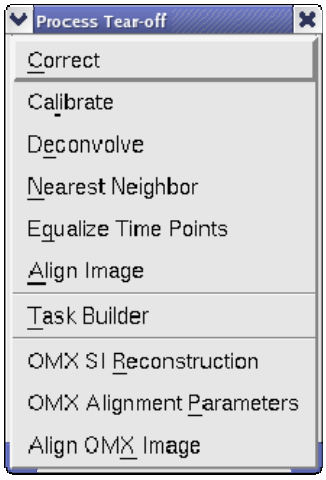
softWoRx Tools for OMX Image Processing

3D-SIM Image Reconstruction Software

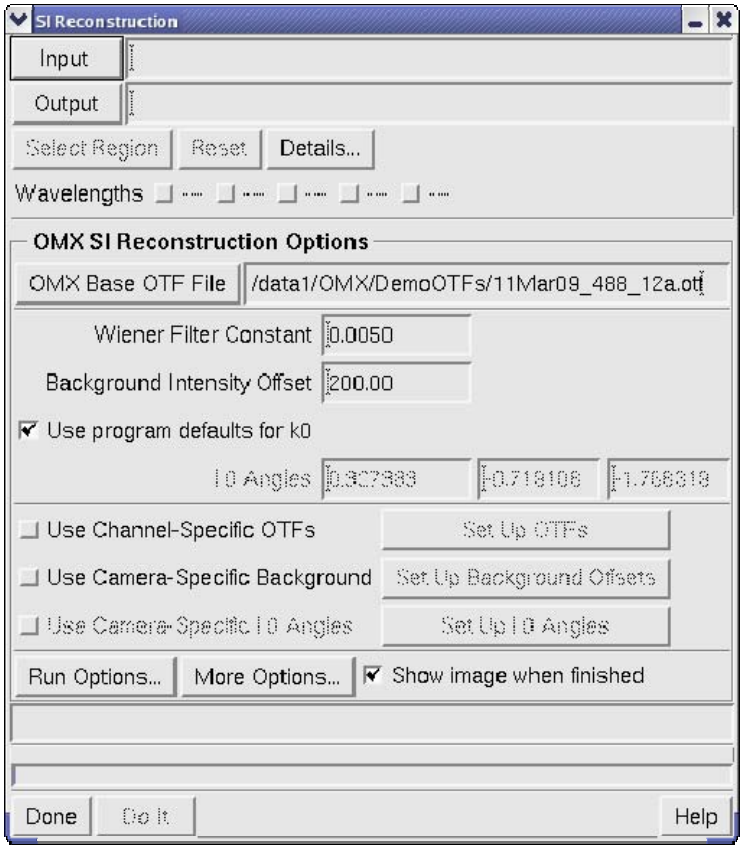
There are now two additional methods that can be used to reconstruct SI images from the OMX data sets. Both of these methods can work on data sets with one or more wavelength data so there is no need to separate data sets; in fact, it is best not to separate the channels.

Method One:

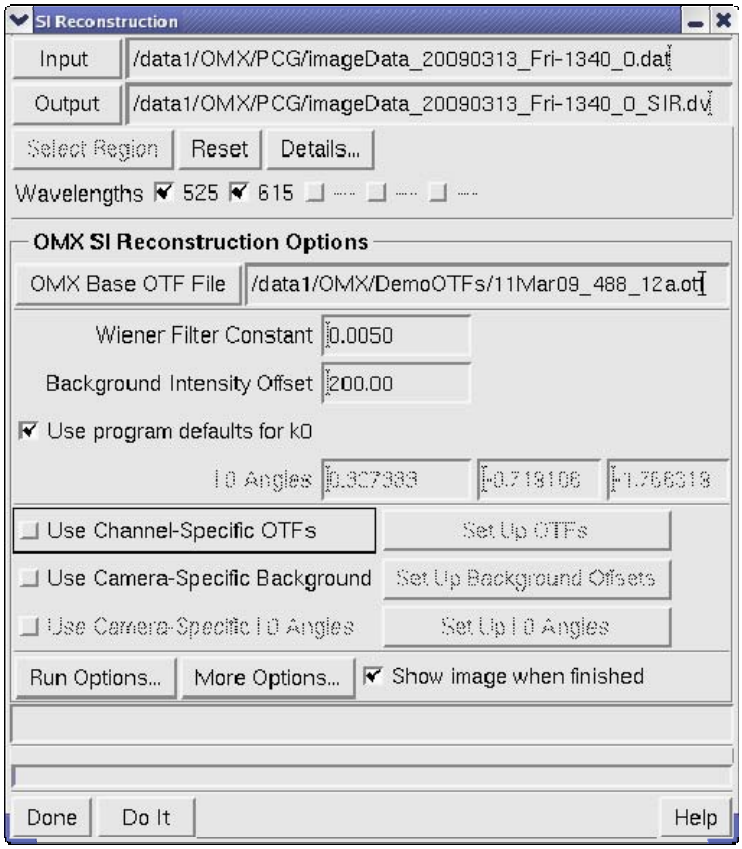
1. In softWoRx, from the Main menu bar choose Process and choose: OMX SI Reconstruction.



2. The following dialog box will appear:

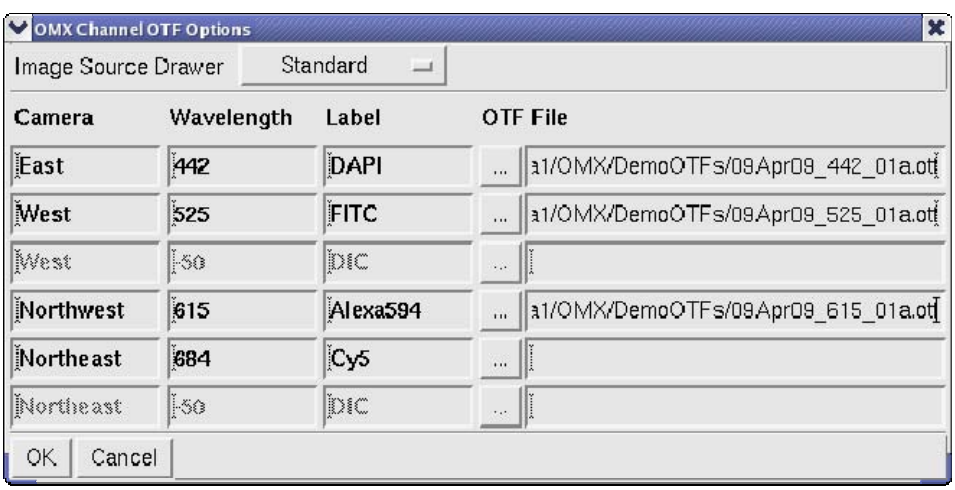


3. As with most softWoRx dialog boxes, you can select the input or drag-and-drop a either a window number or file into the Input field. This will fill in the default

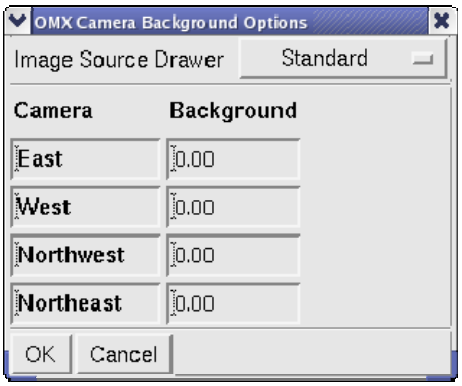


Output destination.

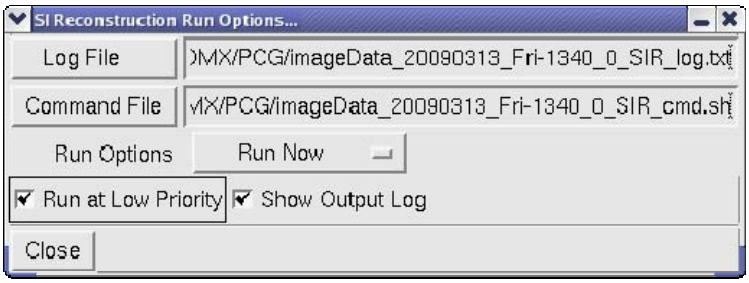
4. Notice that the default will use a single OTF file for processing all channels. However, you can also choose to use channel specific OTF's. When choosing Use Channel Specfic OTF's you must set-up which OTF's to use for each channel by selecting the drawer that you are using (Standard or Live-cell) and using the … button to select which OTF to use for each channel.

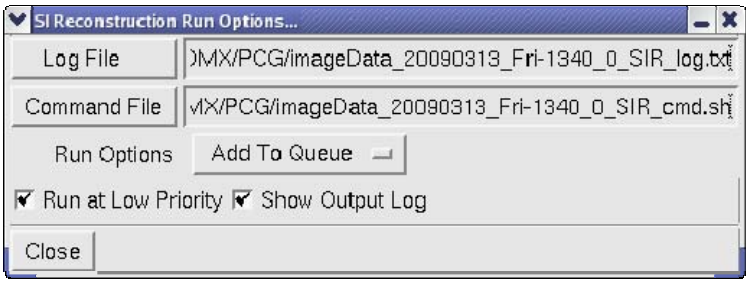


5. Like-wise, a specific background subtraction value can be used for each channel as well using the Use Camera-Specific Background button and setting up the background for each channel.

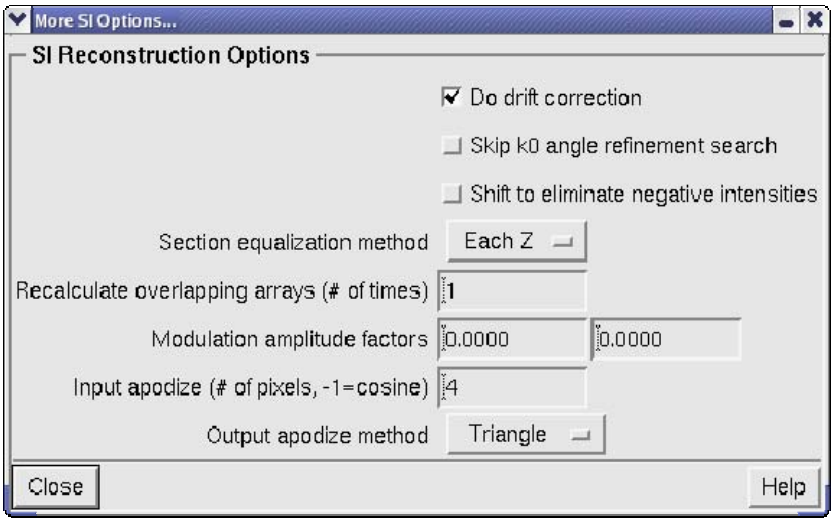


6. The SI Image Reconstructions can be run immediately or added to an image processing queue.



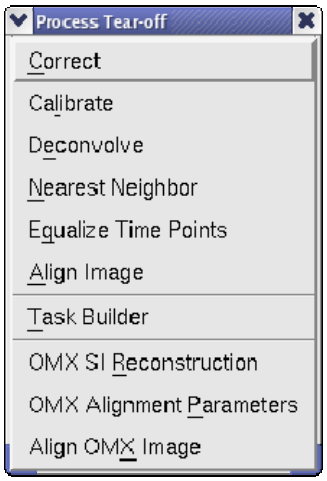


7. Also note that there are additional options available for reconstruction that can be selected through the More Options dialog. For most samples, these options are not needed but in some instances these options may assist in minimizing artifacts in the images.

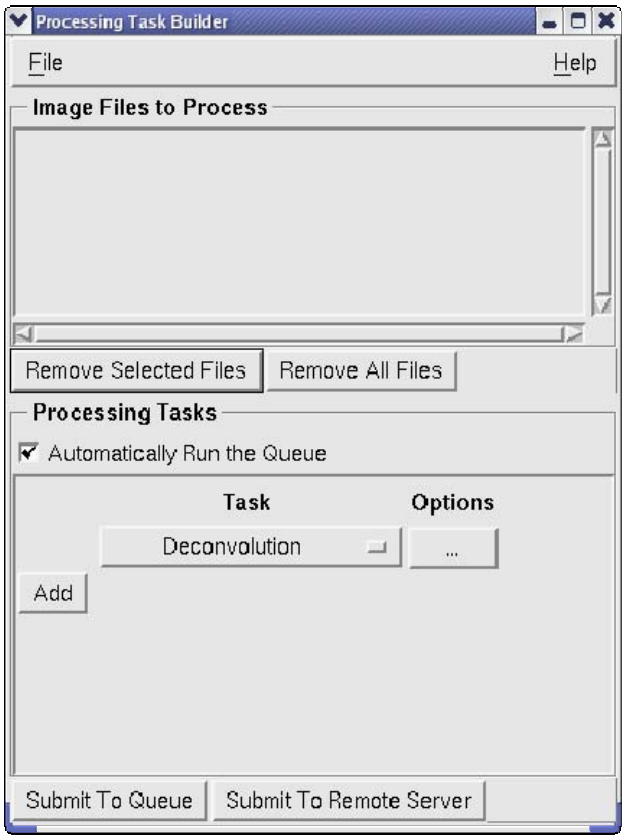


Method Two:

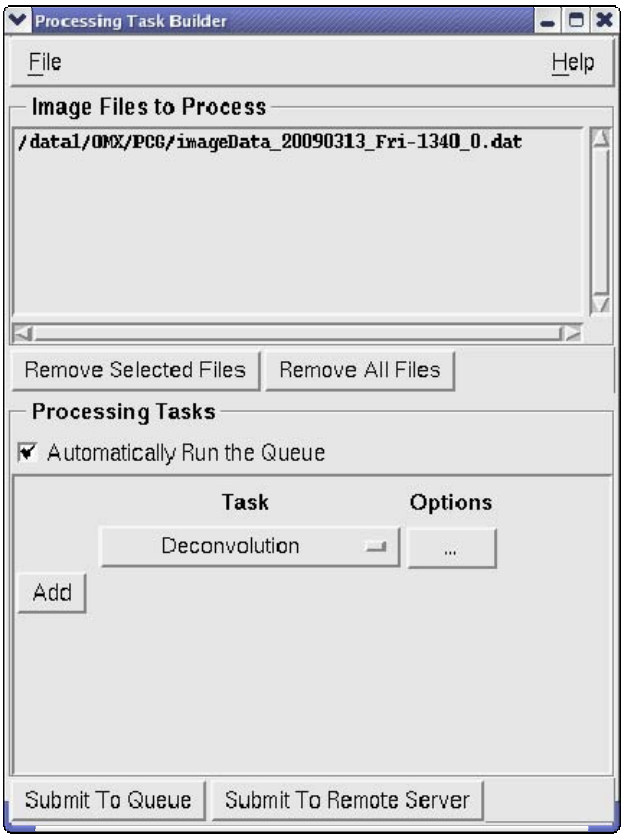
1. The other new method for processing SI images is to use the Task Builder. The Task Builder is a useful way to perform the same processing on a number of files. To use the Task Builder, simply open the Task Builder from the same Process menu off of the main softWoRx Toolbar.



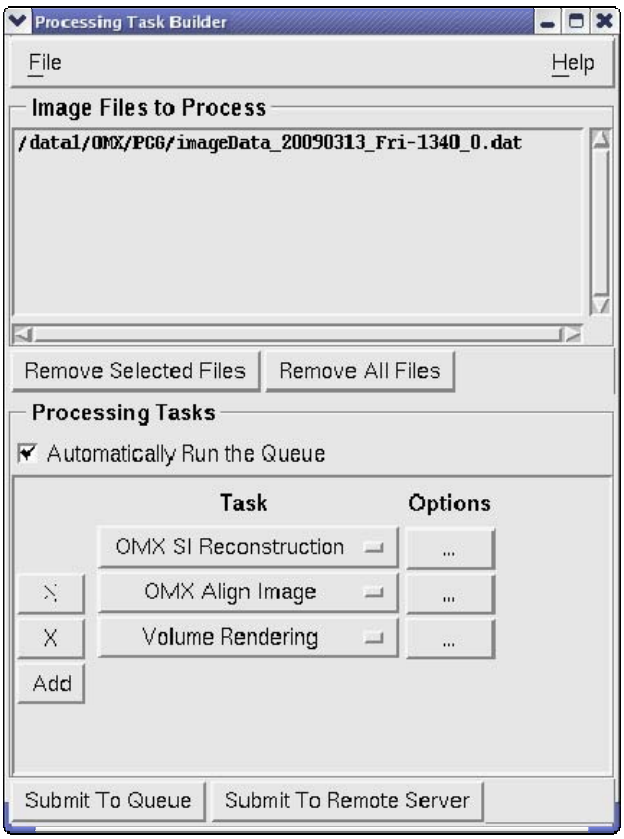
2. This will open the following dialog.



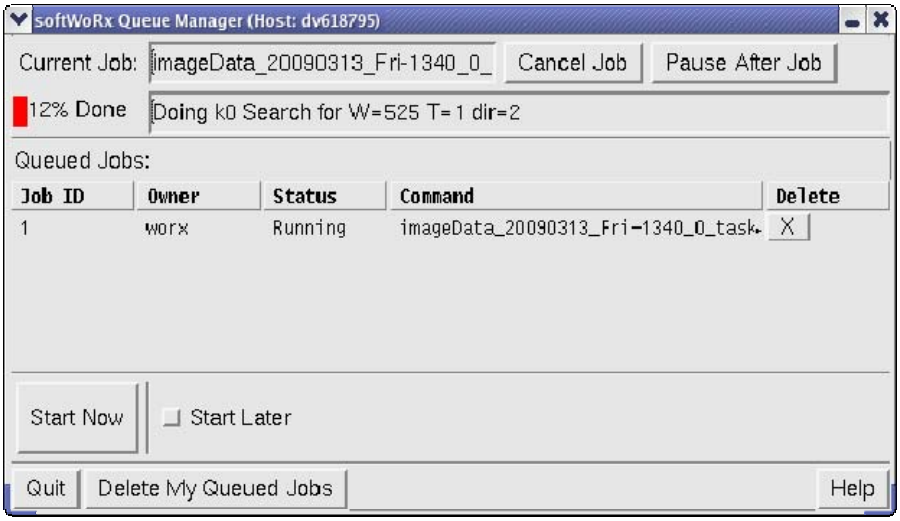
3. From here, multiple files can be added by dragging the file from the graphical file manager (Konqueror).



4. Specific chains of Tasks can be added to sequentially reconstruct, align, etc. all of the Image Files to Process. Each Task has most of the same options that exists in Method One above.

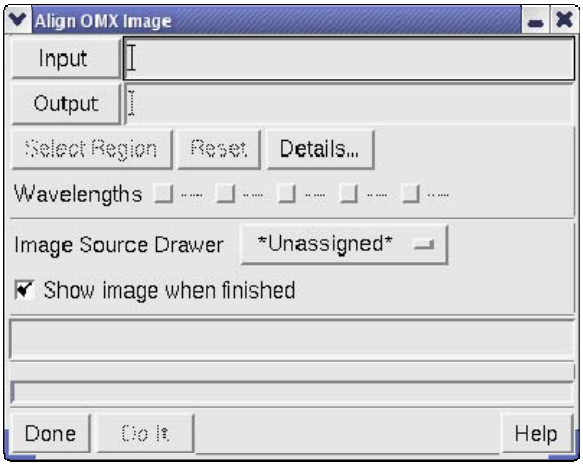


5. Using either method, the processing can then be sent to the Queue for immediate processing or a later time can be set to start the image processing.

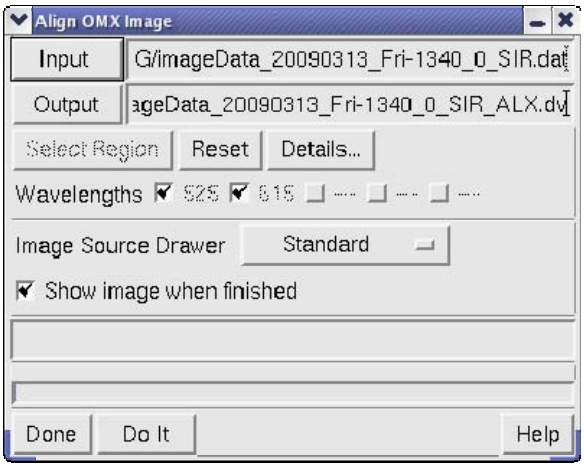


Align OMX Image

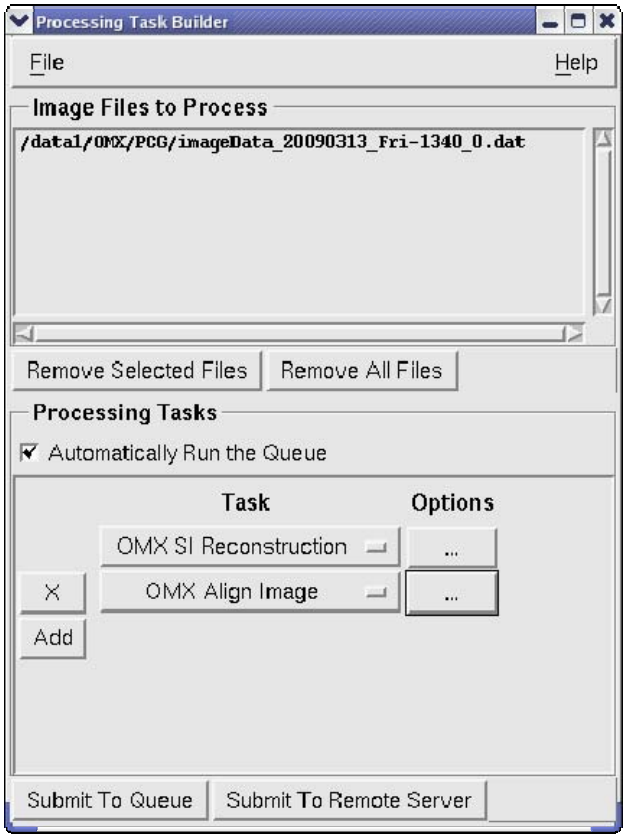
1. Open the Align OMX Image dialog from the softWoRx main menu using Process : Align OMX Image. The follow dialog will appear.



2. Drag-and-Drop the image or window that you wish to align or choose a file using the Input button.



3. You must select which drawer you used to acquire the image using the Image Source Drawer pull-down. Next you may press the Do It button and the image will be aligned using the last saved alignment parameters from the OMX Alignment Parameters tool.
4. This procedure must be applied to SI, Conventional, and Deconvolved images.
5. Alternatively, you can use the Task Builder tool to align images. Drag-and-Drop images from the file manager (Konqueror) into the Task Builder and select OMX Align Image for the task.



6. In the Options you must select which filter drawer you are using. Images can then be submitted to the Image Processing Queue for immediate processing or scheduled for later.