

Beyond the obvious —

Quality metrics from the ESO Telescope Bibliography

Uta Grothkopf, Silvia Meakins, Dominic Bordelon
ESO Library
library@eso.org



ESO telescope **b**ibliography (telbib)

- ▶ database of refereed papers that use ESO data
- ▶ built and curated by ESO library
- ▶ telbib.eso.org

- ▶ **interconnect resources**
proposals - data - papers

- ▶ **evaluate ESO's scientific performance & measure impact**
metrics for statistics, reports, visualizations

- ▶ **define guidelines for future telescopes and instruments**
analyze publishing behaviour to understand needs of ESO's user community





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Overview

- ▶ telbib **curation**
- ▶ ESO facilities: bibli**metrics**
- ▶ ESO in context: **comparisons** with other facilities



▶ telbib **curation**



Refereed (e-)journals





Text mining

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.	88795.txt	PDF/HTML	<input type="checkbox"/>	debug

"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"

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

—> **excluded**

- ▶ **define policies**
- ▶ **apply them consistently**

ect?...

Search | Export Records - choose -

LookInside	Online	Delete	Debug
88795.txt	PDF/HTML	<input type="checkbox"/>	debug

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small appar"
with **ISAAC**
"double h"
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European

Search

"ion ($R > 600$) spectrograph **FORS 1** and **FORS 2**
on the VLT/Kuyen telescope. The spectra revealed

visual inspection



Data links and metadata in telbib

Title
Biblio info
Citations

Edit Paper

PaperID: 44244 BibCode: [View ADS](#) | [View telbib](#)
Bibliographic info: MNRAS, vol. 415, pp. 1479-1508 (8/2011)
CitationCount: 117 | Reads: 961 | PubDelay : 737 (min) | 548 (med) | 188 (max) day(s)
Also data used from:

Title:

Private Comment:

e.g. Affil corrected manually. | HARPS ADP/ESO as disc. w/ Jeremy Walsh 31/3/11 | N. Delmotte: UVES POP (266.D-5655) not ADP nor Archive [unless retrieved from Arc] 24/8/07

[+] [Abstract](#), [Keywords](#), [Public Comment](#), [URL](#)

List of Programs (8)

ID	Mode	Part	Type	Instrument	Archive Del	
078.F-9028	sm	ESO	Normal	LABOCA	N	<input type="checkbox"/> arc?
079.F-9500	sm	MPG	Normal	LABOCA	N	<input type="checkbox"/> arc?
080.A-3023	sm	ESO	Normal	LABOCA	N	<input type="checkbox"/> arc?
081.F-9500	sm	MPG	Normal	LABOCA	N	<input type="checkbox"/> arc?
171.A-3045	sm	-	Large	VIMOS	Y	<input type="checkbox"/> arc?
168.A-0485	sm	-	Large	VIMOS	Y	<input type="checkbox"/> arc?
082.A-0890	sm	-	Normal	HAWKI	N	<input type="checkbox"/> arc?
183.A-0666	sm	-	Large	VIMOS	N	<input type="checkbox"/> arc?
		-	Any	-	N	<input type="checkbox"/> arc?

Additional tags: [Add/Edit](#)
:Archive_Plus_New
:Proc_Level: Data Products
:Provenance: ESO
Staff+Instr
:GOODS
:LESS

Instruments
Mode / Type
pro IDs

Other tags

Author info

Author(s): (Add/Edit/List/Delete)
1.) Wardlow, J. L.; **2.)** Smail, Ian; **3.)** Coppin, K. E. K.; **4.)** Alexander, D. M.; **5.)** Brandt, W. N.; **6.)** Danielson, A. L. R.; **7.)** Luo, B.; **8.)** Swinbank, A. M.; **9.)** Walter, F.; **10.)** Weiß, A.; **11.)** Xue, Y. Q.; **12.)** Zibetti, S.; **13.)** Bertoldi, F.; **14.)** Biggs, A. D.; **15.)** Chapman, S. C.; **16.)** Dannerbauer, H.; **17.)** Dunlop, J. S.; **18.)** Gawiser, E.; **19.)** Ivison, R. J.; **20.)** Knudsen, K. K.; **21.)** Kovács, A.; **22.)** Lacey, C. G.; **23.)** Menten, K. M.; **24.)** Padilla, N.; **25.)** Rix, H.-W.; **26.)** van der Werf, P. P.;

First Author:

ESO Key :

Staff
 Staff+Instr

Refereed
 Made Public

Shadow

ProgramID found
Best source:
Location:

Facilities:

Data Management:

ADSQueryOK: Yes
EntryDate: Jul 25 2011 3:41PM
ModifiedDate: Jan 14 2014 11:50AM
ADSQueryDate: Feb 21 2016 7:56AM
MadePublicDate: Jul 25 2011 3:49PM





Data links and metadata in telbib

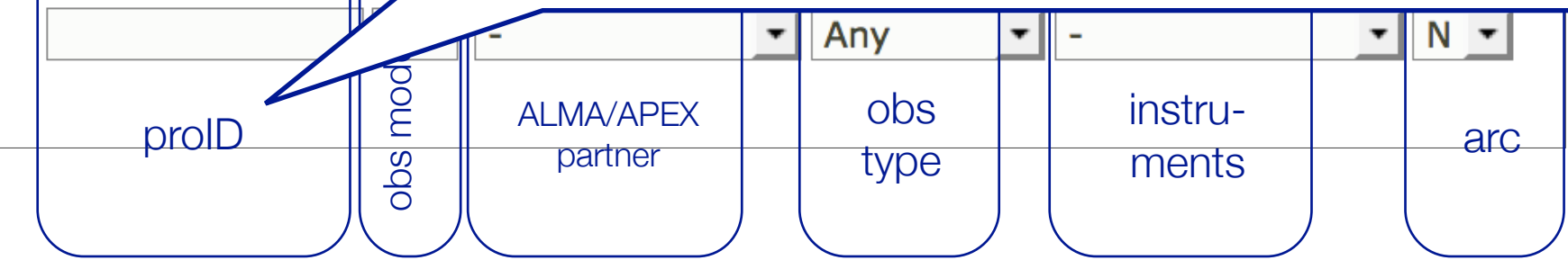


telbib complete >95%

List of **Programs** (8)

ID	Mod
078.F-9028	sm
079.F-9500	sm
080.A-3023	sm
081.F-9500	sm
171.A-3045	sm
168.A-0485	sm
082.A-0890	sm
183.A-0666	sm

- ▶ approx. **70% correct proIDs** in VLT papers
- ▶ human **curation** needed:
 - ➔ **verify program IDs**
 - ➔ use obs dates to find **missing** programs
 - ➔ inspect cited papers (“**Paper I**”)
 - ➔ **communicate** with ESO scientists and authors







▶ ESO facilities: bibliometrics



telbib public interface: telbib.eso.org



European Southern Observatory



ESO Telescope Bibliography

[telbib Statistics](#) | [API](#) | [Help](#) | [Libraries Home](#) | [Archive Home](#) | [ESO Home](#)

REFINE SEARCH

Year

- 2015 (671)
- 2014 (939)
- 2013 (884)
- 2012 (887)
- 2011 (802)

[more...](#)

Journal

- A&A (6068)
- ApJ (2438)
- MNRAS (2077)
- AJ (500)
- A&AS (242)

[more...](#)

Instrument

- UVES (1610)
- FORS2 (1219)
- FORS1 (973)
- ISAAC (934)
- SOFI (742)

[more...](#)

TELBIB SEARCH

All fields or and

Author 1st auth. +

Title / Abstract / Keywords or and

Journal

Publication year From To

BibCode


ProgramID

Instrument +

Telescope +

Site/Archive

Only papers based on ESO time

 For information about search fields move the mouse over the labels.

[Send comments to ESO library](#)

The **Telescope Bibliography (telbib)** is maintained by the ESO library. It contains refereed publications that directly use ESO data.

News

telbib can now also be queried via API. For more information, see <http://telbib.eso.org/api-docu.php>.

Explore telbib metrics:

- Click the **VISUALIZE** button on the results page to view **animated charts** of your search results
- Access the **telbib Statistics** area to find **interactive graphs** of selected statistics
- Find publication and citation info in the **Basic ESO Statistics document**
- Use the **overview** of annual publication statistics to access all telbib papers that pertain to a given year

Further info:

Contact the ESO librarians at library@eso.org



telbib products

telbib Publication Statistics Overview

ESO publication statistics are derived from the *Telescope Bibliography (telbib)*, a database of refereed papers that directly use ESO data or ESO facilities. Telbib is maintained by the ESO Library. Here, we provide some basic statistics to give an overview of publications and citations for the publication years 1998-2011.

Publication statistics given in the table below are linked to the corresponding papers in telbib.

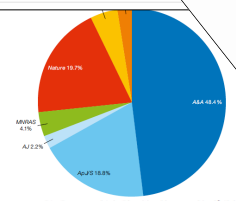
Year	VLT / VLTI	LSP others	Survey total
1996		349	
1997		388	
1998		405	
1999	29	324	
2000	52	300	
2001	105	316	
2002	157	289	
2003	260	305	
2004	342	321	
2005	360	295	
2006	414	278	
2007	494	316	
2008	486	289	
2009	471	267	
2010	508	277	2
2011	552	288	13
2012	614	276	30
Total 1998-2012	4,844	5,284	45

Chainanor

APEx is a collaboration between the Max-Planck-Gesellschaft für Physik (MPE), the Observatoire de la Côte d'Azur (OCA), and ESO (Chile). The observatory is located on the Observatoire de la Côte d'Azur (OCA), and ESO (Chile). The observatory is located on the Observatoire de la Côte d'Azur (OCA), and ESO (Chile). The observatory is located on the Observatoire de la Côte d'Azur (OCA), and ESO (Chile).

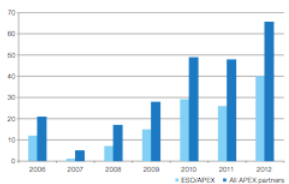
Year	APEx	Other APEx
2006	12	21
2007	1	6
2008	16	20
2009	19	20
2010	20	20
2011	21	20

number of papers using ESO data from 1996-2012 to 9456. An overview of publication numbers can be found at http://www.eso.org/observatories/telbib/pubstats_overview.html. The statistics are linked to the corresponding records in the telescope bibliography (telbib) database.



More than 10 000 articles from selected astronomy journals (A&A, A&A, ApJ, ApJ, ApJ, AN, ARA&A, EMP, ExA, Icar, MNRAS, Nature, NewA, NewAR, PASJ, PASP, PNAS and Science) were screened during 2012 in order to identify those that use data from ESO telescopes and instruments to achieve new scientific results. Approximately 8% of the papers qualified for inclusion in telbib.

The VLT/VLTI provided data for 614 peer-reviewed papers. This repeats the strong increase in the number of papers that could be seen in 2010 and 2011 (see top right figure) and suggests that a plateau has not yet been reached. With an average number of approximately 17%, the fraction of papers based on archival VLT/VLTI data was fairly stable during the years 2006-2011. In 2012, this number increased considerably. A quarter of the 614 papers (154 publications) used exclusively or partly (i.e., in combination with new ESO observations) data retrieved from the ESO archive. Forty percent of these archival papers (64 out of 154) were based on ESO data products (<http://archive.eso.org/cms/esodata/esodata-products.html>). Among them, the GOODS survey played a special role as it provided data for 36 papers (almost 24% of all VLT/VLTI archival papers) in 2012.



La Silla's research output has remained stable during the past ten years, as illustrated by the 276 papers published in 2012 based on data obtained at that observing site. This number includes only papers using data obtained at La Silla facilities for which observing time is recommended by the ESO Observing Programmes Committee (OPC). Non-ESO telescopes or observations obtained during "private" periods are not included.

ESO's survey telescope, VISTA, with its VIRCAM camera, has produced science papers based on regular observations since 2011. In the past year, 30 papers were published, mostly using data from the VVV, VIKING, VMC, UltraVISTA, VHS and VIDEO surveys.

40 papers based on ESO/AFEX time. The number of papers per year using ESO/AFEX data and observations provided by all AFEX partners (ESO, the Max Planck Society, Onsala, Chile) are shown in the figure above.

This year, the first science results based on ALMA observations appeared, leading to a total of 19 refereed papers. The great

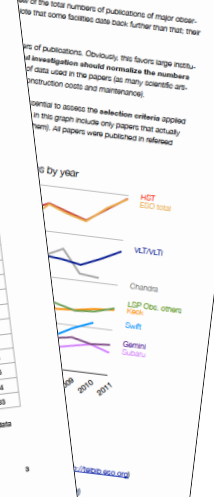
Publications



Notes:
 VLT/VLTI papers using data generated by VLT and VLTI instruments, including visitor instruments for which observing time is recommended by the ESO OPC (Observing Programmes Committee), e.g., VLT CHIRONX, VLT PIONEER, VLT FORS2, etc.
 Other LSP facilities papers using data generated by other facilities of the La Silla Paranal Observatory, including visitor instruments for which observing time is recommended by the ESO OPC, e.g., NTT, LICK, etc.
 Papers based on data from non-ESO telescopes or observations obtained during "private" periods are not included.
 Chainanor papers using data generated by APEx instruments, including visitor instruments for which observing time is recommended by the ESO OPC, e.g., APEx, etc.
 Papers based on data from more than one facility, where the total number cannot be calculated, simply adding all publications of the individual sites, telescopes, or instruments.

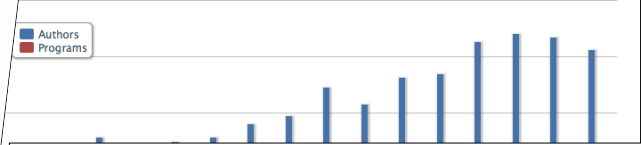
Year	VLT / VLTI	LSP others	Cooperation	Total
1996		349		349
1997		388		388
1998		405		405
1999	29	324		353
2000	52	299		351
2001	105	316		421
2002	157	289		446
2003	260	305		565
2004	342	321		663
2005	360	295		655
2006	414	278	12	704
2007	494	316	7	817
2008	486	289	7	782
2009	471	267	15	753
2010	508	276	20	804
2011	552	288	25	865

Observatories



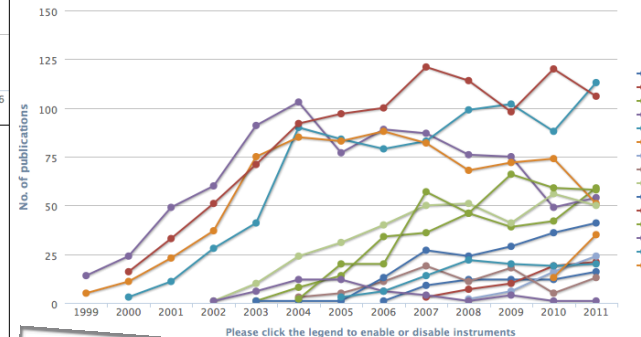
Average number of authors and programs per paper

Source: telbib, 1996 - 2012



VLT/VLTI instruments

Source: telbib, 1999 - 2011



ESO staff papers 03/2012

Papers added recently to the ESO Telescope Bibliography, maintained by the library. Subscribe to the ESO telbib RSS feed. Cosmology | Interstellar Medium, Star Formation and Planetary Systems | Stellar Evolution | Papers without ESO Evolution | Miscellaneous

10 Latest Added ESO Papers

First Author	Title	Instrument	ProgramID	BibCode	ADS
1. Imanishi, Masatoshi	High-density Molecular Gas Properties of the Starburst Galaxy NGC 1614 Revealed with ALMA	ALMA_Bands	2011.0.00020.S	2013AJ...146...471	e-ADS
2. Drake, Alyssa B.	Evolution of star formation in the UKIDSS Ultra Deep Survey field - I. Luminosity functions and cosmic star formation rate out to z = 1.6	VIRCAM	285.A-5033	2013MNRAS.433.796D	e-ADS
3. Faedi, F.	Lucky imaging of transiting planet host stars with LuckyCam	NACO	085.C-0558	2013MNRAS.433.2097F	e-ADS
4. Tsantaki, M.	Deriving precise parameters for cool solar-type stars. Optimizing the iron line list	HARPS	072.C-0488	2013A&A...555A.150T	e-ADS
5. Smart, R. L.	NPARSEC: NTT Parallaxes of Southern Extremely Cool objects. Goals, targets, procedures and first results	SOFI	186.C-0756	2013MNRAS.433.2054S	e-ADS
6. Bonney, M.	The near-infrared spectral energy distribution of β Pictoris b	NACO	073.D-0534, 076.C-0339, 078.C-0472, 084.C-0739, 085.D-0625, 088.C-0358, 090.C-0653, 184.C-0567	2013A&A...555A.107B	e-ADS
7. Suutarinen, A.	Determination of the far-infrared dust opacity in a prestellar core	HAWK-I, SOFI	075.C-0748, 077.C-0562, 083.C-0079	2013A&A...555A.140S	e-ADS
8. Insnerra, C.	Moderately luminous Type II supernovae	EFOSC2_2.2, EFOSC2_3.6, EFOSC2_NTT, SOFI	184.D-1140	2013A&A...555A.142I	e-ADS





Recommended: telbib metrics from librarians



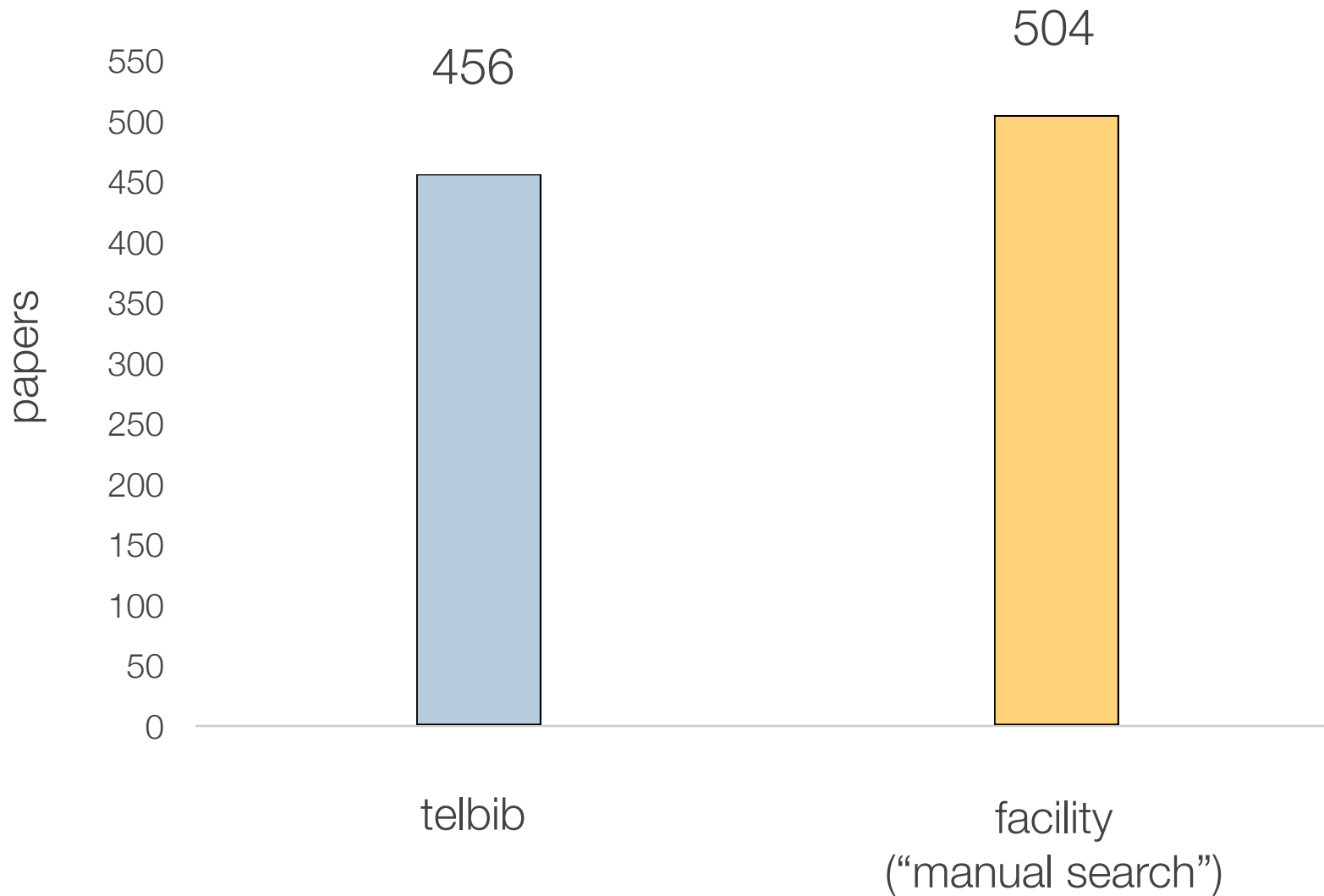
incl. parameters not available from public interface

BibCode	CitationCount	Title	Author
2010NewA...15..433M	208	VISTA Variables in the Via Lactea (VVV): The public ESO near-IR variability survey of the Milky Way	Minniti, D.; Lucas, P. W.; Emerson, J. P.; Saito, R. K.; Hempel, Pietrukowicz, P.; Ahumada, A. V.; Alonso, M. V.; Alonso-Garcia, J.; Arias, J. I.; Bandyopadhyay, R. M.; Barbuy, B.; Bedin, L. R.; Bica, E.; Borissova, J.; Bronfman, L.; Carraro, G.; Catelan, M.; Cross, N.; de Grijs, R.; Drew, J. E.; Feinstein, C.; Gamen, R. C.; Geisler, D.; Gieren, W.; Goldman, B.; Gonzalez, O. A.; Gunthardt, G.; Gurovich, S.; Hambly, N. C.; Irwin, M. J.; Ivanov, V. D.; Kerins, E.; Kinemuchi, K.; Kurtev, R.; Maccarone, T.; Masetti, N.; Merlo, D.; Messineo, M.; Mirabel, I. F.; Monaco, L.; Morelli, L.; Padilla, N.; Palma, T.; Parisi, M. C.; Pignata, G.; Rejkuba, M.; Roman-Lopes, A.; Sale, S. E.; Schreiber, M. R.; Smith, M.; Soto, M.; Tamura, M.; Tappert, C.; Thompson, M. A.; Toledo, I.; Zoccali, M.; Pietrzynski, G.
2013A&A...556A..55I	189	Mass assembly in quiescent and star-forming galaxies since $z \approx 4$ from UltraVISTA	Ilbert, O.; McCracken, H. J.; Capak, P.; Dunlop, J.; Karim, A.; Renzini, M. A.; Caputi, K.; Boissier, S.; Arnouts, S.; Aussel, H.; Comparat, J.; Guo, Q.; Hudelot, P.; Kartaltepe, J.; Kneib, J. P.; Krogager, J. K.; Le Floc'h, E.; Lilly, S.; Mellier, Y.; Milvang-Jensen, B.; Moutard, T.; Onodera, M.; Richard, J.; Salvato, M.; Sanders, D. B.; Scoville, N.; Silverman, J. D.; Taniguchi, Y.; Tasca, L.; Thomas, R.; Toft, S.; Tresse, L.; Vergani, D.; Wolk, M.; Zirm, A.
2013ApJ...777...18M	148	The Evolution of the Stellar Mass Functions of Star-forming and Quiescent Galaxies to $z = 4$ from the COSMOS/UltraVISTA Survey	Muzzin, Adam; Marchesini, Danilo; Stefanon, Mauro; Franx, Marijn; McCracken, Henry J.; Milvang-Jensen, Bo; Dunlop, James S.; Fynbo, J. P. U.; Brammer, Gabriel; van Dokkum, Pieter G.
2012A&A...544A.156M	141	UltraVISTA: a new ultra-deep near-infrared survey in COSMOS	McCracken, H. J.; Milvang-Jensen, B.; Dunlop, J.; Franx, M.; Fynbo, J. P. U.; Holt, J.; Caputi, K. I.; Goranova, Y.; Buitrago, F.; Emerson, J. P.; Freudling, W.; Hudelot, P.; Magnard, F.; Mellier, Y.; Nilsson, K. K.; Sutherland, W.; Tasca, L.; Zabl, J.
2012A&A...537A.107S	108	VVV DR1: The first data release of the Milky Way bulge and southern plane from the near-infrared ESO public survey VISTA variables in the Via Láctea	Saito, R. K.; Hempel, M.; Minniti, D.; Lucas, P. W.; Rejkuba, M.; Toledo, I.; Gonzalez, O. A.; Irwin, M. J.; Gonzalez-Solares, E.; Hodgkin, S. T.; Lewis, J. R.; Cross, N.; Ivanov, V. D.; Kerins, E.; Emerson, J. P.; Soto, M.; Gurovich, S.; Angeloni, R.; Beamin, J. C.; Catelan, M.; Padilla, N.; Zoccali, M.; Pietrukowicz, P.; Moni Bidin, C.; Mauro, F.; Geisler, D.; Folkes, S. L.; Sale, S. E.; Borissova, J.; Kurtev, R.; Ahumada, A. V.; Alonso, M. V.; Adamson, A.; Arias, J. I.; Bandyopadhyay, R. M.; Barbuy, B.; Baume, G. L.; Bedin, L. R.; Bellini, A.; Benjamin, R.; Bica, E.; Bonatto, C.; Bronfman, L.; Carraro, G.; Clarke, J. R. A.; Contreras, C.; de Grijs, R.; Dias, B.; Drew, J. E.; Feinstein, C.; Gamen, R. C.; Gieren, W.; Goldman, B.; Grand, R. J. J.; Gunthardt, G.; Hambly, N. C.; Hanson, M. M.; He*miniak, K. G.; Hoare, M. G.; Huckvale, L.; Kinemuchi, K.; Longmore, A.; Maccarone, T.; Majaess, D.; Masetti, N.



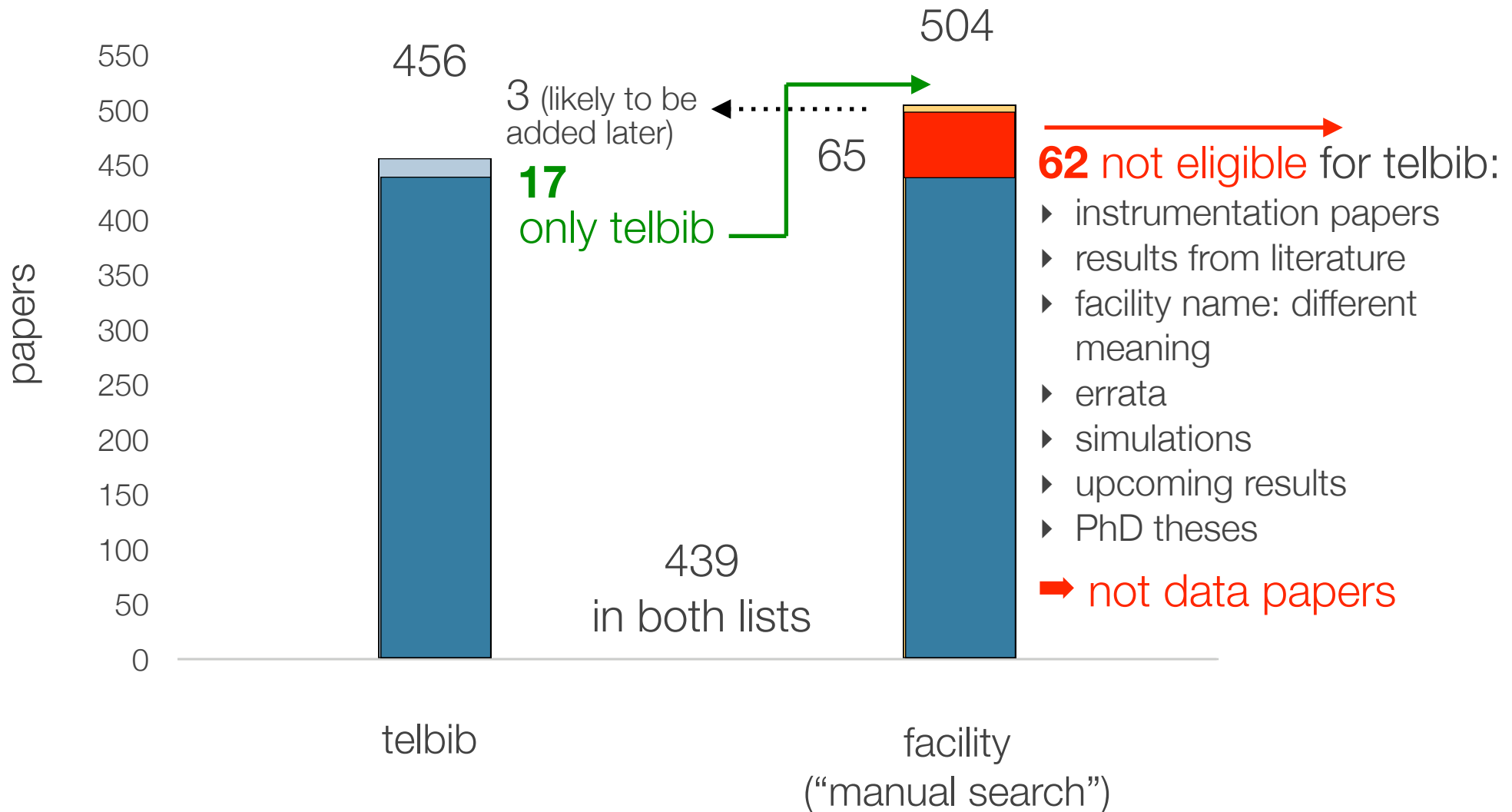


telbib vs. “manual” ADS search — example



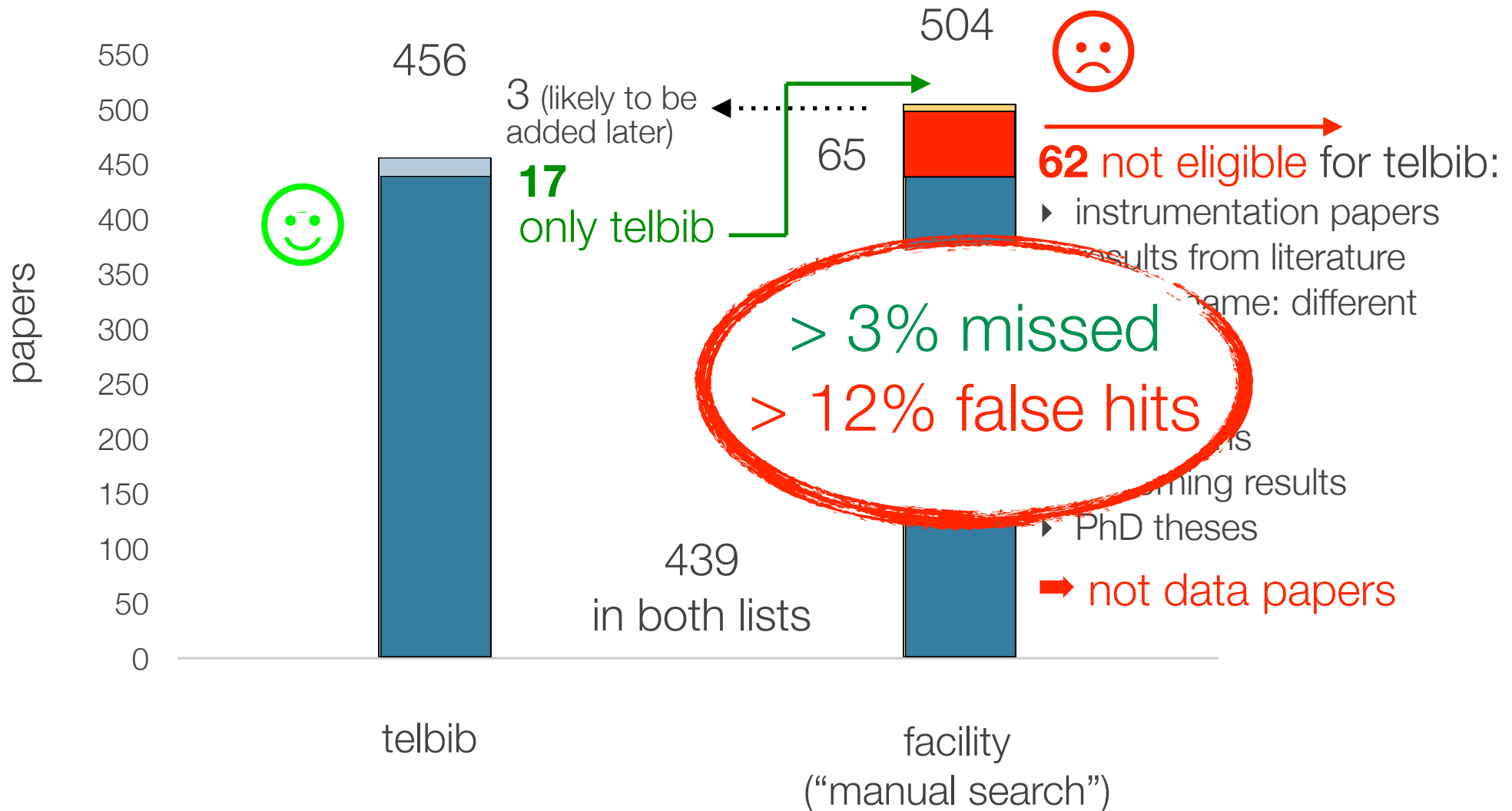


telbib vs. “manual” ADS search — example



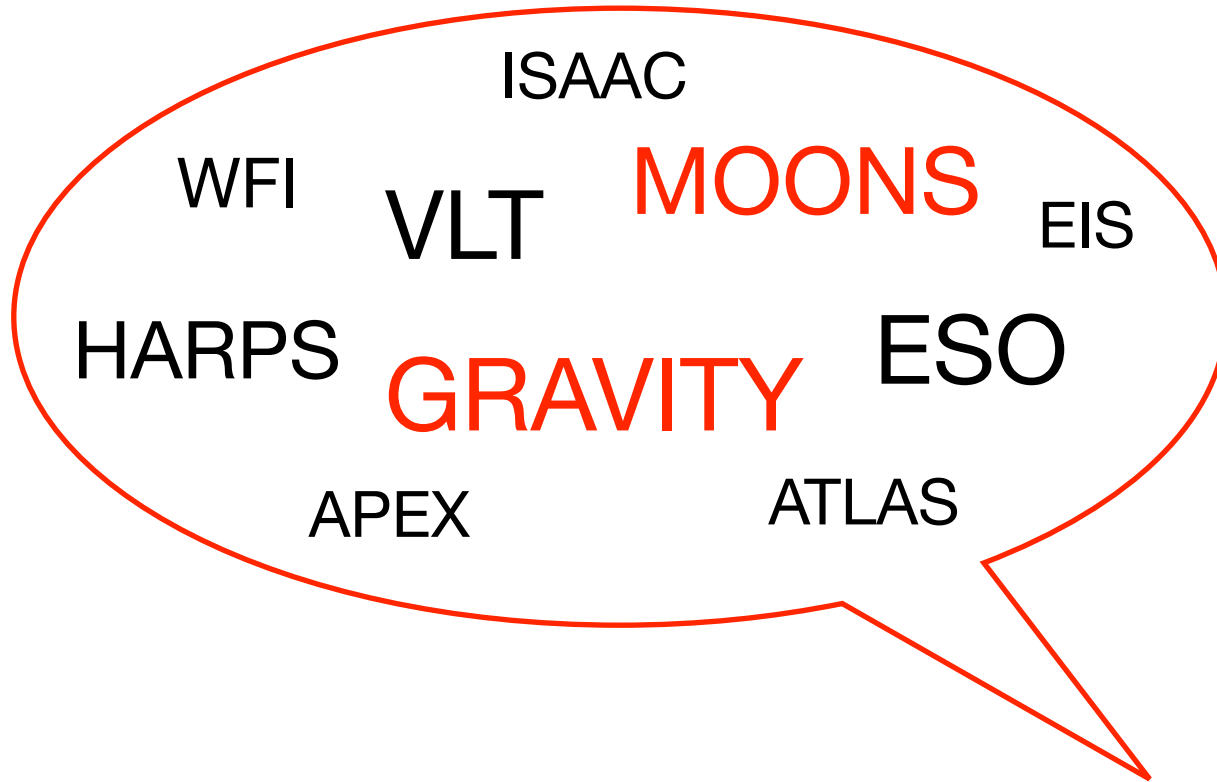


telbib vs. “manual” ADS search — example





Non-unique facility names





- ▶ ESO in context: **comparisons**
with other facilities



ESO telbib policies

ESO data publication policy

The screenshot shows the ESO website's 'Publications based on ESO Data' page. The header includes the ESO logo and the tagline 'ESO — Reaching New Heights in Astronomy'. A navigation bar contains links for 'Public', 'Science', 'User Portal', 'Intranet', 'Contact', and 'Site Map'. A search bar is located on the right. The main content area features a sidebar with a menu of 'Science Users Information' items, including 'Observing Facilities', 'Future Facilities and Development', 'Observing with ESO Telescopes', 'Policies and Procedures', 'Science Operations Policy', 'Director's Discretionary Time', 'Target of Opportunity', 'Guaranteed Time Observations', 'Public Surveys', and 'Publications with ESO Data'. The main text states: 'Publications making use of ESO observational data must include the following statement in a footnote or in the acknowledgement: **Based on observations collected at the European Organisation for Astronomical Research in the Southern Hemisphere under ESO programme(s) PPP.C-NNNN(R).** Please substitute the place-holder PPP.C-NNNN(R) with the programme ID(s) of the data used, e.g., 094.A-1234(A). You will find the identifier in the FITS header of the observations.'

ESO Director General

<http://www.eso.org/sci/observing/policies/publications.html>

Description(s)

Paper classification

Papers pertaining to the ESO Telescope Bibliography use partly or exclusively data from ESO facilities. These can be observations taken by the authors or data obtained from the ESO Science Archive or other sources, regardless of whether or not the observations have been published before. However, papers that merely quote results from the literature, that are derived from ESO data, are excluded. Likewise, papers that describe instrumentation or software, simply mention ongoing projects (e.g., surveys or Large Programmes), suggest future observations with ESO facilities, develop models or run simulations, using data merely as examples, are not included in telbib. Also excluded are papers which show ESO images as a visual reference rather than using them to achieve scientific results.

The ESO librarians communicate extensively with authors as well as ESO instrument scientists and archive specialists to determine if, and which, observations were used in publications. The final decision about inclusion or exclusion of a given paper lies with the ESO Director for Science.

http://www.eso.org/sci/libraries/telbib_methodology.html





Cooperation with other curators



Astrobib

A forum for curating observatory bibliographies

(incl. HST, Gemini, Subaru, NRAO, Spitzer, a.o.)

[Astrobib](#)

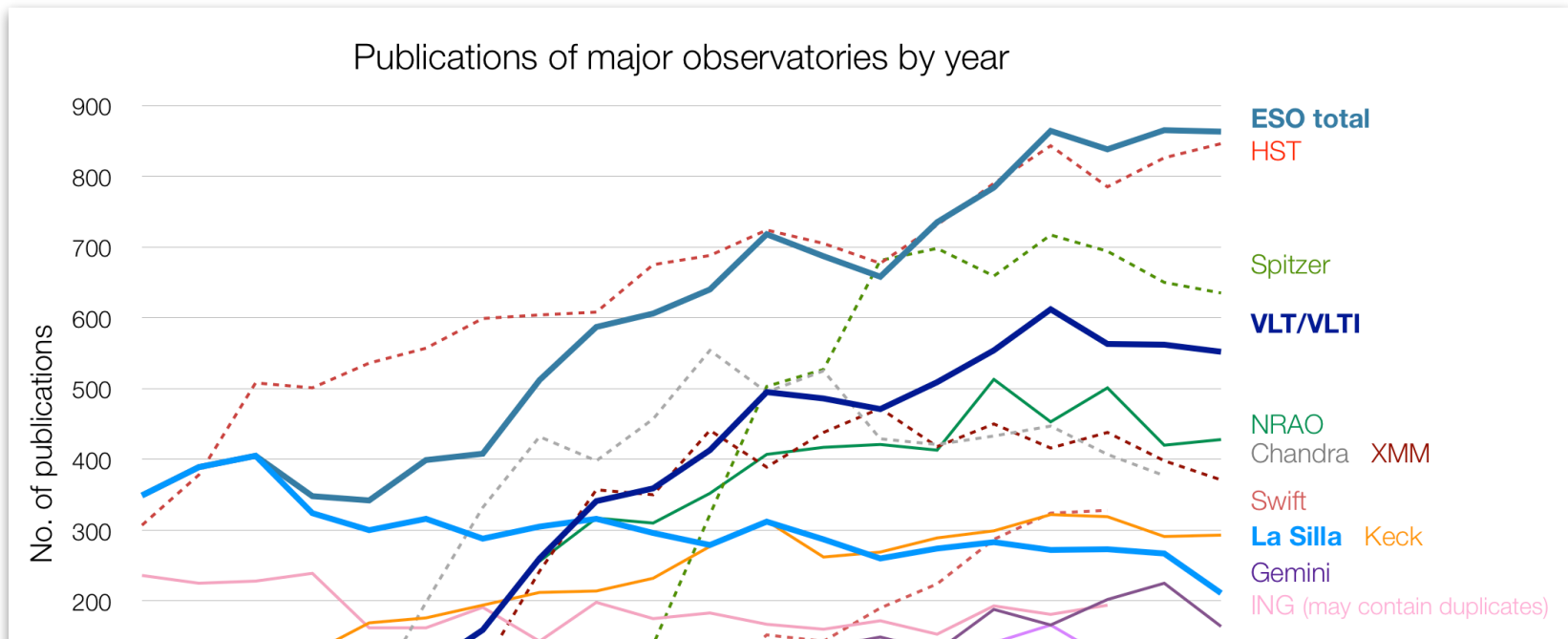
Forum of bibliography curators



IAU Comm. 5, WG Libraries:
“Best Practices for Creating a Telescope Bibliography”



Notice to users of comparisons

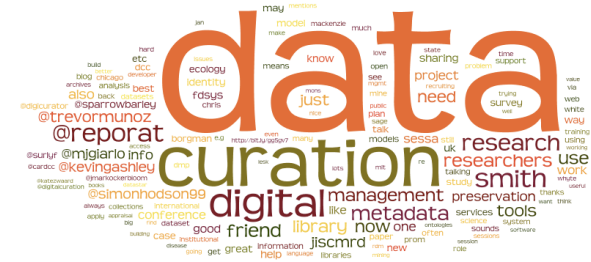


Please note that selection criteria for inclusion or exclusion of papers vary among observatories

Take-away Points

1. telbib is curated

- ▶ curation = “to take care of”
- ▶ much time & effort to verify telbib entries
- ▶ workflow ensures quality content



2. telbib provides insights

- ▶ large range of parameters
- ▶ numerous statistics, reports, and visualizations
- ▶ tool to understand publishing trends



3. Librarians cooperate with other curators

- ▶ aiming for transparency
- ▶ comparisons have many caveats
- ▶ handle with care!



(but this is what can be achieved at present)

