2012 Edition of the Annual
Solar-Terrestrial Centre of Excellence (STCE)

Workshop
On-orbit degradation of solar and space weather Instruments
– Lesson learned –

Thursday May 3rd 2012

The workshop will take place at the Royal Observatory of Belgium, Brussels (RMI meeting room).

The aim of this workshop is to open discussions related to the degradation observed on space instruments dedicated to monitor the Sun and the space weather. The idea is to share and gain knowledge of on-orbit degradations from our past and present experiences and to use them as a guide to predict future performance of ongoing instrument developments.

The presentations will then be followed by a **Round Table** (2h if time available) with the goal to provide good practices and innovative approaches to reduce or correct as strongly as possible expected degradations. We intend to implement a **Lessons Learned** process to identify what has gone well with previous missions (which should be repeated) and to rethink what should be done differently. This shall initiate new studies that will provide regular feedback and continuous activities to increase the lifetime of future space missions.

We welcome all participants who want to share their experience and knowledge. We look forward to meeting you.

Ali BenMoussa and Samuel Gissot

STCE-ROB

Workshop Program

(Thursday May 3rd 2012)

Presentations shall be limited to **20 minutes + 5 minutes** for questions.

9:15			**Welcome / Introduction**
9:30	U. Schuehle	MPS	Space degradation and cleanliness of VUV/EUV solar spectrographs
9:55	F. Auchère	IAS	Degradation of EIT on SOHO
10:20	G. Del Zanna*	DAMTP	In-flight degradation of the SOHO CDS NIS instrument and cross-calibration via EUV spectral irradiance measurements
10:55	Chris Eyles	RAL	Long-Term Stability of the Photometric Calibration of the STEREO HI-1 Heliospheric Imagers
11:20	**Coffee Break**		
11:35	D. Walton	MSSL	Degradation of the Hinode EIS detectors after 5 years in orbit
12:00	A. Jones	LASP	Measured degradation in Solar EUV Spectrometers SOHO-CELIAS-SEM and SDO-EVE
12:25	S. Mekaoui	EC-JRC	Ageing corrections of DIARAD/VIRGO on SOHO
12:50	G. Thuillier	LATMOS	The long term mission of SOLAR SOLSPEC on board ISS - Internal capabilities for the detection and the correction of trends for the absolute responses and wavelength scales
13:15-14:15	**LUNCH**		
14:15	D. Seaton	ROB	Degradation of SWAP, if any
14:40	I.E Dammasch	ROB	Degradation of LYRA onboard PROBA2 after 2 years in orbit
15:05	G. Cessateur	PMOD	Degradation of PREMOS onboard PICARD
15:30	M. Meftah	LATMOS	Ageing of the PICARD payload thermal control
15:55 Session: *Future space instruments* (presentation 10 + 5 min)			
16:10	J-P Halain	CSL	Introduction to the Extreme Ultraviolet Imager (EUI) telescopes onboard Solar Orbiter
16:25	T. Thilbert	CSL	Introduction to ESIO
16:40	V. Pierrard**	BISA	Introduction to the space radiation environment and to the Energetic Particle Telescope (EPT)
17:05	**Coffee Break**		
17:15			**ROUND TABLE**

*30min+5min questions **20min+5min questions

ROUND TABLE OUTLINE

The following questions/topics could be discussed around the table:

- Lesson learned review from flight experience (what works and what does not):
  - ✓ lists of proven technology and their degradation levels,
  - ✓ influence of the space and spacecraft environments (orbits, radiations, vacuum, T°, contamination) ,
  - ✓ influence of scientific purpose (wavelength, duty cycle),
  - ✓ priorities of problems still to be solved (unknown performances), ...
- Degradation estimation methods (mathematical methods, cross-instrument calibrations, reference instruments),
- Roadmap for instrument design/part selections (optical design, materials, new HW developments),
- Ground calibration and testing campaigns (methods and procedures, facilities, cleanliness),

Online-Registration

Please fill out the doodle: http://www.doodle.com/zzhdaq2tybunpzqx or contact: ali.benmoussa@stce.be

Location

Royal Observatory of Belgium (meridian room) 3 Circular 1180 Brussels, Belgium.
For a map and travel directions please visit: http://www.astro.oma.be/EN/info/praktisch.php

Hotel accommodation:

Hotels near ROB	Address	Contact
LES TOURELLES* **	Avenue Winston Churchill, 135, 1180 Brussels	Tel. : +32 2 344.95.73 Fax : +32 2 346.42.70 http://www.lestourelles.be
BEST WESTERN COUNTY HOUSE* **	Square des Héros, 2-4 1180 Brussels	res@countyhouse.be http://www.bestwestern.be/overview.asp?hotelid=59
CAPITAL Brussels* **	Chaussee de Vleurgat, 191 1050 Brussels	Tel. : +32 2 646.64.20 Fax. : +32 2 646.33.14 http://www.hotelcapital.be
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