

Quality Control (qualitycontrol)

User Documentation for qualitycontrol

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1 Introduction

This is a prototype of a Quality Control package, and is strung together from bits and pieces in the package ‘noise’ to form an automated command-line software. Documentation for ‘noise’ and its associated ‘bdsm’ exists separately.

Currently, this package does the following :

- (1) Calculates image statistics for every channel,
- (2) Creates an image with the BDSM-detected gaussians overlaid,
- (3) Associates the BDSM-gaussian list with an user-specified list of other gaussian lists (which could be created from other images through BDSM or imported from external catalogues) and
- (4) Plots gaussian parameters of the BDSM-gaussian list against those provided by the user.

2 Contents and installation

The mother package is called NOISE and has its source files in the directory ‘noise’. The main executable here is called ‘qualitycontrol’. The makefile can be used to create the executable. The requirements are the same as for ‘noise’.

The source finding software ‘bdsm’ needs to have been run on the input fits file before running ‘qualitycontrol’ (this reverse order of things will only be temporary) and checks if all the output files of ‘bdsm’ are present or not.

3 Usage: makeqcparadefine

First, the script makeparadefine is run, which creates the file paradefine. Check the name of plotdir inside makeparadefine. This is where the output plots are stored. The name of the input fits file then needs to be changes in the paradefine file. Next the script makeqcparadefine is run.

3.1 qc_asrl_list

Makeqcparadefine asks the user whether ze wants to use an existing version of the file qc_asrl_list or create a new one. This has a list of all the .gaul files to associate the source list of the input image with. If a new one is desired, this file is created and opened using gvim (change to your favourite editor by specifying it inside makeqcparadefine) and can be edited. Each row in the file has the file name and a number and a letter. The number signifies the association radius in arcseconds. The default is zero and is taken to imply half the beam size. The letter is either m or s and tells the software whether that source list is the master or the slave list (i.e., whether the bdsm sources are associated with this list or vice versa). When the user has finished editing the file, any key can be pressed to proceed.

If the user desires to import an external catalogue, ze first needs to convert it to .gaul and .srl from an AIPS-style STAR file, before running makeqcparadefine. This can be done by using the

'st2g' option in the 'sm' submenu of 'noise', as described in the manual. Please read this section of the manual for the exact format of the star file.

3.2 qc_pasl_opts

Makeqcparadefine then asks the user whether ze wants to use an existing version of the file qc_pasl_opts or create a new one. If a new one is desired, this file is created and opened using gvim. This file has the list of x and y axes to plot against each other for each of the associations defined in the qc_asrl_list above. The format is pretty self-evident, a new file is opened with sensible defaults and the codes are always given at the bottom of the file.

When done, run qualitycontrol and the list of plots are written out in a file whose name is printed on the screen.