

Program structure

formatting routines (HIPE-Scanamorphos interface):

/path_install/SCANAMORPHOS/pro_format_input/

processing and visualization routines:

/path_install/SCANAMORPHOS/pro_scanamorphos/

examples scripts and input ascii files (examples from paper):

/path_install/SCANAMORPHOS/examples/

All the information you need (read carefully) :

README (installation and usage instructions + options list)

CHANGES (summary of changes in successive versions)

examples/README_PACS (usage instructions + examples)

formatting of input data

level-1 frames (1 fits file per obsid)



convertL1ToScanam.py (in examples/)

level-1 data with formatted masks
(Badpixels, Nonscience, Saturation, Glitchmask)



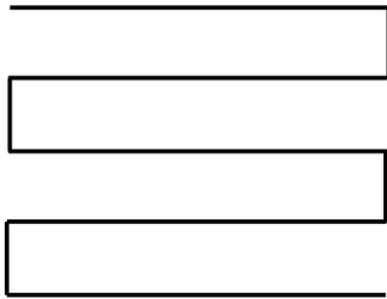
convert_hcssfits_pacs.pro (in pro_format_input/)

input IDL structures (1 .xdr file per repetition per obsid)
(non-nominal frames and slews between scans discarded)

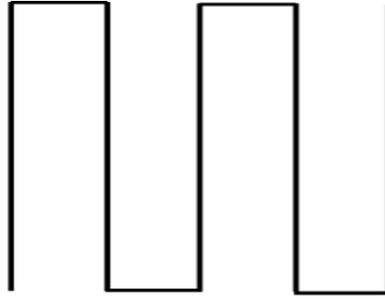
```
nobs = 2
obsid = ['1342187067', '1342187069']
for i = 0, nobs - 1 do convert_hcssfits_pacs, $
dir_in='/data/pacs/n4559/processed_obsid/', $
dir_out='/data/pacs/n4559/input_scans/', $
root=obsid(i)+'_blue', color='blue'
```

ordering of input scans

input scans must alternate their orientation on the sky



scan



cross-scan

The .xdr files for each input scans must be put into the file called **scanlist_pacs**
The first line of this file **must** contain the directory where the files are

example: observation with 2 obsids and 1 **scans** and 1 **cross-scans**, rep=2

If there are more than one repetition:

stru_obsid1_cam_scan1.xdr
stru_obsid2_cam_scan1.xdr
stru_obsid1_cam_scan2.xdr
stru_obsid4_cam_scan2.xdr

typically for PACS : $n \times$ **scan**, then $n \times$ **cross-scan**

The same structure must be repeated for each of them

options

scanamorphos, /pacs, nob=4

mandatory for PACS:

/pacs, nob = n (n : number of distinct obsids)

(to take into account PCAL flash transient at the start of each obsid)

degree of interactivity:

1) command-line input:

- no visualization

- */visu* : shows the result of each intermediate step

- */debug* : shows more plots (may be hard to interpret)

2) batch mode: run *pro_format_input/batch_process.pro*

informative options:

/version : prints version number

/vis_traject : allows to check orientation and trail of each scan
(successive input scans have to alternate orientation)

options

processing options:

/parallel : for observations in PACS-SPIRE parallel mode

/galactic : to preserve sky gradients in very bright fields

/minimap : for observations in "mini-scan map" mode

/nocross : for a single scan or non-overlapping scans

/jumps_pacs : to detect and mask brightness discontinuities

/nothermal : to skip short-timescale average drift subtraction

/noglitch : to skip glitch masking

nblocks = nbl : to force slicing of field into nbl sub-fields

options

astrometry and output format:

*orientation of output map : either astronomical (N up – E left)
or scan-parallel (to work with PRFs or for elongated fields)*

pixsize: Pixel size of the final map : free (FWHM/4 by default)

*/frame_fromallscans : useful if two or more epochs combined
(to determine spatial frame from all scans, not just first 2)*

hdr_ref = hdr : to use reference header for output map

*/one_plane_fits : to produce separate fits for each plane
instead of fits cube (for very large maps)*

batch processing

```
batch_process, master_list='/path_batchlists/master_list_1'
```

```
root_file_name
```

```
/data_path/input_scans/
```

```
pacs
```

```
nobs=4
```

```
orient='astro'
```

```
pixsize=2.85
```

```
stru_1342187067_red_scan1.xdr
```

```
stru_1342187069_red_scan1.xdr
```

```
stru_1342187067_red_scan2.xdr
```

```
stru_1342187069_red_scan2.xdr
```

```
stru_1342187068_red_scan1.xdr
```

```
stru_1342187070_red_scan1.xdr
```

```
stru_1342187068_red_scan2.xdr
```

```
stru_1342187070_red_scan2.xdr
```

```
#####
```

download, documentation,
reference:

<http://www2.iap.fr/users/rousseau/herschel/>