Minutes of the 27th SOHO SWT Meeting

ESTEC, Noordwijk, The Netherlands

25-26 February 1999

Contents

1 Welcoming Address

Bernhard Fleck welcomed the attendees and again thanked the entire SOHO recovery team for their hard work during the recent recovery. Applause subscribed his words.

He introduced the new Deputy Project Scientist, Paal Brekke from University of Oslo and a new science writer, Stafano Coledan who was contacted by the Agency to help popularize SOHO results. Unfortunately some of the PI's could not attend the meeting due to a strike in Finland (J. Torsti) and the well known avalanches in Switzerland (C. Fröhlich). No Lasco representative could attend. In addition, many people from the operations team at GSFC could not come due to all the planned activities in the coming week.

Peter Wenzel welcomed all attendees to ESTEC and the Solar System Division.

2 Action Items

Action 27-1:
On PI's to provide input to what the instruments plan to do during the Mercury transit. Deadline before next SWT meeting on 21 June .

Action 27-2:
On PS to provide the orbit data for Nov. 15-17

Action 27-3:
On EIT team to provide documentation on their roll determination method by end of March.

Action 27-4:
On PI's to provide ideas for press conference at the SOHO-8 before end of April.

3 Agree Agenda and Action Revision

No changes to the agenda (see annex 1). List of attendees - annex 2

Actions Revision

Action 26-1: closed
PI's are requested to test the sample level zero data CD-ROMs that CDHF will produce from data processed at IDDS (the new ground system). They are asked to report the results of these tests to the Science Data Coordinator (lsanchez@esa.nascom.nasa.gov) no later than two weeks after receiving the CD-ROMS.

Action 26-2: closed
On Luis Sanchez, to find out how MDI will received their high rate data once the transition to IDDS is complete and no more 8mm tapes are produced.

Action 26-3: closed
PI's are requested to provide input on the strategy they will adopt with their instruments regarding the Leonids meteor storm by October 28. They are asked to consider two cases: No spacecraft attitude change, and 1.77 degree offpointing to set the solar panel edge-on on the radiant of the storm.

Action 26-4: closed
The SOHO engineering team will report on the outcome of the MMS study to mitigate the risk associated with the Leonids meteor storms as soon as it becomes available.

There were some discussions about the activities in connection with the Leonids last year. Was this just a hype up? Was the risk involved worth all the extra maneuvers? What should we do next year? The latter was discussed since a Mercury transit will occur on 15 Nov, just prior to the next Leonid shower (Nov 17th). This could provide a unique stray light test for some of the instruments.

However, as stated by B. Fleck, spacecraft safety comes first.

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On PI's to provide input to what the instruments plan to do during the Mercury transit. Deadline before next SWT meeting on 21 June .

Action 27-2:
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4 Spacecraft status

B. Fleck presented the main flight events during the last 6 months including the recoveries (see annex 3). Expect to return to 0 degree roll attitude at the beginning of March.

A questions was raised about the expected fuel consumption in the future. Estimates gives the expected annually fuel consumption to be around 4 kg. Each future ESR should require about 1.5 kg.

Instrument teams should be aware of the fact that station keeping now will take about 15 times longer than before.

5 Recertification Review Action Status

J. Credland gave a update of the recertification review action status (see Annex 4)

The spacecraft is expected to be in "normal mode" first week of March after a roll maneuver.

He pointed out the quick recovery from last ESR (took only 15 minutes) and it was nice to see that the software upgrade 3 weeks earlier worked. It appears that we now have a robust software to exit future ESR's. The final gyroless software is expected to be ready/tested/uploaded mid July. After this SOHO should be fully operational.

The delta recertification review is scheduled for March 9/10.

A concern was pointed out that so far there has been very few changes in the FOT. More staffing for FOT is expected from NASA. All changes should now go through a "Change Control Board" (CCB). They have a large back-log to work on.

Program Managers are now present at GSFC. The NASA Program Panager (Judy Bruner) is in charge during nominal operations. The ESA Program Manager (Michel Verdant) takes over during emergencies.

Funding: NASA has followed ESA and has committed operations to March 2003 without any further senior review.

6 SOHO gyroless mode

Ton van Overbeek gave an overview of the gyroless mode and compared this to the previous (original) mode and the current "normal" mode (Annex 5). Pointed out that during a roll the spacecraft will be in low rate. The new software should considerably reduce the risk of falling back into ESR.

7 Ground system status

Luis Sanchez presented a couple of viewgraphs showing the current and future plans for the ground system, prepared by Ron Mahmot (see annex 6). Dark boxes labeled in white are new systems.

Answering a question from Phil Scherrer, the RDA system will record all SOHO data, including VC2 and VC3 (this point was later confirmed by Ron Mahmot).

8 Presentation on the 1998 Leonids event.

Detlef Koschny, from the Solar System Division of ESA's Space Science Department, made a brief presentation about the past 1998 Leonids event. According to flux density data gathered, the peak of the shower was at the predicted moment, not 16 hours before as rumored. However, instead of the expected sharp peak, there was an 1 day long broad maximum that nobody predicted (see annex 7).
More information about this year's shower will be available at the EGS, and at a workshop that will be held at NASA Ames the week before.

9 DSN Weekend Requirements

Future DNS support was also presented.

- DSN Resources Allocation Meeting Feb 2, 1999
- SOHO seems to have good priority and is getting it's requirements met
- No major conflicts until Jan 2001 (Genesis + Integral launch, i.e. shift 3 months continuous)
- Most contentions resolved by using DSS 27
- **No need to relax weekend requirements**

10 Instrument status

The PI's presented the status of their instruments (see annex 8).

10.1 EIT (J.P. Delaboudiniere)

Discussed a method for determining the roll angle of SOHO analyzing EIT images using a cross-correlation method. This method appear to me robust even during proton events (see annex 8).

Action 27-3:
On EIT team to provide documentation on their roll determination method by end of March.

J.P. Delaboudiniere commented about the use of EIT images without proper references to the instrument team (e.g. the recent Solar Wind paper in Science February 5th 1999 by Hassler et al.).

10.2 UVCS (S. Fineschi)

Discussed some details about the degradation of the Ly-detector and that this detector is being operated in a very conservative way. Tests of the detector will be executed in a few weeks.
Mentioned that a UVCS type of instrument was recently selected as a candidate for a MIDEX mission (ASCE) (see annex 8).

10.3 SWAN (J.L. Bertaux)

Plan to change some of the onboard software. Discussed the more complicated calibration/straylight corrections. A long term trend in the measurements could be due to a more active Sun (see annex 8) .

10.4 CELIAS (P. Bochsler)

Gave status and science activities since last STW. Showed some interesting new results obtained during a CME in may 1998. Mentioned two new workshops planned for this year (see annex 8).

10.5 COSTEP (H. Kunow)

(see annex 8)

10.6 Golf (A. Gabriel)

(see annex 8)

10.7 CDS (R. Harrison)

(see annex 8)

10.8 SUMER (P. Lemaire)

(see annex 8)

10.9 MDI (P. Scherrer)

(see annex 8)

10.10 VIRGO (V. Domingo)

(see annex 8)

10.11 LASCO

No representative from LASCO. B. Fleck mentioned that they are still working on a recovery of C1.

10.12 ERNE

No representative

11 PR and outreach activities

F. Drigani gave an overview of the Science Communication Service at ESTEC (see annex 9). A question was raised if it was possible to get help to produce nice PR graphics. B. Fleck answered that the SOHO PS office will help/advice to get this done, i.e. contact points for PI's is the PS office.

P. Brekke gave an overview of the on-going an planned PR/outreach (see annex 9).

The LOC of the SOHO 8 workshop in Paris would like to arrange a press conference during the meeting. This cannot be organized before we have something to present. Any new science should be mentioned to the ESA PR machinery no later than end of April.

Action 27-4:
On PI's to provide ideas for press conference at the SOHO-8 before end of April.

12 Science Priorities for Next Six Months

B. Fleck summarized a few activities. The planned Whole Sun Month campaign coincides with the recomissioning of SOHO. Thus, not a good time for this campaign. UVCS presented plans for CME watch (see annex 10).

13 MEDOC Campaign

J.C. Vial presented plans for the next MEDOC campaign which was agreed upon (time, program etc.). Campaign 3: Weeks 19-21 (10-30 May 1999); Campaign 4: weeks 38-40 or 39-41. CDS requested more details about what studies to be run and when. They really need this information to plan their activities.

14 Meetings and Workshops

B. Fleck presented list of upcoming meetings, which is also available at the SOHO home page (see annex 11. He expressed his concerns that there are too many meetings, some of them even on the same topic (and with the same SOC). There was some discussion on this topic. He also mentioned an invitation to propose an IAU Symposium at the IAU General Assembly meeting in Manchester (August 2000).

15 Status of the SOHO Archive

L. Sanchez presented the current status of the processing of the various SOHO data products (see first viewgraph of annex 12). He also made some comments on the differences between the new and the old ground system (see also annex 6 –Ron's one).

He wanted to thank all the PI's for providing all the data in a regular fashion.

I. Scholl gave an overview of the new SOHO archive system. There is a review scheduled for June 8 to decide whether to roll out the new system at that date or a later one. Details about the archive, see annex 12.

There was discussions about how RAL fits into the archive/database system and about releasing the source code of the user interface to RAL.

B. Fleck strongly encouraged the IAS colleagues to release their source code. It was argued that RAL needs this code now, not in June, mainly for the following reasons:

- To know if they can adapt it to their system, that has a different architecture or if they need to develop their own user interface.
- To view the database contents when ingesting the SOHO data that will be arriving shortly.

Following some discussions it was agreed upon that IAS will provide their source code to RAL, and with everybody's understanding that this was not the final version.
To close the session, Isabelle gave a real-time demonstration of the system.

16 AOB

Next SWT meeting, SWT-28, will take place on June 21 1999 at MEDOC the day before the SOHO 8 Workshop. Starting at 10 AM.