

## The Solar Twin Planet Search: The age - chromospheric activity relation

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It is well known that the magnetic activity of solar type stars decreases with age, but it is widely debated in the literature whether there is a smooth decline or if there is an early sharp drop until 1-2 Gyr followed by a relatively inactive and constant phase. We revisited the activity-age (AC) relation through Mount Wilson (MW) Ca II H & K activity indices. We measure the activity indices using HARPS time-series observations of 79 solar twins with precise isochronal ages and physical parameters. New relations between activity and age of solar twins were derived assessing the chromospheric age-dating limits using MW metric. The Ca II H & K AC relation of solar twins evolves until 6 Gyr, in agreement with previous findings using open clusters. This confirms that Ca II H & K lines remain an interesting clock also for stars slightly older than the Sun. We are extending this analysis exploring the flux-flux and AC relations using other optical chromospheric sensitive lines.

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