
Accretion Disc Winds in X-ray Binaries: theory, simulations, and observational tests

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Abstract

We review the current status of physical modeling of X-ray spectral signatures of disc winds in X-ray binaries.

I discuss the main physical processes that could launch and accelerate winds and the processes that control the wind geometry and time-variability.

Finally, I review insights from time-dependent multi-dimensional numerical simulations of the winds and show a few examples of how these winds can account for the observed properties of X-ray binaries.

Keywords: accretion discs, mass outflows, hydrodynamics, MHD, photoionization, radiative transfer

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