

MIDI PRISM mask position for Paranal NRTS

Konrad R. W. Tristram (tristram@mpifr-bonn.mpg.de)

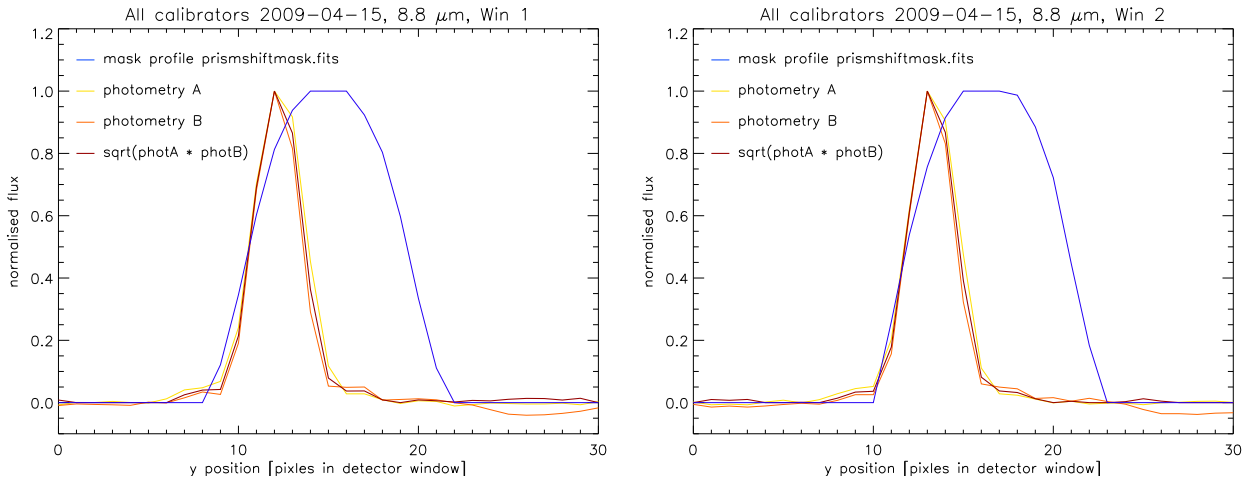
April 23, 2009

In the following plots the position of the currently used mask on Paranal for HIGH_SENSE PRISM observations (“prismshiftmask.fits”) is compared to the current (as of 2009-04-15) position of the spectra of the source total flux spectrum. This mask is used since April 2008, when it replaced an earlier mask. For an initial analysis of the drift of the position of the dispersed signal in MIDI HIGH_SENSE PRISM data I refer to my memo dated May 29, 2008. The data used for this analysis was taken from observations of Circinus on the UT1-UT3 baseline obtained on 2009-04-15.

Displayed are cuts at a certain column / wavelength ($8.8\ \mu\text{m}$ for the calibrators and $12.6\ \mu\text{m}$ for Circinus) through detector windows of the photometry observations. On the left, the comparison is carried out for the first window in MIDI, on the right hand side for the second window. As expected both windows have an offset of 1 pixel with respect to each other. The objects were always centered with IRIS (as far as this was possible) and the positions were directly checked by MIDI acquisition images. In the acquisition images, offsets from the reference pixels were all below 1 pixel.

It is obvious that the spectra have started moving outside the mask again as already happened in April 2008. As this directly affects the possibility to track fringes, I suggest again to shift the mask down by three pixels. I also suggest that the physical reason for the drift be investigated as soon as possible, as with the current drift rate of 3 pixels per year, the detector window edge will be reached in 3 years.

Comparison for an average of all calibrators observed on 2009-04-15:



Comparison for an average of all Circinus observations observed on 2009-04-15:

