



1st Asia-Pacific Conference on Plasma Physics, 18-22, 09.2017, Chengdu, China

Wind from black hole accretion system and its observational applications

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Black hole accretion is one of the most important fundamental processes in the universe. Black hole accretion is the engine of many astrophysical phenomena, such as, active galactic nuclei, black hole X-ray binaries, gamma ray burst, tidal disruption event and so on. In recent years, one of the most important findings of black hole accretion theory is the outflows/wind by observations and numerical simulations. In this report, first, I will introduce the finding history of wind in black hole accretion theory. Second, the driven mechanism of outflow in black hole hot accretion flow is discussed. Third, I will introduce the applications of wind in the explanation of observations. Finally, I will introduce the feedback by black hole wind on the evolution of galaxies.

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