

ISOCAM 12 μ m Atlas of Bright Spiral Galaxies

Authors:

Bendo, George J.; Joseph, Robert D.; Wells, Martyn; Gallais, Pascal; Haas, Martin; Heras, Ana M.; Klaas, Ulrich; Laureijs, René J.; Leech, Kieron; Lemke, Dietrich; Metcalfe, Leo; Rowan-Robinson, Michael; Schulz, Bernhard; Telesco, Charles

This Highly Processed Data Product contains an atlas of images taken with ISOCAM at 12 μ m on a representative sample of Bright Spiral Galaxies selected from the Revised Shapley-Ames Catalogue.

A Catalogue with flux densities of the central objects using different apertures is also included.

Data and analysis were published in “**An Infrared Space Observatory Atlas of Bright Spiral Galaxies**”, available at:

http://cdsads.u-strasbg.fr/cgi-bin/nph-bib_query?bibcode=2002AJ....123.3067B&db_key=AST

ATLAS OF ISOCAM IMAGES AT 12 μ m

ISOCAM data were reprocessed from the SPD level (OLP 6.3.1):

1. **ISOCAM Interactive Analysis** was used to mask pixels affected by glitches and by hysteresis after a bright emission:
 - a) The model dark current was subtracted
 - b) ‘tcor’ deglitching routine followed by manual deglitch was used.
2. **CIR** data processing software (Starck et al., 1999) was used to reprocess the data:
 - a) “correct_dark_vilspa” was used to subtract the dark current.
 - b) The mask obtained with CIA was applied to remove glitches in the images, or alternatively the “correct_glitch_mr” routine was used in the cases where no manual deglitch was necessary in CIA.
 - c) The “correct_transient_fs” routine, based on the Fouks-Shubert transient correction method was applied to remove transient effects.
 - d) The frames from the first pointings were masked due to the imperfect transient correction.
 - e) A 2 pixels border was masked at each frame because of the poor flat-fielding at the edges of the images.
 - f) CIR’s flatfield library was used.
 - g) Individual images were combined to construct the final maps.
 - h) Maps were converted to mJy/pixel

CATALOGUE OF FLUX DENSITIES AT 12 mm

A **Catalogue** with flux densities derived from the images at 12 μm has been produced. Three apertures of diameter 15'', 45'' and 135'' were used.

The fluxes were calculated after subtraction of a background flux measured from two off-target regions within the images. The 135'' aperture extends out of the image; in this case only the measured flux has been taken into account, without extrapolation outside the image.

The uncertainties given in the catalog come from two sources. The calibration is estimated to be good within 10%. A second source of error is the uncertainty in estimating the background subtracted from the image. It is treated like a systematic error over the entire aperture where the flux measurement is made.

The error in the background leads to a situation in which some sources are detected in 15'' aperture but not in 135'' aperture: a larger aperture introduce noise and if there is no additional signal, the signal-to-noise ratio of the measurements decreases.