Minutes of the 32nd SOHO SWT Meeting

Stanford University, Palo Alto, California

14 December 2000

Contents

1 Welcoming Address

B. Fleck welcomed the attendees. All instruments except CDS and COSTEP were represented – R. Harrison had sent his apologies, and H. Kunow was prevented from attending due to unforeseen circumstances.

2 Action Items

Action 32-1:
On PIs: Provide names/institutions that may participate in SOHO 5-year celebration and the Sun-Earth Day on 27 April. Input to P. Brekke before 15 January 2001.

Action 32-2:
On PIs: Provide input to NASA Senior Review (1-3 pages per instrument), including instrument status and science highlights. Input to J. Gurman before 16 March 2001.

Action 32-3:
On L. Sanchez and PIs: List of Level Zero CD recipients to be sent out by L. Sanchez and reviewed by PIs to eliminate those that no longer need them.

Action 32-4:
On L. Sanchez and European archive administrators: Provide monthly usage statistics for archive sites.

Action 32-5:
On S. Haugan: Coordinate automated SOHO instrument input to HESSI Flare Catalog with D. Zarro.

3 Agree Agenda and Action Revision

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

Actions Revision

Action 31-1: Closed/Ongoing[1]
On J. Gurman: Details on offpointing manoeuvre to be distributed (annex 4) and a proposal to be sent to the Program Office. Feedback from risk analysis to be distributed.

Action 31-2: Closed[2]
On B. Fleck: Place and time of 5-year celebrations to be selected.

Action 31-3: Closed[3]
On PIs: Suggest material for "5-year booklet".

[1] See section 8
[2] See section 13
[3] Dropped – see section 13

Recurring actions

Action 30-2: Ongoing
On PIs: Provide updated information for the SOHO Bibliography & Publications database[4], with particular emphasis on Ph.D. Theses.

CDS, CELIAS, ERNE, GOLF, SUMER, UVCS, MDI in pretty good shape.

For COSTEP, LASCO and EIT we will query NASA ADS (impossible for SWAN and VIRGO); however, we will miss out all JGR and GRL papers!

Action 30-3: Ongoing
On PIs: Request team members to send paper copies of papers in journals (other than *ApJ* and *A&A*) to the SOHO PS office[5].

4 Spacecraft Status

B. Fleck presented the spacecraft status (annex 3) on behalf of M. Chaloupy, J.-P. Olive, and H. Schweitzer.

SOHO ESR-15 occurred just past midnight UT on 29 November 2000. The cause was a reset of the attitude control unit (ACU). Frozen telemetry packets showed no indications as to the cause.

SOHO was back in normal mode only 36 hours after the ESR.

Regarding solar array degradation, the margin is about 3 times the loss to date.

There are no concerns regarding the spacecraft health. The main risk factor regarding operations remains Flight Operations Team attrition.

5 Ground System Status

J. Gurman presented the ground system status on behalf of R. Mahmot (see annex 4).

The PIs were asked to review the distribution lists of Level Zero CDs (action 32-3).

6 Instrument Status

The PIs presented the status of their instruments (see annex 5).

6.1 GOLF (A. Gabriel)

(see annex 5-1)

6.2 VIRGO (C. Frölich)

(see annex 5-2)

[4]Submit information to `soho@esa.nascom.nasa.gov`
[5]SOHO PS Office, NASA GSFC, Mail Code 682.3, SOHO EAF, Bldg 26 Room G-1, Greenbelt, MD 20771

6.3 MDI (P. Scherrer and R. Bush)

Due to thermal reasons, the MDI window acts as a lens, changing the plate scale by a factor of 1/1000. There is also a distortion that amounts to 1/3 pixel measured at 0.5 $R_\odot$. The image ellipticity is about 1/2 pixel, corresponding to a CCD tilt of about 2^o.

The cross-equator flow observed can be explained by a 6 arcmin roll relative to the startracker.

MDI magnetograms can now be retrieved through requests to the SOHO archive.

R. Bush presented some MDI trends (see annex 5-3).

6.4 SUMER (K. Wilhelm)

(see annex 5-4).

6.5 EIT (J.-P. Delaboudiniere)

(see annex 5-5)

6.6 UVCS (J. Kohl)

(see annex 5-6)

6.7 LASCO (R. Howard)

(see annex 5-7)

6.8 SWAN (E. Quemerais)

SWAN is operating nominally. Real-time images will soon be available online.

6.9 CELIAS (B. Klecker)

(see annex 5-8)

6.10 ERNE (J. Torsti)

(see annex 5-9)

7 NASA SEC Senior Review

J. Gurman informed about the upcoming senior review (see annex 6). PIs should provide input on instrument status and science highlights by 16 March 2001 (action 32-2), and assist in formulating the proposal during the next SWT (23-24 April 2001) at Goddard.

8 S/C Offpoint Manoeuvre

The revised plan for an offpoint manoeuvre that will give an improved EIT flat field was discussed (see annex 7). MDI may request small modifications to take advantage of the offpoint (like extending the dwell time to 3 minutes). All PIs still supported the manoeuvre.

B. Fleck informed that a faster roll mode may be developed to decrease the time spent in recovering from an ESR (the current maximum roll speed is 12h/360 degrees). In case such a mode is developed, tested and deemed safe, it was agreed that requests for roll manoeuvres on scientific grounds would be considered on a case by case basis.

9 SOHO Archive Status

B. Fleck presented the status of the SOHO archive on behalf of L. Sanchez (see annex 8). The PIs requested that reports of usage statistics be compiled and distributed on a monthly basis (action 32-4).

A plot of SOHO publications can be found in annex 9.

10 Working with SOHO data

S. Haugan discussed the need for on-line "user guides" that enable archive users to read and analyze data from each instrument (see annex 10). In the following discussion, it was agreed that the user guide is not *required* to refer to any particular software platform; However, it may be assumed by instrument teams that IDL (and any applicable SolarSoft extensions) is available to the user.

11 SOHO Science Operations

S. Haugan reported on the status of science operations, including HESSI collaborations (see annex 11). It was agreed that no "focus weeks" or months be set in advance, but SPWG meetings should try to look further ahead in order to synchronize upcoming instrument operations. S. Haugan is to coordinate automated input to the HESSI Flare Catalog with D. Zarro (action 32-5).

12 Next MEDOC Campaign/Station Keeping Manoeuvre

B. Fleck discussed the likely dates of the next MEDOC Campaign versus the next Station Keeping Manoeuvres (see annex 12). Note that the next station keeping manoeuvre has since been moved to 22 February. The preferred time for MEDOC Campaign #7 is weeks 20+21 (14 May - 27 May). Final dates to be discussed and agreed by e-mail. Note that HESSI is expected to be operational at this time. Another campaign (#8) will be attempted in the October–November time period (note Leonids meteor shower around 17 November).

13 PR and Outreach activities/5 Year Event

P. Brekke reported on recent PR and Outreach activities and on plans for the 5 Year Event (see annex 13). The 5 Year Event will be taking place in both European countries and in the US on 27 April 2001, which is also the Sun-Earth Day in the US (see annex 14). PIs should provide names/institutions which may participate or contribute to P. Brekke by 15 January 2000 (action 32-1).

It was decided to drop the plans for a 5-year booklet.

14 Meetings and Workshops

See annex 15.

C. Fröhlich was elected as chairman of SOHO-11, "Half a Solar Cycle of SOHO Observations", in Davos 11-15 March 2002.

15 AOB

SWT-33 will be held Monday and Tuesday 23-24 April 2001, at Goddard Space Flight Center. The SPWG will be scheduled for 24 April PM.

A. Gabriel enquired about candidates for a postdoc position at MEDOC (French citizens excluded).

Annex 1: Agenda

Annex 2: List of Participants

Attendees SOHO SWT-31

Name	Institute/Experiment	Address
Brekke, P.	ESA/SSD	NASA/GSFC, Code 682.3 (pbrekke@esa.nascom.nasa.gov)
Bush, R.	Stanford University/SOI-MDI	HEPL Annex B212, Stanford, CA 94305-4085 (rbush@solar)
Delaboudiniere, J.P.	IAS/EIT	Univ. Paris XI, F-91405 Orsay Cedex (boudine@ias.fr)
Fleck, B.	ESA/SSD	NASA/GSFC, Code 682.3 (bfleck@esa.nascom.nasa.gov)
Fröhlich, C.	PMOD-WRC/VIRGO	CH-7260 Davos-Dorf
Gabriel, A.	IAS/GOLF	Bat 121, Univ. Paris XI, F-91405 Orsay Cedex (gabriel@ias.fr)
Gurman, J.	NASA/GSFC/EIT	(gurman@gsfc.nasa.gov)
Haugan, S.V.H.	ESA/SSD	NASA/GSFC Code 682.3 (shaugan@esa.nascom.nasa.gov)
Hoeksema, T.	NASA HQ	(thoeksem@mail.hq.nasa.gov)
Howard, R.	NRL/LASCO/EIT	Code 7660, Naval Research Lab, Washington DC,
Klecker, B.	MPE/CELIAS	MPE, D-85740 Garching
Kohl, J.	SAO/UVCS	SAO, 60 Garden ST, Cambridge, MA 02138, USA
Kosovichev, A.	Stanford University/SOI-MDI	ERL 328, Stanford University MC4055
Quemerais, E.	Service d'Aeronomie/SWAN	BP 3, Verrieres-Le-Buisson, F-91371 (quemerai@aerov.jussieu.fr)
Scherrer, P.	Stanford University/SOI-MDI	HEPL Annex B210, Stanford, CA 94305-4085, USA
Scholl, I.	IAS	IAS Bât 121, Univ. Paris XI, F 91405 ORSAY
Torsti, J.	University of Turku/ERNE	Space Res. Lab., SF-20520 Turku (jarmo.torsti@utu.fi)
Wilhelm, K.	MPAE/SUMER	MPAe Lindau (wilhelm@linmpi.mpg.de)

Annex 3: Spacecraft Status

Annex 4: Ground System Status

Annex 5-1: GOLF

Annex 5-2: VIRGO

Annex 5-3: MDI

Annex 5-4: SUMER

Annex 5-5: EIT

Annex 5-6: UVCS

Annex 5-7: LASCO

Annex 5-8: CELIAS

Annex 5-9: ERNE

Annex 6: NASA SEC Senior Review

Annex 7: S/C Offpoint Request

Annex 8: Status of the SOHO Archive

Annex 9: Publication statistics

Annex 10: Working with SOHO data

Working with SOHO data

Stein Vidar H. Haugan/ESA SOHO SOC

- **Working archive – now the last piece!**
- **Ideal world:**
  - **Single, dedicated web page entry point for each instrument**
  - **Step-by-step instructions starting with:**
    - **Archive output files**
    - **Installed SolarSoft library**
  - **Producing meaningful plots in 1 day (or hour)**
  - **Reference (calibration, issues, etc).**
- **Current state**
  - **To Be Determined**
  - **EIT is a good start**

Annex 11: Science Operations

SOHO Science Operations

Stein Vidar H. Haugan/ESA SOHO SOC

- **SOHO-HESSI Collaborations**
  - **JOP136 Default HESSI Collaboration**
    - **First SPWG round last Monday**
  - **HESSI Flare Catalog**
    - **Reporting on an AR / NOAA Flare basis**
    - **Should include non-MMOP observations as well**
    - **Generate input based on as-run databases?**
  - **Concerns**
    - **Max Millennium programs are** *large*
    - **Commitments (or lack thereof) must be communicated explicitly**

SOHO Science Operations

Stein Vidar H. Haugan/ESA SOHO SOC

- **Declining number of campaigns per year:**

	CDS	EIT	MDI	SUMER	UVCS	LASCO	Yohkoh	TRACE	SOHO
1996	120	107	60	119	45	27	26	-	155
1997	150	104	72	113	38	33	16	-	187
1998	80	46	48	27	23	19	13	73	129
1999	96	58	55	66	21	20	19	104	156
2000	78	41	42	33	28	15	17	51	110

  – **Fatigue, but also longer, more intensive campaigns?**

- **Are we doing enough to coordinate instruments?**
  – **Same types of target, but different time**
  – **Daily/weekly meetings can do much, but:**
  – **Mostly a longer-term scheduling problem**
  – **Should we have "focus weeks/months/.."?**
    * **Off-limb AR month (SUMER/CDS/UVCS)**
    * **Or simply "Off-limb month"**
  – **Generic "Coordination campaign"**

Annex 12: MEDOC Campaign/Station Keeping Manoeuvre

Annex 13: PR/Outreach Activities

Annex 14: Sun-Earth Day

Annex 15: Meetings and Workshops