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Testing models for stellar angular momentum evolution with K2 observations of Praesepe and the Hyades

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The oldest open clusters within 250 pc of the Sun, the Hyades and Praesepe, are important benchmarks for calibrating stellar properties such as rotation and magnetic activity. As they have the same age and roughly solar metallicity, these clusters serve as an ideal benchmark for stellar properties at ~600 Myr. We present rotation periods measured with the repurposed Kepler mission, K2, for 48 Hyads and 677 Praesepe members, including the first periods measured for fully convective Hyads. These data have enabled new tests of models describing the evolution of stellar rotation; discrepancies with these models imply that we still do not fully understand how magnetic fields affect stellar spin-down.

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