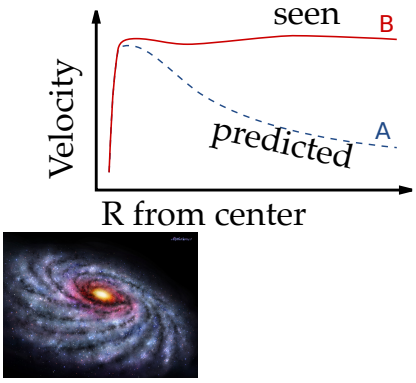
Weak Gravity

When gravity is 10^{-10}g, Newton's law doesn't work



History

1932 Jan Oort, Milky Way motions too fast
1933 Fritz Zwicky, motions of galaxies too fast
1962 Alar Toomre, thin disc galaxies too fast, unstable
1970s Vera Rubin rotation profile data

Current Efforts

Dark matter - plug in what is needed
MOND - change Newton's law from $1/R^2$ to $1/R$

My Efforts

Need a stable, constant velocity solution for gravity
The product rule may come into play
Use BOTH 1st order terms (only 1st is, 2nd ignored)

$$dq^2 = \left(\left(1 - 2\frac{GM}{c^2 R}\right)dt^2 - \left(1 + 2\frac{GM}{c^2 R} + O(2)\right)dR^2/c^2,\ 2\ \ dt\ \ dR/c\right)$$