

Workshop of the International Space Science Institute (ISSI)

Solar Dynamics and its Effects on the Heliosphere and Earth

Bern, Switzerland, 18-22 April 2005

Convenors:

Roger M. Bonnet, ISSI, rmbonnet@issi.unibe.ch

Madhulika Guhathakurta, NASA HQ, mguhatha@hq.nasa.gov

Gerhard Haerendel, IU Bremen, hae@iu-bremen.de

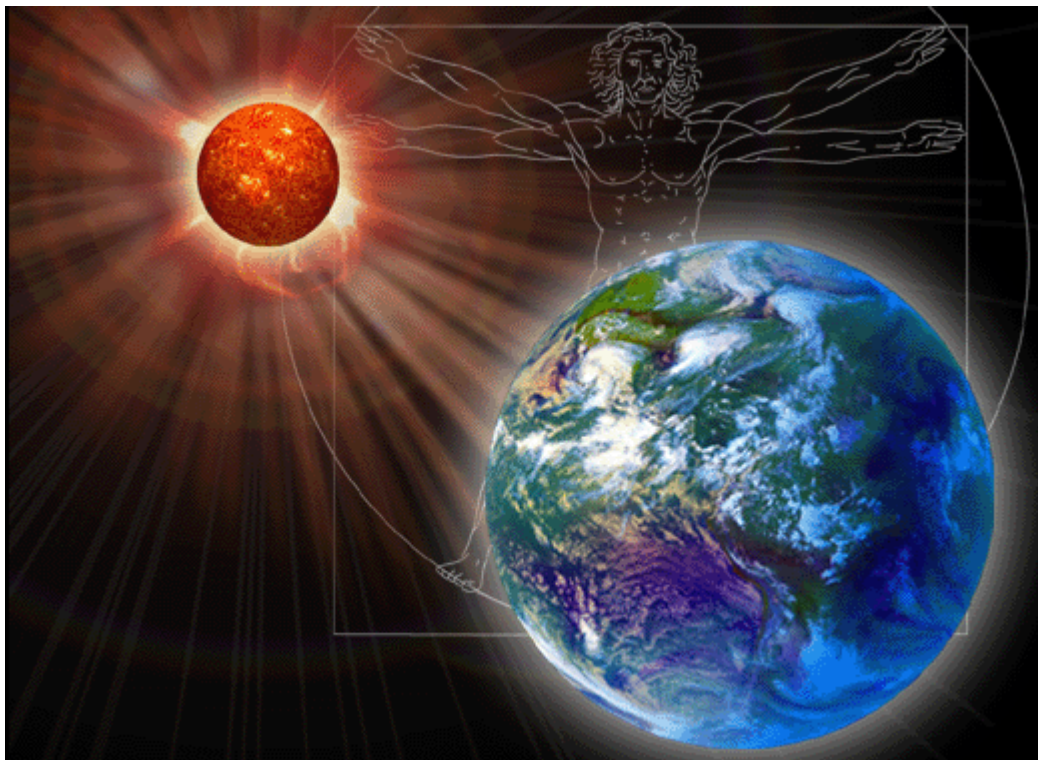
Hermann Opgenoorth, ESA-ESTEC, Hermann.Opgenoorth@rssd.esa.int

Götz Paschmann, ISSI, paschmann@issi.unibe.ch

Rudolf von Steiger, ISSI, vsteiger@issi.unibe.ch

Local organisation:

Brigitte Fasler, ISSI, brigitte.fasler@issi.unibe.ch



(picture from ilws.gsfc.nasa.gov)

Monday, 18 April 2005**Session 1 – Solar Dynamics** (incl. Atmospheric Dynamics)

09:00		Registration, Coffee
	<i>Roger M. Bonnet</i>	<i>chair</i>
10:00	Roger M. Bonnet	Welcome, introduction to ISSI
10:15	Rudolf von Steiger	Workshop introduction, logistics
10:30	John Leibacher	Helioseismic probes of the origins of solar variability
11:15	Alexander Kosovichev	Active region dynamics
12:00		Lunch Break
	<i>Rudolf von Steiger</i>	<i>chair</i>
14:00	Nigel Weiss	Sunspot structure and dynamics
14:45	Åke Nordlund	Solar atmosphere dynamics
15:30		Tea
16:00	Leon Golub	Studies of coronal dynamics
16:45	Ester Antonucci	Solar coronal winds, dynamics and composition
18:00		Welcome drink

Tuesday, 19 April 2005**Session 2 – Solar Wind Chain** (incl. Coronal heating and acceleration)

	<i>Philippe Escoubet</i>	<i>chair</i>
09:00	Rainer Schwenn	Solar wind sources and their variations over the solar activity cycle
09:45	Ruth Esser	Coronal heating: observations and theory
10:30		Coffee
11:00	Jon Linker	Ejection of solar mass and magnetic flux
11:45	Thomas Zurbuchen	Structure and evolution of the global heliosphere
12:30		Lunch
	<i>Bernhard Fleck</i>	<i>chair</i>
14:00	Rumi Nakamura	Substorms and their solar wind causes
14:45	Joachim Birn	Modelling of the magnetospheric response to the dynamic solar wind
15:30		Tea
16:00	Mark Lester	Ionospheric response to solar radiation and solar wind particles
16:45	Jean-André Sauvaud	Magnetospheric ions of solar wind origin
17:30		Adjourn

Wednesday, 20 April 2005**Session 3 – CME Chain***Lika Guhathakurta**chair*

- 09:00 Sarah Gibson The evolving sigmoid: Evidence for magnetic flux ropes in the corona before, during, and after CMEs
- 09:45 Nat Gopalswamy ICME properties
- 10:30 Coffee
- 11:00 Hannu Koskinen Geoeffectiveness of ICMEs
- 11:45 Ioannis Daglis Ring current dynamics
- 12:30 Lunch

*Hermann Opgenoorth**chair*

- 14:00 Jerry Goldstein Plasmasphere response
- 14:45 Mike Wiltberger End-to-end modelling (numerical)
- 15:30 Tea
- 16:00 Dan Baker End-to-end modelling (empirical)

Session 4 – SEP Chain

- 16:45 Mihir Desai Seed population for CME-driven shocks
- 17:30 Adjourn

Thursday, 21 April 2005

Session 4 – SEP Chain (cont.)

	<i>Götz Paschmann</i>	<i>chair</i>
09:00	Bob Lin	Solar electrons and hard X-rays / gamma-rays
09:45	Peter Cargill	Particle acceleration in global coronal magnetic fields
10:30	Joe Giacalone	Shock acceleration models
11:15		Coffee
11:45	Berndt Klecker	Solar energetic particles charge states: an overview
12:30	Richard Mewaldt	High-energy SEPs, composition
13:15		Lunch
15:00	Group 1 Group 2	Visit of Einstein house Walk the Einstein path
16:30		Switch of group 1 and 2
19:00		Workshop Dinner at Ristorante Verdi

Friday, 22 April 2005

Session 5 – Commonalities

	<i>Dave Sibeck</i>	<i>chair</i>
09:00	Gerhard Haerendel	Commonalities between chromosphere and ionosphere
09:45	Steve Schwartz	Shocks
10:30		Coffee
11:00	Jörg Büchner	Theory and simulation
11:45	Markus Aschwanden	Particle acceleration
12:30	Gerhard Haerendel	Workshop Summary
13:00		Concluding remarks, publication plans
13:30		Adjourn

Workshop Participants

Ester	Antonucci	University of Torino	antonucci@to.astro.it
Markus	Aschwanden	Lockheed-Martin, Palo Alto	aschwanden@lmsal.com
Dan	Baker	Univ. of Colorado, Boulder	daniel.baker@lasp.colorado.edu
Joachim	Birn	LANL, Los Alamos	jbirn@lanl.gov
Roger M.	Bonnet	ISSI, Bern	rmbonnet@issi.unibe.ch
Jörg	Büchner	MPS Lindau	buechner@mps.mpg.de
Peter	Cargill	Imperial College, London	p.cargill@ic.ac.uk
Ioannis	Daglis	National Observatory of Athens	daglis@space.noa.gr
Mihir	Desai	Univ. of Maryland, College Park	desai@uleis.umd.edu
Philippe	Escoubet	ESA-ETEC	Philippe.Escoubet@esa.int
Ruth	Esser	Univ. Tromsø	ruth.esser@phys.uit.no
Bernhard	Fleck	ESA	bfleck@esa.nascom.nasa.gov
Joe	Giacalone	Univ. of Arizona, Tucson	giacalon@lpl.arizona.edu
Sarah	Gibson	HAO, Boulder	sgibson@ucar.edu
Jerry	Goldstein	SWRI, San Antonio	jgoldstein@swri.edu
Leon	Golub	CfA, Cambridge MA	golub@cfa.harvard.edu
Nat	Gopalswamy	NASA GSFC, Greenbelt	gopals@fugee.gsfc.nasa.gov
Madhulika	Guhathakurta	NASA HQ	mguhatha@hq.nasa.gov
Gerhard	Haerendel	International University Bremen	hae@iu-bremen.de
Berndt	Klecker	MPE Garching	berndt.klecker@mpe.mpg.de
Hannu	Koskinen	Univ. of Helsinki	hannu.koskinen@fmi.fi
Alexander	Kosovichev	Stanford University	akosovichev@solar.stanford.edu
John	Leibacher	NSO, Tucson	jleibacher@spd.aas.org
Mark	Lester	Univ. of Leicester	mle@ion.le.ac.uk
Bob	Lin	Univ. of California, Berkeley	rlin@ssl.berkeley.edu
Jon	Linker	SAIC San Diego	linkerj@saic.com
Richard	Mewaldt	Caltech, Pasadena	rmewaldt@srl.caltech.edu
Rumi	Nakamura	Austrian Academy of Sciences, Graz	rumi.nakamura@oeaw.ac.at
Åke	Nordlund	Theoretical Astronomical Center, Copenhagen	aake@astro.ku.dk
Hermann	Opgenoorth	ESA-ESTEC	Hermann.Opgenoorth@rssd.esa.int
Götz	Paschmann	ISSI, Bern	paschmann@issi.unibe.ch
Jean-André	Sauvaud	CESR, Toulouse	Jean-andre.Sauvaud@cesr.fr
Steve	Schwartz	Queen Mary, London	S.J.Schwartz@qmul.ac.uk
Rainer	Schwenn	MPS Lindau	schwenn@linmpi.mpg.de
Dave	Sibeck	NASA GSFC	David.g.Sibeck@nasa.gov
Rudolf	von Steiger	ISSI, Bern	vsteiger@issi.unibe.ch
Nigel	Weiss	University of Cambridge	now@damtp.cam.ac.uk
Mike	Wiltberger	NCAR, Boulder	wiltbemj@ucar.edu
Thomas	Zurbuchen	Univ. of Michigan, Ann Arbor	thomasz@umich.edu