

ASTROPHYSICS SEMINAR

Wednesday, 18 January 2012 at 14:00

Modeling and observations of flows interaction in binary systems

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Abstract. My talk deals with the accretion processes in binary systems. It consists of three parts. The first one is devoted to the Classical Nova explosions. On the example of the system CI Cam it is shown that standard X-ray emission (3-10 keV) is a very useful energy band for detail study of this phenomenon immediately (in hours) after explosion and can be used for systematical discovery of such systems by X-ray surveys. The second part of the talk is devoted to the problem of interaction between an accretion disk and a stream of matter from the inner Lagrangian point in binary systems. We argue that detail analysis of this process can be used as one new tool to measure the viscosity parameter in the accretion disk. The value of this parameter is still debatable as theoretical estimations of this parameter (≤ 0.02) are several orders of magnitude lower than estimations from observations (0.1-0.4). In the third part I will discuss problem of an unexpected break in low frequency region $f_{\text{break}}/f_{\text{orb}} \sim 0.2-2$ in power density spectra (PDS) of X-ray flux variations of several persistent LMXB.

Additional Information

The seminars are given in the ISDC "Pavillon" building
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