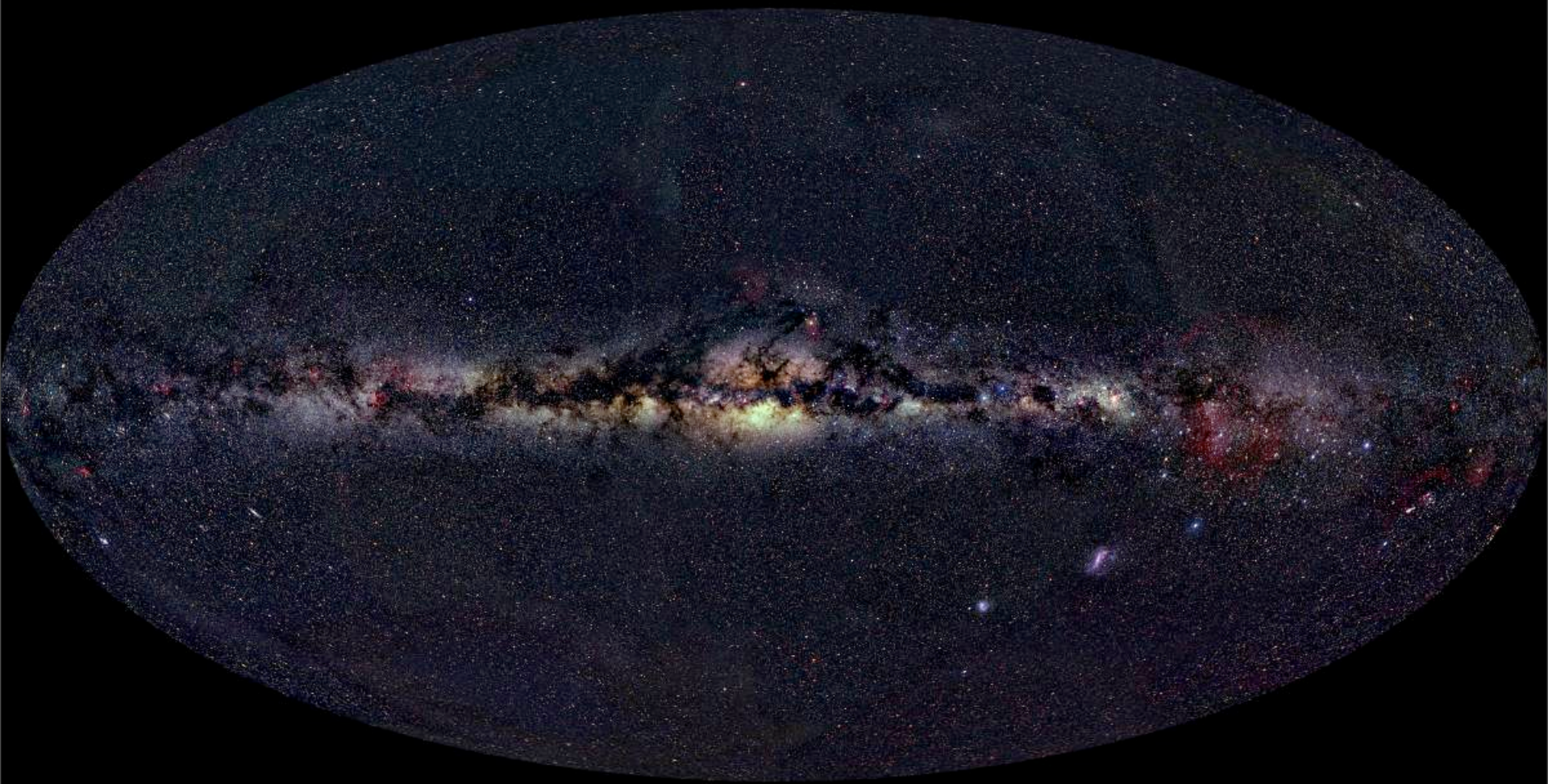
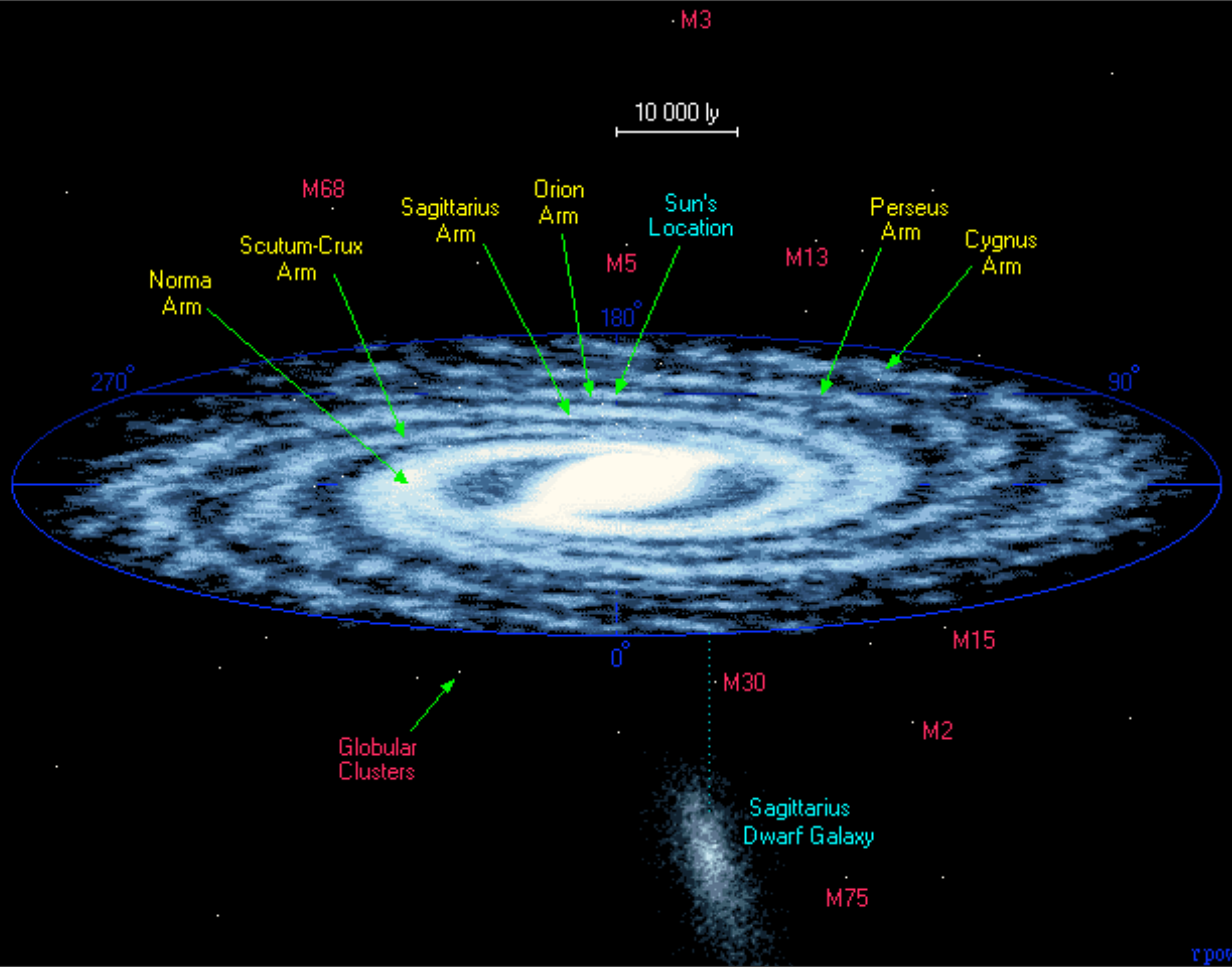


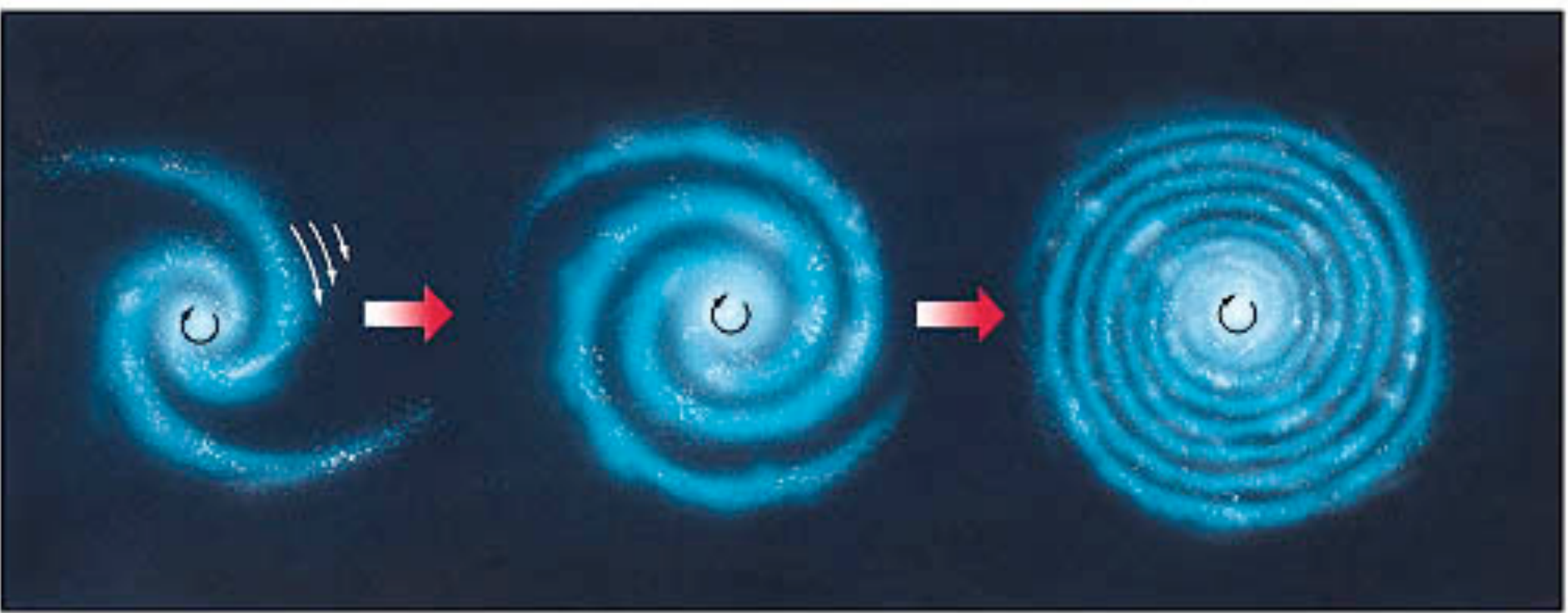
Astro 220: Galaxies and cosmology



Oct 3 2010

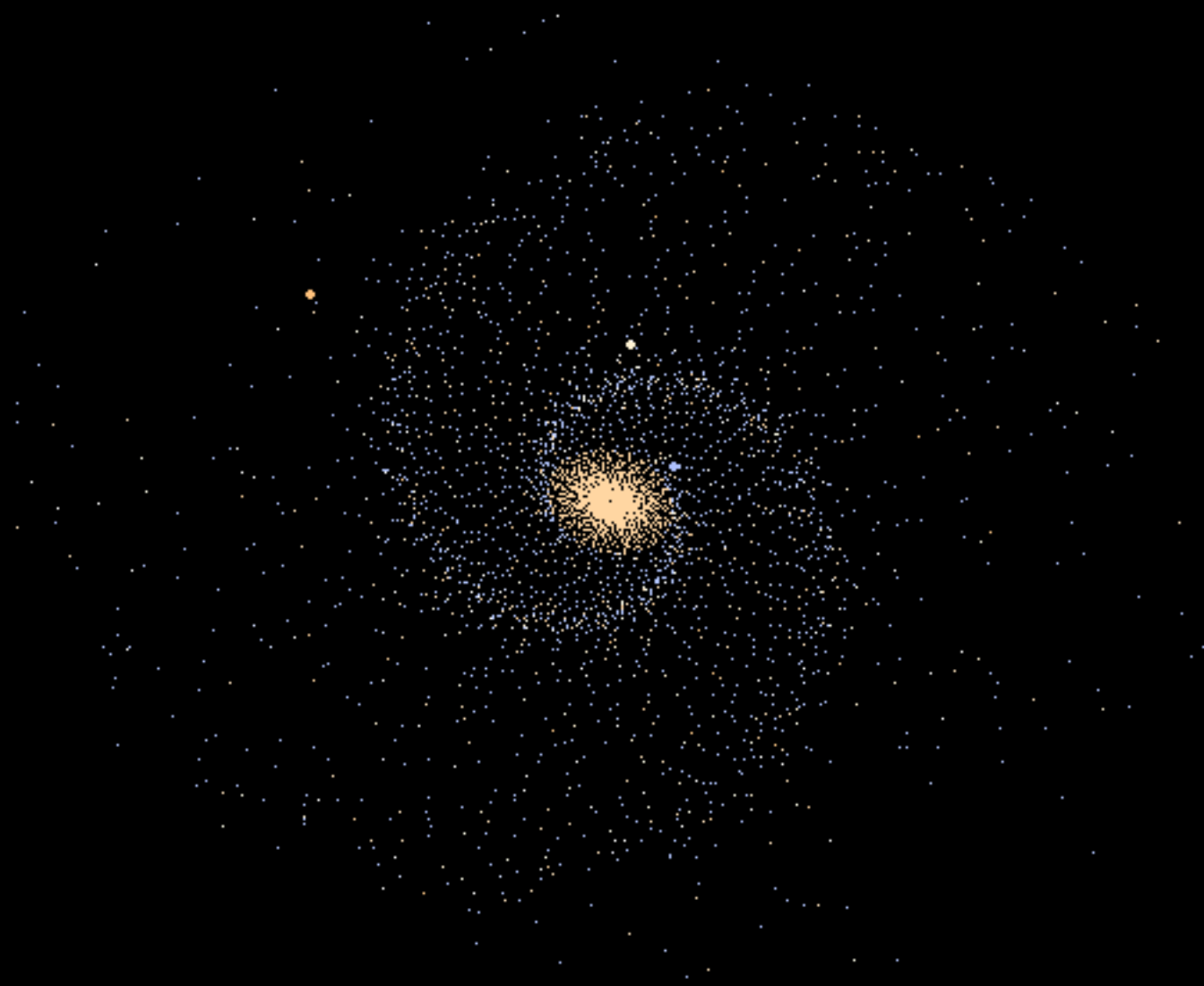




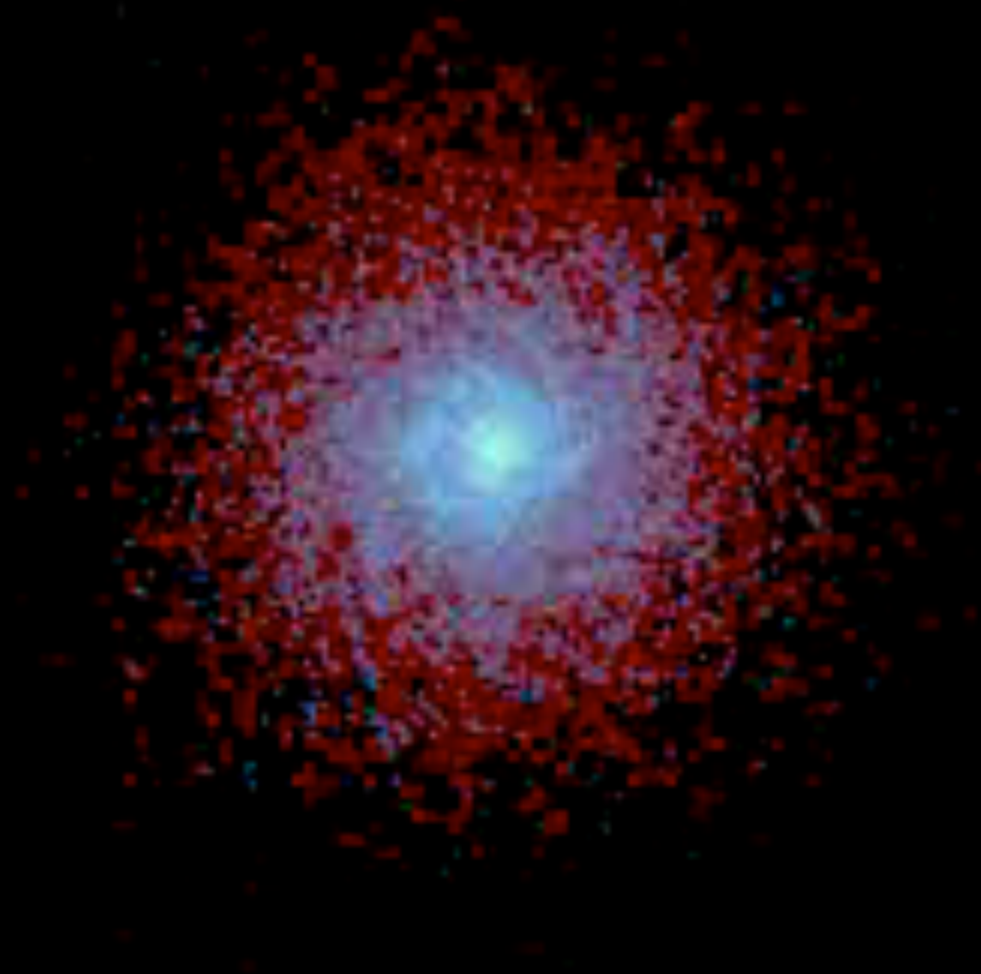


10 Kpc

0 M Years

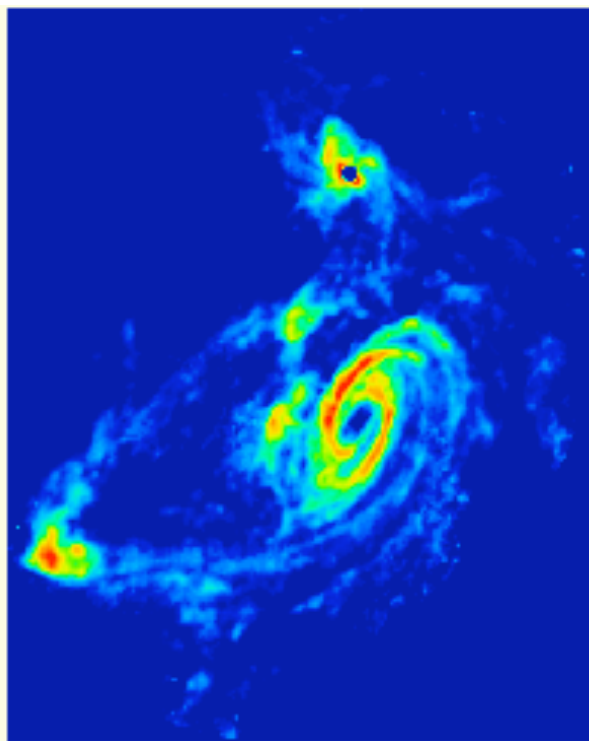


0.50

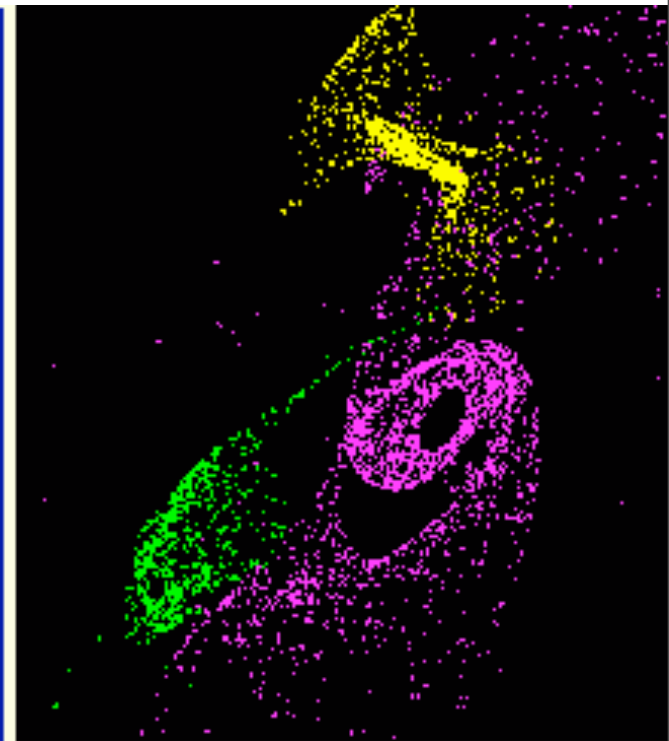




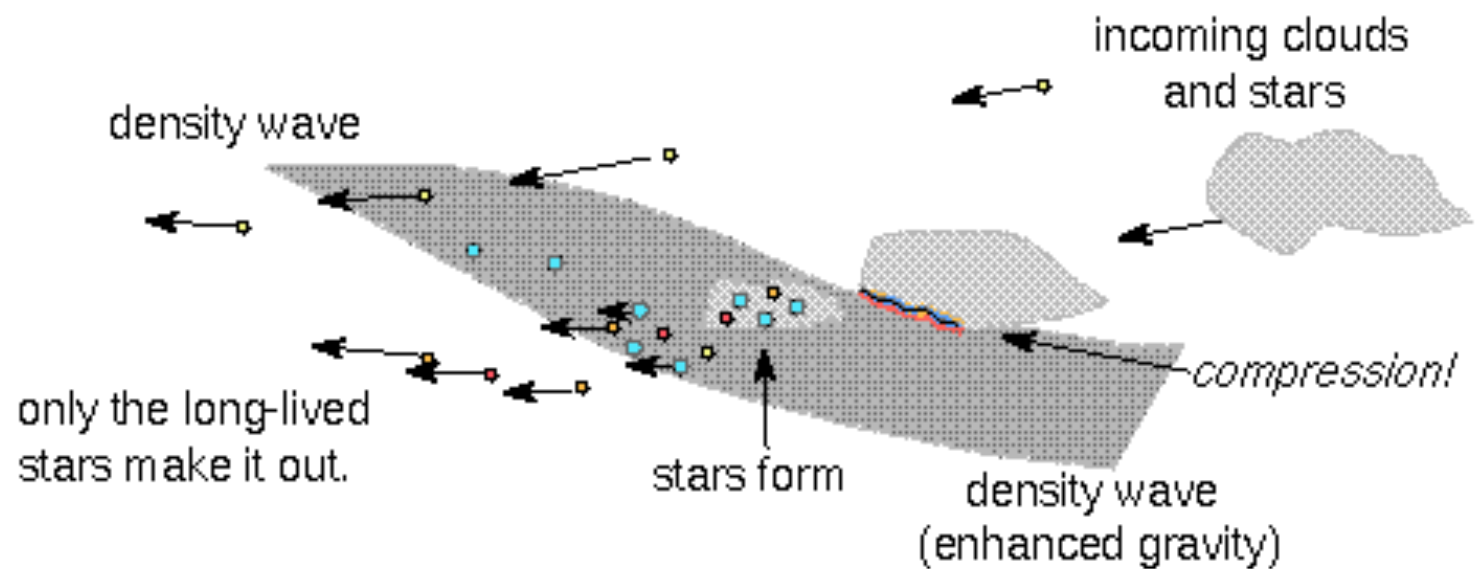
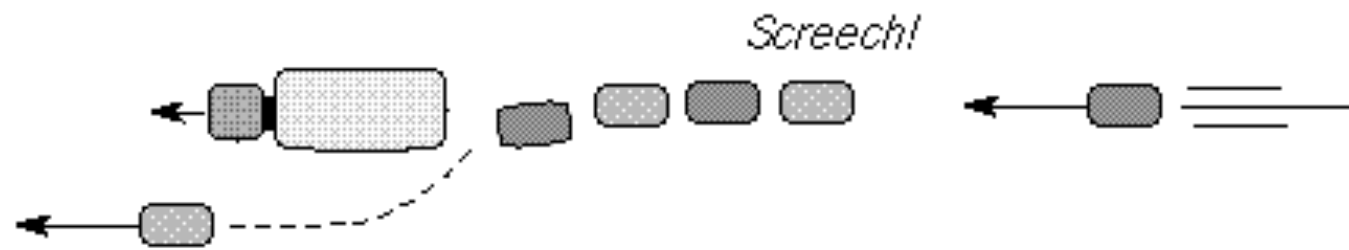
visual



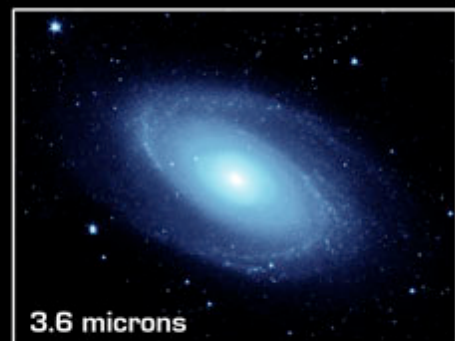
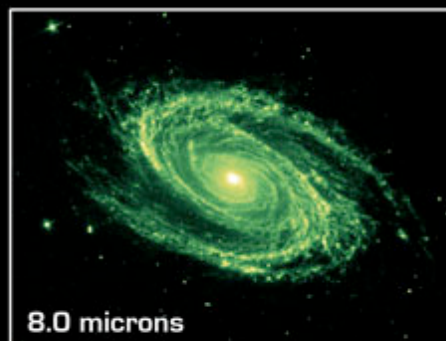
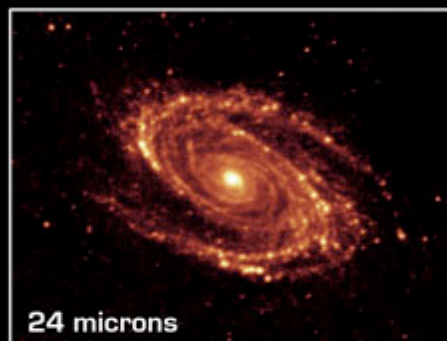
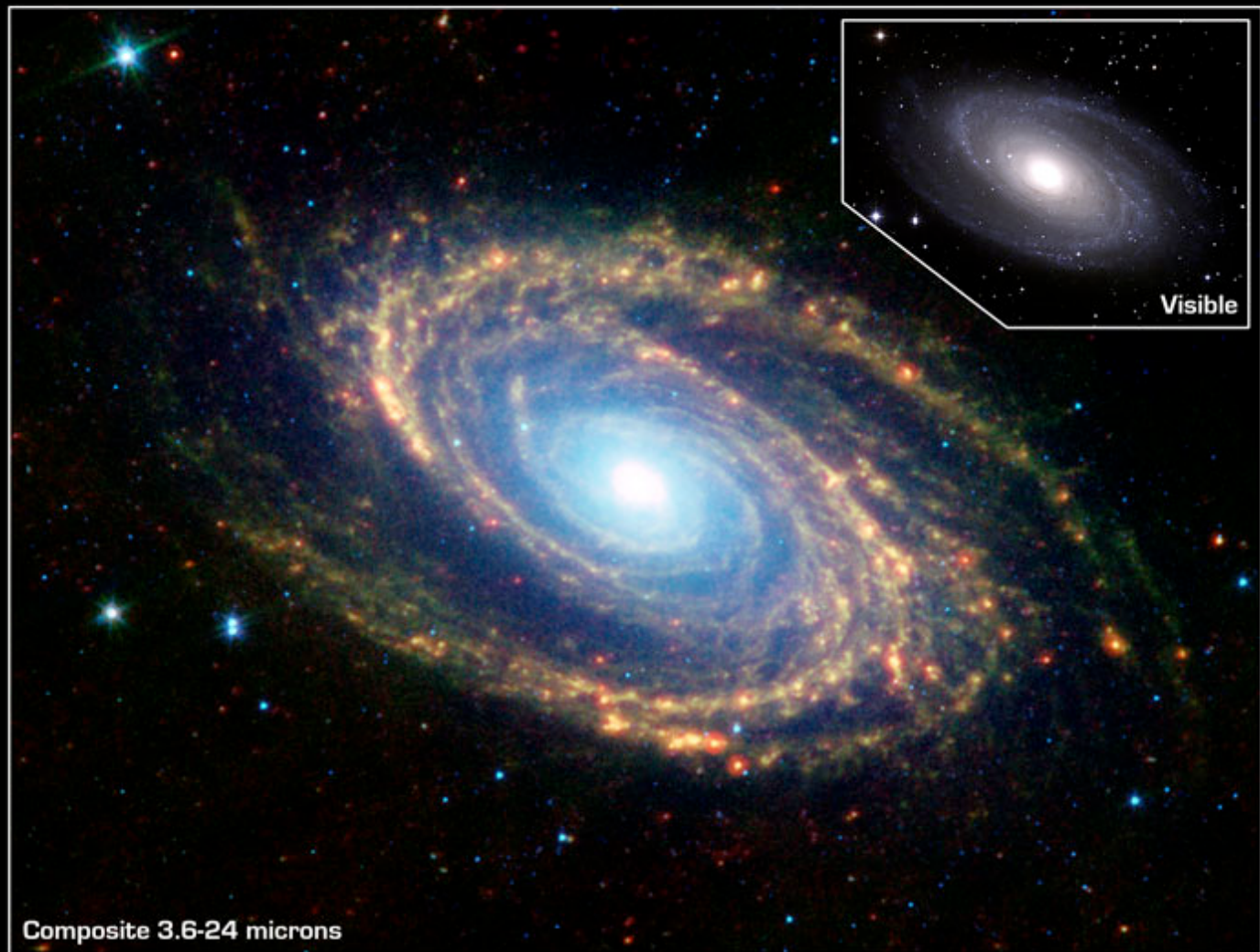
radio (21cm)

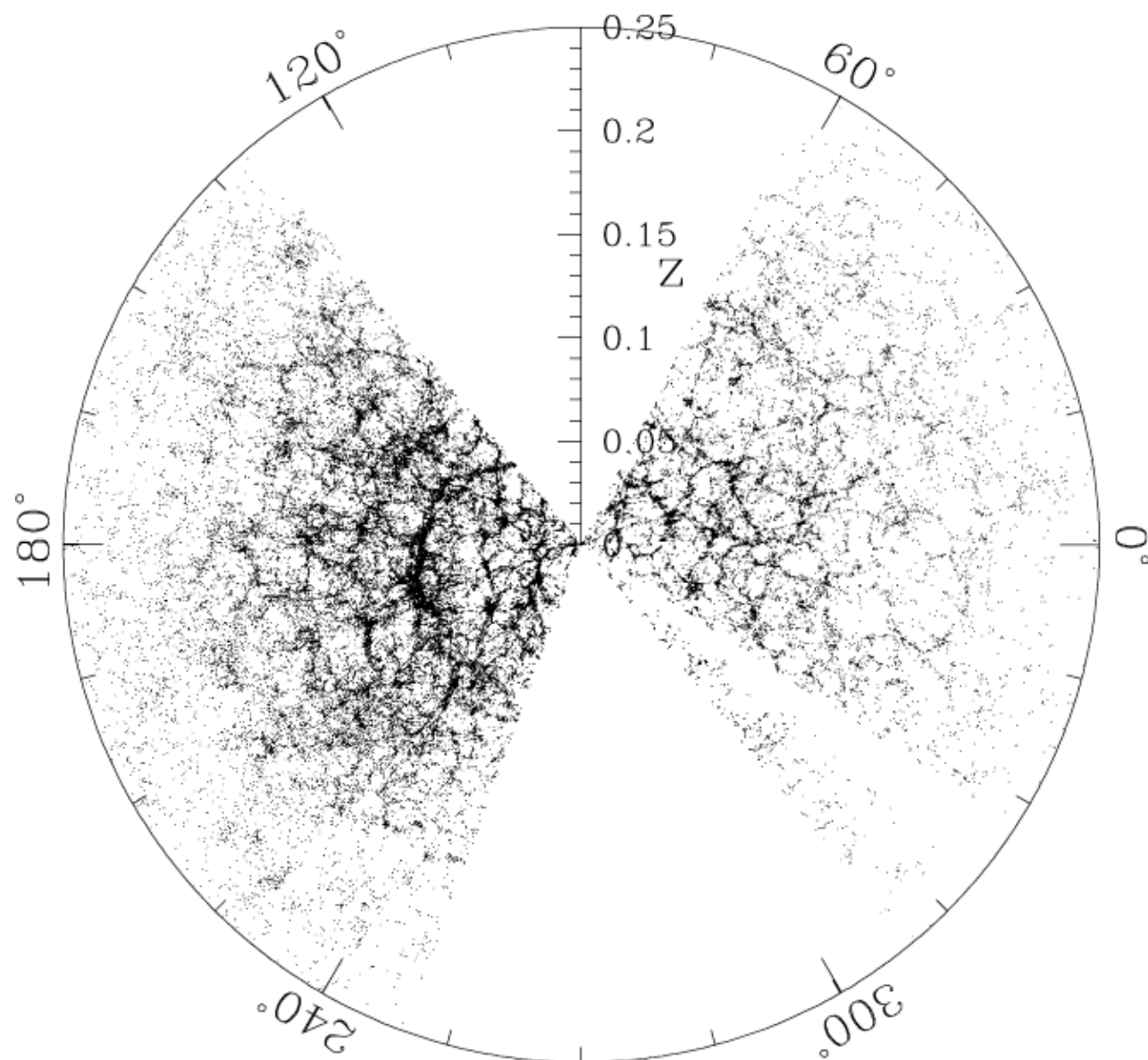


simulation

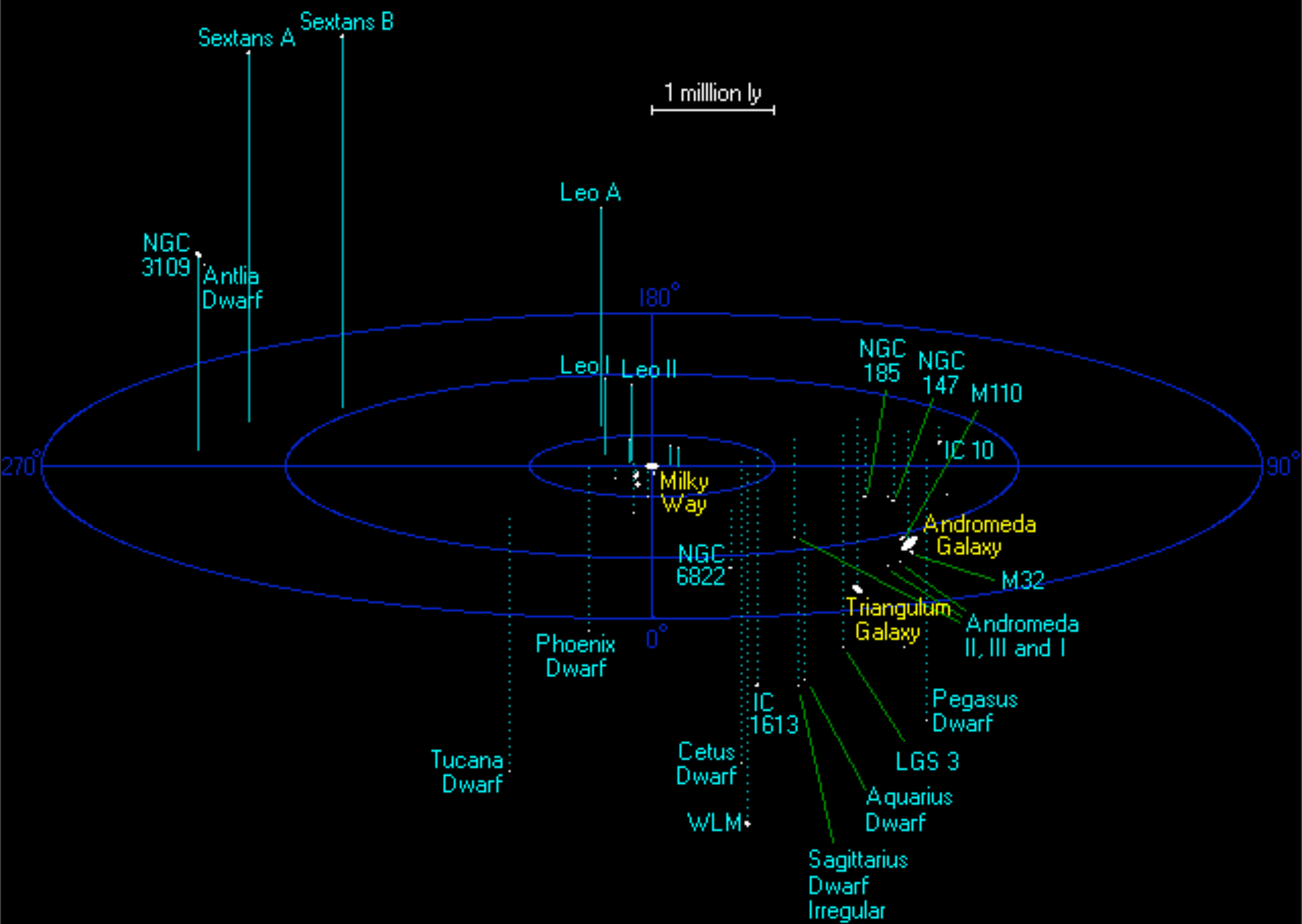


Spiral density waves are like traffic jams. Clouds and stars speed up to the density wave (are accelerated toward it) and are tugged backward as they leave, so they accumulate in the density wave (like cars bunching up behind a slower-moving vehicle). Clouds compress and form stars in the density wave, but only the fainter stars live long enough to make it out of the wave.

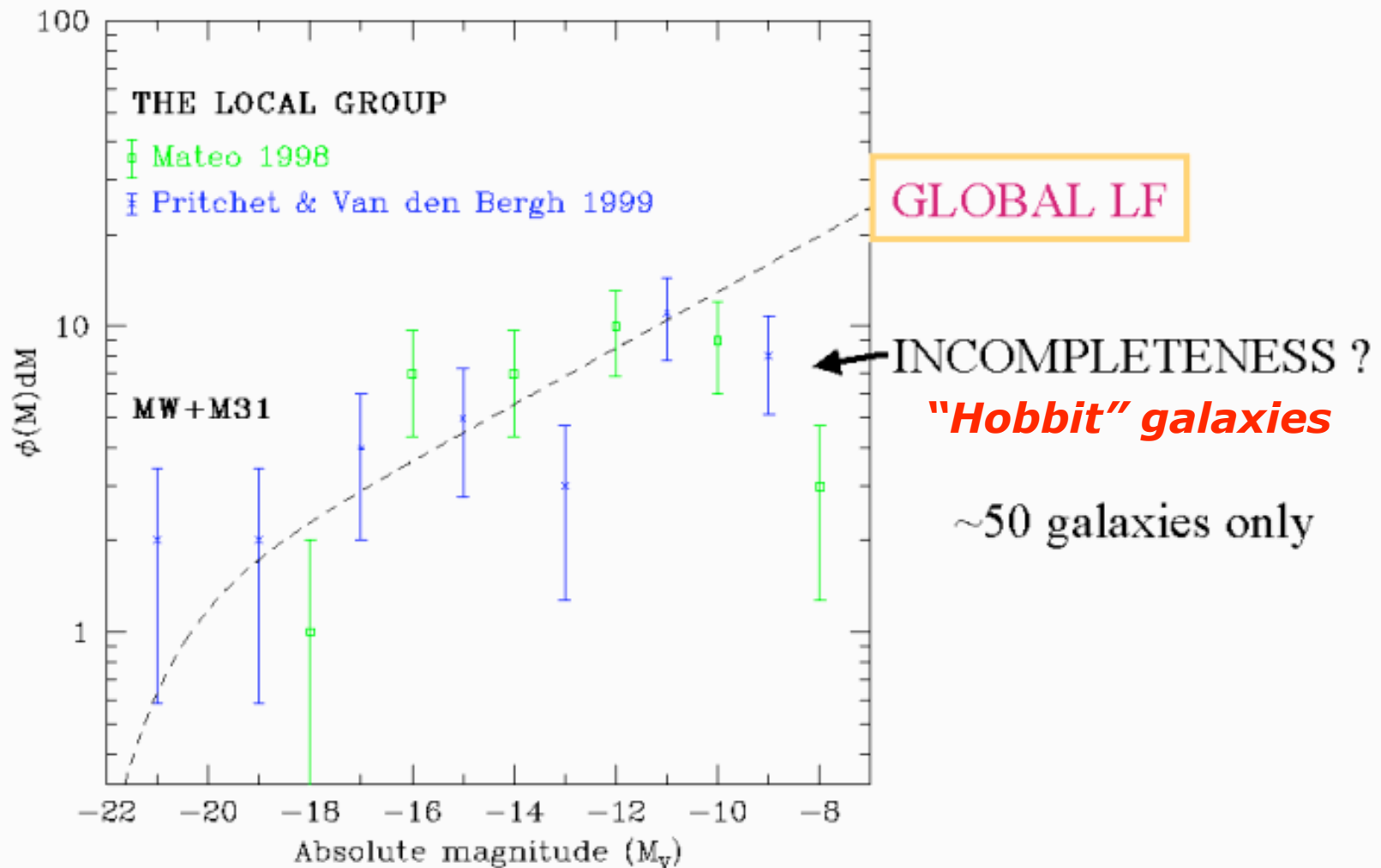


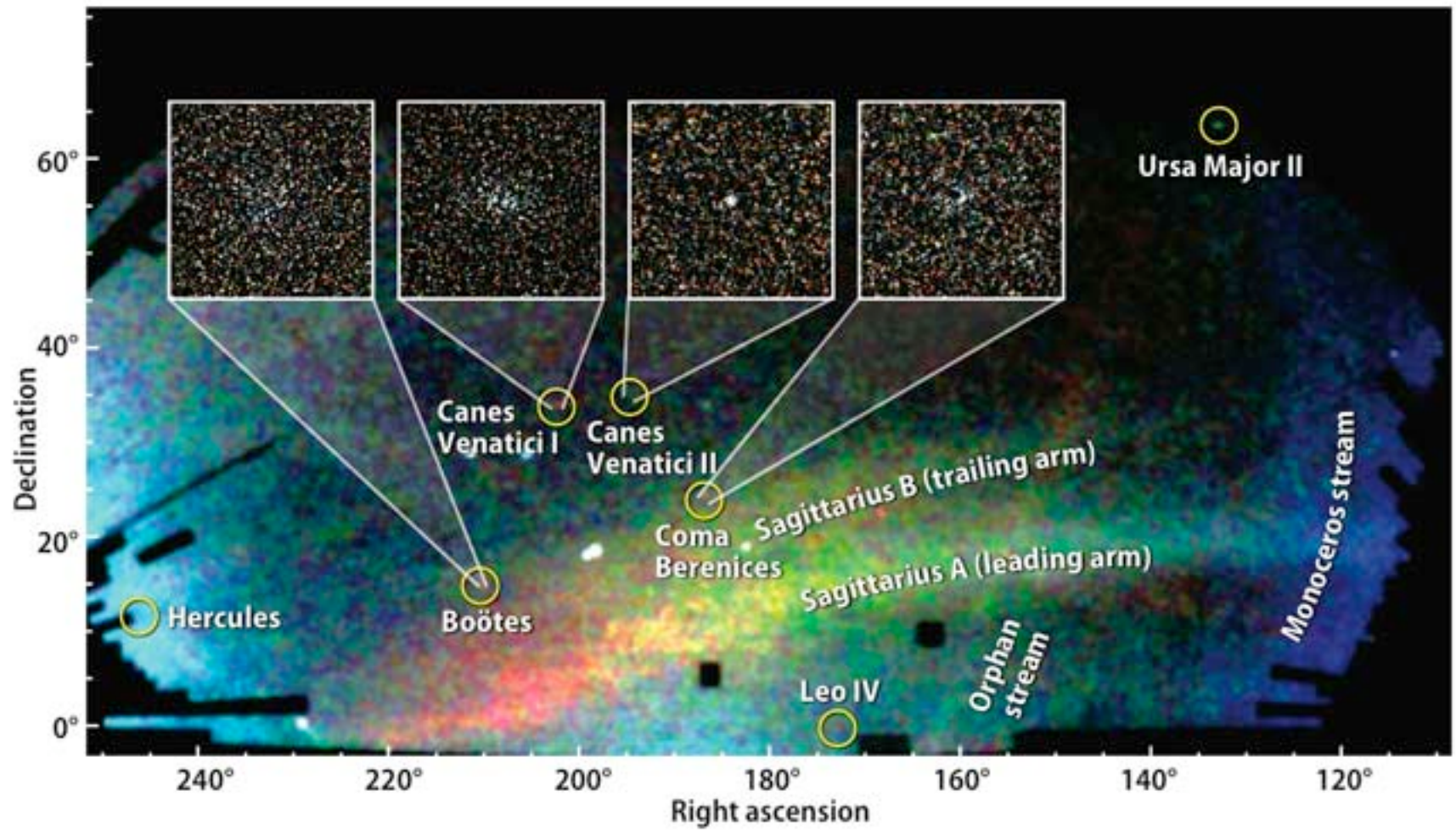


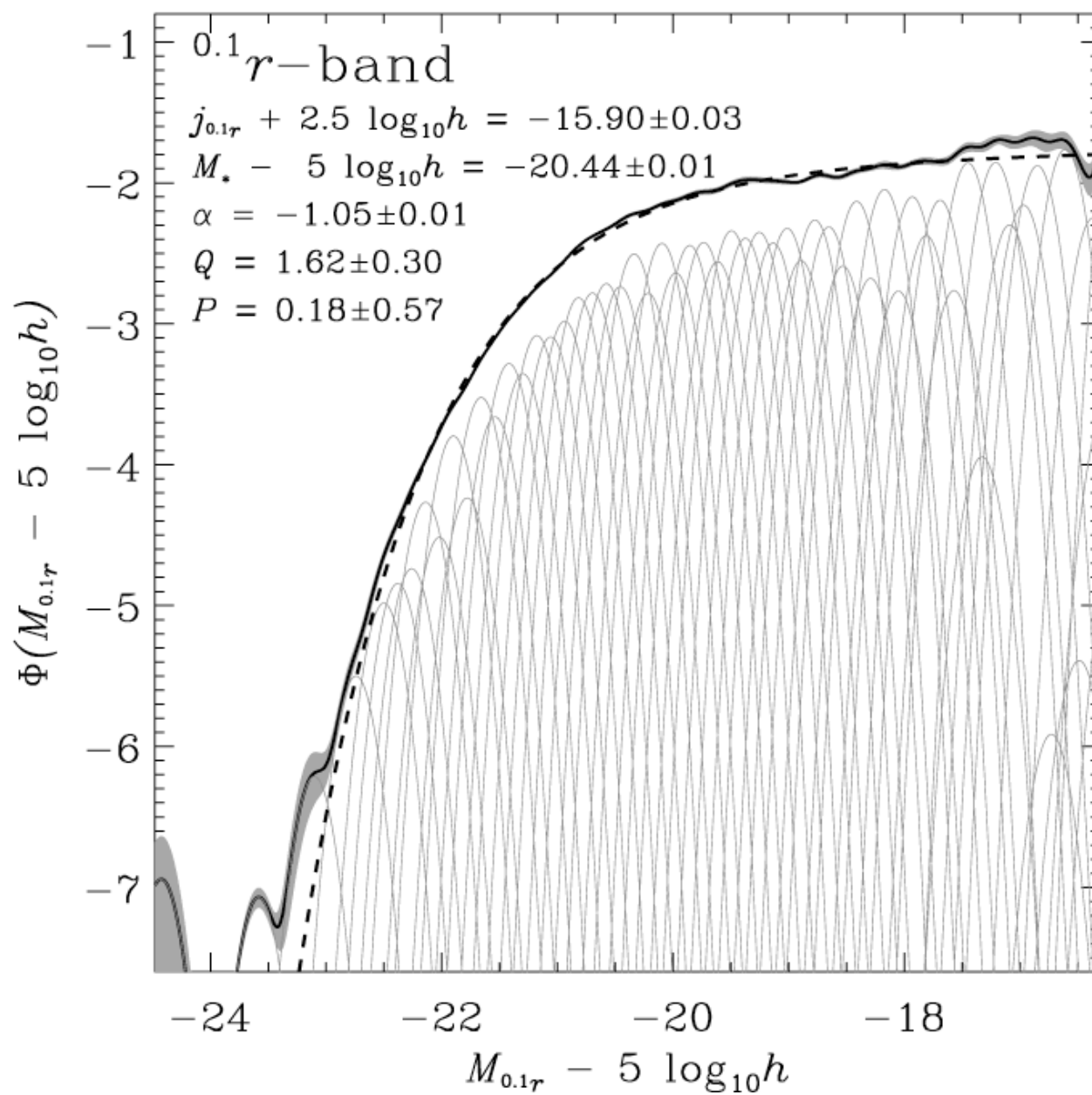
Large-Scale Structure sample10



The Local Group







Meet the neighbors!



MW



M31



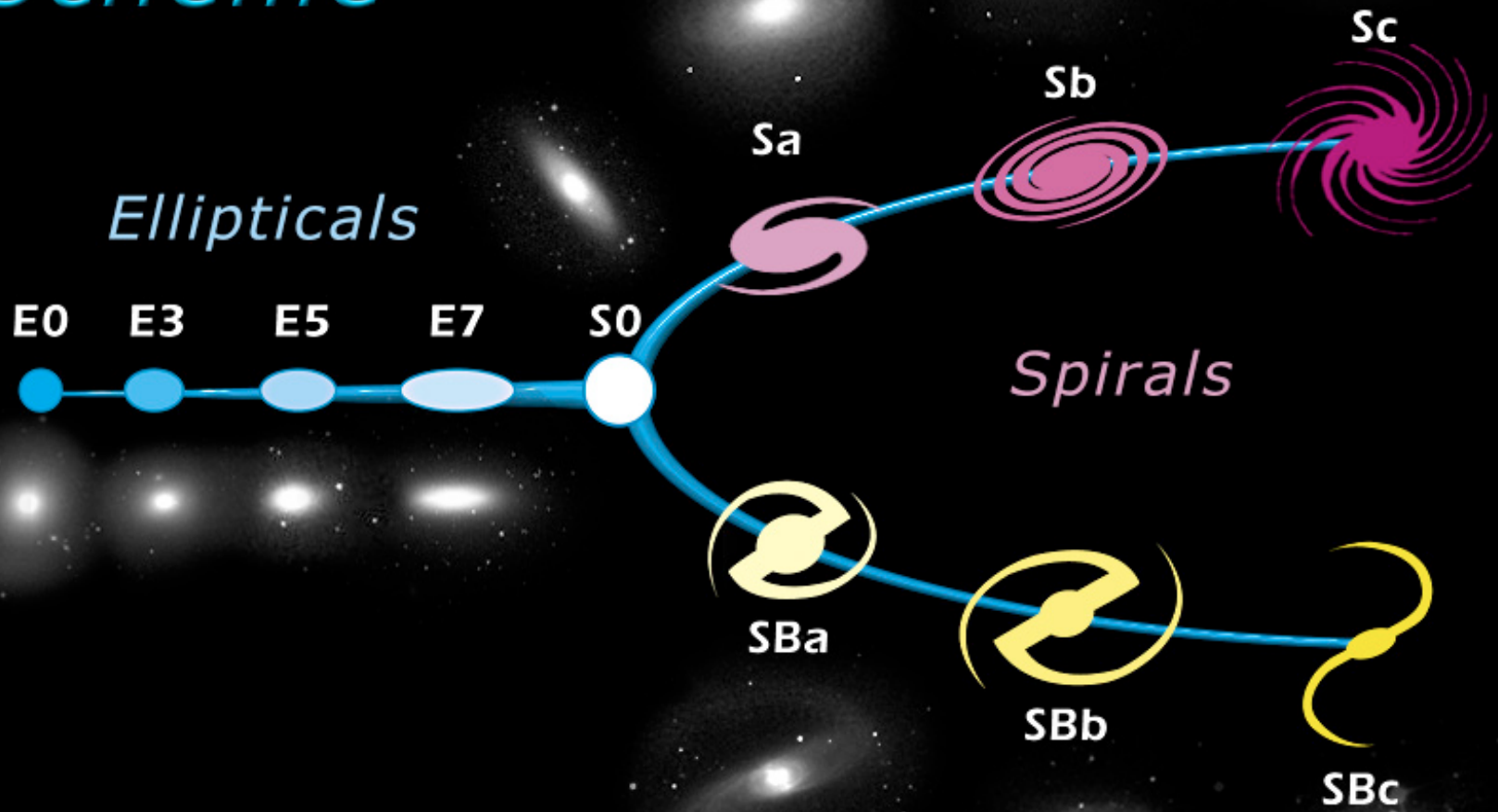
M33



Hickson Compact Group 87

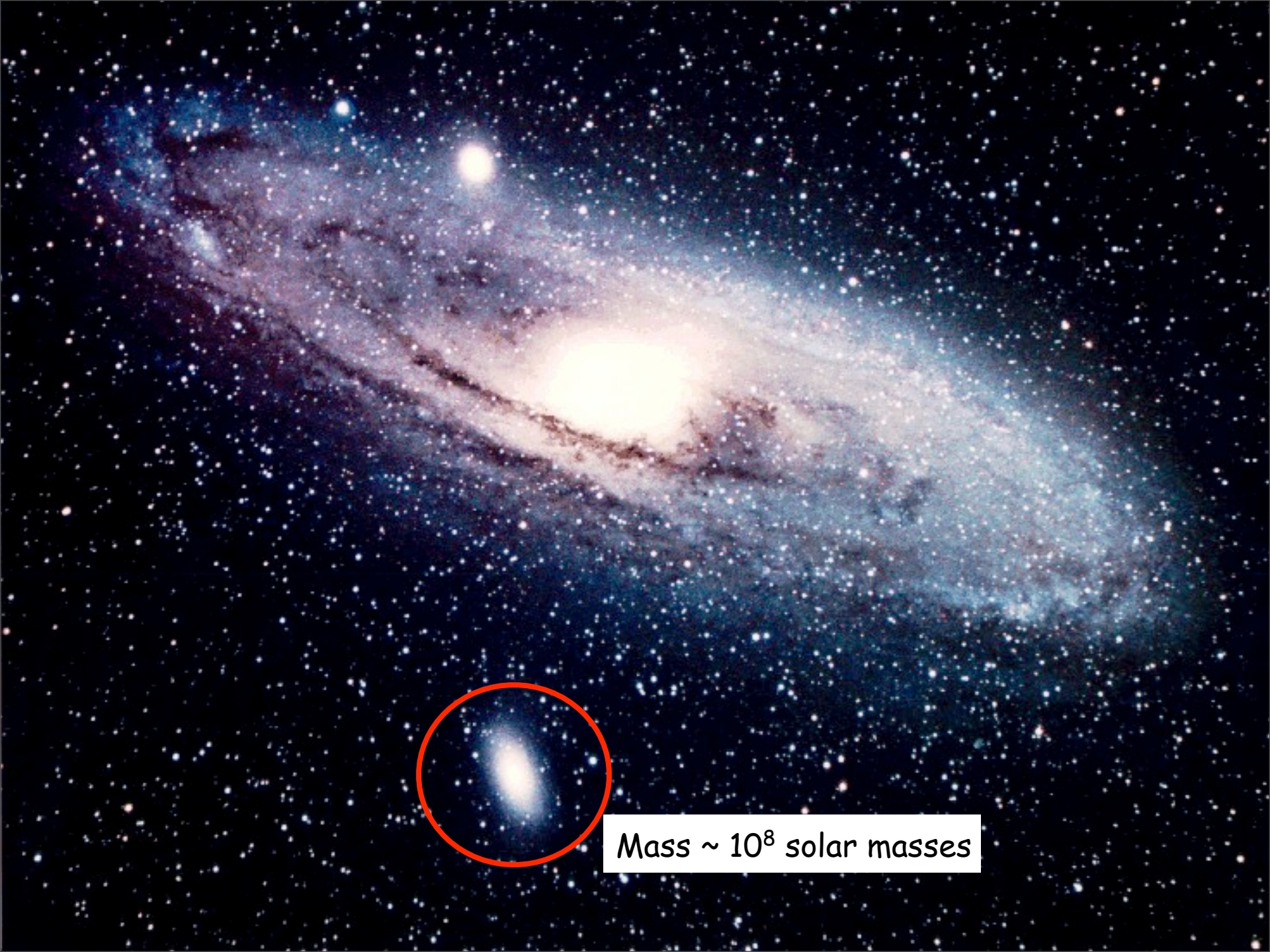


Edwin Hubble's Classification Scheme



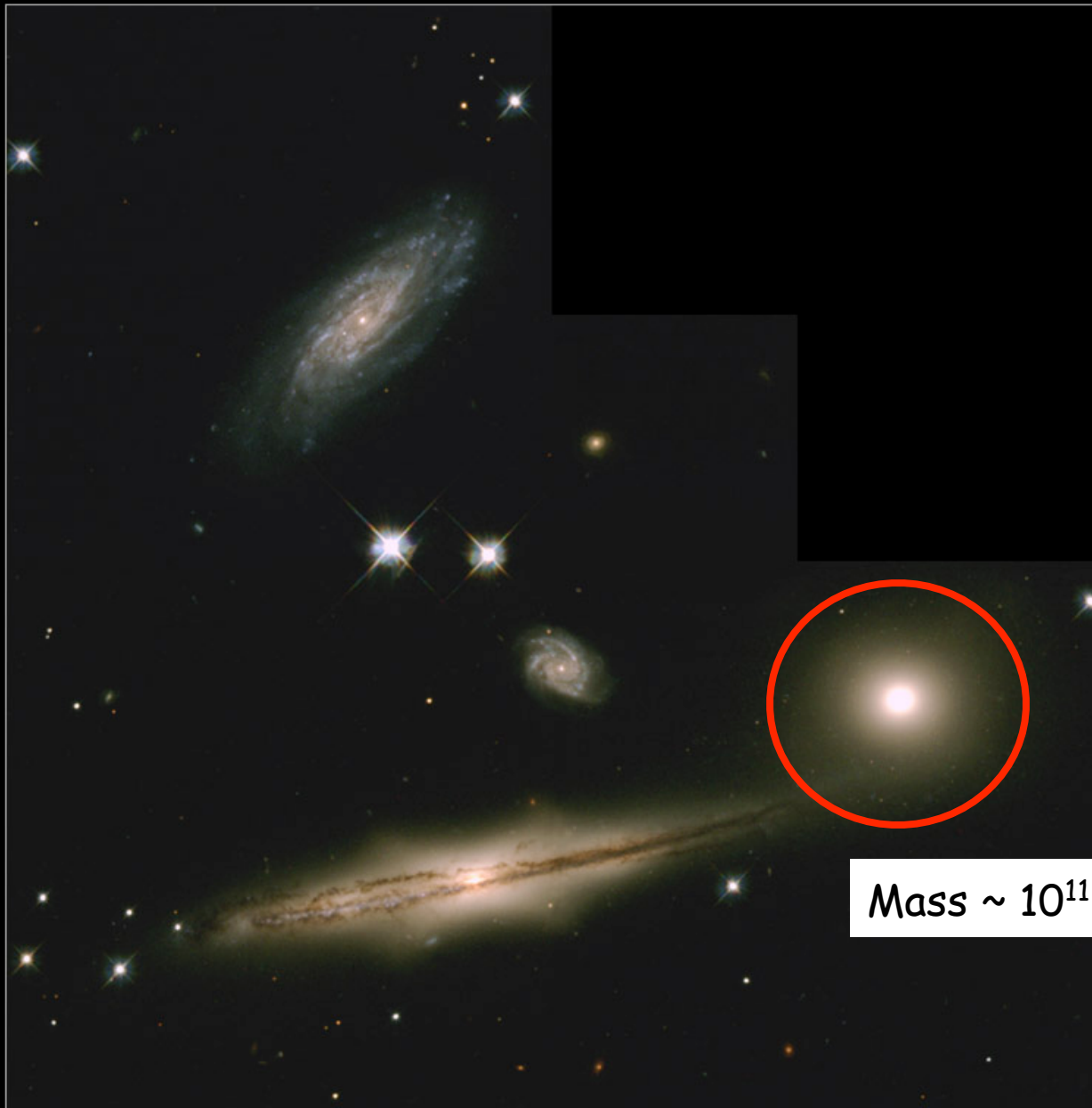
Mass $\sim 10^6$ solar masses

© Anglo-Australian Observatory

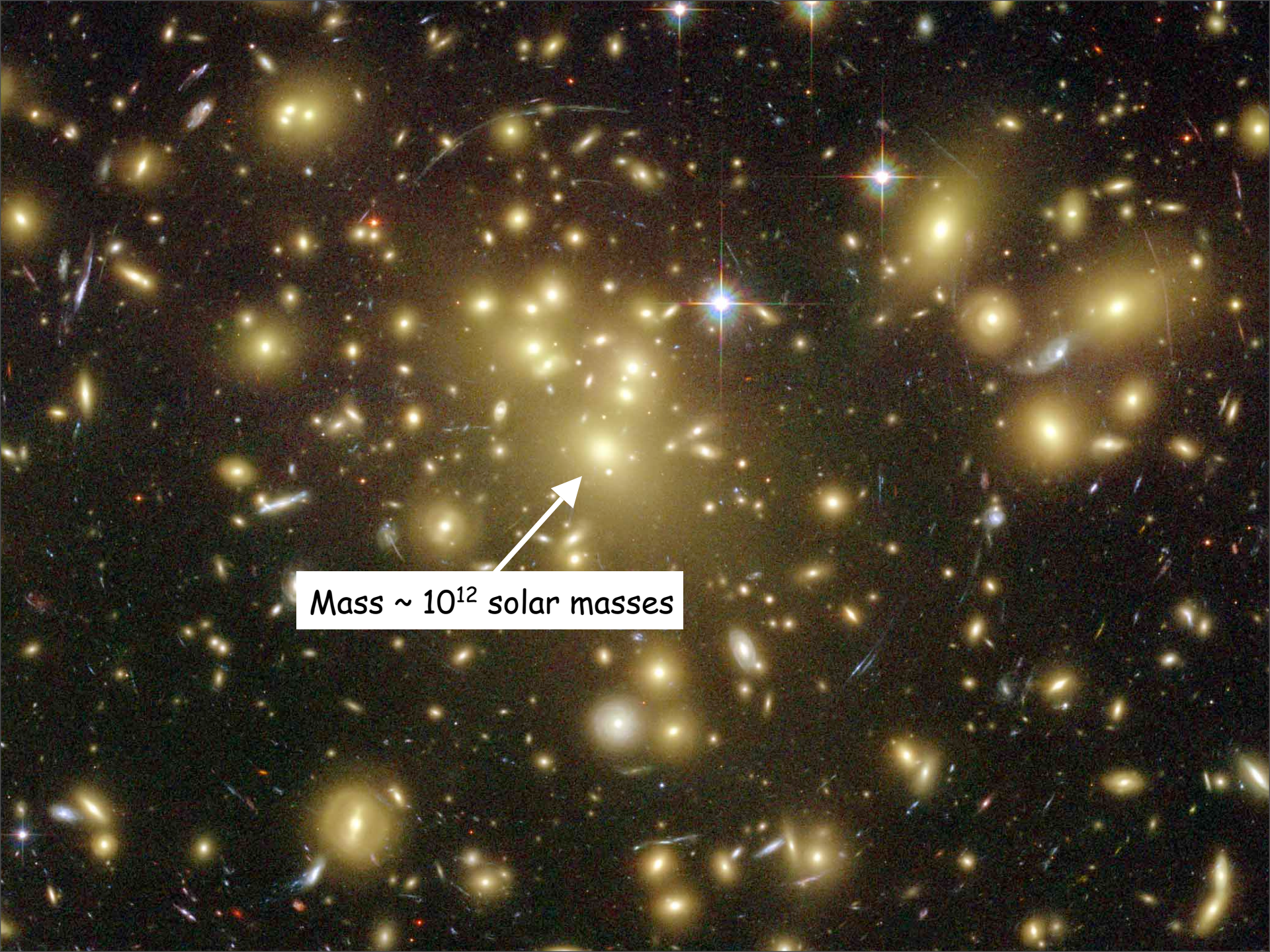


Mass $\sim 10^8$ solar masses

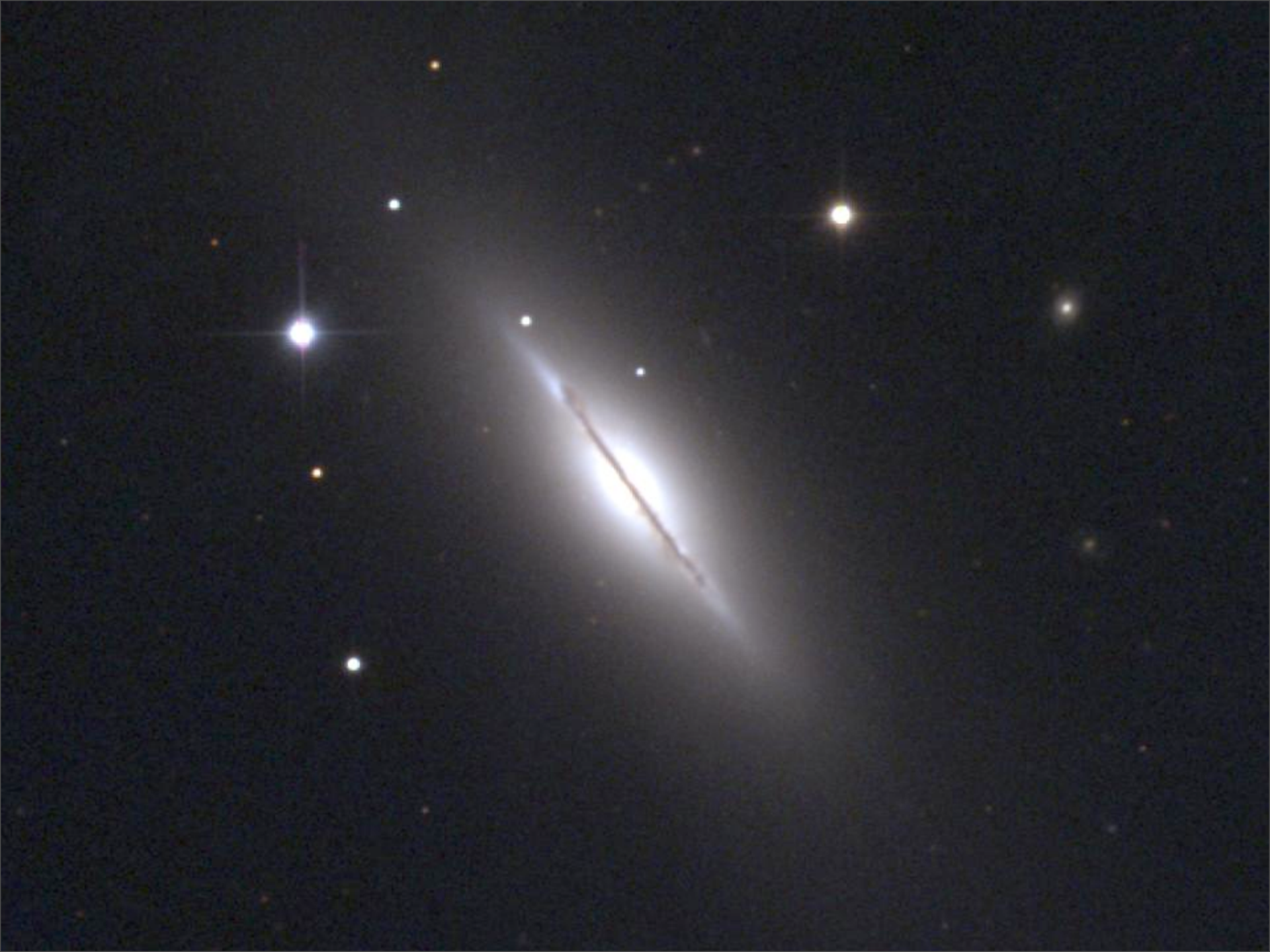
Hickson Compact Group 87



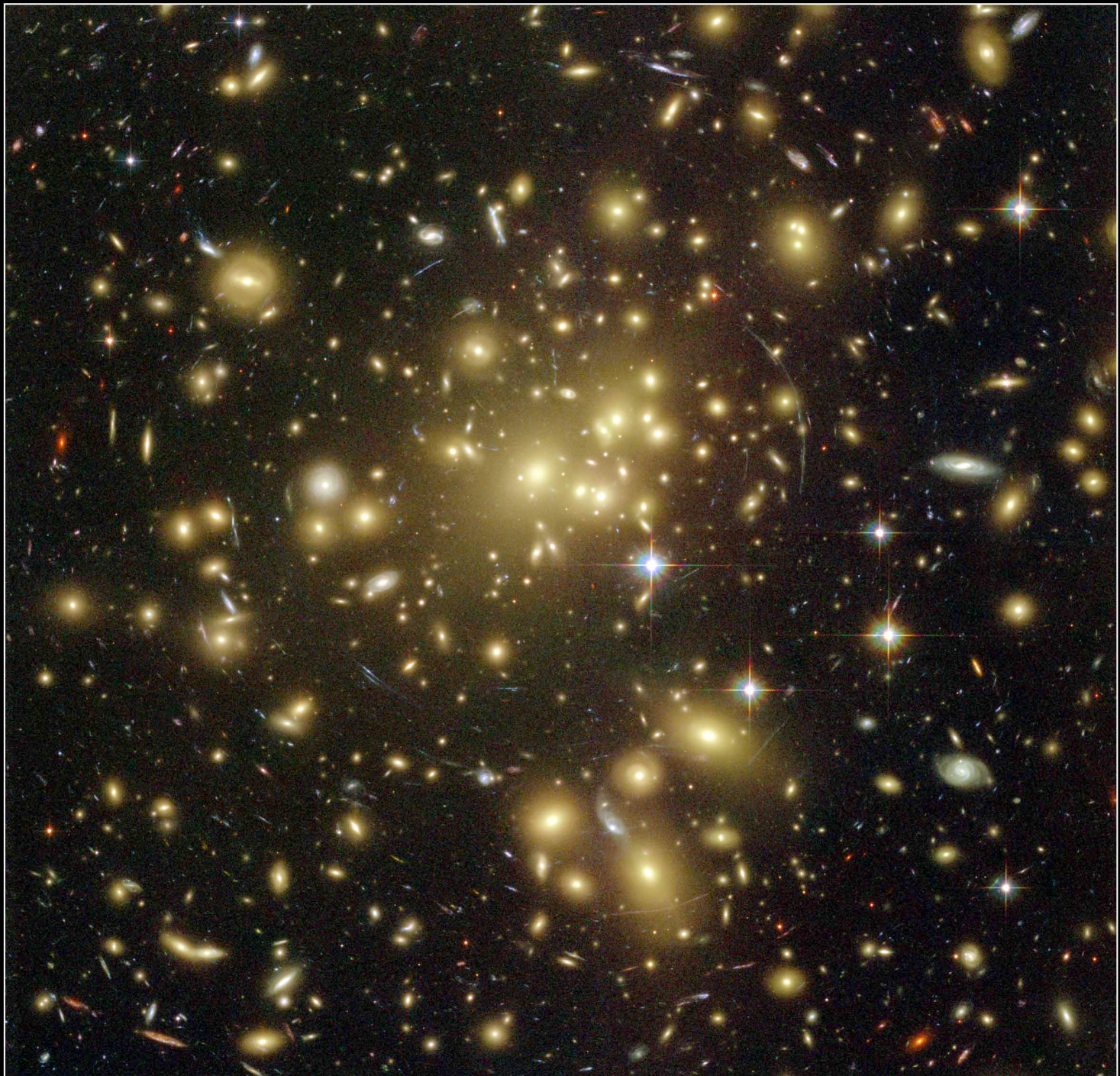
Mass $\sim 10^{11}$ solar masses

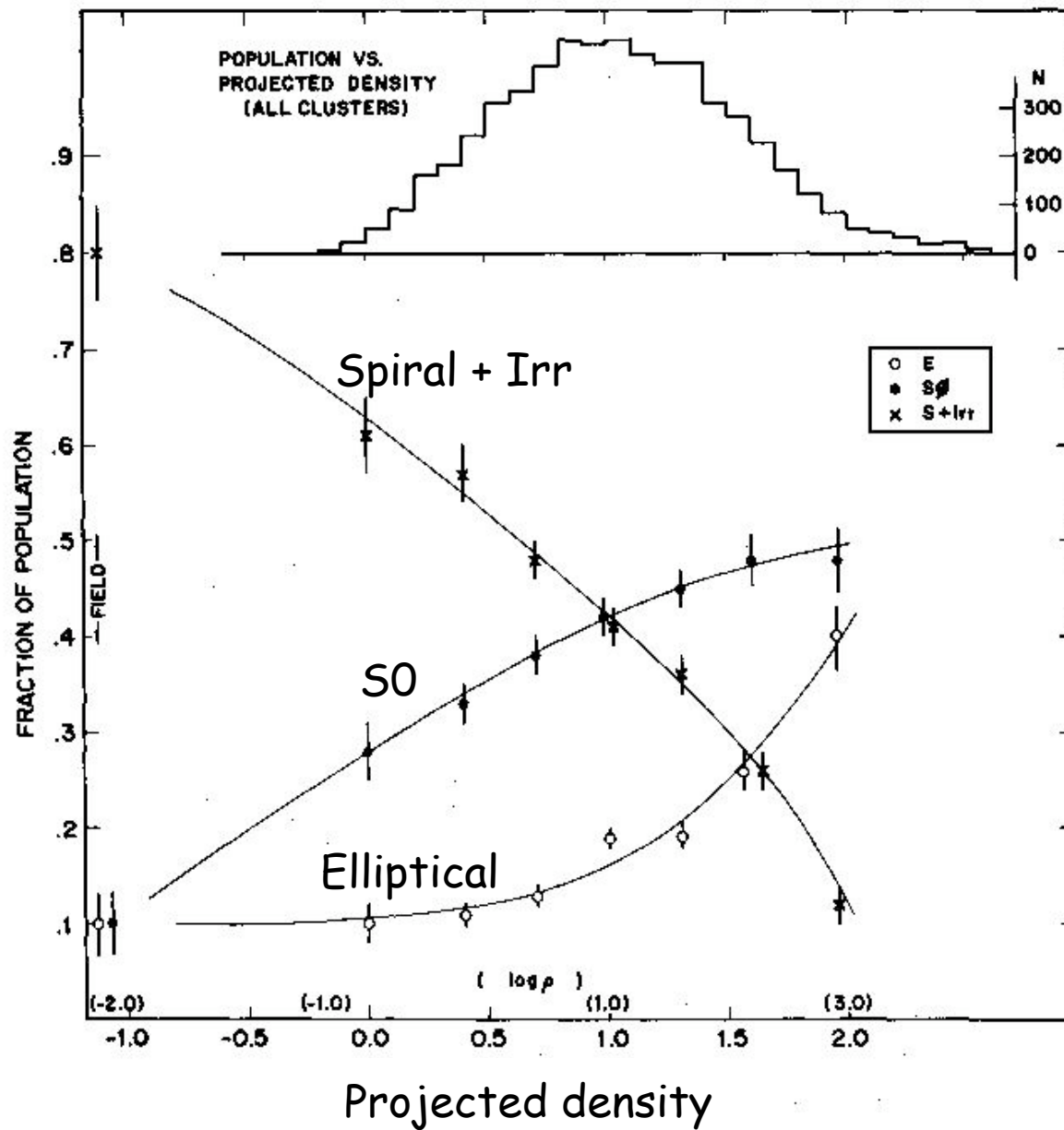


Mass $\sim 10^{12}$ solar masses









Dressler 1980: Morphology-density relation

