



Trends and developments in VLT data papers as seen through telbib

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Selected insights gained through telbib

- The average number of authors as well as the average number of programs used per VLT paper have increased over time (Fig. 1)
- The number of papers that use archival data has been growing, reaching a level of approx. 25% during recent years (Fig. 2)
- 37% of the VLT papers published 2012-2014 also use data from Gemini, HST, Keck, Subaru, or ALMA (Fig. 3)
- On average, the impact of VLT papers (median number of citations) is higher than that of AJ papers by a factor of 1.7 (Fig. 4)

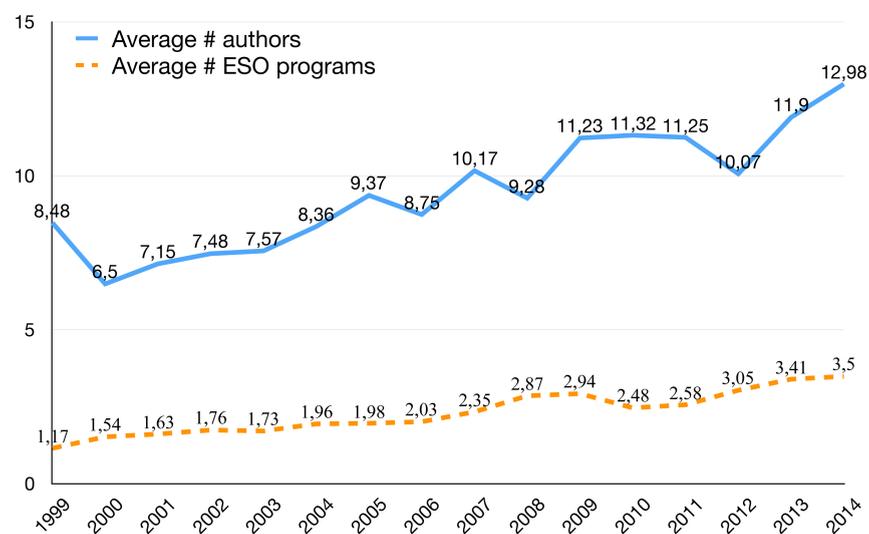
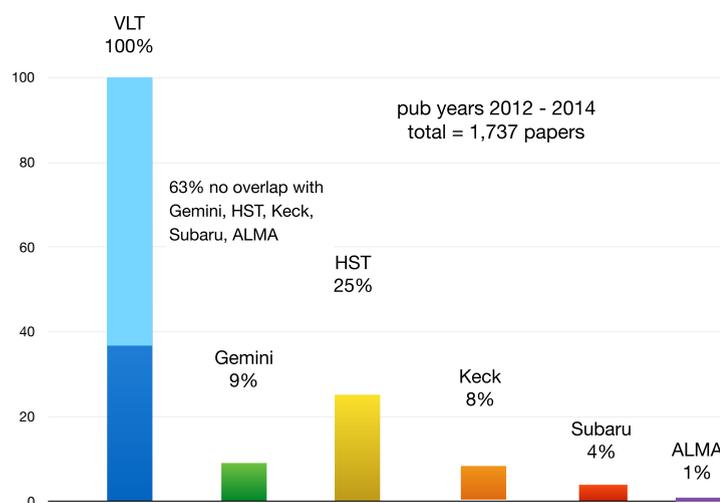


Fig. 1: Average number of authors and ESO programs

The trends towards larger author groups and use of more programs per paper in recent years is clearly visible. (Total: 5,970 papers)

Fig. 3: Overlap with other large observatories

37% of the VLT papers published 2012-2014 also deploy data from other major observatories. Out of 1,737 papers, 9% also use Gemini data, 8% Keck data, and 4% Subaru data. VLT and ALMA, whose first publication appeared in 2012, have 1% of the papers in common. With 25% overlap, the highest synergies are found with HST data papers. 63% of the VLT papers do not deploy data from any of these five observatories.



Abstract

The ESO Telescope Bibliography (telbib; telbib.eso.org) is a database of refereed papers published by the ESO users community. It links data in the ESO Science Archive with the published literature, and vice versa.

Developed and maintained by the ESO library, telbib also provides insights into the organization's research output and impact as measured through bibliometrics studies.

Numerous reports, statistics, and visualizations derived from telbib help to understand the way in which the user community uses ESO/VLT data in publications. Based on selected use cases, we will show recent trends and developments.

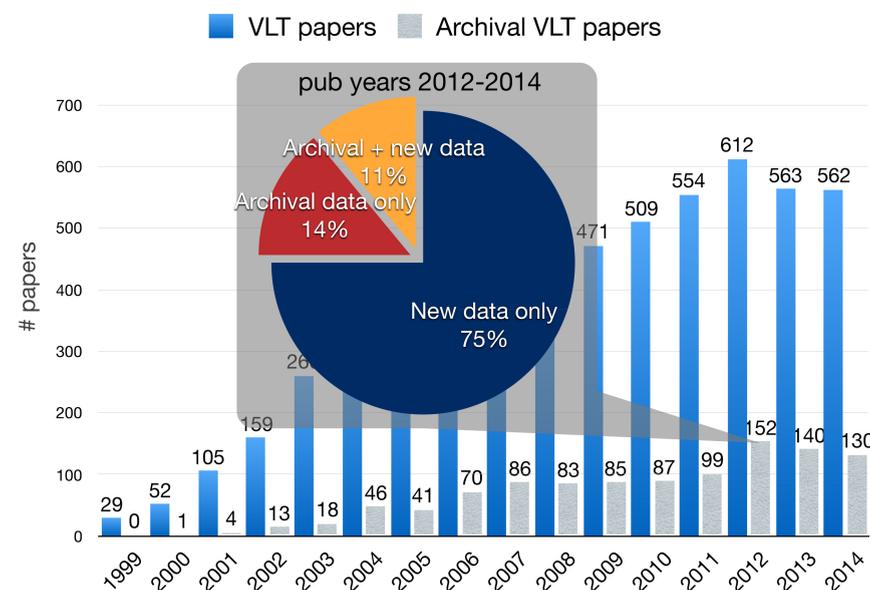


Fig. 2: Number of papers using archival data

The fraction of archival VLT papers has steadily increased to a level of approx. 25% in publication years 2012-2014. Of these, approx. 13% use exclusively archival data, while approx. 11% use archival as well as proprietary ("new") ESO observations. (Total: 5,970 papers)

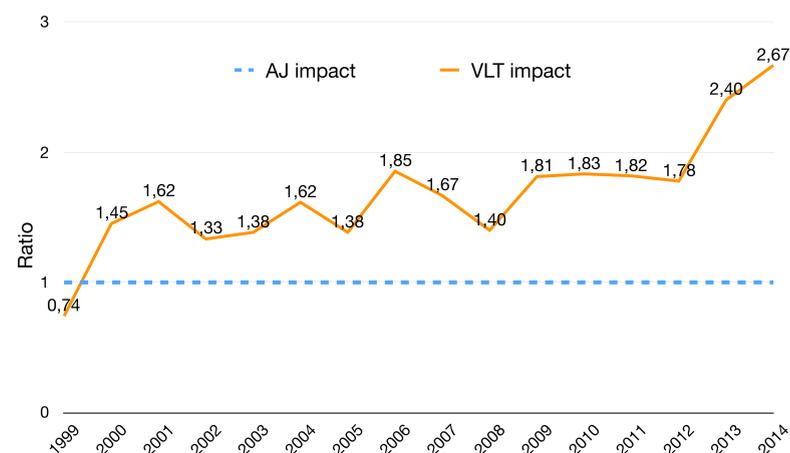


Fig. 4: Impact (relative to AJ papers)

The impact is calculated by dividing the median number of citations to VLT papers by the median number of citations to all AJ papers of the same year (following the methodology by Crabtree, doi: 10.1117/12.2054058). On average, the impact of VLT papers is higher by a factor of 1.7. In particular recent VLT papers (published 2013-2014) are cited approx. 2.5 times more often than AJ papers.