
The hypersoft state of Cyg X-3: A key to jet quenching in X-ray binaries?

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Abstract

Cyg X-3 is a unique microquasar in the Galaxy hosting a Wolf-Rayet companion orbiting a compact object that most likely is a low-mass black hole. The unique source properties are likely due to the interaction of the compact object with the heavy stellar wind of the companion. In this presentation I will concentrate on a very specific period of time in the evolution of the binary prior to the massive outbursts observed from the source. During this period Cyg X-3 is in a so-called hypersoft state, where the radio and hard X-ray fluxes are found to be at their lowest values (or non-detected), the soft X-ray flux is at its highest values, and sporadic gamma-ray emission is attributed to the onsets and ends of this period. I will present the recent results obtained by a multiwavelength campaign during the hypersoft state including Swift and NuSTAR pointing observations in the X-rays and broadband radio monitoring by SMA, AMI-LA and RATAN-600. Motivated by the observational results, I will discuss a scenario where the jet production gets completely turned off, and show that a similar sequence of events might take place in the accretion wind source GRO J1655-40.

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