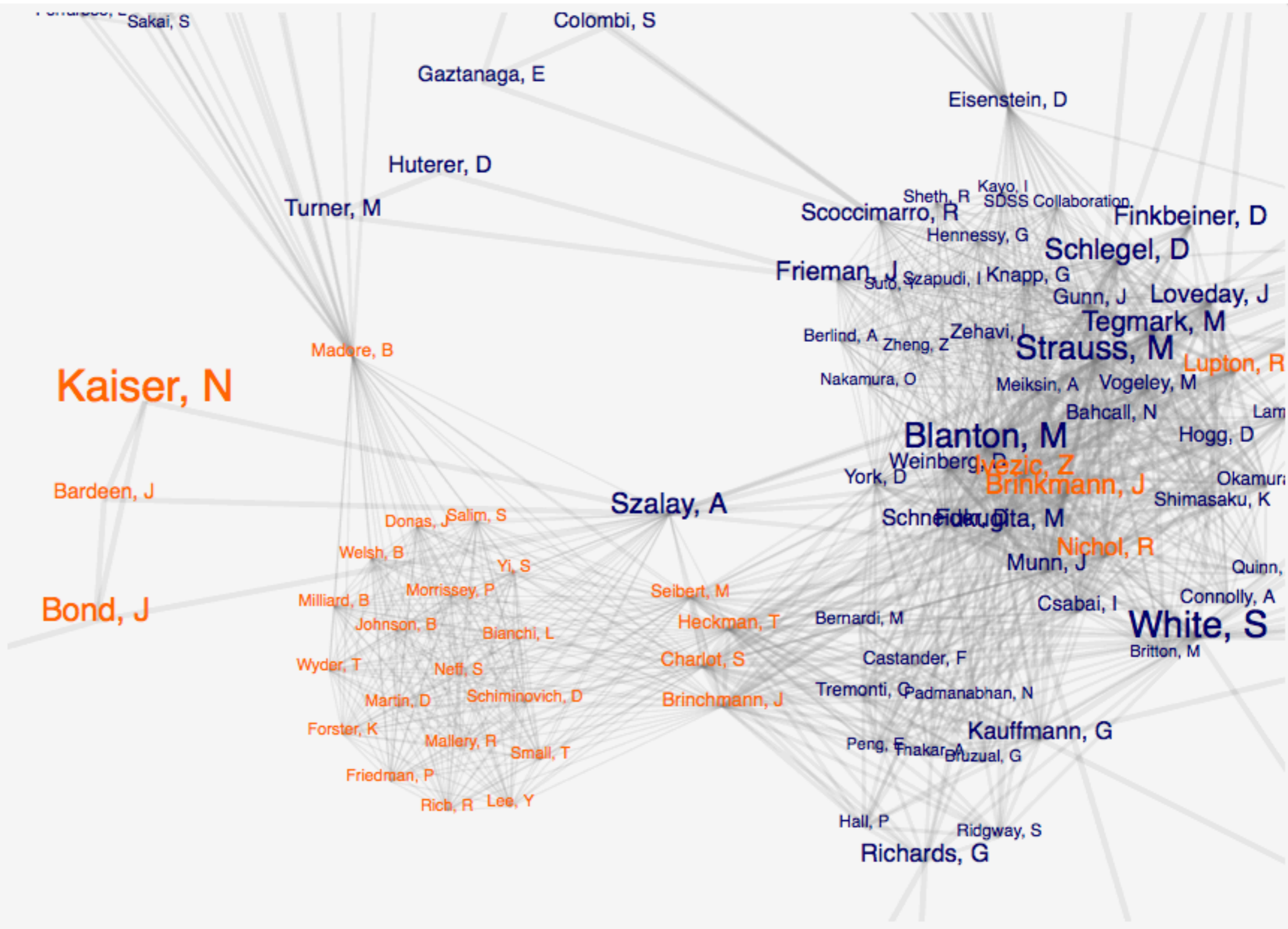
Animate Freeze

Select Single Select Group

Search for an Author:

Search

- Selected Authors:
- Szalay, A
  - Lupton, R
  - Salim, S
  - Friedman, P
  - Nichol, R
  - Yi, S
  - Neff, S
  - Welsh, B
  - Small, T
  - Heckman, T





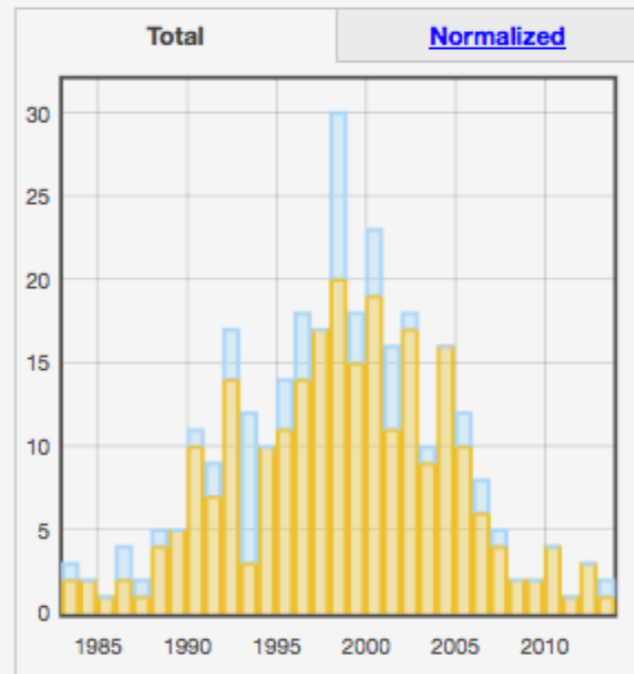
Papers		Totals	Refereed
Number of papers	[?]	300	243
Normalized paper count	[?]	108.3	77.4
Total reads	[?]	122620	119922
Average reads	[?]	408.7	493.5
Median reads	[?]	265.5	324.0
Total downloads	[?]	66951	65824
Average downloads	[?]	223.2	270.9
Median downloads	[?]	131.0	173.0

Citations		Total	Refereed
Number of citing papers	[?]	8582	7293
Total citations	[?]	17381	17199
Average citations	[?]	57.9	70.8
Median citations	[?]	27.0	39.0
Normalized citations	[?]	3893.6	3820.0
Refereed citations	[?]	15178	15027
Average refereed citations	[?]	50.6	61.8
Median refereed citations	[?]	24.0	34.0
Normalized refereed citations	[?]	3412.6	3348.8

Indices		Total	Refereed
h-index	[?]	73	73
g-index	[?]	122	122
i10-index	[?]	214	210
i100-index	[?]	54	54
tori index	[?]	105.5	103.2
riq index	[?]	331.0	327.0
read10-index	[?]	522	483

Export to xls

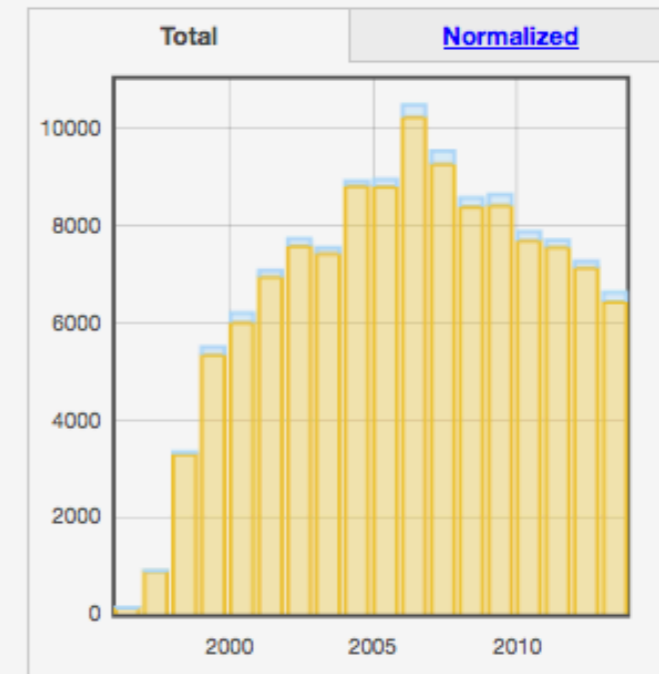
### Publications per year



Refereed  
 Not Refereed

View as  Size

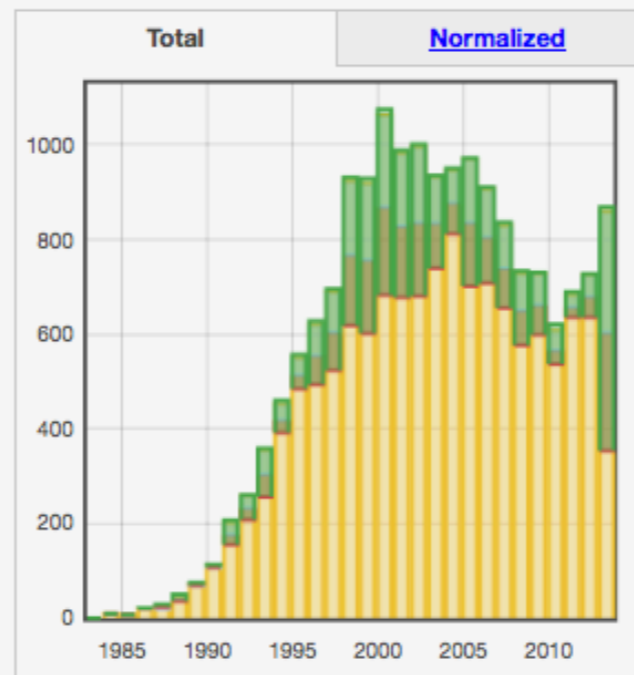
### Reads per year



Refereed  
 Not Refereed

View as  Size

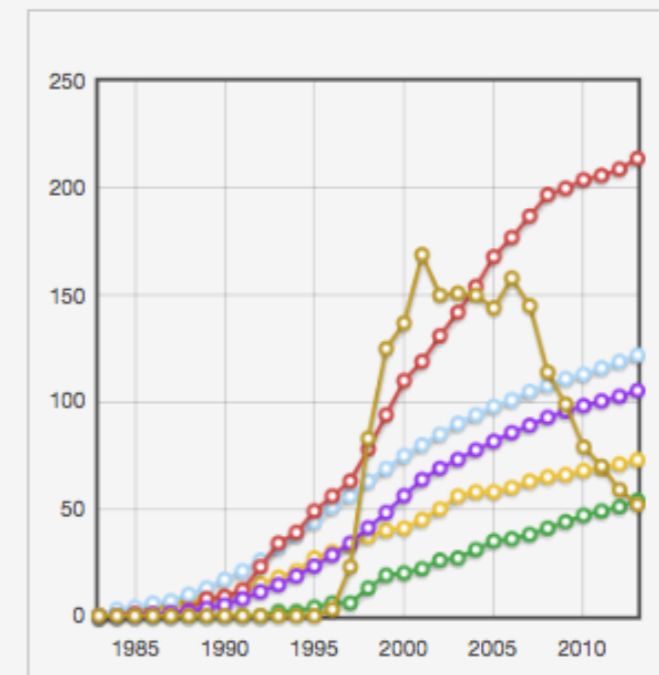
### Citations per year



Ref. citations to ref. papers  
 Ref. citations to non ref. papers  
 Non ref. citations to ref. papers  
 Non ref. citations to non ref. papers

View as  Size

### Indices



h-index  
 g-index  
 i10-index  
 i100-index  
 tori-index  
 read10-index

# IT Infrastructure

- Seriously considering cloud-based services to support main ADS website
- Back-end components being rearranged and evolving: Invenio, MongoDB, SOLR
- Still relying on ADS “Classic” data ingest pipeline and curation
- Work continues on Search and UI:
  - ▶ Implement external search (for object names), and incorporate external facets (objects, data)
  - ▶ Enhance ADS personal library interface and functionality (bookmarking, tagging, annotating)
  - ▶ Decouple UI components, update page layout

# ADS Personalization

- User Database: needs to be upgraded to support persistent identities, interoperate with other systems (arXiv, ORCID)
- ADS 2.0 features upgraded personal libraries supporting a collaborative model
- Users and Groups: support sharing of bookmarks, comments with collaborators
- Tags: assign label and comments to papers for quick classification and retrieval
- Annotations: save free-text notes associated with a paper



# Content Updates

- ADS now indexes 10.2M metadata records (10.8M sources)
- Its citations database contains 70M records
- ADS indexing full-text of all the major Astronomy journals and physics content from arXiv, Elsevier, Springer, EDP Sciences, APS, AGU, **AIP, SPIE**. Hopefully soon: **IOP**, OSA, OUP, CUP, Nature, Science, PNAS
- Currently over **3.6M** records in fulltext archive, looking to grow to cover all peer-reviewed content currently in ADS
- Added metadata for 1,100 volumes of historical literature funded by Smithsonian grant

# Projects & Collaborations

- Unified Astronomy Thesaurus (AAS/CfA/IVOA)
- ADS All-Sky Survey (Seamless Astronomy)
- Astronomy Source Code Library entries in ADS
- Concept Extraction (ScienceWise)
- Topic Models (UMass Amherst)
- Annotations (MGH MIND group)