CIAO 2 Threads

"Threads" are processing recipes. They are designed to teach users by leading, step-by-step, through a procedure. These threads range from basic (downloading data), to more complex (multi-chip exposure map), but each thread describes the process in the same easy-to-use manner.

Some threads have been made more automated in the form of 'scripts'. Visit the scripts page for a more complete description and the complete list of scripts.

Note: the following threads are designed to work with **reprocessed** data. If you have "old" data (i.e. processed with ASCDSVER below R4CU5UPD8), we strongly suggest to check the Chandra Archive for an updated version of it.

- Introduction
  - How to Download Chandra Data from the Archive
  - Introduction to CIAO 2.0
  - Introduction to the Data Model (dm)
  - Introduction to *Firstlook*
  - Introduction to *Prism*
  - Introduction to *ChIPS*
  - Introduction to *FilterWindow*

- Data preparation
  - Has your data been reprocessed?
  - Update Bad Pixel List
  - Remove Pixel Randomization
  - Correction for Aspect Offsets
  - Data Filtering
  - How to Restore WCS Info To Images

- Imaging
  - Combine ObsID
  - Create "True Color" Images (see also the color_image script)
  - Source Detection
  - Estimate the Number of Counts in a Source (see also the get_counts script)
  - Obtain a Radial Profile:

        - Using CIAO tools (see also the get_rproj script)
        - Using the FUNTOOLS package
    - Exposure Maps
        - Create an HRC Exposure Map
        - Create an ACIS Exposure Map for a Single Chip
        - Create an ACIS Exposure Map for Multiple Chips

- Imaging Spectroscopy
    - Extract an ACIS spectrum and make RMF and ARF (see also the imagspec.tar file)

- Grating Spectroscopy
    - Correcting PHA2 Header Keywords
    - ACIS
        - Obtain Grating Spectra from an HETG/ACIS-S Observation (see also destreak.ps)
        - Obtain Grating Spectra from an LETG/ACIS-S Observation (see also destreak.ps)
        - Create an HETG/ACIS-S Grating ARF (see also the mkgarf_acis script)
        - Create an LETG/ACIS-S Grating ARF (see also the mkgarf_acis script)
    - HRC
        - Obtain Grating Spectra from an LETG/HRC-S Observation
        - Create an LETG/HRC-I Grating ARF (see also the mkgarf_hrci script)
        - Create an LETG/HRC-S Grating ARF (see also the mkgarf_hrcs script)
    - Examining PHA2 Files
    - GUIDE: Fitting and Identifying Spectral Lines
    - Extract Coadded and Grouped Nth-Order Source & Background Spectra and ARFs (see also the add_grating_orders script)

- *Sherpa*
    - Getting Started With *Sherpa*
    - Introducing *Sherpa*: ASCII Data & Errors and Single-Component Source Models
    - Fitting Spectral Data: FITS Data & Responses and Multi-Component Source Models
    - Simulating 1-D Data: The *Sherpa* `FAKEIT` Command
    - Fitting Grating Data
    - GUIDE: Fitting and Identifying Spectral Lines