

Physics of accretion and ejections around black holes: An overview

Professor
Indranil Chattopadhyay

Aryabhata Research Institute of
Observational Sciences (ARIES), Nainital



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Centres of active galaxies (active galactic nuclei or AGN) or X-ray binaries (microquasars) are very bright. Radiative output of AGNs are ten to fourteen orders of magnitude higher than sun, while that of microquasars, it is four to six orders of magnitude higher. The only viable explanation of this phenomena is through conversion of a fraction of gravitational energy released into EM radiation. Accretion is the process of accumulation of matter by some process on to a certain point/region. In astrophysics, it means matter falling onto the surface of gravitation centre (stars, neutrons stars, white dwarf) or into a black hole. While the radiation requires accretion of matter, but such AGNs and microquasars also show collimated, relativistic outflows (jets) or uncollimated outflows or winds.

In this overview we list the problems in theoretical understanding of the observed phenomena, even in the era of GRMHD simulation.



*Everyone is invited to
attend*