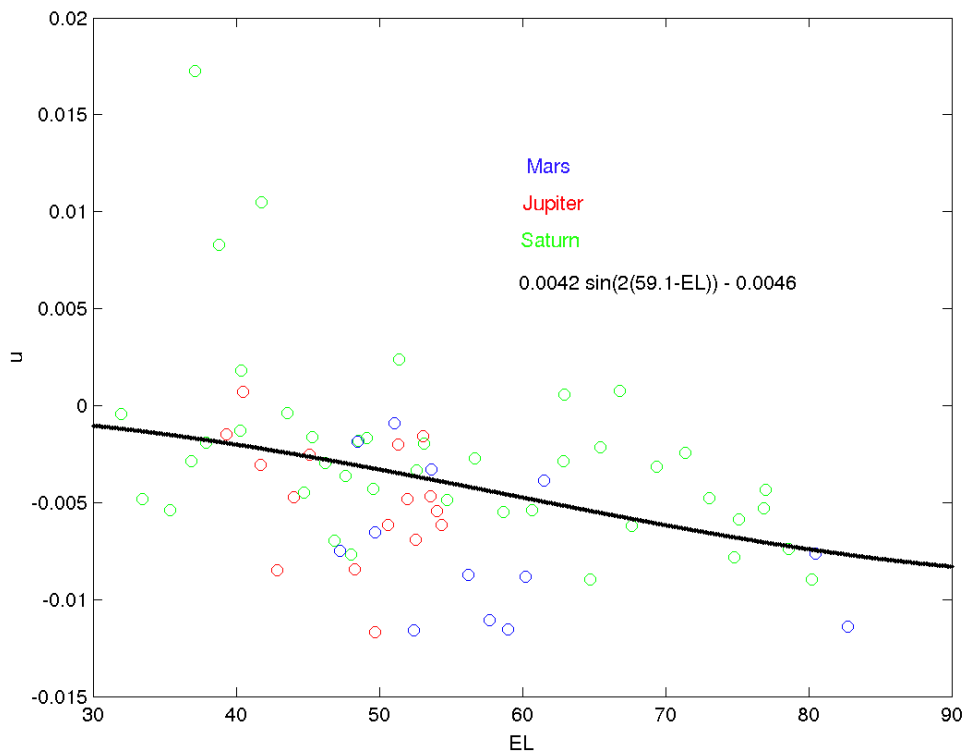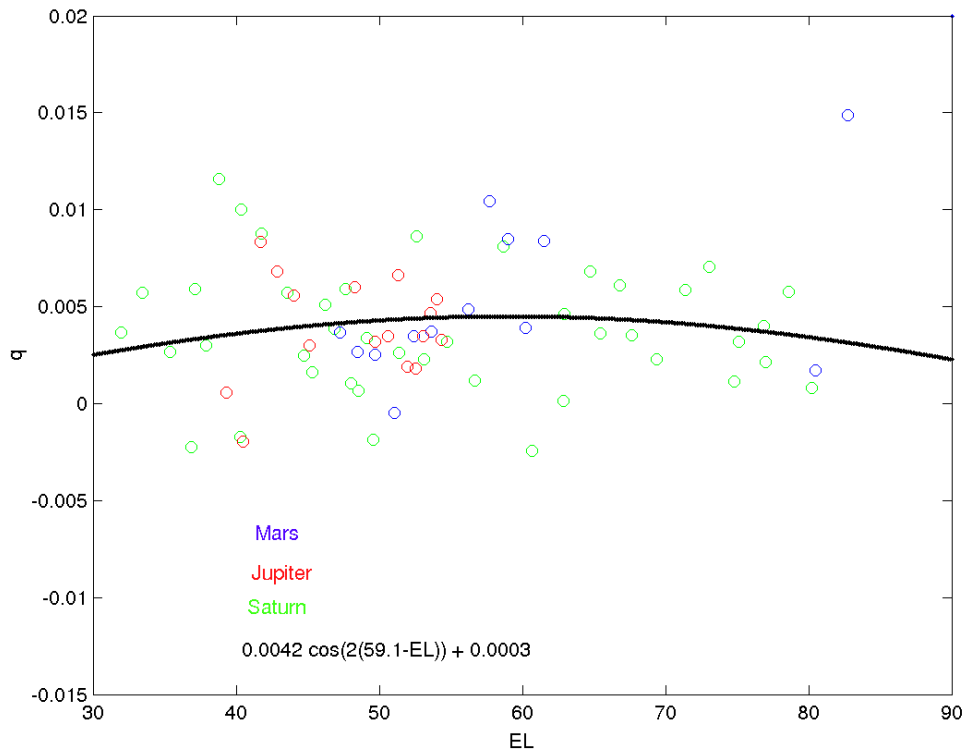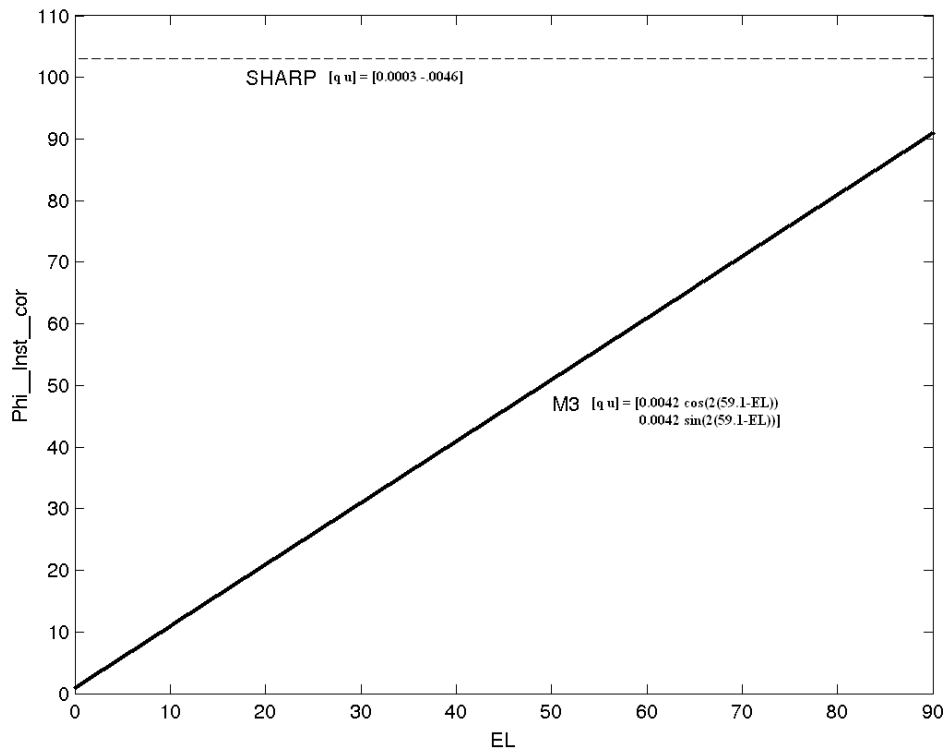I analyzed Saturn similarly to Jupiter
(http://lennon.astro.northwestern.edu/CSOpol/collaborators/analysis/IP_jupiter.pdf)
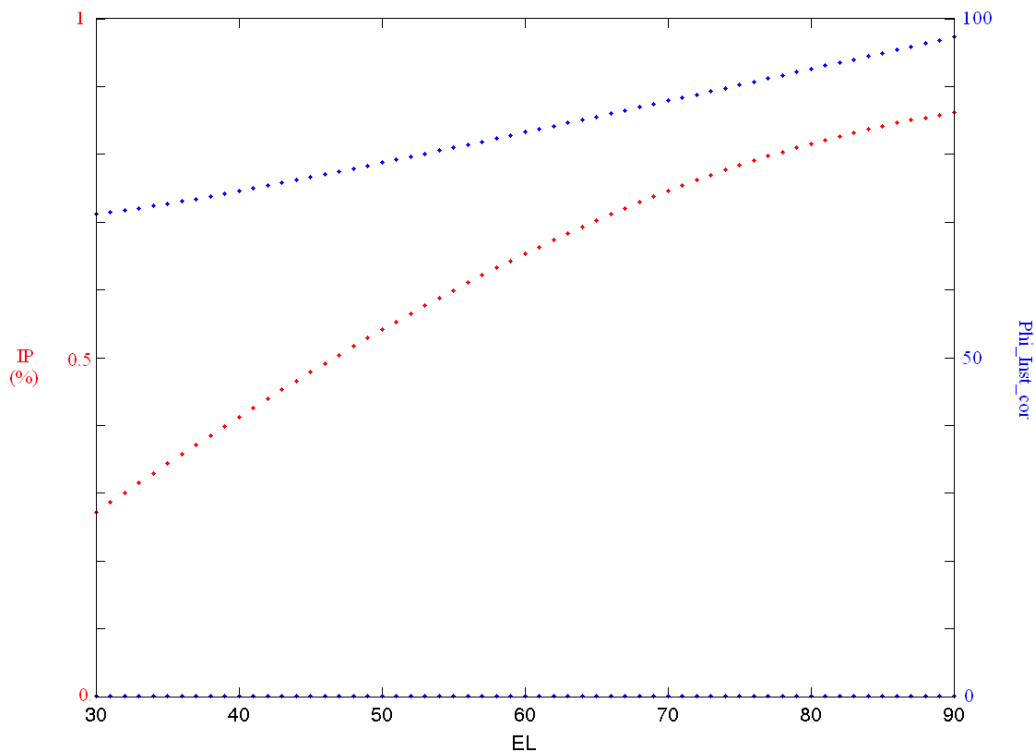Only that the >70% is changed to >50% for that Saturn is smaller so the bad pointing
did not leave as big a portion outside the array. The same method is used on Mars as a
check and gives the same result as in
(http://lennon.astro.northwestern.edu/CSOpol/collaborators/analysis/IP.pdf)

The Phi_Inst_cor, constant and variable parts are plotted separately. The results are very close to our expectations of SHARP and M3.

The total Phi_Inst_cor and IP.

(The STD of the fitting is 3.8%. Leaving the outlier further than 3*STD will not change IP more than 0.1% and Phi_Inst_cor more than 4°)