



Pipeline de reduction de données Neo-Narval

Torsten Böhm

Libre-ESpRIT is a data reduction package for reducing echelle spectropolarimetric data that:

- Trims the data if needed to the appropriate size
- Subtracts a fit to bias values averaged on 8 px by 8 px boxes
- Locates the desired number of orders on the chip (starting with an approximate location for the first order at row 2300)
- Measures the geometrical shape (curvature) of those orders
- Corrects for pixel-to-pixel sensitivity differences (divides by an average flat field)
- Models the slit geometry (direction and curvature)
- Masks bad pixels using a bad pixel map
- Identifies comparison lines for each order
- Rejects blended lines
- Calibrates each order, giving the mean resolution per order
- Checks calibration for order overlap
- Finds the pixel-to-wavelength relation so the data can be calibrated in wavelength
- Performs an optimal extraction of the spectra (produces 1D spectra from 2D exposures)
- Computes intensity spectra with error bars
- Combines the appropriate exposures to calculate the polarization spectra (if appropriate)
- Removes the continuum polarization (optional) to give the polarization in the lines with respect to the polarization in the continuum
- Combines the spectra on an exposure to extract the sky spectra and the object minus sky spectra (if appropriate)
- Applies corrections (to wavelengths) to compensate for Earth's motion
- Divides the spectrum by a flat field response (optimal)
- Normalizes the continuum (optional)

