

Coordinated observations of X-ray and high-resolution EUV active region dynamics

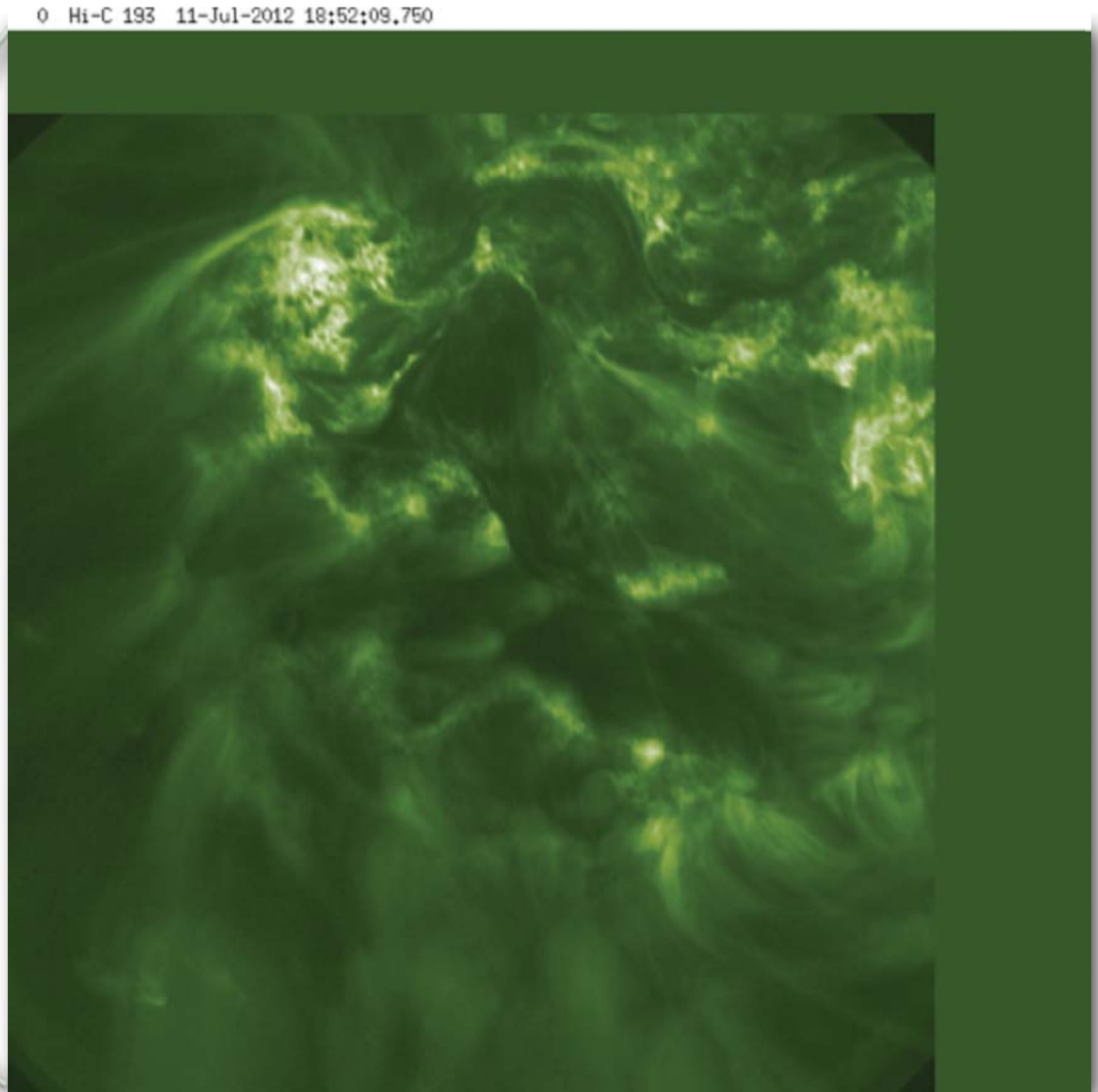
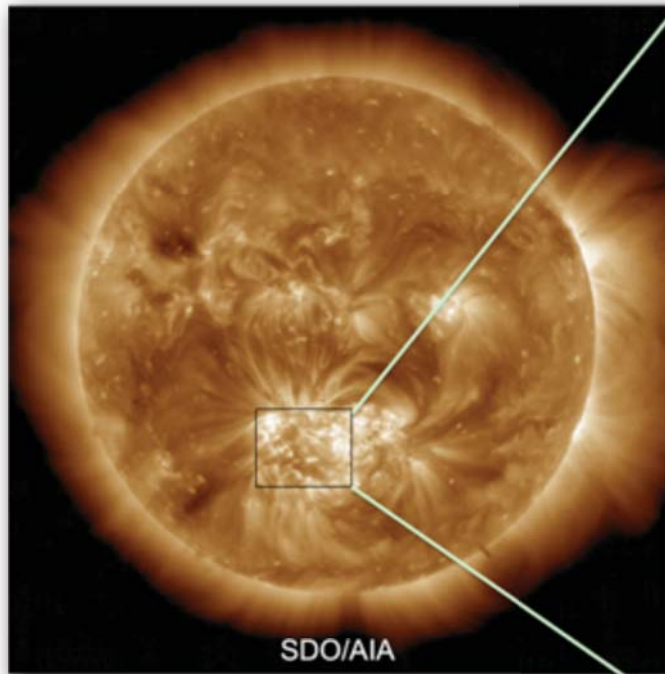
Sabrina Savage

Special Acknowledgements:

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Ken Kobayashi (UAH/MSFC),
Leon Golub (SAO), Kelly Korreck (SAO)

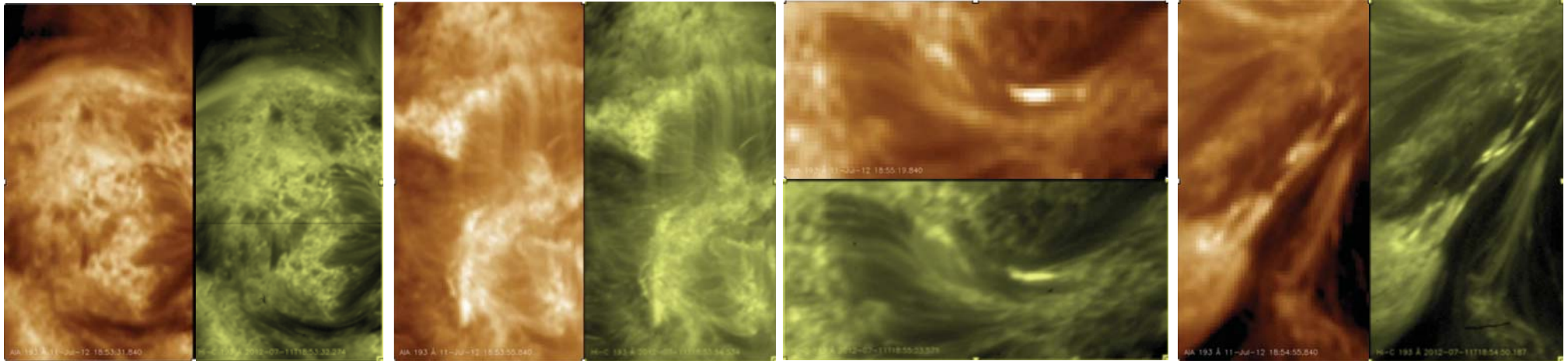


AIA & Hi-C 193 (11 July 2012)



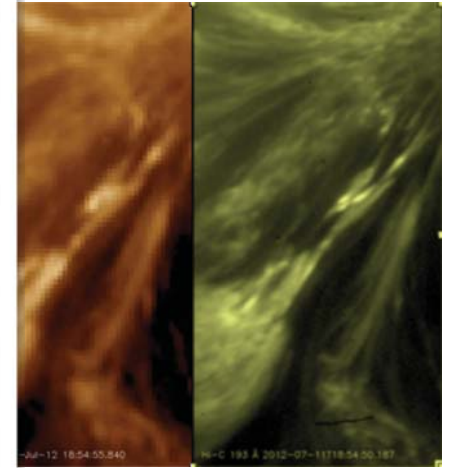
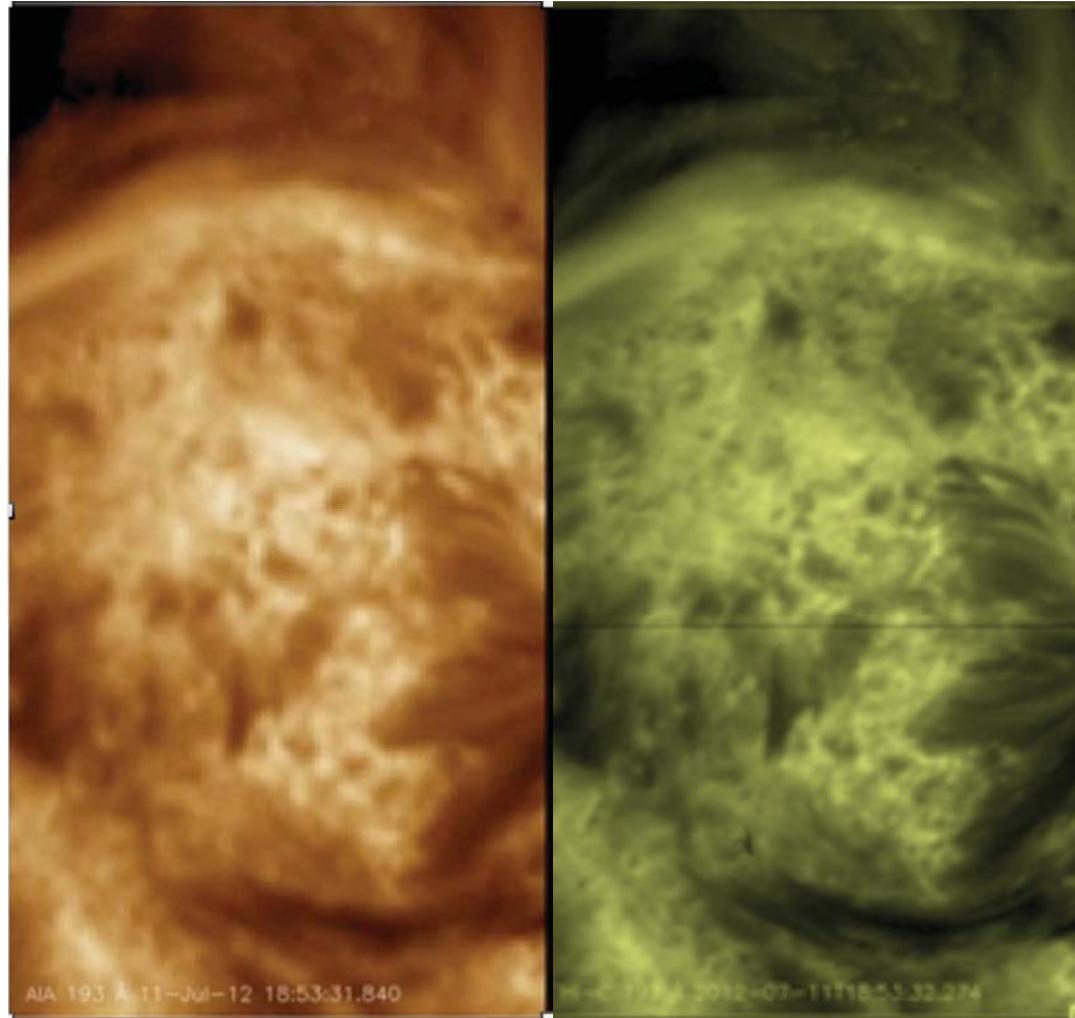
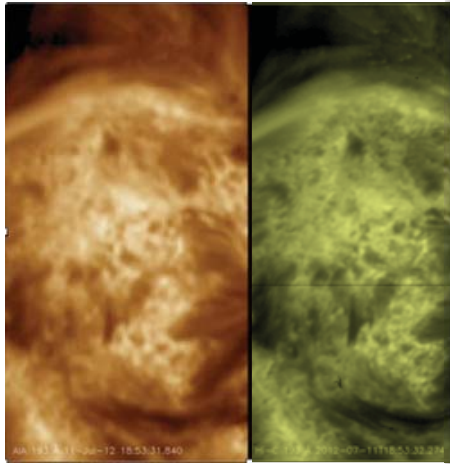
Hi-C: 4K duration ~ 3 min; 1K duration ~ 2 min; Cadence ~ 5.5 sec

AIA 193 & Hi-C 193



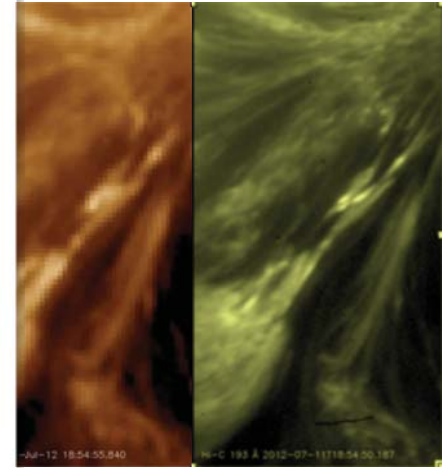
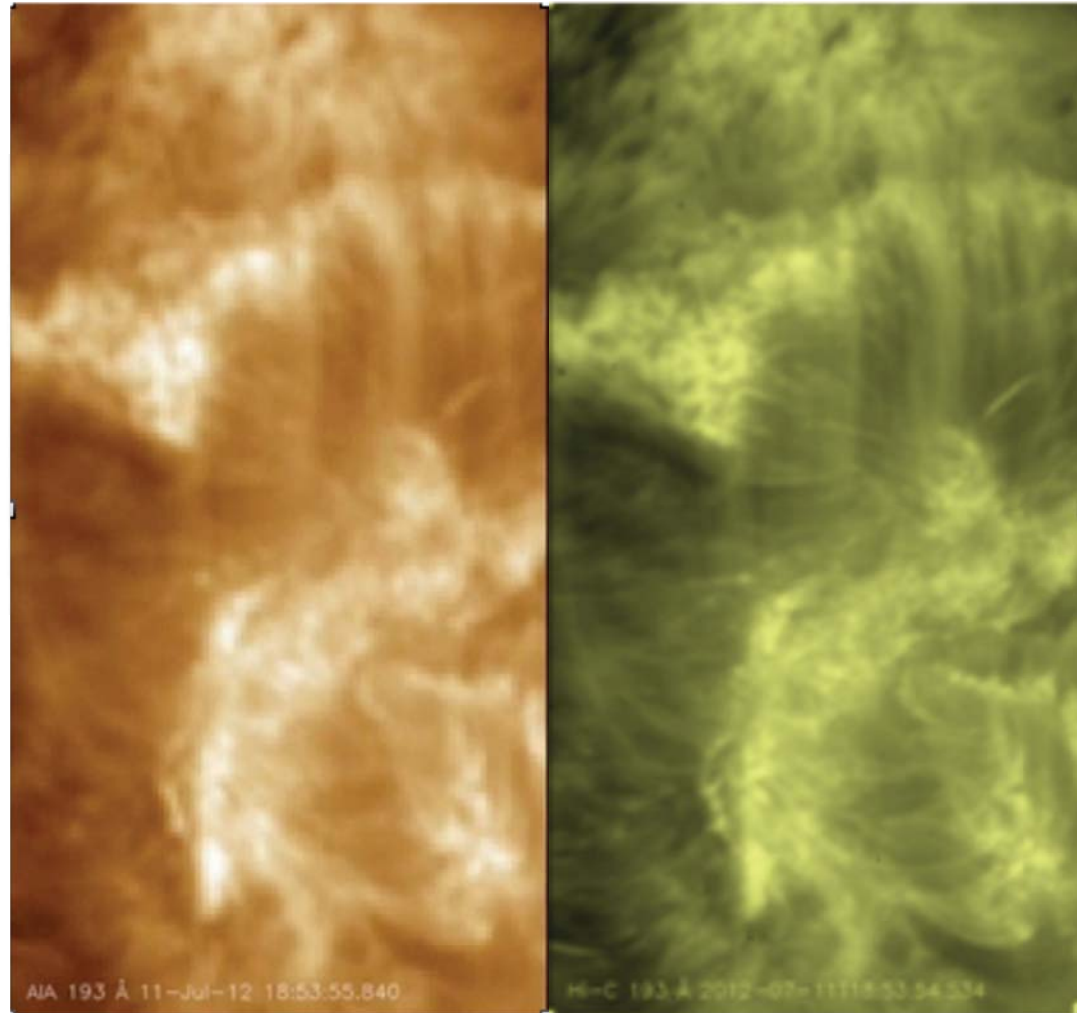
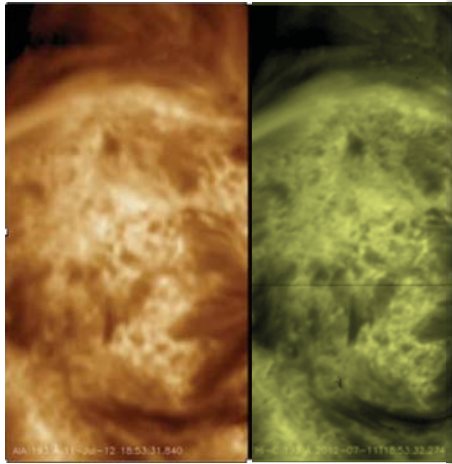
Cirtain et. al. 2013

AIA 193 & Hi-C 193



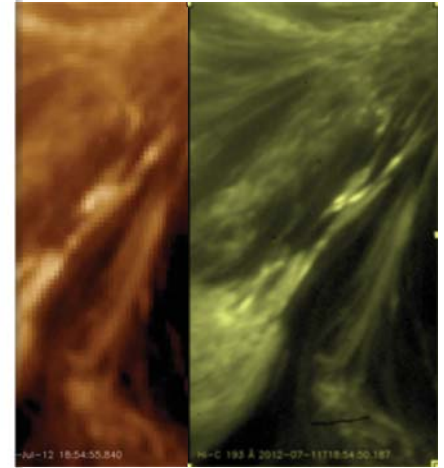
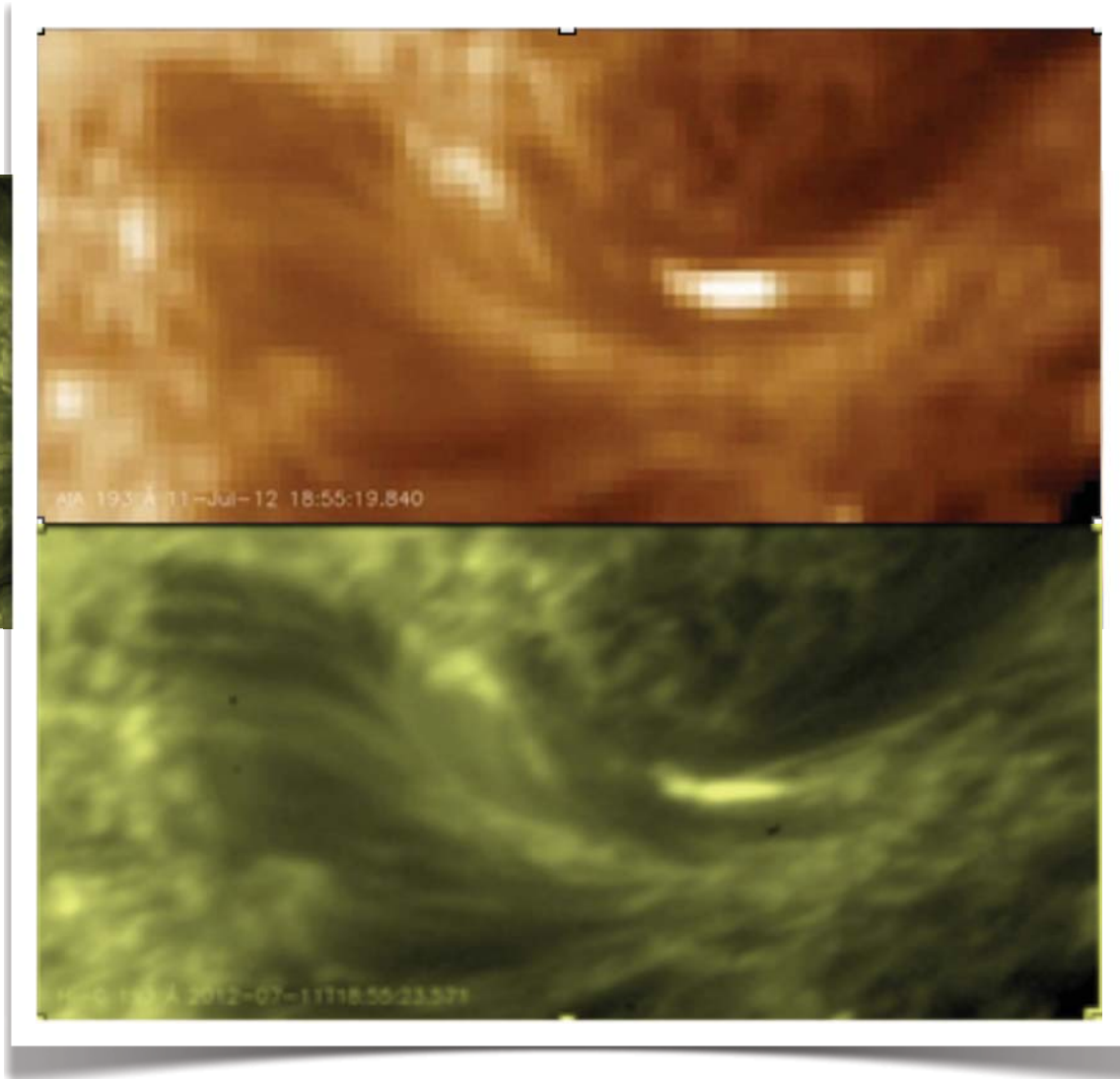
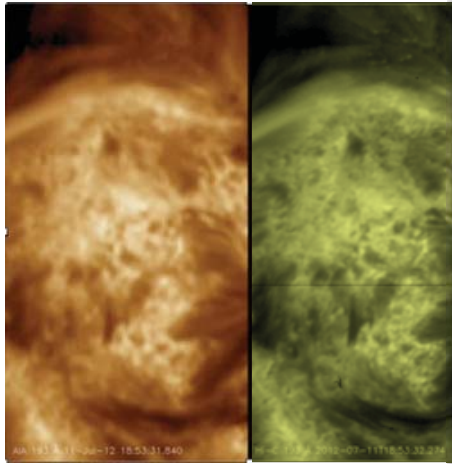
Cirtain et. al. 2013

AIA 193 & Hi-C 193



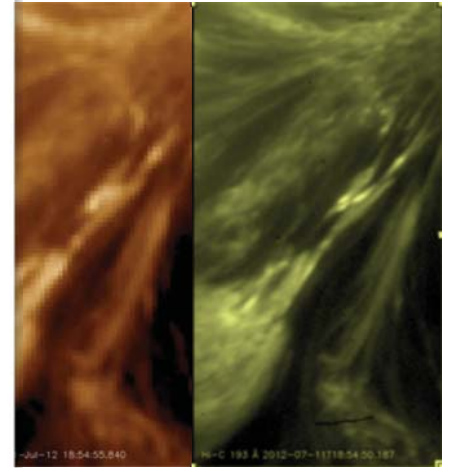
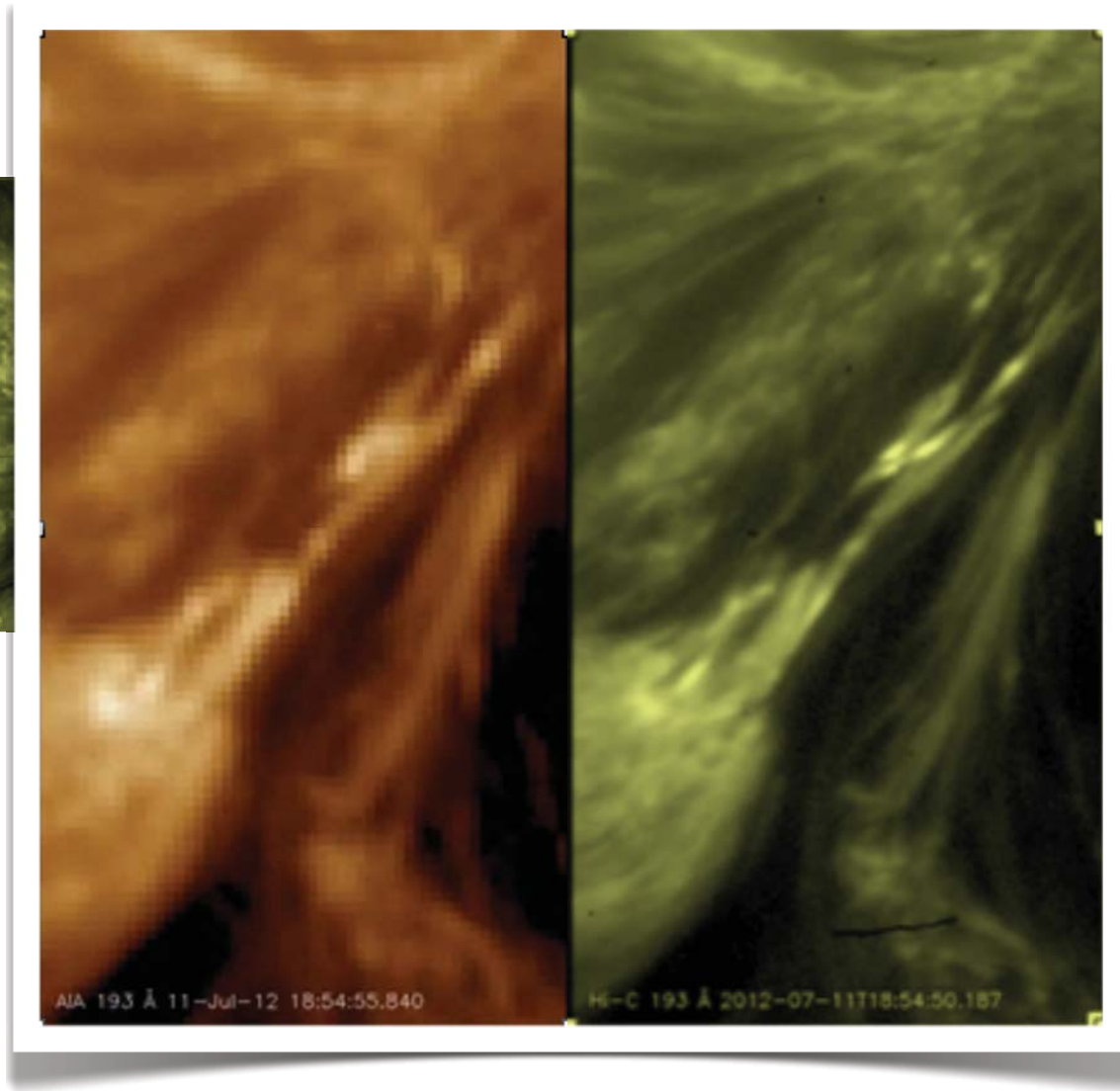
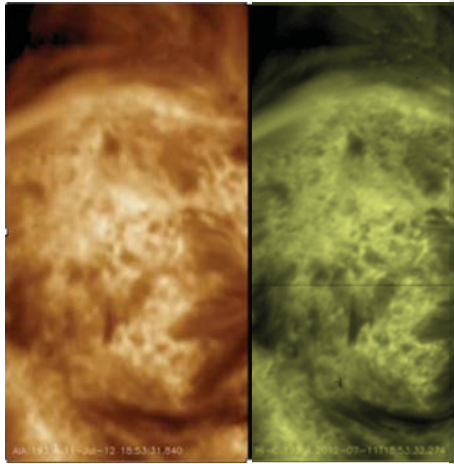
Cirtain et. al. 2013

AIA 193 & Hi-C 193



Cirtain et. al. 2013

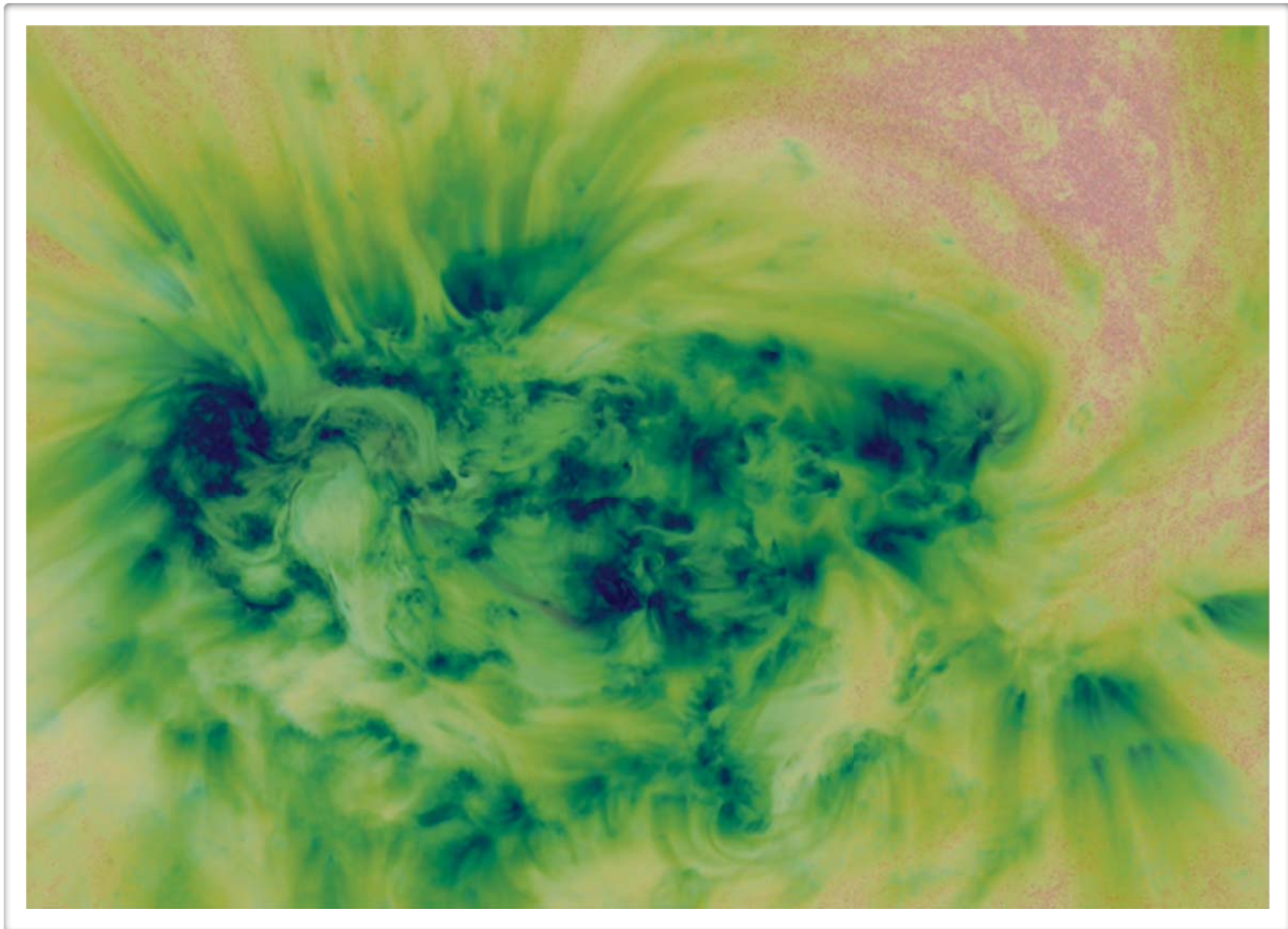
AIA 193 & Hi-C 193



Cirtain et. al. 2013

AIA 193 (Red/Blue) + 131 (Green)

11 Jul, 00 UT - 15 Jul, 00 UT

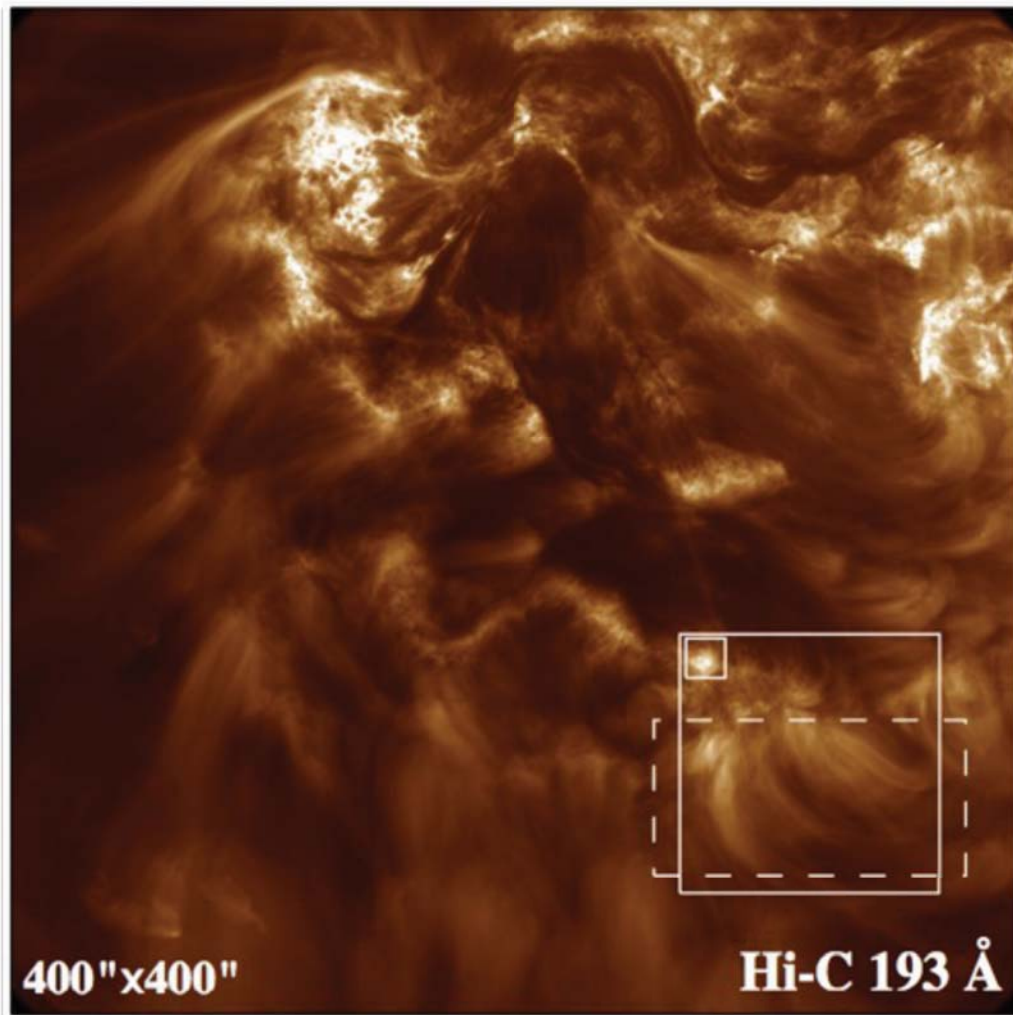


Selected Science Publications

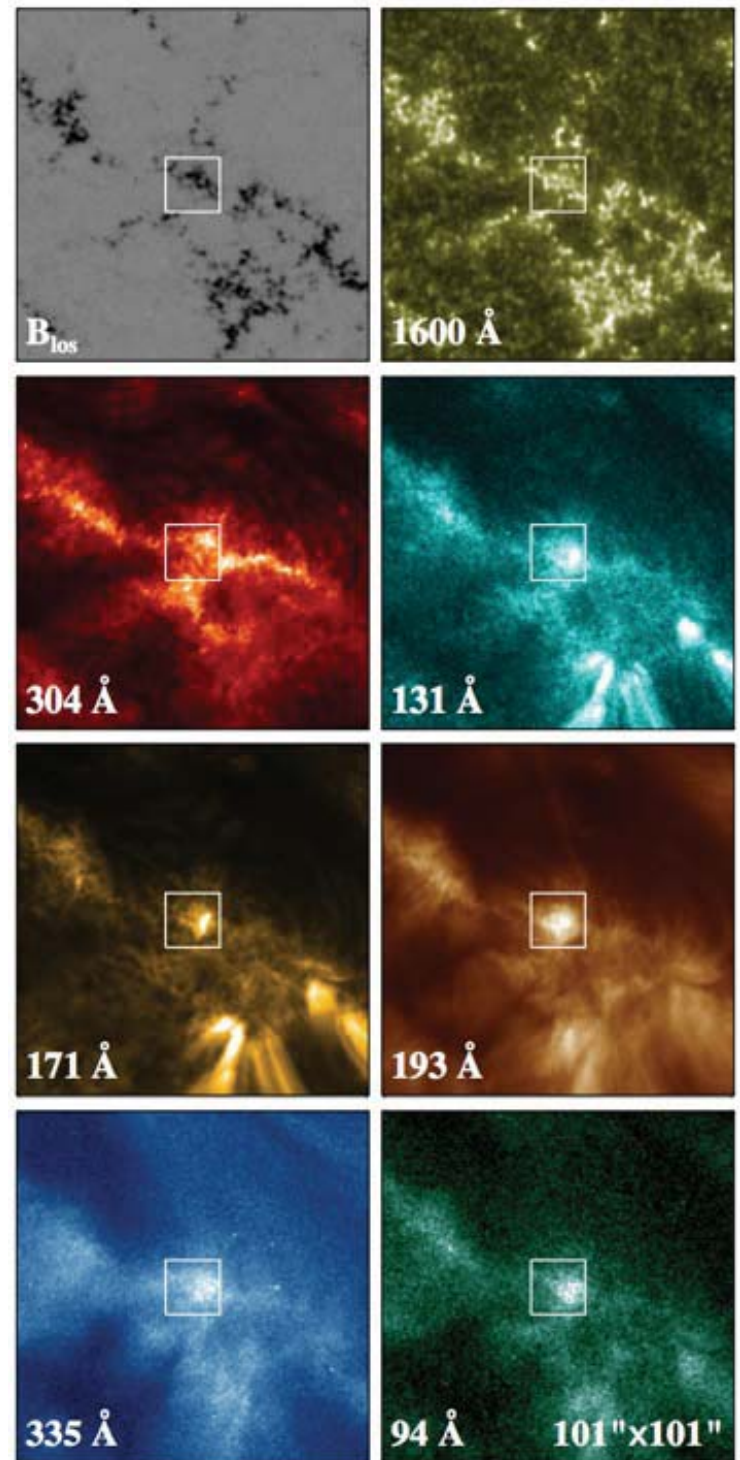
1. *Energy release in the solar corona from spatially resolved magnetic braids*
Cirtain et al. 2013, Nature, 493, 7433, pp 501
2. *Hi-C and AIA observations of transverse magnetohydrodynamic waves in active regions*
Morton & McLaughlin 2013, A&A, 553, 10
3. *Anti-Parallel EUV Flows Observed Along Active Region Filament Threads with Hi-C*
Alexander et al. 2013, ApJ, 775, L32
4. *Structure of solar coronal loops: from miniature to large-scale*
Peter et al. 2013, A&A, 556, A104
5. *Observing Coronal Nanoflares in Active Region Moss*
Testa et al. 2013, ApJL, 770, 1

Add pics and emphasis

Plage I: Miniature Loops?



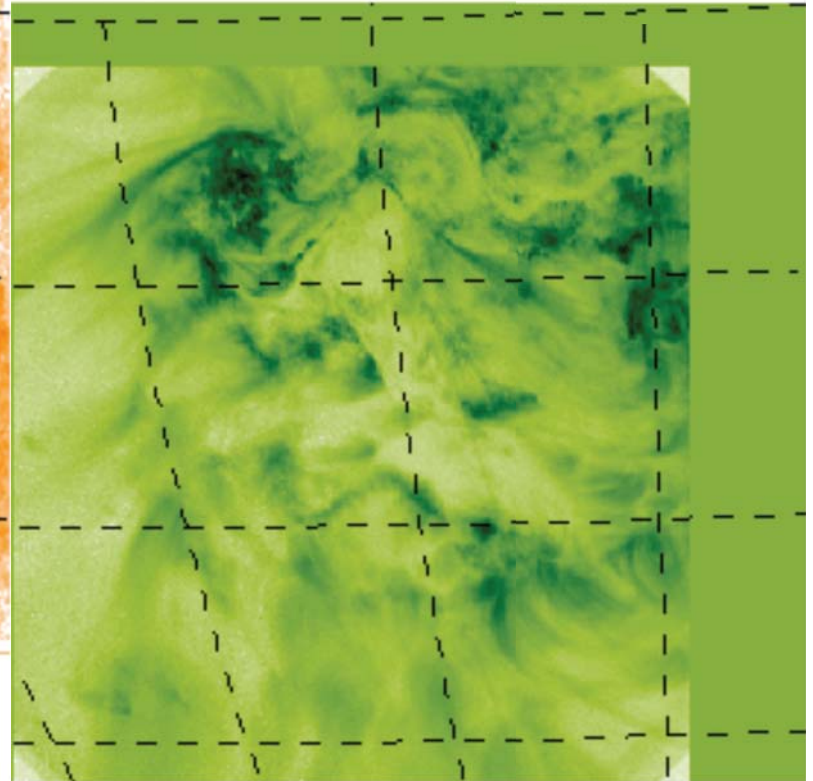
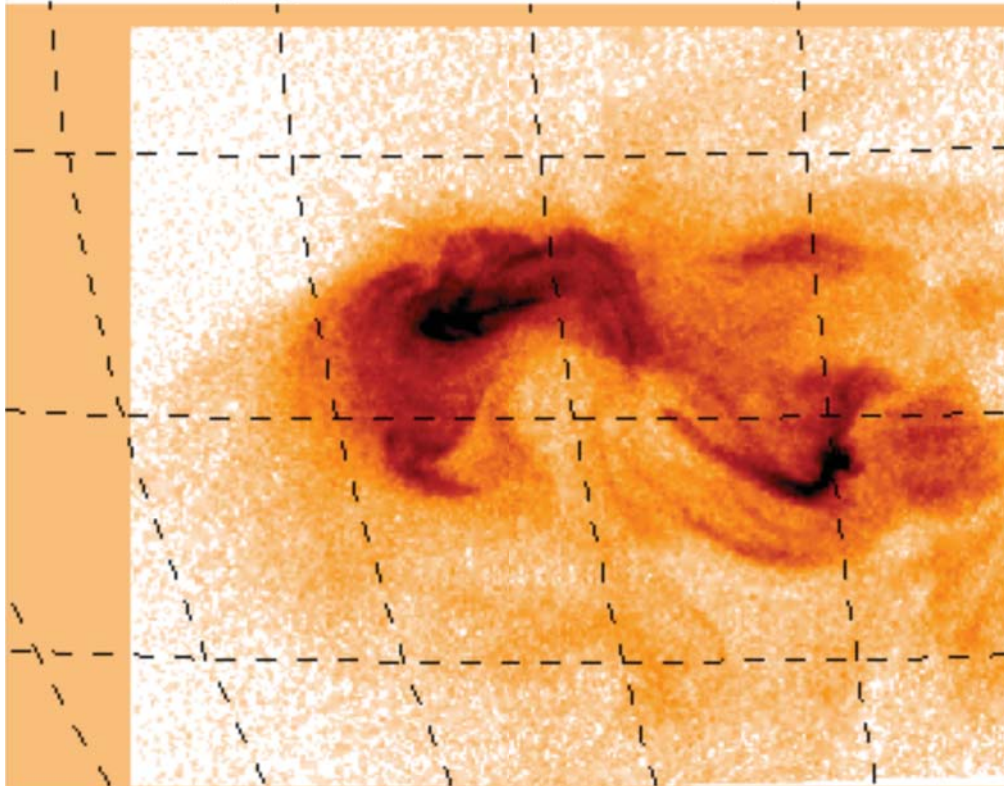
-Assumes no hot loop associated with the bright central spot due to determined lack of X-ray imaging ...



Peter et. al. 2013

XRT Ti-Poly + Hi-C 193

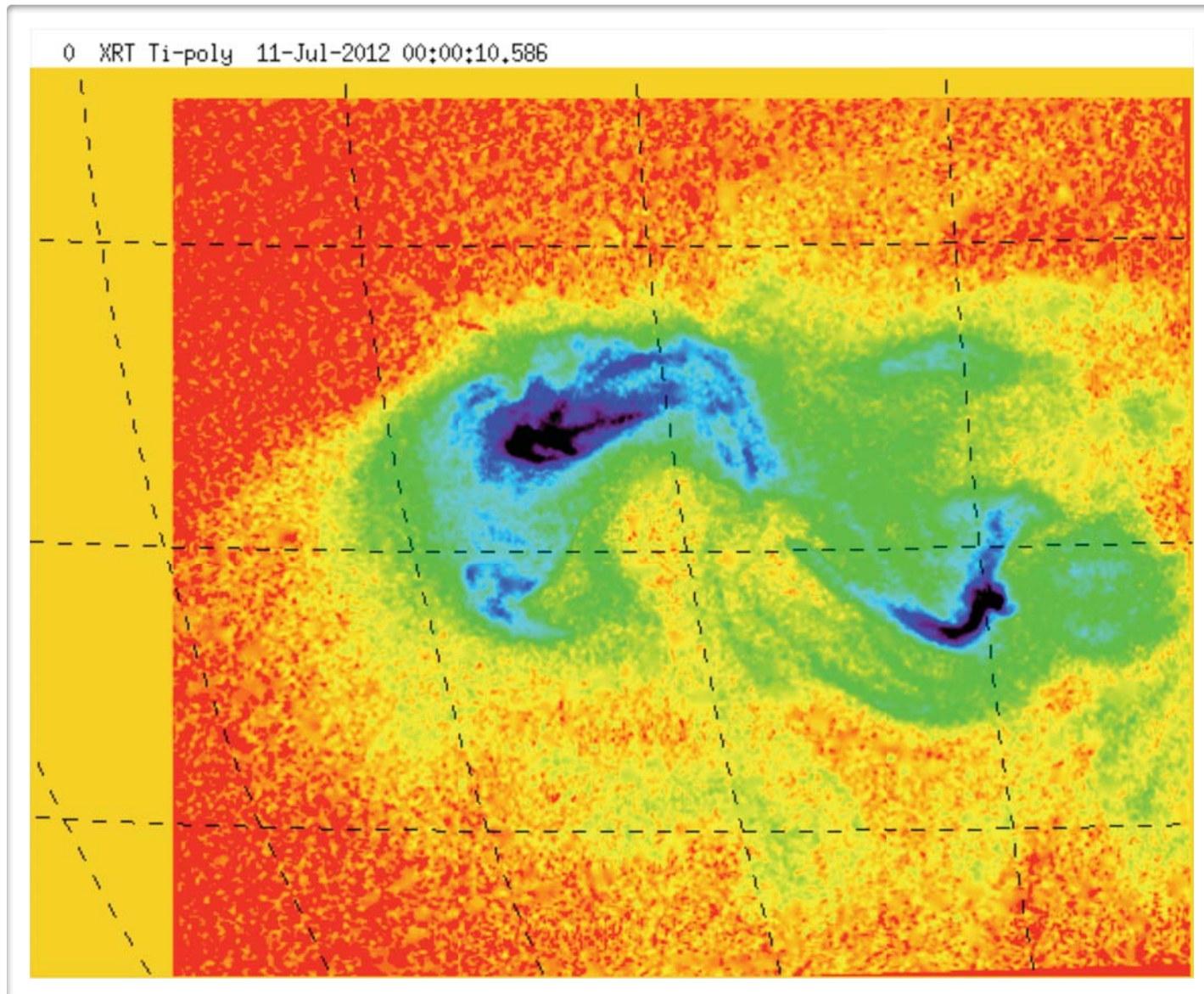
0 XRT Ti-poly + Hi-C 193 Reference time: 11-Jul-2012 00:00:10.58



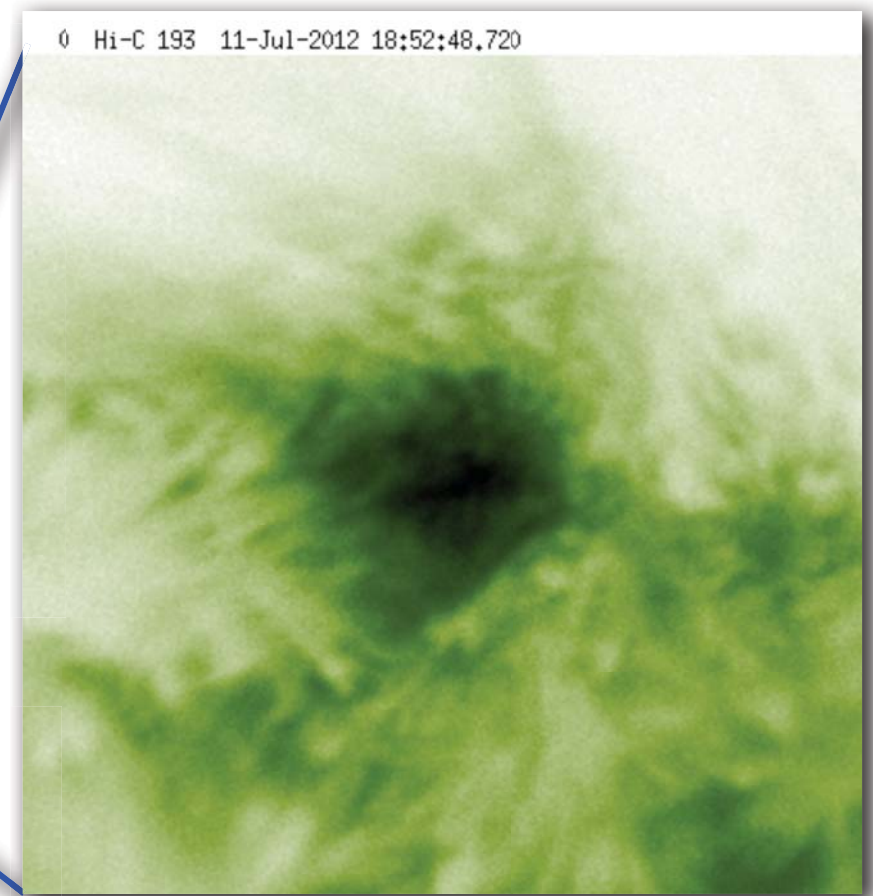
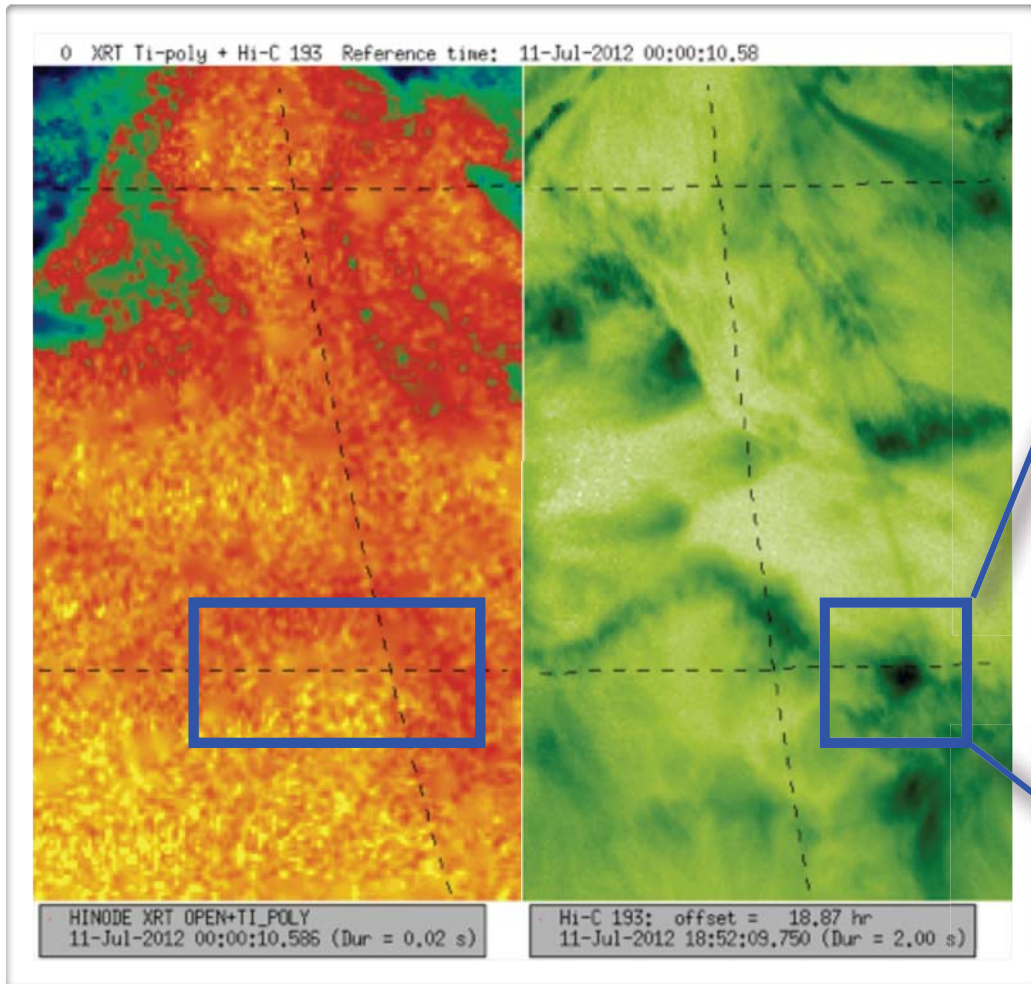
HINODE XRT OPEN+TI_POLY
11-Jul-2012 00:00:10.586 (Dur = 0.02 s)

Hi-C 193; offset = 18.87 hr
11-Jul-2012 18:52:09.750 (Dur = 2.00 s)

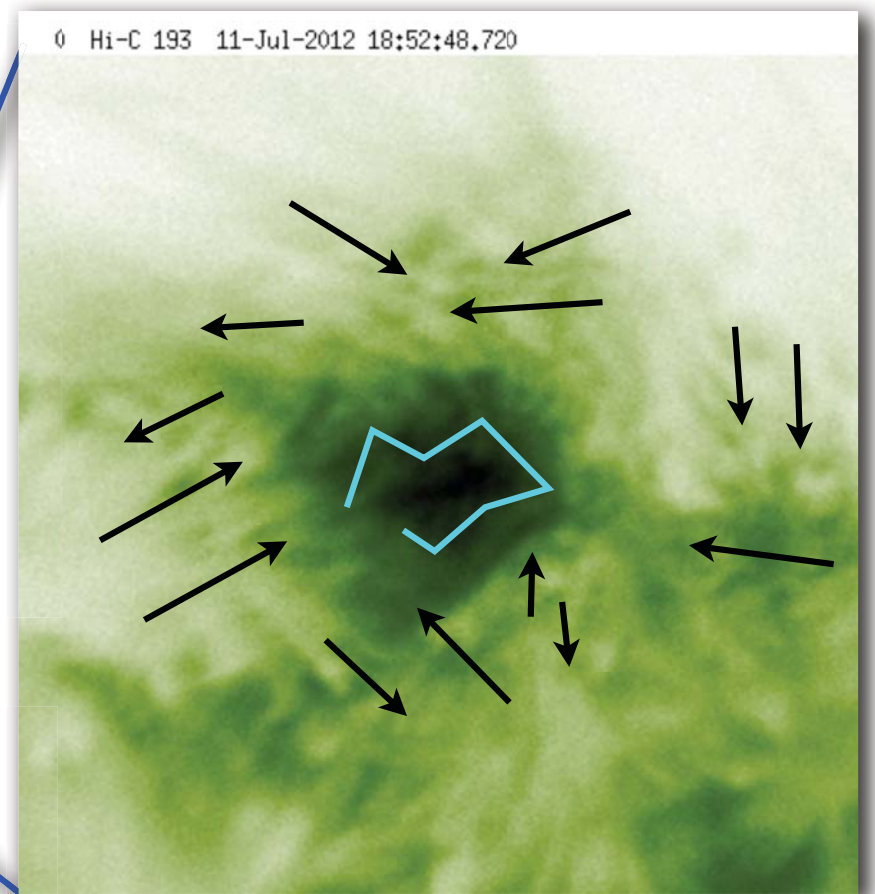
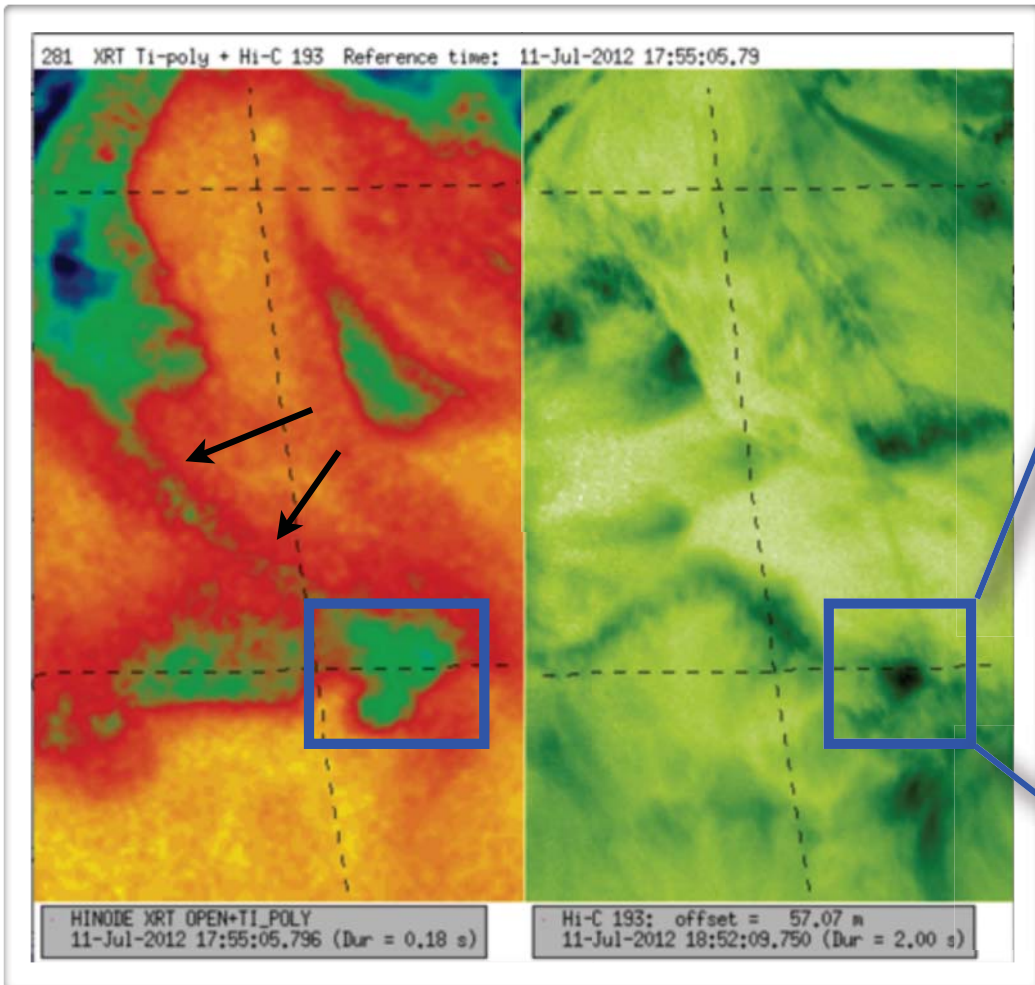
XRT: Large-scale structure



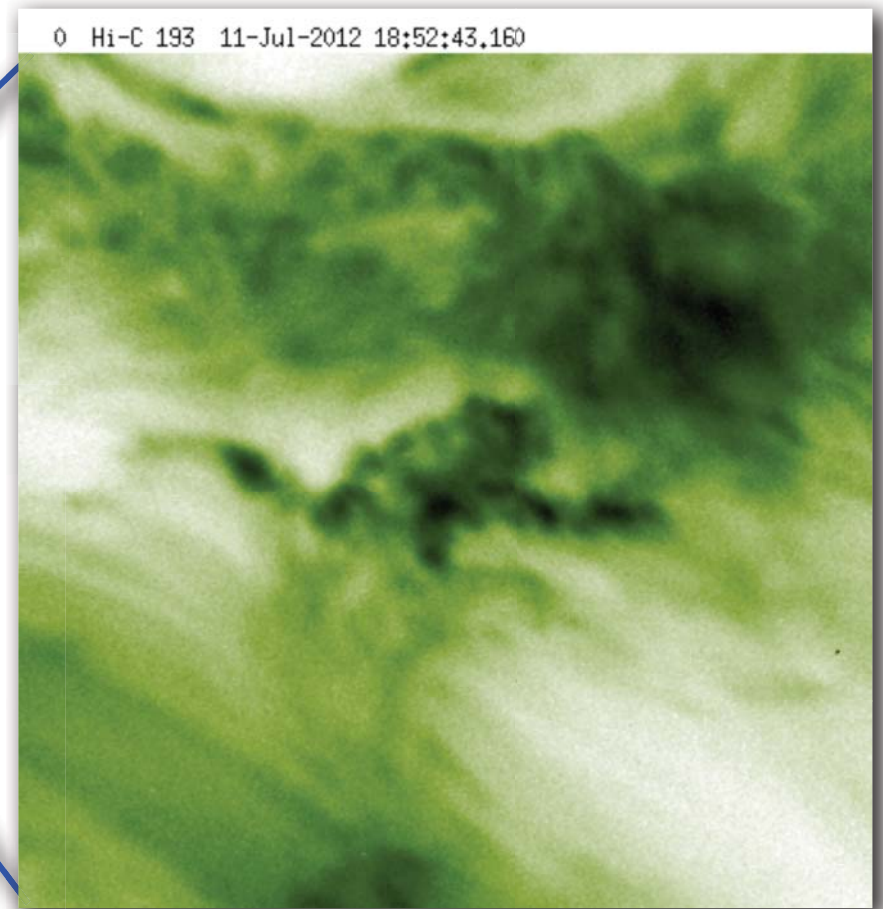
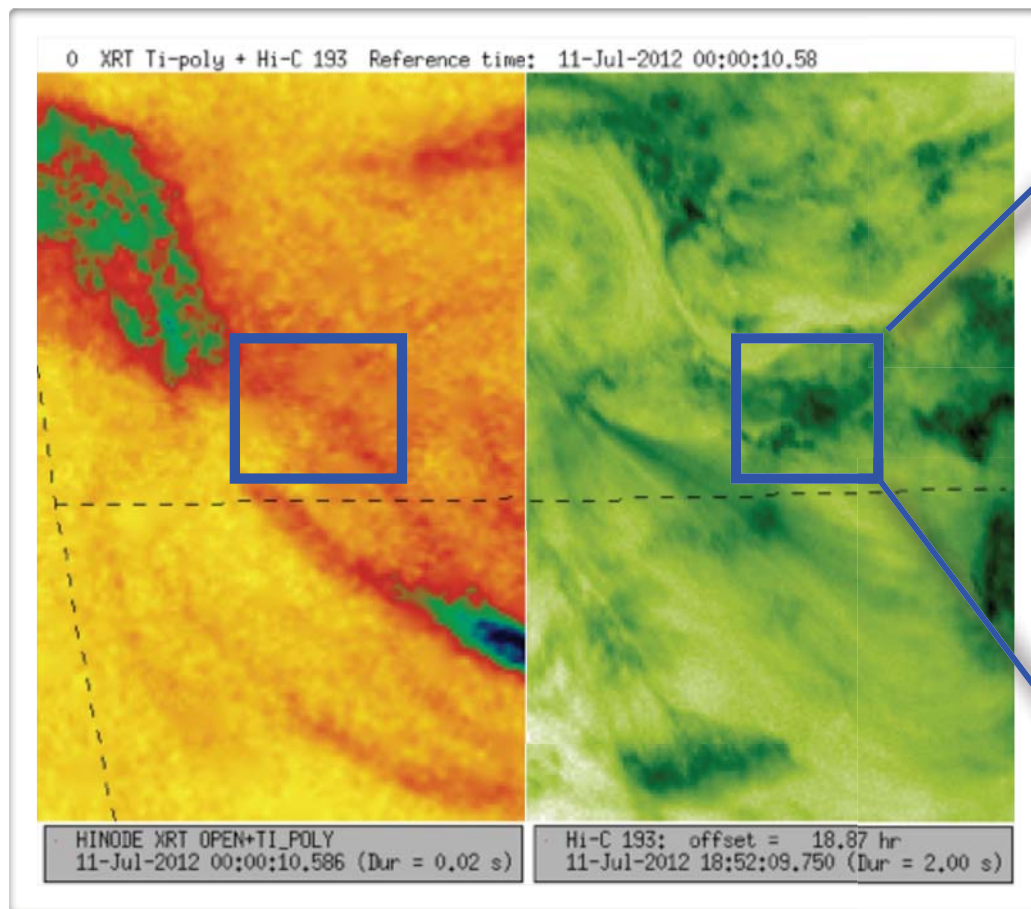
XRT + Hi-C Plage Region I



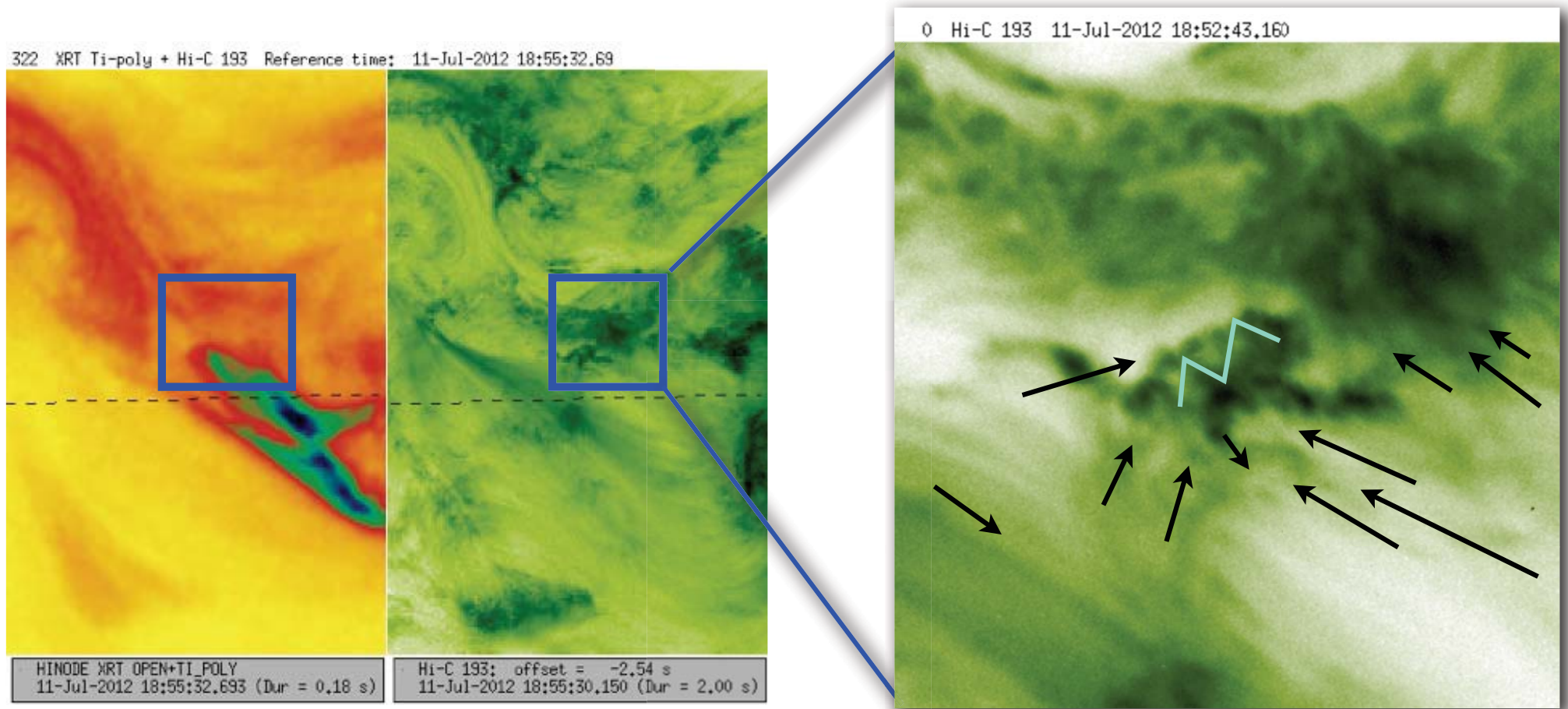
XRT + Hi-C Plage Region I



XRT + Hi-C Plage Region 2

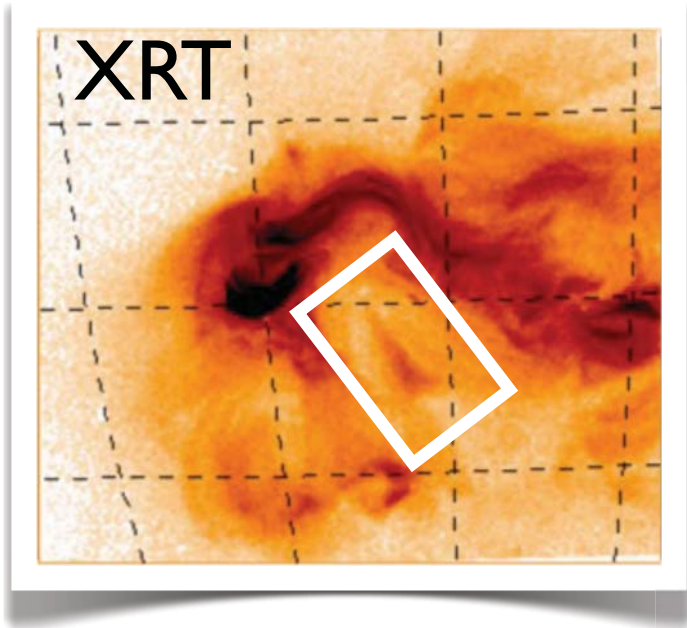


XRT + Hi-C Plage Region 2

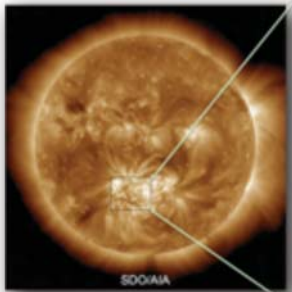
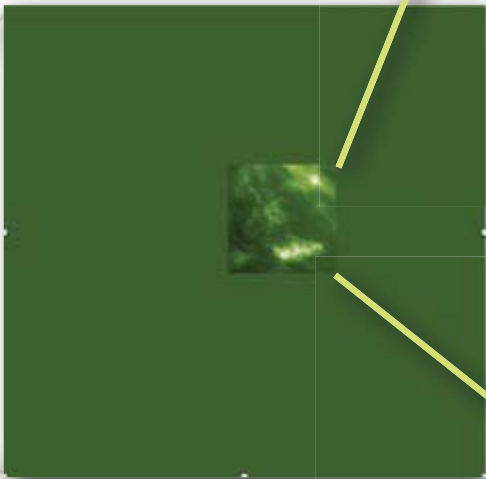
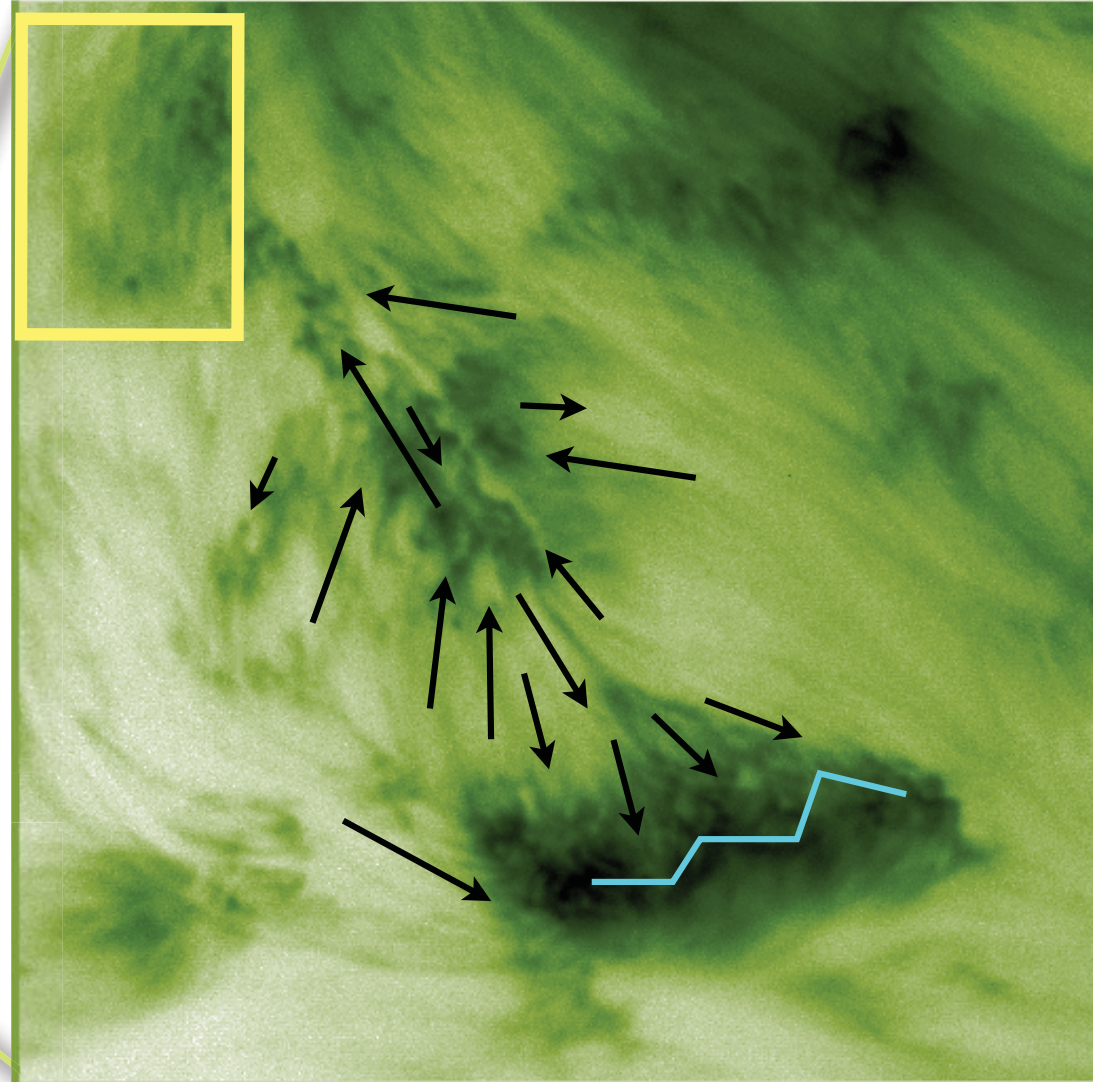


Focus from Testa et. al. 2013

Hi-C 193 IK region



0 Hi-C 193 11-Jul-2012 18:52:43.160



Conclusions

- Can we say anything about nanoflares or heating mechanisms?
- Are there micro-loops in the “dynamic moss”?