

Timing analysis of AE Aquarii X-ray observations

Tuesday, 11 October 2016 15:15 (30)

AE Aquarii has been known as one of the most enigmatic magnetic Cataclysmic Variables on various aspects, including large optical flares and flickering large radio flares, TeV gamma-ray emissions and X-ray emission. AE Aquarii is a close binary system composed of a magnetized white dwarf and a Roche-lobe filling K3IV red dwarf. A white dwarf has a very short rotational period about 33.08 s. We have made independence timing analysis of archival AE Aquarii X-ray observation, obtained using orbital observatories «XMM-Newton» and «Chandra» in 2001 and 2005 respectively. We compared our results with published data. Period searching with different numerical methods confirmed the presence of 33-s regular X-ray pulsations. Also we confirmed that pulsations with a period of 16.5 s, visible in optical and UV ranges, absents in the X-ray part of AE Aquarii spectrum. It can mean that an X-ray emission comes from the one pole of white dwarf surface.

Primary author(s) : Ms. RYSPAeva, Elizaveta (Saint Petersburg State University)

Presenter(s) : Ms. RYSPAeva, Elizaveta (Saint Petersburg State University)

Session Classification : Poster session - II

Track Classification : Cosmic rays