Newtonian regime

 $g_{in} > a_0$

$$M = \frac{RV^2}{G}$$



e.g., surface of the Earth

isolated systems

McGaugh (2007)

MOND regime

$$g_{in} < a_0$$

$$M = \frac{V^4}{a_0 G}$$

e.g., remote dwarf Leo I



External Field dominant Newtonian regime

 $g_{in} < a_0 < g_{ex}$

$$M = \frac{RV^2}{G}$$



e.g., Globular cluster M13

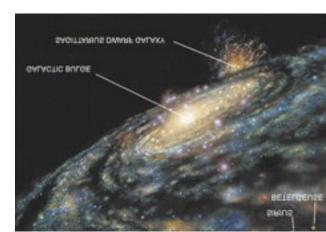
non-isolated systems

External Field dominant quasi-Newtonian regime

$$g_{in} < g_{ex} < a_0$$

$$M = \frac{g_{ex}}{a_0} \frac{RV^2}{G}$$

e.g., nearby Sgr dwarf



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