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Dust Reverberation Mapping in AGN

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The dusty obscuring structure around the active galactic nuclei (AGN), commonly referred to as the 'torus' , provides the angle-dependent obscuration as postulated in the Unification Scheme of AGN. This dust rich environment supplies the central engine with material for accretion and is known to thermally absorb optical light from the accretion disc and re-emit it in the infrared (IR). The time lag between the visible and near-IR emission serves as a measure of the physical size of the innermost, hottest dust, which is set by sublimation of large graphite grains. I present the first results of our ongoing campaign to measure those time lags in a sample of AGN. The observed time lags are consistent with the established lag-luminosity relationship. We are now in the process of turning the hot dust lags into standardisable candles, as part of the ESO public survey VEILS, and will use these new lag measurements to normalise the Hubble relation at lower redshifts.

Consider for a poster?

Yes

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