

## Minutes of the 7<sup>th</sup> Hinode Monthly Meeting May 23-24, 2007

The 7<sup>th</sup> Hinode Monthly Meeting was chaired by Prof. Watanabe and held on May 24, 2007 at 8:00 AM (JST) at ISAS and by telecon. The Agenda was circulated by Prof Watanabe and was accepted.

### 1. Instrument Status

- i) SOT: Tarbell reported that SOT continued to observe during the eclipse season. They were seeing some slight changes in focus during the daylight portion of the orbit. New software is working successfully and they are routinely observing in Fe 6302, H-alpha and occasionally in Na D. They prefer not to change lines too frequently and do so every few days. The small bubbles have decreased in number. The throughput problem in the NFI is a result of UV damage to the coating of the blocking filter. There are five other filters that are vulnerable to this problem and one that is safe. The latter (made by Barr Associates) is the default position when the NFI is not in use.
- ii) XRT: DeLuca reported that Filter Wheel 1 is now operating normally but perhaps not as vigorously as in the past. There were two glitches resulting in a loss of location and one or two images were lost before it recovered. They intend to turn on operational heaters on June 18 at which time they will monitor the temperature at the mirror very closely. This date gives them the best margin for the mirror bond temperature. The models indicate that there should be not be any real problem. The temperature at the filter wheel has dropped from 8°C from before the start of the eclipse season to below 4°C and was around 2°C when the failure occurred before. The temperature is dropping more slowly now.
- iii) EIS: Harra reported that they had been testing the operation of the SLA during SAA passages without problems and they plan to go operational within a few days.
- iv) Spacecraft: Shimizu reported that the AOCS was operating well during the eclipse except for one issue that was not related to science operations. It was a problem related to an interface between a hard wired timer and the ground software. This should be fixed within a week.

### 2. The Reformatter Problem

DeLuca stated that the problem SAO was experiencing was that it was taking approximately five times longer than a week ago. He wasn't sure about the cause. Shimizu stated that the problem occurred during "Golden Week" and resulted from a reduced data flow to the reformatter that also resulted in inability of the Chief Observers to see images. The cause of the problem is understood and was a result of a change made by Matsuzaki. Unfortunately he was on vacation and was unreachable during Golden Week to correct the problem.

Hurlburt stated that there had been a slight improvement in the average performance but complained that there appears to be drop outs in the data that causes havoc with the reformatter, which has to start all over again. Shimizu complained that Matsuzaki doesn't recognize the problem. Hurlburt wondered whether it was a result of multiple users attempting to access the data base. Shimizu and Hurlburt disagreed about the magnitude of the problem.

Tarbell asked if the global reformatting will be completed by May 27. Hurlburt thought that it might be missed by a week or less as they were still having problems with the pointing data. Watanabe wondered whether we should issue a statement. Tarbell didn't think it was a terrible problem if we only missed the deadline by a day or two but that we should still look into the problem of why we there are slow downs.

Culhane stated that EIS doesn't seem to have this problem; perhaps because they are using a different computer and Harra noted that they are not trying to reformat all the data or to correct the pointing. DeLuca thought that we should keep track of this and try and identify the source of the problem. Watanabe replied that Matsuzaki is monitoring the situation.

### 3. Joint Observations

The two campaigns (HOP 7 and 8) performed during the previous month ran successfully. Culhane stated that HOP 7 (Observations with EIS, SOHO/UVCS and Ulysses) was moderately successful with the only anomaly being the failure of UVCS to get as close to the limb as they had hoped, so that there was a gap between the EIS and UVCS data sets. However they both obtained good spectra. HOP8 (STEREO joint observations) Mariska said that he had not received any significant feedback from the PI (Plunkett). However he understood that they were comfortable with what they achieved. The only criticism was that they would have liked to have known where Hinode was pointing so that they could have tuned their observing program a little.

Shimizu was asked by Watanabe to discuss any alignment issues as a result of the eclipse season. He said that he had not yet had an opportunity to analyze the data. He reported that the temperature of the XXX had dropped by 10°C and that the alignment situation was still evolving. Watanabe asked how frequently co-alignment observations to be made in June? Shimizu replied that the co-alignment observations will be made every 3 or 4 days. During observations of sunspots XRT will take g-band images every 10 minutes to establish the co-alignment between XRT and SOT. The procedure for co-aligning EIS with the other instruments was not well established. Tarbell pointed out that SOT has its correlation tracker operating so that the observations are not exactly the same for limb observations. Watanabe was thinking that more frequent co-alignments might be made. An extended discussion took place between Watanabe and Shimizu about the frequency of observations.

Golub are asked are the event lists up to date for the next month? He had received an e-mail from Jane Noglik saying that she had an observation program with EIS and wanted to bring XRT into the collaboration, however when he checked she was not on the current list. Culhane asked to be sent the name and would check it against their lists and get back to him.

Watanabe asked Sekii to briefly describe the two proposals HOPs 14 and 15. The first (Kamio and Bellot Rubio) was for a joint campaign with the four Canary Island telescopes (SST, VTT, Themis and DOT) to characterize quiet sun magnetic fields and investigate active region magnetism. The campaign time period was from September 17<sup>th</sup> to October 6<sup>th</sup> for a period of six hours each day from 08:00-14:00 UT. They proposed joint observations with SOT (FG & FP), EIS and XRT. The HOP 15 was for a joint observation with SOHO MDI to perform two spacecraft stereoscopic helioseismology that might allow them to probe as deep as the tachocline. The opportunity is when MDI has six days of continuous coverage between September 10<sup>th</sup> and November 11<sup>th</sup>. Because the intensity observations are noisy they would like the longest possible continuous coverage but short gaps for synoptics would be acceptable.

Culhane then discussed a new category called REMs (remarks) rather than HOPs. This category was for standard EIS operations but from non-core team members. Because they didn't require any additional planning among the other teams they were not considered to rise to the level of a HOP. Tarbell wanted to capture these activities in his data base if these were to be standard features. Doschek and Mariska agreed. Davis suggested that since EIS was committed to a certain set of observations at a particular time that would preclude other observers from requesting EIS time they should carry the HOP designation. Watanabe was reluctant to place them on his HOP list. It was eventually concluded that REMs 5 and 6 be combined and added to the HOP list.

There was a discussion of proposals that were considered targets of opportunity and whether there should be a difference between core and non-core team requests. Tarbell believed that Target of Opportunity (TO) proposals should be approved in the normal manner and run if and when the particular target appeared. Approved TOs would be scheduled during the weekly and/or daily meetings. Culhane summed up the consensus that we should not differentiate between core team or external TO proposals. Watanabe agreed to put these proposals (REMs and TOs) into the HOP list.

There are also three other proposals that don't have any specific dates associated with them. These should be discussed at the next SSCs meeting. Culhane reviewed the decisions namely that REM 3 will become an HOP and a TO, REM 4 will become an HOP and its scheduling will be discussed at the next SSC meeting and REM 5 and 6 will be combined into a single HOP. Watanabe would assign numbers to the new HOPs.

Finally Watanabe reviewed the June proposals these included HOP12, HOP10 and HOP16 (coordinated observations with the Hida, Norikura and Sac Peak Observatories respectively). Tarbell reported that there is an advantage for identifying targets as HOPs as they are automatically tracked by the SOT operations software. There was a discussion of conflicts although there was no overlap between the required observing times. Reconciliation of the different plans was left to the weekly meetings. DeLuca suggested that we should give some advice to the COs to prioritize active region observations vis-à-vis EIS operations. Culhane stated that EIS had both quiet and active sun observations and could adapt to all conditions.

It was agreed that the priority would be to follow any active region. Watanabe stated that he would add the RHESSI collaboration into the mix. There is also a collaboration with SHAZAM P and SOT at the end of the month (HOP 13). Tarbell noted that the end of June was fairly quiet and they were considering having a CCD bake out at this time that would result in a few days loss of observing time. They would discuss this at the instrument telecon the next day.

The 8<sup>th</sup> Monthly Meeting will be held on June 28 at 7:00 AM JST and on June 27 in the US and the UK at the usual times.

John Davis, June 22, 2007

**Attendees:** Shibasaki, Watanabe, Sekii, Davis, Shimizu, Sakao, Cobb, Doschek, Mariska, Tarbell, Berger, Hurlburt, DeLuca, Golub, Webber Harra, Culhane, Williams, Ichimoto, Sakurai and others.