

WISE Galaxy Processing: Standard (large tiles)

Region tiles (mosaics) have been constructed; source files (per tile) have been extracted; PSF (per tile) have been built

Primary input tile is a WISE source list of the entire region of concern (which may be many tiles, e.g. SGP)

Sample_select

Fortran program that extracts extended source candidates. The list is then sorted by the w1 mag.

Run_list

Script to cycle through tiles for processing; Per TILE

Run_prep

Script to prepare the various files for TILE processing: Each source from the Sample table has a corresponding mosaic set (& PSFs) and stars table

Process

Script to cycle through all sources; for each: create (or target pre-existing) "doit.txt"
Execute binary

Criteria for Selection:

w?sat < 0.05 (non-saturation)
AND
W?rchi2 >= 2 AND
W1 or w2 S/N > 5
OR
XSCPROX <=5 (2MASS XSC)

Sample:
extended
source
candidates

WISEfuzzyPhot

Fortran binary that performs galaxy source characterization

Various Processing Step in sequencing order

- Working area: extract stamp images
- Point-source Test : Rfuzzy
- Foreground Star subtraction
- Source Masking (pre-selected or bright stars)
- Additional source identification and subtraction
- Centroid/Position Determination
- 3-sigma isophotal shape
- Size: 1-sigma isophote
- Photometry
- Extraction: phot table, images and ancillary files

Primary-summary
table of
photometry and
characterization

Curve of Growth
Table

Surface
Brightness
Profiles

Stamp Images:
Input & unc
Cleaned
Model