

The formation and long-term evolution of circumbinary planetary systems across the H-R diagram

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An overview of circumbinary population with Kepler & TESS

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It has been almost 15 years since the breakthrough discovery of Kepler-16, which was the first unambiguous detection of a planet orbiting both stars in a binary system with main sequence stars. Thanks largely to the Kepler and TESS missions, around 20 such circumbinary planets have already been detected and some trends seem to have emerged. Unraveling the characteristics of these circumbinary planets is of fundamental value in astronomy as this new class of planets allows us to probe questions regarding the formation, migration, evolution and habitability of planetary systems in a larger context. In this contribution I will review how these circumbinary planets are detected and characterized, highlight a few recent discoveries, and discuss some emerging observational trends in this small but growing sample.

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