



CENTRO DE ASTROBIOLOGÍA
ASOCIADO AL NASA ASTROBIOLOGY INSTITUTE



CSIC



OMC Calibration and Operations status

OMC calibration team

INTEGRAL Calibration Group Meeting

ESTEC, 1-3-2017



OMC status: summary

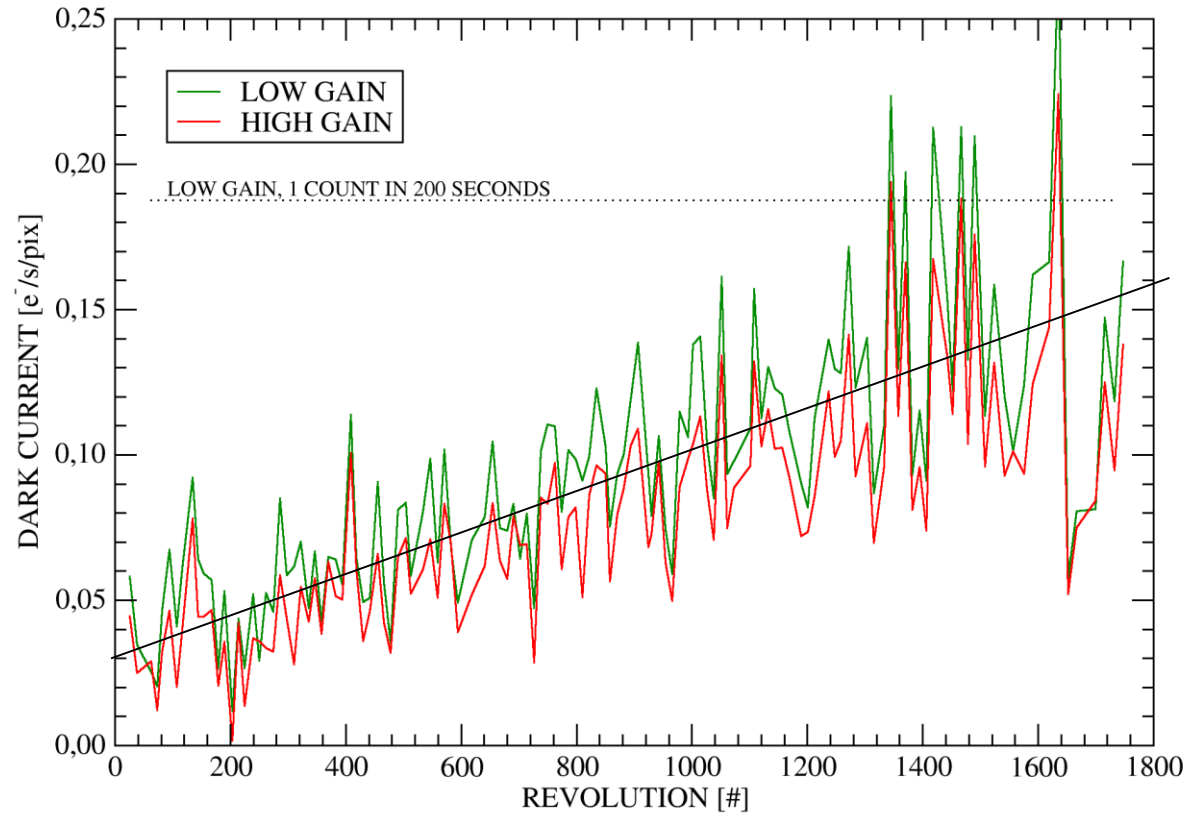
- No anomalies
- System in good health
- New Flat Field calibration strategy implemented with the help of ISOC



CCD status

- The dark current increases slowly, but remains still within acceptable limits.
- No temperature correction done on the plot.
 - It seems the temperature of the S/C has been lower in average in the last months.

DARK CURRENT

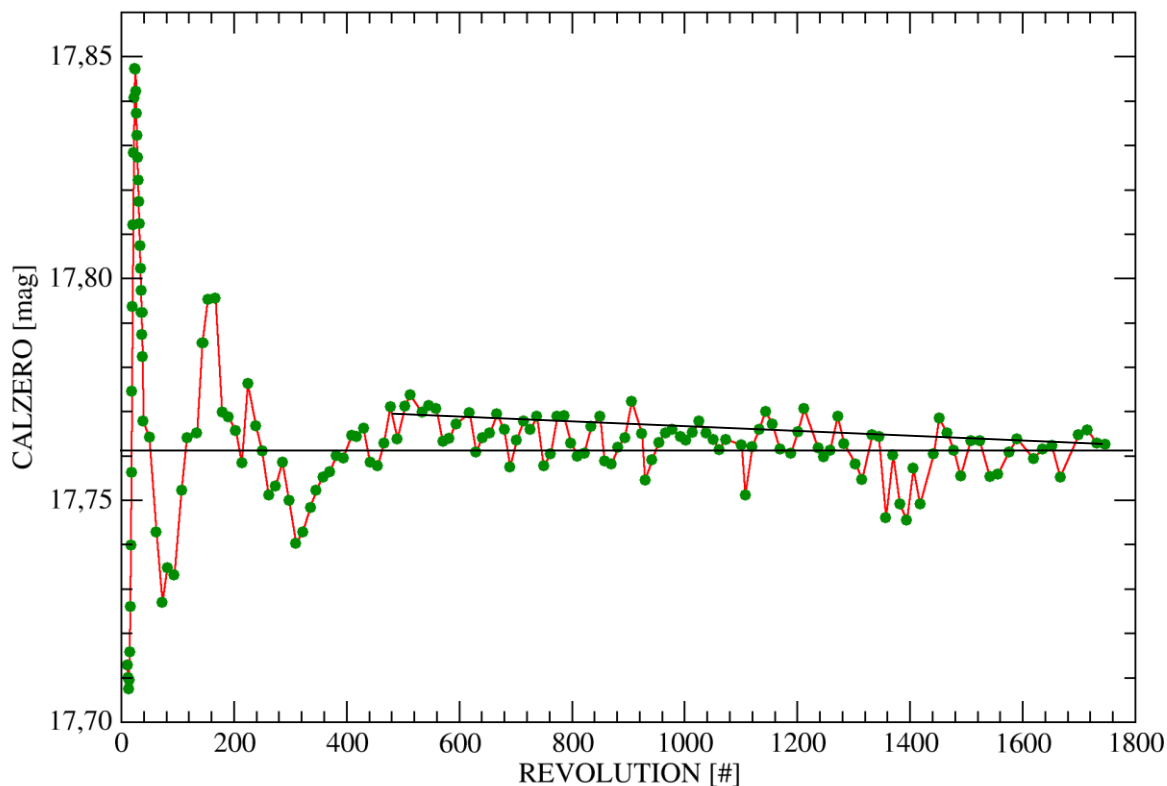




OMC photometric calibration

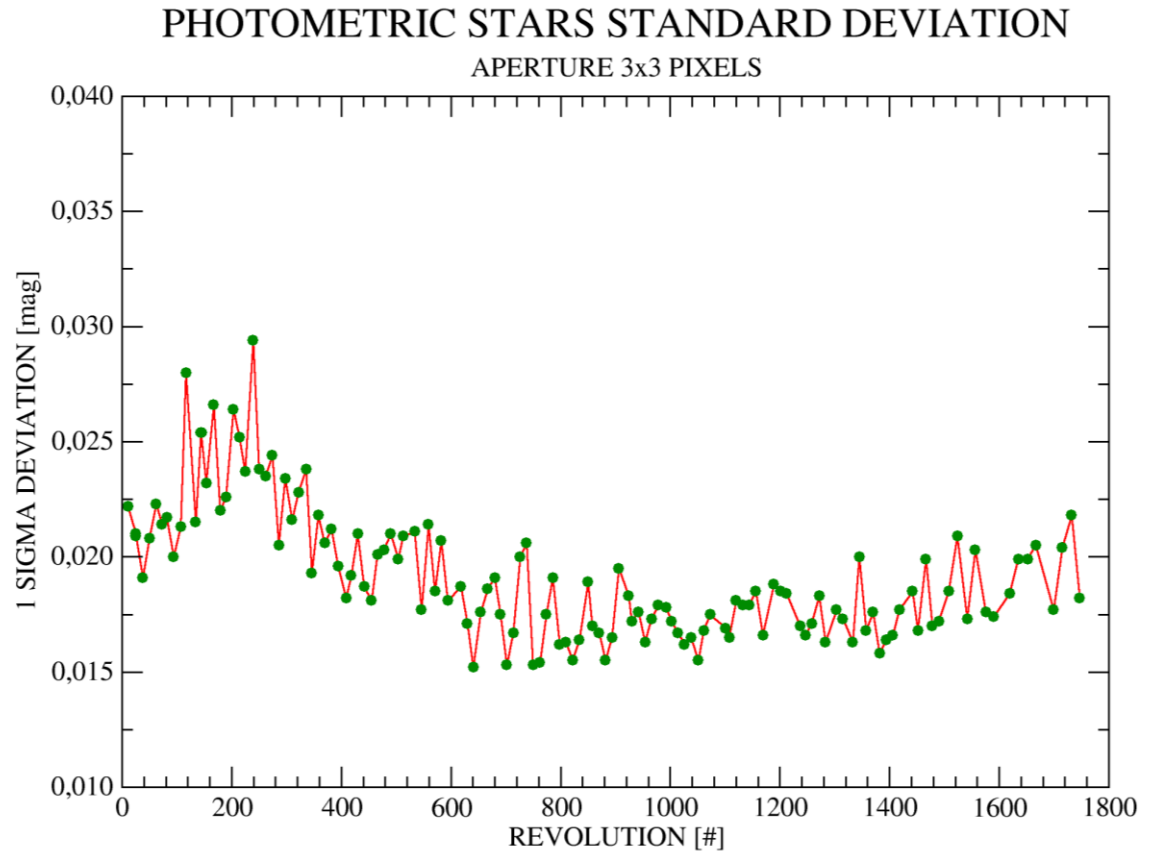
CALIBRATION ZERO POINT

- The zero point of the calibration (a measure of the overall sensitivity) is very stable, with a small trend to decrease.
 - The darkening of the lenses is still not significant, but may be increasing very slowly



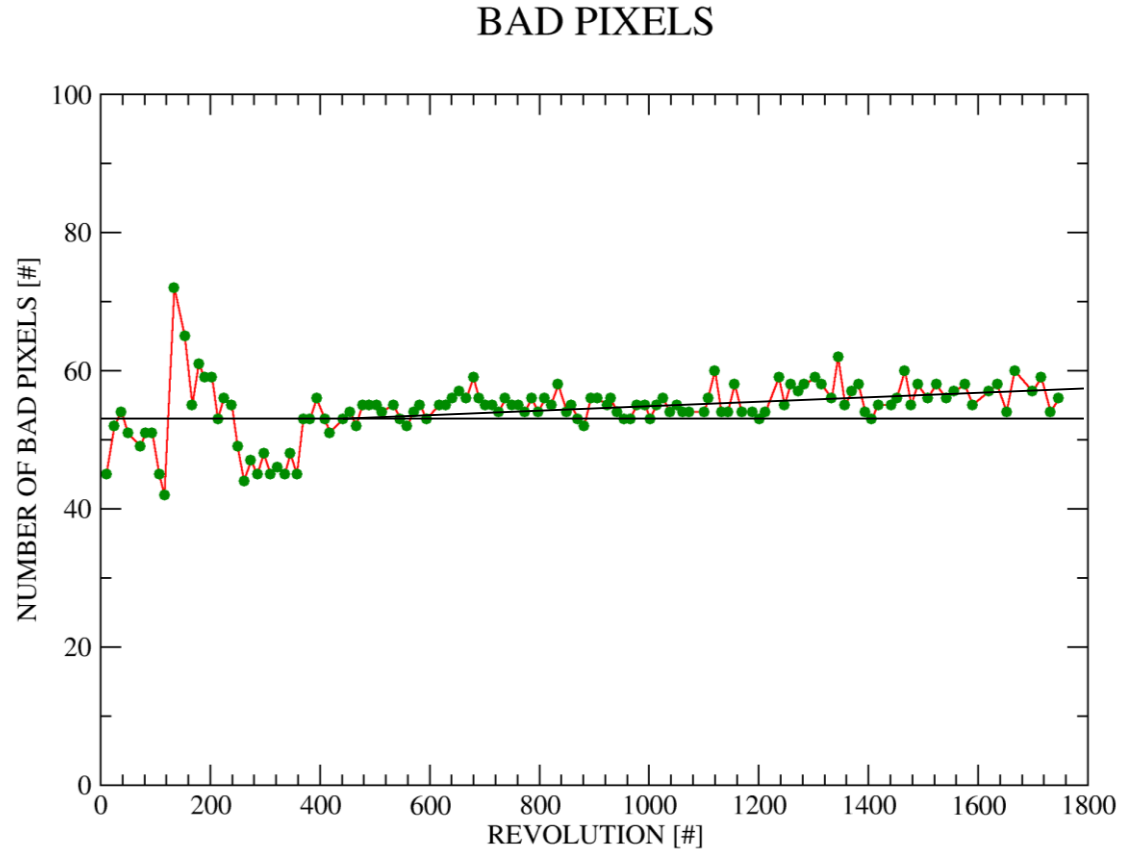
OMC photometric calibration

- The accuracy of the calibration remains stable, with a slow trend to worsen
 - Will be improved with the new calibration strategy.



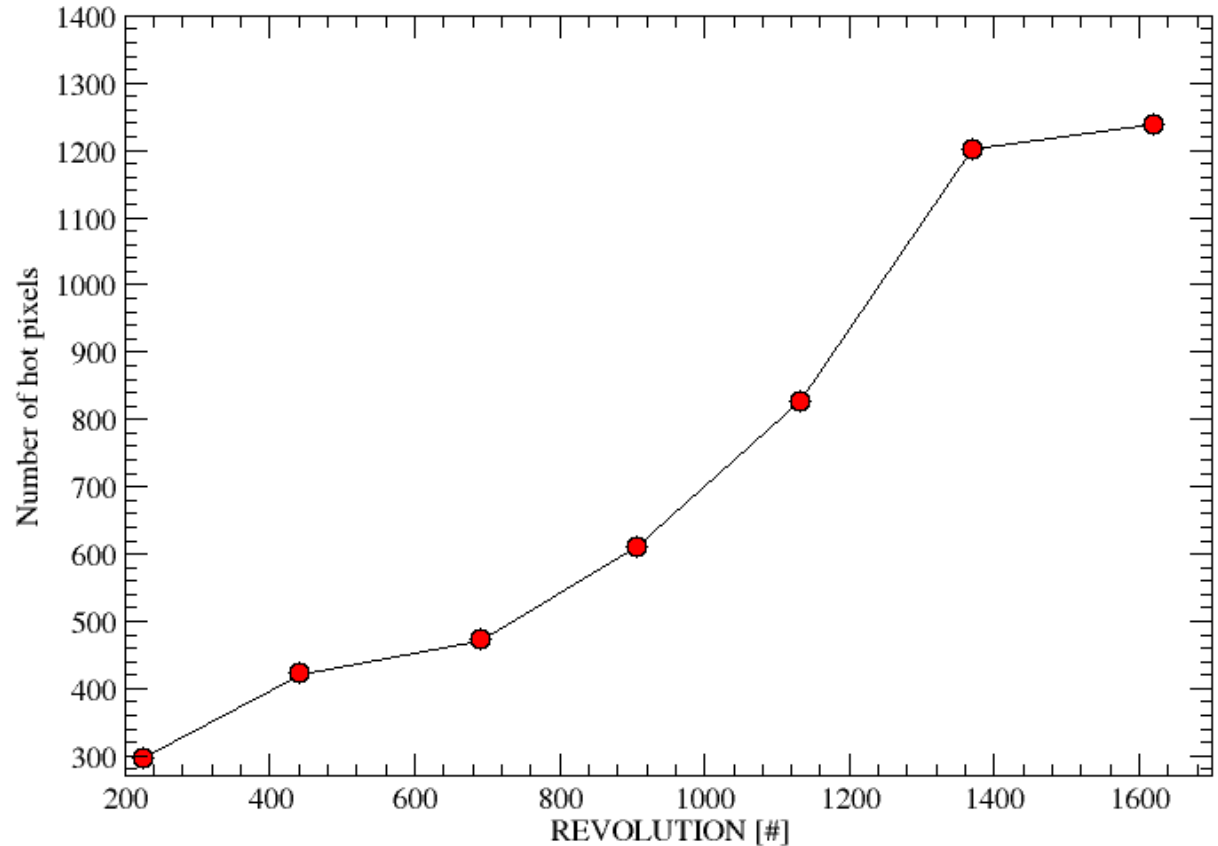
OMC photometric calibration

- The number of bad pixels (loss of sensitivity) increases very slowly.



OMC photometric calibration

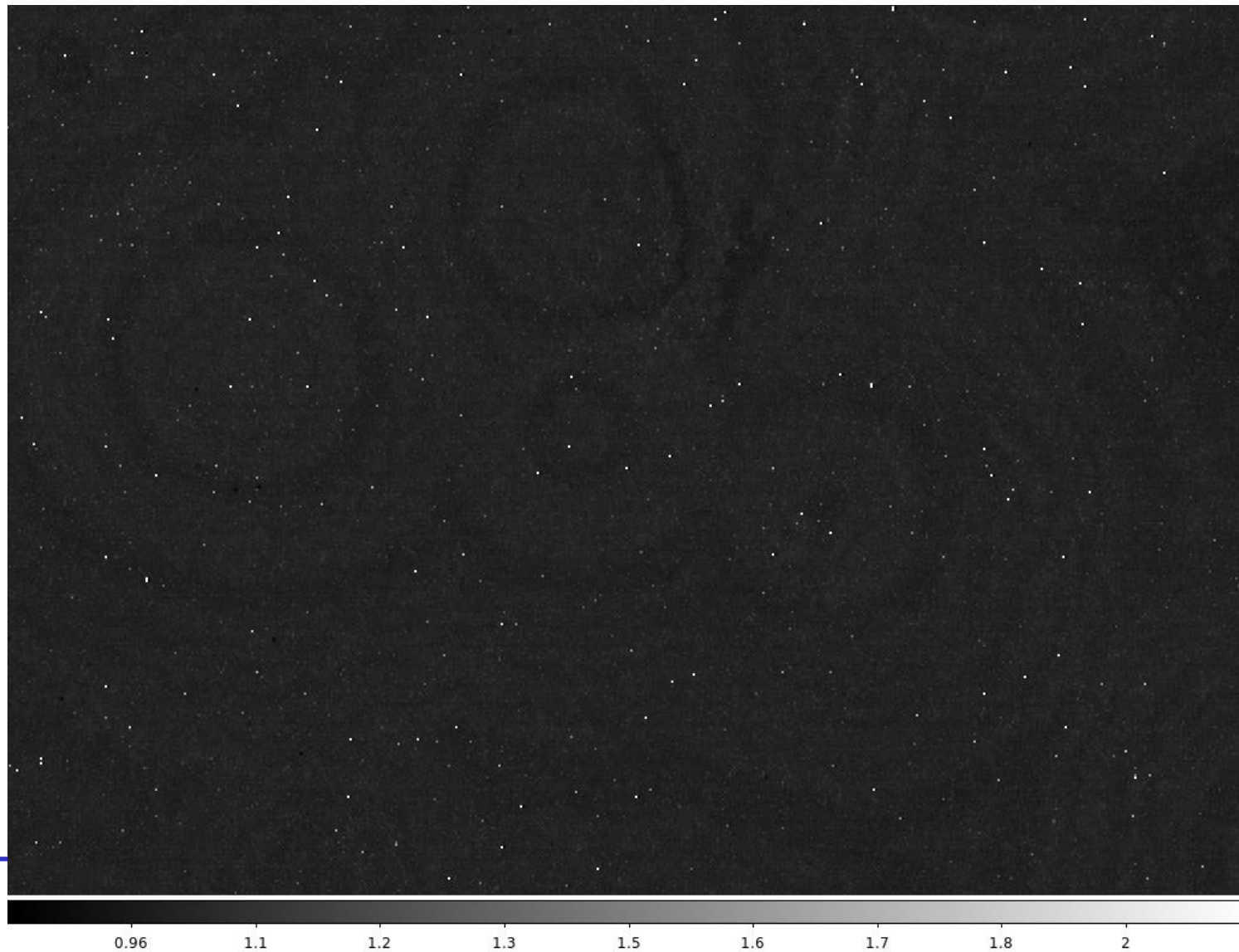
- The number of hot pixels (increased dark current or flickering pixels) increases continuously with time
 - Still < 0.1% of the pixels.





OMC photometric calibration

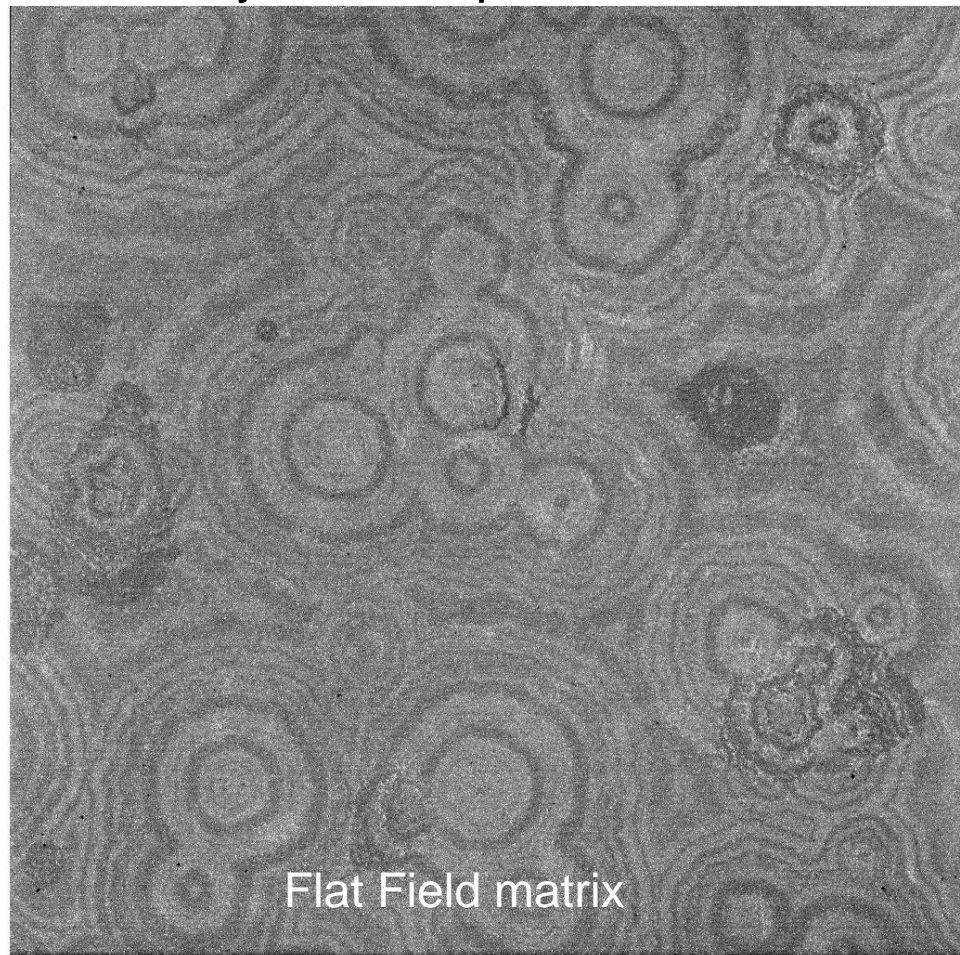
- Section of the CCD with the cuts set to identify the hot pixels.



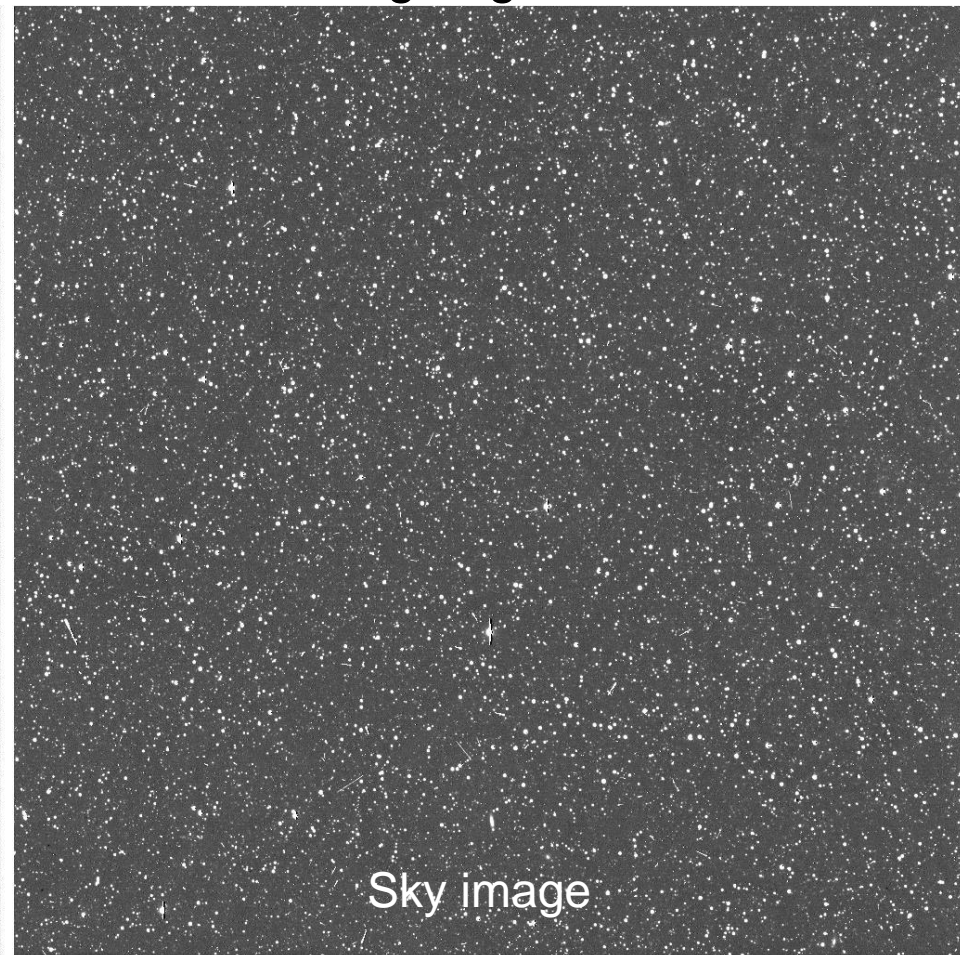


OMC photometric calibration

- A new flat-field calibration strategy has just been started.
- It consists on a narrow 3x3 dither (off-pointings in steps of 2 arcminutes) to facilitate the removal of sky objects in the long exposure sky images.
- Analysis and optimization of the Flat Field matrix ongoing.



0.92 0.94 0.96 0.98 1 1.02 1.04 1.06 1.08



0.65 0.8 0.95 1.1 1.3 1.4 1.5 1.7 1.9



OMC operations: future support

- OMC operations continue to be funded by the Spanish funding agency.
- The compromise is to fund at least up to $T_{\text{end}} + \sim 2$ years, to guarantee the final processing and archival of data.