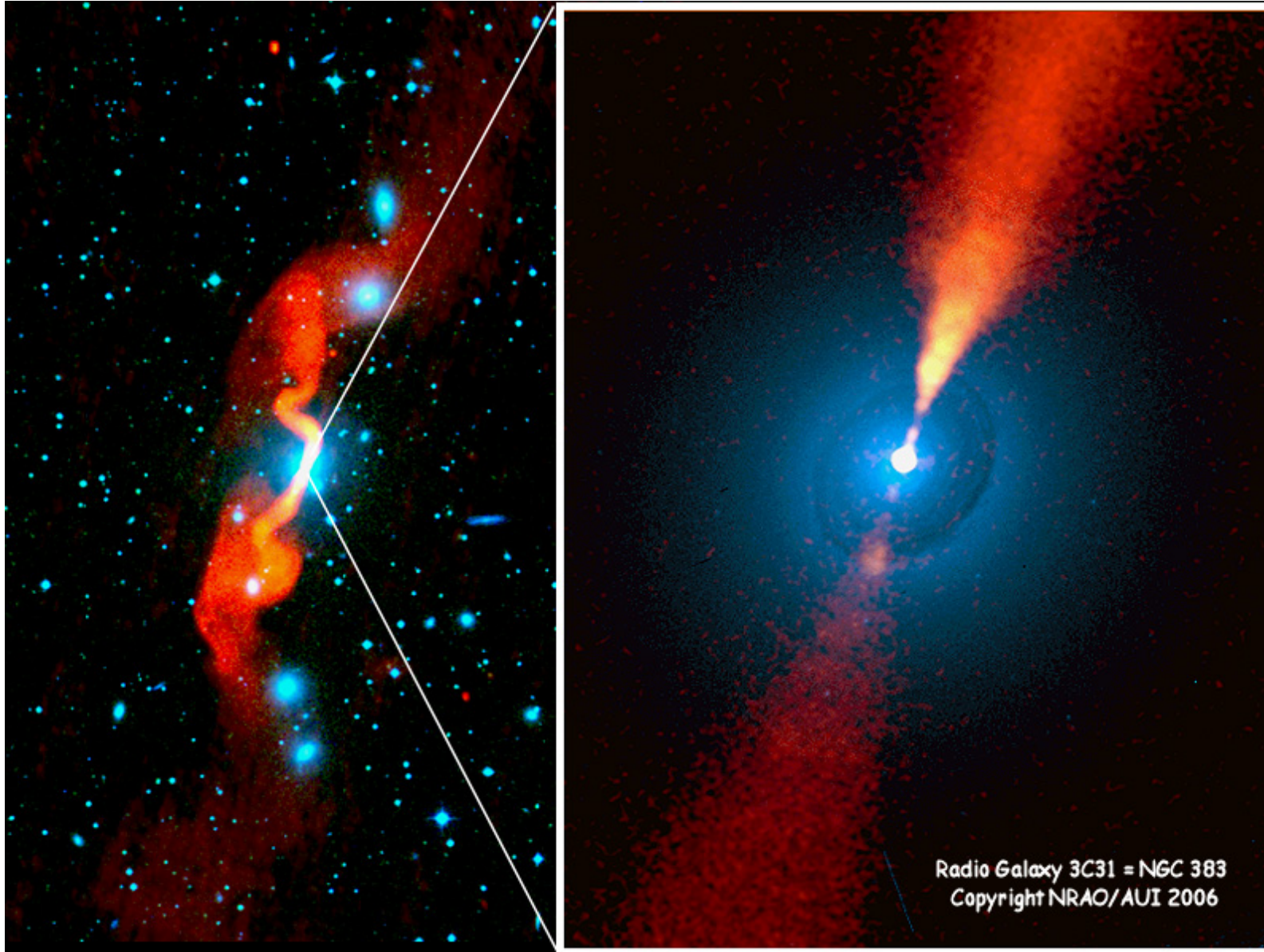
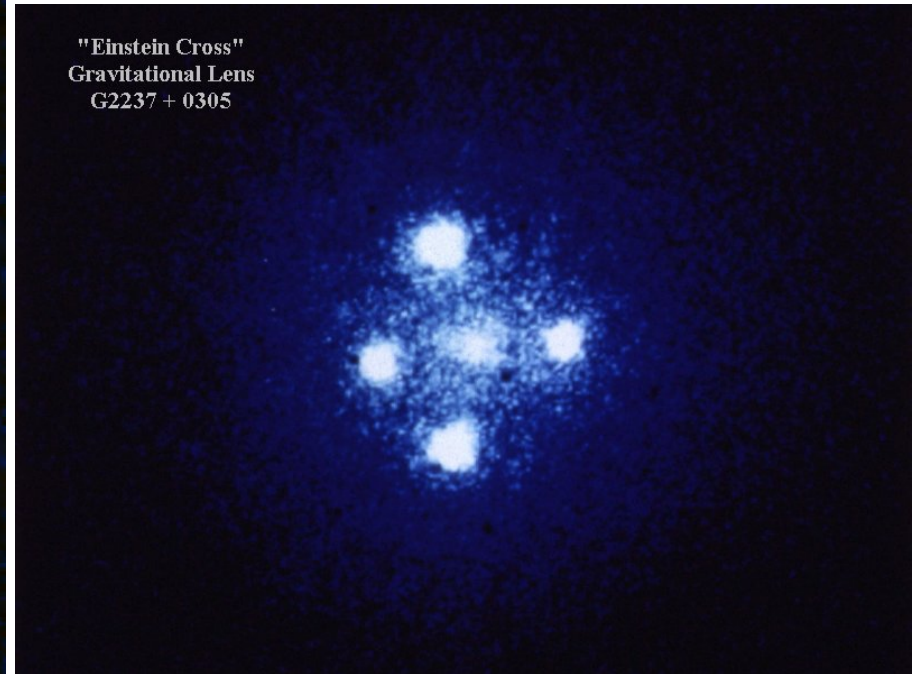
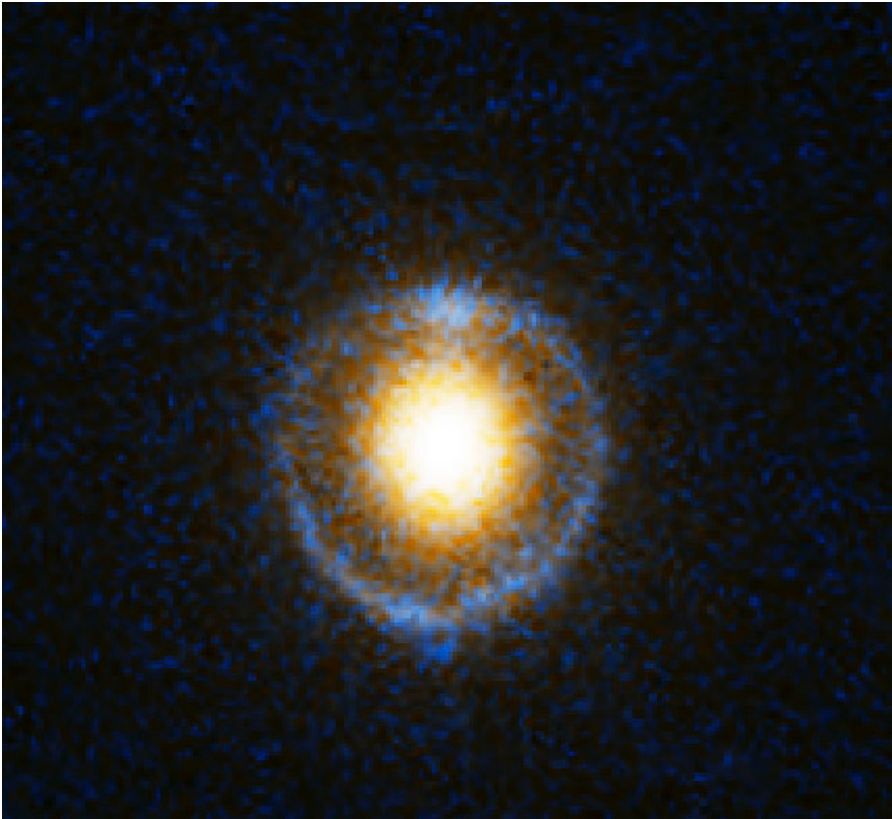


# Radio Galaxy 3C31, NGC 383

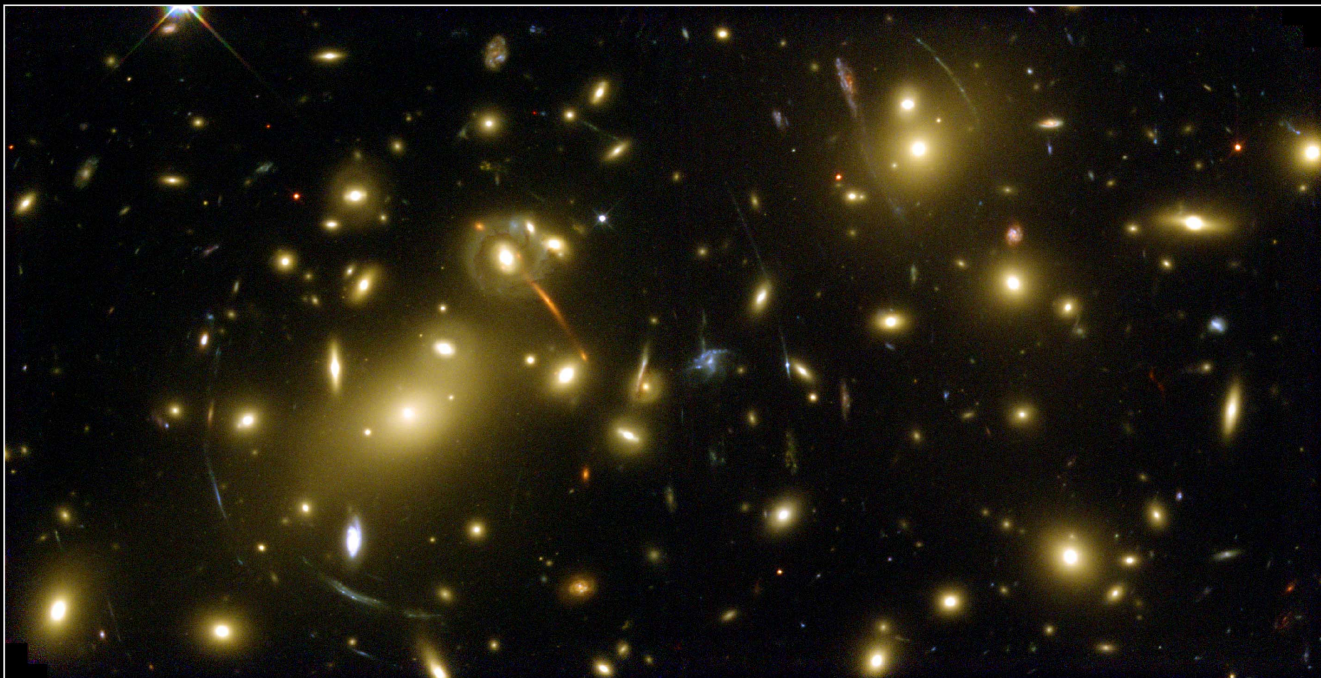


# Einstein Ring and Cross



# Giant Arcs

- Giant arcs in galaxy clusters: galaxies, source; cluster, lens



**Galaxy Cluster Abell 2218**  
Hubble Space Telescope • WFPC2

NASA, A. Fruchter and the ERO Team (STScI) • STScI-PRC00-08

# Cosmic Shear

- On even larger scales, the large-scale structure weakly shears background images: weak lensing

