

134th Hinode SSC Meeting on 22nd March, 2018 at 07:00 JST

Short Summary, Conclusions and Actions

a. Program Status

1. Instrument Status Review

SOT operating without its Filtergraph (FG) camera following an electronic fault. Spectro-Polarimeter (SP) and Correlation Tracker (CT) are nominal.

XRT is nominal.

EIS is currently off. Power supply interruption on day 4 of 5 day CCD bakeout. Following SWG telecon, EIS team and spacecraft engineers are examining interface configurations prior to a switch-on of EIS. This will be discussed at a second SWG telecon which will take place on 27th March.

XRT prefer not to switch off. Could be put in safe hold mode. XRT - spacecraft interface being checked.

SOT are awaiting further details of the spacecraft interface from SWG telecon actions. Prefer not to switch off during EIS turn-on.

2. Report on Changes to Instrument Telemetry Allocation

There are no further reports on telemetry allocation changes

3. FM Calendar

Hinode focus mode calendar is being prepared, Further discussions of Quiet Sun studies will take place after EIS status is confirmed.

4. HOP Prioritisation

SSC asked by **SWG** to prioritise HOPs i) with associated ground-based observations that were overlapping in a time zone and ii) in cases that generated mission telemetry use conflicts.

ACTION: Culhane to ensure that such cases were highlighted in SSC meeting notes; Ongoing

b. Previous Action Items

New **HOP** request for coordinated observations with **SOT**, **XRT** and **SUVI (GOES-R)** is still awaited. Details of **BBSO** support for **HOP 350** are still outstanding. **Savage** will discuss.

c. Review/Discussion of Open HOPs and ToOs

- routine **HOPs 79** and **81** were run as planned during **February**
- **HOP 341** has started to run in **January/February** and is progressing well; good data has been obtained; further observations needed. **McKenzie** to check details
- **HOP 345** has acquired a good data set that is being analysed; further runs may be requested in future
- still no requests to run **HOP 348**, awaiting input on the Nu-star solar planning process

- **HOP 349** has been run and is ongoing; run times have been added to the HOP list
- **HOP 350** will be run on **29th May** in support of the **Hi-C** rocket launch

d. Review of New or Updated Proposals and Scheduling of Observations

1. Coordinated Observations with X-ray Spectrometer onboard the SDO/EVE Calibration Rocket Launch - Moore (christopher.s.moore@cfa.harvard.edu), Woods, Caspi, Warren, Ugarte-Urra, Mariska/Warren/SSC; HOP 351

- coordinated observations with X-ray spectrometer onboard the SDO/EVE calibration rocket
- perform Quiet Sun (QS) and/or Active Region (AR) differential emission measure (DEM) and elemental abundance analysis
- use **SOT**, **EIS** (if available), **SDO/AIA** with **EVE** calibration rocket observations
- calibration rocket launch on **12th June**; to be confirmed

ALMA Joint Observations

Preliminary ALMA calendar is available at:

<https://sites.google.com/site/almasolarobserving/calendar>

Due to **ALMA** time shifts, **DePontieu** suggested that the ALMA observing schedule should ensure some extra time for each joint observation to ensure sufficient overlap with Hinode and IRIS. If possible, a note clarifying this should be added to each of the relevant entries in the ALMA catalogue. An ALMA calendar link should also be added to the Hinode Google calendar (**Action;Shine**).

For the following six ALMA-related HOPs, it was requested that **Kobelski** should add the relevant HOP number to the ALMA calendar. **Shine** should add the relevant ALMA observation ID numbers to the Hinode Google calendar

2. Polar jet hunting with ALMA - Shimojo (masumi.shimojo@nao.ac.jp), SSC Contacts: Savage, Watanabe, De Pontieu; HOP 352

- hunt polar coronal hole jets jointly with ALMA using the HOP 81 observing plan
- total ALMA observing time: 6 hr
- joint observations with ALMA to be made in April; time slot to be agreed

3. Study of Quiet Chromosphere Heating with ALMA - Nindos (anindos@cc.uoi.gr), SSC Contacts: Savage, Watanabe, De Pontieu; HOP 353

- undertake ALMA-Hinode-IRIS coordinated observations of a quiet Sun region to study chromospheric heating.
- observe a quiet Sun region close to disk center at both ALMA frequencies
- total ALMA observing time: 4 hr
- joint observations with ALMA to be made in April; time slot to be agreed

4. Probing the Chromosphere of Coronal Holes and Coronal hole boundaries jointly with ALMA - Loukitcheva (lukicheva@mps.mpg.de), Solanki, White, Leenaarts, Carlsson, Gary, SSC Contacts: Savage, Watanabe, De Pontieu; HOP 354

- study the dependence of chromospheric structure and heating on the magnetic field's topology and search for signs of enhanced heating produced by magnetic reconnection at coronal hole boundaries.
- observe an on-disk mid-latitude coronal hole to include also a part of QS

- observe for 4 hours (two hours in each ALMA band) during ALMA daytime: 13:00 Ut - 20:00 UT
- joint observations with ALMA to be made in April; time slot to be agreed

5. ALMA - IRIS -Hinode observations of Thermal Non-equilibrium and Coronal Rain - Antolin (patrick.antolin@st-andrews.ac.uk), SSC Contacts: Savage, Watanabe, De Pontieu; HOP 355

- constrain properties of coronal heating mechanisms based on observed plasma cooling characteristics
- observe an off-limb active region; centres of instrument FoVs to be aligned with ALMA FoV centre
- **Tarbell** to discuss long exposure SOT/SP observation with **Antolin**, he will also discuss limitations to Hinode off-limb pointing
- four ALMA scheduling blocks requested for a total observing time of 8 hours; continuous observation requested including during SSA transit
- joint observations with ALMA to be made in April; time slot to be agreed

6. Temperature Structure of the Chromospheric Network in Coordination with ALMA - Cauzzi (gcauzzi@NSO.edu), Reardon, Molnar, Uitenbroek, Chen, Cranmer, Chai, Mathioudakis, SSC Contacts: Savage, Watanabe, De Pontieu; HOP 356

- ALMA-Hinode-IRIS-GBO coordination to assess spatio-temporal structure of the temperature of the chromospheric network
- observe the Quiet Sun magnetic network
- total of 2 hours of ALMA observing time has been agreed; April time slot to be advised
- support from Dunn and Goode ground-based solar telescopes has been agreed
- observing time interval 14:00 UT - 19:00 UT best for ground-based coordination

7. Joint Observation of a Quiescent Filament with ALMA and IRIS - Rodger (a.rodger.1@research.gla.ac.uk), Wedemeyer, Labrosse, Szydlarski, Simoes, Fletcher, SSC Contacts: Savage, Watanabe, De Pontieu; ToO HOP 357

- determine the temperature distribution across a solar filament using ALMA and coordinated Hinode observations
- observe a quiescent solar filament
- ToO. Observation is likely to occur during one day while ALMA is in the correct array configuration: 30 March -15 May, and 15-30 August
- ALMA observation consists of three 2-hour duration science goals leading to a total observation duration of approximately 6 hours; exact time of day is not currently known.

Continuing monthly observations are:

- **Polar Monitoring - Shimojo; CORE HOP 81**
- run on **3rd April** (N pole fast) and **4th April** (S pole fast)
- **Synoptic SOT Irradiance Scans – Tarbell; CORE HOP 79**
- run on **12th April** (N/S only)
- **Multi-temperature Full Disk Slot Scans – Ugarte-Urra, Brooks, Warren; CORE HOP 130**
- run on **9th** and **30th April** if EIS is available.

e. Monthly Science Reports

- next **Hinode** monthly science report will be prepared by the **XRT Team** for **March** and by **SOT Team** for 13th April -
see http://hinode.msfc.nasa.gov/science_charts/ for template and previous chart
- provide one summary slide for Hinode team management at MSFC and two additional slides for NASA HQ

f. Date of Next Meeting

- next meeting: **19th April, 2018** at **07:00 JST**; **18th April, 2018** as appropriate in US/Europe

g. AOB

Senior Review Panel meeting on **30th October** was concluded successfully. A good outcome has been announced. Funding level will be confirmed during April.

Savage will shortly circulate the next edition of the focus mode calendar.