SHARP data analysis on IRAS20126+4104 data set II
Hiroko

-Reduced chi2

chi2 values in the peak flux region are higher than those in the rest of the regions.   Reduced chi2 on the peak flux region is investigated with 4 and 8 bins using -c option.

* 8 bins case:

chi2 -f chi2_090630_8bin.list -c points_list

For point 1:
Reduced Chi Squared mean and standard dev. for the I map: 39.210749, 31.274262
Reduced Chi Squared mean and standard dev. for the Q map: 3.171563, 2.626378
Reduced Chi Squared mean and standard dev. for the U map: 3.214877, 2.088829
Summary of results for whole map:
Reduced Chi Squared mean and standard dev. for the I map: 2.986200, 10.657962
Reduced Chi Squared mean and standard dev. for the Q map: 1.449916, 1.229938
Reduced Chi Squared mean and standard dev. for the U map: 1.756281, 1.411173

* 4 bins case:

chi2 -f chi2_090630_4bin.list -c points_list

For point 1:
Reduced Chi Squared mean and standard dev. for the I map: 25.199194, 15.817265
Reduced Chi Squared mean and standard dev. for the Q map: 4.337869, 2.798870
Reduced Chi Squared mean and standard dev. for the U map: 2.467563, 1.378039
Summary of results for whole map:
Reduced Chi Squared mean and standard dev. for the I map: 3.211457, 7.054469
Reduced Chi Squared mean and standard dev. for the Q map: 1.715588, 1.244402
Reduced Chi Squared mean and standard dev. for the U map: 1.491416, 0.847323
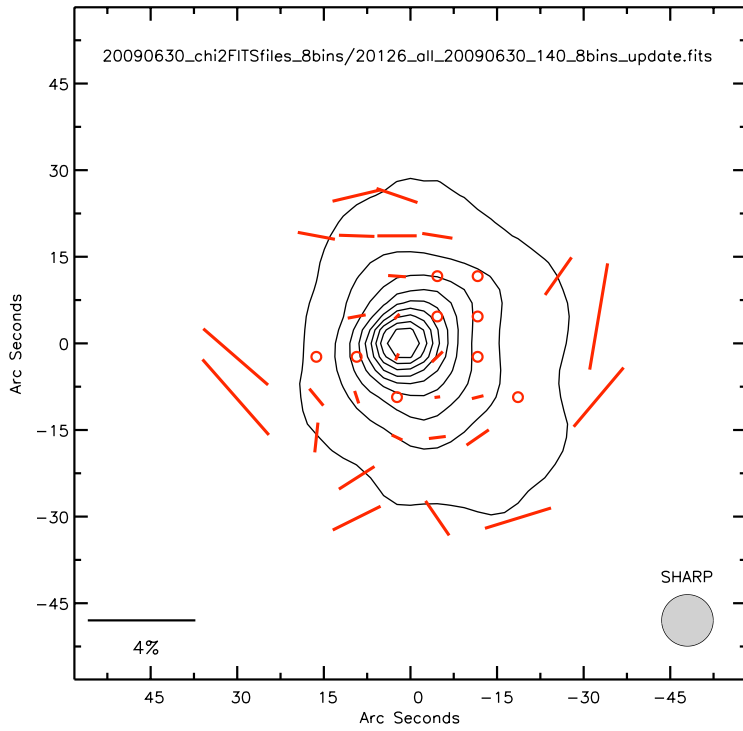
- Result maps

Following maps are made using polsharp5 using the 8 bins inflation factor.
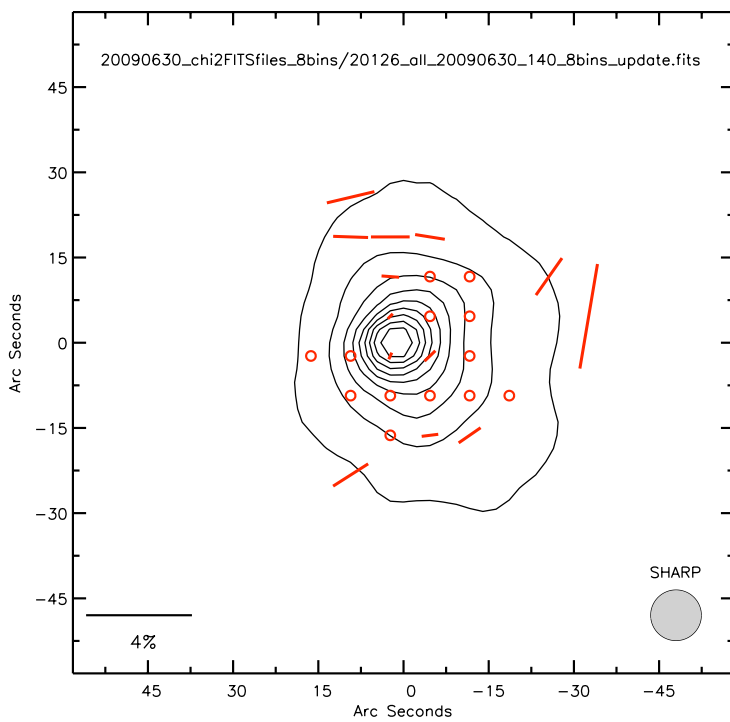 polsharp5,'20126_all_20090630_140_8bins_update.fits',/
vec,skipv=3,maxsig=2,color=2,onep=1,/ps,/debias
("debias" flag ==> John's 2006 PASP paper equation (11) & (12))
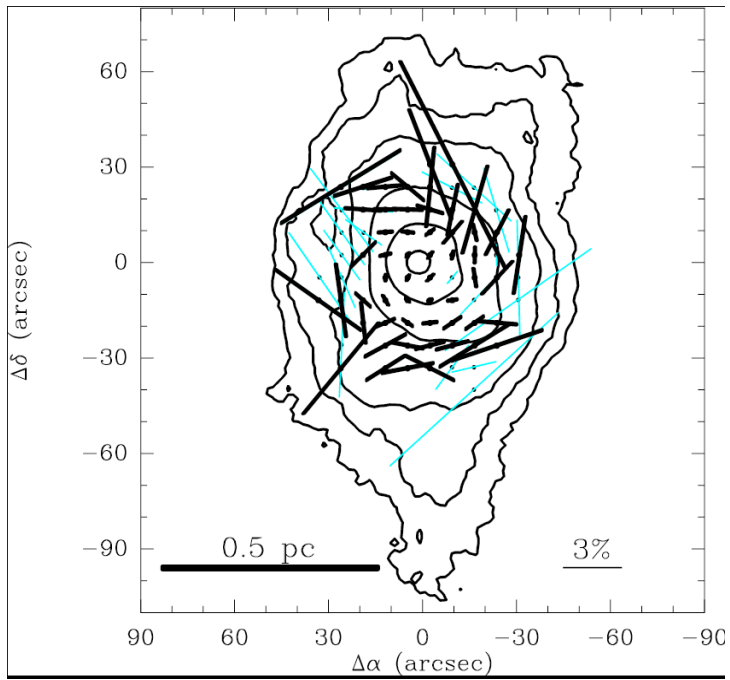
2 sigma (error inflated)

20090630_chi2FITSfiles_8bins/20126_all_20090630_140_8bins_update.fits

SHARP

4%

Arc Seconds

Arc Seconds

2.5 sigma (error inflated)

20090630_chi2FITSfiles_8bins/20126_all_20090630_140_8bins_update.fits

SHARP

4%

Arc Seconds

Arc Seconds

Please note that the lowest degree of polarization measured was 0.3 %.

Polarization map as of 2008/04/15

Result maps obtained look very similar to what we got from analysis done before April 2008.