

Workshop on Partially Ionized Plasmas in Astrophysics
Tenerife, June 19-22, 2012

Scientific program

Tuesday June 19th

9:30 – 9:45 Registration (entrance of the conference hall)

9:45 – 10:00	Welcome/ Aims of the meeting	Khomenko
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Session 1: Equations and numerical methods (20 min talk, 10 min questions)

Chair: Khomenko

10:00 – 10:30	Overview of equations & assumptions	Khomenko
10:30 – 11:00	Two-fluid approach for partially ionized solar plasmas	Zaqarashvili

11:00 – 11:30 coffee break

11:30 – 12:00	Collisional frequencies, pressure tensor and plasma drifts	Diaz
12:00 – 12:30	Instabilities and stochastic heating in inhomogeneous solar plasma	Vranjes
12:30 – 13:00	<i>General discussion</i>	

13:00 – 15:30 lunch break

15:30 – 16:00	Numerical schemes for multifluid magnetohydrodynamics	Falle
16:00 – 16:30	Radiative transfer in multi-fluid and MHD simulations	Vitas
16:30 – 17:00	Non-equilibrium hydrogen ionization in the solar atmosphere	Leenaarts

17:00 – 17:30 coffee break

17:30 –	<i>General discussion</i>	
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20:00 Welcome cocktail at Hotel Vallemar

Wednesday June 20th

Session 2: Formation of stable structures and instabilities (20 min talk, 10 min questions)

Chair: Arber

9:00 – 9:30	Pederson resistivity in the chromosphere	Arber
9:30 – 10:00	Rayleigh – Taylor instability in prominences	Diaz
10:00 – 10:30	Neutral atom diffusion in a partially ionized prominence plasma	Gilbert
10:30 – 11:00	The Kelvin-Helmholtz instability in weakly ionized flows	Downes

11:00 – 11:30 coffee break

11:30 – 12:00	Thermal instability in fully and partially ionized prominence plasma	Ballester
12:00 – 12:30	Downflowing dynamics of vertical prominence threads	Oliver
12:30 – 13:00	<i>General discussion</i>	

13:00 – 15:30 lunch break

Session 3: Non-solar astrophysical plasmas (20 min talk, 10 min questions)

Chair: Downes

15:30 – 16:00	Multifluid MHD turbulence in molecular clouds	Downes
16:00 – 16:30	Numerical Simulations of the Wardle Instability	Falle
16:30 – 17:00	Magnetospheres of "Hot Jupiters"	Khodachenko

17:00 – 17:30 coffee break

17:30 – 18:00	Coupling solar simulations with space weather: code comparison within SWIFF consortium	Olshevsky
18:00 –	<i>General discussion</i>	

Thursday June 21st

Session 4: Waves (20 min talk, 10 min questions)

Chair: Ballester

9:30 – 10:00	Cut-off wavenumber in single-fluid MHD	Ballester
10:00 – 10:30	Damping of MHD waves in partially ionized plasmas	Khodachenko
10:30 – 11:00	Resonant damping of prominence thread oscillations: effect of partial ionization	Soler

11:00 – 11:30 coffee break

11:30 – 12:00	Damping of Alfvén waves in solar partially ionized plasmas: effect of neutral helium in a multi-fluid approach	Zaqarashvili
12:00 – 12:30	Ionisation diagnostics of solar magnetic structures	Verth
12:30 – 13:00	<i>General discussion</i>	

13:00 – 15:30 lunch break

Session 5: Numerical simulations (20 min talk, 10 min questions)

Chair: Cameron

15:30 – 16:00	Magnetohydrodynamics of the Partially-Ionized Solar Atmosphere	Cameron
16:00 – 16:30	Chromospheric heating by ambipolar diffusion	Khomenko
16:30 – 17:00	Numerical simulations including ambipolar diffusion	Martinez-Sykora

17:00 – 17:30 coffee break

17:30 – 18:00	Non-equilibrium calcium ionisation in the solar atmosphere	Wedemeyer-Bohm
18:00 – 18:30	Alfvén waves, spicules and the partially ionized chromosphere	De Pontieu
18:30 –	<i>General discussion</i>	

21:00 Conference dinner

Friday June 22nd

Session 6: Solar phenomena (20 min talk, 10 min questions)

Chair: Khodachenko

9:30 – 10:00	Modeling the solar chromosphere	Hansteen
10:00 – 10:30	Ion-neutral damping spicule formation and Ellerman bombs	Erdelyi
10:30 – 11:00	Behavior of neutral and ionized iron in sunspots	Collados

11:00 – 11:30 coffee break

11:30 –	<i>Overall discussion, future prospects</i>	
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Final remarks

Saturday June 23rd

Excursion/ hike