

Galaxy Name	Halo Mass (1e12 Msun)	Disk Mass (1e12 Msun)	Bulge Mass (1e12 Msun)	Total (1e12 Msun)	f_{bar}
M31	19208.8	1200	190.5	20599.3	0.067
M33	1866.13	93	0	1959.13	0.047
MW	19749.25	750	100.05	20599.3	0.041
Local Group	40824.18	2043	290.55	43157.73	0.0519

1. The total masses of both MW and M31 are very similar. Dark matter dominates as the total mass in both.
2. M31 has a higher stellar mass, so I'd expect it to be more luminous than MW
3. M31 has less dark matter but more stellar mass than MW, while MW has more dark matter and less stellar mass than M31. This is surprising, one might think dark matter and stellar mass would be directly proportional to each other.
4. The fraction is off by about 11 percent, as I calculated a baryon fraction on the local group to be about 5 percent. This local group is likely devoid of stellar mass when compared to other galaxies. For the average baryon fraction to be 16 percent, the average stellar mass of galaxies must be around three times that of this local cluster.