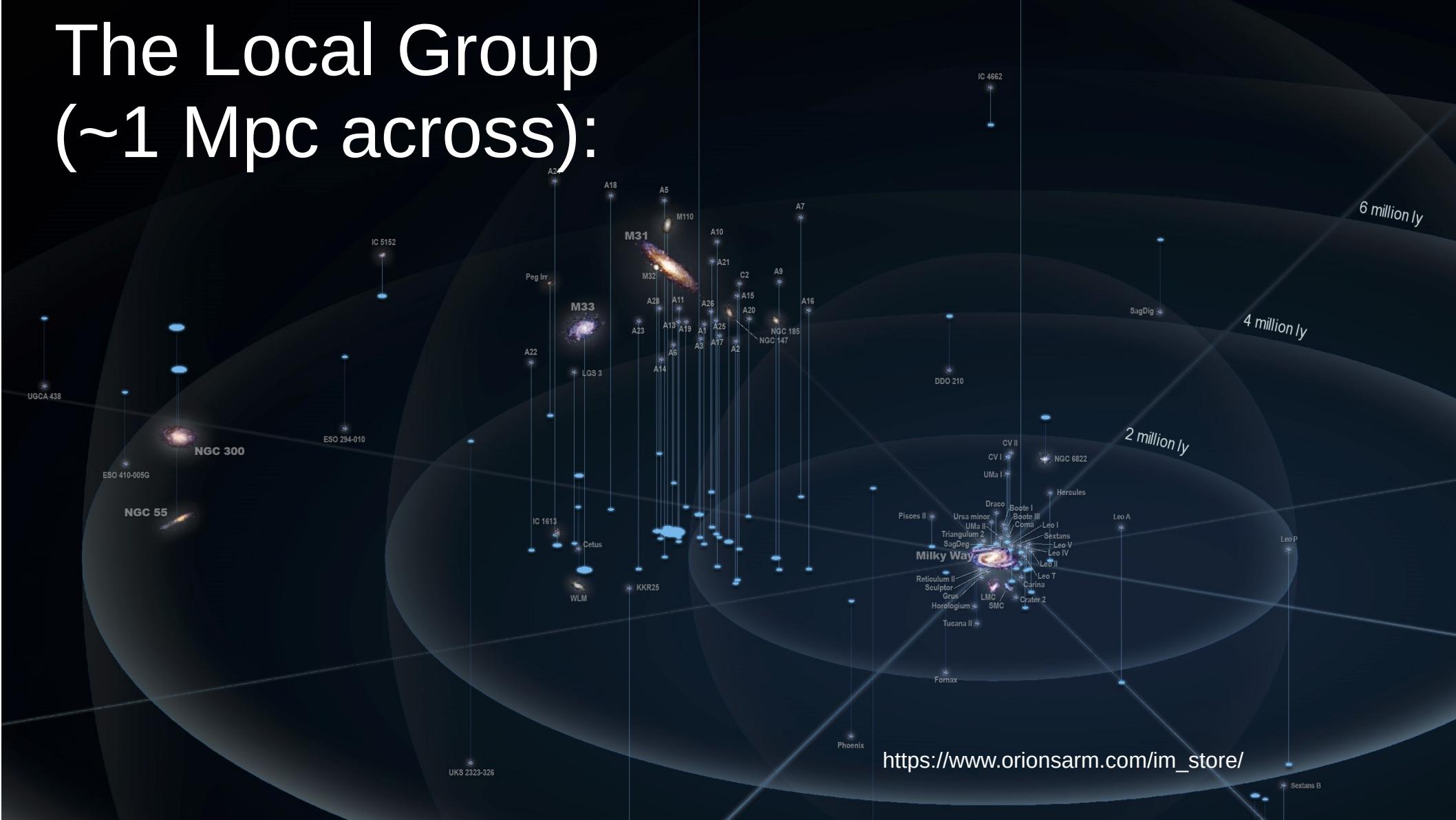


# W13L2 – Galaxy Clusters

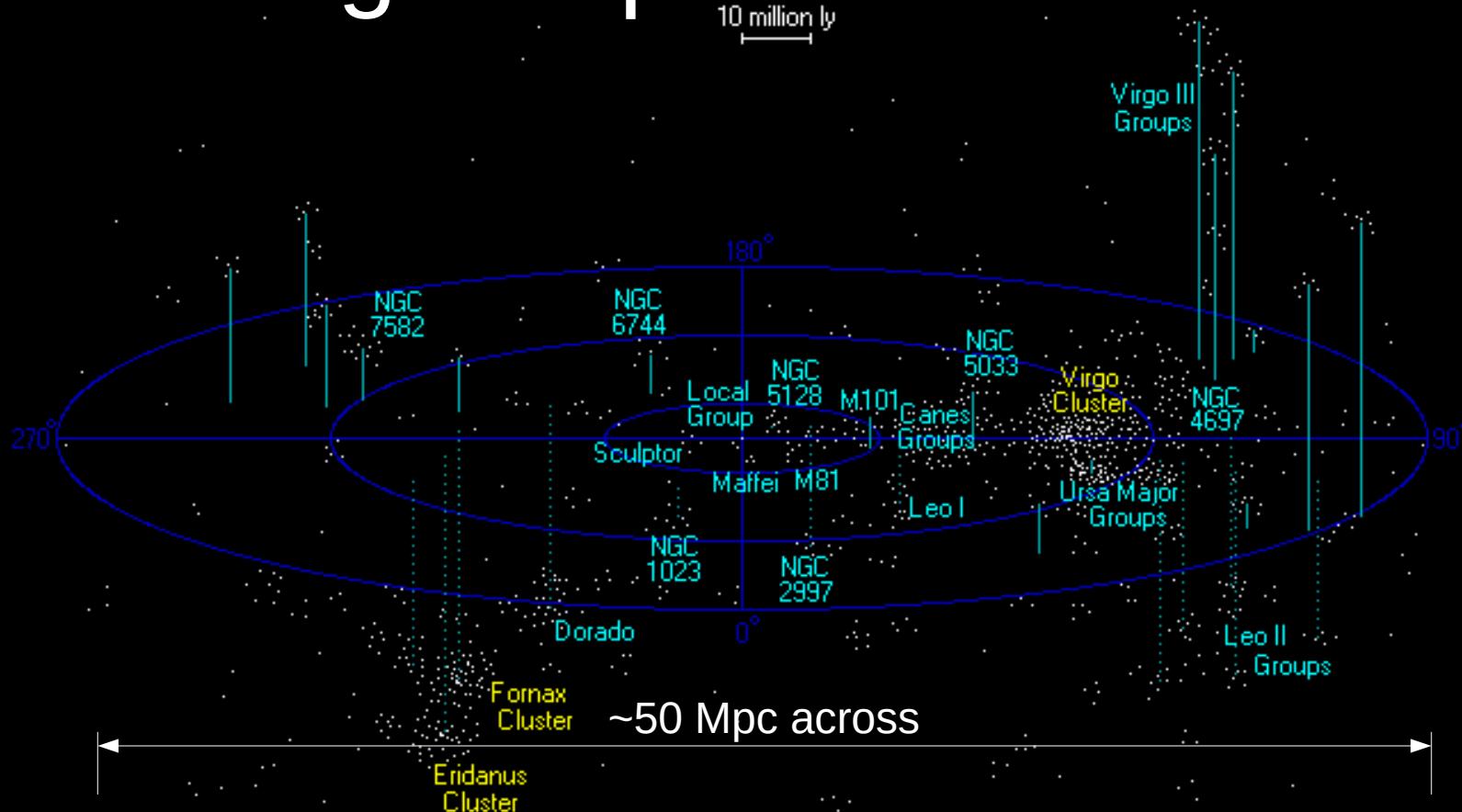
PSet #8: due Monday, April 22

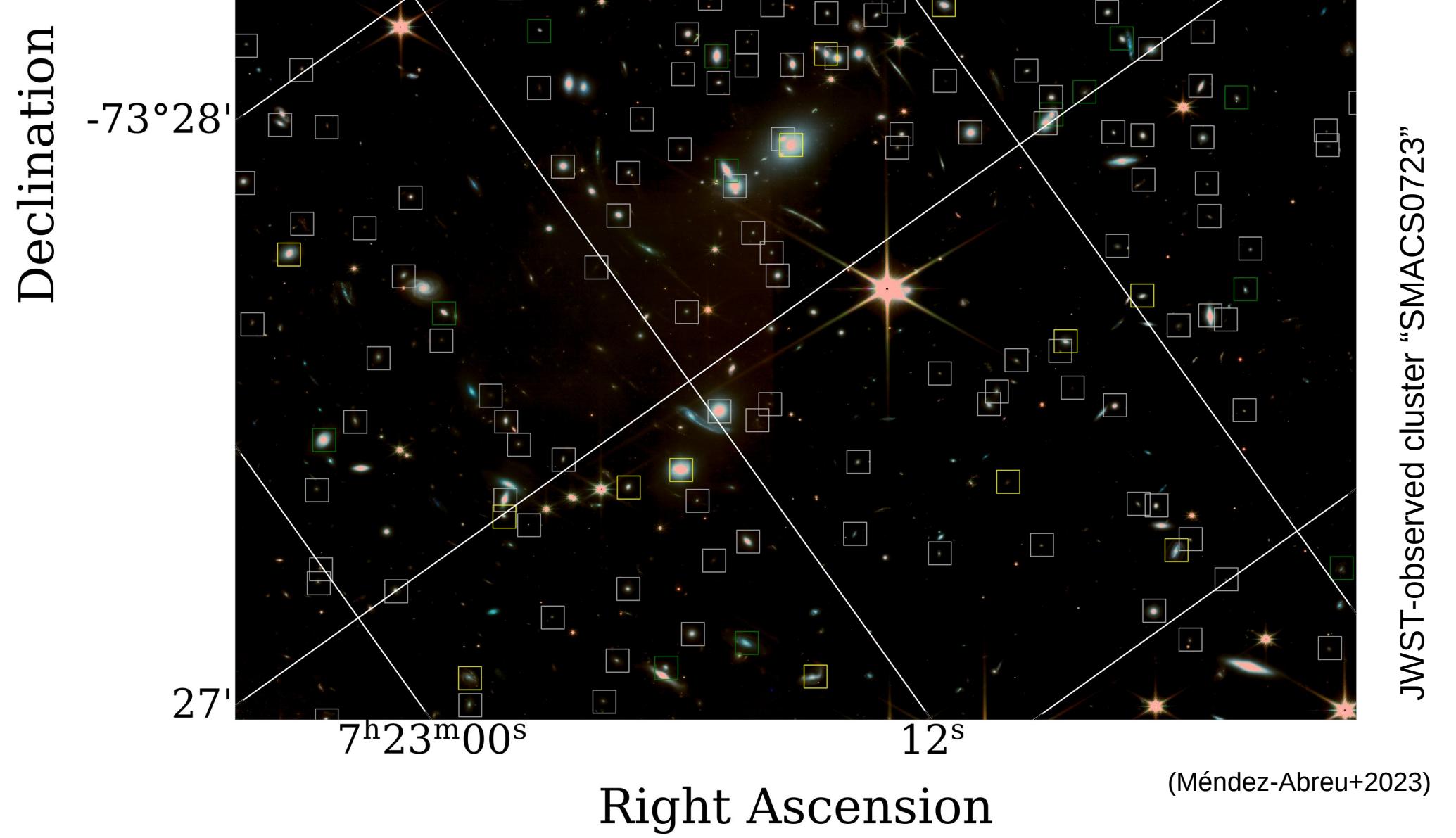
# The Local Group (~1 Mpc across):



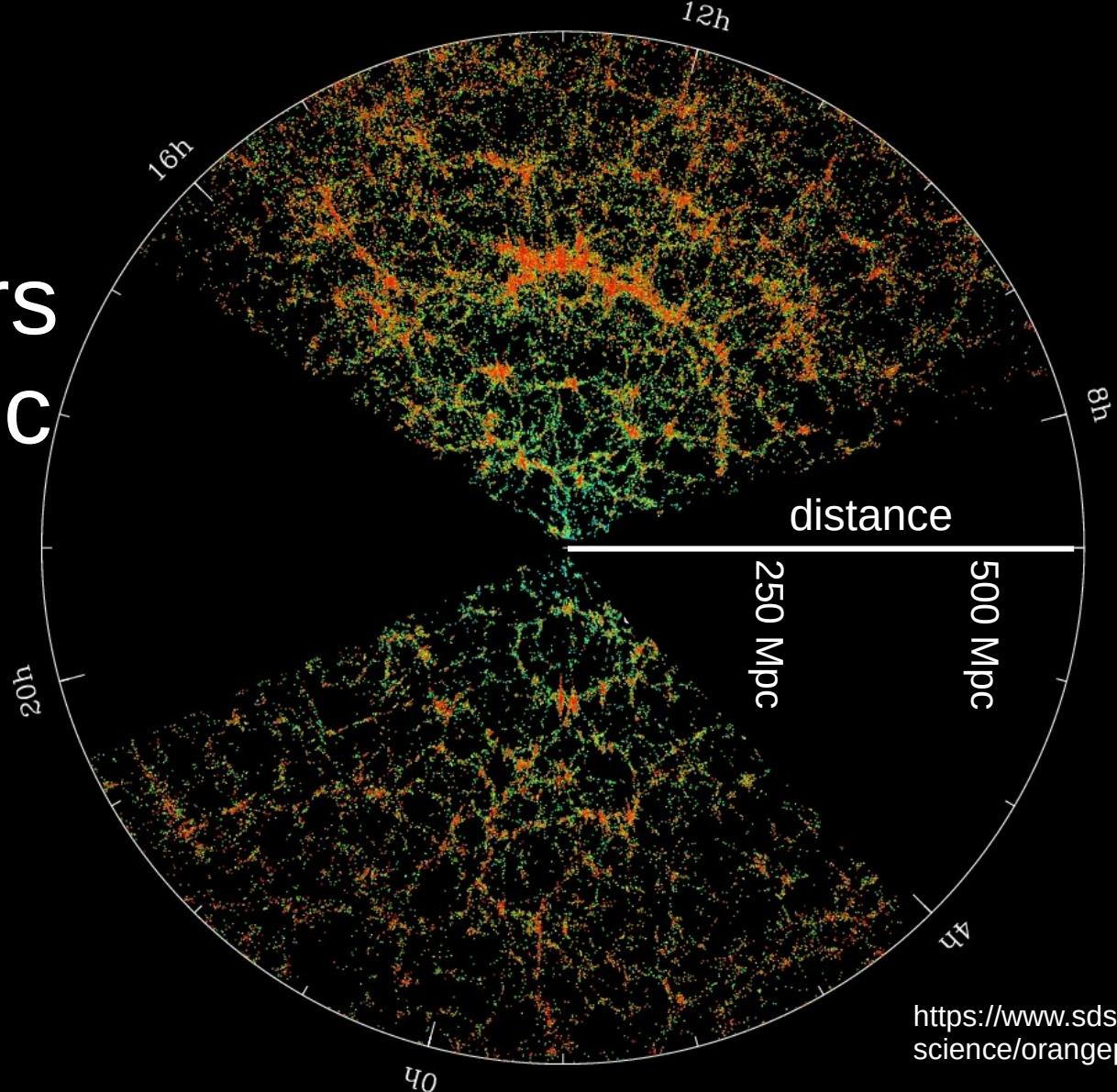
# Virgo Supercluster

10 million ly





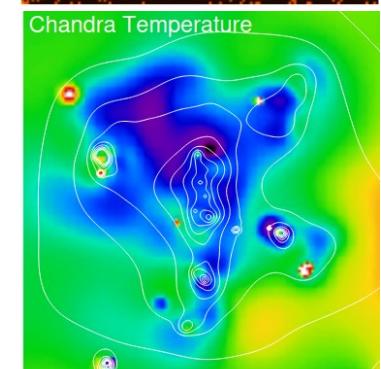
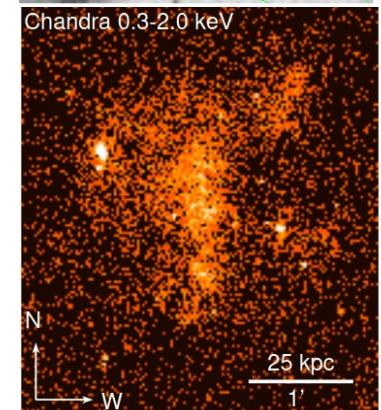
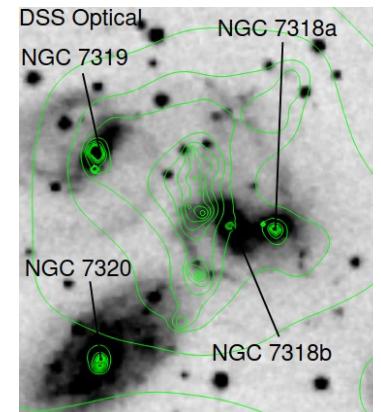
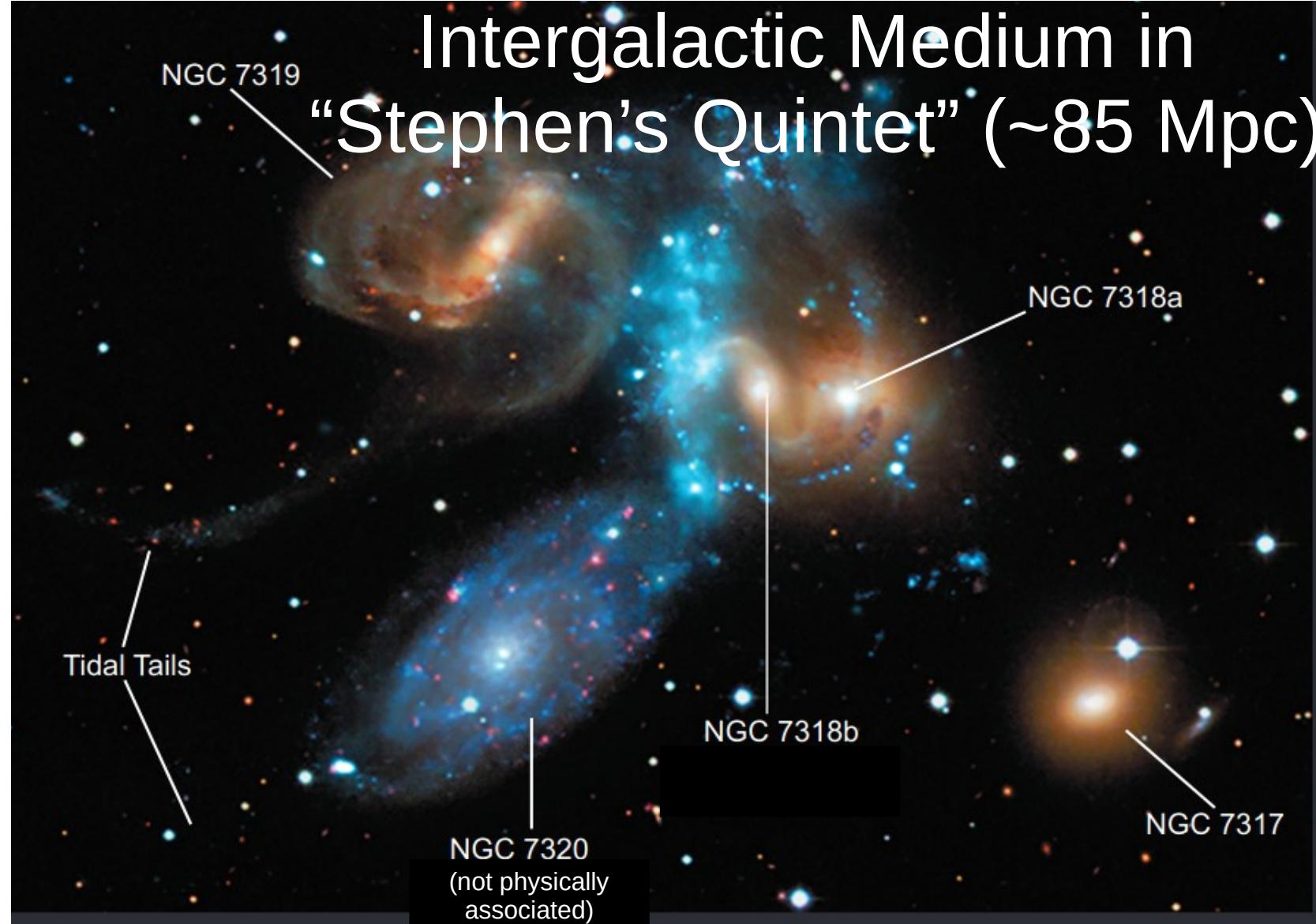
# Large-Scale Structure: Galaxy Clusters out to ~600 Mpc



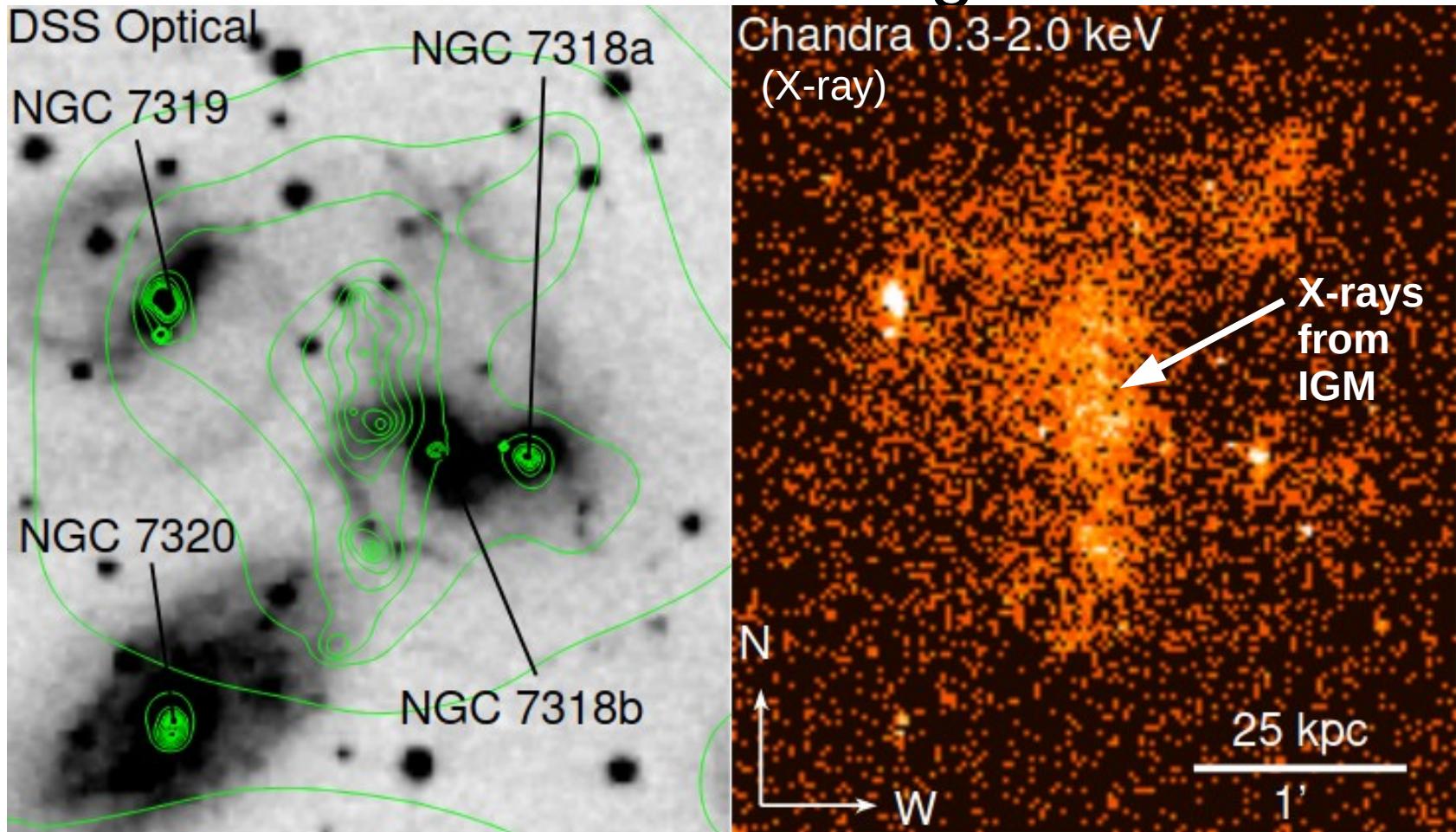
[https://www.sdss.org/  
science/orangepie/](https://www.sdss.org/science/orangepie/)

# Intergalactic Medium in

## “Stephen’s Quintet” ( $\sim 85$ Mpc)



# Stephen's Quintet: Lots of X-ray emission where there are no galaxies!





# Planetarium Show

- Slawson Hall: M or W (4/29 or 5/1) ?

# Possible Topics:

- 1) The Dark Matter Mystery
- 2) From Earth to the Universe
- 3) The Hot & Energetic Universe
- 4) The Quest for Extrasolar World