

Tidal Disruption Events in XMM-Newton slew survey and some preliminary results of LEIA

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Tidal disruption event (TDE), where a star is ripped apart by the strong tidal forces of a supermassive black hole (SMBH), creates an impulse of accretion, resulting in bright flare that decays in time-scales of months to years, thus provides a unique tool to detect dormant black holes and investigate the accretion process around SMBH. We have built a sample of highly variable X-ray sources, including several TDE candidates, from XMM-Newton slew survey (XMMSL) by comparing their fluxes with that measured in RASS. Here we will talk about the highly variable X-ray sources and a detailed multiwavelength analysis of one TDE which shows brightening in both optical/UV and X-ray band. Besides, XMMSL has similar energy coverage and sensitivity in soft X-ray as Einstein Probe (EP), and the variable content of XMMSL can be used as a reference for the long-term variable and transient sources that EP will detect. An experimental module of the EP-WXT telescope, namely LEIA, was launched on July 27, 2022 and has started its regular scientific surveys since Nov. 2022. In this talk, we will also briefly introduce some preliminary results of LEIA.

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