

Light leaks in NAOMI

Action that has been done so far (2007.04.05)

On Sunday afternoon (2007.04.01) Sam detected strong infrared light leaks in Grace, visible especially with the MR875 nm filter.

All the exposures I'm talking about now are 100s long, with the MR875 filter, oasis binned 4x4 in imaging mode

run /obsdata/whta/20070401/r954837 shows 3239 counts outside the image, 3256 for the background, 3300 around the centre of the image (sort of diffused light) plus 2 regions at top and right of the image with >3435 counts.

We never could find the source of the parasitic light (have switched off in turn the dichroic changer, all camera dsu's, OSCA mechanisms, but with no success).

We installed a 12cm long baffle (35mm diameter black cardboard tube) at the entrance of OASIS, and that suppressed the 2 brightest regions.

run /obsdata/whta/20070402/r955076 shows: non exposed part of image 3239 counts, background 3256 counts, and a large diffused zone around the centre with 3330 counts.

Today we noticed, by occulting the filter focus lens with a piece of black cardboard, that the resulting image was very uniformly lit, with 3500 counts! this means that this piece of cardboard was reflecting (IR) ambient light from the room.

So we covered completely the large plexiglas window of the dichroic changer closer to Oasis, and tried to cover the part below Oasis between the instrument, AG7, the bench.

The result is shown in the run

/obsdata/whta/20070405/r955929 with 3245 counts outside the image, 3262 counts for the background, 3270 counts or less on most of the image, and only a very small central part of the image with 3290 counts.

I hope this will be enough now to enable observing in the 800-900nm spectral range with OASIS.

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