

Parallel operation of MIRC with VEGA

2010-10-20

GENERAL CONSIDERATIONS

- Limiting magnitude of MIRC is magK=4.5
- Use SearchCal in “V detailed mode” to find the correct calibrators according to these limits.
- A bright K target (magK<2) at the beginning of the night is better for a good initial alignment of MIRC fibers.

PRELIMINARY SETTINGS

1. Standard alignment in the Lab + LDC in place.
2. MIRC is working on **beams 1-2-3-4**. Check that the VEGA StarList configuration is in agreement to that setting and that the same reference beam is set.
3. The use of the LDC is simple. In the opleserver windows, the following commands have to be entered “**uselddc on**” and “**autolddc on**”. Correct values for the glass position are between -10 and +49. In some case the ideal correction of atmospheric dispersion is not possible and you should do with that. This is especially true for W1 due to its large difference of altitude. If possible adjust the REF position to optimize both the observability and a good configuration of the LDCs.
4. Cosmic Debris is configured for MIRC.
5. MIRC has internal paths adjustments with values already calibrated for VEGA on configuration E1E2W2W1. These values could be different for a different set because of the difference of internal path (IR mirror -> Visible dichroics) depending of the telescope. If necessary on a new configuration, adjust these values so that the VEGA fringes are close to their theoretical positions and carefully note the new values of the MIRC internal offsets. VEGA fringes have been set so that fringes 12 are in the upper right panel at about +500 μ m (MR), fringes 23 are in the upper right panel at about +300 μ m and fringes 34 are in the upper left panel at around -170 μ m.
6. As soon as the first star of the night is acquired on tip/tilt, start the final alignment sequence on VEGA: pupil control and flux optimization.
7. When done, MIRC takes the lead and first performs its fiber injection sequence. It’s important to do that after the VEGA alignment.

FRINGE AND DATA ACQUISITION

1. During the fiber injection sequence on MIRC (10mn typically) and in order to assist MIRC for fringe centering, it is possible for VEGA to look for fringes (do that by pairs by using the visible shutters) and center them at their expected position. Be careful to use the last offsets found by MIRC. They are indicated in the MIRC GUI. The values in the VEGA tracker are not updated if MIRC is changing them.
2. Remember to manually enter the offsets in the ObsLog panel.
3. As soon as fringes are found and locked by MIRC, start recording on MIRC and on VEGA.
4. When data acquisition on VEGA is completed, stop the acquisition on MIRC so that the shutter sequence could start.
5. When the MIRC shutter sequence is done (it’s about 10mn), you can slew to the next target.