

Abstract Submitted  
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**Comparison of Multi Disk Exponential Gas Distribution vs. Single Disk** ERICA RAO, JAMES O'BRIEN<sup>1</sup>, Wentworth Institute of Technology — In fitting galactic rotation curves to data, most standard theories make use of a single exponential disk approximation of the gas distribution to account for the HI synthesis data observed at various radio telescope facilities. We take a sample of surface brightness profiles from The HI Nearby Galaxy Survey (THINGS), and apply both single disk exponentials and Multi-Disk exponentials, and use these various models to see how the modelling procedure changes the Newtonian prediction of the mass of the galaxy. Since the missing mass problem has not been fully explained in large spiral galaxies, different modelling procedures could account for some of the missing matter.

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