

Title:

A Study of Exoplanets Magnetosphere Interactions with Stellar Winds using MHD Simulations

Abstract:

Numerous numerical studies have been carried out in recent years that simulate different aspects of Star-Planet Interactions. These studies focus mostly on hot Jupiters with sun-like stars. However, more realistic simulations require the inclusion of a wide range of stellar types in the study of stellar-planetary interactions. In this study, I use MHD simulations to model star-planet interactions assuming different stellar types and two types of exoplanets: hot Jupiters, and Earth-like. In this talk I will present some results of structures and dynamics of the magnetospheres of these kinds of systems.