

Astronomy Seminar Spring

February 15, 2017

Population of X-ray binaries in globular clusters

X-ray binaries (XRBs) are systems containing a compact object (white dwarf, neutron star or black hole) accreting from a companion star. These binaries are orders of magnitude more abundant in globular clusters than the rest of our Galaxy. This over-abundance is caused by the high stellar density in globular clusters, which leads to the formation of XRBs through dynamical encounters. The population of XRBs in globular clusters shows additional dependences on GC properties such as mass, density, and metallicity, which can illuminate details of XRB formation and destruction processes. In my talk, I will discuss the relation between formation of X-ray binaries and properties of globular clusters.