Instrument-specific FAQ (FLAMES) (Phase 2)

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Frequently Asked Questions related to FLAMES

•I need to observe standard stars for my program, what is the best way of doing this?

Answer: Unfortunately, FLAMES has no dedicated template for observations of individual stars. Excepting for the case of ARGUS fast template, a full configuration file has to be provided, i.e., one guide star and a minimum of 3 FACBs.

•Why do I need to indicate the central wavelength in the acquisition template?

Answer:FLAMES has no atmospheric dispersion corrector (ADC). The system corrects for the atmospheric displacement of the light between the guiding wavelength (650nm) and the central wavelength using the information in the acquisition template. This correction is a function of the airmass at the mid-point of the exposure.

•What is atmospheric differential refraction and what will it mean for my program?

Answer: Atmospheric differential refraction can be a problem because of the large field of view of FLAMES. The fibres are positioned optimally for the expected airmass at mid-exposure, and this is done at the telescope immediately before the observation. The user must choose an appropriate maximum acceptable airmass at the phase 2 stage, since the effect of atmospheric differential refraction is variable with airmass and observing wavelength. To check the tolerances for your particular setup and targets, you can use the tool available at http://www.eso.org/observing/etc/doc/flamesFieldDistortion.htm. For details on the effect, please see the User Manual Sec. 4.4.

•I need accurate radial velocities. Is the pipeline making any corrections for the Earth motion?

Answer: The heliocentric corrections are computed, but not applied. You can find them in the FIBER_SETUP products in the columns BCORR, HCORR and GCORR, for barycentric, heliocentric, and geocentric corrections respectively. The corrections are given in km/s.

•I'm using ARGUS fast configured for a given wavelength. Can I use a different set-up in my science observation?

Answer: Yes you can as long as you don't change the wavelength given in the acquisition template. So the system thinks you are still in the same wavelength. If you do so, you must be aware that if the difference between your actual wavelength and the one used to configure ARGUS is large, your object might be largely displaced or even be completely out off of the array (see Figure 16 in the User Manual).

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