

TATA INSTITUTE OF FUNDAMENTAL RESEARCH
DEPARTMENT OF ASTRONOMY & ASTROPHYSICS

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Title : The peculiar X-ray binary Cygnus X-3

Day, Date & Time : Tuesday, 22 September, 2009 at 16.00 hrs

Venue : Lecture Theatre (AG-66)

Abstract

Cyg X-3 is a peculiar system, the only known X-ray binary in the Galaxy with a Wolf-Rayet companion. Its X-ray spectra are unusual, showing a high energy cutoff in the hard state at a much lower energy than that in other X-ray binaries. Its variability is also atypical, with no power above about 1 Hz. Both facts can be explained by the effect of a Thomson-thick cloud surrounding the X-ray source. We determine the optical depth and the size of the cloud, and propose its origin.