

Finding a Precessional Disk around the Obscured Supergiant X-ray Binary IGR J16318-4848

Thursday, 25 April 2013 17:30 (5 minutes)

We present the results of the long-term near infrared (NIR) photometric observations on IGR J16318-4848. Two period of 26.7 days and 79.7 days are found in the Swift/BAT light curve. A similar 80-day period is found from the *JHK* light curve of IGR J16318. The 26.7-day period is interpreted as the orbital period of the system and the neutron star moves in the dense circumstellar disk of the supergiant star. The same 80-day period found both in the Swift/BAT and the *JHK* light curves might be due to the precession of the circumstellar disk, which caused by the tidal motion of the neutron star.

Primary author: Dr YAN, Jingzhi (Purple Mountain Obs.)

Presenter: Dr YAN, Jingzhi (Purple Mountain Obs.)