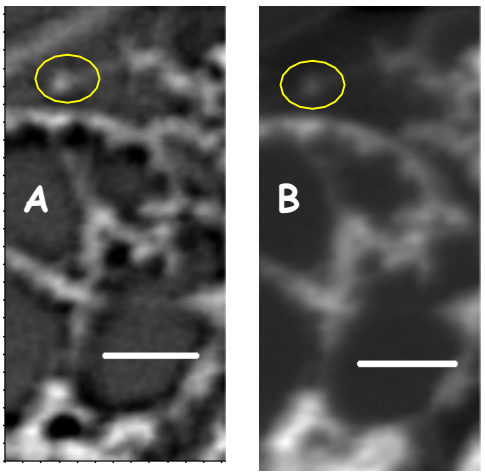
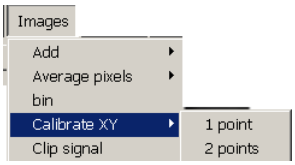
Using image~calibrate to extract common regions of multiple images or component maps

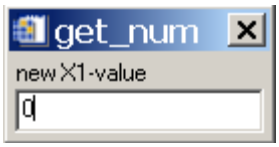
Original images (component maps from 532_100403059 CNT sample)

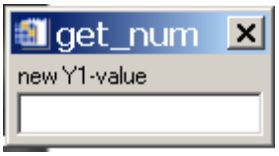


1. select fiducial
2. **images~calibrate~1-point**
   * click on fiducial

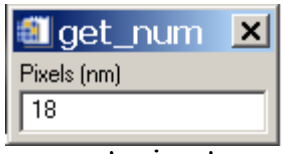


** Define fidicual as (0,0)
(NB in IDL '0' is not displayed so a blank string is = 0)



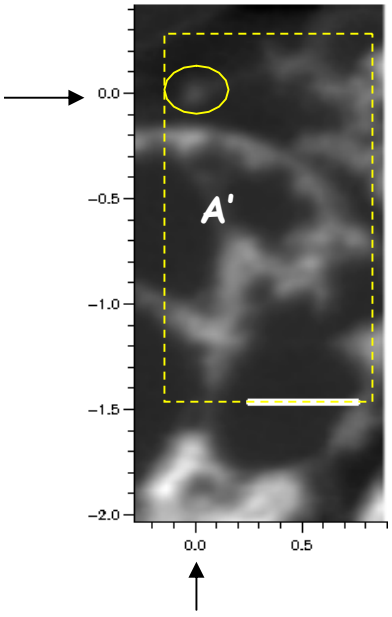


2 (continued) * Select pixel size



(default is that of the current image; if you are trying to match images with different pixel spacing choose the smallest pixel size and use same value for all images you want to place on same spatial scale and mesh)

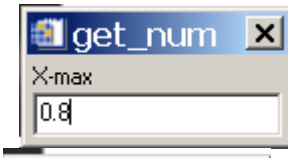
Image co-ordinate system and mesh is then adjusted

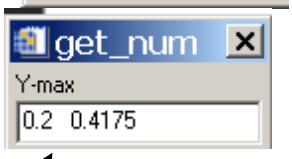


* select x-min, s-max, y-min, y-max in the new co-ordinate system

On FIRST time to use images~calibrate the default values are the corners of the shifted image. On all future uses the default values are those from the last use - so can extract exactly the same area from multiple images/ maps

I chose x: (-0.2, 0.8)
y: (-1.5 ,0.2)

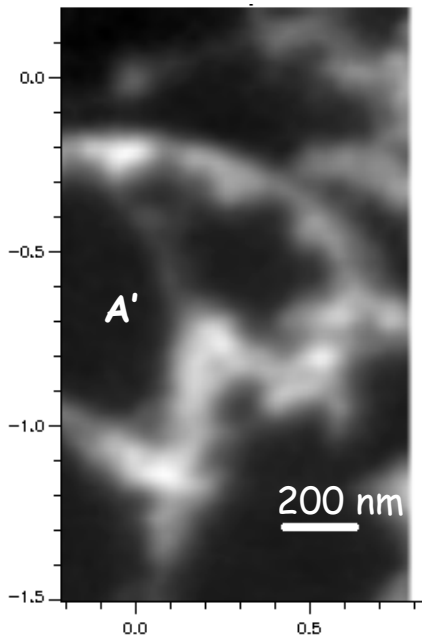




etc

Use 'type ahead' feature - no need to delete last value

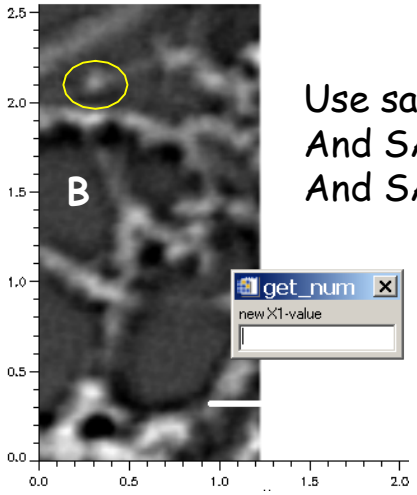
Using image~calibrate to extract common regions of multiple images or component maps (2)



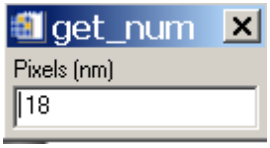
* move this calibrated / truncated image to one of buffer (1-9)
* select second image to calibrate/truncate

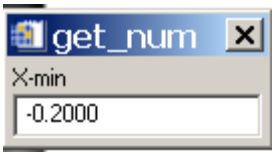
3. launch **images~calibrate~1 point** (prompt in log)

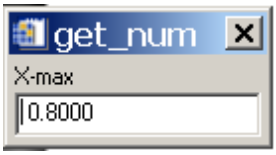
* Click on fiducial (SAME point in the new image ; NB this is how to manually align shifted images)

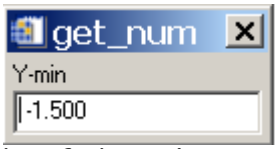


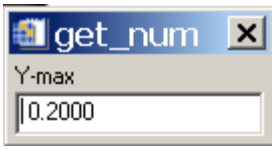
Use same reference value (0,0)
And SAME pixelation
And SAME (x,y limits)









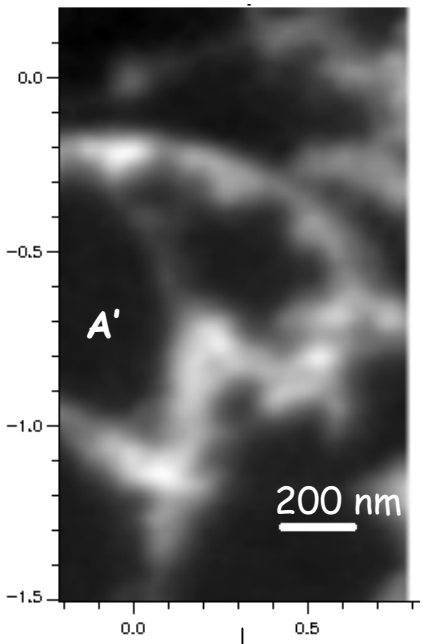


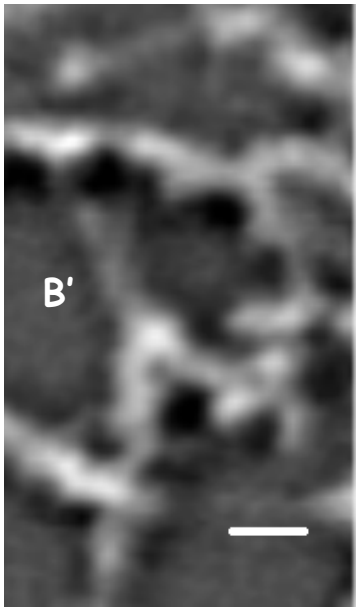
i.e. once you have clicked on the fiducial, just hit <enter> at each additional parameter

4. move this calibrated / truncated image to another of buffer (1-9)

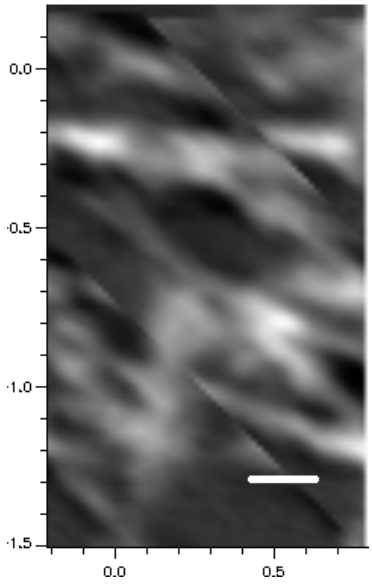
Using image~calibrate to extract common regions of multiple images or component maps (3)

5. CHECK by summing, or color overlay (RGB) - if skewed result, this probably is due to a rounding error which has meshed one of the images to a slightly different number of pixels (happens perhaps 1 in 3 times)



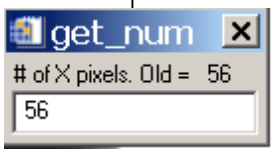


SUM is screwed up



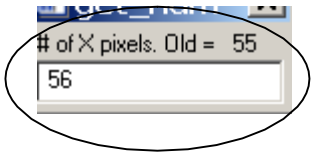
6. Correct using **Utilities~mesh**

A'

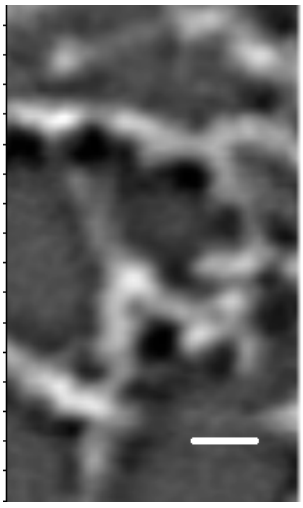


Routine then remembers last values

B'

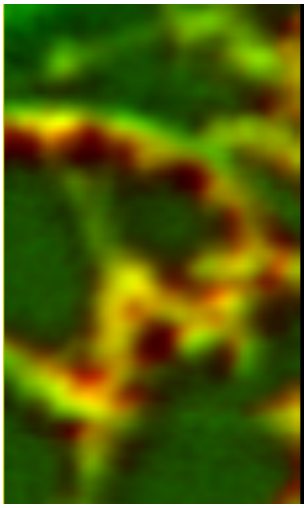


Problem is only 55 columns in B' but 56 in A''



SUM

RG overlay



A' B'