

Third Solar Orbiter Workshop Program

Monday 25 May - Thursday 29 May, 2009

Sunday 24 May

17:00 Registration

19:00 **Welcome reception**

Monday 25 May - AM

Session 1: General topics and status of Solar Orbiter

Chair: *Ester Antonucci*

09:30 Welcome addresses and general information by LOC
Ester Antonucci

09:40 Welcome address of the Italian Space Agency ASI and the Italian National Astrophysics Institute INAF

10:00 Solar Orbiter and the Science Programme of ESA
David Southwood

10:30 History and science goals of Solar Orbiter
Eckart Marsch

10:50 Solar Orbiter mission and project status
Philippe Kletzkine

11:20 **Coffee Break and Posters**

12:00 Open solar physics questions - what can Solar Orbiter do that could not be addressed by existing missions?
Spiro Antiochos

12:20 Open heliospheric physics questions - what can Solar Orbiter do that could not be addressed by existing missions?
Marco Velli

12:40 The unique opportunities of Solar Orbiter - strategic issues
Richard Harrison

13:00 **Lunch**

Monday 25 May - PM

Session 2: Synergies with Solar Probe Plus and Solar-C and with ground-based solar observatories

(Chair: *Marcello Coradini*)

14:30 NASA's heliophysics programme - Science and missions
Dick Fisher

15:00 NASA's Solar Probe Plus - Science goals and status
Lika Guhathakurta

15:20 Synergies between Solar Probe Plus and Solar Orbiter
Dave McComas

15:40 Orbit synchronization enabling two-point in-situ measurements from Probe and Orbiter
Adam Szabo

16:00 JAXA's Solar-C - Mission options and science goals
Saku Tsuneta

16:30 **Coffee Break**

17:00 SOLAR-C out-of-ecliptic mission orbit and spacecraft systems
Hirohisa Hara

17:15 SOLAR-C and solar dynamo
Takashi Sekii

17:30 Short review of future ground-based solar optical telescopes
Göran Scharmer

17:50 Future ground-based solar radio observations
Alexander Konovalenko

18:10 Coronal magnetic field diagnostics with future coronagraphs
Marco Romoli

18:30 **Plenary discussion on mission synergies**
Chair: *Richard Marsden*

19:00 **Adjourn**

Tuesday 26 May - AM

Session 3:

Review and consolidation of the unique science goals of Solar Orbiter

Chair: *Eckart Marsch*

09:00 Probe the solar dynamo by observing the Sun's high-latitude field, flows and seismic waves

Sasha Kosovichev

09:20 Explore, at all latitudes, the energetics, dynamics and fine-scale structure of the Sun's magnetized atmosphere

Louise Harra

09:40 Investigate the links between the solar surface, corona and inner heliosphere

S m Krucker

10:00 Determine the properties, dynamics and interactions of plasma, fields and particles in the near-Sun heliosphere

Stuart Bale

10:20 Multi-point in situ measurements and sun-heliosphere connections

Thomas Zurbuchen

10:40 Future prospects for multi-spacecraft helioseismology

Thierry Appourchaux

11:00 Coffee Break and Posters

11:30 Magnetic coupling between the interior and the outer atmosphere of the Sun

Vassilis Archontis

11:50 Coupling between photosphere, chromosphere and corona

Bart De Pontieu

12:10 Connecting solar activity to heliospheric particles

David Lario

12:30 Panel discussion

13:00 Lunch

Tuesday 26 May - PM

Session 4: Open session on scientific, technical and operational issues of the Solar Orbiter mission and on synergies with Solar Probe Plus

Chair: *Richard Marsden*

14:30 Perihelion operations and telemetry constraints on observations
Daniel Müller

15:00 The latitudinal dependence of the solar radiance
Werner Schmutz

15:15 contributed talks

16:00 **Coffee Break and Posters**

16:30 Panel discussion

18:00 **Adjourn**

Wednesday 27 May

09:00 **Open session on new synergistic scientific objectives and technologies**

10:30 **Coffee break**

11:00 **Open session on new synergistic scientific objectives and technologies**

12:30 **Lunch**

14:15 **Social activity (tour to Pompei or Capri)**

19:00 **Adjourn**

Thursday 28 May - AM

**Session 5:
Review of Solar Orbiter's payload and novel science - New opportunities and scientific challenges for the remote sensing instruments**

Chair: *Richard Harrison*

09:00 Solar polarimetry and local helioseismology
Sami Solanki

09:20 EUV imaging of the Sun and its corona
Jean-François Hochedez

09:40 EUV spectroscopy of solar activity on disk and off limb
Don Hassler

10:00 Solar coronagraphy and sun-heliosphere connections
Ester Antonucci

10:20 X-ray imaging of the flaring corona
Arnold Benz

10:40 Heliospheric imaging: Linking the corona with the solar wind
Angelos Vourlidas

11:00 **Coffee Break and Posters**

11:30 Coronal dynamics and the Helium component
Silvano Fineschi

11:45 Solar wind acceleration processes in the corona
Dan Moses

12:00 Spectroscopic signatures of plasma flows in the corona
Werner Curdt

12:15 Coronal seismology from a corotational vantage point
Ineke de Mortel

12.30 Coronal seismology and fluctuations in the outer corona
Daniele Telloni

12:45 Magnetic reconnection signatures observable by Solar Orbiter in
the solar atmosphere
Jörg Büchner

13:00 **Lunch**

Thursday 28 May - PM

Session 6:

**Review of Solar Orbiter's payload and novel science - New opportunities
and scientific challenges for the in situ instruments**

Chair: *Robert Wimmer-Schweingruber*

14:30 Coronal and heliospheric magnetic field
Timothy Horbury

15:00 Radio and plasma waves on the sun and in the heliosphere
Milan Maksimovic

15:30 Solar wind plasma particles - solar origin and in situ microstate
Christopher Owen

16:00 Energetic particles - coronal sources and heliospheric
propagation
Javier Rodriguez-Pacheco

16:30 **Coffee Break and Posters**

17:00 Helios' legacy on solar wind turbulence and novel science with
Solar Orbiter
Raffaella D'Amicis

17:15 Panel discussion and action items

18:00 **Adjourn**

20:00 **Conference dinner - end of meeting**

Friday 29 May

Executive group meeting and preparation of possible CV activities

(Chair: TBD)

09:00 Introduction and contributions

10:30 **Coffee Break**

11:00 General discussion and actions

13:00 **Lunch**

14:00 **End of group meeting**

Saturday 30 May

Whole day: Voluntary social touristic activity organized by LOC
