

## An Improved Age-Activity Relationship for Cool Stars older than a Gigayear

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Magnetic activity is crucial to the understanding of the potential habitability of exoplanets; the strong radiation emitted by a star can cause atmospheric mass loss from the exoplanet. Therefore, it is important to understand magnetic activity and its evolution with time. For solar and late-type stars it is known that they spin down over time due to magnetic braking, which has led to many studies concerning the evolution of stellar rotation and stellar activity with age. The majority of these studies construct a relationship that is only reliable for ages younger than a gigayear due to the difficulty of determining ages for older stars. However, it is now possible to study ages for a larger sample of stars through asteroseismology; opening up the possibility of stellar age investigations for stars older than a gigayear. In this presentation I will present a new and improved age-activity relationship and discuss the possible explanations for the change we see in the relationship.

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