X-ray emission around White Dwarfs. as signature of sub-stellar companions

Sandino Estrada-Dorado

Resumen

Hard X-ray emission from white dwarfs (WD) is generated by the presence of a stellar companion either by their coronal emission or by an accretion disk formed by the material stripped from the companion. Recent studies have proven that Jupiter-like planets can be the donors of material to create an accretion disk and generate hard X-ray emission. Under this light, here we discuss our X-ray XMM-Newton observations of the accreting WD G29-38. In addition, we present radiation-hydrodynamic simulations produced with the GUACHO code to study the WD+planet scenario. Synthetic X-ray observations are produced with the help of the CHIANTI database and are compared directly with observations.