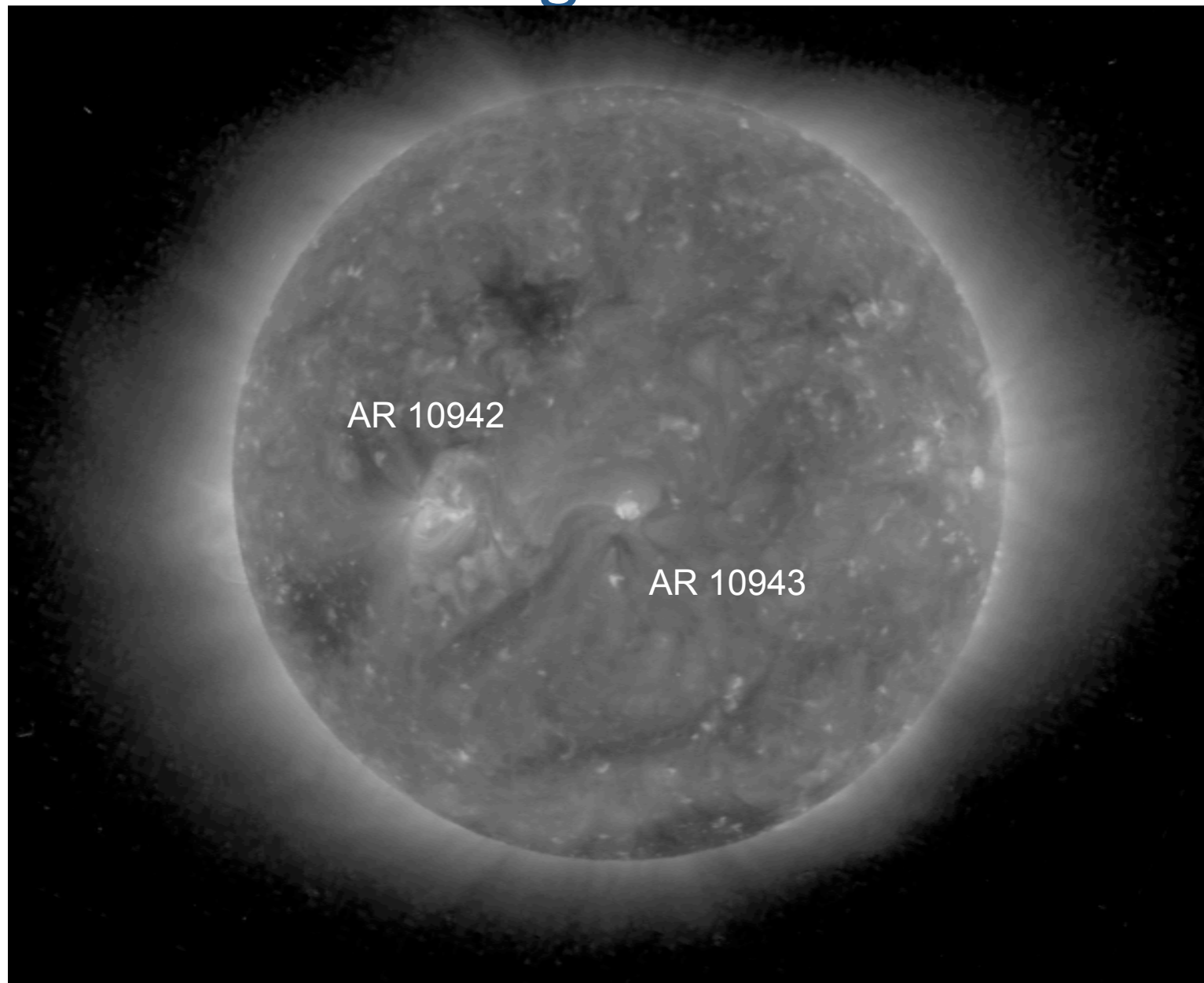


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Stéphane Régnier² and
Jean-Claude Vial¹

Magnetic topology around a downflow at the edge of AR10943: a large scale flow from AR10942?

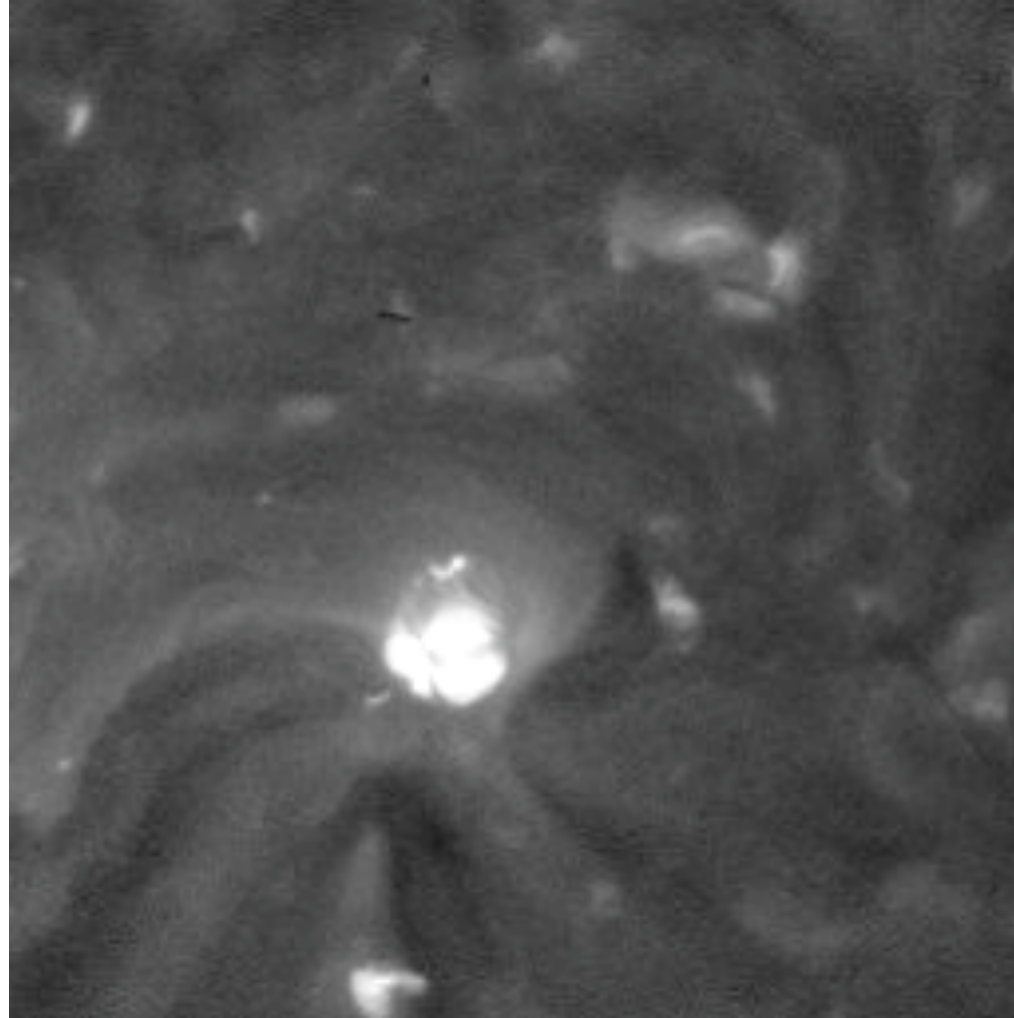
1 : Institut d'Astrophysique Spatiale
2 : University of Central Lancashire

Two Active Regions on Feb 2007



STEREO
Image
FeXII 195

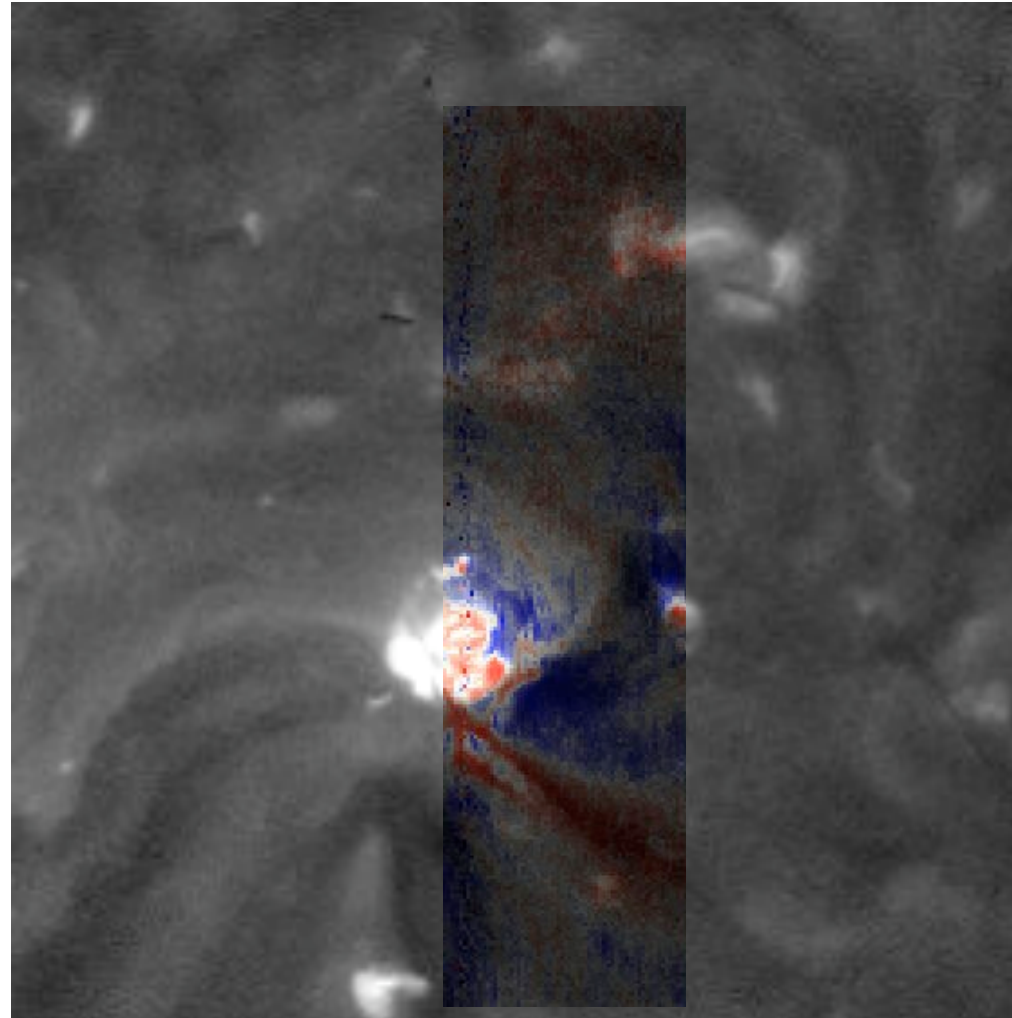
The Active Region 10943



XRT image

The Active Region 10943

What kind
of
Downflows
?



Doppler
Velocities
from
 -17km.s^{-1} to
 9km.s^{-1}

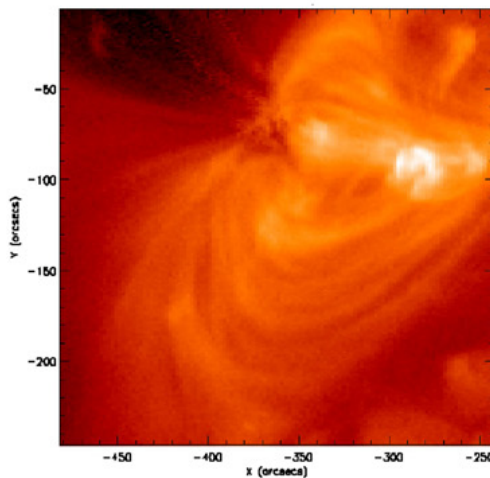
XRT image

And Doppler shift from Fe XII 195 Å
(EIS)

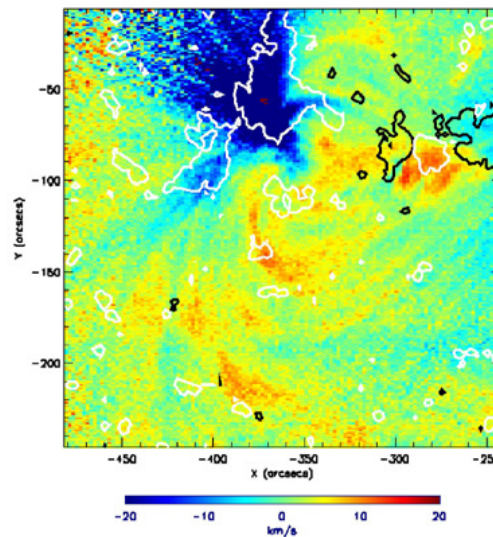
What about the Active Region 10942 ?

(Baker et al 2009)

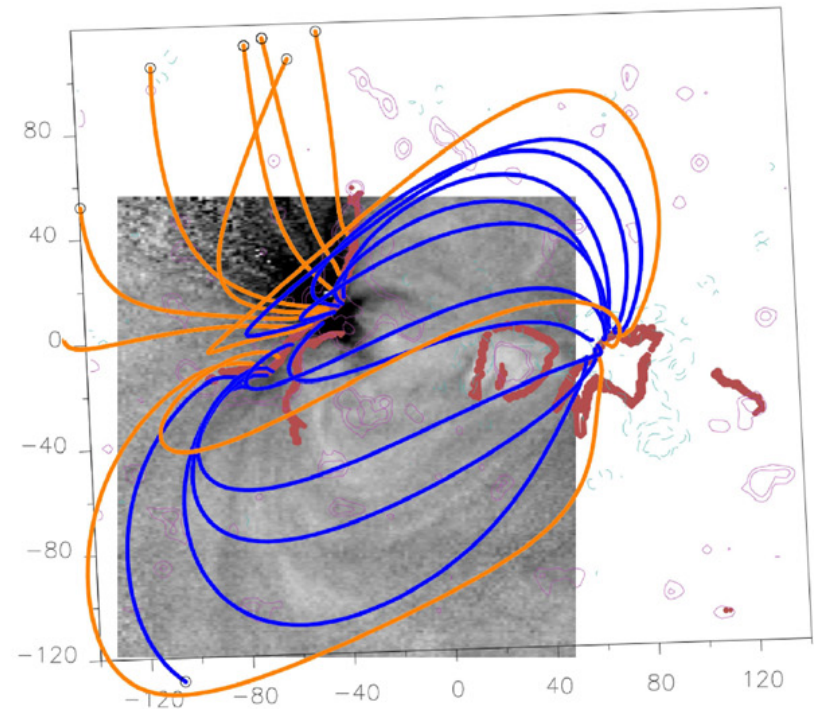
Blue outflow to the
Solar Wind ?
(Sakao et al 2007)



Intensity from FeXII
195.1 Å SIE

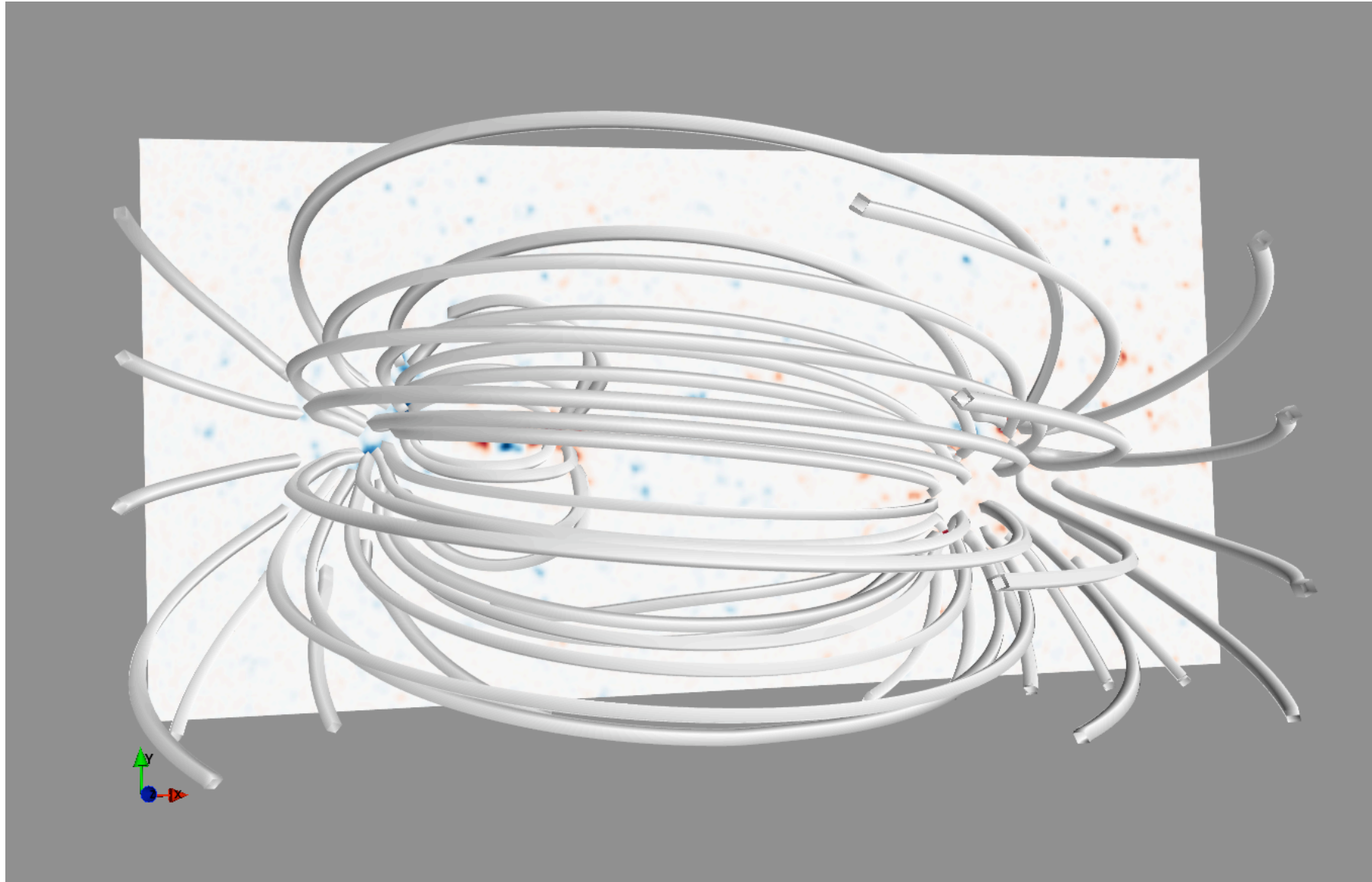


Velocities from FeXII
Doppler shift (EIS).

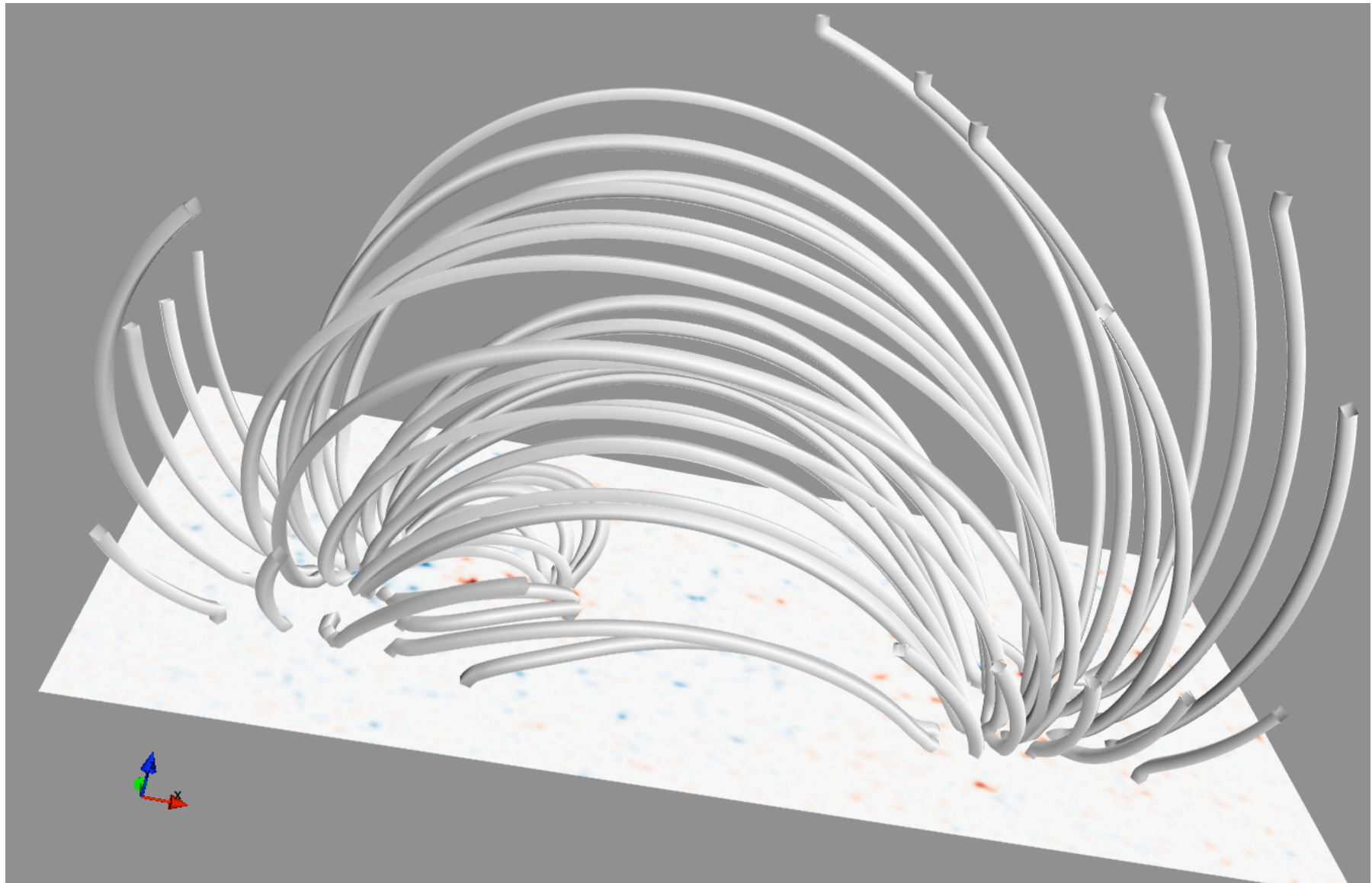


Extrapolated magnetic field over
velocities field(FeXII Doppler shift).

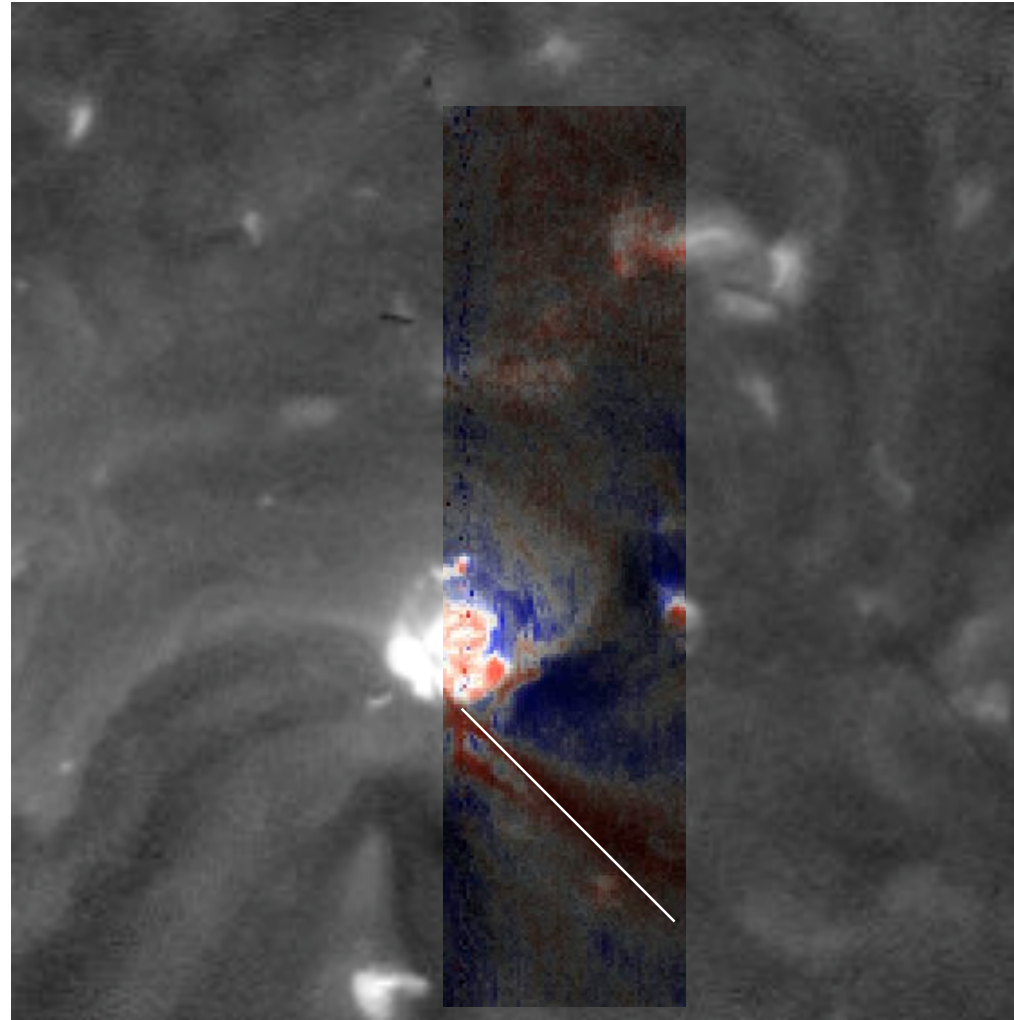
Some large scale loops maybe?



Some large scale loops maybe?



Cut along the straight downflow

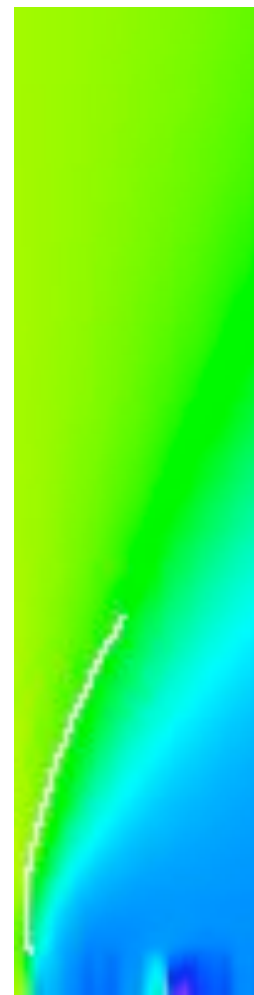


XRT image

And Doppler shift from Fe XII 195 Å
(EIS)

Magnetic field along the downflow cut

A magnetic field line in this plane



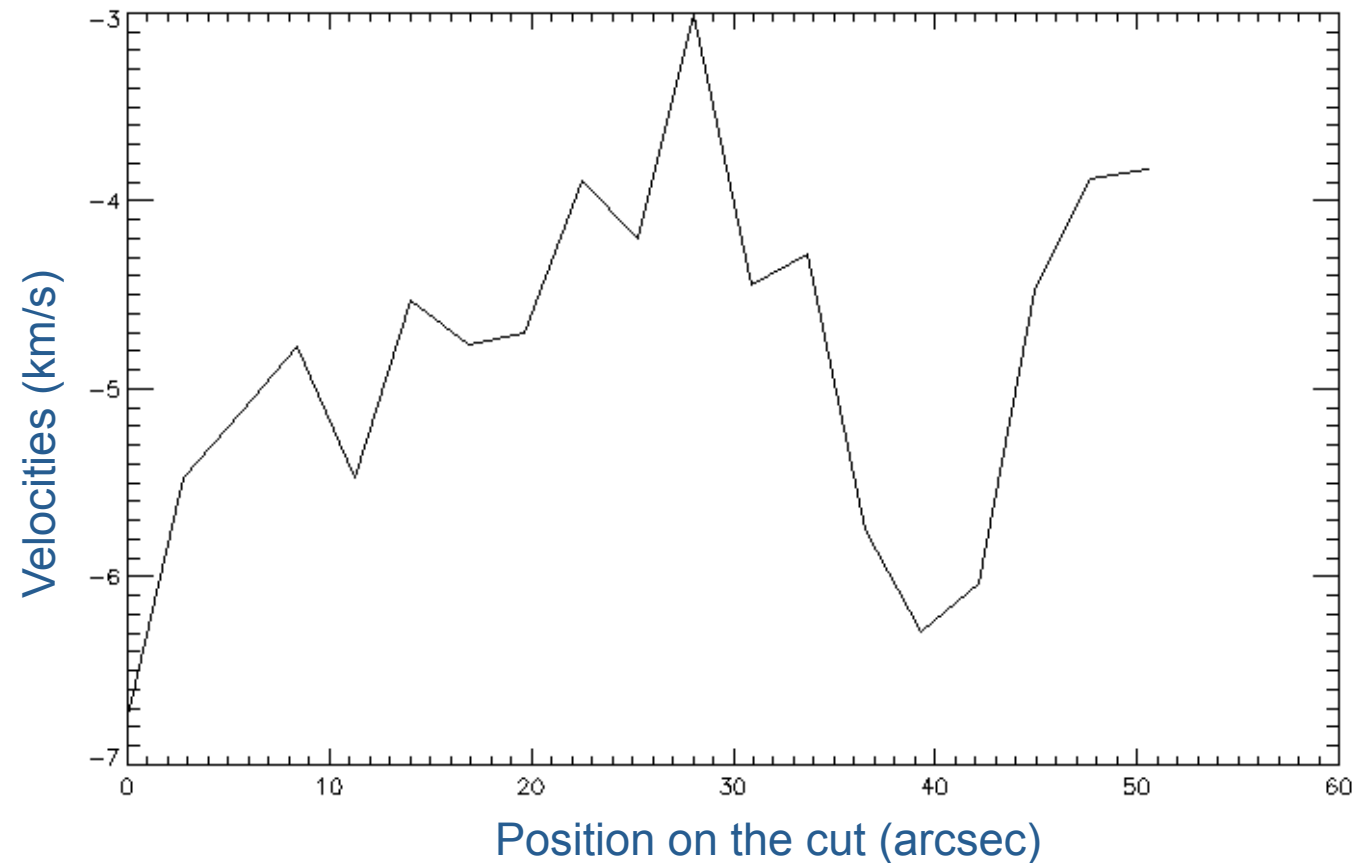
Angles on the horizontal plane



Angles from the horizontal plane

Velocities along the downflow cut

Velocities
(tangential
to the
extrapolated
field lines)



Conclusion

Discussion

- a straight downflow has been detected at the edge of AR10943
- magnetic extrapolations indicate that large-scale loops connect AR10943 and 10942
- some of the upflowing material seen in AR10942 (Sakao 2007, Baker 2009) could come down in AR10943 instead of following field lines open to interplanetary space (solar wind)

Future work:

- get estimate of density and mass flow, compare with flow in AR10942