

Hypothesizing Dark Matter

- Astronomers studied Andromeda galaxy (same size and structure as Milky Way)
- Examined total amount of light that the stars emit; therefore, can estimate the total mass of galaxy
- From total estimated mass, you can predict the speed of stars
- By studying spectra of stars, they realized stars were moving much faster than predicted

Conclusion:

We only see visible matter; therefore, there was missing mass that we cannot see. This missing mass is called “DARK MATTER”

Dark Energy

Universe expansion should be slowing down gradually due to gravity but instead, the rate of expansion is increasing (“something” is causing the expansion to increase). This is referred to “DARK ENERGY”

The Universe:

Dark Energy 73%

Dark Matter 23%

Visible Matter (stars and galaxies) 4%

