Before I forget

For those interested in "instrumentation" (in fact, astronomical techniques, as a whole):

You are welcome to join

ISS7

Instrumentation Group

Thursdays, 4pm, room F-307

Before I forget

Who is into converting the Telescope On Campus

Into

The First Robotic Polarimetric Telescope of the World?
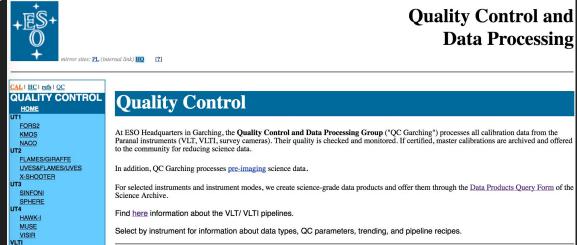
AGA0414
CCD Characterisation

Prof. Alessandro Ederoclite

Characterisation, data quality and trends

You want to know your detector.

You want to know the quality of your data.

You want to make sure that your data are ALWAYS good.

FORS2

Quality control of FORS2

http://www.eso.org/observing/dfo/quality/FORS2/qc/qc1.html

Trend of bias

http://www.eso.org/observing/dfo/quality/FORS2/reports/HEALTH/trend_report_BIAS_med_master_HC.html

Readout noise

http://spiff.rit.edu/classes/phys445/lectures/readout/readout.html

RON = sqrt[Σ (x_i - <x>)^2 / N]

http://www.eso.org/observing/dfo/quality/FORS2/reports/HEALTH/trend_report_BIAS_ron_raw_HC.html

Gain

We get photons which produce electrons in the CCD. An ADC (analog-to-digital converter), converts electrons in "counts".

The "gain" makes us "go back" to what we actually measured.

Gain = # electron per pixel / # counts per pixel

http://spiff.rit.edu/classes/phys445/lectures/gain/gain.html

http://www.eso.org/observing/dfo/quality/FORS2/reports/HEALTH/trend_report_CONAD_HC.html

Linearity

http://www.eso.org/observing/dfo/quality/FORS2/reports/HEALTH/trend_report_DETMON_LIN_HC.html