

Date: Mon, 11 Apr, 2022, 7:40 pm

Subject: Newsletter - IAU Commission E4 "Impact of Magnetic Activity on Solar and Stellar Environments"

Dear all,

Welcome to the new IAU Commission E4 "Impact of Magnetic Activity on Solar and Stellar Environments". This is the first one of our new quarterly Newsletters.

Commission website

We have a new website for our Commission. This website is external to IAU and you can find it from:

<http://www.cessi.in/IAUE4/>

On this website we will collect information that is of interest to our members, including recent papers and conference announcements.

Commission E4 Talks

We are very happy to announce that we are starting regular virtual talks on topics that are of interest to our members. The first talk in this series will be given by Prof. Katja Poppenhaeger on **April 20 at 14:00 UT** (10:00 EST / 16:00 CEST / 22:00 China).

Speaker: Prof. Katja Poppenhaeger

Title: Magnetic activity as the landscaping force in stellar and exoplanetary systems

Abstract: The spectrum of magnetic activity phenomena - such as spots, flares, coronal emission, and winds - can be observed for our Sun in great detail, while the corresponding observations of stars trade off spatial resolution for a much larger parameter space. There has been a lot of progress as well as new puzzling insights into several areas of magnetic activity and the way it interacts with the stellar surroundings lately. I will give an overview of the wide range of possible connections between solar/stellar magnetism, space weather and exoplanets. Then I will discuss some recent or in-progress highlights in the areas of stellar spin-down, starspot locations on the stellar surface, stellar magnetism in connection to star-planet interactions, and coronal emission line physics and its impact on exoplanet atmospheres.

Zoom information for the talk:

<https://us02web.zoom.us/j/>

Meeting ID: 875 8812 4253

Passcode: 144091

For the future talks we invite suggestions for speakers from our members, especially suggestions for more junior speakers would be very welcome. The suggestions can be sent to Rim Fares and Emre Isik (rim.fares@uaeu.ac.ae and emre.isik@tau.edu.tr).

Future conferences

Finally, we want to draw your attention to some meetings that are of interest to our members:

IAU General Assembly (August 2-11, Busan, South Korea):
Symposium 370 "Winds of Stars and Exoplanets"

Symposium 372 "The Era of Multi Messenger Solar Physics"
Focus Meeting 5 "Beyond the Goldilocks Zone: the Effect of Stellar Magnetic Activity on Exoplanet Habitability"
Division E Days
Division F Days
Division G Days

Cool Stars 21 (July 4-9, Toulouse, France)
Including the splinter sessions:
Solar and stellar coronal mass ejections
Manifestations of star-planet interactions
Towards a better understanding of cool star magnetised winds and mass-loss rates

COSPAR 2022 (July 16-24, Athens, Greece)
Including the following sessions:
Solar and Stellar Magnetic Flux Ropes
Connecting solar and stellar coronal mass ejections: lessons learned, challenges and perspectives

We will send these newsletters quarterly from now on. If you have any announcements you would like to make, for example on conferences, please contact the commission president (heidi.korhonen@eso.org)

All the best,

Heidi Korhonen, on behalf of the E4 Organising Committee