

OBSERVATIONS OF AN INTERESTING MAGNETIC STRUCTURE SEEN BY SWAP

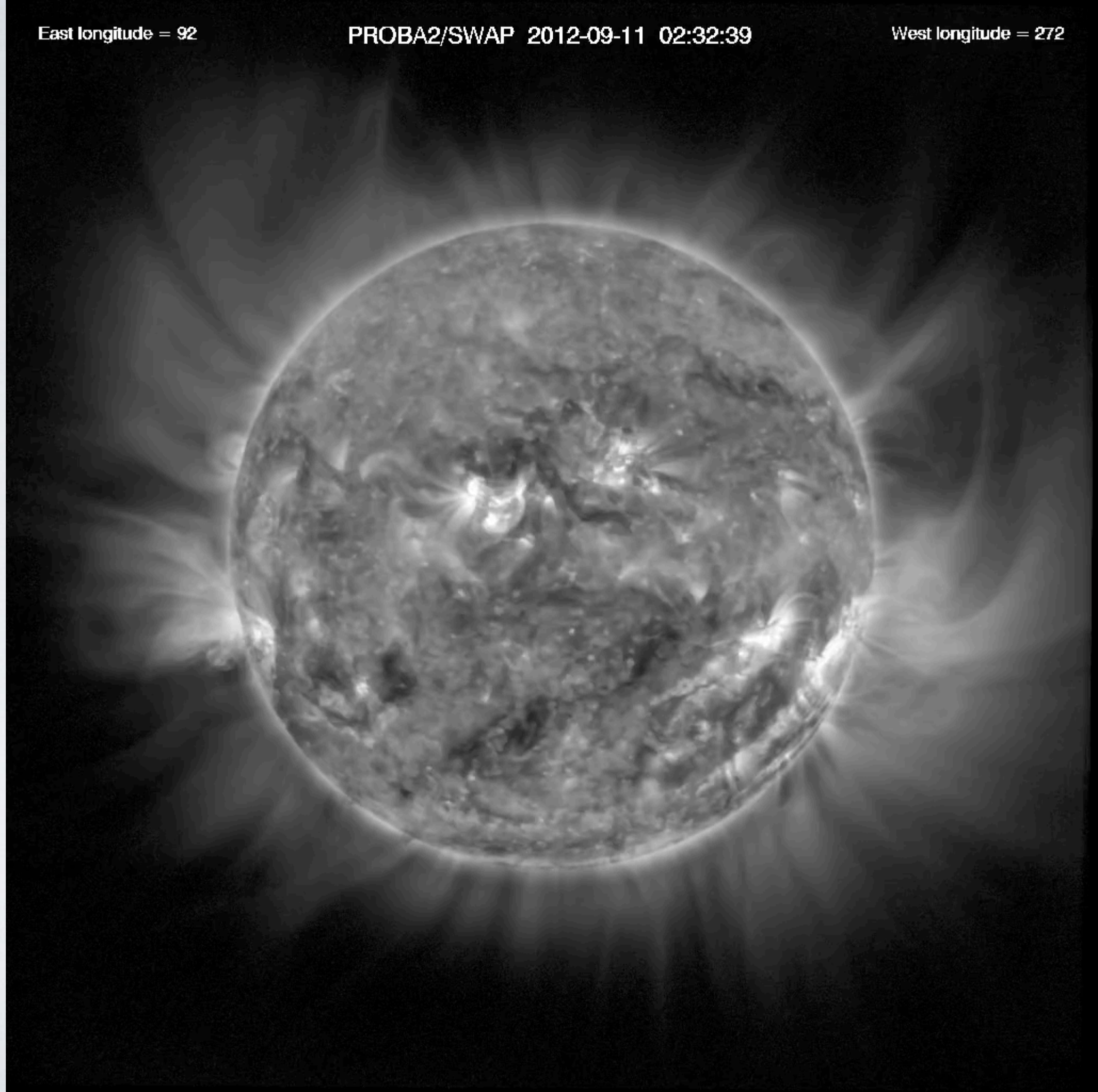
Laurel Rachmeler
PROBA2 Science Center Team
19 September 2014



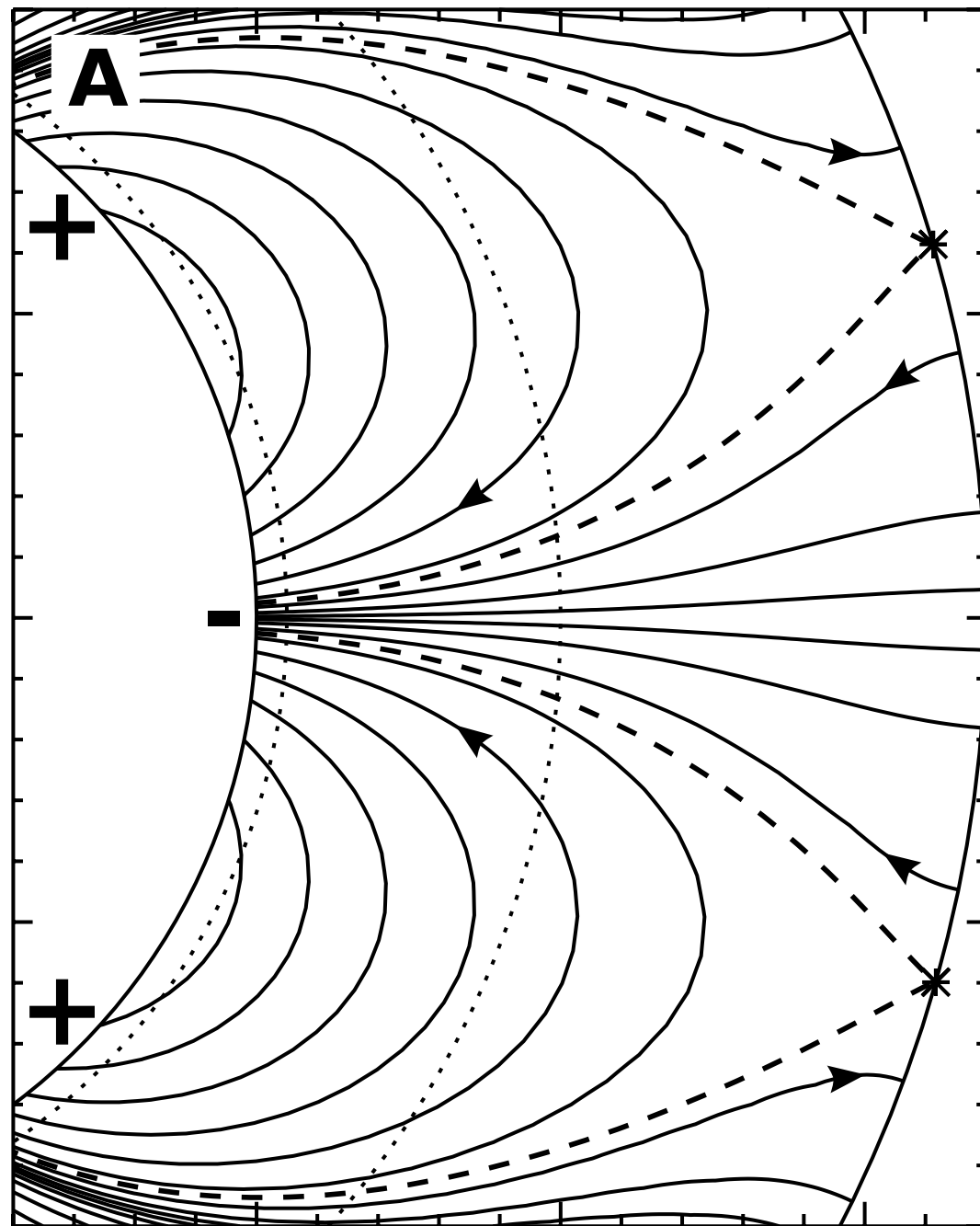
East longitude = 92

PROBA2/SWAP 2012-09-11 02:32:39

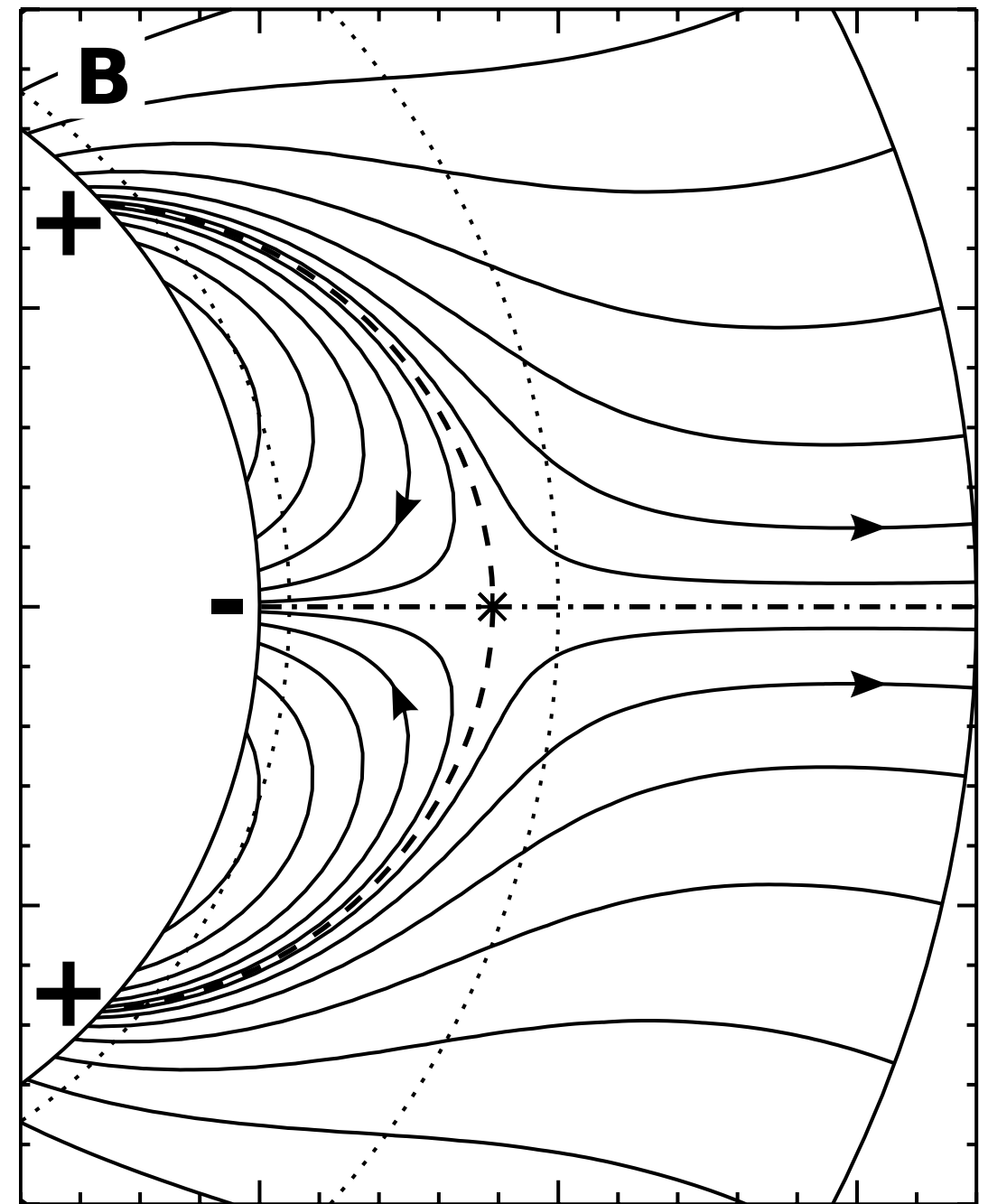
West longitude = 272

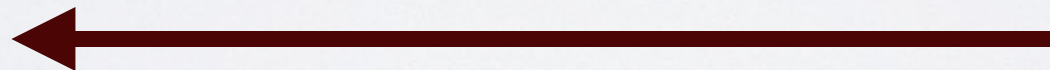


Double Streamer

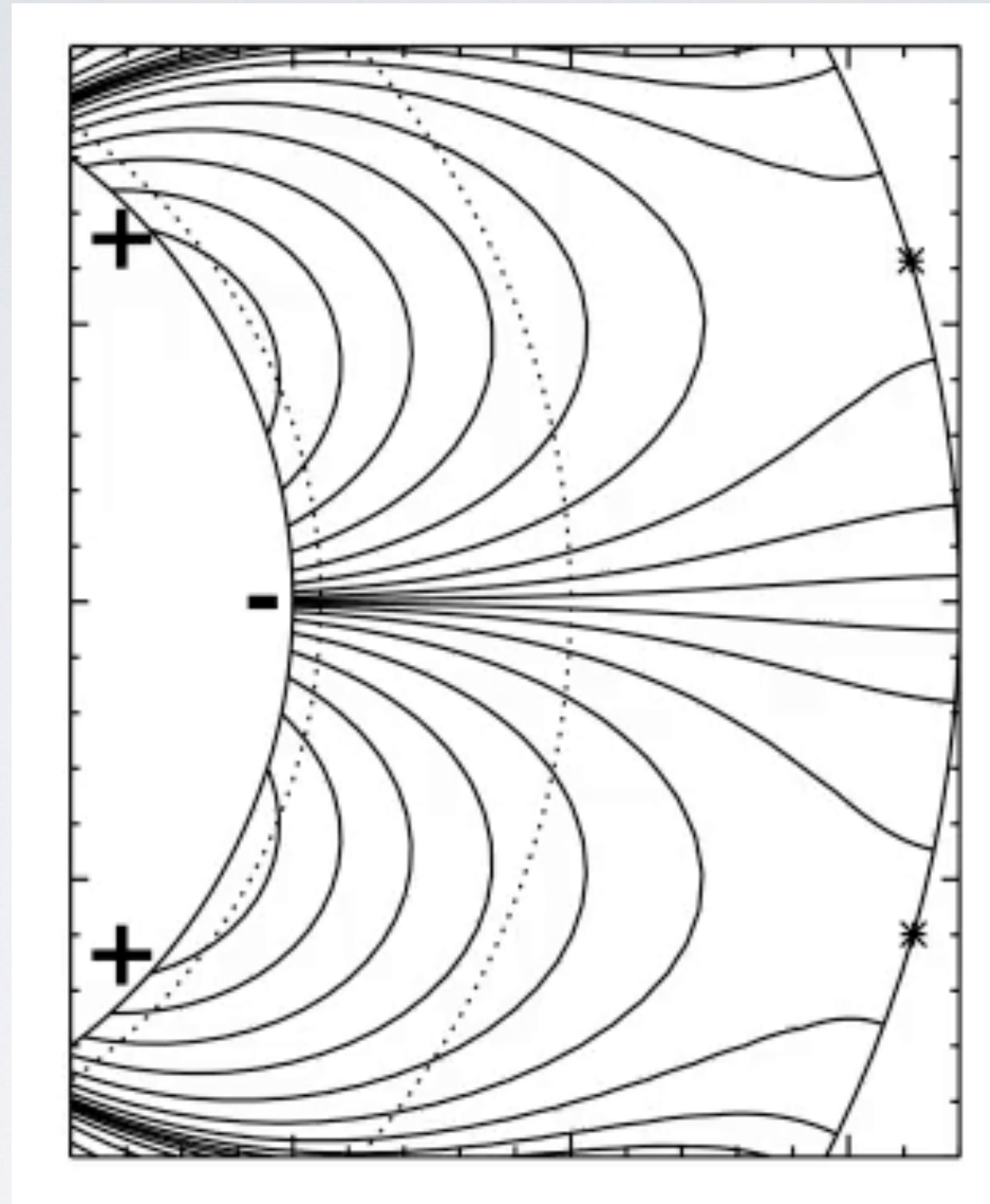


Pseudostreamer

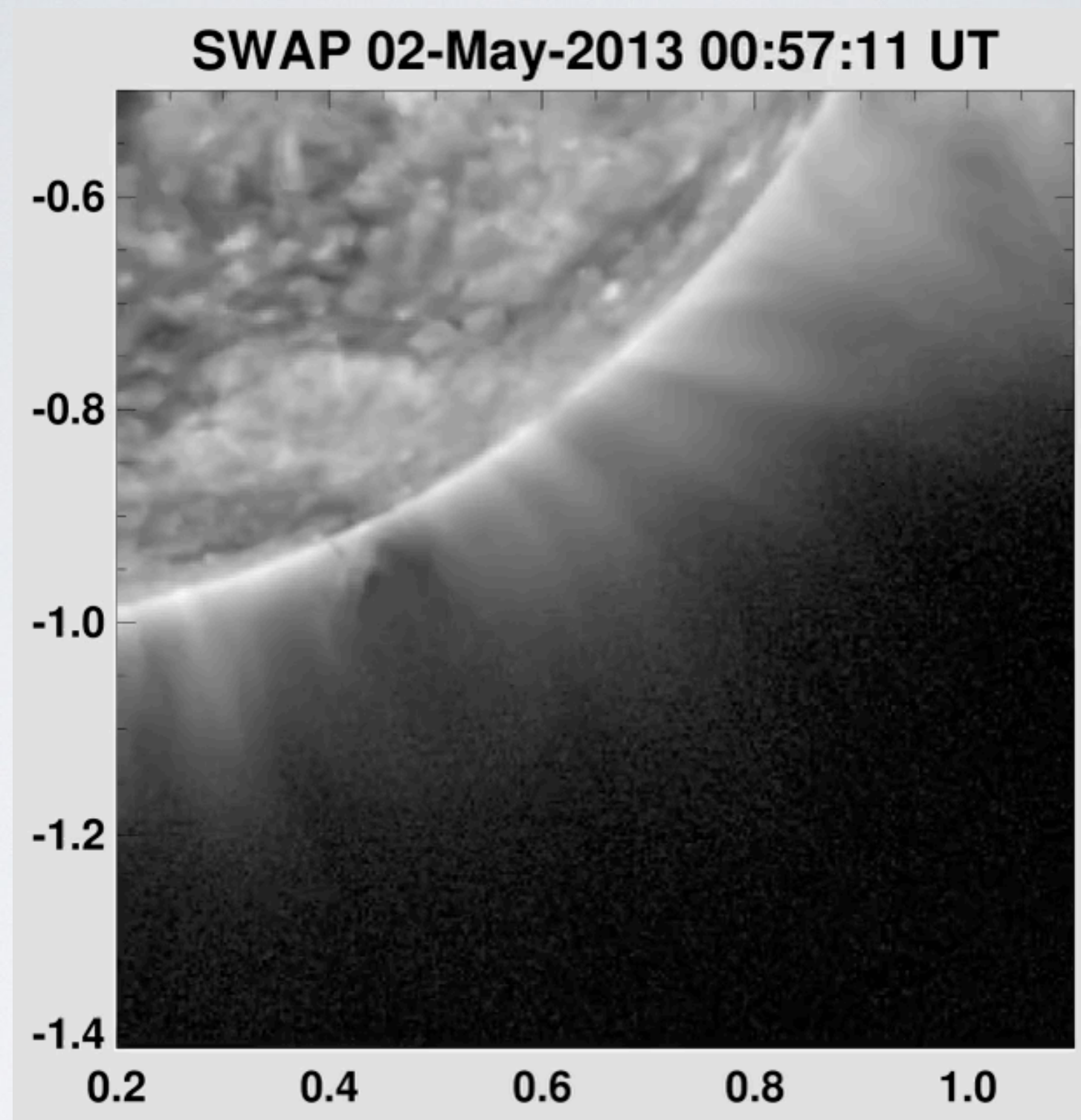




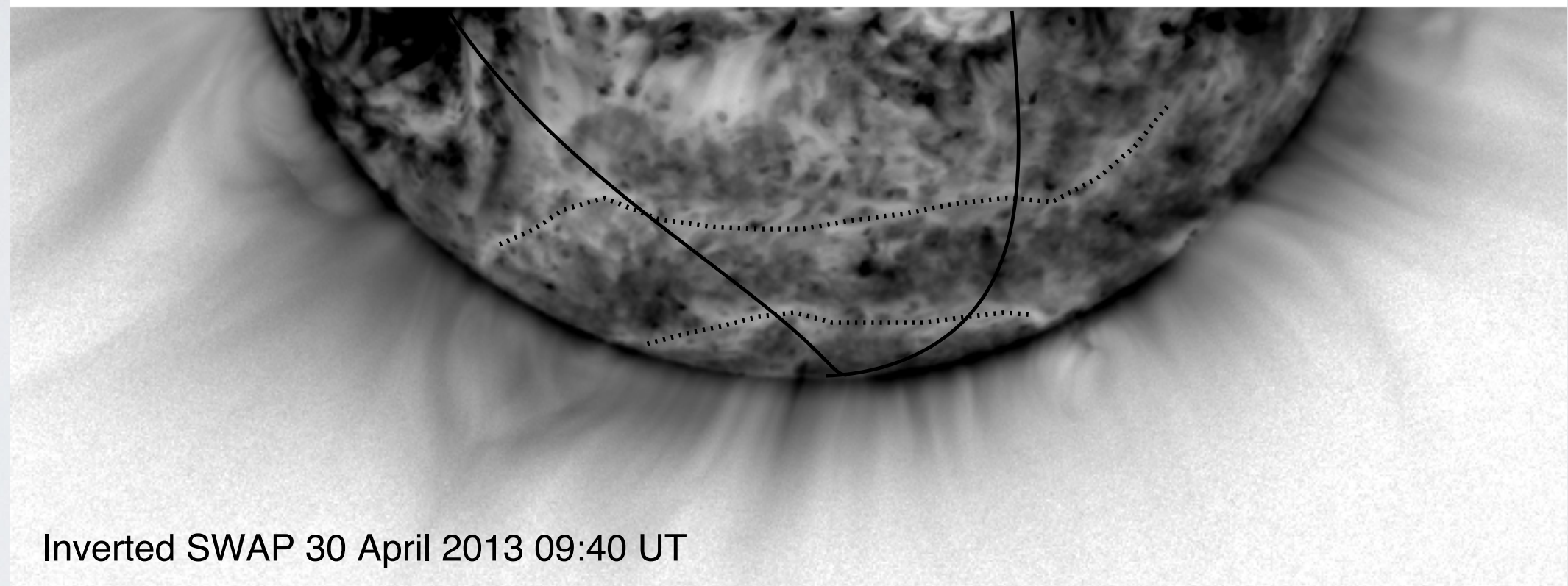
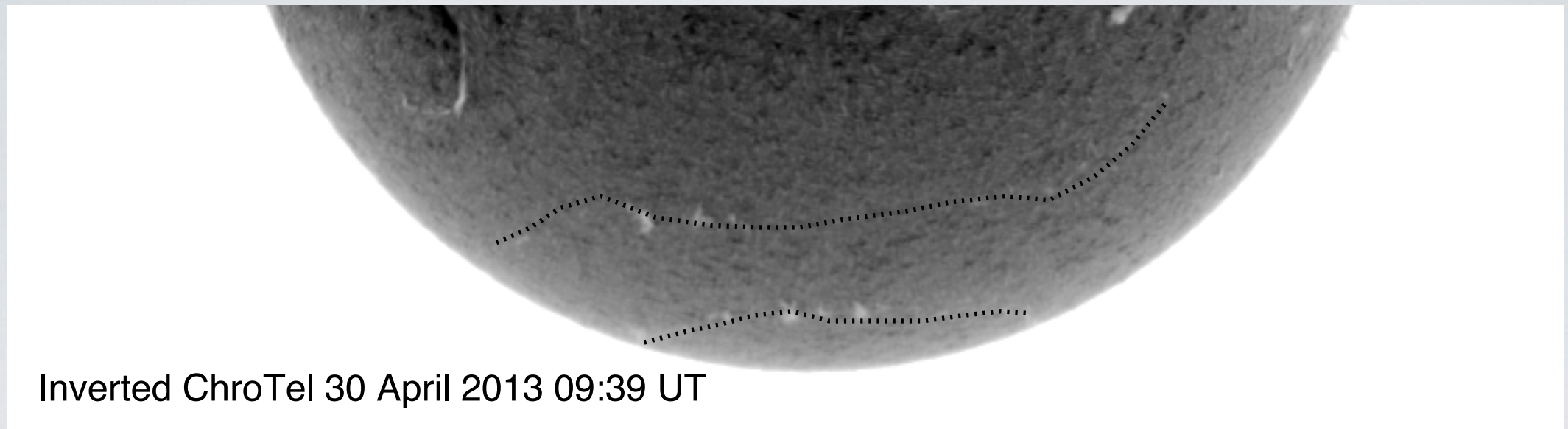
MORPHOLOGY CHANGES
IN SPACE, NOT TIME



MORPHOLOGY CHANGES
IN SPACE, NOT TIME

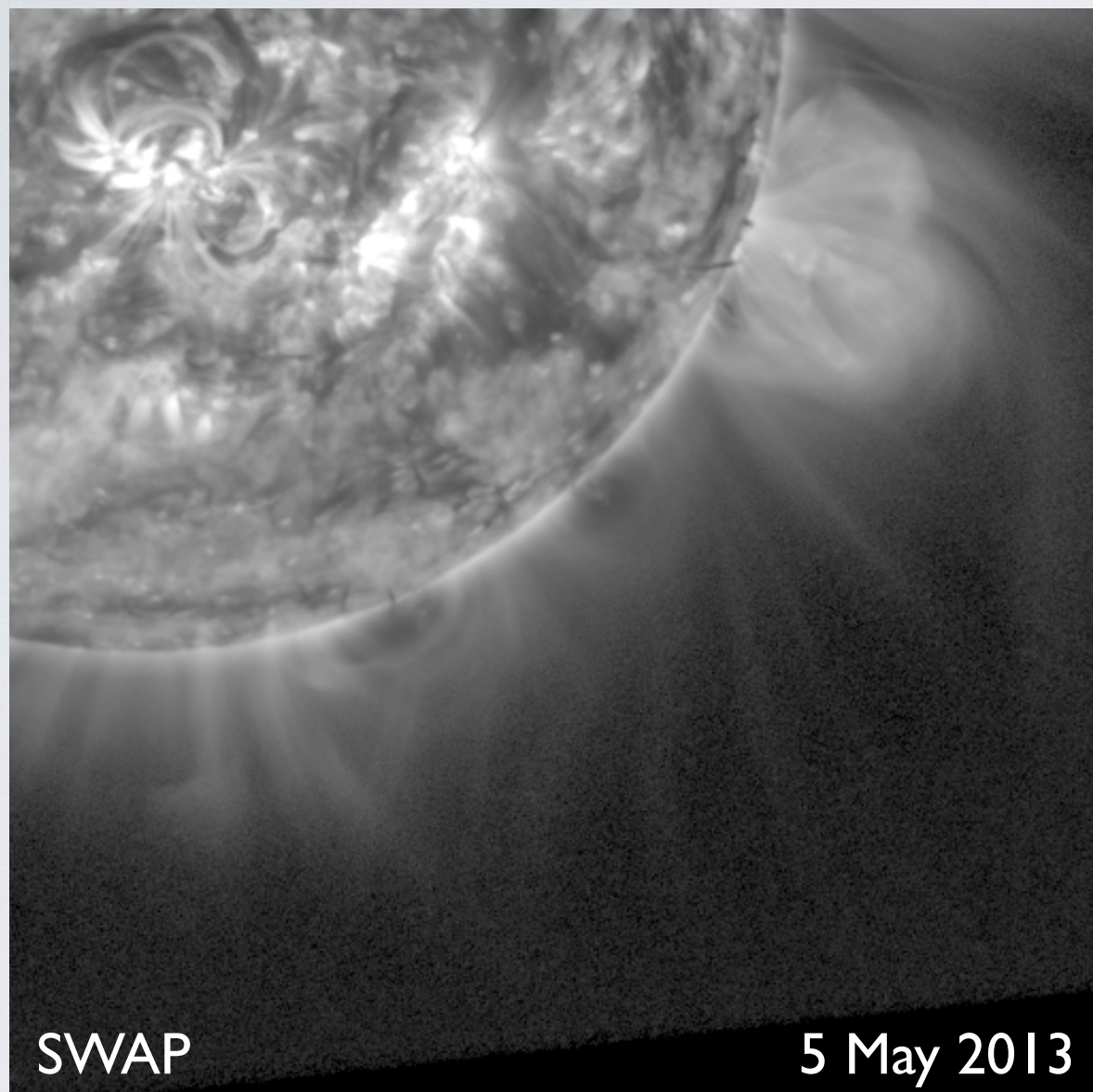


SPECIFIC OBSERVATION

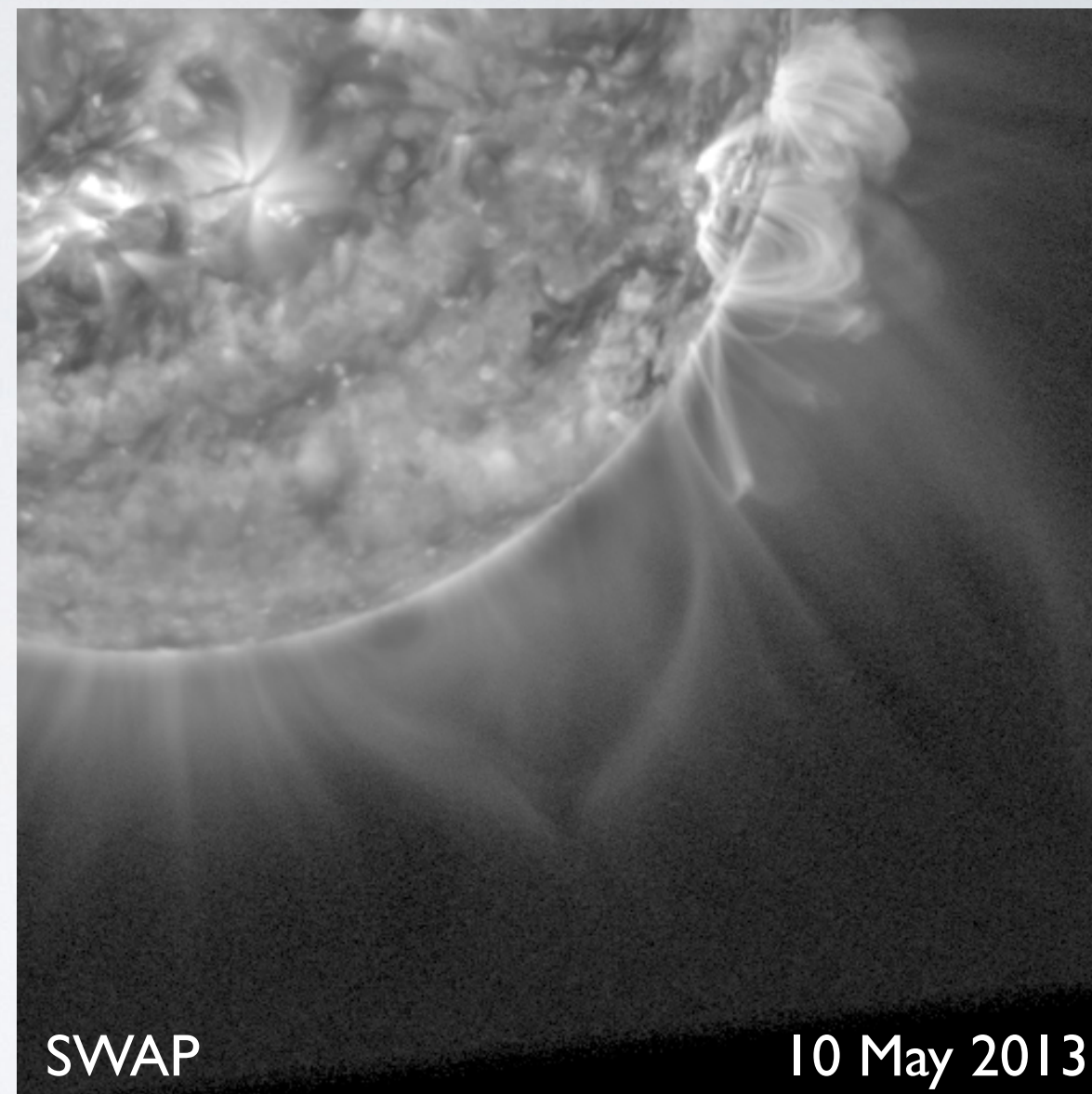


FILAMENT CHANNELS

Double Streamer



Pseudostreamer



The data are ambiguous

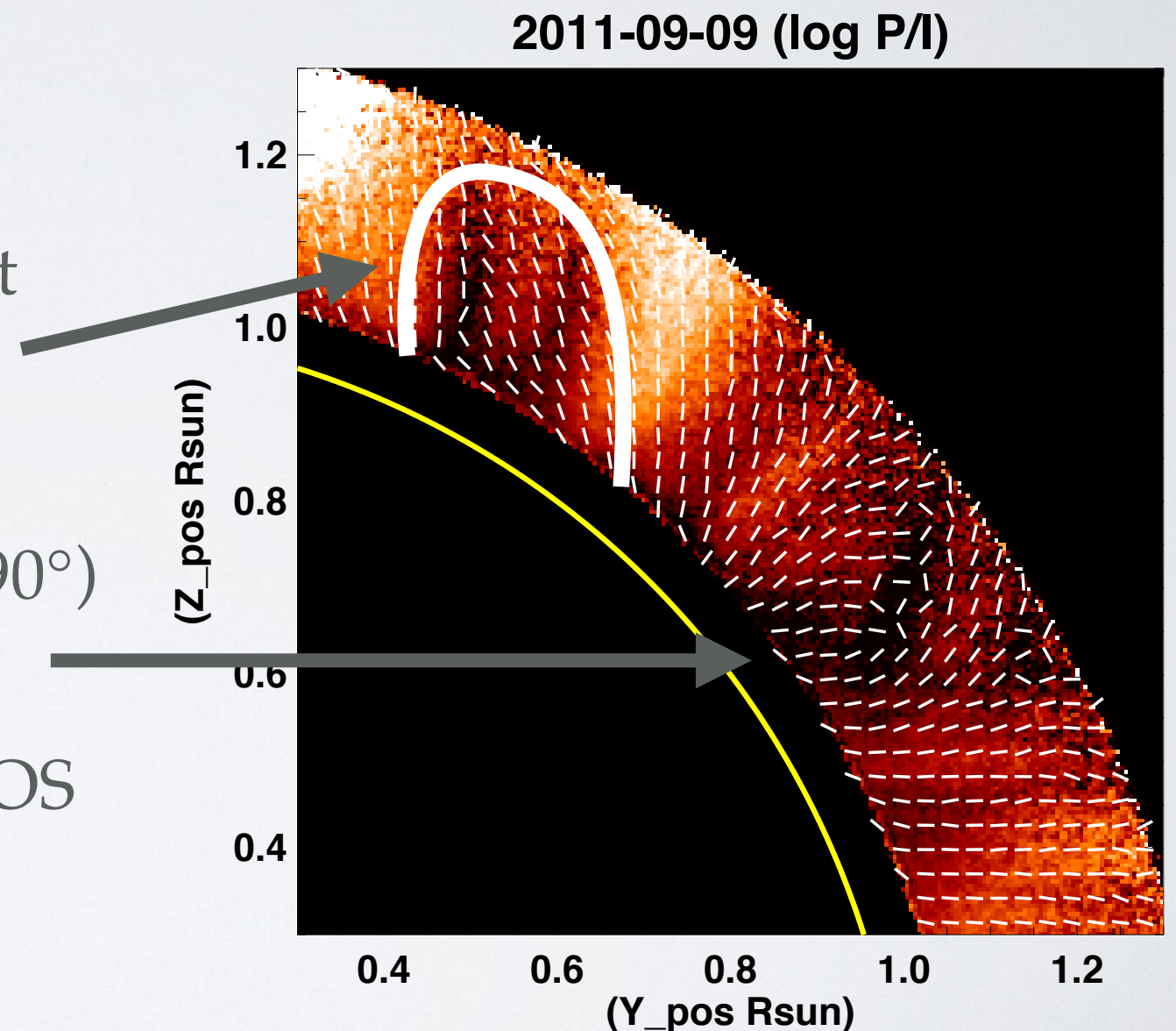
CORONAL POLARIZATION

the short version - linear polarization (L)

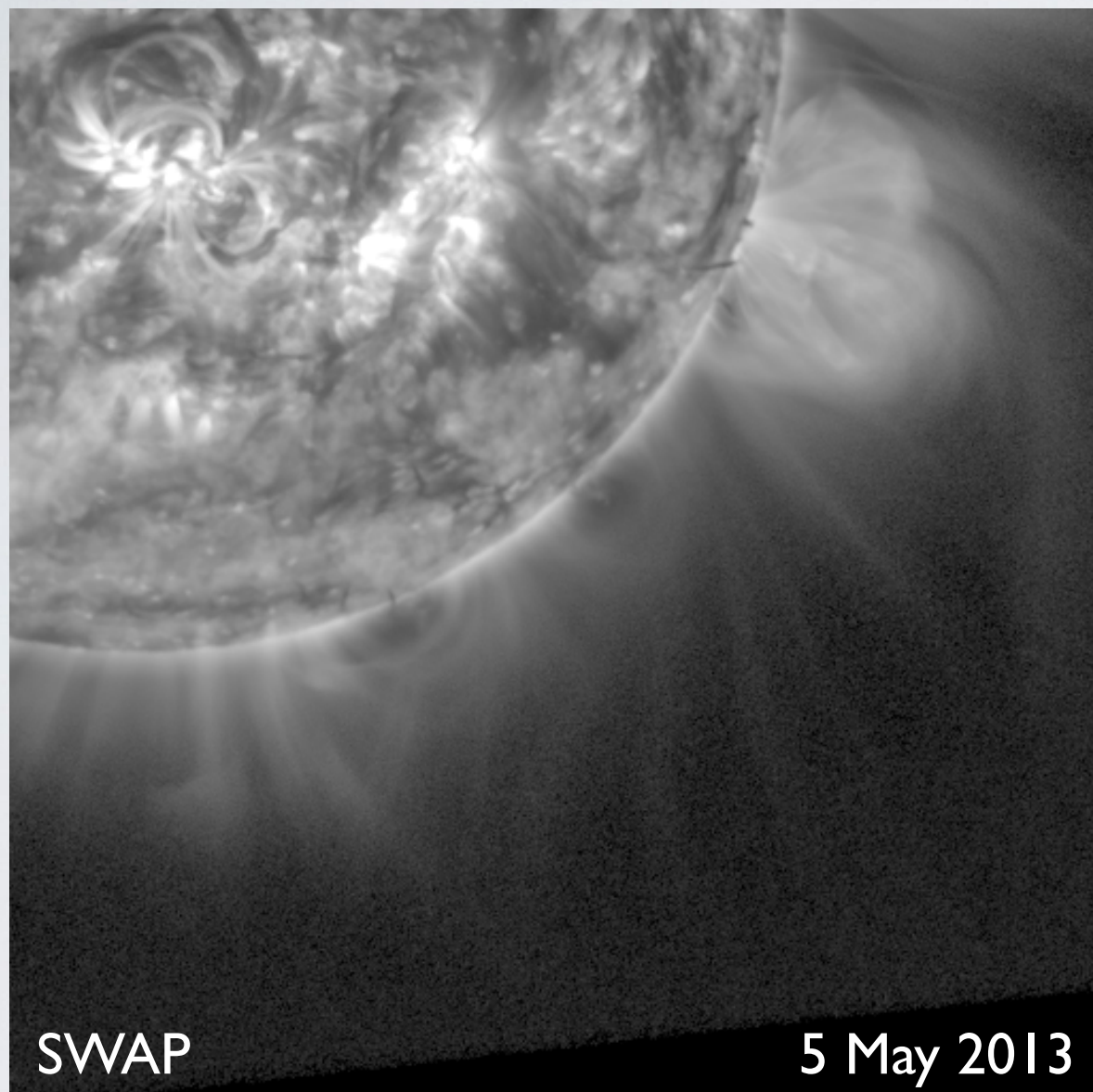
$$\frac{L}{I} = \frac{\sqrt{Q^2 + U^2}}{I} \approx 10^{-2} \propto \sin^2 \Theta$$

Look for nulls in L

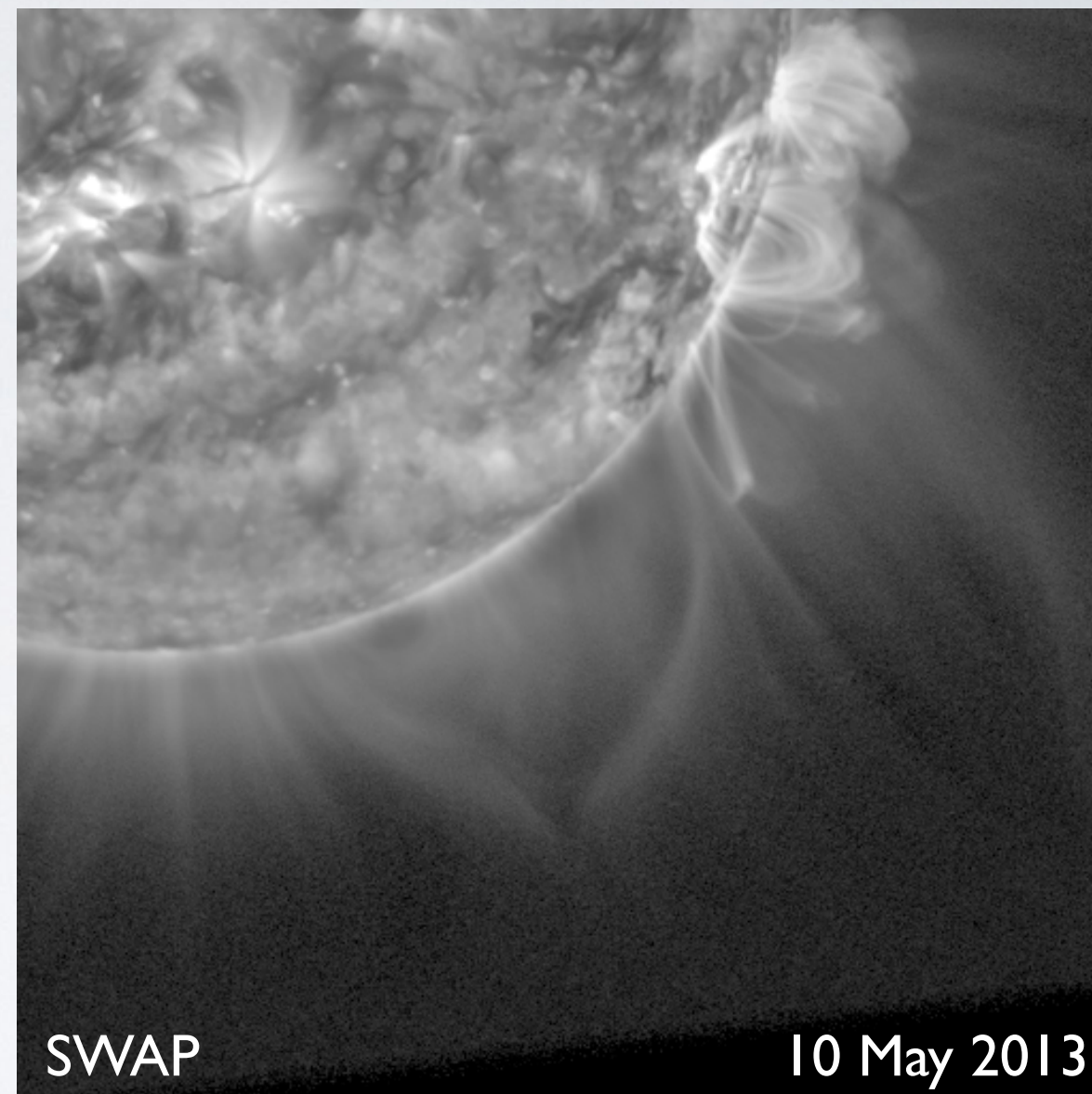
1. Van Vleck Inversion, B is about 54° from radial
 - elongated dark structures
2. B is along line of sight ($\theta=90^\circ$)
 - dark blobs
3. High symmetry causes false LOS signal
 - dark blobs



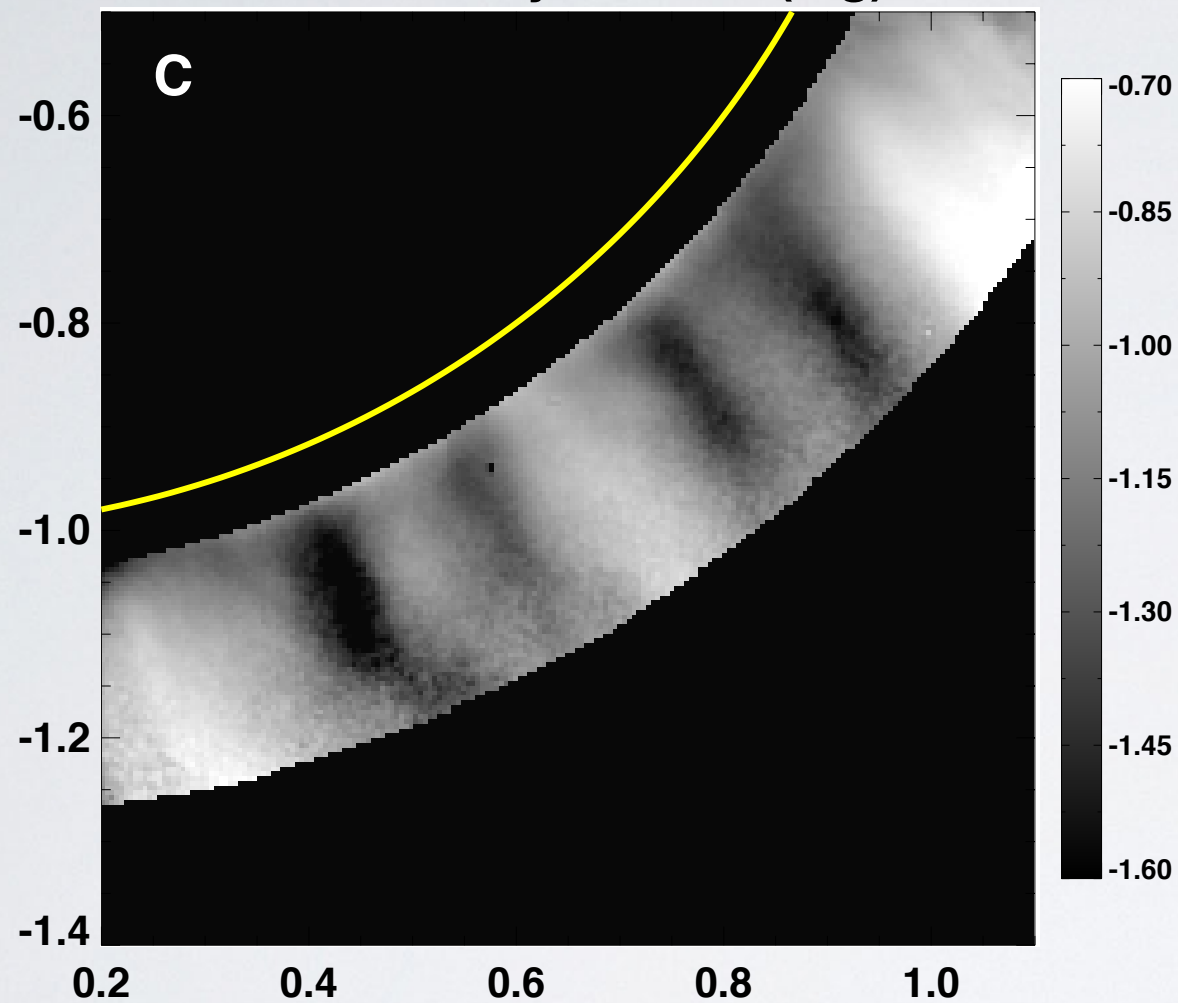
Double Streamer



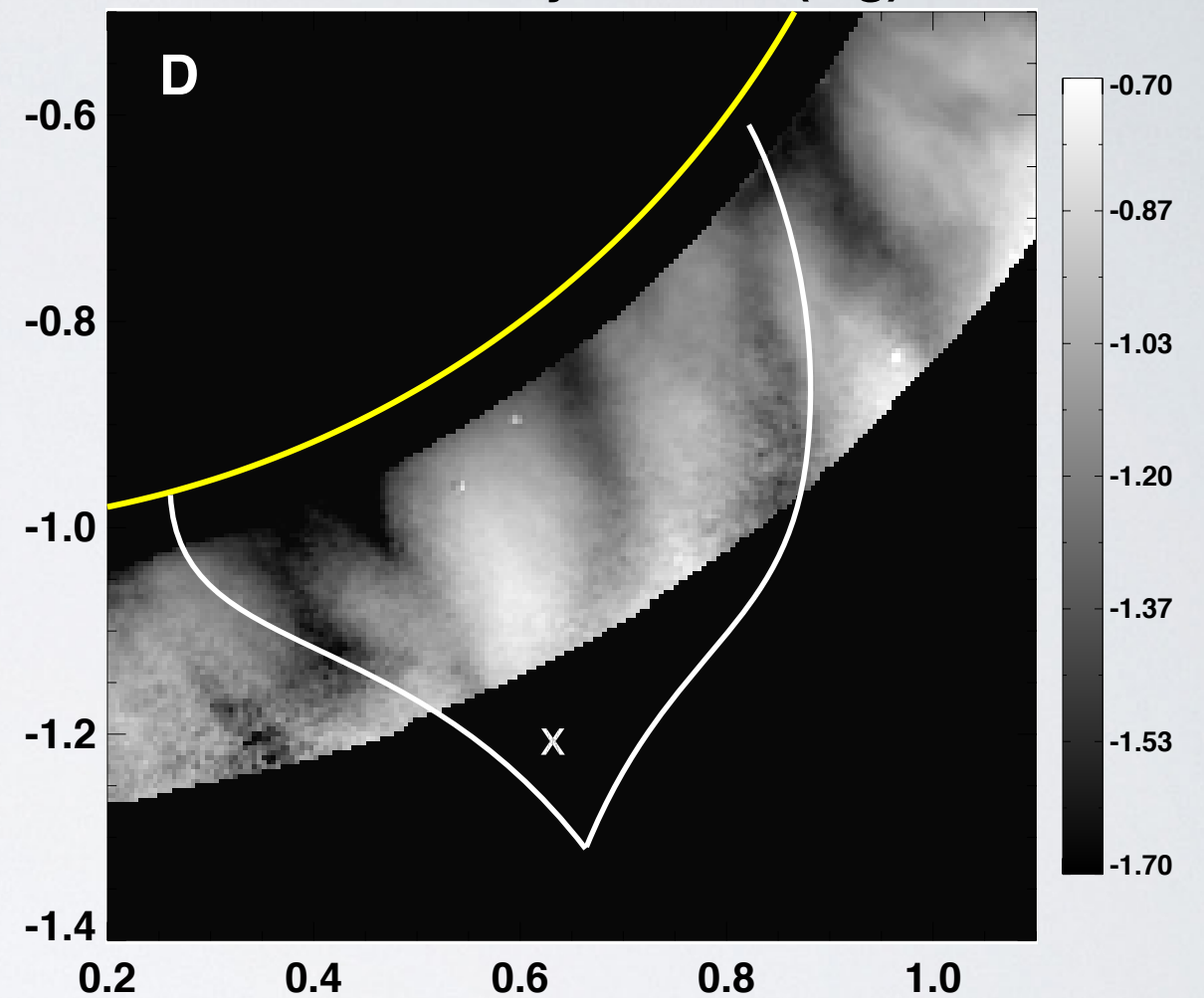
Pseudostreamer



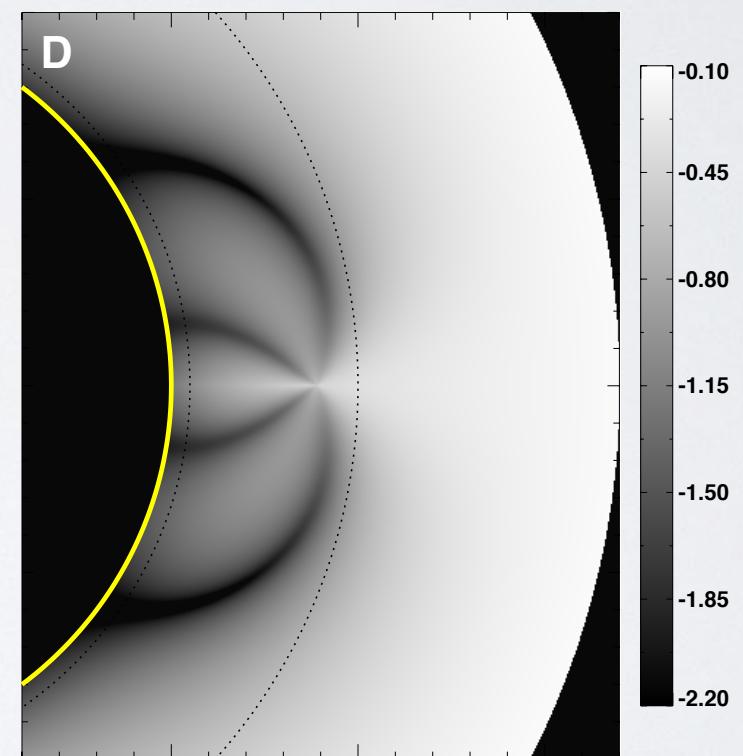
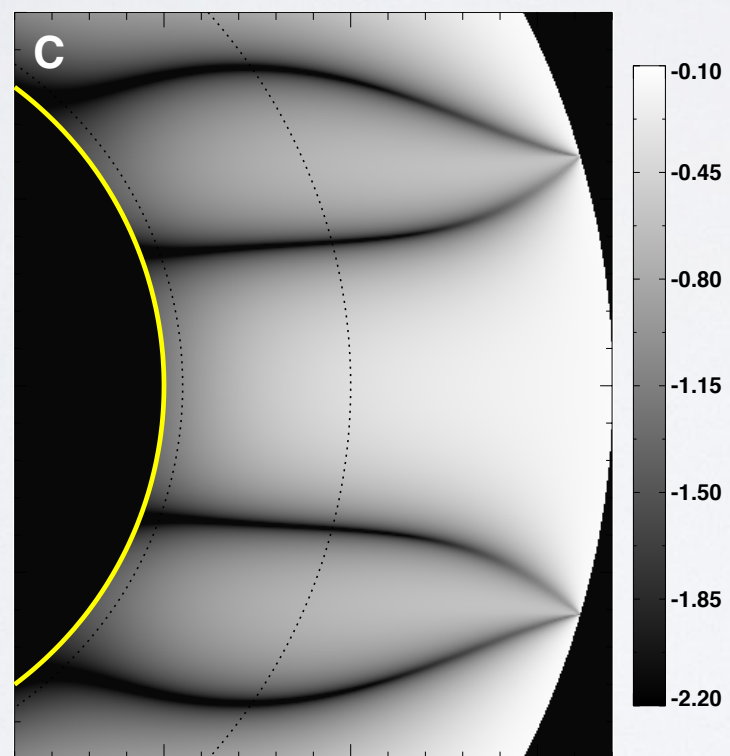
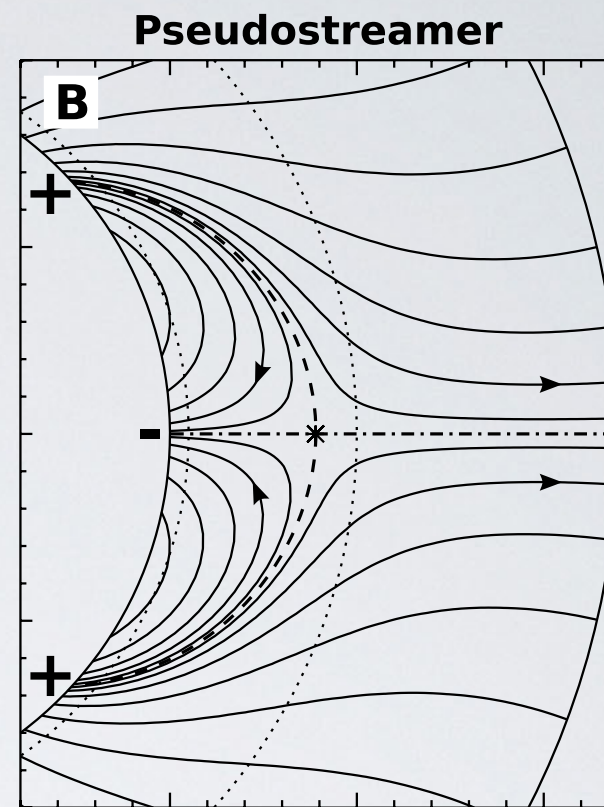
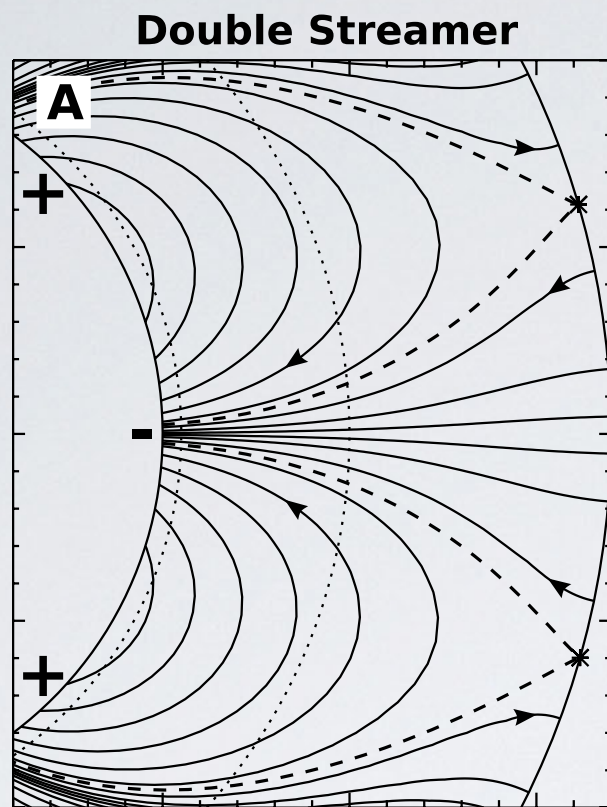
CoMP 5 May 2013 L/I (log)



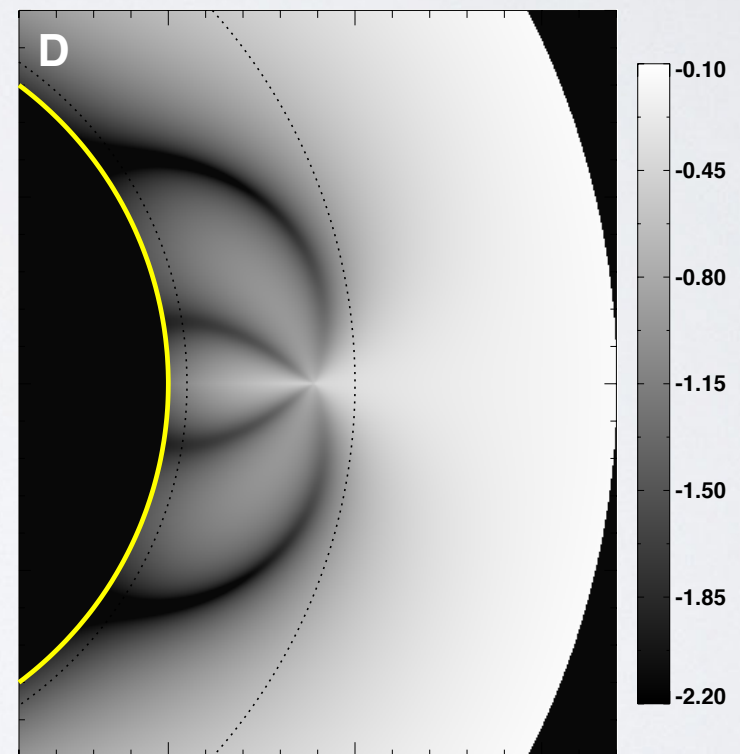
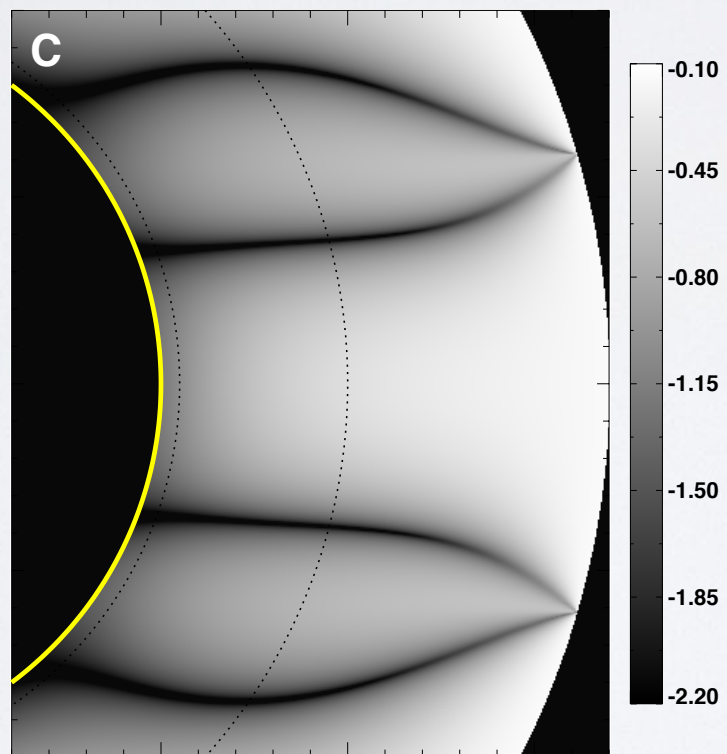
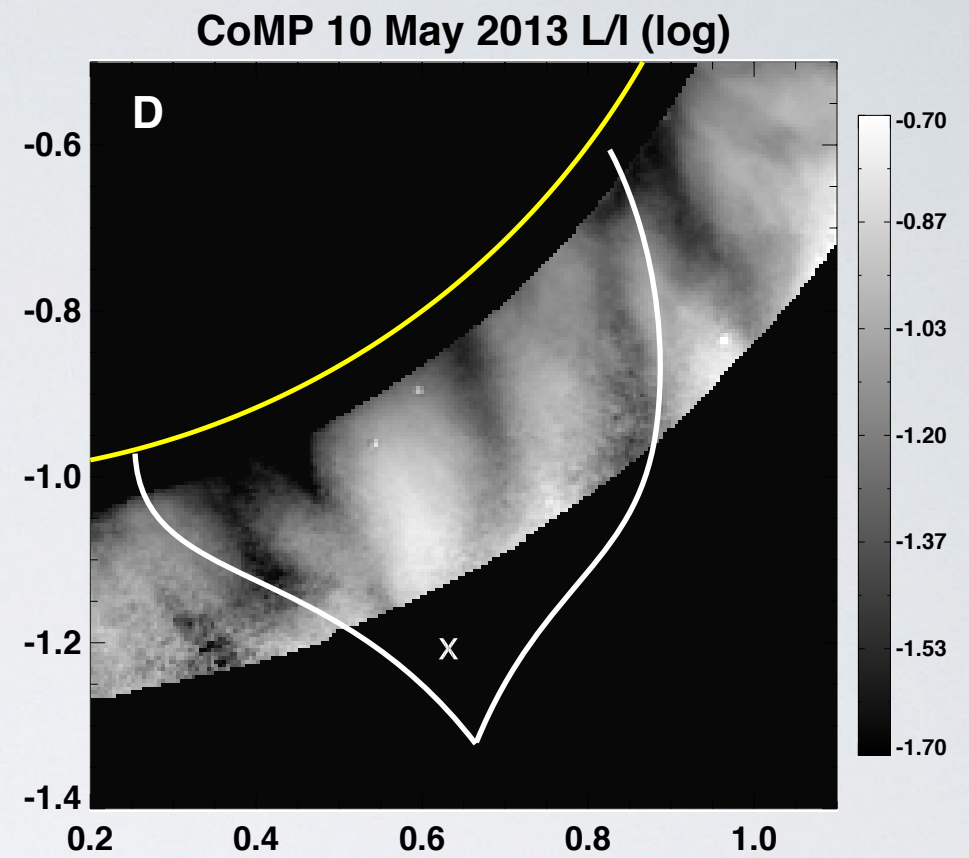
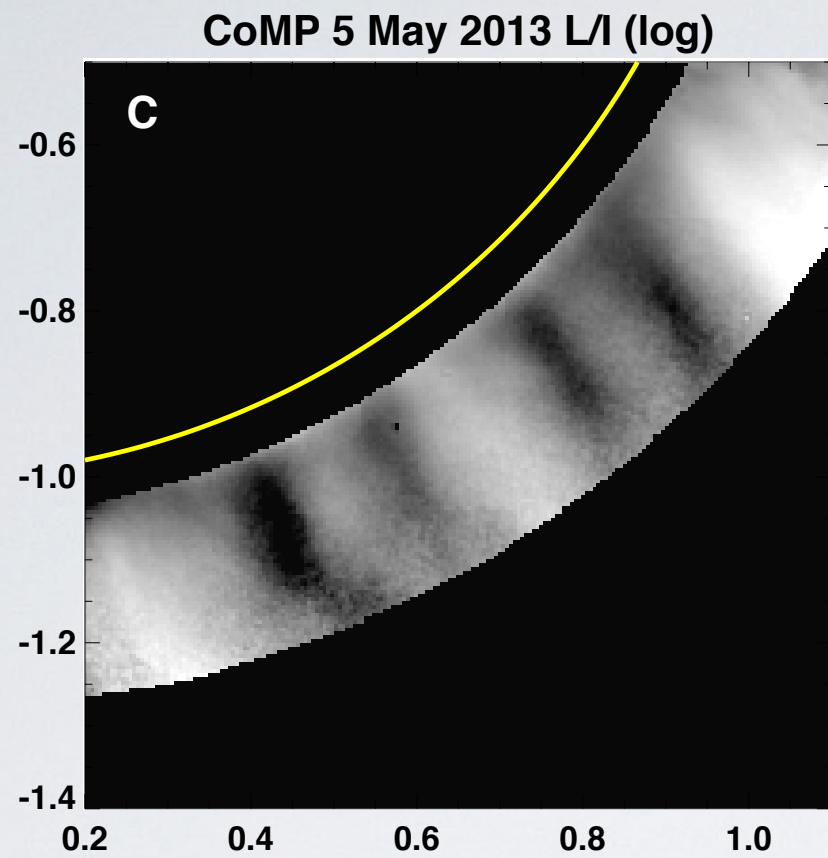
CoMP 10 May 2013 L/I (log)



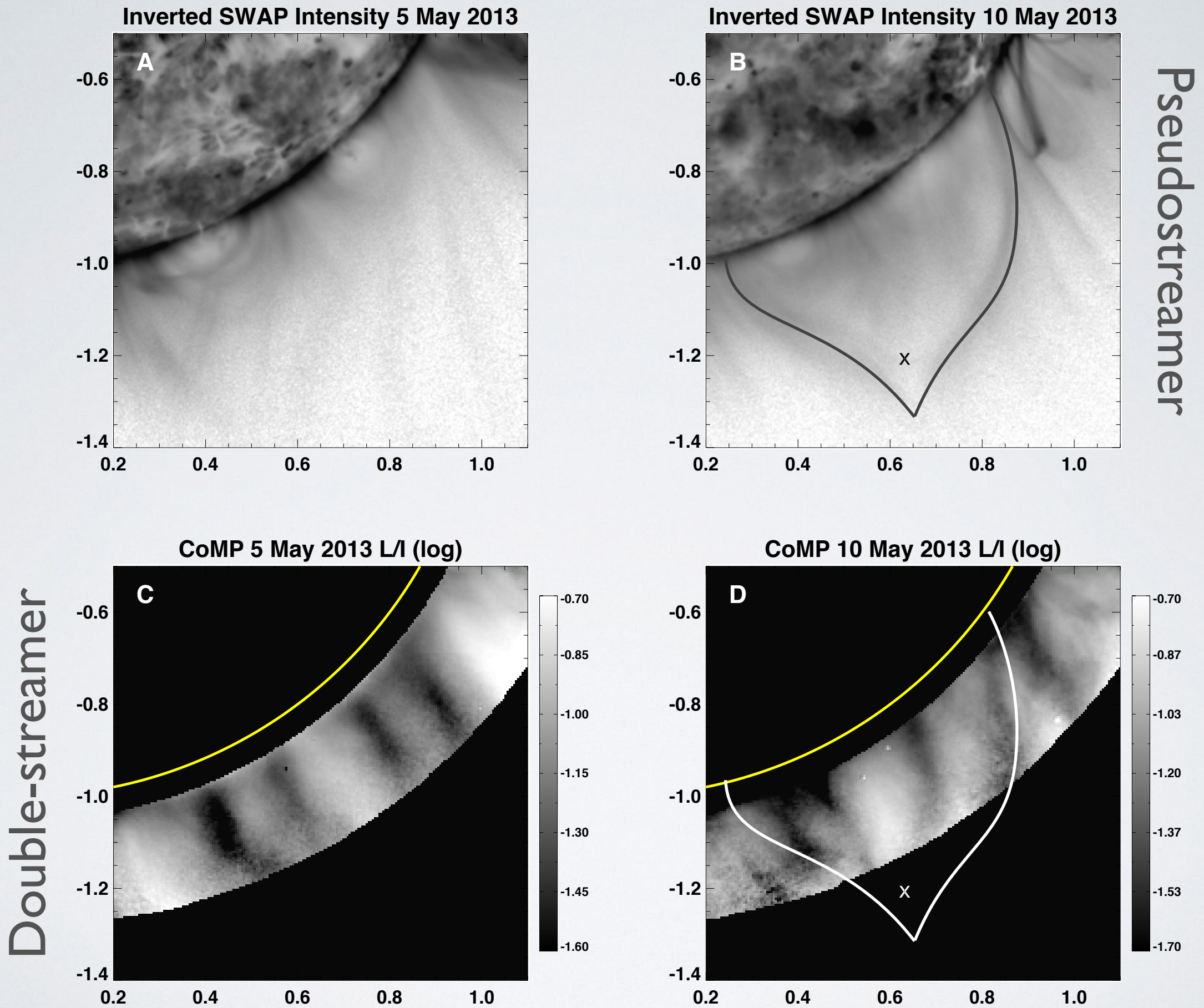
CORONAL POLARIZATION



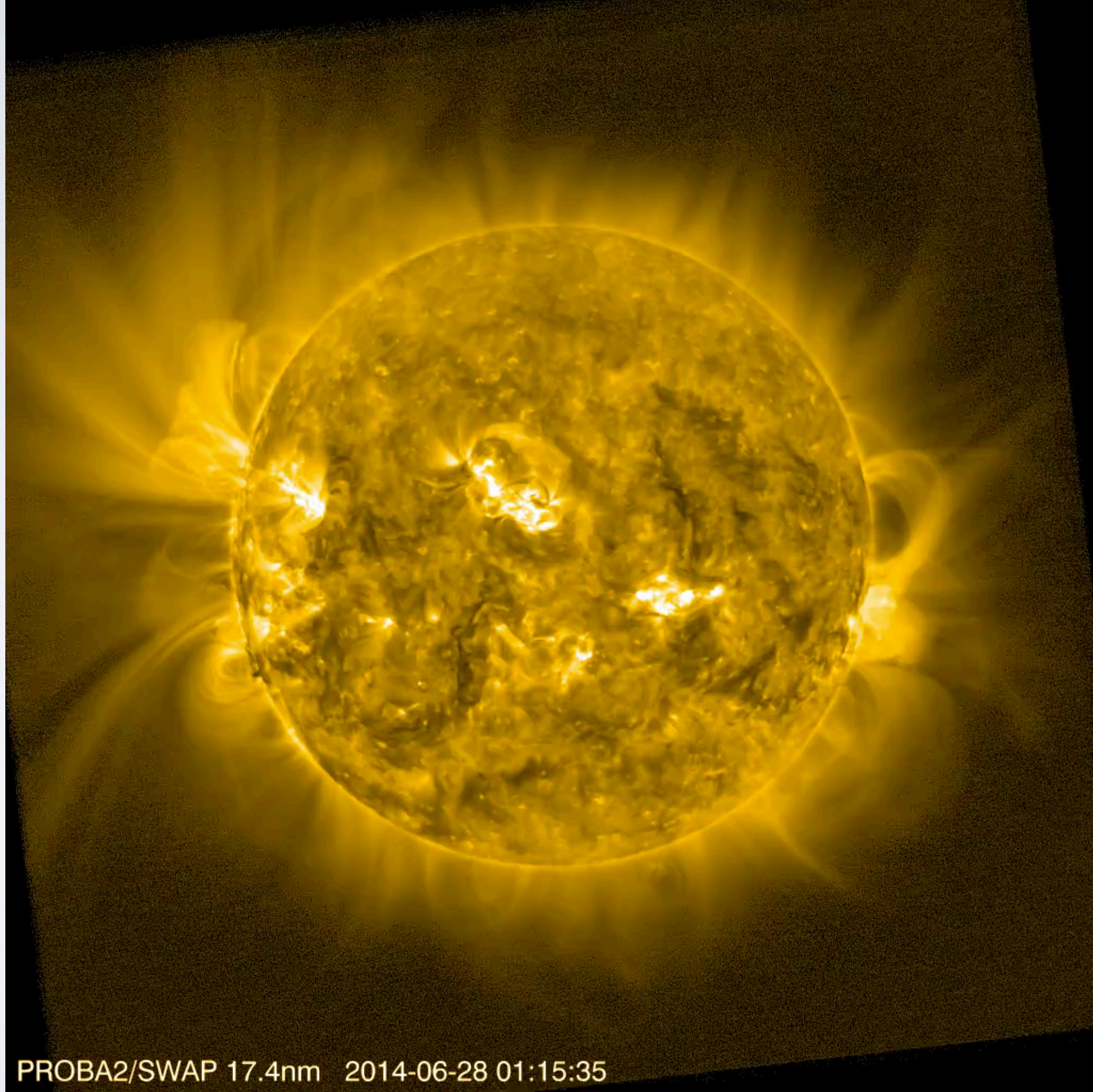
CORONAL POLARIZATION



CORONAL POLARIZATION



Using SWAP, CoMP, and modelling techniques we identified a hybrid structure containing a combination of both streamers and pseudostreamers.



PROBA2/SWAP 17.4nm 2014-06-28 01:15:35