

## Sun, Space Weather, and Solar-Stellar Connection



Contribution ID: 84

Type: **Invited talk**

# Star-Planet Interactions: From Solar System Planets to Exoplanets

*Friday, January 24, 2025 11:40 AM (20 minutes)*

Magnetized plasma winds and storms from host stars such as the Sun shape (exo)planetary magnetospheres and influence atmospheric mass loss. In the solar system, solar magnetic transients also force planetary environments creating adverse space weather. Magnetohydrodynamic modelling of star-planet interactions provide a physics-based window to explore these phenomena that have profound implications for protection of space-based technologies and (exo)planetary habitability. In this talk, I shall discuss the fascinating science underlying star-planet interactions –focussing on our research on the interplay of magnetized stellar winds and (exo)planets with and without magnetospheres.

## Contribution Type

### Theme

Connecting Solar Corona to Heliosphere

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**Session Classification:** Extreme Events