dwarfs entering or leaving eclipse can also be used to probe the atmospheres of their companions.

- Lensing by white dwarfs will provide unique opportunities to probe the surface of the stars they orbit.

- Although we cannot yet predict the orbital or mass distributions of planets, binary evolution allows us to predict general characteristics of the orbital and mass distribution of white dwarfs in close ($a <$ a few AU) binaries. A set of more detailed calculations is needed, to generate individual binaries for each set of simulations, and to compute the mass transfer history, the time at which mass transfer ended, the radius of the white dwarf, the light curves, and the characteristics of the monitored star (rotation, metalicity) that may have been influenced by accretion.

- By discovering orbiting white dwarfs with lower mass than expected for their measured orbital periods, *Kepler* can establish the contribution of three-body interactions to the formation of blue stragglers.

- Once a large ensemble of *Kepler* events exists, we will be able to compare their properties with those predicted by the theoretical work, and learn about a wide variety of outstanding issues, such as the fraction of matter retained during stable mass transfer to a main sequence star and the efficiency of common envelope ejection in a variety of situations.

- Many of the mass transfer products in which a white dwarf orbits a main-sequence star will experience future epochs of mass transfer onto the white dwarf. Some of these white dwarfs are destined to become Type Ia supernovae. Significant uncertainties in our understanding of the progenitors (Di Stefano 2010; Di Stefano & Nelson 1996) will be addressed by the *Kepler* results. The same is true for other outcomes, such as accretion-induced collapse. The *Kepler* data on the endpoints of the evolution of the primaries will provide, for the first time, a large number of reliable starting points for us to compute the next phase of evolution in close white-dwarf binaries.

Implications: *Kepler* was developed as a mission to discover planets. We find that, in addition, it will be a unique resource to study white dwarfs and mass transfer. The results will touch on stellar evolution, binary evolution, and the formation of intriguing systems, such as the progenitors of Type Ia supernovae and accretion-induced collapse.

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