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Resolving Orbits of Low Mass Companions in the Hyades Cluster

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Published on: Jun 29, 2022 URL: <u>https://baas.aas.org/pub/2022n6i305p07</u> License: <u>Creative Commons Attribution 4.0 International License (CC-BY 4.0)</u> We are resolving the orbits of spectroscopic binary stars in the Hyades Cluster using the CHARA Array. We obtained positions and flux ratios in the H-band using the MIRC-X combiner and the K-band using the recently commissioned MYSTIC combiner. We present preliminary orbital fits and mass estimates for four binary systems (HD 27691, HD 28033, HD 28294, and HD 28394). The sample consists of binaries where the primary stars have F-G spectral types and the companions are low mass stars with masses in the range of 0.3-0.9 M_{sun} . The results will be used to test evolutionary models for low mass stars. The large mass difference between the components will provide leverage for testing the isochrones and refining the age of the Hyades cluster.