EUROPEAN SOUTHERN OBSERVATORY

Organisation Européenne pour des Recherches Astronomiques dans l'Hémisphère Austral

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VERY LARGE TELESCOPE

EDPS-GUI QUICK-GUIDE
Tutorial

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1 Introduction

1.1 Scope

This document is meant for first time user of EDPS, and guides through the installation procedure and data reduction using the edps-gui dashboard (Graphic User Interface). After working through this tutorial, the reader should be able to use other supported EDPS workflows for the reduction of user provided data.

1.2 What is EDPS?

The ESO Data Processing System (EDPS) is a framework to run ESO's data processing pipelines and it is meant to eventually replace the previous ESOReflex environment. The general principles of EDPS have been described by Freudling, Zampieri, Coccato et al. [2024, A&A, 681, A93]. Please refer to that paper if you have used EDPS for research resulting in a scientific publication.

Each of ESO's data processing pipeline consist of a series of standalone programs called *recipes*. Each recipe is designed to process certain type(s) of input data. The processing of these input data typically requires a range of auxiliary files such as calibration files. EDPS is designed to select appropriate input data for the different recipes of a pipeline, and execute them in sequence. This is done by specifying for each pipeline the workflow for organizing data and executing the recipes. This workflow can the used to process a set of data fully automatically.

1.3 Additional documentation

The ESO instrument pipelines web pages are available here.

A more detailed description of the EDPS dashboard and its component is available here

2 Installation

2.1 Prerequisites

The software prerequisites to install EDPS, edps-gui and all the needed components are:

- Recent Firefox or Chrome browser, Python 3.11 or higher (but there are issues with Python 3.14).
- At least one ESO pipeline with EDPS workflow should be in your system. To install the desired ESO pipelines, follow the instructions in the ESO pipelines pages. NOTE: the 'apptainer' installation method is currently not supported. After the installation, the 'esorex' command must be in the path. To test whether the installation was successful, type

  ```
  esorex --recipes
  ```

  A list of available recipes should appear.
- Install graphviz, fv, and ds9, which have to be included in the system path (definying aliases not enough). Graphviz can be easily installed via:

  ```
  sudo apt install graphviz (Debian, Ubuntu)
  sudo dnf install graphviz (Fedora)
  ```

  fv and ds9, are optional. To install them, follow the instructions in corresponding webpages. You can test whether these three packages are installed and their path are correctly set by typing on a terminal:

  ```
  dot -V
  fv  -version
  ds9 -version
  ```

2.2 Installation steps

To install EDPS follow these steps:

- Create a new Python virtual environment and activate it:

  ```
  python3 -m venv edpsgui
  . edpsgui/bin/activate
  ```

  Make sure the python3 version is 3.11 or higher, but not 3.14.
- Install the required packages:

  ```
  pip install --extra-index-url  \
     https://ftp.eso.org/pub/dfs/pipelines/repositories/stable/src \
     edps edpsgui edpsplot adari_core
  ```