CENTRO DE ASTROBIOLOGÍA
ASOCIADO AL NASA ASTROBIOLOGY INSTITUTE
CSIC INTA

OMC Status

Albert Domingo

IOCG

ESOC, March 25, 2011

OMC status

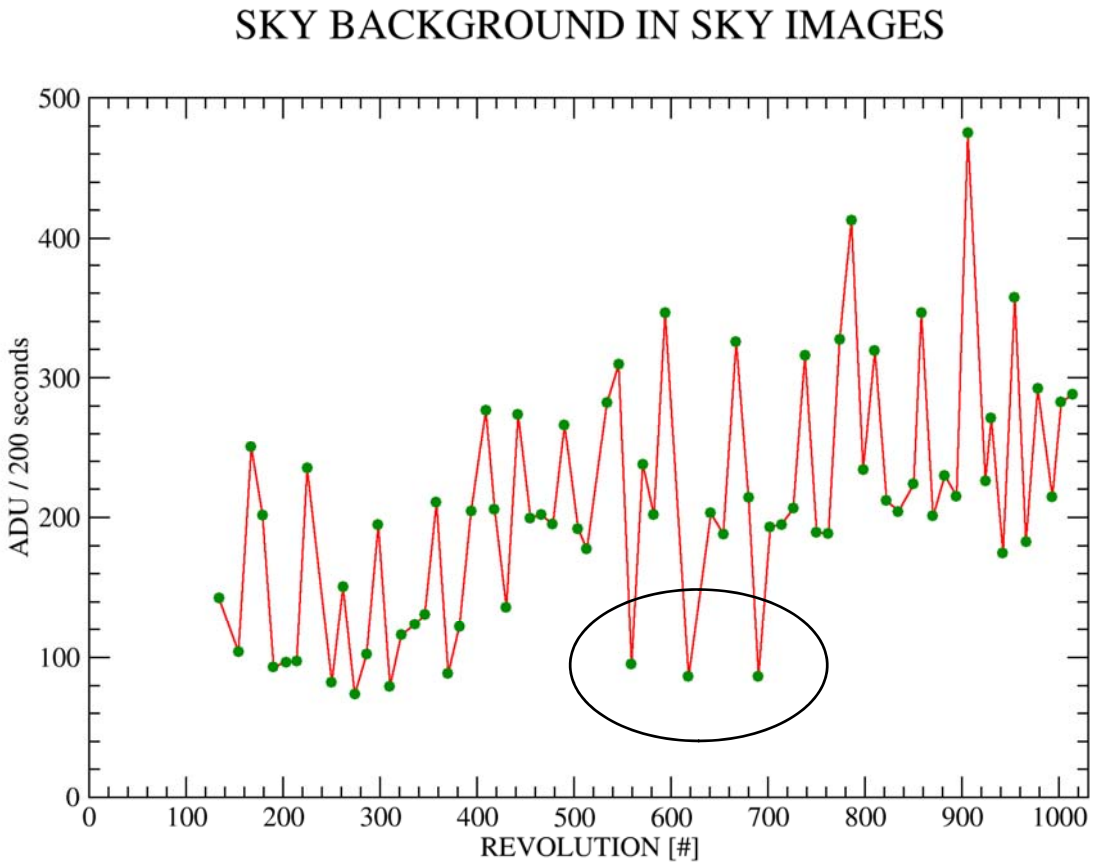
- OMC Status
  - CCD surviving well
  - Flatfield stabilized
  - Sensitivity stable
  - Photometric accuracy increasing
  - Dark current increasing slowly
  - No effects attributed to the perigee altitude dropping

OMC operations

- Operations are running very smoothly.
- Monthly flatfield calibrations are being performed in the standard way.
- The strategy to search for high zodiacal light levels whenever possible is satisfactory.
- A first step as part of the new flatfield calibration strategy has been already implemented (rev 966).
- ISOC to implement the rest of new calibration strategy (small dither).

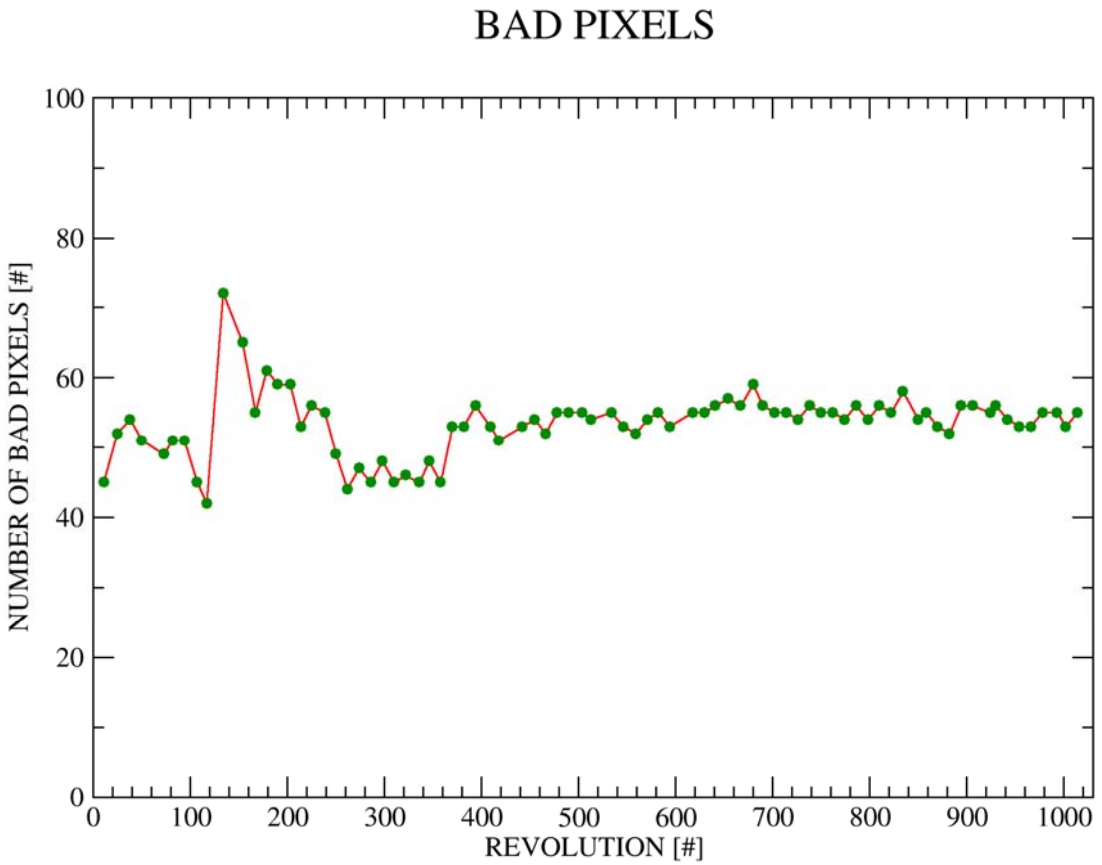
OMC operations

- From rev 700 the strategy to select calibration fields with high zodiacal light is satisfactory.



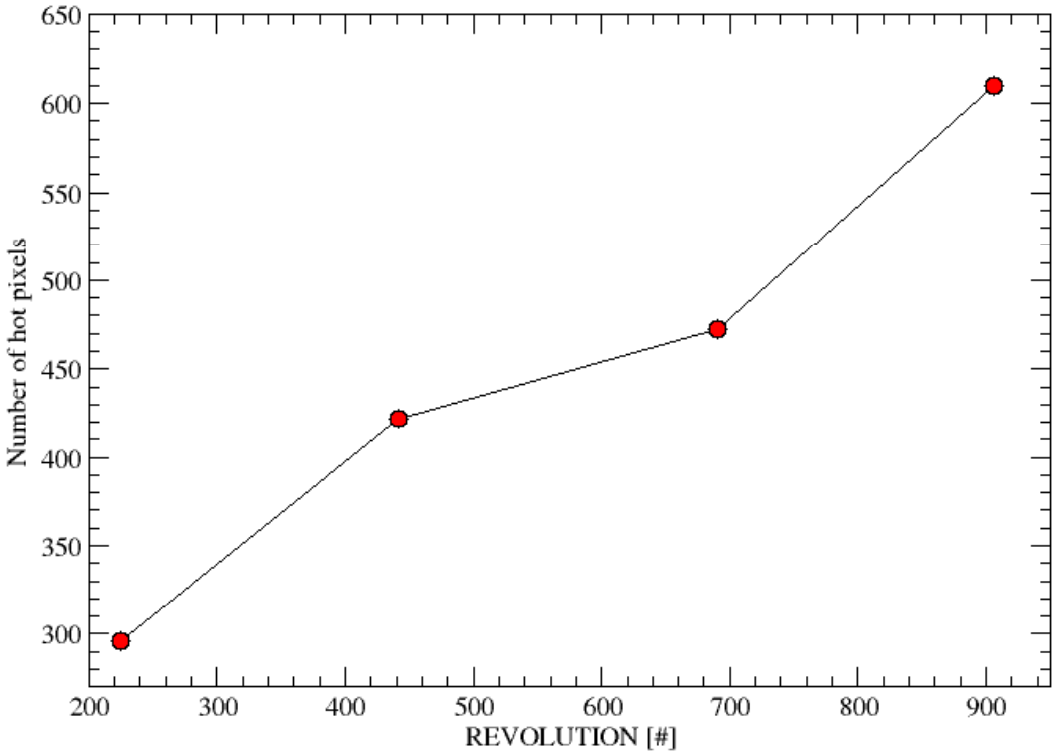
CCD status

- The number of bad pixels (sensitivity <80%) remains very stable.



CCD status

- The number of hot pixels (higher dark current) increasing slowly and monotonically with time.
- Same trend from the beginning of the mission. Seems not to be related with the perigee altitude dropping.

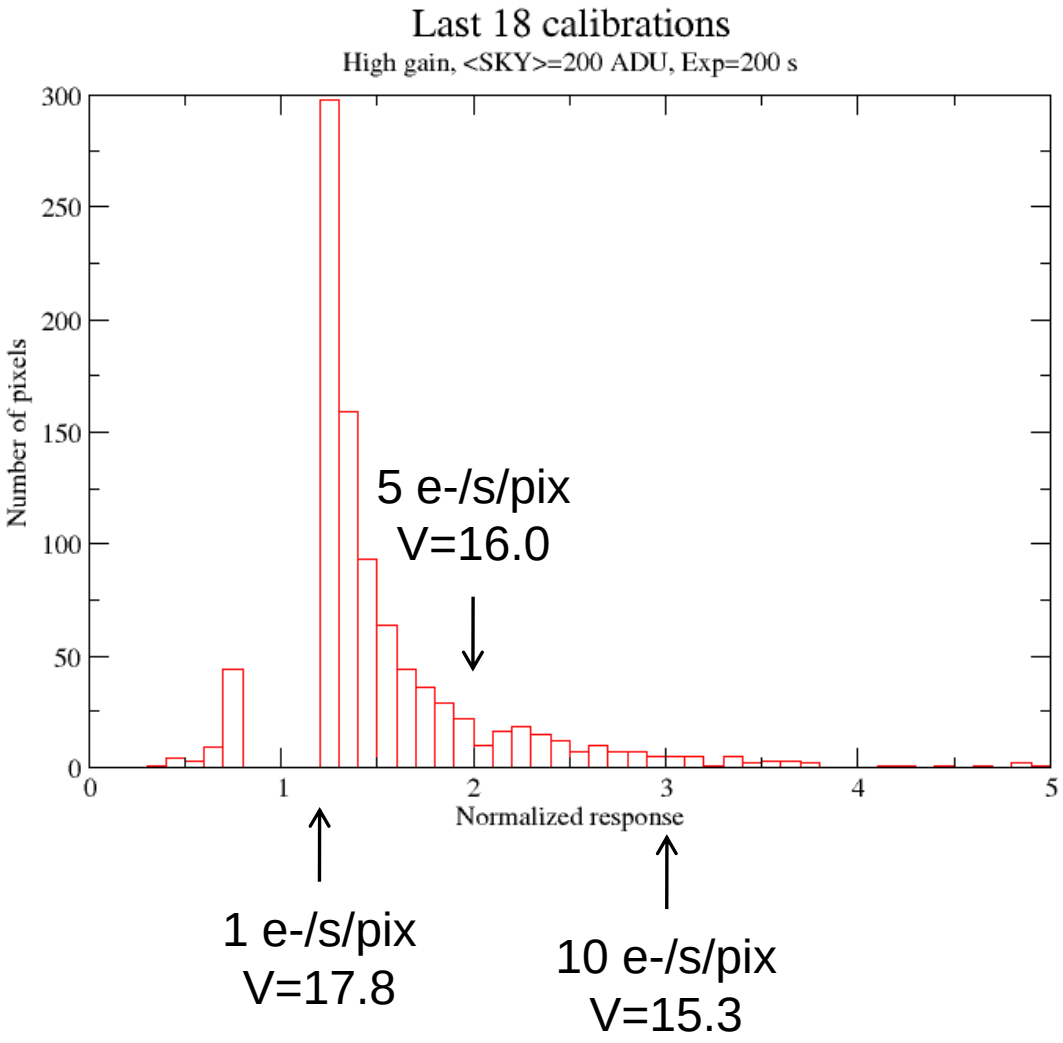


CCD status

- Hot pixels distribution.
- Values are normalized to the OMC sky background level in 200 s.

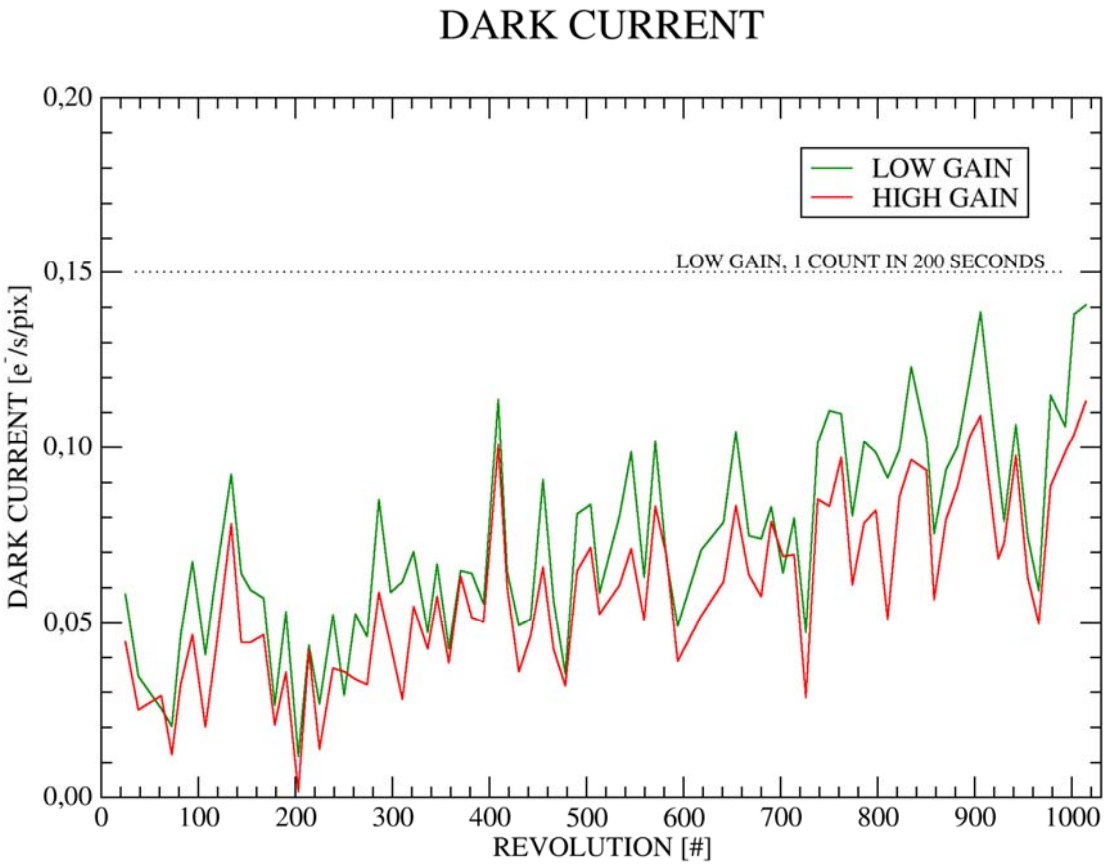
- The majority of hot pixels still have no effect on OMC science.

- 163 with > 5 e-/s/pix
- 56 with > 10 e-/s/pix



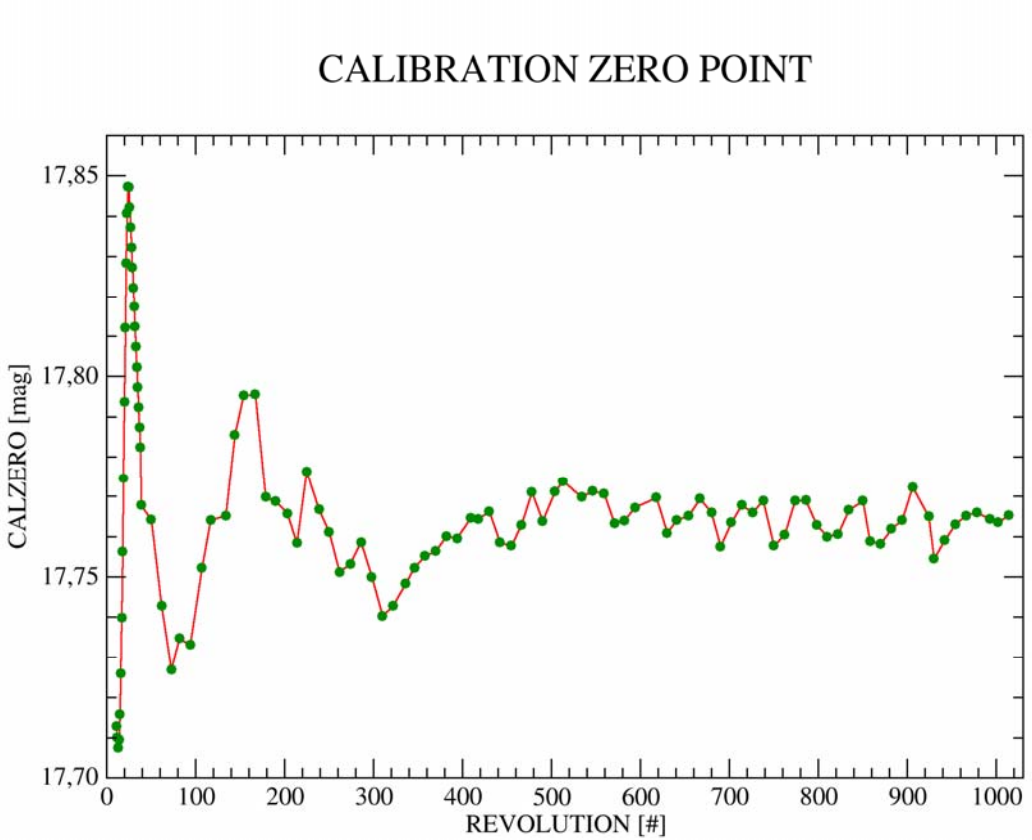
CCD status

- The overall dark current increases very slowly and remains well within acceptable limits.
- No temperature correction done on the plot.



OMC photometric calibration

- The zero point of the calibration (a measure of the overall sensitivity) has become very stable.
  - The lenses are not getting darker with radiation.
  - The overall transparency of the CCD coating remains invariable.



OMC photometric calibration

- The photometric accuracy remains below 0.02 mag (2% in flux).
  - Very stable from revolution 600 onward.