

On the Rapid Spin-down and Low Luminosity Accretion in AE Aqr

Chul-Sung Choi (KAO), Insu Yi (KIAS)

AE Aqr is an unusual close binary system with a large spin-down rate, a relatively low quiescent luminosity, and clear pulse signals. We consider an unconventional picture of AE Aqr in which an accreting white dwarf is rapidly spun-down via gravitational radiation emission and the accretion proceeds at high altitudes while bulk of inflowing material is ejected in a propeller-like manner. We discuss spread of the accreted material on the magnetic poles in the presence of a strong magnetic field. Implications on emission spectra and time variabilities are also discussed.