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Probing the wind and funnel formed in super-Eddington accretion using X-ray reverberation

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X-ray reverberation is a powerful technique used to measure the black hole in the thin disk system. Recent observation of tidal disruption events shows that X-ray reverberation arising from characteristic Fe K α photons can also happen in the super-Eddington system. State-of-the-art simulations show that optical and geometrical thick wind can be launched in the super-Eddington accretion. The new geometry and wind kinematics should shape the Fe K α line together with the strong gravitation field. We run a series of simulations to understand the spectral dependence on these factors. The result shows a double-peak feature similar to the spectra from a thin disk system but with a completely different physical origin.

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