

Solar Wind 12 Conference Saint-Malo, 21 – 26 June 2009 General Program



Sunday 21 June - PM

16:00 - 19:00 Registration & setting Posters **GROUP 1**

Posters GROUP 1 : sessions 1 & 2

Posters GROUP 2 : sessions 3, 4, 5 & 6

18:00 - 20:00 Welcome Cocktail

Monday 22 June - AM

08:00 - 08:45 last registrations

08:45 - 09:00 Milan Maksimovic : Welcome address

09:00 - 09:40 Stan Owocki

THE SOLAR WIND IN ASTROPHYSICAL CONTEXT (*Invited opening talk*).

Session 1 : Coronal Heating and the Acceleration of the Fast Solar Wind

Chair : Milan Maksimovic

09:40 - 10:10 Ruth Esser

REVIEW OF HEATING RELEVANT CORONAL AND SOLAR WIND OBSERVATIONS AND THEORIES (*Invited talk*).

10:10 - 10:30 Jiansen He, Eckart Marsch , Chuanyi Tu , & Lijia Guo

UPWARD PROPAGATION OF ALFVEN WAVES LAUNCHED BY SMALL SCALE MAGNETIC RECONNECTION IN THE CHROMOSPHERE.

10:30 - 10:50 Gaetano Zimbardo

MORE THAN MASS PROPORTIONAL HEATING OF HEAVY IONS BY COLLISIONLESS QUASI-PERPENDICULAR SHOCKS IN SOLAR CORONA.

10:50 - 11:50 Coffee break & POSTER VIEWING GROUP 1 (I)

11:50 - 12:10 Marco Velli

SOLAR WIND ACCELERATION: MECHANISMS AND SCALING LAWS.

12:10 - 12:30 Anatoli I. Efimov, L. A. Lukanina, L. N. Samoznaev, I. V. Chashei, M. K. Bird, M. Pätzold, & S. Tellmann

QUASI-PERIODIC FLUCTUATIONS DETECTED IN MARS-EXPRESS CORONAL RADIO SOUNDING OBSERVATIONS.

12:30 - 14:00 LUNCH at the Palais du Grand Large

Monday 22 June - PM

Chair : Nicole Meyer-Vernet

- 14:00 - 14:20 Sergio Servidio, W. H. Matthaeus, P. A. Cassak, M. A. Shay and P. Dmitruk
PROPERTIES OF MAGNETIC RECONNECTION IN MHD TURBULENCE.
- 14:20 - 14:40 D. Aaron Roberts
DEMONSTRATIONS THAT THE SOLAR WIND IS NOT ACCELERATED BY WAVES OR
TURBULENCE
- 14:40 - 15:00 Viviane Pierrard & Y. Voitenko
VELOCITY DISTRIBUTION FUNCTIONS OF THE SOLAR WIND PARTICLES

Session 2 : Physical Processes in the Solar Wind (Waves, Turbulence, Kinetics ...)

Chair : David Burgess

- 15:00 - 15:30 Justin C. Kasper
SOLAR WIND KINETICS AND VELOCITY DISTRIBUTIONS (Invited talk)
- 15:30 - 15:50 Lorenzo Matteini, S. Landi, M. Velli, and P. Hellinger
ON THE ROLE OF WAVE-PARTICLE INTERACTIONS IN THE EVOLUTION OF SOLAR WIND ION
DISTRIBUTION FUNCTIONS: OBSERVATIONS AND SIMULATIONS

15:50 - 16:50 *Coffee break & Poster viewing - GROUP 1 (II)*

- 16:50 - 17:20 Alexander A Schekochihin, M.A. Barnes, S.C. Cowley, W.Dorland, G.W. Hammett, G.G.
Howes, G. Plunk, E. Quataert, & T. Tatsuno
GYROKINETIC TURBULENCE IN THE SOLAR WIND (Invited talk)
- 17:20 - 17:40 Adolfo F. Viñas, C. Gurgiolo, T. Nieves-Chinchilla, S. Peter Gary, and M. L. Goldstein
MODELING THE STRAHL IN THE SOLAR WIND USING CLUSTER/PEACE ELECTRON VELOCITY
DISTRIBUTION FUNCTIONS
- 17:40 - 18:00 Jaime A. Araneda, Y. Maneva, & E. Marsch
NONLINEAR DECAY OF ALFVEN-CYCLOTRON WAVES: PROTON AND ALPHA VELOCITY
DISTRIBUTION FUNCTIONS

18:00 - 19:30 *Poster viewing - GROUP 1 (III) & Buffet*

Tuesday 23 June - AM

Session 2 (cont.): Physical Processes in the Solar Wind (Waves, Turbulence, Kinetics ...)

Chair : Filippo Pantellini

- 08:30 - 09:00 Sébastien Galtier
SOLAR WIND TURBULENCE: NEW QUESTIONS AND POSSIBLE SOLUTIONS (Invited talk).
- 09:00 - 09:20 Gregory G. Howes, S. C. Cowley, W. Dorland, G. W. Hammett, E. Quataert, A. A.
Schekochihin, and T. Tatsuno
NUMERICAL STUDIES OF KINETIC TURBULENCE IN THE SOLAR WIND.
- 09:20 - 09:40 Olga Alexandrova, J. Saur, C. Lacombe, A. Mangeney and P. Robert
SOLAR WIND TURBULENT SPECTRUM FROM MHD TO ELECTRON SCALES.

- 09:40 - 10:00 Khurom H.Kiyani, S.C. Chapman & Y. Khotyainstev
USING CLUSTER II TO INVESTIGATE THE DISSIPATION/DISPERSION RANGE OF SOLAR WIND
TURBULENCE
- 10:00 - 10:20 Arcadi Usmanov, W.H Matthaeus, B. Breech & M.L. Goldstein
MHD MODELING OF THE SOLAR WIND WITH TURBULENCE TRANSPORT AND HEATING

10:20 - 11:10 - Coffee break & Poster viewing - GROUP 1 (IV)

Chair : Stuart D. Bale

- 11:10 - 11:30 Peter Gary
SHORT-WAVELENGTH SOLAR WIND TURBULENCE: THE ROLE OF WHISTLER FLUCTUATIONS
(Invited talk)
- 11:30 - 11:50 Chadi Salem, D.Sundkvist & S.D. Bale
ON THE NATURE OF THE ELECTROMAGNETIC FLUCTUATIONS IN THE
DISSIPATION/DISPERSION RANGE OF SOLAR WIND TURBULENCE
- 11:50 - 12:10 Enrico Camporeale & D. Burgess
ELECTRON FIREHOSE INSTABILITY: LINEAR THEORY AND 2D PARTICLE-IN-CELL SIMULATIONS
- 12:10 - 12:30 John J. Podesta
NEW OBSERVATIONS OF SPECTRAL ANISOTROPY AND POSSIBLE DAMPING OF KINETIC
ALFVÉN WAVES IN THE DISSIPATION RANGE OF SOLAR WIND TURBULENCE

12:30 - 14:00 LUNCH at the Palais du Grand Large

Tuesday 23 June - PM

Session 2 (cont.): Physical Processes in the Solar Wind (Waves, Turbulence, Kinetics ...)

- 14:00 - 14:20 John T. Gosling
MAGNETIC RECONNECTION IN THE SOLAR WIND: AN UPDATE (invited talk)
- 14:20 - 14:40 Marcia Neugebauer & J. Giacalone
PROGRESS IN THE STUDY OF INTERPLANETARY DISCONTINUITIES
- 14:40 - 15:00 Antonella Greco, W.H. Matthaeus, S. Servidio, P. Chuychai & P. Dmitruk
STATISTICAL PROPERTIES OF SOLAR WIND DISCONTINUITIES AND INTERMITTENT
TURBULENCE

Session 3 : Slow Wind Streams, CMEs & 3D Structures of the Corona and Heliosphere

Chair : Ester Antonucci

- 15:00 - 15:30 Yi-Ming Wang
THE DIVERGENT ORIGINS OF THE SLOW SOLAR WIND (Invited talk)
- 15:30 - 15:50 Claire Foullon, B. Lavraud, N.C. Wardle, C. J. Owen, H. Kucharek, A.N. Fazakerley, D.E. Larson
E. Lucek, J.g. Luhmann, A. Optiz, J-A Sauvaud & R.M. Skoug
THE APPARENT LAYERED STRUCTURE OF THE HELIOSPHERIC CURRENT SHEET: MULTI-
SPACECRAFT OBSERVATIONS

15:50 - 16:20 Coffee break - Poster removal GROUP 1 & Setting Poster GROUP 2

- 16:20 - 16:50 Alexis P. Rouillard
COMPARING WHITE-LIGHT AND IN-SITU OBSERVATIONS OF SOLAR WIND TRANSIENTS
(invited talk)
- 16:50 - 17:10 Daniele Telloni, R. D'Amicis, A. Bemporad, E. Antonucci & R. Bruno
SOHO/UVCS DETECTION OF TURBULENCE AND INTERMITTENT EVENTS IN A CORONAL
MASS EJECTION
- 17:10 - 17:30 Angela Ciaravella
UVCS spectroscopic results, temperature, velocity and 3D structure of CMEs (Invited talk)
- 17:30 - 17:50 Jon A. Linker, Z. Mikic, R. Lionello, P. Riley & V. Titov
RELATING OBSERVED EMISSION FEATURES OF CMES TO MAGNETIC FIELD EVOLUTION
- 17:50 - 18:10 Noé Lugaz, I. I. Roussev, I. V. Sokolov & C. Jacobs
SOLAR-TERRESTRIAL SIMULATIONS OF CORONAL MASS EJECTIONS WITH A REALISTIC
INITIATION MECHANISM

18:10 - 19:30 Poster viewing - GROUP 2 (I) & Buffet

Wednesday 24 June - AM

Session 3 (cont.) : Slow Wind Streams, CMEs & 3D Structures of the Corona and Heliosphere

Chair : Karine Issautier

- 08:30 - 08:50 Peter Riley
THE THREE-DIMENSIONAL STRUCTURE OF THE INNER HELIOSPHERE
(Invited talk)
- 08:50 - 09:10 C. Nick Arge
COMPARING THE OBSERVED AND MODELED GLOBAL HELIOSPHERIC MAGNETIC FLUX
- 09:10 - 09:40 Pascal DEMOULIN
INTERACTION OF ICMES WITH THE SOLAR WIND (Invited talk)
- 09:40 - 10:00 Mathew J. Owens, N. U. Crooker, & T. S. Horbury
WHERE IS THE EXPECTED IMPRINT OF FLUX ROPE GEOMETRY ON SUPRATHERMAL
ELECTRONS IN MAGNETIC CLOUDS?
- 10:00 - 10:20 Sergio Dasso, Demoulin P., Gulisano A.M., Cremades H., Mandrini C.H., Schmieder B., Cid
C., Cerrato Y., Saiz E., Rodriguez L., Zhukov A.N., Aran A., Menvielle M. & Poedts S.
EXPANSION OF MAGNETIC CLOUDS FOR DIFFERENT SOLAR WIND CONDITIONS

10:20 - 11:20 - Coffe break & Poster viewing - GROUP 2 (II)

- 11:20 - 11:40 Paulett Liewer, E. M. De Jong, J. R. Hall, R. Howard, N. Sheeley, A. Thernisien & W. T.
Thompson
DETERMINATION OF CME 3D TRAJECTORIES FROM STEREOSCOPIC ANALYSIS OF
STEREO/SECCHI CORONAGRAPH AND HELIOSPHERIC IMAGER DATA

Session 1 (cont.) : Coronal Heating and the Acceleration of the Fast Solar Wind

Chair : Nicole Meyer-Vernet

- 11:40 – 12:10 Eugene N. Parker
KINETIC AND HYDRODYNAMIC REPRESENTATIONS OF CORONAL EXPANSION AND THE SOLAR WIND (Invited talk)
- 12:10 – 12:40 Joseph F. Lemaire
HALF A CENTURY OF KINETIC SOLAR WIND MODELS (Invited talk)

12:40 - 14:10 LUNCH at the Palais du Grand Large

Wednesday PM : Excursion at the “Mont Saint-Michel”



- 15:30** Departure from Palais du Grand Large
~21:00 Arrival Palais du Grand Large

Thursday 25 June - AM

Session 4 : Solar Wind through its Interaction Processes with Solar System Objects and Dust

Chair : Janet Luhmann

- 08:30 - 09:00 Xochitl Blanco-Cano
BOW SHOCKS IN THE SOLAR WIND: LESSONS TOWARDS UNDERSTANDING CORONAL AND INTERPLANETARY SHOCKS. (Invited talk).
- 09:00 - 09:20 George Gloeckler, L. Fisk, & J. Geiss
COMPOSITION OF THE INNER SOURCE MEASURED WITH THE SOLAR WIND ION COMPOSITION SPECTROMETER ON ULYSSES
- 09:20 - 09:50 Ingrid Mann
DUST IN THE INTERPLANETARY MEDIUM (Invited talk)
- 09:50 - 10:10 Christopher T. Russell, L.K. Jian, T.L. Zhang, A. Wennmacher, & J.G. Luhmann
INTERPLANETARY FIELD ENHANCEMENTS: OBSERVATIONS FROM 0.3 AU TO 1.0 AU

10:10 - 11:10 - Coffee break & Poster viewing - GROUP 2 (III)

- 11:10 - 11:30 Robert F. Wimmer-Schweingruber & P. Bochsler
ON THE ORIGIN OF INNER-SOURCE PICKUP IONS II
- 11:30 - 12:00 Anil Bhardwaj
X-RAY EMISSION FROM THE SOLAR SYSTEM BODIES: CONNECTION WITH SOLAR X-RAYS AND SOLAR WIND (Invited talk)
- 12:00 - 12:20 Ina P. Robertson, K. D. Kuntz, M. R. Collier, T. E. Cravens & S. L. Snowden
THE HELIOSPHERIC CONTRIBUTION TO THE SOFT X-RAY BACKGROUND EMISSION

12:20 - 14:00 LUNCH at the Palais du Grand Large

Thursday 25 June - PM

Session 5 : Energetic Particles and Frontiers of the Heliosphere

Chair : Gary Zank

- 14:00 - 14:30 Edward C. Stone
LARGE SCALE HELIOSPHERIC STRUCTURE AND THE VERY LOCAL INTERSTELLAR MEDIUM (invited talk)
- 14:30 - 14:50 David J. McComas
FIRST RESULTS FROM THE INTERSTELLAR BOUNDARY EXPLORER (IBEX) (Invited talk)
- 14:50 - 15:10 Vladimir B. Baranov
POSSIBLE EFFECTS OF MAGNETIC FIELDS ON STRONG DISCONTINUITIES AND WAVES IN THE HELIOSPHERIC INTERFACE
- 15:10 - 15:40 R. B. Decker
LOW-ENERGY CHARGED PARTICLES FROM THE TERMINATION SHOCK AND HELIOSHEATH (Invited talk)
- 15:40 - 16:00 Jacob Heerikhuisen & N. Pogorelov
MODELING NEUTRAL HYDROGEN IN THE HELIOSPHERIC INTERFACE

16:00 - 17:00 Coffee break & Poster viewing GROUP 2 (IV)

- 17:00 - 17:30 Joe Giacalone
THE STRUCTURE OF THE SOLAR-WIND TERMINATION SHOCK AND THE NATURE OF CHARGED-PARTICLE DISTRIBUTIONS IN ITS VICINITY (invited talk)
- 17:30 - 17:50 Nikolai A. Belov, M. S. Ruderman
THE STRUCTURE OF THE FLOW NEAR THE HELIOPAUSE STAGNATION POINT
- 17:50 - 18:10 J. R. (Randy) Jokipii & J. Kota
MAGNETIC FIELDS AND COSMIC-RAY TRANSPORT AT FLUID VELOCITY SHEAR

19:30 Cocktail at the Palais du Grand Large

20:30 Conference Dinner

Friday 26 June - AM

Session 5 (cont.) : Energetic Particles and Frontiers of the Heliosphere

Chair : Vlad Izmodenov

- 08:30 - 08:50 Eric Quémerais
VOYAGER UVS MEASUREMENTS IN THE OUTER HELIOSPHERE: OBSERVATIONS AND MODELS (Invited talk)
- 08:50 – 09:10 Richard A. Mewaldt, R.A. Leske, E.C. Stone, A.F. Barghouty, A.Y. Shih, A.W. Labrador, C.M.S. Cohen, A.C. Cummings, T.T. von Rosenvinge & M.E. Wiedenbeck
ENERGETIC NEUTRAL HYDROGEN ATOMS FROM A SOLAR FLARE: OBSERVATIONS AND INTERPRETATION
- 09:10 – 09:30 John Richardson, E. C. Stone, J. C. Kasper, J. W. Belcher & R. B. Decker
VOYAGER PLASMA OBSERVATIONS IN THE HELIOSHEATH
- 09:30 – 09:50 Nikolai V. Pogorelov, S. N. Borovikov, L. F. Burlaga, R. W. Ebert, J. Heerikhuisen, Q. Hu, D. J. McComas, S. T. Suess & G. P. Zank,
TRANSIENT PHENOMENA IN THE DISTANT SOLAR WIND AND IN THE HELIOSHEATH
- 09:50 – 10:10 Rosine Lallement, D. Koutroumpa, E. Quémerais, Jean-Loup Bertaux & S. Ferron
THE INTERSTELLAR HYDROGEN FLOW: UPDATED ANALYSIS OF SWAN DATA

10:10 - 10:30 - Coffee break

Session 6: Open session (including solar cycles studies)

Chair : Nat Gopalswamy

- 10:30 – 10:50 Roger C. Wiens and the GENESIS Team
RESULTS FROM THE GENESIS SOLAR WIND SAMPLE MISSION
- 10:50 – 11:10 Géza Erdos & André Balogh
LATITUDINAL OFFSET OF THE HELIOSPHERIC CURRENT SHEET: ULYSSES MAGNETIC OBSERVATIONS THROUGH TWO SOLAR CYCLES
- 11:10 – 11:30 Harjit.S. Ahluwalia & R.C. Ygbuhay
STATUS OF GALACTIC COSMIC RAY RECOVERY FROM SOLAR CYCLE 23 MODULATION
- 11:30 – 11:50 Mihir I. Desai, M. Al-Dayeh, F. Allegrini & G. M. Mason
SOLAR CYCLE VARIATIONS OF QUIET-TIME SUPRATHERMAL AND CME-SHOCK ACCELERATED IONS
- 11:50 – 12:10 Giuliana de Toma, S. Gibson, J. Burkepile, B. Emery & J. Kozyra
SOLAR CYCLE 23: AN UNUSUAL SOLAR MINIMUM?
- 12:10 – 12:30 Gareth D. Dorrian, A.R. Breen, I. Whittaker, M. Grande, J. A. Davies, A. P. Rouillard, Mario M. Bisi & R.A. Fallows
INTERACTING STRUCTURES IN THE SOLAR WIND: IPS AND STEREO HI OBSERVATIONS
- 12:30 – 12:50 Janeth.G. Luhmann, C.O. Lee, Yan Li, C.N. Arge, G. Petrie & E. Kilpua
SOLAR WIND SOURCE MAPPING THROUGH THREE SOLAR MINIMA
- 12:50 – 13:00 Milan Maksimovic : Closing Remarks, Next Solar Wind conference

13:00 End of the meeting