# WORK FLOW FOR LOCKED MODEL ANALYSIS

1) Run the W_HIREXR_CALIB widgets on modules 1-3 & 4
2) Run the W_HIREXSR_DET_ALIGN widgets on He-like and H-like branches
3) Reset the He-like binning data: (assuming standard 125 frame collection - 20 ms)
    1. chmap=HIREXSR_AUTOCHMAP(2,5)
    2. tmap=HIREXSR_AUTOTMAP(125,2,shot=shot,tr=[0.4,1.5])
    3. good=intarr(96,125)
    4. good[0:max(chmap),0:max(tmap)]=1
4) Write He-like binning to tree:
   HIREXSR_WRITE_BINNING,shot,chmap=champ,tmap=tmap,good=good
5) Reset the H-like binning data
    1. chmap=chmap[0:486,*]
    2. good=intarr(32,125)
    3. good[0:max(chmap),0:max(tmap)]=1
6) Write H-like binning to tree:
   HIREXSR_WRITE_BINNING,shot,chmap=champ,tmap=tmap,good=good,/h
7) Reset the spectrometer declination
    1. (He-like) HIREXSR_CHANGE_CRYSTAL_BETA,shot,0.0,/nomom
    2. (H-like) HIREXSR_CHANGE_CRYSTAL_BETA,shot,0.0,/nomom,/h
8) Run the THACO
    1. (He-like) HIREXSR_RUN_THACO,shot,2,nback=2,sine=1
    2. (H-like) HIREXSR_RUN_THACO,shot,3  [use 6 if running for He-like Ca]
9) Go through W_HIREXSR_HE_MOMENTS and remove bad pixels
10) Re-run #8.1 with /nofit keyword
11) adjust the spectrometer declination
    1. re-run #7.1 & 7.2 with #'s finite beta
    2. (He-like) HIREXSR_FITSPEC2TREE,shot,2,nback=2,/nofit
    3. (H-like)  HIREXSR_FITSPEC2TREE,shot,3,/nofit
    4. examine overlap of line-integrated Ti using W_HIREXSR_PROFILES
    5. REPEAT #11.1-#11.4 until overlap of upper and lower Ti profiles
12) Re-run THACO, repeat #8.1 and #8.2 but with the /nofit keyword
13) process  and confirmthe inverted data using W_HIREXSR_PROFILES