Data processing of VIRCAM data: FAQs

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

Data processing of VIRCAM data: Frequently asked questions

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

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

http://www.eso.org/observing/dfo/quality/VIRCAM/pipeline/problems.html

- **How do I uncompress .fz files?**

Answer: VISTA/VIRCAM data are compressed with Rice lossless compression algorithm. This is one of the standard compression algorithms and more details can be found here:

http://heasarc.gsfc.nasa.gov/fitsio/fpack/.

If you display images using ds9, there is no need to uncompressing them, because ds9 (as well as CFITSIO) supports this format.

- **How can I inspect the data with IRAF?**

Answer: The VIRCAM data are multi-extension FITS files, with 16 extensions, one for each detector array. In IRAF the extensions must be displayer/inspected individually. For example:

display VIRCAM_file_name.fits[4] 1

imexam VIRCAM_file_name.fits[10]

- **Are there any colour transformations available for the VIRCAM filters and another filter system?**

Answer: The UK in-kind VIRCAM archive reprocessing and new ESO VIRCAM imaging pipeline use the 2MASS catalogue to astrometrically and photometrically calibrate the science fields. The color transformations used for the conversion between the VIRCAM photometric system and the system used for photometric calibration (e.g. 2MASS) can be found in the fits tables included in the data distribution (HIERARCH ESO PRO CATG = PHOTCAL_TAB).

For the current VIRCAM detectors and filters, the transformations used in the PHOTCAL_TAB to the 2MASS filters are:

Z_VIRCAM = 2.025*Jmag_2MASS - 1.025*Hmag_2MASS

Y_VIRCAM = 1.610*Jmag_2MASS - 0.610*Hmag_2MASS

J_VIRCAM = 0.923*Jmag_2MASS + 0.077*Hmag_2MASS

H_VIRCAM = 0.032*Jmag_2MASS + 0.968*Hmag_2MASS

Ks_VIRCAM = 0.010*Jmag_2MASS + 0.990*Kmag_2MASS

NB118_VIRCAM = 1.100*Jmag_2MASS - 0.100*Hmag_2MASS

NB980_VIRCAM = 1.680*Jmag_2MASS - 0.680*Hmag_2MASS

Please, consult the website:

http://casu.ast.cam.ac.uk/surveys-projects/vista/technical/photometric-properties

for updates on the relations.