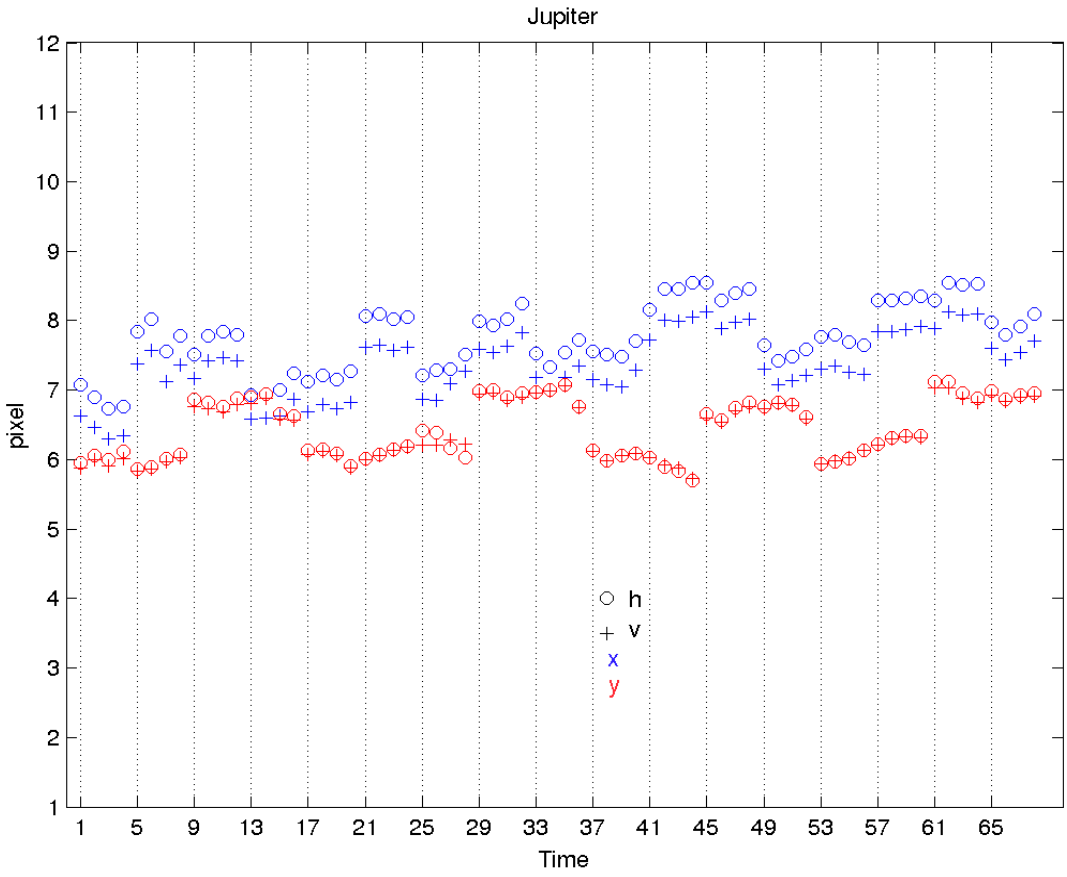


Fig. 1

For Jupiter, the alignment between h and v arrays is similar to Mars; a little worse in the X direction (~ 0.5 pixel).

Pointing changes < 0.25 pixel during one cycle.

(Though these results are from Gaussian fit, note that Jupiter distributes more like a flat-top than Gaussian; the Gaussian HMFW (pink contour in the Fig. 2) << real HMFW (green contour).)

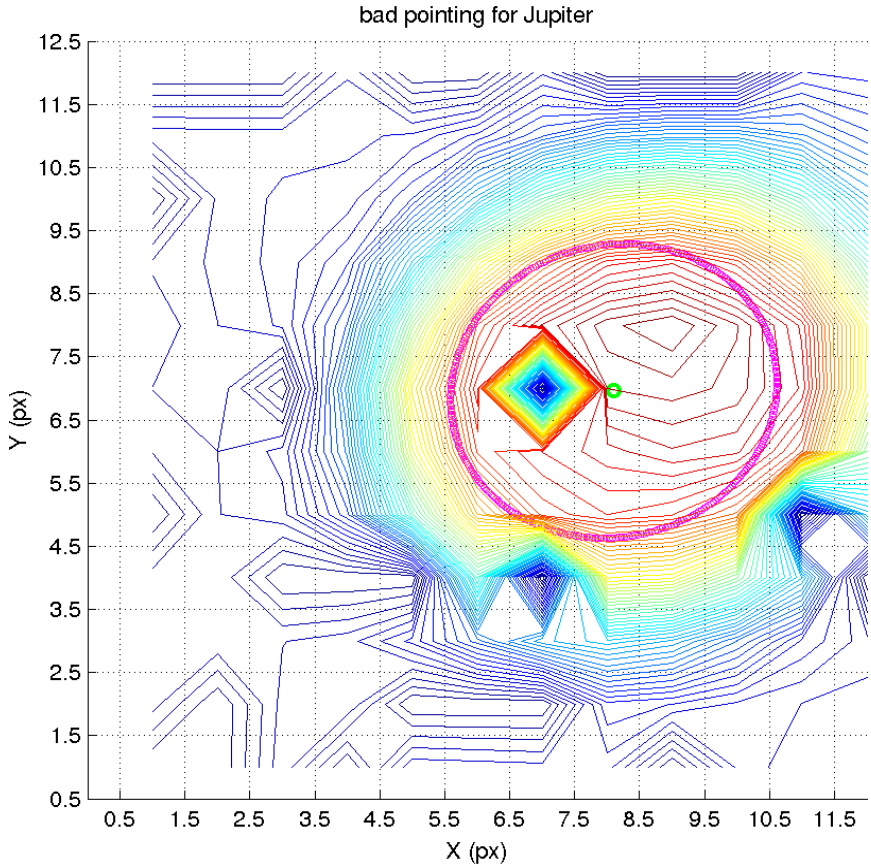
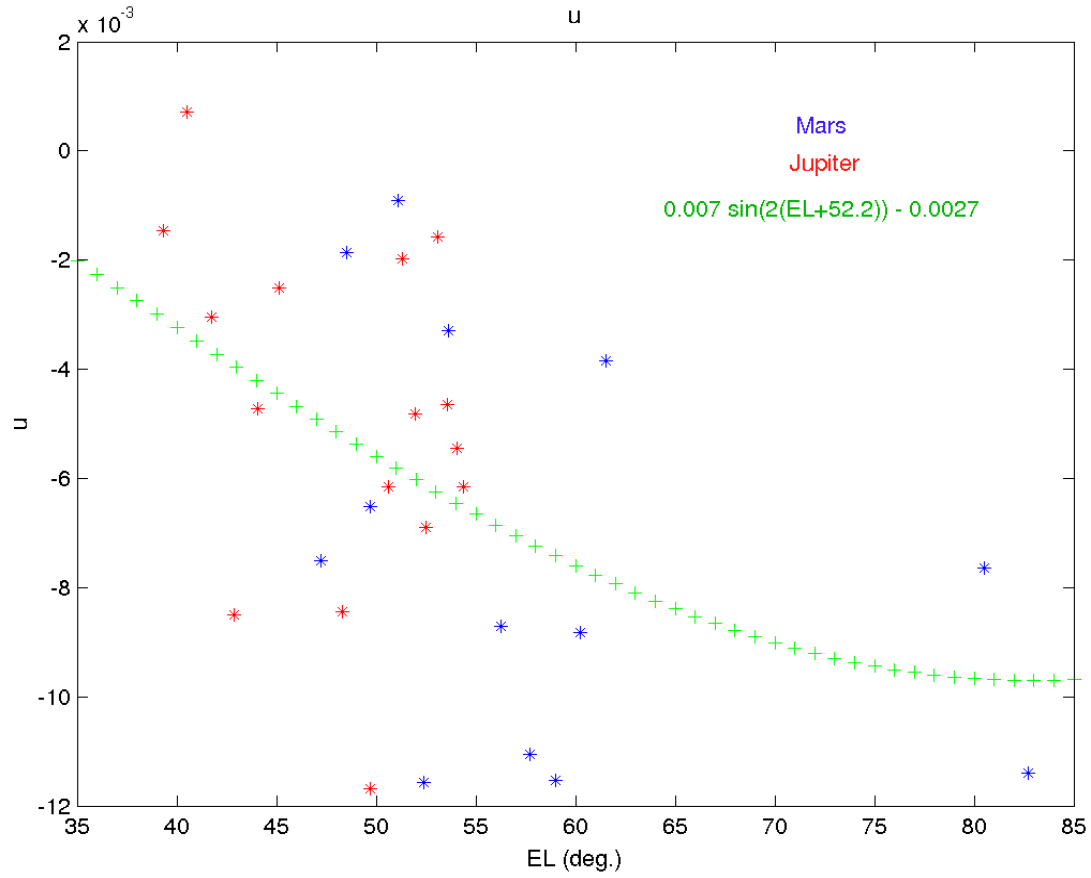


Fig. 2

I tried to treat Jupiter similarly to Mars to look for IP. But the pointing of Jupiter is worse; plus its bigger size, more than half of the data look like Fig. 2.
I decided to focus on those pixels having signals > 70% of the maximum pixel (> the yellow contours), so we don't have to worry about the parts left outside the field of view. These pixels will contain ~70% of the total power, because of the flat-top like distribution.
Besides the masking, the rest of the data analysis is the same as Mars.
(lennon.astro.northwestern.edu/CSOpol/collaborators/analysis/IP.pdf)

The results, q, u, and the best fitting curves, are shown in Fig. 3, plot vs. elevation.
For the fitting, the constant parts give
P = 1.06 % and PHI_INSTRUMENT = 67°
The std from the fitting curves is 0.4 %

The parts very with elevation give P = 0.7 % and PHI_INSTRUMENT shown in Fig. 4


u
x 10^-3
Mars
Jupiter
0.007 sin(2(EL+52.2)) - 0.0027
u
EL (deg.)

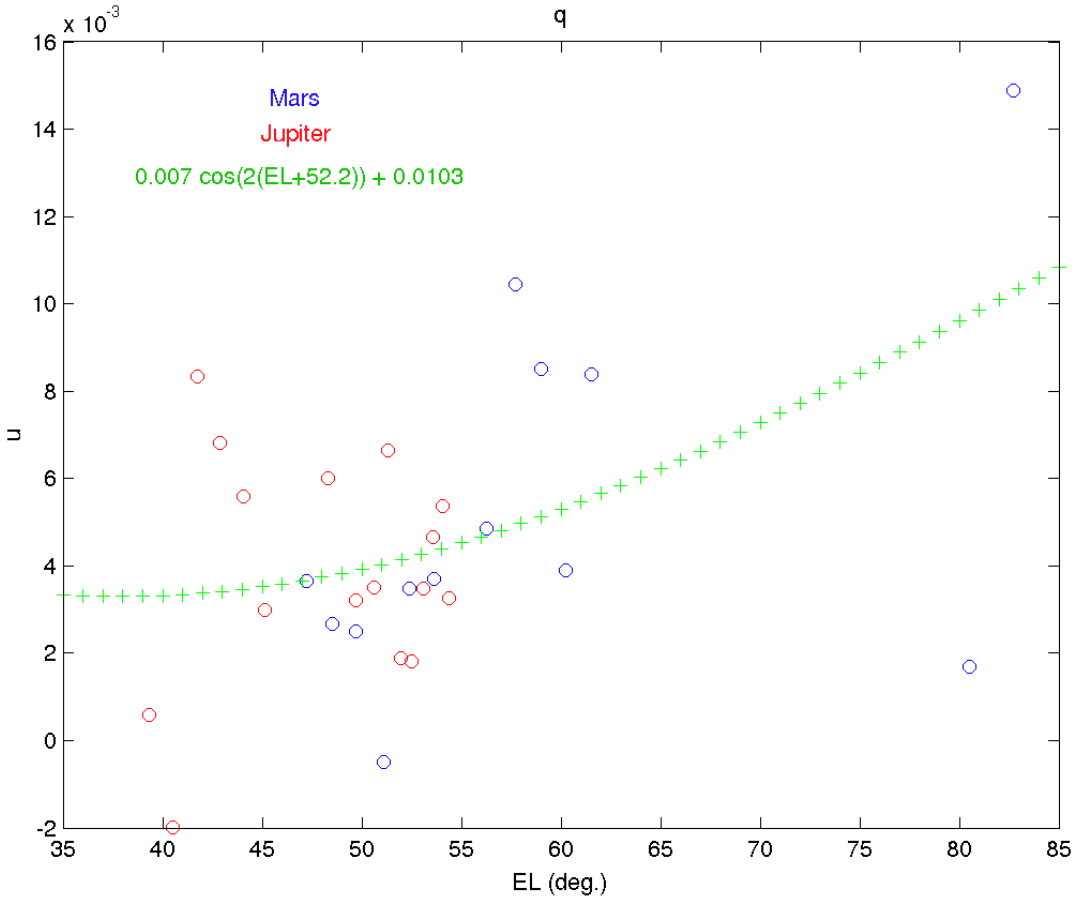

q
x 10^-3
Mars
Jupiter
0.007 cos(2(EL+52.2)) + 0.0103
u
EL (deg.)

Fig. 3

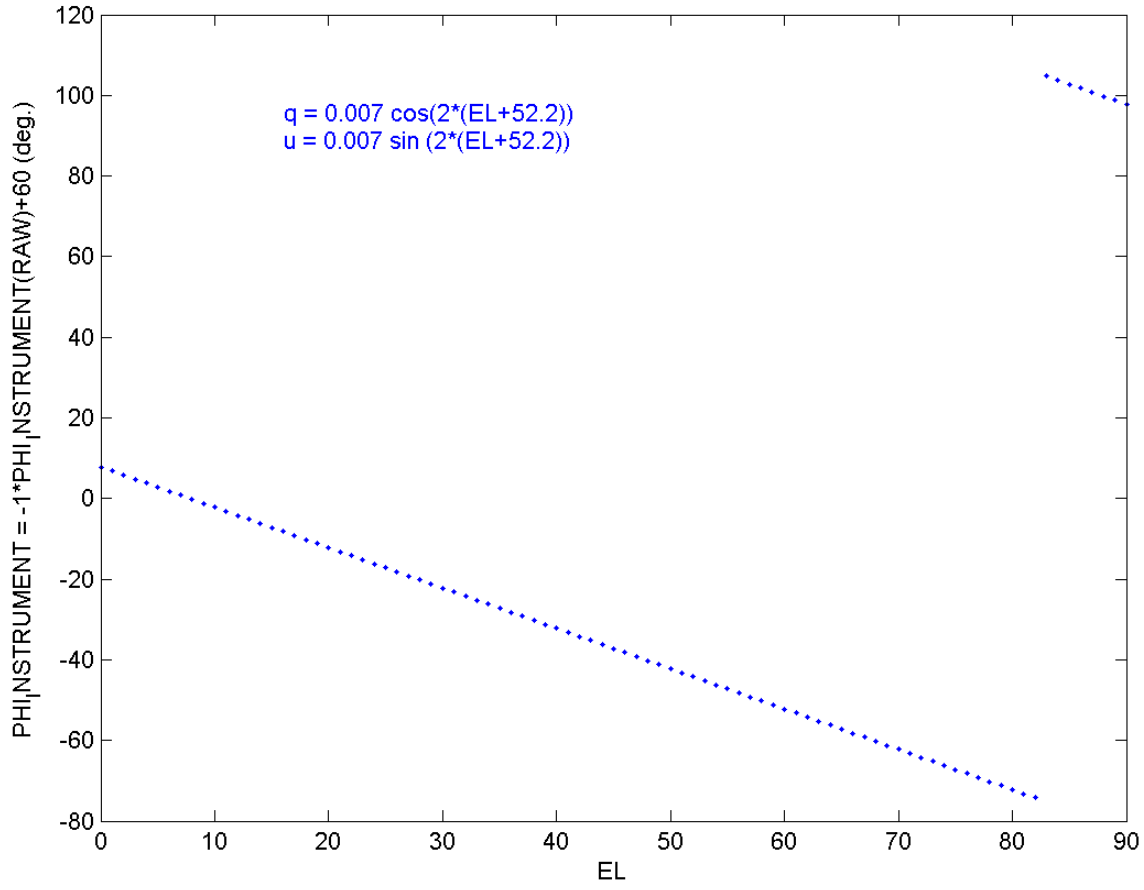


Fig. 4

Note : PHI_INSTRUMENT(RAW) = atan(u/q) if q > 0
PHI_INSTRUMENT(RAW) = atan(u/q) + π if q < 0

PHI_INSTRUMENT = -1 * PHI_INSTRUMENT(RAW) + 60° from Giles' grid test

Question : Why not PHI_INSTRUMENT = PHI_INSTRUMENT(RAW) - 60° ?
Which makes Fig. 4 what we expect for polarization from M3.