

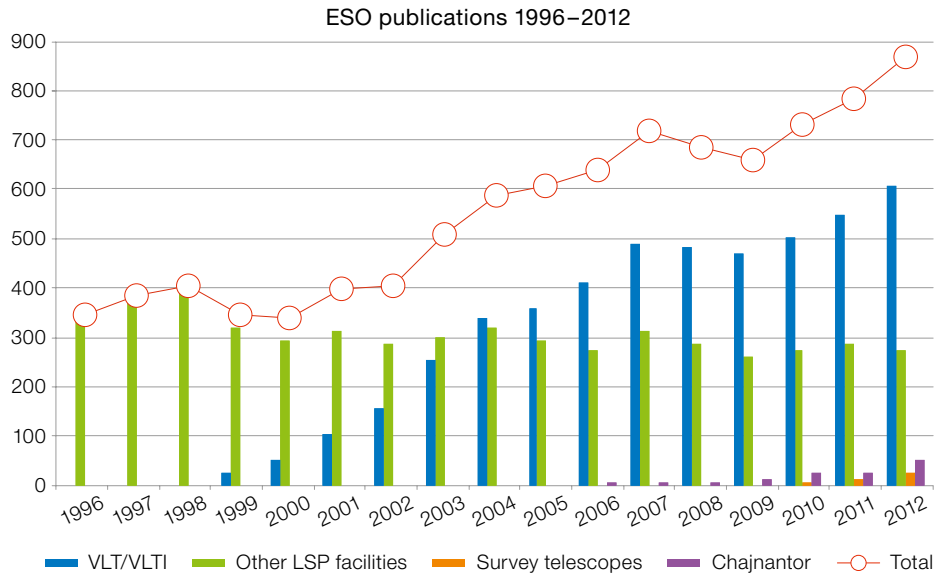
# Publication Digest

In 2012, the ESO user community published over 870 refereed papers, the highest number ever in a single year (see top right figure). This brought the total number of papers using ESO data from 1996–2012 to 9455. An overview of publication numbers can be found at [http://www.eso.org/sci/libraries/telbib\\_pubstats\\_overview.html](http://www.eso.org/sci/libraries/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&ARv*, *AJ*, *ApJ*, *ApJS*, *AN*, *ARA&A*, *EM&P*, *ExA*, *Icar*, *MNRAS*, *Nature*, *NewA*, *NewAR*, *PASJ*, *PASP*, *P&SS* 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*.

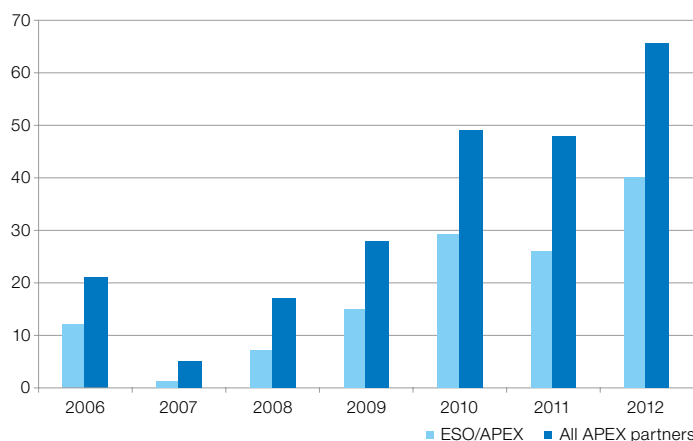
The VLT/VLTI provided data for 614 peer-reviewed papers. This repeats the strong increase in the number of papers that could be seen in 2010 and 2011 (see top right figure) and suggests that a plateau has not yet been reached. With an average number of approximately 17%, the fraction of papers based 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/eso-data/eso-data-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.



Refereed papers using ESO data, 1996–2012. Papers can use data from more than one facility. VLT/VLTI: Papers using data generated by VLT and VLTI instruments, including visitor instruments for which observing time is recommended by the ESO OPC, e.g., VLT ULTRACAM, VLTI PIONIER. 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 ULTRACAM. Papers based on data from non-ESO

telescopes or observations obtained during "private" periods are not included. Survey telescopes: Papers using data generated by the ESO survey telescope VISTA. Chajnantor: Papers using data generated by APEX or ALMA, including visitor instruments for which observing time is recommended by the ESO OPC, e.g., P-Artemis, Z-Spec. Other visitor instruments (e.g., APEX/CONDOR) are excluded. Only papers based (entirely or partly) on ESO APEX or ALMA time are included.



The number of papers based on ESO/APEX observations and data from all APEX partners, respectively.

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.

Scientific results using data from APEX led to 66 refereed publications, including

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

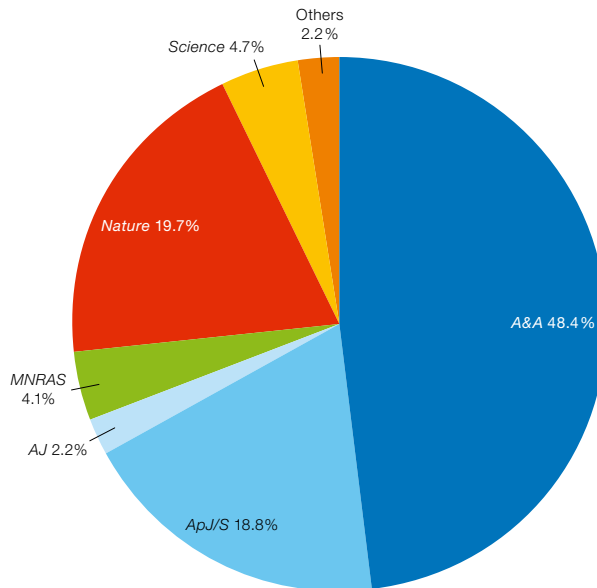
This year, the first science results based on ALMA observations appeared, leading to a total of 19 refereed papers. The great

majority (16) involved European ALMA observing time or science verification data (13). The ALMA bibliography is maintained by the librarians at ESO and National Radio Observatory (NRAO) as well as by the National Astronomical Observatory Japan (NAOJ). For each paper using ALMA data, the programme ID(s) are recorded, along with the corresponding ALMA partner (Europe, North America, East Asia, Chile, the Joint ALMA Observatory [JAO]), observing type (standard, large, target of opportunity, director's discretionary time, science verification), and use of archival ALMA data, if any. Programme IDs in *telbib* records will be linked to the observations in the ALMA archive as soon as it becomes available.

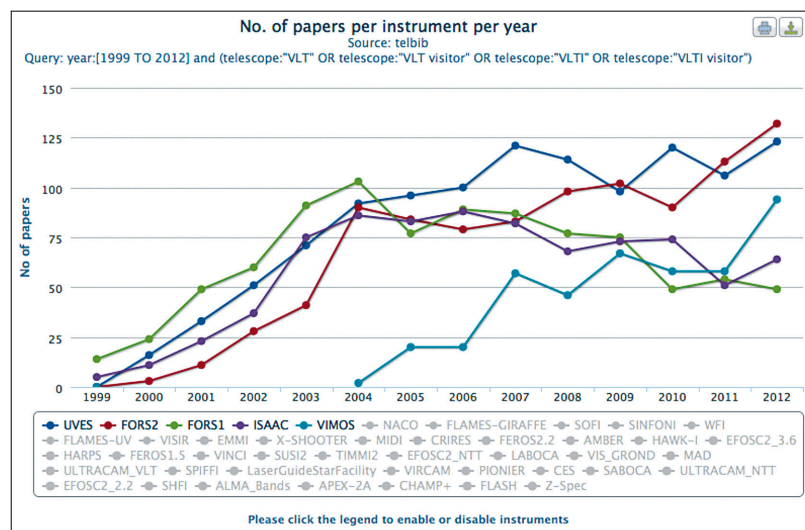
Between 1999 and 2012, 319 papers based on ESO data were featured in ESO press releases, which translates into about 23 papers per year, or almost one every other week. *telbib* records of science papers discussed in press releases can be accessed directly from the ESO press release web pages (<http://www.eso.org/public/news/>); similarly, the public *telbib* interface provides a link to the press release page. The large majority of featured papers were published in the journal *A&A* (48.4%), followed by *Nature* (19.7%) and *ApJ/ApJS* (18.8%). The fraction of papers per journal is illustrated in the top right figure.

The statistics discussed here are extracted from the ESO telescope bibliography (*telbib*), a database of refereed papers that use observational data from ESO telescopes and instruments. *telbib* is maintained by the ESO librarians. In the course of the year, several new features have been added to the public interface (<http://telbib.eso.org>). In particular, search results can be used in a variety of ways. In addition to the export function, which allows users to create comma-separated (.csv) or tab-separated (.txt) files of the retrieved articles, it is now possible to visualise search results. Available options include a graphical view of the number of papers per instrument, year, or journal as well as the use of archival data. All graphs are interactive, i.e., information can be displayed or hidden based on the user's preferences. As an example, the bottom right figure shows the top five VLT

Papers featured in ESO press releases 1999–2012



Distribution of papers featured in ESO press releases (1999-2012) by journal.



Screenshot of a visualisation of the top five VLT instruments that provided data for papers published 1999–2012, retrieved via the public *telbib* interface (<http://telbib.eso.org>). Currently greyed-out facilities can be displayed by clicking on the legend.

instruments that provided data for papers published from 1999 to 2012. Only these five instruments are visible in the graph; many others that also provided data for papers, but for a smaller number, are currently greyed out. They can be displayed should the user wish to.

The complete list of all 2012 papers can be found at [http://www.eso.org/libraries/telbib\\_info/AR/ESO\\_AnnualReport\\_publications2012.pdf](http://www.eso.org/libraries/telbib_info/AR/ESO_AnnualReport_publications2012.pdf). The file includes those papers written by the ESO users' community based on ESO data, followed by a separate listing of refereed publications by ESO scientists with or without use of ESO data.

Please see the ESO libraries homepage <http://www.eso.org/sci/libraries.html> for updated summaries of publication statistics.