

Lecture Notes 9/11

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→ Our Galaxy = The Milky Way

- consists of several hundred billion stars
- all stars seen by naked eye - are stars in the Milky Way

(Extra Galactical Objects

(Andromeda Galaxy) -
(Globular Clusters) M13 constellation Hercules

) unimportant info.

- center of Galaxy's have to have something w/ tremendous amount of energy → BIG BLACK HOLE

→ Our Galactic Cluster

3 Million light years across

→ Our Super Cluster

100 Million light years across

→ Great Attractor

200 Million light years across

→ Universe

- Biggest scale that makes any sense - beyond that - unknown

- Each of these are held together and interact w/ each other by - GRAVITATION INTERACTION

"40 orders of Magnitude" (10^{40})

- 9-10 Billion light years across - OUR UNIVERSE
- Space has 4 dimensions → Space time