

Galaxy Name	Halo Mass (1e12 solMass)	Disk Mass (1e12 solMass)	Bulge Mass (1e12 solMass)	Total (1e12 solMass)	F_bar
MW	1.975	0.075	0.01	2.06	0.041
M31	1.921	0.12	0.019	2.06	0.067
M33	0.187	0.009	n/a	0.196	0.046
LG	n/a	n/a	n/a	4.316	0.034

1. The mass of the MW and M31 are the same (2.06 1e12 solMass). The Halo dominates this total mass.
2. M31 has a larger stellar mass (0.139 1e12 solMass) than that of the MW (0.085 1e12 solMass), however MW has a larger total Halo mass (1.975 1e12 solMass) than that of Andromeda (1.921 1e12 solMass). With a larger stellar (star) mass I would expect that M31 is more luminous.
3. The dark matter mass in the MW is 1.975 1e12 solMass and the dark matter mass in M31 is 1.921 1e12 solMass.  $MW/M31 = 1.02811$  or roughly 2.8% more dark matter mass. This isn't surprising given their total mass, since M31 has more stellar mass, then it must have less of a halo mass in order for the total masses of MW and M31 to be the same.
4. The baryon fraction can be found in the table. 16% is larger than the baryon fractions we found in the table (~4.1%, ~6.7%, and ~4.6%).