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"Exo-space weather: the interaction between exoplanets and their host star environments"

Stellar activity can reveal itself in the form of radiation (eg, enhanced X-ray coronal emission, flares) and particles (eg, winds, coronal mass ejections). Together, these phenomena shape the space weather around (exo)planets. Because most of the known exoplanets have significantly closer orbital distances than solar system planets, they are often embedded in much harsher particle and radiation environments, leading to stronger interactions between the exoplanet and its surrounding environment. In this talk I will discuss how these strong interactions can generate observable signatures, from radio emission from exoplanets and planet-hosting stars, to UV spectroscopic transits. Together with modelling tools, these observations provide other avenues for characterising exoplanetary systems, which would otherwise remain unknown.