

Ultraluminous X-ray sources as super-Eddington accretion disks

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Abstract

Copyright © 2018 by the Editors. All rights reserved. The origin of Ultraluminous X-ray sources (ULXs) in external galaxies whose X-ray luminosities exceed those of the brightest black holes in our Galaxy by hundreds and thousands of times is mysterious. The most popular models for the ULXs involve either intermediate mass black holes (IMBHs) or stellar-mass black holes accreting at super-Eddington rates. Here we review the ULX properties, their X-ray spectra indicate a presence of hot winds in their accretion disks supposing the supercritical accretion. However, the strongest evidences come from optical spectroscopy. The spectra of the ULX counterparts are very similar to that of SS 433, the only known supercritical accretor in our Galaxy.

Keywords

Super-Eddington accretion disks, Ultraluminous X-ray sources

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