European Southern Observatory

ESO Telescope Bibliography

TELESCOPE BIBLIOGRAPHIES:

SHARED CURATION, BETTER RESULTS

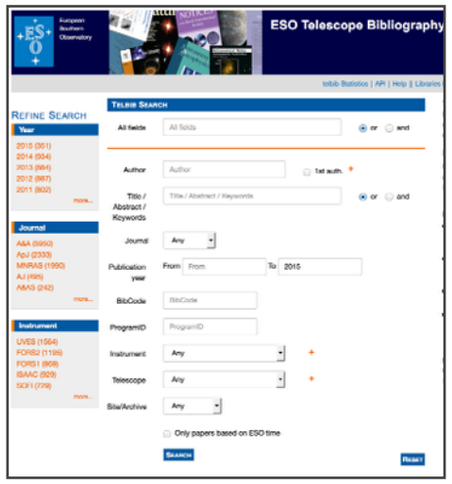
Uta Grothkopf & Silvia Meakins
ESO Library
library@eso.org

Workshop on Shared Curation of the Astronomical Literature, Harvard-Smithsonian CfA, John G. Wolbach Library, June 12-13, 2015

Data lifecycle

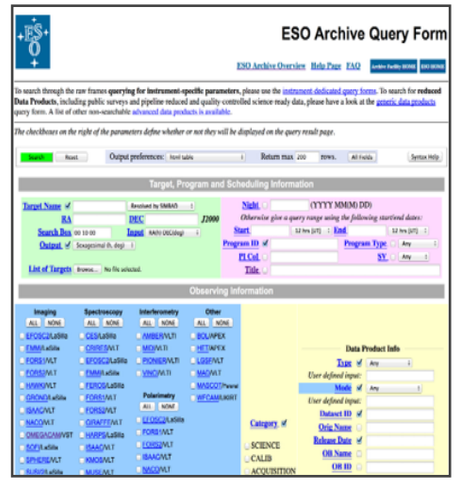
Maximum return of science benefits from observing proposals

Observing programs

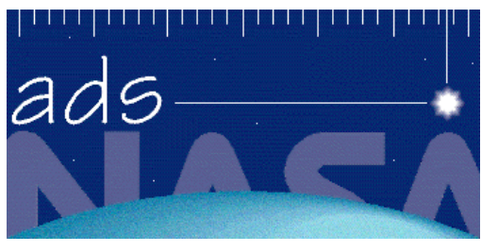


Telescope bibliography

Data archive



Papers



ESO Telescope Bibliography (telbib)

- What?
  - Database of refereed papers that **use ESO data**

HARMONIZE SELECTION CRITERIA

- How?
  - telbib **methodology** explained

IMPROVE WORKFLOWS

- Why?
  - interconnect resources (proposals -> papers / papers -> data)
  - measure ESO's scientific output (productivity + impact)
  - evaluate performance of telescopes + instruments
  - define guidelines for future facilities
  - put **ESO in context** with other observatories

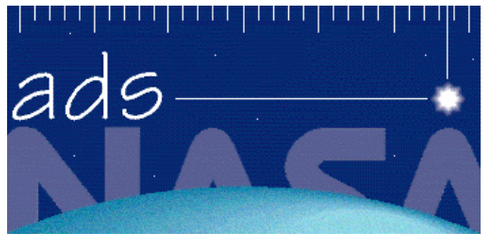
EXPLORE CONTEXT

ESO Telescope Bibliography (telbib): workflow

Scientific literature

ESO Telescope Bibliography (telbib): workflow

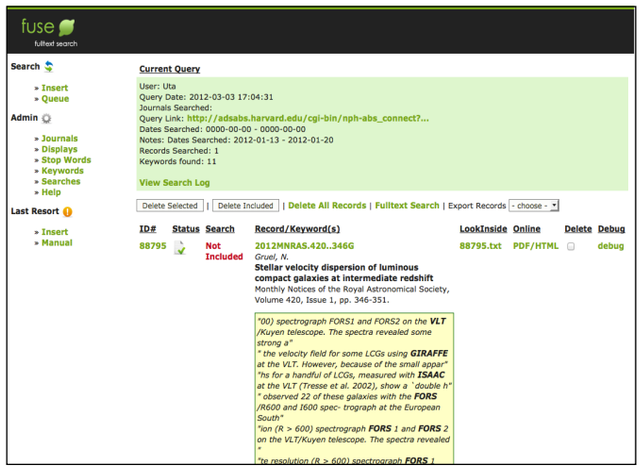
Access via NASA ADS Abstract Service



Telescope Bibliography (telbib): workflow

Scientific literature

Semi-automated search tool FUSE



Telescope Bibliography (telbib): workflow

fuse
fulltext search

Search

» Insert
» Queue

Admin

» Journals
» Displays
» Stop Words
» Keywords
» Searches
» Help

Last Resort

» Insert
» Manual

Current Query

User: Uta
Query Date: 2012-03-03 17:04:31
Journals Searched:
Query Link: http://adsabs.harvard.edu/cgi-bin/nph-abs_connect?...
Dates Searched: 0000-00-00 - 0000-00-00
Notes: Dates Searched: 2012-01-13 - 2012-01-20
Records Searched: 1
Keywords found: 11

View Search Log

Delete Selected | Delete Included | Delete All Records | Fulltext Search | Export Records - choose -

ID#	Status	Search	Record/Keyword(s)	LookInside	Online	Delete	Debug
88795		Not Included	2012MNRAS.420..346G *Gruel, N.* **Stellar velocity dispersion of luminous compact galaxies at intermediate redshift** Monthly Notices of the Royal Astronomical Society, Volume 420, Issue 1, pp. 346-351. *"00) spectrograph FORS1 and FORS2 on the **VLT** /Kuyen telescope. The spectra revealed some strong a"* *" the velocity field for some LCGs using **GIRAFFE** at the VLT. However, because of the small appar"* *"hs for a handful of LCGs, measured with **ISAAC** at the VLT (Tresse et al. 2002), show a `double h"* *" observed 22 of these galaxies with the **FORS** /R600 and I600 spec- trograph at the European South"* *"ion (R > 600) spectrograph **FORS** 1 and **FORS** 2 on the VLT/Kuyen telescope. The spectra revealed "* *"te resolution (R > 600) spectrograph **FORS** 1	88795.txt	PDF/HTML	☐	debug

visual inspection

ESO TELBIB SELECTION CRITERIA:

Papers that

- partly or exclusively **use ESO data**
- **proprietary** (obt. by authors) or **archival**

—> included

Papers that

- quote results from literature
- describe instrumentation / software
- mention ongoing projects
- suggest future observations
- use data in models or simulations merely as examples
- use images only as visual reference

—> excluded

➡ J. Lagerstrom, S. Winkelman, U. Grothkopf & M. Bishop (2012): Observatory bibliographies: current practices

Proc. SPIE 8448, doi:10.1117/12.925482

http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1359172

rkflow

Telescope Bibliography (telbib): workflow

fuse
fulltext search

Search
- » Insert
- » Queue

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Last Resort
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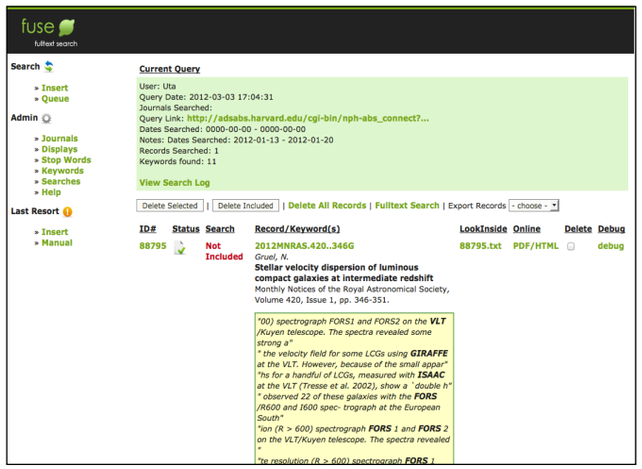
transfer metadata from ADS to telbib

visual inspection

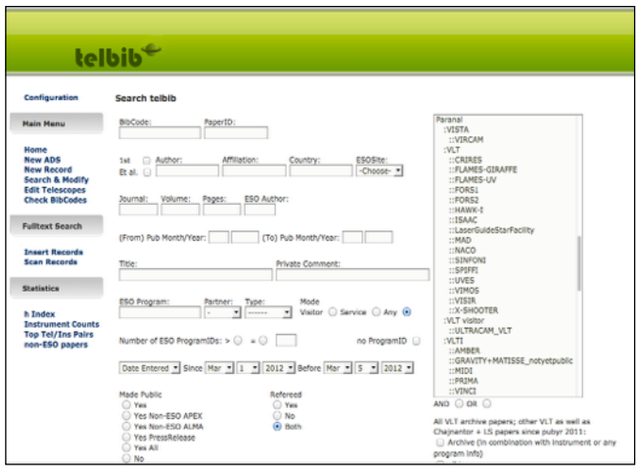
Telescope Bibliography (telbib): workflow

Scientific literature

Semi-automated search tool FUSE



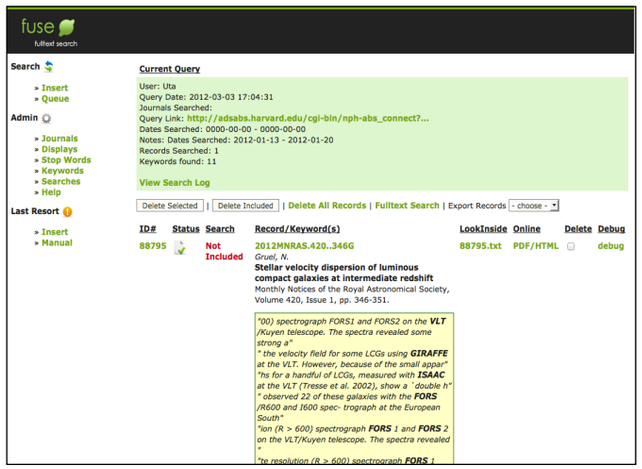
Telbib database (back-end)



Telescope Bibliography (telbib): workflow

Scientific literature

Semi-automated search tool FUSE



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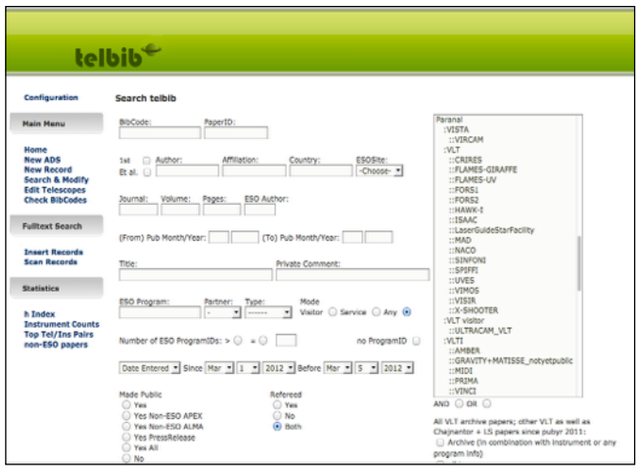
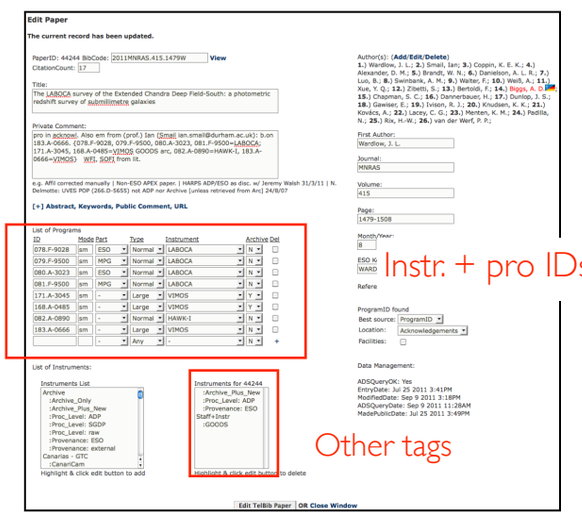


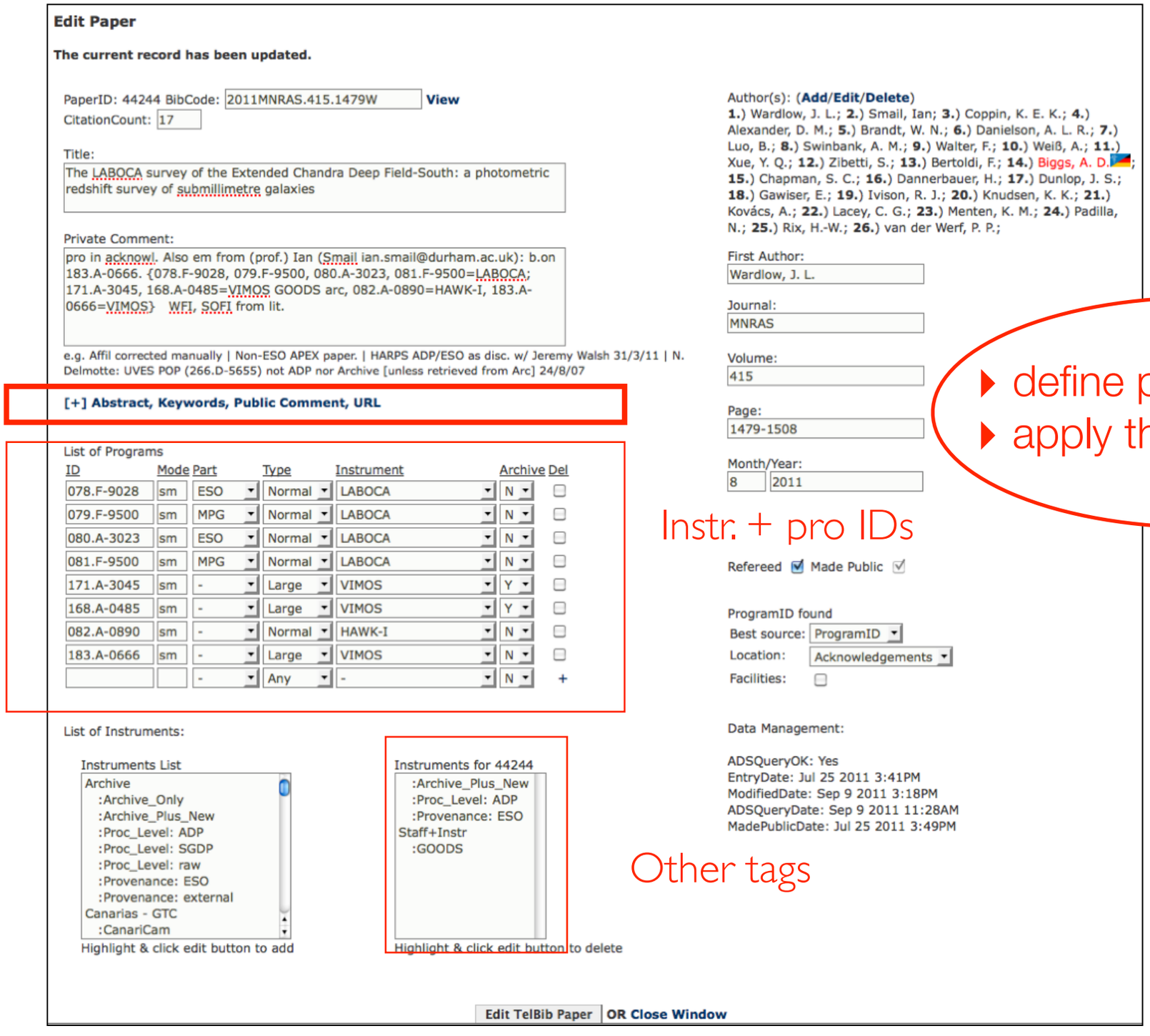
Tags + proIDs for telbib records



Instr. + pro IDs

Other tags

Telescope Bibliography (telbib): workflow



Telescope Bibliography (telbib): workflow

[+] Abstract, Keywords, Public Comment, URL

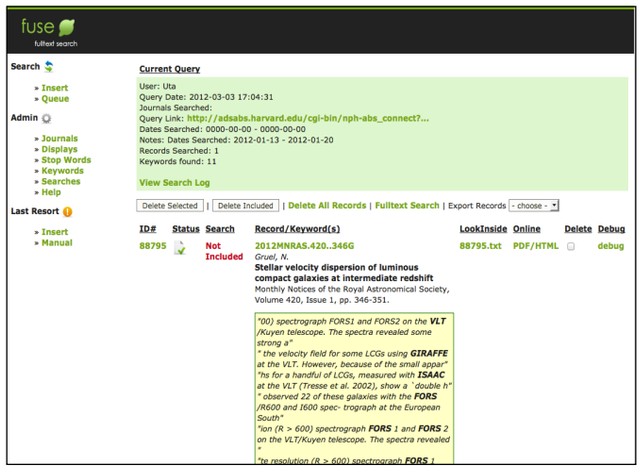
Abstract:
We derive photometric redshifts from 17-band optical to mid-infrared photometry of 78 robust radio, 24-μm and Spitzer IRAC counterparts to 72 of the 126 submillimetre galaxies (SMGs) selected at 870 μm by LABOCA observations in the Extended Chandra Deep Field-South (ECDF-S). We test the photometric redshifts of the SMGs against the extensive archival spectroscopy in the ECDF-S. The median photometric redshift of identified SMGs is z= 2.2 ± 0.1, the standard deviation is σz= 0.9 and we identify 11 (˜15 per cent) high-redshift (z≥ 3) SMGs. A statistical analysis of sources in the error circles of unidentified SMGs identifies a population of possible counterparts with a redshift distribution peaking at z= 2.5 ± 0.2, which likely comprises ˜60 per cent of the unidentified SMGs. This confirms that the bulk of the undetected SMGs are coeval with those detected in the radio/mid-infrared. We conclude that at most ˜15 per cent of all the SMGs are below the flux limits of our IRAC observations and thus may lie at z≳ 3 and hence at most ˜30 per cent of all SMGs have z≳ 3. We estimate that the full S870 μm > 4 mJy SMG population has a median redshift of 2.5 ± 0.5. In contrast to previous suggestions, we find no significant correlation between submillimetre flux and redshift. The median stellar mass of the SMGs derived from spectral energy distribution fitting is (9.1 ± 0.5) × 1010 Mȯ although we caution that the uncertainty in the star formation histories results in a factor of ˜5 uncertainty in these stellar masses. Using a single temperature modified blackbody fit with β= 1.5, the median characteristic dust temperature of SMGs is 37.4 ± 1.4 K. The infrared luminosity function shows that SMGs at z= 2-3 typically have higher far-infrared luminosities and luminosity density than those at z= 1-2. This is mirrored in the evolution of the star formation rate density (SFRD) for SMGs which peaks at z˜ 2. The maximum contribution of bright SMGs to the global SFRD (˜5 per cent for SMGs with S870 μm≳ 4 mJy or ˜50 per cent extrapolated to SMGs with S870 μm > 1 mJy) also occurs at z˜ 2.

ADSKeywords:
galaxies: evolution, galaxies: high-redshift, galaxies: starburst, submillimetre: galaxies

Telescope Bibliography (telbib): workflow

Scientific literature

Semi-automated search tool FUSE



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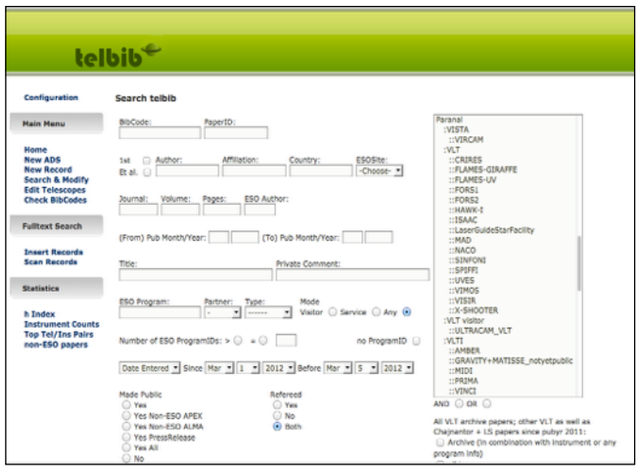
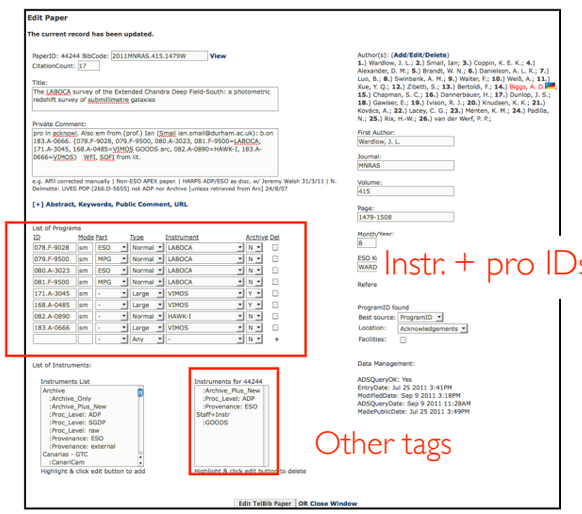


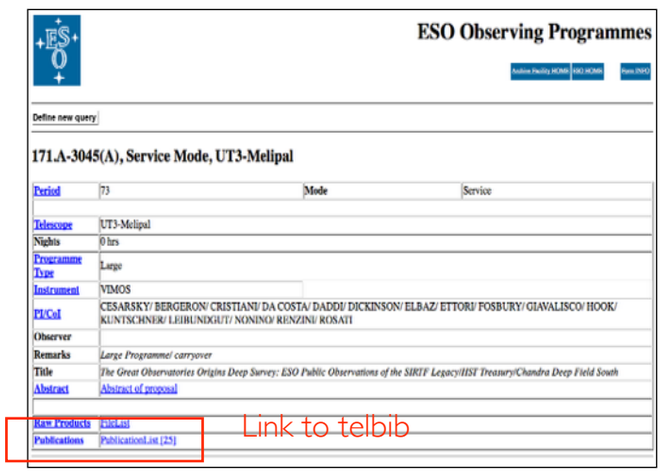
Tags + proIDs for telbib records



Instr. + pro IDs

Other tags

Data archive



Link to telbib

Telescope Bibliography (telbib): workflow

ESO Observing Programmes

Archive Facility HOME | ESO HOME | Form INFO

Define new query

171.A-3045(A), Service Mode, UT3-Melipal

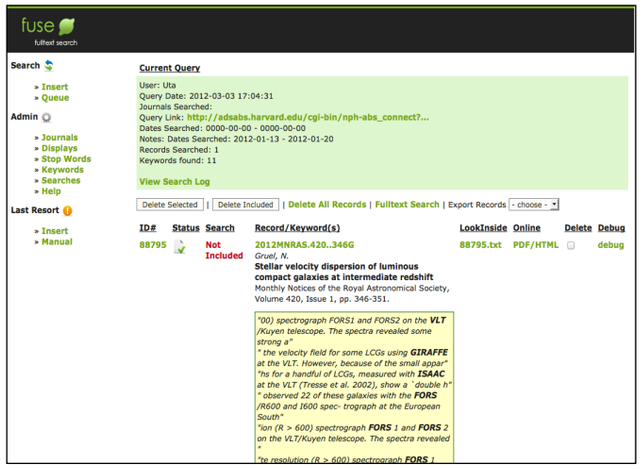
Period	73	**Mode**	Service
Telescope	UT3-Melipal		
Nights	0 hrs		
Programme Type	Large		
Instrument	VIMOS		
PI/CoI	CESARSKY/ BERGERON/ CRISTIANI/ DA COSTA/ DADDI/ DICKINSON/ ELBAZ/ ETTORI/ FOSBURY/ GIAVALISCO/ HOOK/ KUNTSCHNER/ LEIBUNDGUT/ NONINO/ RENZINI/ ROSATI		
Observer			
Remarks	*Large Programme/ carryover*		
Title	*The Great Observatories Origins Deep Survey: ESO Public Observations of the SIRTF Legacy/HST Treasury/Chandra Deep Field South*		
Abstract	Abstract of proposal		
Raw Products	FileList		
Publications	PublicationList [25]		

Link to telbib

Telescope Bibliography (telbib): workflow

Scientific literature

Semi-automated search tool FUSE



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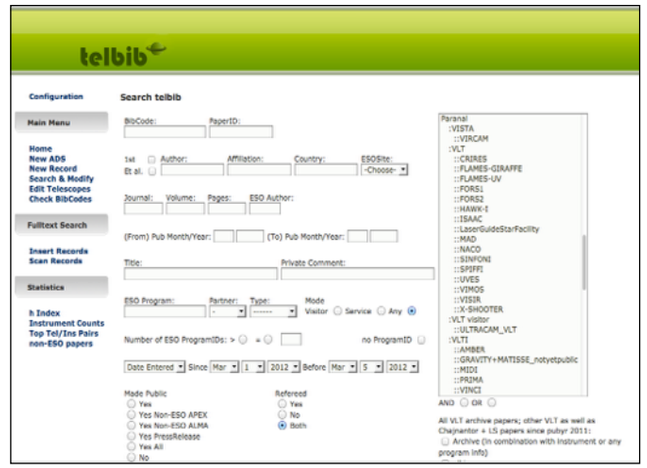
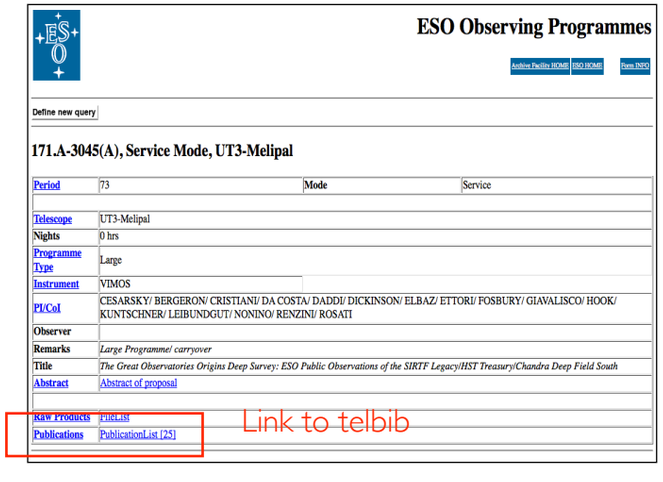


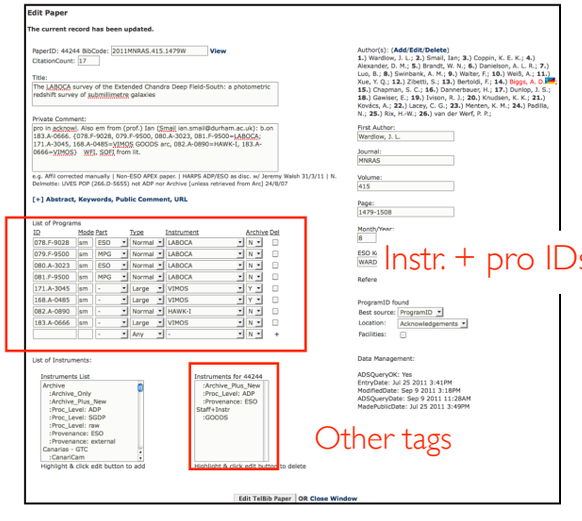
Telbib database (front-end)

Data archive



Link to telbib

Tags + proIDs for telbib records



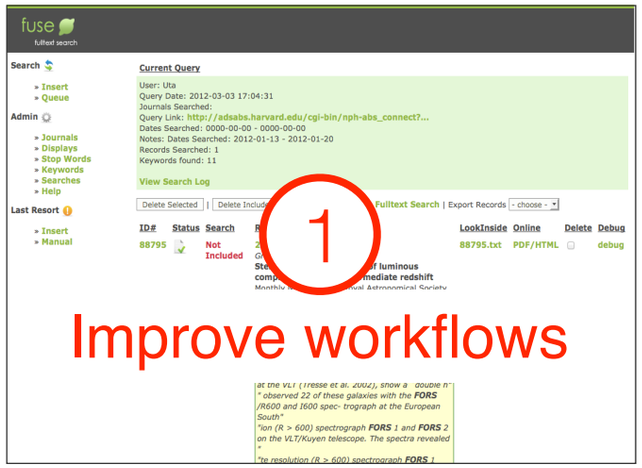
Instr. + pro IDs

Other tags

Areas for improvement

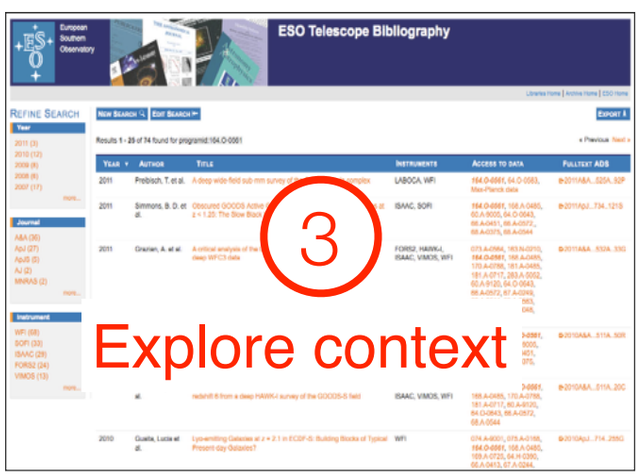
Scientific literature

Semi-automated search tool FUSE



Telbib database (back-end)

Telbib database (front-end)



Data archive

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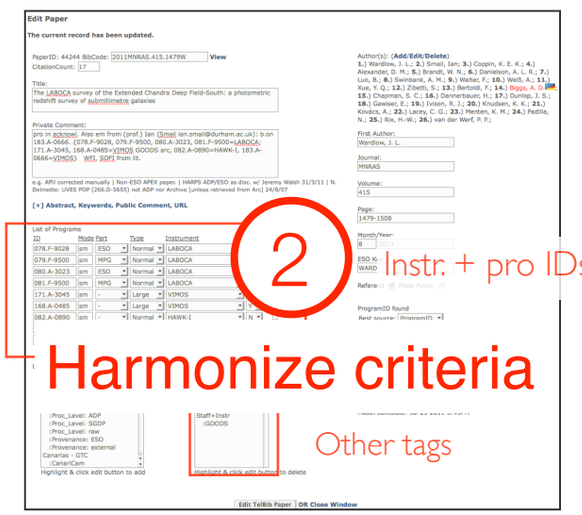


1 Improve workflows

PROBLEMS OCCUR WITH:

- Access to full texts
  - access to journals changes frequently
  - duplication of work among observatories
- Text mining
  - publisher & copyright restrictions
  - large variety of journals
  - multiple keywords (e.g., facilities, locations, concepts), regular expressions

WISH LIST:

- (Sophisticated) central **text mining at ADS** incl. unlimited number of snippets

② Harmonize criteria

AT PRESENT:

- Individual projects to cross-check selection criteria
  - e.g., ESO-Gemini and ESO-Keck initiatives
- IAU WG Lib Best Practices

  http://iau-commission5.wikispaces.com/WG+Libraries+-+Best+Practices+for+Creating+a+Telescope+Bibliography
  - document endorsed by IAU Comm. 5
- AstroBib (maintained by S. Winkelman, CXC)
  - mailing list (rather low traffic) & website (www.astrobibl.io/astrobib/)

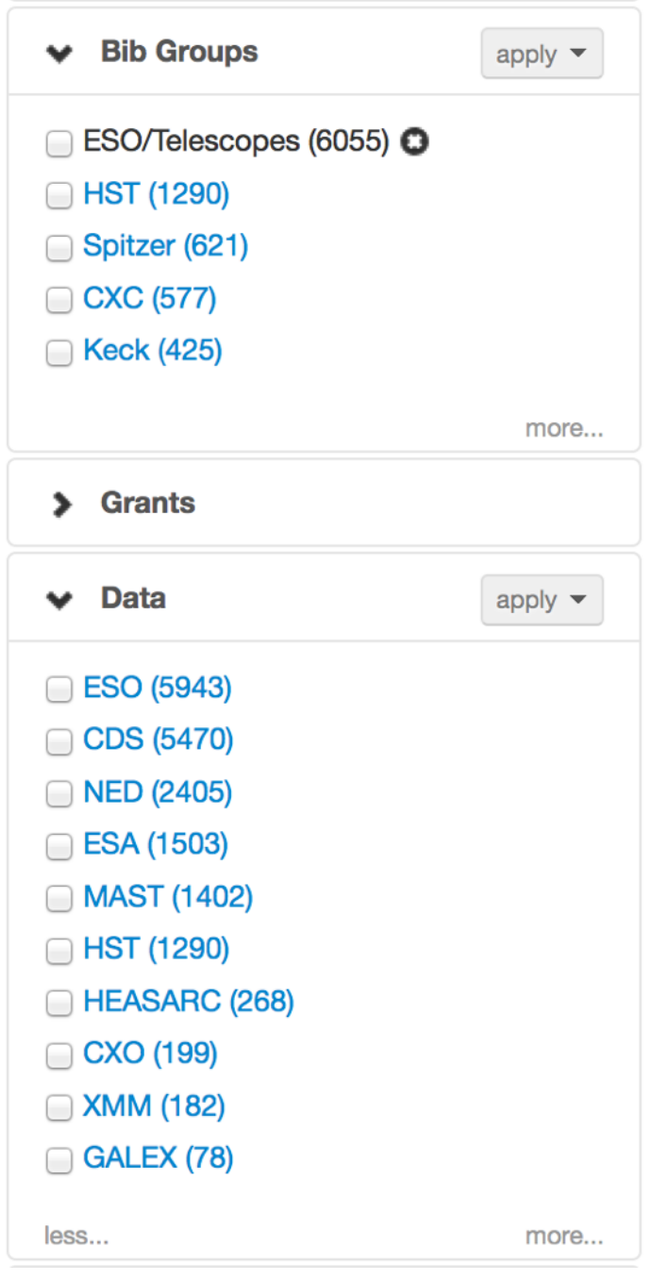
WISH LIST:

- Standardized adoption of **Best Practices**; method to show compliance; develop logo/seal of quality (?)
- **AstroBib website:** add content; involve community; make it central knowledge point

3 Explore context

At present:

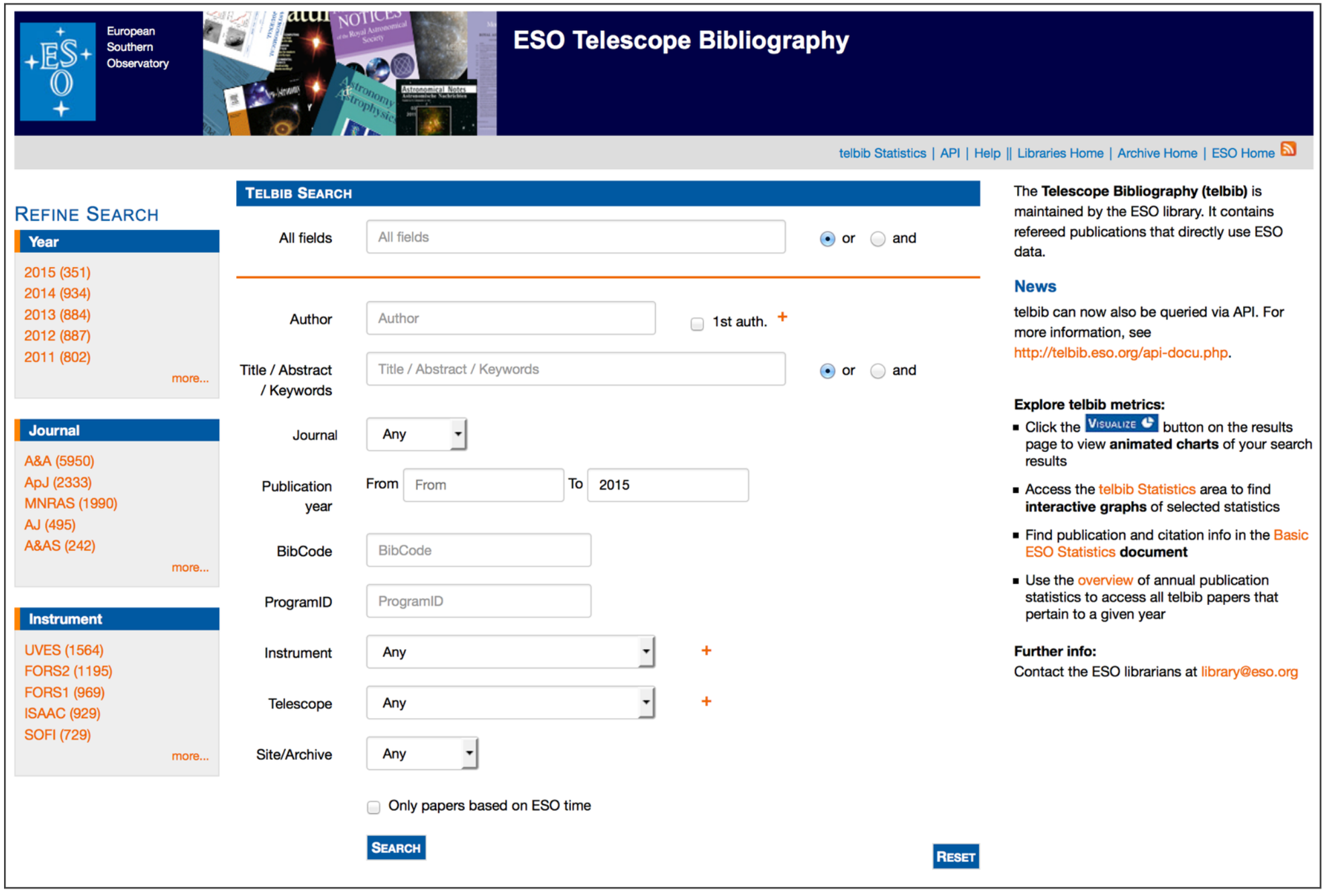
- Distributed telescope bibliographies
  - access and queries vary among observatories
- Central access at ADS Labs:
  - no clear explanations for **Bib Groups** and **Data** filters



Wish List:

- **Clearer explanations** at ADS re. filters
- Dedicated **work area at ADS** for bibliography curators

Telbib public interface: http://telbib.eso.org



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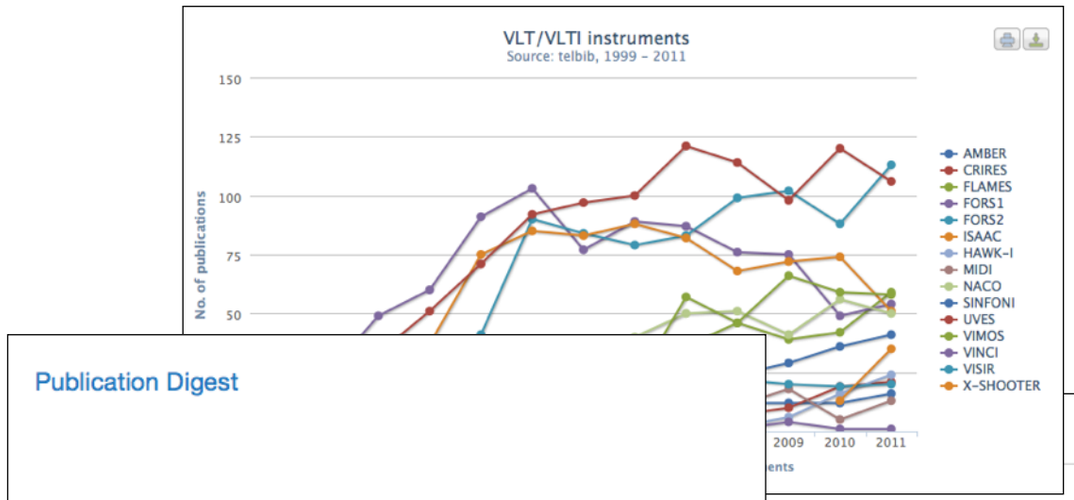

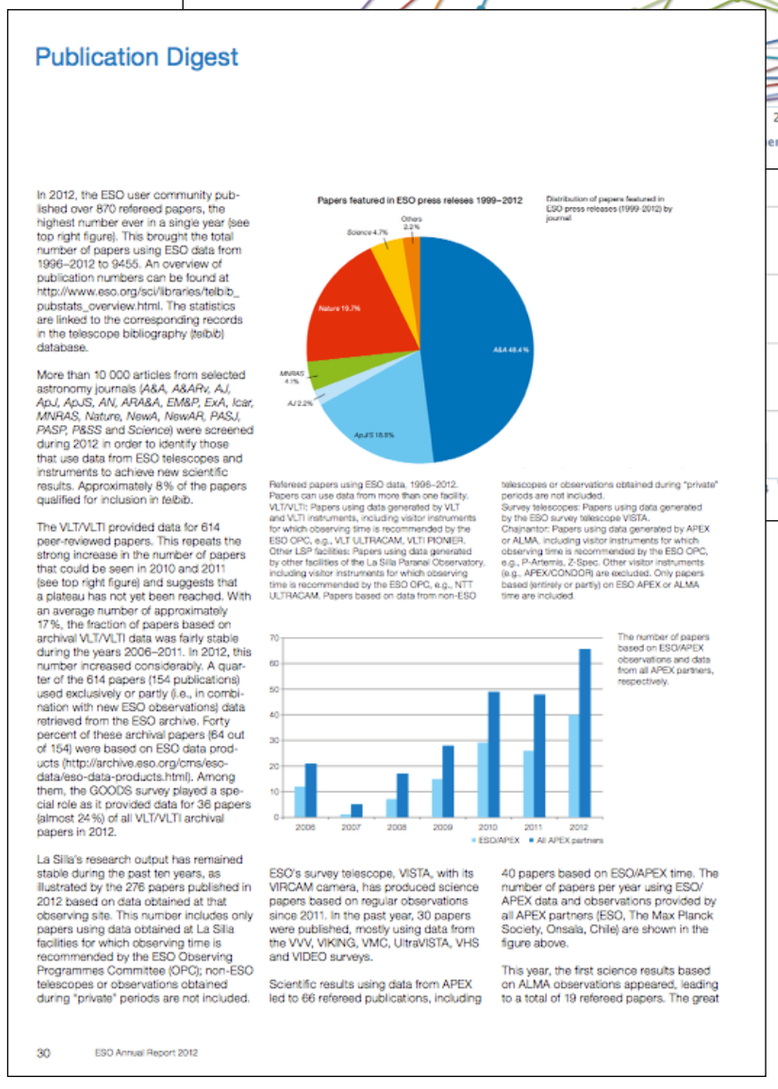

Keywords in telbib records

- assigned by authors
- journal keywords
- imported into telbib from ADS

Supersolar metal abundances in two galaxies at z˜ 3.57 revealed by the GRB 090323 afterglow spectrum

Savaglio, S. ; Rau, A. ; Greiner, J. ; Krühler, T. ; McBreen, S. ; Hartmann, D. H. ; Updike, A. C. ; Filgas, R. ; Klose, S. ; Afonso, P. ; and 5 coauthors
show affiliations

Monthly Notices of the Royal Astronomical Society, Volume 420, Issue 1, pp. 627-636.
Published in Feb 2012
DOI: 10.1111/j.1365-2966.2011.20074.x

We report on the surprisingly high metallicity measured in two absorption systems at high redshift, detected in the Very Large Telescope spectrum of the afterglow of the gamma-ray burst (GRB) GRB 090323. The two systems, at redshift z= 3.5673 and 3.5774 (separation $\Delta v \approx 660$ km s^{-1}), are dominated by the neutral gas in the interstellar medium of the parent galaxies. From the singly ionized zinc and sulphur, we estimate oversolar metallicities of [Zn/H] =+0.29 ± 0.10 and [S/H] = +0.67 ± 0.34, in the blue and red absorber, respectively. These are the highest metallicities ever measured in galaxies at z 〉 3. We propose that the two systems trace two galaxies in the process of merging, whose star formation and metallicity are heightened by the interaction. This enhanced star formation might also have triggered the birth of the GRB progenitor. As typically seen in star-forming galaxies, the fine-structure absorption Si II* is detected, both in z= 3.5774 ± 0.0005 and 3.5673 ± 0.0003. From the rest-frame ultraviolet emission in the GRB location, we derive a relatively high, not corrected for dust extinction, star formation rate $\approx 6\ M_{\odot}\ yr^{-1}$. These properties suggest a possible connection between some high-redshift GRB host galaxies and high-z massive submillimetre galaxies, which are characterized by disturbed morphologies and high metallicities. Our result provides additional evidence that the dispersion in the chemical enrichment of the Universe at high redshift is substantial, with the existence of very metal-rich galaxies less than two billion years after the big bang. Partly based on observations collected at the European Southern Observatory under ESO proposal No. 082.A-0693.

Keywords:
Astronomy: cosmology: observations; galaxies: ISM; gamma-ray burst: individual: GRB 090323
arXiv: Astrophysics - Cosmology and Extragalactic Astrophysics

ESO Telescope Bibliography

telbib Statistics | API | Help || Libraries Home | Archive Home | ESO Home

NEW SEARCH | EDIT SEARCH

« back to results

DETAILED INFORMATION

Author(s)	Savaglio, S.; Rau, A.; Greiner, J.; Krühler, T.; McBreen, S.; Hartmann, D. H.; Updike, A. C.; Filgas, R.; Klose, S.; Afonso, P.; Clemens, C.; Küpcü Yoldaş, A.; Olivares E., F.; Sudilovsky, V.; Szokoly, G.
Title	**Supersolar metal abundances in two galaxies at z˜ 3.57 revealed by the GRB 090323 afterglow spectrum**
Keywords	gamma-ray burst: individual: GRB 090323, galaxies: ISM, cosmology: observations
Abstract	show abstract
Publication details	MNRAS, 2012, vol. 420, p. 627-636
BibCode	2012MNRAS.420..627S
Fulltext (via ADS)	ADS
Citations (from ADS)	49 Altmetric 11
Further information	http://www.eso.org/public/news/eso1143/ (Press Release)
Instrument(s)	FORS2, VIS_GROND
Telescope(s)	La Silla_2.2m, PressRelease, VLT
Site(s)	Paranal , Staff+Instr , Surveys+PRs , Visitor Instruments
ProgramID(s)	082.A-0693 (access to data)

Keywords in telbib records

ISAAC

X-SHOOTER

- low precision
- general concepts (galaxies, stars…)

NACO

Keywords in telbib records + Unified Astro Thesaurus

- better precision with UAT?
- ensure consistent use of UAT terms by authors, editors, librarians…
- trying to answer various question, e.g.:

Which **keywords** appear in research based on **instruments A, B, C** ?

Which **instruments** are used for research on **keywords X, Y, Z** ?

Which **trends in research** can be seen?

Stay tuned….