Data processing of VST/OmegaCAM data: FAQs

Paola Popesso - 2022-04-25 - Comments (0) - data processing FAQ for each instrument

Data processing of VST/OmegaCAM data: Frequently asked questions

- **Are there any known problems with OmegaCAM data?**

Answer: The quality control group keeps a list of know problems at

http://www.eso.org/observing/dfo/quality/OMEGACAM/qc/problems.html

- **Where can I download the OmegaCAM pipeline to reduce my data?**

Answer: ESO does not offer a data-reduction pipeline for OmegaCAM. The ESO OmegaCAM pipeline is exclusively used for quality control, i.e. it processes data to monitor the instrument's proper performance, and does not produce science-grade data products.

- **My data shows an extended, bright feature - what can this be?**

Answer: It is likely that some reflections from the moon are affecting your data. These reflections are unpredictable and have been found to be more frequent when the target is closer than ~40deg to the bright moon. You might also want to check:

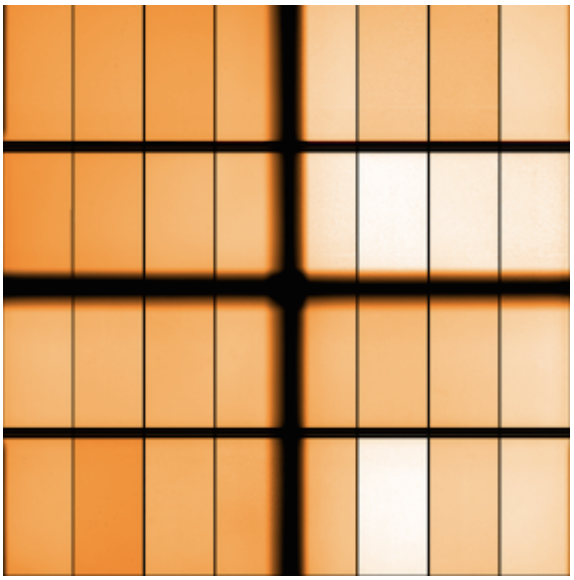
http://www.eso.org/sci/observing/PublicSurveys/useful_links/OmegaCAM_images.html

where we provide a collection of example OmegaCAM images, illustrating some special data features.

A comprehensive description of features visible in OmegaCAM detectors can also be found in the quality control web pages.

- **A number of OmegaCAM filters show vignetting in their central regions. What are the causes for this and what are the dimensions of these features?**

Answer: A number of OmegaCAM filters are not monolithic, but consist of four segments (each covering 8 detectors) that have a central cross-shaped support structure. This support creates a vignetting effect that will be visible in 20 detectors which is significantly larger than the gaps present between adjacent CCD's. The affected filters are: B_JOHN, V_JOHN,H_ALPHA, NB_659, NB_852,and the effect looks like this (for the H_ALPHA filter):

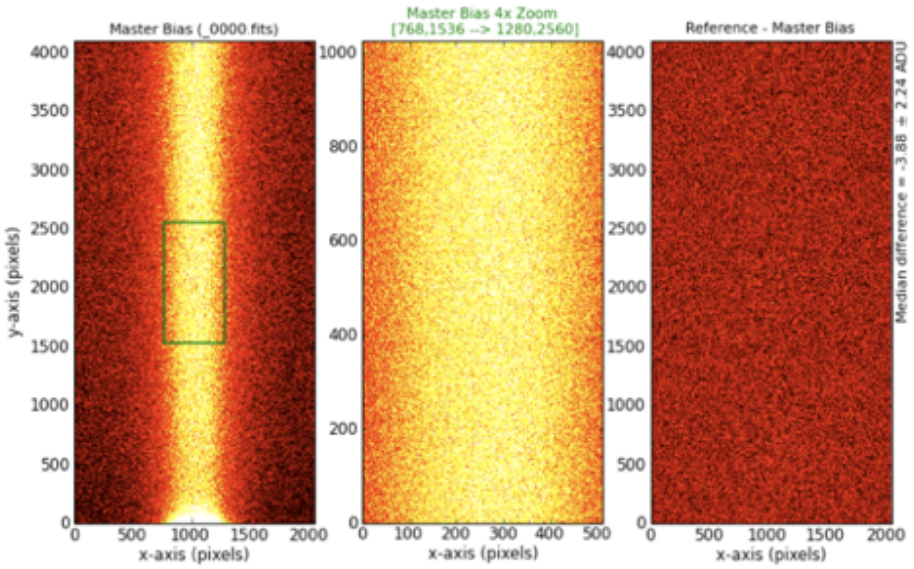


When using these filters, one needs to take the vignetting into account when chosing a dither pattern. A conservative accounting for the total size of the vignetted area can be summarized as:

Filter	North/South Vignetting	East/West Vignetting
B_JOHN	1405 pixels (300 arcsec)	1405 pixels (300 arcsec)
V_JOHN	1430 pixels (306 arcsec)	1410 pixels (302 arcsec)
H_ALPHA	1418 pixels (305 arcsec)	1407 pixels (302 arcsec)
NB_659	1418 pixels (305 arcsec)	1407 pixels (302 arcsec)

- **Some OmegaCAM detectors show an odd central stripe in the bias and master bias images.**

Answer: Two OmegaCAM detectors (ESO_CCD_#68 and #90) show a centrally elevated structure in their bias frames. This structure, however, remains constant with the underlying bias level and can be easily corrected.


Master Bias (_0000.fits)
Master Bias 4x Zoom
[768,1536 --> 1280,2560]
Reference - Master Bias
y-axis (pixels)
x-axis (pixels)
x-axis (pixels)
x-axis (pixels)
Median difference = -3.88 ± 2.24 ADU