Attempting a manual drift list:

1. Went to end of movie and picked bright spots (50).

Then went ½ way back and removed empty AOIs

Then went to frame 1 and removed MT AOIs

1. Then fit the remaining 5 AOIs over the whole movie (turned OFF parallel processing. This took: 10min)

With parallel processing 4:34 to a million years

1. load('C:\Matlab\data\default.dat','-mat') %this loads the aoifits you just made to prpare for Gaussian refinement. Note the “-“ is really fussy. Copying and pasting may put the wrong type of – in there, so if it doesn’t work, type it out in matlab.
2. dat=draw\_aoifits\_aois\_v1(aoifits,'y'); % Break aoifits.data into individual matices for each AOI
3. help construct\_driftlist\_time\_v1 % First function used for making driftlist
4. execute the following:

xy\_cell{1}.dat=dat(:,:,1); % Make the cell arrays for the Gaussian spots

xy\_cell{2}.dat=dat(:,:,2); % used in making the driftlist

% Data for the xy locations of the spots in each frame

%note: I had only 2 spots that I am analyzing for the driftlist. But other verisons of this protocol from larry include things lik: xy\_cell{3}.dat=dat(:,:32); so perhaps you need a new one of these for each spot???

xy\_cell{1}.range=[1 4800]; % Total Range of tracking the spots

xy\_cell{2}.range=[1 4800];

xy\_cell{1}.userange=[1 4800]; % Range that the track is used (rest of track is

xy\_cell{2}.userange=[1 4800]; % ignored

CorrectionRange=[1 4800]; % Frame range over which we correct the drift

SequenceLength=5448; % Total # of frames in the glimpse file, CANNOT change it to number of frames you would like to analyze

1. [fn fp]=uigetfile % Get the protein image file again so that you can make the “vid” variable

eval(['load ' [fp fn] ' -mat']) % (makes the vid variable

8) % Run function that constructs a cumulative drift vs (glimpse time)

drifts\_time=construct\_driftlist\_time\_v1(xy\_cell,vid,CorrectionRange,SequenceLength,[8 8],[2 15 2 15]);

% Run function that constructs drift vs frame number for our file (the vid

% here need not match the vid above).

%[8 8] can change to [4 4] this is the polynomial degree

% this will create a figure of the drift for each spot. You must then click on the image once, then click again on the new image that that produces, at which point you should see a “drifts\_time” variable appear in the workspace side bar

8b) If need to edit:

xy\_cell{2}.userange=[1 2050]; % Get rid of one big spike

% Run again

drifts\_time= construct\_driftlist\_time\_v1(xy\_cell,vid,CorrectionRange,SequenceLength,[8 8],[2 15 2 15])

1. Then as before:

drifts=driftlist\_time\_interp(drifts\_time.cumdriftlist,vid);

foldstruc.DriftList=drifts.diffdriftlist; % Assign driftlist to proper member

% member of foldstruc structure

driftlist=drifts.diffdriftlist; % Also assign driftlist just for saving

% Save all the stuff used to make the driftlist

save p:\matlab12\larry\data\b26p132c.dat xy\_cell SequenceLength CorrectionRange vid

**save P:\matlab12\larry\data\02032017\_Unphos\_ORC\_manual\_driftlist.dat driftlist**

**save P:\matlab12\larry\data\02032017\_file317\_driftlist\_parameters.dat xy\_cell CorrectionRange SequenceLength**