ESO software and other resources

Paola Popesso - 2023-07-20 - Comments (0) - Data processing and analysis software resources

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ESO distributes and provides support for ESO data reduction software tools for instruments currently in operations at the La Silla Paranal Observatory, as well as for a number of decommissioned instruments. The ESO pipelines software, including installation instructions, user manuals, demo datasets and tutorials are available for download from the ESO pipelines webpage. All pipelines can be run either through (1) the EsoReflex environment, which is recommended for ESO data reduction, in which the data processing cascade is rendered graphically and data seamlessly flow from one processing step to the next, including automatic data organization, and inspection and looping over the intermediate and final data products, or (2) by launching recipes from the Gasgano graphical interface, or (3) by using EsoRex command-line utility, which offers possibilities for automatizing tasks in custom made scripts.

Answers to frequently asked questions about ESO data reduction are provided here. Further troubleshooting guidelines for software installation are available in a dedicated article in the Knowledgebase.

A registry of astronomy research software is available on the Astrophysics Source Code Library (ASCL) website. More specifically for ESO instruments data reduction and analysis, there are also some alternative tools that can be used for specialized processing steps. For example, for MUSE the library provides links to several data reduction and analysis tools such as MUSE-DPR, PampelMUSE, and PyMUSE. As a rule ESO can not provide support for any of this non-ESO softwares. However, the library provides links also to the tool reference articles and development team webpage to gather the relative information and to search for help in case of problems. We encourage the user to explore the ASCL website also for other ESO instrument related tools.

In addition, further advanced data reduction and analysis software for some of the ESO instruments is provided on the webpages of the consortia that developed the instrument. Responsibility for the tools, including any support for their installation or use is retained by the respective developers. Examples of data centres and further software resources for ESO instruments can be found here:

- SPHERE Data Centre
- JMMC and VLTI Expertise Centres
- The Cambridge Astronomical Survey Unit (CASU) supported most of the VISTA and VST public survey teams as well as several Spectroscopic Public Surveys at ESO.

If you would like to add to this article links to other Data Centres or tools you find useful, please contact us by submitting a helpdesk ticket and we will be glad to do so. Many thanks in advance for your support!

- Tags
- ESO software
- pipeline
- software