

QC - PARAMETERS

The tracking of SPICA's
performance

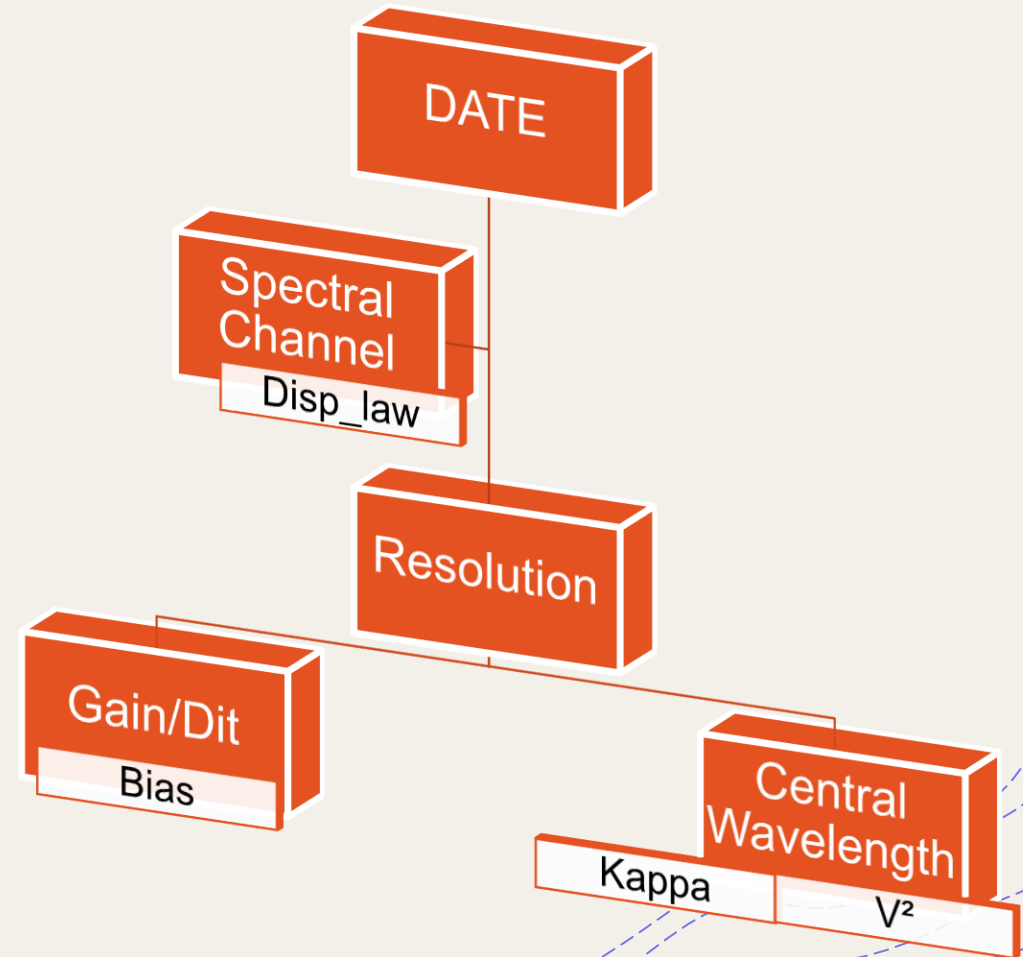


QC Parameters Configuration

The Pipeline creates Quality Check keywords in the header products.

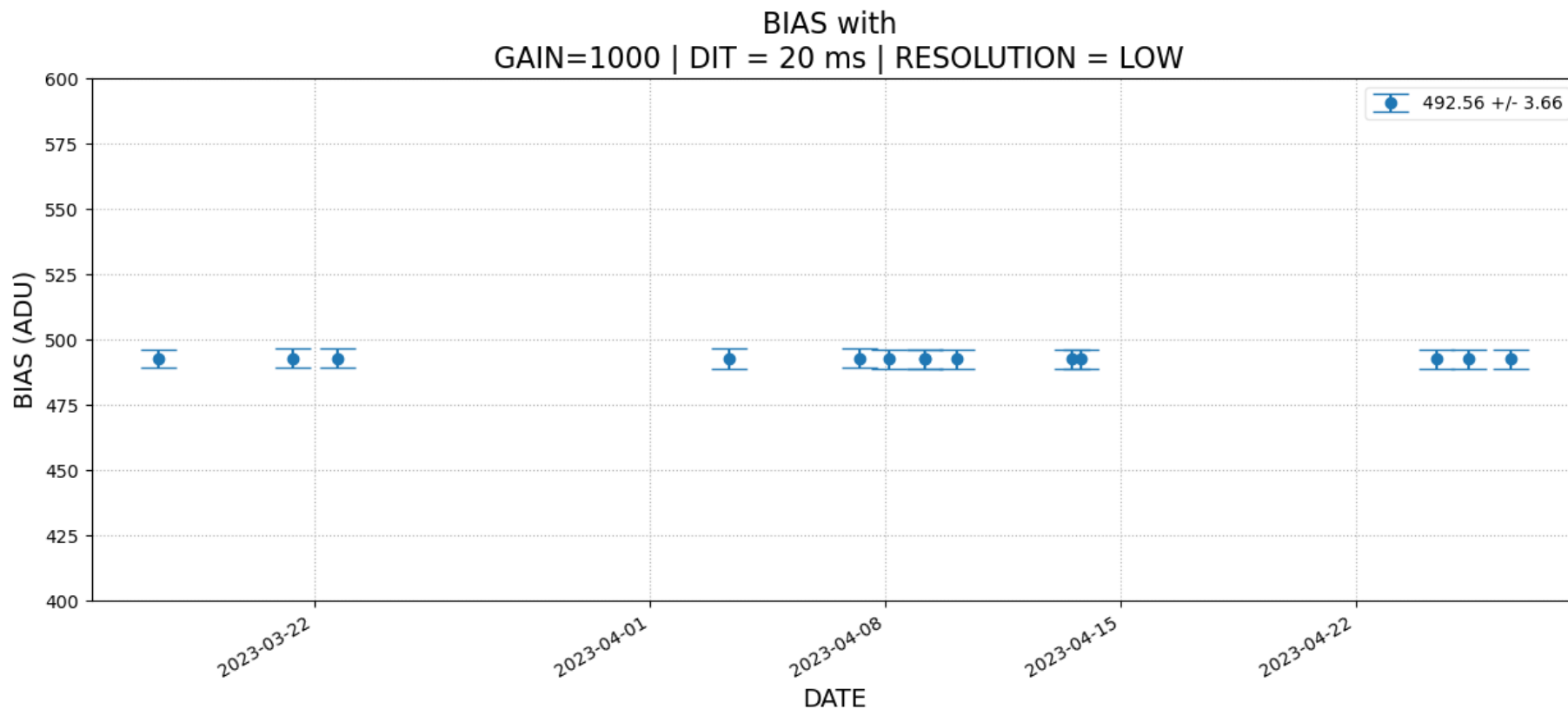
They help us to understand the current state of the instrument.

There are different parameters to distinguish the QC:



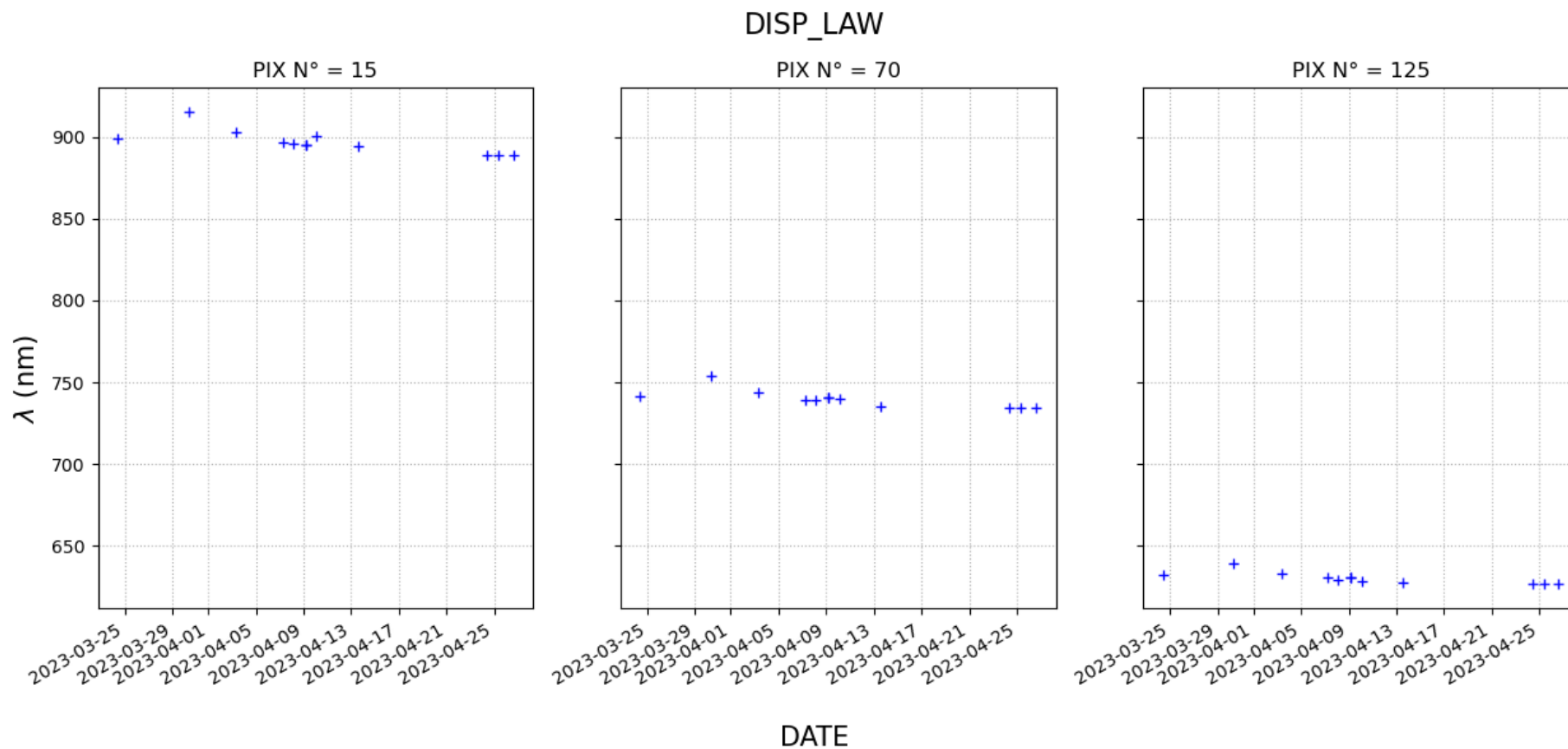
BIAS STS

Represents the background level of the detector, it must be subtracted from the real images to detect only the sky photons. It is obtained by closing the camera shutter and take acquisition.



DISP LAW STS

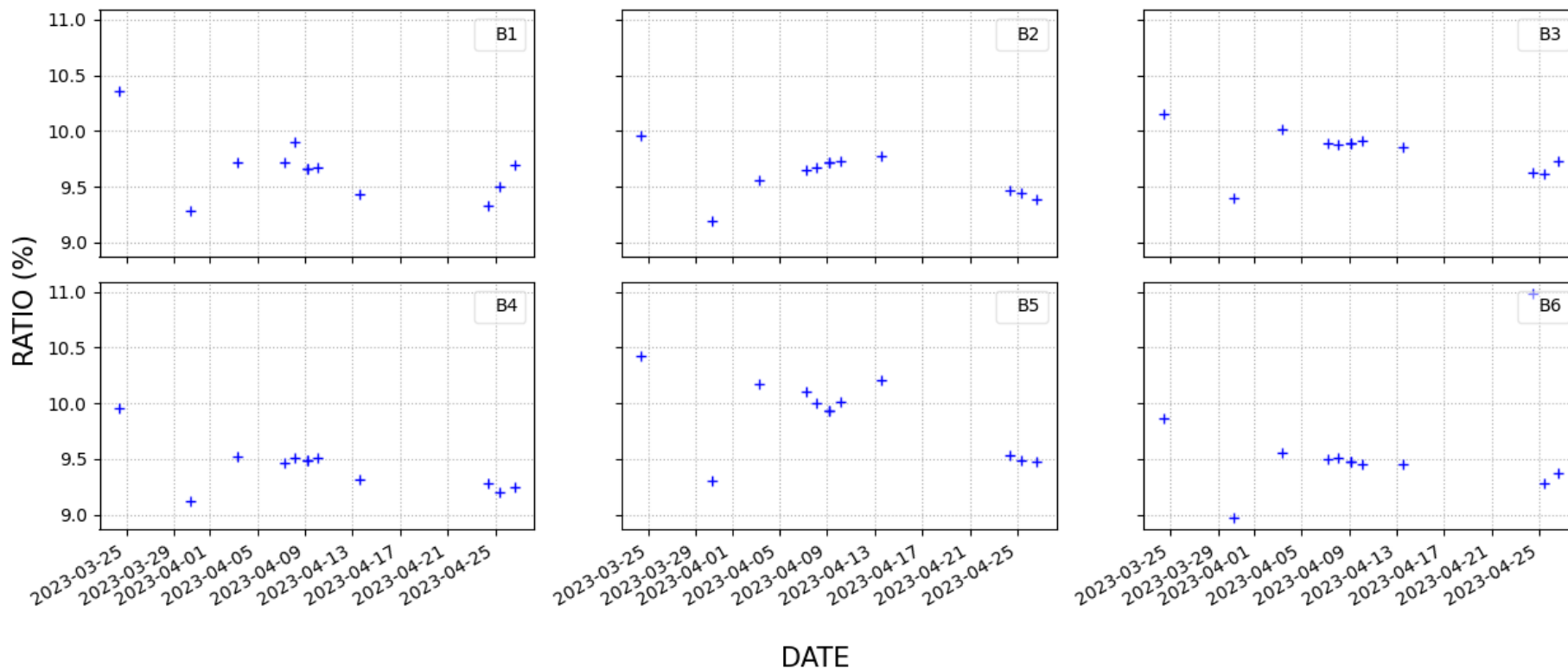
The dispersion law gives the relation between the wavelength and the camera pixels. This plot shows the wavelength value from a given pixel.



KAPPA STS - RATIO

From a given beam, the Ratio is the flux contained by the photometric channel over the flux contained in the interferometric channel. It is expressed in %.

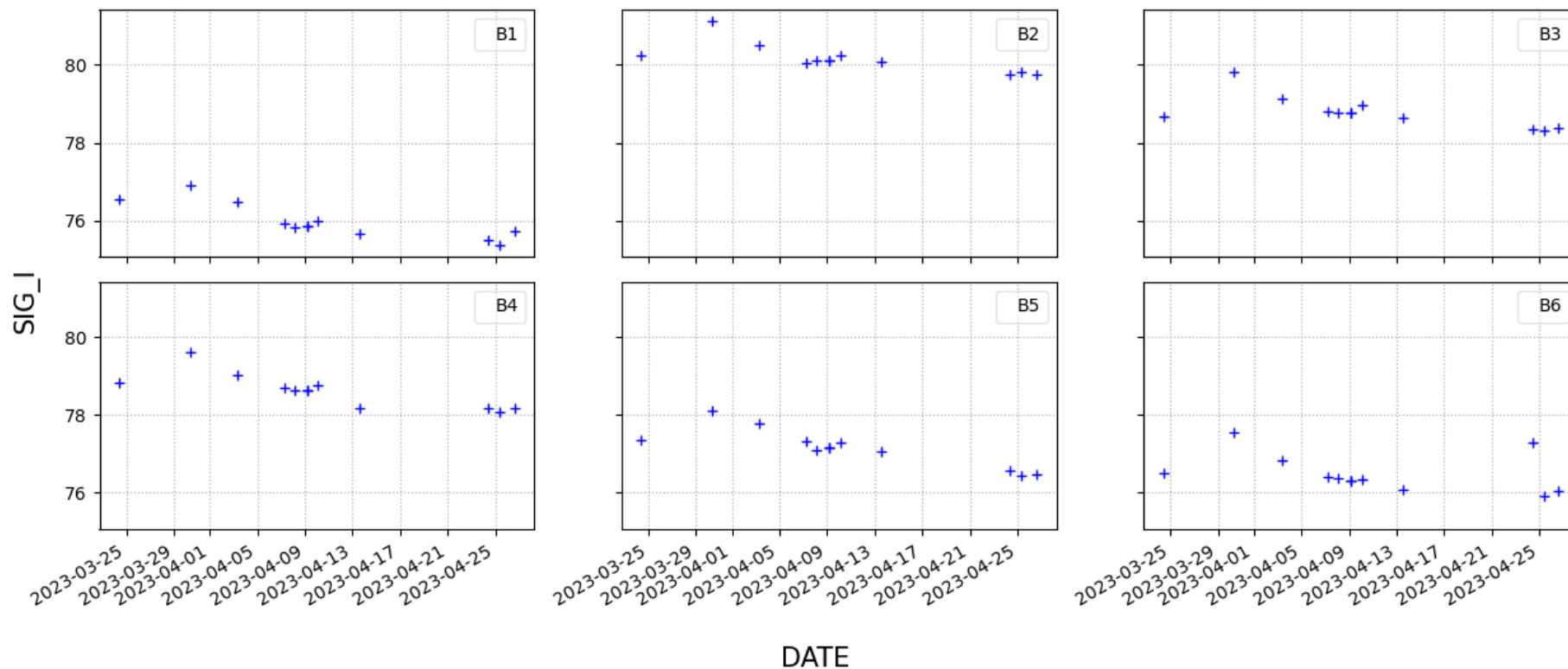
KAPPA with
RESOLUTION = LOW | CENTRAL WL = 720 nm



KAPPA STS - SIG_I

From a given beam, Sig_I is the standard deviation of the interferometric channel expressed in pixels.

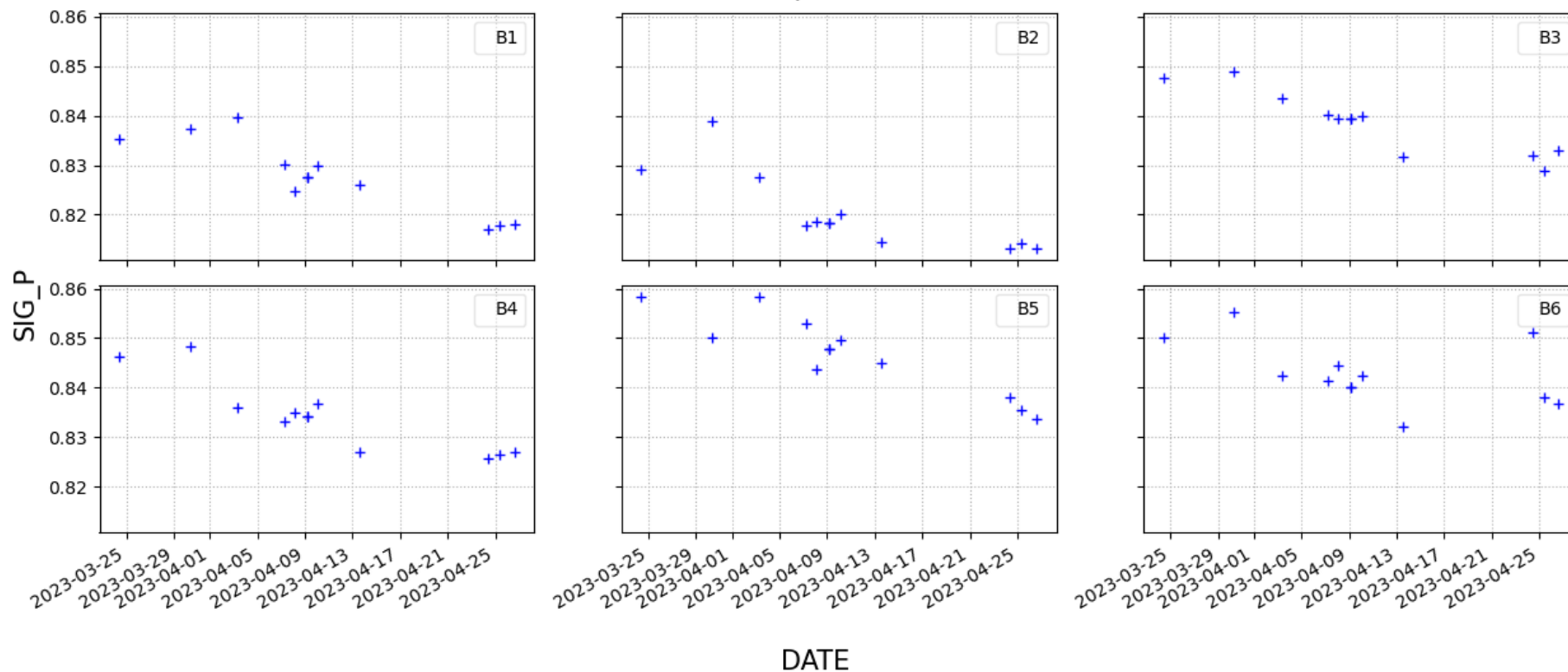
KAPPA with
RESOLUTION = LOW | CENTRAL WL = 720 nm



KAPPA STS - SIG_P

From a given beam, Sig_P is the standard deviation of the photometric channel expressed in pixels.

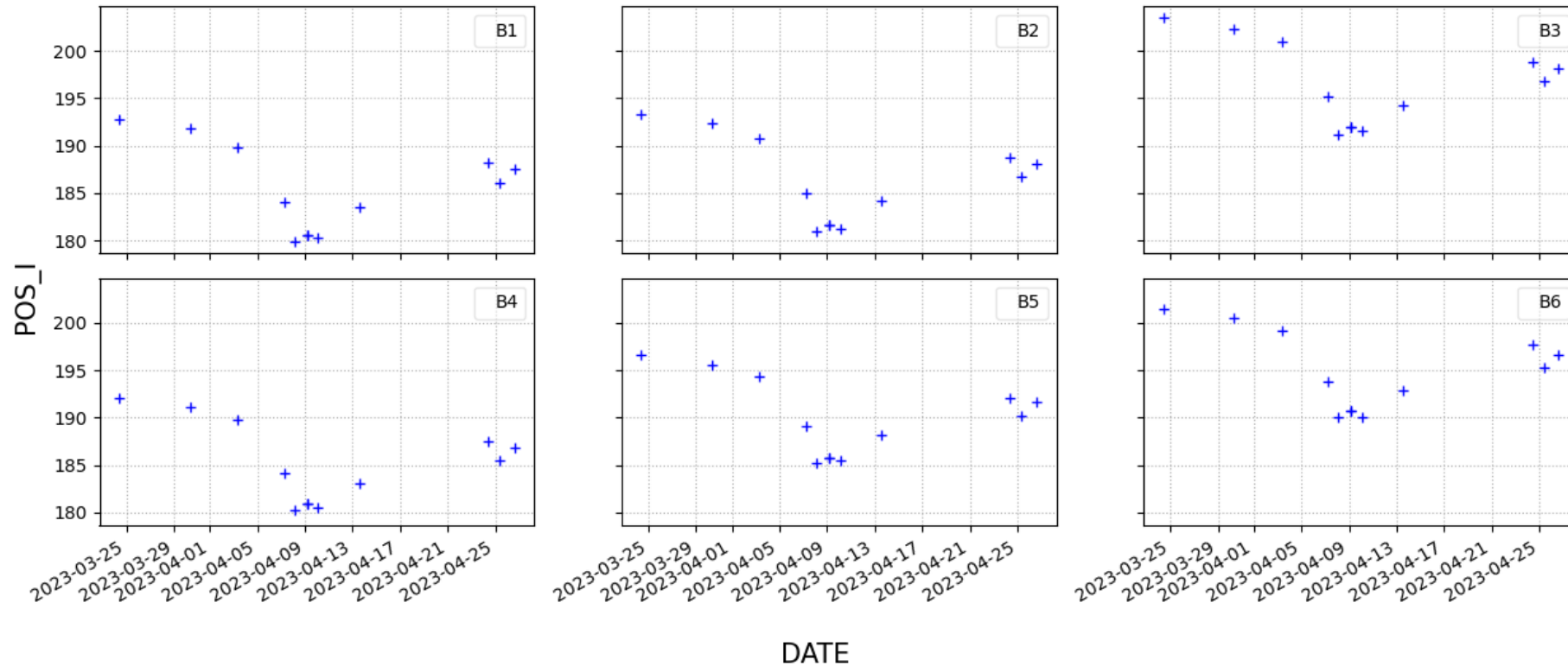
KAPPA with
RESOLUTION = LOW | CENTRAL WL = 720 nm



KAPPA STS - POS_I

From a given beam, Pos_I is the position of the interferometric channel expressed in pixels.

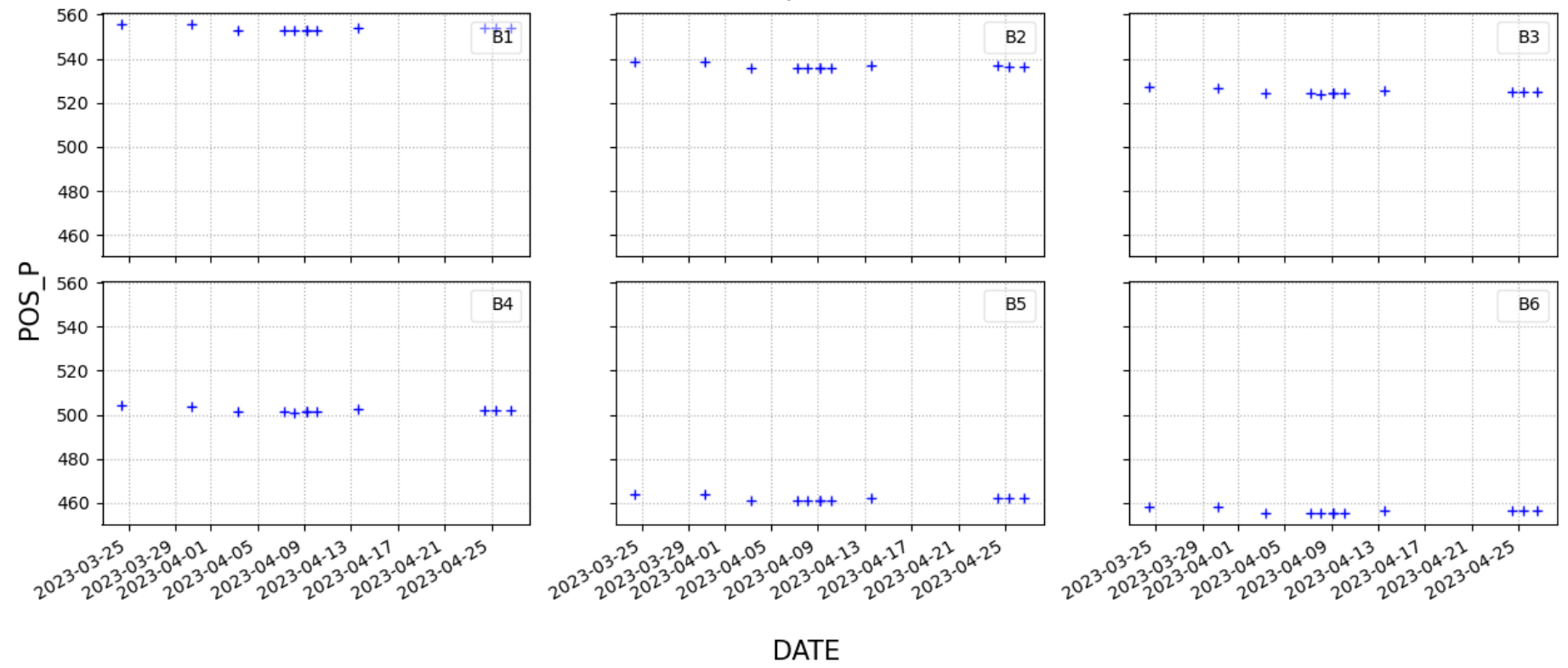
KAPPA with
RESOLUTION = LOW | CENTRAL WL = 720 nm



KAPPA STS - POS_P

From a given beam, Pos_P is the position of the photometric channel expressed in pixels.

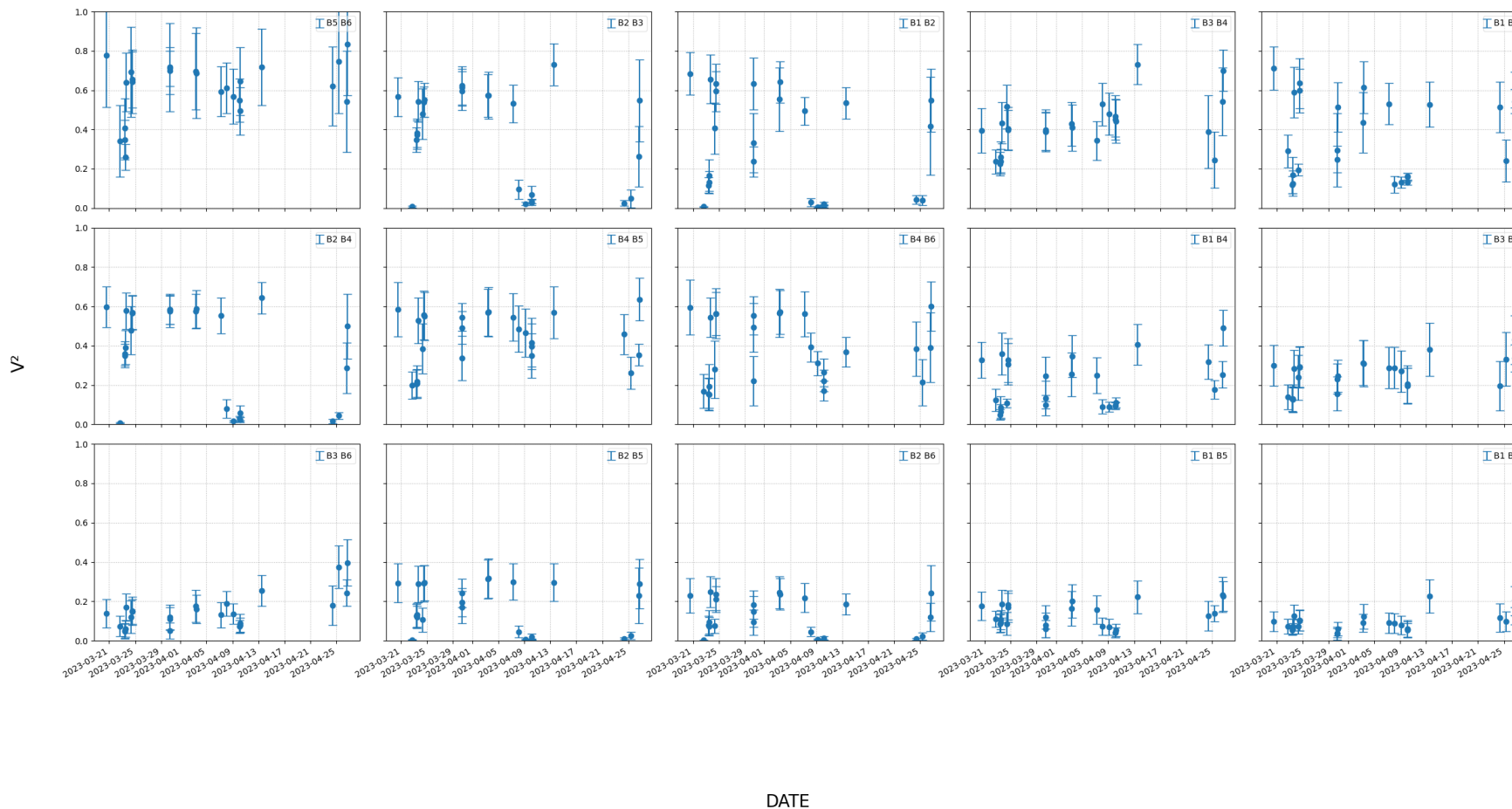
KAPPA with
RESOLUTION = LOW | CENTRAL WL = 720 nm



STS V²

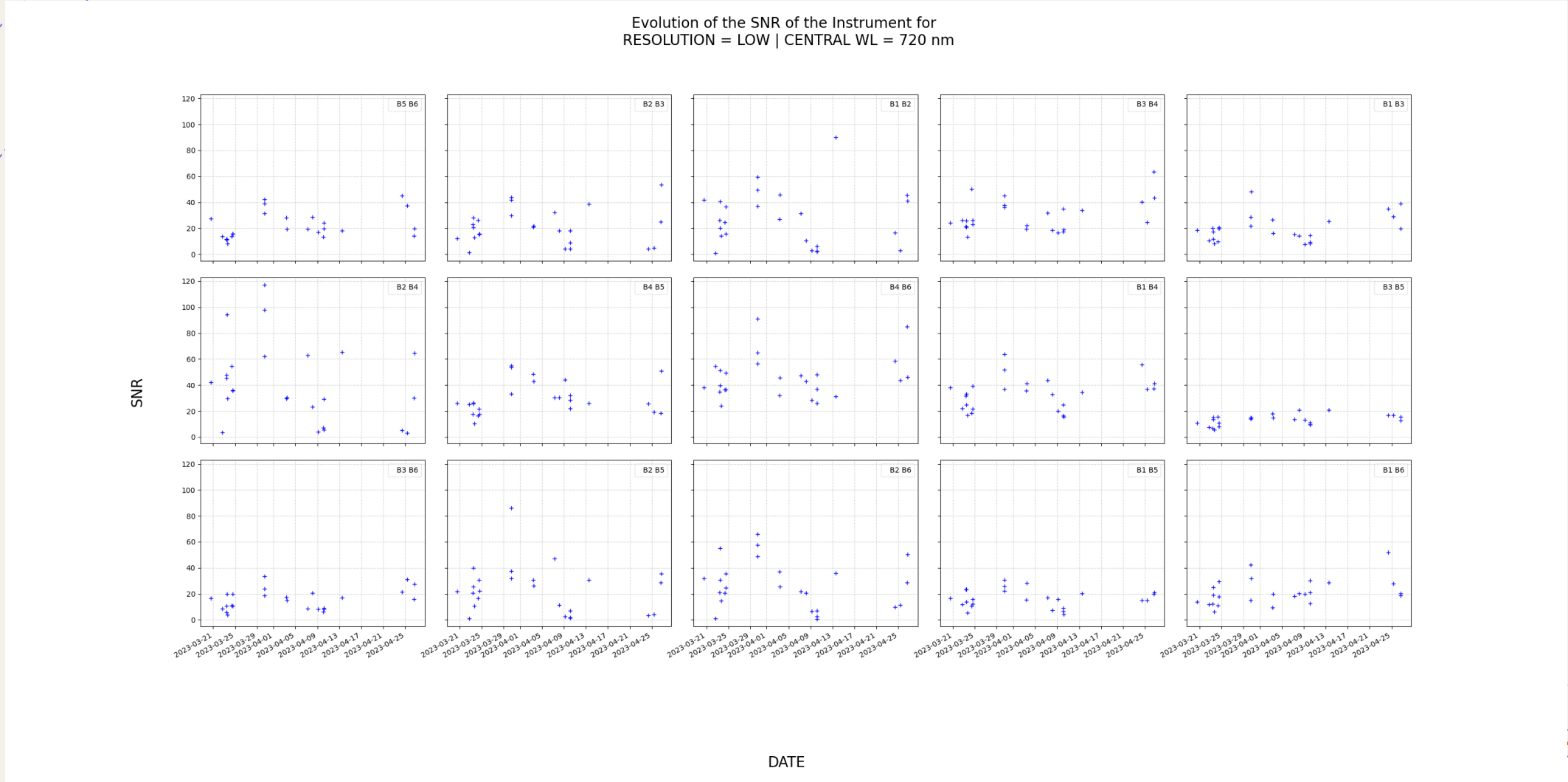
To follow to performance of the instrument, we can use as a tool the squared visibility of each base. Better is the V², better is the alignment and the performance on-sky.

Evolution of the V² of the Instrument for
RESOLUTION = LOW | CENTRAL WL = 720 nm



STS SNR

To follow to performance of the instrument, we can use as a tool the signal to noise ratio of each base. Better is the SNR, better are the performance on-sky.



All plots are available on the SPICA's web page :

<https://ftp.oca.eu/pub/spica/Results/QualityCheck/>