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SHARP data analysis on IRAS20126+4104 data set IV

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- Check the number of pixels for 4- and 8-bins chi2 fits files

Giles pointed out that I should check the number of valid pixels (excluding NAN pixels) to make sure the comparison of reduced chi2 values between 4- and 8bins is relevant. The number of valid pixels were turned out to be a little different for 4- and 8 bins cases; 993 pixels (38.3%) for 4-bins case and 765 pixels (29.4%) for 8 bins case. So, I decided to crop a large region in the map and check the reduced chi2 values for 4- and 8 bins case in the region. The radius of 12 pixels from a central position was chosen for the cropped region.

8 bins case:

```
> chi2 -f chi2_8bin.list -c points_list_large
```

For point 1:

Reduced Chi Squared mean and standard dev. for the I map: 4.985771, 8.891303

Reduced Chi Squared mean and standard dev. for the Q map: 2.023579, 1.468056

Reduced Chi Squared mean and standard dev. for the U map: 1.727085, 0.950099

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

The inflation factor for point (26.000000,28.000000) is: 1.217680

4 bins case:

```
> chi2 -f 4bin.list -c points_list_large
```

For point 1:

Reduced Chi Squared mean and standard dev. for the I map: 6.232230, 15.539138

Reduced Chi Squared mean and standard dev. for the Q map: 1.692593, 1.466887

Reduced Chi Squared mean and standard dev. for the U map: 2.201417, 1.551456

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

The inflation factor for point (26.000000,28.000000) is: 1.258153

- Result map

```
IDL > polsharp5,'20126_all_20090630_140_8bins_update.fits',/  
vec,skipv=3,maxsig=2,color=2,onep=1,/debias,levels=[0.055,0.1,0.2,0.9]
```

2 sigma (error inflated, 8bins case)

