



Reflex, a Flexible Scientific Workflows Environment

K.Banse, P.Ballester, D.Bramich, V.Forchi, W.Freudling, C.Garcia, M.Klein-Gebbinck, A.Modigliani, M.Romaniello

UVES Workflow For Point Source Blue Arm Echelle Data (v. 4.7.8)

Workflow Instructions

To run this workflow on the demo data:
- Turn on highlighting. Choose "Tools" -> "Animate at Runtime"
from top menu and set it to "1".
- Press the "Run" button OR cntrl-R to start the workflow.

To run on a different data set:
- Click on ROOT_DATA_DIR and set as appropriate.
All subdirectories of RAWDATA_DIR will be searched for data.
- If desired, change END_PRODUCTS_DIR.
- Press the "Run" button OR cntrl-R to start the workflow.

To monitor the progress of the workflow in more detail:
- Open "Window" -> "Runtime Window" in top menu before starting the workflow.

Setup Directories

Input:

- ROOT_DATA_DIR: /home/reflex/Reflex_10/Data/
- RAWDATA_DIR: \$ROOT_DATA_DIR/reflex_input/UVes_Blue

Working Directories:

- BOOKKEEPING_DIR: \$ROOT_DATA_DIR/reflex_book_keeping/UVes_Blue
- LOCS_DIR: \$ROOT_DATA_DIR/reflex_logs/UVes_Blue
- TMP_PRODUCTS_DIR: \$ROOT_DATA_DIR/reflex_tmp_products/UVes_Blue
- END_PRODUCTS_DIR: \$ROOT_DATA_DIR/reflex_end_products

Output:

If END_PRODUCTS_DIR or ROOT_DATA_DIR is changed using the Browse button, the leading 'file:' has to be removed manually

Global Parameters

- FFTS_VIEWER: fv (fits viewer to use for the inspection of input/output products)
- ESORExArgs: --suppress-prefix=TRUE (esorex arguments)
- EraseDirs: false (Change "EraseDirs" to true to erase BOOKKEEPING_DIR, TMP_PRODUCTS_DIR and LOCS_DIR each time the workflow is run (Lazy Mode won't work anymore))
- END_PRODUCT_SUBDIR: 2010-07-07T18:10:29/Science.DataSet1 (This is set automatically)
- GLOBAL_TIMESTAMP: 2010-07-07T18:10:29 (This is set automatically)

Workflow Steps:

- Step 1: Data Organisation and Selection
- Step 2: Creation of Master Calibration Files
- Step 3: Wavelength and Response Calibration
- Step 4: Spectrum Extraction
- Step 5: Output Organisation

Flowchart: The workflow starts with 'Initialise' and 'Data Transfer'. It proceeds through 'Data Filter', 'Spectrum Locator', 'Master Dark Creation', 'Order Detection', 'Master Flat Creation', 'Wavelength Calibration', 'Instrument Response', 'Spectrum Extraction', and finally 'Product Renamer'. A 'Data Organizer' component is also shown at the beginning.

Interactive Spectrum Extraction Window: This window displays three plots: 'Extracted and Merged Spectrum, No. Orders: 31', 'Flux Calibrated Spectrum, No. Orders: 31', and 'Spectrum Extraction'. It includes a 'Parameters' panel on the right with options for 'reduce extract method', 'reduce extract profile', 'reduce extract wavelength', 'reduce extract oversample', 'reduce extract gain', 'reduce extract flat', and 'reduce extract response'. The 'Spectrum Extraction' plot shows 'Flux (Counts)' vs 'Wavelength (Ang)' with a 'Min Ripple: 1.07' and 'Max Ripple: 0.493'.