

Iron K Reverberation in Seyfert galaxy NGC 5506

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Abstract

NGC 5506 is a Seyfert galaxy whose AGN has strong X-ray variability and its spectrum shows both narrow and broad components of the Iron K alpha line, making it an excellent target for X-ray reverberation. Using a new XMM-Newton observation, we measure the lag-energy spectrum and constrain the shape of the broad component of the iron line. By comparing this with the shape of the photon spectrum, we are able to constrain the location of the inner edge of the accretion disk and obtain limits on the spin from both spectroscopy and timing.