X-ray observations of radio-quiet AGN and outflows

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Abstract

I will present the X-ray study of the close environnement of supermassive black holes (SMBH) in radio-quiet active galactic nuclei (RQ AGN): from the disc-corona system to the molecular torus. A large fraction of RQ AGN also displays in their X-ray spectra absorption signatures from ultra-fast outflows ("UFOs") and warm absorbers. UFOs are associated with sub-relativistic wind emitted at the inner part of the accretion disc and are characterised by blueshifted resonant absorption lines of very highly ionised iron (Fe XXV and Fe XXVI). UFOs could be energetic enough to impact the host galaxies and then be important in the framework of SMBH-host galaxy feedback process. In addition, AGN, as very bright sources, can be used to study the matter located along the line-of-sight such as the interstellar medium. I will illustrate how Athena with the XIFU instrument will allow us to make huge progress on our understanding on all these topics.

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