Probing black hole accretion through X-ray timing

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Abstract

Strong flux variability is one of the observational manifestations of black hole (BH) accretion. Some of the fastest variations are detected in the X-ray band, where the inner accretion flow is probed. I will review the X-ray variability characteristics of BH-accreting systems, discussing the information they convey about the properties of the accretion flow. In particular, I will focus on recent developments based on the study of "X-ray reverberation", and illustrate how these studies are informing our understanding of the structure and dynamics of the accretion flow.

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