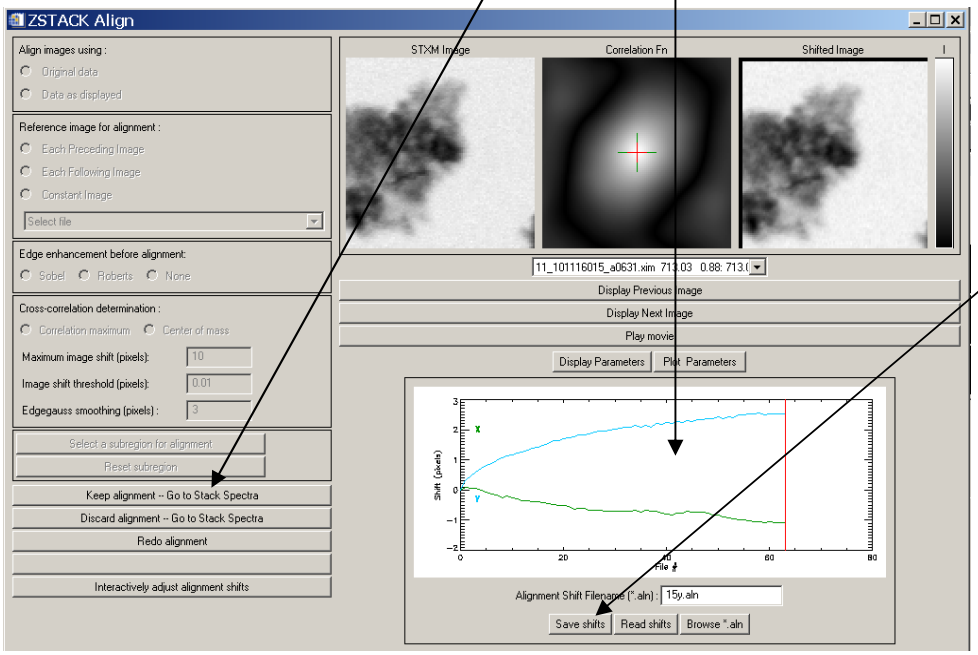
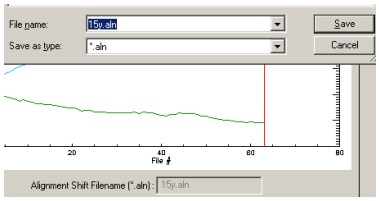
Using Zimba and axis binary stack analyze

Stacks~analyze~Zimba

'browse' to *.ncb
'list is complete'
Auto alignment
Click on pixel shift windows to scale properly

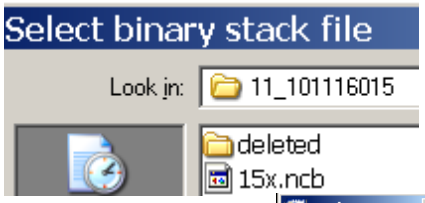


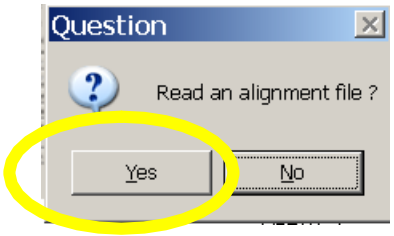
WRITE OUT the *.aln file (default name is same as that of the stack)

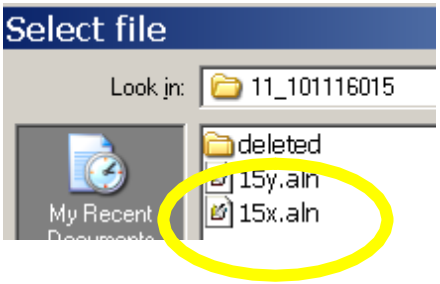


continue to Zstack spectra to VIEW the stack
Once finished, you can build the alignment shifts into the original stack using

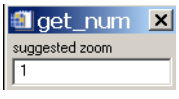
Stacks~analyze~axis binary

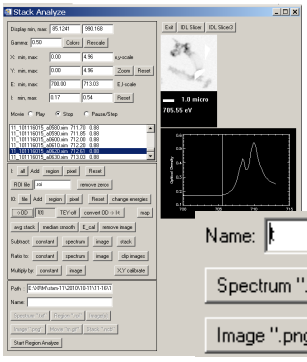




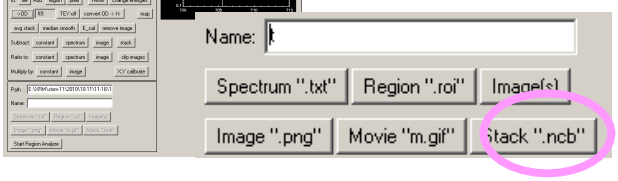


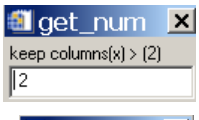
Select size scale factor

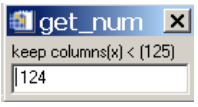


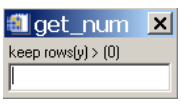


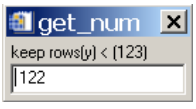
When write out the binary stack, the default row and column values reflect the alignment (sub-pixel with interpolation) and truncation so that a common area is present in the aligned & truncated image set



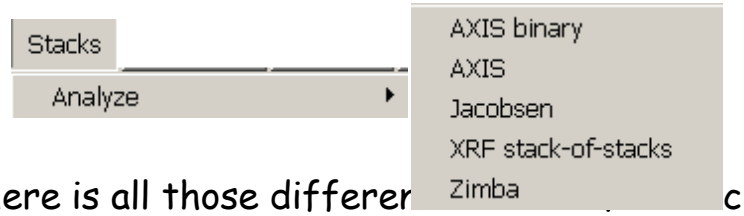








General aspects of which one to use



The reason there is all those differer ck manipulation is because they each do something well and fail or do-poorly other things. So

I use **Zimba** for
* alignment - I save the alignment information for incorporation into a binary stack using the first stack~analyse~axis binary
* viewing spectra of multiple regions
(its auto align is really quite remarkable. If you run zimba outside of axis2000 (you need the licensed IDL to do this) its manual align works and is also sweet. But many of the features, including all the write out do not work as you would expect them to, and many cause the Zimba package to freeze, as you have experienced)

I use **stack_process** (the routine behind the top 2 choices in stack~analyze) for
* building alignment into stacks
* converting from transmission to OD (or for linear yield normalization - the TEY button in the middle switches the Io normalization to a simple division)
* generating maps, movies, expanded viewing
* truncating spatially (using the row/column limits on write out) or spectrally (using the e-range controls, then writing out)
* averaging images over specific energy ranges (great for on / off edge evaluations) - again using the controls in the middle of the widget to select a relevant energy range, then using the **avg** button to average all images in the selected energy region
* subtracting images, constants, or even whole stacks (to e.g. strip out a majority component to allow one to see better minority components)
* in general anything where you want to manipulate the stack rather than simply view it.

AXIS - starts stack_list read in to read in aset of 8.nc files
Jacobsen - CJJ's last (~2005) stack_analyze (the original version of stack_process)
XRF stack-of-stacks - fluorescence yield NEXAFS (XRF spectrum at each spatial point in an image, recorded over a range of incident photon energies)
- (under development as of 2010)