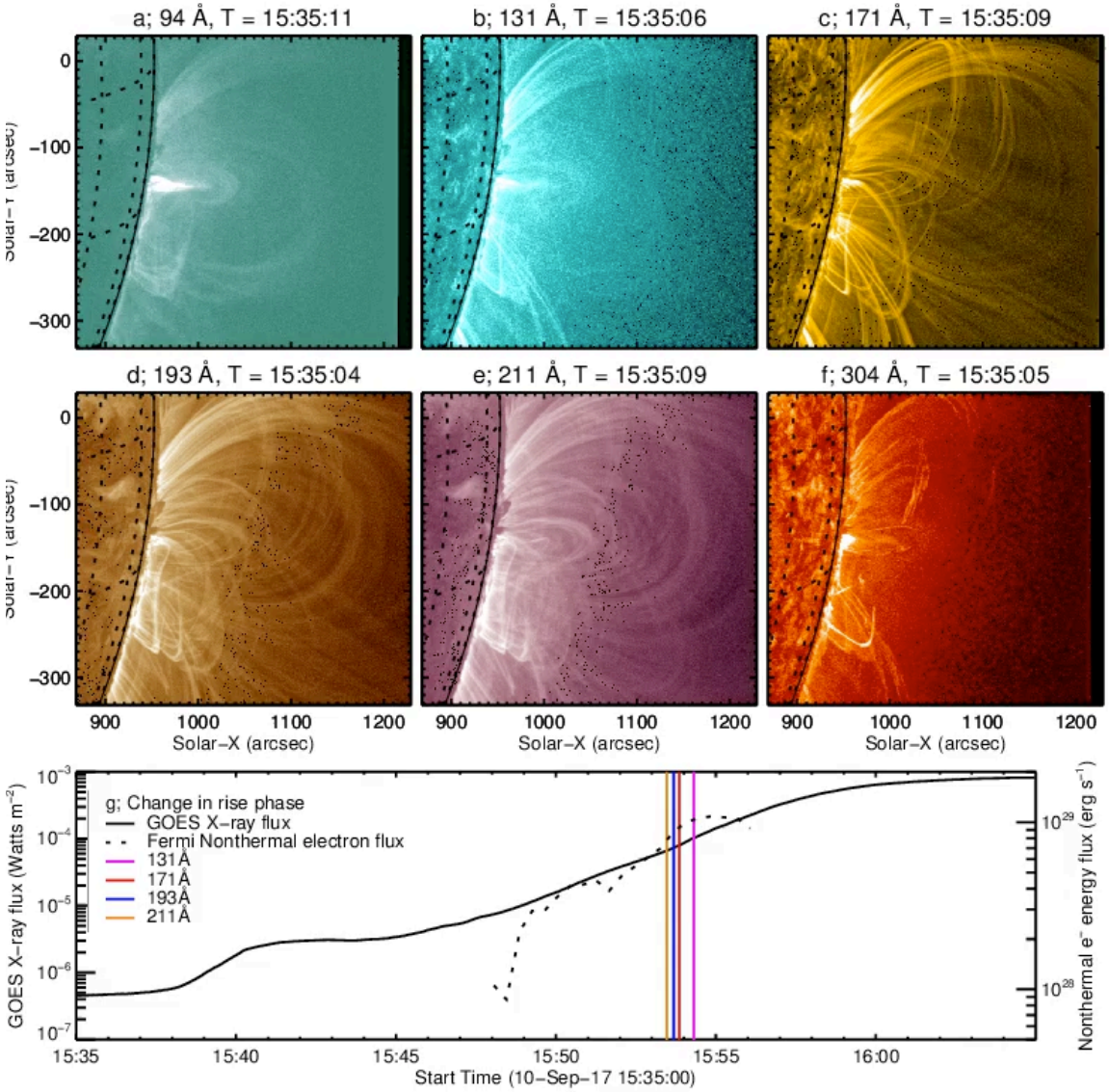
Hinode EIS status and how to be involved

- EIS status is nominal
- One issue happened last year - a ‘switch-off’. EIS successfully switched back on in time for the HiC2 launch!
- Contact: PI: Louise Harra (l.harra@ucl.ac.uk), SCC (Len Culhane), UK Hinode EIS PS (Deb Baker), UK Hinode PS (Alan Hood).

Top science priorities for next 4 years
1. Energetic events



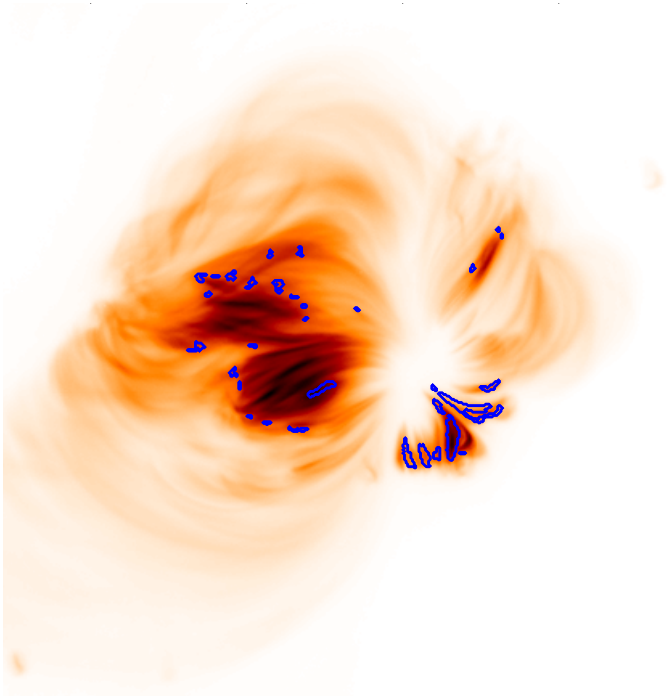
First for spectra!

First cavity observed (Long et al., 2017)
First current sheet observed (Warren et al., 2017)

Cavities are just dark in imaging - but they have fast flows, and hot temperatures.

Our new telemetry regime will allow more of these results.

Top science priorities for next 4 years
Energetic events



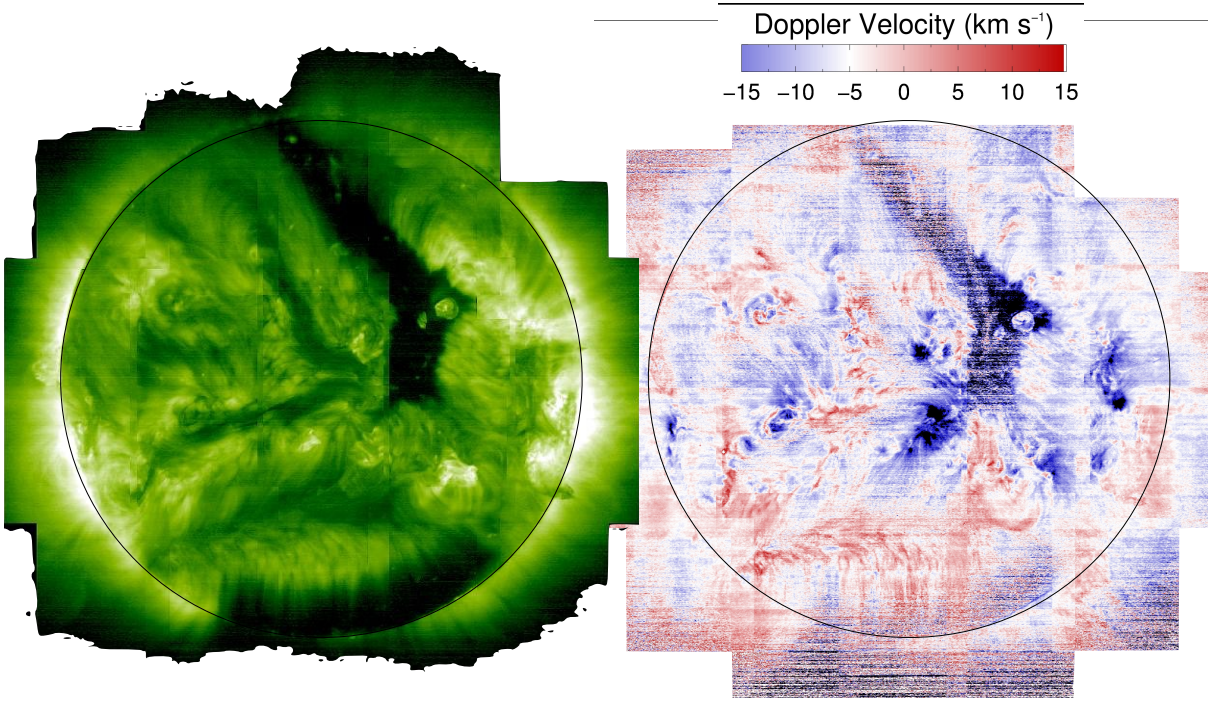
The blue regions show where micro-flares are happening in the AR.

Have developed a fast spectral mode for EIS to work along side this.

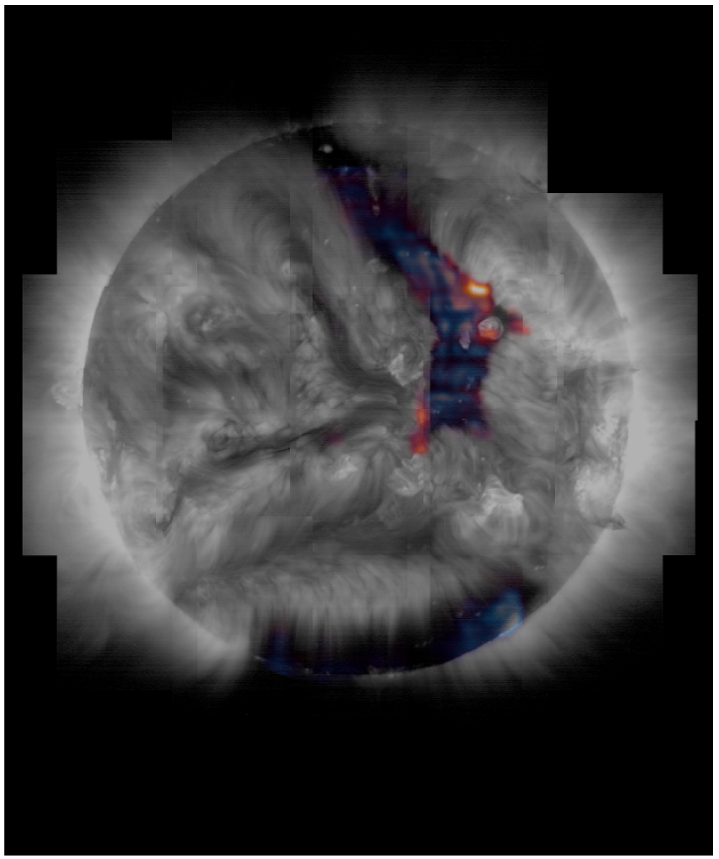
Hinode XRT has a ‘fast’ mode - only used once before. Now observed with EIS-slot data, IRIS and SDO.

Top science priorities for next 4 years
Mass and energy flow

- The equatorial coronal hole appears to show potential sources of both slow and fast solar wind.



Brooks et al., 2018



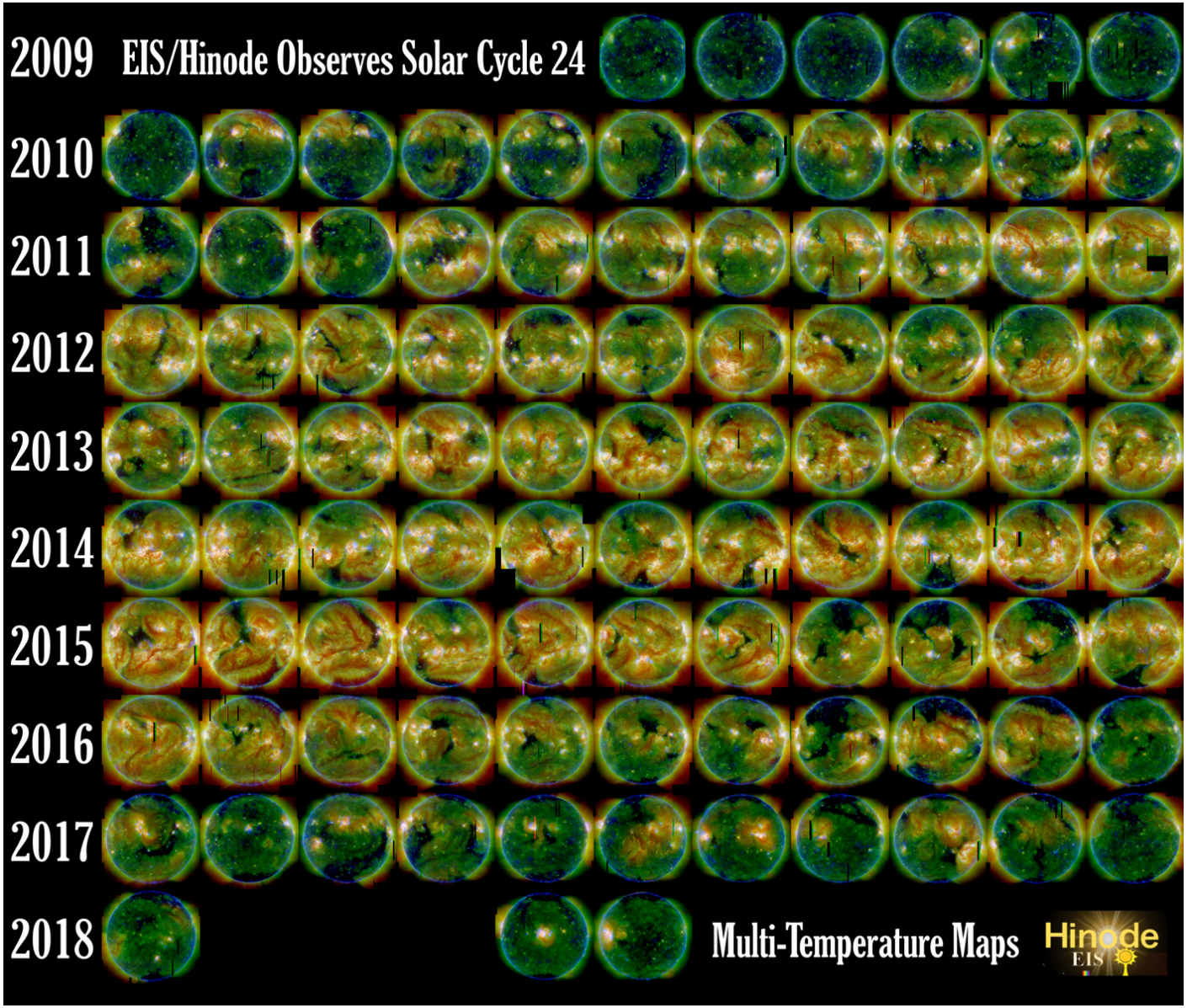
Top science priorities for next 4 years
Solar cycle effects

Full solar cycle now available.

How does the EUV & X-ray solar irradiance change with cycle?

What will happen in the next solar minimum?

Hinode EIS



solar orbiter

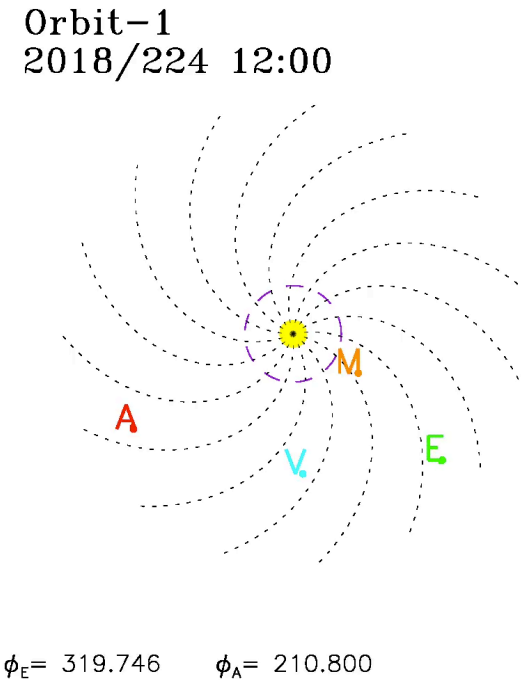
PARKER SOLAR PROBE
A MISSION TO TOUCH THE SUN

1. Our science aims are focussed around understanding the energy flow from the surface outwards.

2. First tests observing at perihelion were made in November - actively using modelling to determine the location to point the spacecraft.

3. We have made big strides forwards in slow wind - some on fast wind. The team is developing an observing strategy for PSP when at perihelion. This will also be developed for Orbiter. Alongside observing campaigns have been developed for DKIST.

4. The polar observations will aid the understanding of the solar cycle as we head in to a ‘suspected’ weak cycle.



Future plans

- Next Hinode science meeting, September 2019, Tokyo
- Hinode team involved in several NSO funded DKIST workshops. These will need updated.
- Coordination with IRIS continues
- Regular full Sun scans
- Making use of the additional telemetry available – especially at the limb.
- Plans of how to observe with Solar Orbiter & PSP.

Encourage PhD students/PDRAs to make use of Hinode - develop and run HOPs