

Program of the 779. WE-Heraeus-Seminar "From the Heliosphere to Astrospheres - Lessons for Exoplanets and their Habitability" (16-20 January, 2023)

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|-------|--|--|---|--|---|
| 09:00 | Welcome <hr/> A. Papaioannou Solar realtions (online) | K. Scherer - Habitable astrospheres | H. Rauer - The PLATO Mission | L. Noack - Interior heating and outgassing of rocky exoplanets | K. Herbst- Modeling the impact of CRs on (exo)planetary atmospheres |
| 09:15 | | | | | |
| 09:45 | S. Berdyugina - Exoplanet Surface Structures | T. Lüftinger - Stellar winds | F. Pepe - Observing Exoplanets with ESPRESSO | E. Ilin - Magnetic star-planet interactions | M. Sinnhuber - The impact of stellar energetic particles on the composition of planetary atmospheres |
| 10:15 | Coffee | | | | |
| 10:45 | A. Valio - Stellar activity: correlation between starspots and super flares | K. Dialynas- The global heliosphere: in-situ ions from the Voyagers and remotely sensed ENAs from Cassini | Dominique Meyer 3D MHD astrospheres <hr/> J. Dörner CRPropa 3.2 | J. Hoeijmakers - High resolution spectroscopy of ultra-hot gas giant exoplanets | J. L. Grenfell - Effects of High Energy Particles on Atmospheric Chemistry in the Solar System and Beyond |
| 11:15 | B. Morris - Rel. stellar age / Spot coverage (online) | J. Linsky- New Results concerning the Local Interstellar Medium: Inhomogeneity, Interactions with Helio/Astrospheres, and Pressure Balance | N. Ilic Tidal star-planet interaction in planet-hosting wide binaries <hr/> Y. Xu Simulations of Stellar CMEs and their responses in synthetic spectra | K. Poppenhäger - The young planets in the V1298 Tau system and their atmospheres | P. Rimmer - Timing is Everything: Kinetics of UV-Driven Prebiotic Chemistry |
| 11:45 | J. Chebly Quantification of the environment of cool stars using numerical simulations | Dominik Bomans Observations of astrospheres from O to M stars | Flash Presentations (10 Poster) | | Summary |
| 12:00 | Discussion | | | | |
| 12:30 | Lunch | | | | |
| 14:00 | M. Günther - Habitable(?) Worlds and Stellar Flares | E. Engelbrecht (K. Scherer) On the Three-Dimensional Transport of Galactic Cosmic Rays in Astrospheres | Guided Tour at Schloss Drachenburg | V. Dobos - Moons of exoplanets: formation, orbital stability and habitability | |
| 14:45 | M. Jin - Global MHD Modeling of Solar Coronal Mass Ejections and Application to Solar Analogs | D. Rodgers-Lee- The energetic particle environment of Sun-like and M dwarf stars | | Harish Vedantham Planetary magnetic fields | |
| 15:15 | F. Effenberger - Modelling Stellar Energetic Particle Environments of Planets in Habitable Zones based on Stellar Activity | V. Sterken - Synergies between dust and heliospheric/astrospheric science | | J. Saur - Brown dwarfs as ideal candidates for detecting UV aurora outside the Solar System: | |
| 15:45 | J. Hu - Stellar CME-Driven Energetic Particles Events from Young Solar-like Stars | L. Baalman - Synthetic astrosphere observations: the intricate role of interstellar dust | | E. Samara (online) Which Terrestrial Exoplanets Deserve More Scrutiny for Atmosphere Viability? | |
| 16:15 | Coffee | | | | End |
| 16:45 | J. Alvarado-Gomez - Coronal Mass Ejections in Magnetically Active Stars | K. Heng - The CHEOPS Mission: Selected Highlights of Scientific Results | | F. Rünger Exomoon-induced radial velocity signatures in spectra of exoplanetary atmospheres <hr/> G. Rocetti Potential long-term presence of liquid water on the surface of exomoons orbiting free-floating planets | |
| 17:15 | Discussion | | | | |
| 18:15 | Dinner | | Dinner | Dinner | |
| 19:30 | Evening Lecture T. Spohn On the Geophysics of (Exo)Planets | Heraeus Dinner | Informal get-together (open end) | Postersession | |

Poster Presentations

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| E. Amazo-Gomez | The environment of faculae- versus spot-dominated stars |
| A. Bartenschlager | Investigation of the Influence of Stellar Particle Events and Galactic Cosmic Rays on the Atmosphere of TRAPPIST-1e |
| Y. Dumin | The Faint Young Sun Paradox and the Anthropic Principle in the Context of Dark-Energy-Dominated Cosmology |
| F. Elekes | The space environment and magnetospheric Poynting fluxes around Tau Boötis b |
| J. Lirawi | Climates of short-period tidally locked exoplanets |
| A. J. Poser (presented by J.-M. Wissing) | The role of clouds in the radius evolution of hot Jupiters |
| T. Schumann | SPP 1992 - Exploring the Diversity of Extrasolar Planets |
| K. Weis | Structure around LBV: astrospheres or more? |
| J.-M. Wissing | Determination of rare SPE spectra with application to Earth and the extrasolar gas giant HD209458b |
| J. Wokittel | Exploration of best-practice telluric correction methods to optimize ground-based exoplanet spectroscopy for the detection of biosignatures |

Participants highlighted in **blue** are (PhD) students. We have six of them giving a contributed talk and four with a poster. As voted by all participants of the Seminar, at the end of the conference we will award the best student talk and the best student poster.