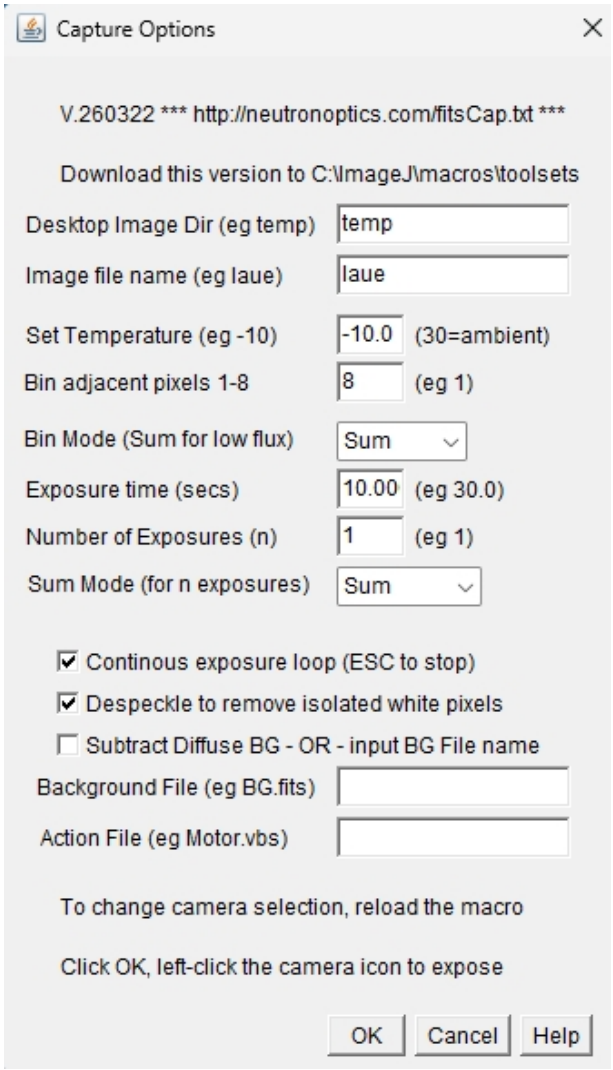
fitsCap – Automating Laue or Tomographic Imaging & Background Filtering

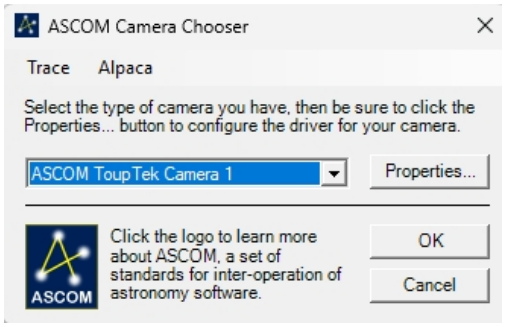
fitsCap.txt is an imageJ Macro plugin using the FITS.DLL for cameras with an ASCOM driver, including NeutronOptics imaging and Laue diffraction cameras using ToupTek & ZWO detectors.

- The GUI is very simple, and the images are opened directly in **imageJ** for treatment
- Exposure time, binning etc can be set and the temperature plotted for each image
- A number of images can be acquired individually, averaged or summed
- Note that **Bin Mode** can be "summed" or "averaged". **Sum Mode** can also be "Individual"
- Background can be subtracted using either a calculated diffuse BG (Laue) or a BG file
- A command file can be run after each image to e.g. change sample orientation
- This help file can be displayed from the Help button on the user interface (below)

To install this fitsCap.txt imageJ macro plugin:

- Copy https://neutronoptics.com/fitsCap.txt to the **\ImageJ\macros\toolsets directory**
- Install the ASCOM Platform environment from https://www.ascom-standards.org/
- Install the ToupTek ASCOM (blue detector) or ZWO ASCOM (red detector) drivers
- Download **FITS.zip** from https://www.easysky.de/ASCOM/Image/FITS.htm and unzip it
- Copy **FITS.dll** to **C:\Program Files (x86)\Common Files\ASCOM\Image**
- Register FITS.DLL by typing **regsvr32 FITS.dll** into a Windows Administrator cmd shell
- Download https://neutronoptics.com/ASCap.vbs to a **VBScript** directory under **ImageJ**
- Click the **red >> icon** at the top right of the ImageJ toolbar and select the fitsCap tool
- **Right-click** the camera tool icon that appears, select the camera & options
- **Left-click** the camera icon to capture a FITS image and display it with ImageJ





The **ASCOM Camera Chooser** (above) appears when you right-click the imageJ Camera icon. Usually select the default ASCOM ToupTek Camera 1 for NeutronOptics cameras.

Temperature control works less well for ZWO cameras