

Publication Digest

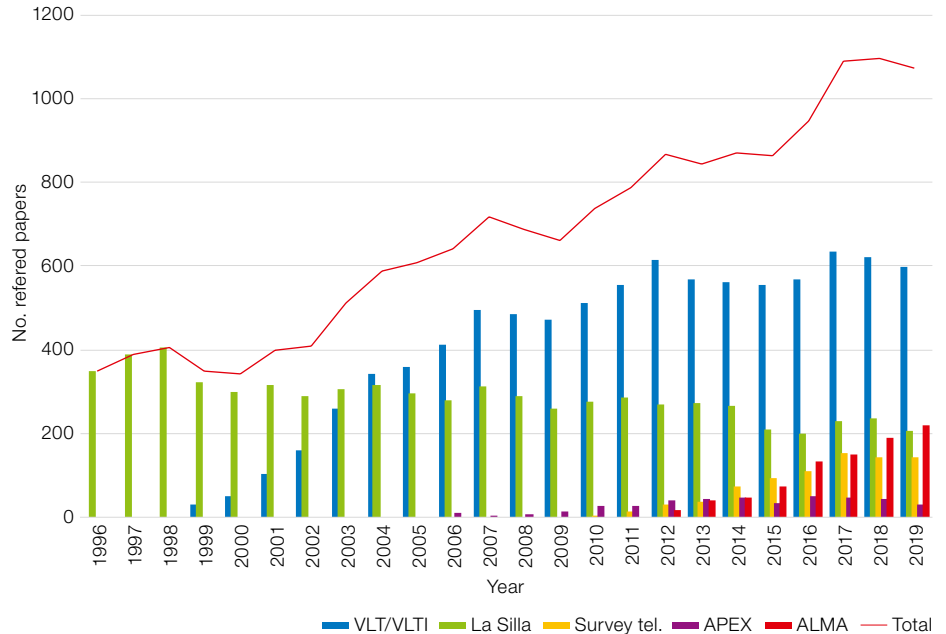
The ESO community published more than 1000 data papers in 2019, bringing the total number of refereed articles published since 1996 that use observations from ESO's facilities beyond 16 000. Papers using VLT/VLTI data seem to have reached a plateau at around 600 papers per year. The La Silla Observatory continues to produce a steady stream of approximately 200 papers per year despite offering a smaller number of telescopes. As in 2018, data from ESO's survey telescopes VISTA and VST resulted in almost 150 papers. The number of APEX data papers decreased slightly from last year, while papers using ALMA data obtained during European observing time saw a large increase in comparison with 2018.

The statistics presented here are derived from the ESO Telescope Bibliography (telbib), a database of refereed papers published by the ESO user community that links publications with the data in the ESO Science Archive; telbib is curated and further developed by the ESO Library and Information Centre and assists the ESO Management in evaluating the Organisation's productivity and impact.

The telbib database is compiled by scanning articles published in major refereed astronomical journals for ESO-related keywords (for example, telescope and instrument names). All telbib papers use data from ESO facilities, whether partly or exclusively. Unless noted otherwise, statistics derived from the telbib database include only papers based on data from telescopes and instruments for which observing time was recommended by the Observing Programmes Committee (OPC).

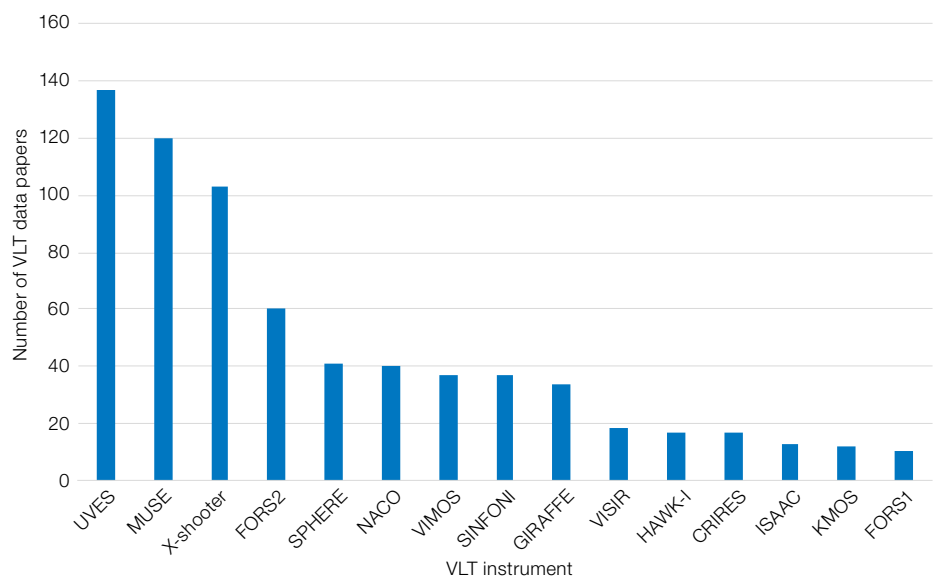
Journals routinely screened for ESO-related keywords are: *A&A*, *A&ARv*, *AJ*, *ApJ*, *ApJS*, *AN*, *ARA&A*, *EM&P*, *ExA*, *Icar*, *MNRAS*, *Nature*, *NewA*, *NewAR*, *PASJ*, *PASP*, *P&SS* and *Science*. Articles published in other journals are added to telbib upon retrieval. While the Library applies text-mining scripts when screening the literature for ESO data papers, all papers are carefully examined by the curators before they are added to the database. If necessary, authors or ESO staff astronomers are consulted to clarify the use of data and eliminate doubts as far as possible.

ESO Publications 1996–2019

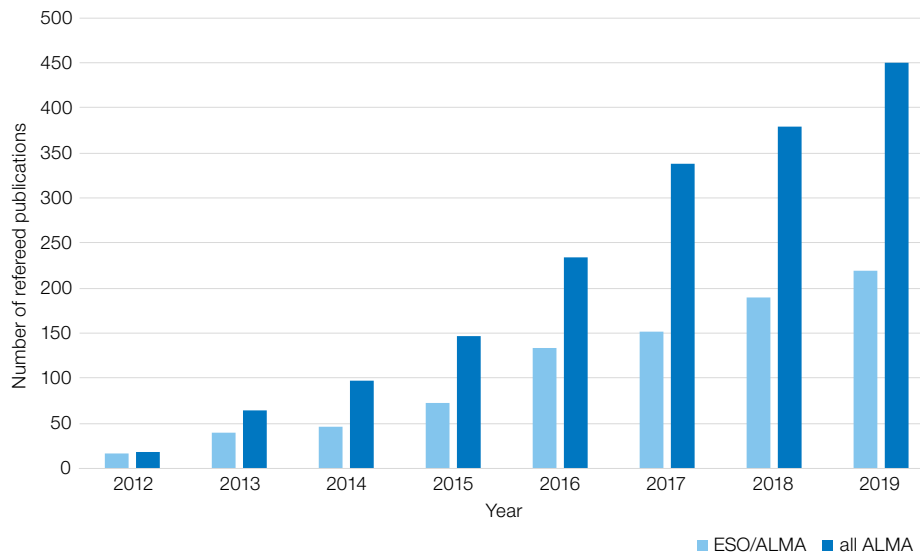


Refereed papers using ESO data from 1996–2019. Some papers use data from more than one facility. VLT/VLTI refers to papers using data generated by VLT and VLTI instruments, including visitor instruments for which observing time is recommended by the ESO OPC, for example, PIONIER. La Silla papers use data from La Silla facilities, including visitor instruments (for example, ULTRACAM). Papers based on data from non-ESO telescopes or observations

obtained during reserved periods (for example, national allocations of time) are not included. Survey telescope papers use data from VISTA and VST. APEX papers use APEX data, including visitor instruments for which observing time is recommended by the OPC (for example, Z-Spec). ALMA papers use data generated by ALMA. For APEX and ALMA, only papers based (entirely or partly on data obtained) during ESO time are included.



Number of data papers in 2019 using observations from the top 15 VLT instruments.



Refereed publications using ESO/ALMA data. For comparison, the numbers of data papers from all ALMA partners are shown. The graph is not cumulative.

The public telbib interface (telbib.eso.org) provides visualisations of search results including on-the-fly graphs and predefined charts. The underlying data tables for all charts can be downloaded via the web, offering users more flexibility to use the available data according to their needs.

Publications from different sites

The VLT and VLTI contributed data to almost 600 refereed papers in 2019. Looking at the development of publication statistics since 2012, it seems that VLT/VLTI data papers have reached a plateau. MUSE continued to perform at an outstanding pace, the total number of papers per year using MUSE data climbing to second place compared to all VLT/VLTI instruments — only six years after the first publication using MUSE data.

ESO's survey telescopes VISTA and VST led to a similar number of papers to that in 2018, bringing the total number of papers from these two telescopes to almost 800.

The La Silla telescopes and instruments continued to produce approximately 200 papers. The HARPS instrument still dominates in terms of paper productivity, even though a slight dip can be noticed in comparison with 2018 (2019: 99 papers,

2018: 120). An increasing number of telescopes, such as the Max-Planck-Gesellschaft (MPG)/ESO 2.2-metre telescope, the Swiss 1.2-metre Leonhard Euler Telescope, and the Danish 1.54-metre telescope, are hosted but not run by ESO, and their papers are not included in the ESO statistics.

The total number of APEX data papers from all partners, i.e., MPIfR, OSO and ESO, was well above 700 at the end of 2019. Approximately 57% of these papers partly or exclusively used data acquired during ESO observing time.

The number of ALMA data papers published in 2019 reached a new annual record. More than 440 papers were published using data from all ALMA partners, almost half of them deploying data obtained during European observing time. The figure above shows the development of ALMA data papers from 2012 to 2019 for all ALMA partners and ESO/ALMA data, respectively. The ALMA bibliography is maintained jointly by the librarians at ESO and the National Radio Astronomy Observatory (NRAO) in the USA, as well as by the National Astronomical Observatory of Japan (NAOJ). Publications based on data from all ALMA partners are also recorded in telbib, but only those based on European observing time are counted in the ESO statistics, unless otherwise noted.

In 2019, the ESO webpages describing its observing facilities were amended. In collaboration with the Library and Information Centre, tabular information is now provided for each instrument, including links to data papers using a particular instrument. These links connect users directly with the public interface of the telbib database.

Details about telbib, including information about the methodology used to screen papers, can be found on the web at www.eso.org/sci/libraries/telbib_info.html. Access to records of all 2019 data papers written by the ESO user community is available at telbib.eso.org/ESO-DataPapers2019.php. A separate listing of refereed publications by ESO scientists with or without the use of ESO data can be found at www.eso.org/sci/libraries/telbib_info/AR/ESOStaffPapers2019.pdf.