

The effect of stellar ages and activity on the habitable zone and habitability of planets

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Host star has a crucial influence on the habitable zone and the habitability of a planet itself. Within our solar system, the evolution of the Sun over time has greatly affected the surface and atmospheric properties of rocky planets. A significant number of the host stars of exoplanets, particularly low-mass stars, are also active compared to the Sun. Determining accurate stellar ages and activity of host stars is critical in evaluating potential habitability of terrestrial exoplanets, and corresponding atmospheric characterization. In this talk, I will briefly review the current status of star-planet interaction and the effect on habitability, highlighting the needed measurements that could significantly help in advancing the search for habitable worlds.

Primary author: KOPPARAPU, Ravi (NASA Goddard)

Presenter: KOPPARAPU, Ravi (NASA Goddard)

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