

Setting Stellar Chronometers: The PTF(+) Open Cluster Survey

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While we have known for 40 years of the existence of a relation between a solar-mass star's age, rotation, and magnetic activity, observational limitations have hampered the assembly of uniform samples of rotation and activity measurements for stars spanning a wide range of ages and masses. We are still far from being able to describe fully the evolution of either rotation or activity for stars of a given mass, or from being able to use rotation or activity measurements to estimate accurately the ages of isolated field stars. I will describe results from our efforts to assemble a complete sample of rotation and activity measurements for low-mass stars in six open clusters ranging in age from 35 Myr to 2.5 Gyr. Testing our data against theory will allow us to develop a better understanding of the age-rotation-activity relation for these stars from their arrival on the zero-age main sequence to when they are a significant fraction of the age of the Sun.

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