

Abstract Submitted
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Refining emission line fitting in NGC 4552 for black hole mass determination SHOTA HODONO, JASON PINKNEY, Ohio northern University — The elliptical galaxy NGC 4552 is about 15.6 Mpc away and shows signs of nuclear activity. A supermassive black hole (BH) is surely present, but a secure BH mass is not yet published for this galaxy. A dataset from the Space Telescope Imaging Spectrograph (STIS) shows promise for providing a BH mass using the gas kinematics method. Here we report on the emission line fitting which is a prerequisite for the gas kinematical modelling. We fit gaussians to the lines using chi-squared minimization. For some of the spectral extractions the fitting is problematic because of either noise, non-gaussian line profiles, or a strong blending of narrow lines with broad lines from the active nucleus. We present our final rotation curves which look consistent with a disk of excited gas rotating about a central dark mass.

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