

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 1461

Konkoly Observatory
Budapest
1978 August 21

ABOUT DISCOVERY OF THE 22.4 -HR PERIODICITY IN THE
VARIATIONS OF H α RADIAL VELOCITIES OF X PERSEI,
THE OPTICAL COUNTERPART OF THE X-RAY SOURCE 3U 0352+30

Radial velocity measurements of V and R components of H α emission in the spectrum of X Persei, a peculiar BOe star have been carried out to search for a periodicity analogous to the existing 22 hr X-ray variations of 3U 0352+30.

Two kinds of periodicity have been discovered. One of them is with a period 22.4 hr (amplitude K=15-17 km/sec) analogous to 22.4 hr periodicity of the X-ray variations of the source 3U 0352+30. Another is with a 581-day one (amplitude K=35 km/sec) (see Hutchings et al. 1974, *Astrophys.J.*, 191, L101).

Fig.1 shows the phase dependences of H α radial velocities (upper curve) and of V/R intensity ratio (lower curve), the 22.4 hr value has been adopted for the period.

All these led us to the evident conclusion on the association of X Persei with the X-ray source 3U 0352+30.

The X Per/3U 0352+30 system may be considered as a triple system: a neutron star moving around a BOe primary with a period of 22.4 hr, and this double system moving around a far third companion with a period 581 days.

All the details on the spectral observation of the system X Per/3U 0352+30 being carried out during the period November 1974 - March 1978 would be published in the Vol.61 of *Izv.Crim. Obs.*

T.S. GALKINA
Crimean Astrophysical
Observatory
p/o Nauchny, Crimea, 334413, USSR

