

Hubble Views Distant Galaxies Through Cosmic Lens

The Hubble Space Telescope peered nearly 5 billion light-years into space to resolve intricate details in the galaxy cluster Abell 370.

Abell 370 is one of the first galaxy clusters in which astronomers observed the phenomenon of gravitational lensing, where the warping of space by the cluster's gravitational field distorts the light from galaxies lying far behind it. The distorted light is manifested as arcs and streaks in the picture, which are the stretched images of background galaxies.

The most prominent arc, the red object shaped like a snake, is the warped image of a galaxy two times farther away. Hubble resolves unseen new details in the arc that reveal structure in the lensed background galaxy.

Galaxy clusters are the most massive assemblages in the universe. The most massive clusters can contain up to 1,000 galaxies. The observations

**were taken on July 16, 2009, by the newly repaired
Advanced Camera for Surveys.**

**The fifth galaxy at bottom left, is a normal-
looking elliptical galaxy that is less affected by the
interactions.**

**For more information on Tactile Astronomy
projects from the Space Telescope Science
Institute in Baltimore, Maryland, go to the
following page at the Web site, Amazing Space:
<http://amazing-space.stsci.edu/tactile-astronomy/>**