

# VIRCAM Paranal and Garching QC pipeline

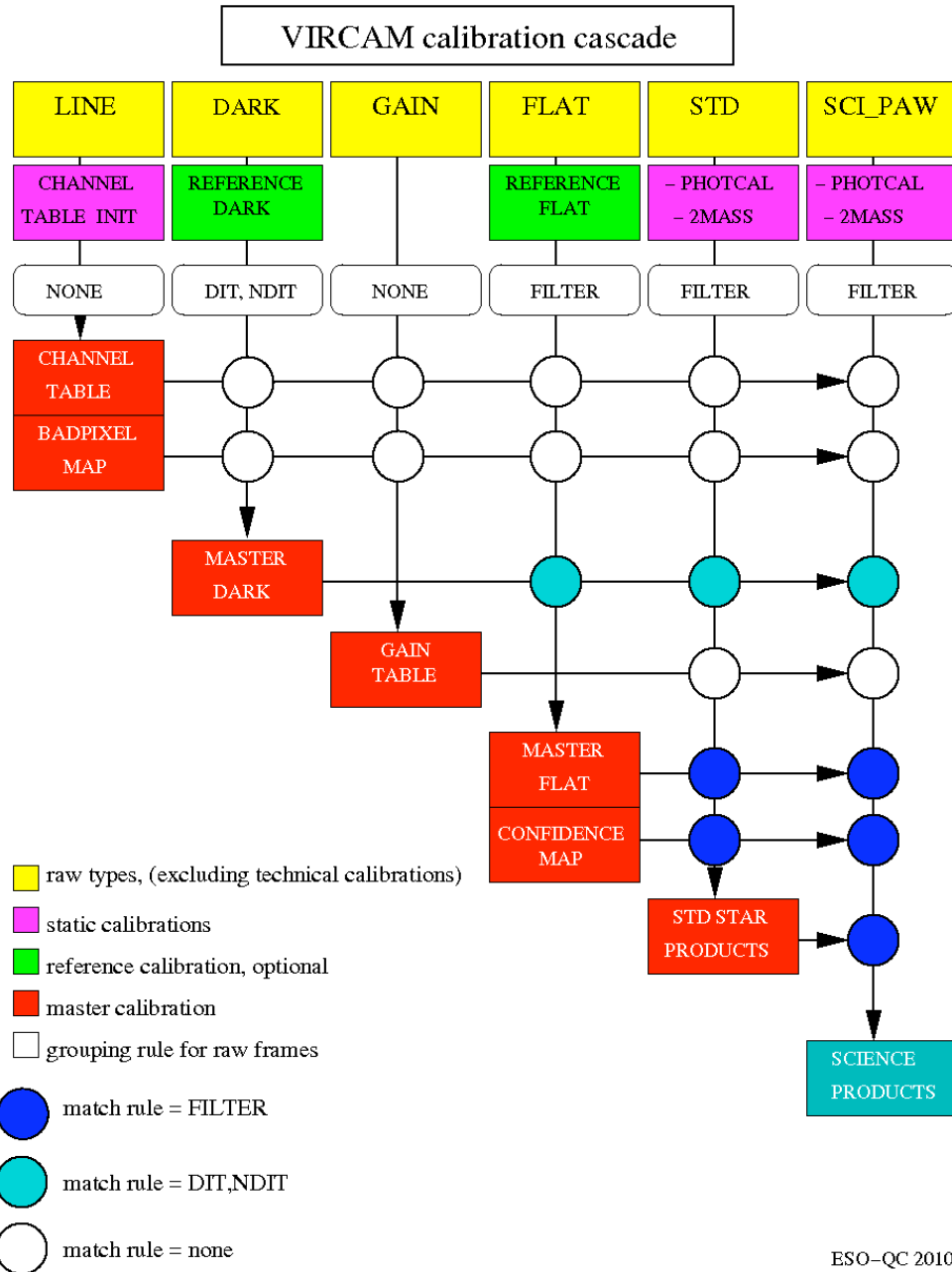
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# Pipeline version & status

- ESO pipeline
  - Developed by CASU
  - Paranal and Garching QC
- Version 0.9.6 → improvements in speed
  - pipeline can cope with data flow from the telescope: all data are reduced on Paranal
- Paranal use – online mode
  - parallel processing of 16 detectors using ESO/DFS internal tools
  - But also installed on the offline machine
- Garching use – offline mode
  - Offline use offers more possibilities to get better science quality products



# Calibration cascade

Information on following web pages:

[http://www.eso.org/observing/dfo/quality/VIRCAM/pipeline/pipe\\_gen.html](http://www.eso.org/observing/dfo/quality/VIRCAM/pipeline/pipe_gen.html)

# Paranal use cases

- Quality control of the calibration and science data
  - Comparison of calibration frames with reference images
  - Check the flux level in flats
  - Check photometric zero point – both standard stars as well as science data
  - Check stellar FWHM vs. seeing requirements in Obs
- Scripts extract information from pipeline QC logs
- All images are reduced
- Reductions up to pawprint level
- QC logs are sent to Garching several times per night/day and are used to monitor instrument health check

# Garching QC use cases

- Verification of completeness of the calibrations
- Verification of quality of calibrations
  - If calibrations are not good, then also the science data will be of little use
- Spot checks only on science data
- Monitoring of certain parameters necessary to check the status of the instrument
- Production of master calibrations for Paranal calibration database

# Limitations or why this is QC and not science grade pipeline

- Paranal online version reduces all data but uses static master calibration database
- Garching pipeline reduces fully only calibrations
- Reductions are OB based
  - Sky subtraction will be poor if there are few jitters, and if no jitters are used one gets zero level products
- Destripping in case of extended objects
- No mosaicing recipes/options