THE SUPERCRITICAL ACCRETION DISK IN SS433 AND ULTRALUMINOUS X-RAY SOURCES

S. N. Fabrika

Special Astrophysical Observatory of RAS, Nizhnij Arkhyz, 369167, Russia
fabrika@sao.ru

SS433 is the only known persistent supercritical accretor, it may be very important for understanding ultraluminous X-ray sources (ULXs) located in external galaxies. We describe main properties of the SS433 supercritical accretion disk, jets and its radio nebula W50. Basing on observational data of SS433 and published 2D simulations of supercritical accretion disks we estimate parameters of a funnel in the disk/wind of SS433 and discuss formation of jets and a nebula. Critical observations which may throw light upon nature of ULXs come from nebulae observations around ULXs. We present results of 3D-spectroscopy of nebulae around several ULXs located in galaxies at distances of 3-6 Mpc. We found that nebulae are powered by their central black holes. The nebulae are shocked and dynamically perturbed probably by jets.