

**1th ISSI team meeting in combination with Europlanet NA1/NA2 activities
International Space Science Institute, ISSI Bern, Switzerland
19. - 21. March 2012**

**Characterizing stellar and exoplanetary environments via
observations and advanced modelling techniques**

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The 1th ISSI team meeting related to the topic on “Characterizing stellar and exoplanetary environments via observations and advanced modelling techniques” is organized together with Europlanet Networking Activity (NA1/NA2) “Observational Infrastructure Networking” activity and will last 2.5 - 3 days during March 19 – March 21, 2012. There will be an open end during Wednesday afternoon. The meeting takes place at ISSI in Bern and will focus on detailed discussions related to missions/projects, observations, data interpretation and advanced modelling tools. Participants will have 30 min (20 min + 10 min discussion) presentations related to the before mentioned topics. These informal presentations will be used as a basis for further discussions, cooperations, planning of proposals related to observations, and ideas for common publications.

1th day: Monday 19. 03. 2012

9:15 - 9:30: **ISSI representative - ISSI, Bern, Switzerland:** ISSI activities, goals of ISSI teams and **H. Lammer - IWF, AAS, Graz, Austria:** Introduction of the ISSI team

9:30 - 10:00: **M. Fridlund - ESA, ESTEC, The Netherlands:** What kind of data from exoplanet missions (ESA, NASA, JAXA) Acan we expect in the near future CoRoT, Kepler, PLATO/EcHO, etc.

10:00 – 10:30: **D. Bisikalo – INASAN, RAS, Moscow, Russia:** Beyond UV observations beyond HST – The Stellar and Exoplanet Program of the World Space Observatory-UV

10:30 – 11:00: **I. Ribas - ICE, CSIC, Barcelona, Spain** – planet detection efforts around M stars and new results on the historical irradiance of solar proxies in UV and ongoing efforts to extend UV studies to low-mass stars

11:00 – 11:30 Coffee break

11:30 – 12:00: **M. Güdel - IfA, Univ. Vienna, Austria** – Stellar radiation environments

12:30 – 13:00: **B. Wood – Naval Res. Lab, Space Div., Washington D.C., USA -** Observations of astrospheres and solar-like stellar winds

Lunch break: 13:00 – 14:00

14:00 – 14:30: **E. Günther** – *Tautenburg Obs., Germany* - WASP-33b: a close in gas giant around an A star

14:30 – 15:00: **J. Linsky** - *Univ. Colorado, Boulder, USA* - New results on the UV radiation environment of exoplanets

15:00 – 15:30: **L. Fossati** – *Open Univ., Milton Keynes, UK* - HST UV observations of WASP-12b (heavy elements), and similar planets

15:30 – 16:00 Coffee break

16:00 - 16:30: **M. Jardine** - *Univ. St. Andrews, UK*- The magnetic structure and dynamics of stellar coronae

16:30 – 17:00: **D. Bisikalo** – *INASAN, RAS, Moscow, Russia* - Advanced MHD model applications to study star-exoplanet interaction: From binary stars to hot Jupiters

17:00 ISSI invites the team members to a welcome drink

2th day: Tuesday: 20. 03. 2012

09:30 - 10:00: **I. Müller Wodarg** - *Imperial Col. London, UK* - Modeling of space weather a synergy between Saturn and exoplanets

10:00 - 10:30: **J. Chadney** - *Imperial Col. London, UK* - Gas-giant ionospheres under solar and stellar radiation

10:30 - 11:00: **L. Benjaffel** – *IAP, Paris, France* – Neutral hydrogen observations around the upper atmosphere of HD 209458b

11:00 – 11:30 Coffe break

11:00 - 11:30: **T. Koskinen**- *LPL, Arizona, USA* – Characterizing the thermosphere of HD 209458b via UV observations

11:30 - 12:00: **V. I. Shematovich** - *INASAN, RAS, Moscow, Russia* - Suprathermal hydrogen produced by the dissociation of molecular hydrogen in the extended atmosphere of exoplanet HD 209458b

12:30 – 13:00: **M. Holmström**, H. Lammer, K. G. Kislyakova – *IRF, Kiruna, Sweden* – Broadening and Energetic Neutral Atom (ENA) production around Solar System planets (Earth, Venus, Mars, comets) and exoplanets

Lunch break: 13:00 – 14:30

14:30 – 15:00: **A. Vidotto** – *Univ. St. Andrews, UK* - The WASP-12b observed early ingress in the near ultraviolet: An indication for a possible magnetic obstacle?

15:00 – 15:30: **T. Lüftinger** - *IfA, Univ. Vienna, Austria* – Deriving magnetic field configurations of stars and studying their influence on surrounding planets.

15:30 – 16:00: **Igor Alexeev** – *Moscow State Univ., Moscow, Russia* – Magnetosphere environments: From Jupiter to “Hot Jupiters”

16:00 – 16:30 Coffe break

16:30 – 17:00 **J.-M. Grießmeier** - *CNRS, Orleans, France* – Exo-magnetosphere hypothesis I: Weak magnetic moments due to tidal locking

17:00 – 17:30: **A. Reiners** – *Univ. Göttingen, Germany* – Exo-magnetosphere hypothesis II: Energy flux determines magnetic field strength of exoplanets and stars

17:30 - 18:00 open end: General Discussions

18:30 End of the second day

3th day: Wednesday: 21. 03. 2012

9:30 - 10:00: **M. L. Khodachenko**, I. Alexeev, E. Belenkaya - *IWF, AAS, Graz, Austria* - The importance of magnetodisks for shaping of magnetospheric obstacles of “Hot Jupiters”

10:00 – 10:30: **E. Belenkaya**, I. Alexeev, M. L. Khodachenko - *Moscow State Univ., Moscow, Russia* – Plasma interaction and magnetic obstacle formation: Parabola- and Alfvén wing-types (Jupiter, Ganymede, etc.)

10:30 – 11:00: **H. Lammer**, K. G. Kislyakova, M. Holmström - *IWF, AAS, Graz, Austria* – Terrestrial exoplanet atmospheres: Synergies from „Hot Jupiter“ environment observations and studies

11:00 – 11:30 Coffe break

11:30 – 12:30: Discussions on a planned Springer book which focuses on the latest stage of knowledge related to “Characterizing stellar and exoplanetary environments”

Lunch break: 12:30 – 14:00

14:00 – to open end: Splinters and discussions related to the possibility of planned common proposals for observations which will enhance our understanding on the stellar-exoplanet environment characterization.

The afternoon is reserved for general discussions, cooperation plans, publication discussions, and the possibility to propose a common observation (e.g., HST...) related to the ISSI-team aims.

Those of you who have plains, trains, or depart during the afternoon of March 21 will be informed on the outcomes of the discussions, suggestions soon after the meeting.