

FEROS operational recipes – August 2009

1. File preparation:

- OBs should be named „PIname“_“star-ID“.obx (to allow ordering in P2PP)
- OD (object identifier) should use coordinates „hhmm+(-)ddmm“ (to allow for ordering according to R.A. in P2PP)
- Local offline machine: w2p2.off.ls.eso.org (user: astro, pwd: .5arcsec)
- Scp works only from w2p2 to outside computer, not the other way!
- Copies of raw data (with old .mt name, for FEROS pipeline) as well as pipeline results (bdf files – must be converted to fits before taking home – see below!) are written to /data/reduced/FEROS/yyyy-mm-dd
- ESO backup contains only raw data, pipeline results must be back-upped manually by observer!

2. Evening calibration:

- if only FEROS --> 17:00 (daily health check AND then start calibration
OB: 910 StanCal norm)
- if FEROS and WFI :
 1. 16:00: start FEROS calibration OB: 910 StanCal norm
 2. then WFI domeflat (daily health check and then standard filters UBVRI – check proposal for which filters are actually needed)
 3. See proposal if WFI special filters are needed

FEROS calibration:

1. FEROS DRS window: stop, choose new date, then restart (to create new data directory: data/reduced/FEROS/day). Blue Midas window opens.
2. In OT (same screen as P2PP): >Feros_CalibrationPlan > 910 StanCalNorm > slelect > Execution sequence > move to top in OT window
3. In BOB: config > check that Env=OT, check that correct OB is fetched, start OB

Check the quality of FEROS calibration:

1. Look at Midas graph or type in blue Midas: show/feros
2. Order definition: parallel orders (no spaghetti)
3. Wavelength solution: rms < 8×10^{-3} Angstrom
4. Number of found lines should be > 500

Check the quality of WFI calibration:

- see the WFI monitor (should see no funny or unfunny structures)
- bias is around 250 (i.e., stars should be >800 to be above bias)
- ff should be 10000-20000. If >7000, lamp is dying or mirror misaligned

3. After sunset to twilight:

- If only FEROS: can start observe ~20 min before twilight end (make FOCUS for FEROS)
- WFI sky flat with standard or standard+special filters
- If time not enough, sky flats can be done also in the end of the night. WFI is very stable and flats could even be used from another night.

4. Start with FEROS:

- a. FEROS focus
done by Telescope operator (standard stars are available in the calibration list)
just make focus, SKIP to take the spectra of standard stars (not necessary).
- b. Start observations from your OBs, **check the counts from the monitor**
- c. If your objects are **very faint (mag > 13 mag), use WFI guiding**
- d. Reduced data are stored in **/data/reduced/FEROS/2009-04-XX (date)**
You can copy them to your own computer, or store temporarily in
/data/reduced/Visitor/yourname
Data products:
f00001.bdf, f00002.bdf, f0000ext1.bdf, f0000ext2.bdf,
f000010001.bdff000010039.bdf
f000020001.bdf.....f000020039.bdf
0000 = 4 digits of ORIGINAL FEROS pipeline name : **fero0000.mt**
This is not standard ESO paranal (archive) name
- e. If you want to take home the **pipeline-reduced data** (you should!), you must **convert** them from bdf to fits and to **backup** them yourself! To start a new MIDAS session without interfering with the blue MIDAS, use >inmidas -p xx (no. between 11 and 99).
 - Either convert manually in MIDAS: outdisk/fits f00001.bdf f00001.fits (or *.mt)
 - or you can use Johny's MIDAS script "nightconvert.prg", which automatically converts all data from one night and orders them by scan number.

5. If start with WFI:

- a. M3 mirror to WFI (SETUP)
- b. Focus with the requested filter
- c. Check the results of focus
- d. Start observations from P2PP or OT
- e. Data products: only raw data (sent to the PI).

6. Data backup request:

Fill the form for each program separately.
Information: Program-ID and e-mail address are on the board (original schedule)

7. Scheduling:

- => First schedule done Roland Gredel. But weather, GROND, and efficiency require that you do modify the schedule!
- A programs have priority! Try to observe whichever A target is best in terms of weather and visibility and mix the programs. Total scheduled observing time have to be met only in the sum.
 - B programs: observe whenever there is no A target possible, but try to get at least one or two targets such that the PIs have something to show for the next proposal.

If time is lost due to:

- GROND: reschedule by putting the lost-time to the Puffer-time or twilight (if possible)
- Bad weather: distribute the lost hours to B-programs and reschedule to puffer time or twilight.