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PACS Stable Developer Build 8.0 1559 (22/07/2011)

Disclaimer :

The PACS stable developer build shall be used by ICC staff and similar user profiles. This build contains new/improved features, but did not undergo the careful acceptance tests as the user releases. It is meant to support instrument experts and prepare the next user release by using it during operations. This way it is possible to detect eventual problems on time and avoid a 'big bang'. Therefore results need to be understood.

Important for Spectrometer products!

Red lineId has increased by 100 to distinguish from the blue, see PacsSpr:3721

Known Problems

- HccsSpr:12922: ArrayData Viewer is called, Image Viewer for Array Datasets is opened
- PacsSpr:3824: photNonLinearityCorrection does not work like LineaCorr - map is corrupted
- PacsSpr:3774: Make MaskViewer available by default in the global namespace

Calibration

General changes

- importUfDirToPal() was replaced by importObservation()
- PacsSpr:3505: The source code and documentation is now accessible for all PACS tasks in the HIPE Task View.

Photometer Processing

- PacsSpr:2820: Easier data access from the Mapindex. MapIndex.get(row, col) returns a MapElement array. Each MapElement now knows about the detector row and detector column, instead only about the detector number. row = MapElement.row, col = MapElement.col, det = MapElement.detector. The MapIndex returns also an array of rows and columns: rows = MapIndex.getDetectorRows(maprow, mapcol), cols = MapIndex.getDetectorCols(maprow, mapcol)
- PacsSpr:3201: the Scanamorphos baseline subtraction tasks and the destriper are available and work (package herschel.pacs.spg.phot.scanam). Still sparsely documented and beta quality
- PacsSpr:3682: A new Task MapDeglitchTask deglitches a map without mapindex.
- PacsSpr:3793: The mapsize calculation for maps around 0 degrees Ra has become more reliable.

Spectrometer Processing

- PacsSpr:3762: correct propagation of EXPOSURE and STDDEV dataset in specAddNodCubes
- extended test harnesses, see e.g. PacsSpr:3209
- PacsSpr:3612: Fixed a bug in the usage of wavelengthGrid: This task created a wavelength grid for each slice, instead of one wavelength grid which encompasses all slices of a single line.
- PacsSpr:3767: Improved the selection of the off-position slices in specProject.
- PacsSpr:2760 The multifit option in the spectral fitting gui now also works for PACS data.
- PacsSpr:3721: Red and blue camera spectra can now be combined in a single context in the level-2 processing, **therefore, the lineId has changed for the red camera: 100 is added!**
- PacsSpr:2765 New footprint visualisation tool. This tool can be accessed as follows:

- ◆ On the command line:

```
fp = pacsSpectralFootprint(image)
fp.addFootprint(frames)
fp.addFootprint(cube)
```

- ◆ Via the Tasks panel: Select an image, frames or cube in the Variables panel, go to applicable tasks in the Tasks panel and select the task `pacsSpectralFootprint`.
- ◆ Once the GUI appears you can drag any frames, cube or rebinned cube into it to show its footprint.
- ◆ You can also start with a PACS spectrum in case you have no image, but just want to see the footprint on an empty background.
- ◆ The image needs to contain a valid WCS.

Spectrometer Product improvements:

- improvements of the browse image product, especially for SED mode, range scan, see e.g. PacsSpr:3709
- correct `minWave`, `maxWave` in meta data and `BlockTable` of products, see e.g. PacsSpr:3725, PacsSpr:3632, PacsSpr:3569
- **red `lineId` has increased by 100 to distinguish from the blue**, see PacsSpr:3721

Pipeline / Ipipe Scripts

- PacsSpr:3780: implemented `PacsSpectra2Spectrum1dTask.py` converts pacs data to a `Spectrum1d`
- improvements of the flatfielding task, see PacsSpr:3777, PacsSpr:3773
- improvements of plotting in ipipe scripts, see e.g. PacsSpr:3396

Documentation

- improvements of javadoc, see e.g. PacsSpr:3733
- `urm` entries are now accessible from the task viewer in `hipe`, see e.g. PacsSpr:3509, PacsSpr:3505, PacsSpr:3670
- PacsSpr:3252: Remove sliced tasks from URM and add the parameters introduced by `PacsSlicedTask` to each task

Coming recommended build

Coming Recommended Build

Previous recommended builds

- PACS Build 7.0 1931 (24/05/2011)
- PACS Build 7.0 1786 (12/04/2011)
- PACS Build 6.0 2044 (23/02/2011)
- PACS Build 6.0 1985 (04/02/2011)
- PACS Build 6.0 1196 (26/11/2010)
- PACS Build 6.0 562 (20/10/2010)
- PACS Build 5.0 975 (12/08/2010)
- PACS Build 5.0 383 (23/06/2010)
- PACS Build 4.0 700 (28/04/2010)
- PACS Build 3.0 1134 (24/02/2010)
- PACS Build 3.0 455 (14/01/2010)