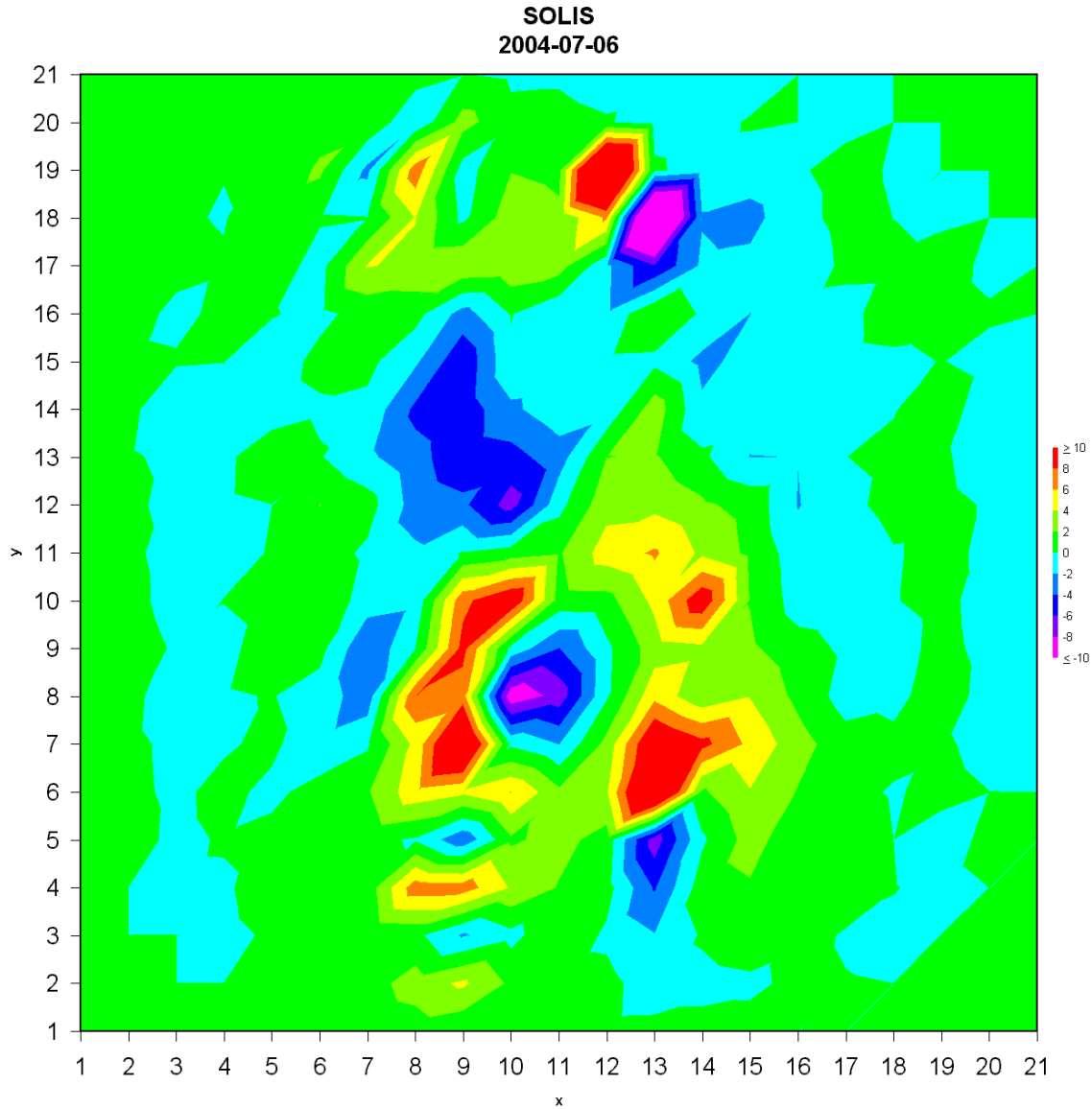
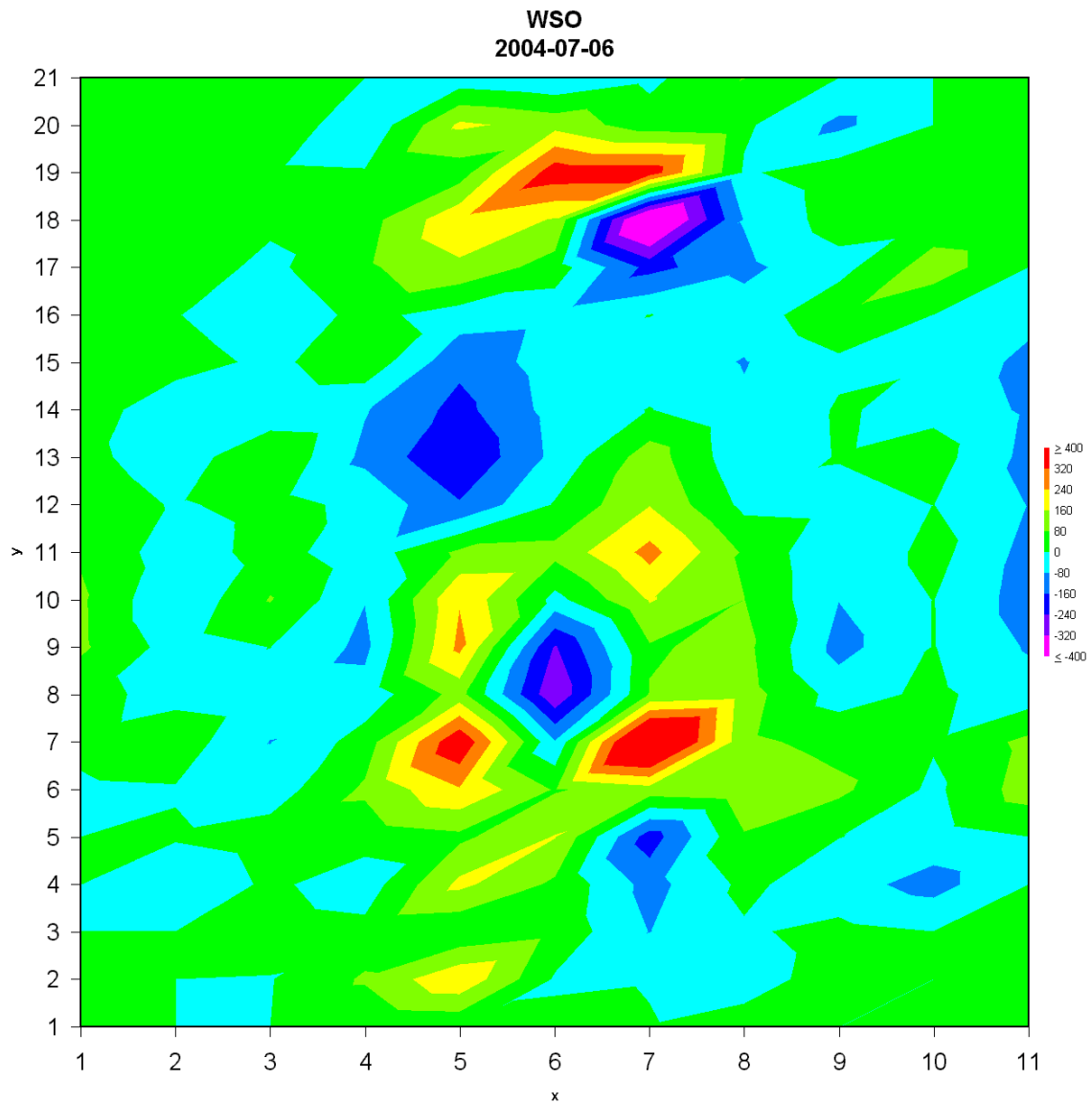


Comparing SOLIS and WSO Disk Magnetograms

I started out with magnetograms on 2004-07-06. First SOLIS data is placed in WSO's 21x21 grid. The result is shown below. The picture is rotated so that E-W is up-down and N-S is left-right. This is just for my convenience:

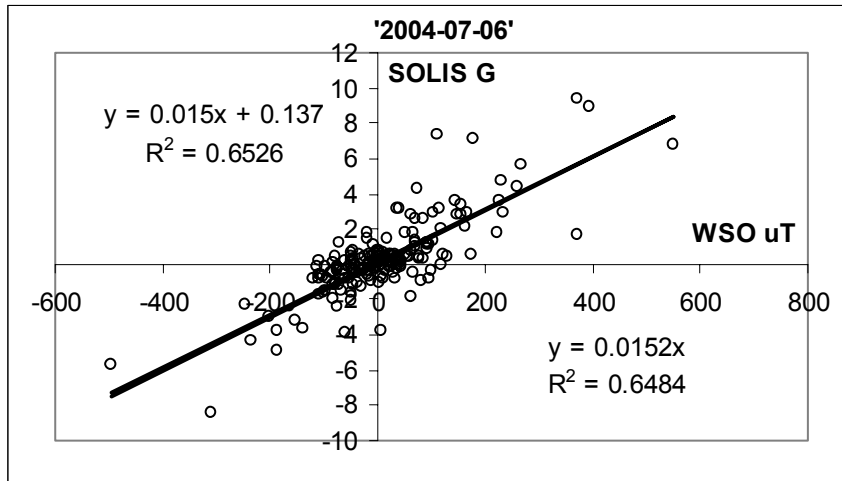


Then the WSO data for the same day (with ~1 hour of the SOLIS observation). Note the 21 steps in the E-w direction and 11 steps in the N-S direction:



For comparison, I average the SOLIS data from the 21 points to 11 points. This is equivalent to what the sun does.

Then I compare the two sets of points:

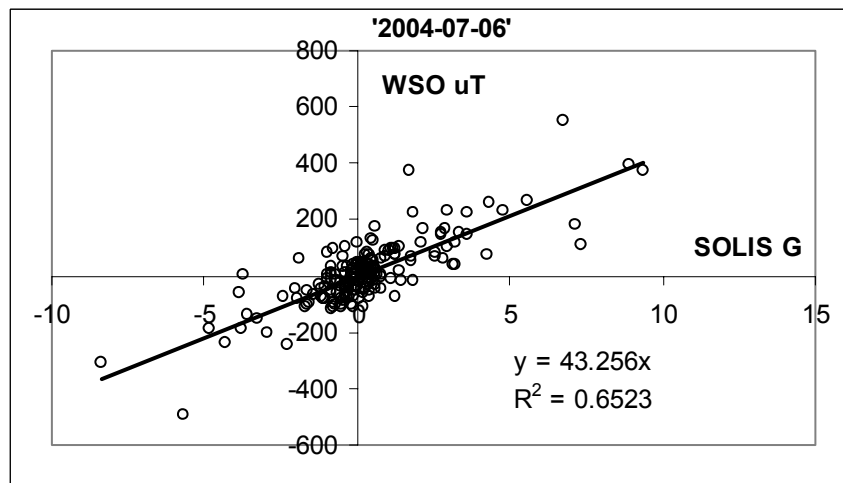


The offset is not significant, so I get rid of it, leading to

$$\text{SOLIS (Gauss)} = 0.0152 \text{ WSO (microTesla), or in same units:}$$

$$\text{SOLIS} = 1.52 \text{ WSO} \quad (\text{as } 1 \text{ G} = 100 \text{ uT})$$

Regressing the other way:



We get

$$\text{WSO (microTesla)} = 43.256 \text{ SOLIS (Gauss), or in same units:}$$

$$\text{WSO} = 0.43256 \text{ SOLIS:}$$

The 'perpendicular' slope is then approximately $((1.52 + 1/0.43256)/2 + 2/(1/1.52 + 0.43256))/2 = 1.875$.

