DEMETRA changelog

[5.1.6.0] - 2020 06 19

Added :
- LISA spectroscope support
- Process
- Hot pixels sigma threshold coefficient edition.
- FITS keywords added: GEO_LONG / GEO_LAT / GEO_ELEV / JD_OBS / JD_MID
- Alpy & LISA: Option to save the last 2d processed spectrum FIT file.

Changed :

- Extraction areas are now updated according to the camera binning setting.
- FITS Keywords are now updated using observation data and process only.
- Cooler status display in acquisition user interface.
- Configuration files location : each user can configure Demetra individually.
- Each users on a same computer has his own Demetra configuration
- Reworked user interface
        - Calibration line list edition
        - Observation and session context edition
        - Alpy/Lisa extraction areas edition.

Fixed :

- All
  - BESS archive conformity (BSS_ITRP / BSS_TELL / BSS_COSM / BSS_NORM).
  - Fixed process errors when using non Demetra images (missing FITS keywords).
  - Image acquisition no more add empty image on interrupted acquisition.
  - Fixed file access error when another process already opened the file.
  - Fixed acquisition saturation orange warning text.
  - Fixed process status after changing the observation name.
  - Fixed UTC time management.
- Alpy&Lisa
  - Selecting a response curve out of the session folder will retrieve it into the session folder (copy).
  - Fixed image acquisition freeze when no spectrum area is set.
  - Manual calibration
    - Fixed wrong pixel report from line selection tool.
        - Added 'Remove' lines button
  - Fixed output tab accessibility for observation that contains images not acquired by Demetra.

[5.1.4.0] - 2020 02 28

Fixed

- eShel process

  - Fixed order detection default parameters.

  - Zip archive default name no more contains '-1'.

  - Fixed output tab horizontal axis color bug for each spectrum order display.

- Alpy

- Calibration: Restored previous default calibration lines list.

[5.1.3.0] - 2020 02 11

Fixed

- Automatic calibration failure on a specific lines configuration. (Line end index outside calibration spectrum)

[5.1.2.0] - 2020 02 09

Fixed

- Old automatic calibration parameters file read : this bug was preventing Demetra to run.

[5.1.0.0] - 2020 01 28

Added:

- Spectrum chart creation.

   - Can generate file: format png / pdf / svg

      - Copy to clipboard option added to every spectrum display

- New automatic calibration line detection method. (old is accessible from configuration menu (absolute threshold (old)/ relative threshold (new))

- Process log: added Observation context information (observer, site, instrument)

Debugged:

- Calibration method selection was not effective (changing from manual to automatic was doing nothing)

[5.0.0.0] - 2019 12 30

Added:

- «LISA» process

Changed:

- New Alpy and LISA automatic calibration user interface

- Reviewed process log.

- Process step intermediate files are now stored in an observation specific subfolder. (new observation only)

Fixed :
- Echelle processes instrumental response builder tool fixed

[4.2.6.0] - 2019 11 29

Fixed :

- Alpy calibration parameters edition

[4.2.5.0] - 2019 11 27

Fixed :

- Process step files were always saved even the save step files checkbox was not checked.
- Added Observation archive configuration files added (note: still missing log files)
- eShel step instrumental response was not operant when specifying a response curve

Changed :

- Reduced observation file size
- Removed echelle process blaze function values
- Removed calibration step detected lines lambda.
- Removed hot pixel values
- Process definition from Observation

[4.2.4.0] - 2019 11 22 - Added observation subfolder

Added :
- Process step files storage moved to an observation dedicated subfolder. (Old observation keeps theses files under the session folder)

Changed :

- Archive configuration files moved to configuration subfolder

Fixed :

- Whoppshel and eShel observation archive (export).
- Process log file correctly added to observation archive.
- Calibration tool now display blaze result spectrum instead of stack result spectrum.

[4.2.3.0] - 2019 11 19 - Whoppshel

Fixed :

    • Spectrum live display on a Whoppshel observation : order selection tool displayed

[4.2.2.0] - 2019 11 17 - Alpy / eShel / Whoppshel

Changed :

    • eShel Setup demonstration observations replaced
    • eShel calibration lines replaced

Fixed :

    • Alpy: Old observation import failed to load calibration parameters

[4.2.1.6] - 2019 11 14 - eShel

Fixed :

    • Changing order reference (graphical purpose) no longer reset observation process
    • Running full eShel process display final file at the end of the process
    • Order detection tool «Display» button colors changed to be more visible

[4.2.1.5] - 2019 11 13 - eShel

Added :

    • eShel observation output tab:
    • Display an overview of all order spectrum in a single U.I. panel
    • Allow zip archive export of observation spectrums (BESS compatible FITS format or DAT format)
    • New eShel process step: «Calibration detection». This step allow an easy calibration tuning with minimal human interaction.

    • Calibration lines editor (accessible in eShel calibration steps wizard U.I., advance tab)
    • Calibration step display calibration lines
    • eShel calibration device
    • Added 1 second delay after sending commands to the device in order to start the acquisition after that the device is physically ready.
    • Shut down Lamp at the end of acquisition (set light source to «object»)
    • New process for Whoppshel device: same that eShel process with different order range defaults values and orders lambda values.

Removed :

    • eShel :

        - order detection parameters no longer contains calibration

- calibration manual mode
- Target type choice. (Not applicable for eShel spectrum)

- Observation preview expander when creating a new observation.

Changed :

- Editable primary and secondary calibration order
- eShel geometry parameters: slant correction disabled by default

Fixed :

- eShel:

    - Horizontal axis display range automatic computation on calibrated spectrum
    - Parameters edition correctly update observation
    - Process status U.I. (Green/Orange/Red) correctly update according to process steps run status

[4.2.0.0] - 2019 09 10

Added :

- Observation can be copied from session observation list context menu
- Alpy calibration: Display hydrogen or calibration lines lines on result spectrum
- Image display: Mouse right button double-click will auto-threshold the display on 2D FITS display.
- Fits viewer: Added a hide/show fits header button
- Instrument name (process) displayed on main window

Changed

- Pixel intensity display (ADU) will no longer switch to spectrum intensity display when moving mouse on the spectrum display.
- Process Alpy: Geometry tools parameters U.I. harmonized with other tools.
- Focus tool can run using contrast or FWHM (horizontal or vertical)
- Spectrum display area over image : Grip size increased
- New Demetra logo

Fixed :

- Process Alpy and eShel: Process status properly updated after removing images from baskets
- Process Alpy:
    – Properly update status while computing entire process
    – Geometry computation tilt/smile parameters U.I. (wrong image name used, wrong image index. . .)
    – Response builder tool scale spectrum algorithm (scale coefficient)
- Moving the spectrum display separator to the top will no logger drop bottom toolbar
- Process Alpy and eShel (#650): FITS file loading error message during process (stack file).
- Real number parsing error while Visual Spec is running.
- Spectrum curve display over image for eShel order

[4.1.5.0] - 2019 06 27

Added :

• eShel calibration wizard advanced mode display found/associated lines and detection boundaries
Fixed
• Copying an observation without the process parameters now use default process parameters.
• Calibration wizard U.I.: Rights parameters used and saved
• Process time performance enhancement by 10%

[4.1.4.0] - 2019 06 20

Added :

• eShel calibration X wizard – Visual vertical bar representing the central lambda value margin. – Advanced parameters and results edition.

Changed :

• eShel X calibration horizontal orders offset computation

Fixed :

• Automatic threshold for eShel order extracted image visualization

[4.1.3.0] - 2019 05 20

Fixed :

• U.I. freeze while process is running.
• eShel process obsolete file deletion (extraction step)

[4.1.2.0] - 2019 03 26

Added :

• Reference order view for eShel image display.
• eShel instrumental response builder tools: order management
• eShel automatic order detection
• eShel automatic lambda calibration

Changed :

• Reworked order detection result display.

[4.0.3.0]

Fixed :

• Observation compatibility: 'scale' is now properly imported from old 'normalization' name.
• FITS : Comment restriction to ASCII format. (other specials characters are replaced with a '?')
• Acquisition duration : debugged manual edition.

[4.0.2.0] - 2018 07 06 - Official OHP 2018 version.

Fixed :

• FITS : corrected a bug that prevent file to open.
• Spectroscopy areas (spectrum / backgrounds) : keep them displayed or hidden according to the

checked state 'show' checkbox
- Process status link to the source observation when duplicating an observation
- FITS header: First letter comment string display

Added :

- Acquisition: added histogram tool
- I.R. builder tool:
- Added curve filter buttons (showing only I.R. curve (raw/smooth) | showing only source curve (raw/corrected))
- default preselection of balmer and atmospheric lines removal.
- Alpy process extended object management (nebulae. . .)

Changed :

- Acquisition : saturation warning is now computed only on the spectrum area.
- Observation : Added Point-like or Diffuse observation type.
- ASCOM Camera: removed camera serial number displayed in camera name box.
- Acquisition :
  - number of image edition is disabled when preview mode is selected
  - saturation warning is now computed on spectrum area. (currently only refreshed on new imageacquisition).
  - U.I. checkbox display/hide is now still functional after new acquired image
  - added sensor temperature in FITS key 'CCD-TEMP' to recorded FITS image
- Process :
  - added RMS value in the process log when computing the calibration coefficients.
  - forbid dark extrapolation when compute required thermal map. process will stop.
- I.R. builder tool : added new curve live display to help to find the continuum coefficient.
- archive : The already exist file warning now has button to ignore or cancel the warning.
- FITS viewer : fixed a bug that was preventing FITS file to open.
- Added eShel pre alpha process (not usable)
- FITS standart HDU extension format type BINTABLE management.