

CAFÉ Spectrograph pipeline

The local pipeline for CAFÉ Spectrograph, *CAFExtractor*, runs automatically during the morning following every observing night.

The pipeline is described in the reference article "CAFE2: an upgrade to the CAFE high-resolution spectrograph. Commissioning results and new public pipeline." Lillo-Box *et al.*, *MNRAS* 491,4496. <https://ui.adsabs.harvard.edu/abs/2020MNRAS.491.4496L/abstract>

For service observations, all the process is performed by Calar Alto staff and the user will receive the raw data and, also, the pipeline products, through the standard archiving and FTP system.

For visitor observations, the observer should take into account the following indications, in order to guarantee that the pipeline will correctly process their data:

The system looks for bunches of calibration frames taken at the beginning and/or at the end of the night. You may obtain the afternoon bunch (before the observation night), the morning bunch (after the observation night), or both. But, in all cases, for the system to work properly, each separate, individual (afternoon or morning) bunch has to contain at least these frames: 5 bias, 5 flats *and* 10 arcs. A calibration set may have more than these, but *not* less.

You may take the calibration images “by hand”, using the normal GUI of the instrument to command the spectrograph in real time, or using the “observing sequence” scheduler. In the first case, take into account that the “object name” field has to start with these characters (square brackets included) for each type of calibration shot:

[bias]
[flat]
[arc]

You are free to add whatever else you want after these characters. Spaces are allowed.

In case of using the “observing sequence” scheduler, object names will be correctly set by the automatic procedure.

Optimum integration times for flat and arc frames may change depending on lamp aging. Please, ask the astronomy staff for updated information on this.

The pipeline runs automatically and its products are sent to the archiving and FTP system, where the user can retrieve them through the standard procedures.