

DEEP SKY OBJECTS

SIXTH OF A SERIES

A TRIO OF SPIRAL GALAXIES

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Galaxies are specifically classified as either spiral, elliptical or irregular in shape. Spiral galaxies are whirling disks of galactic material that have a bulge in the center. They have lots of visible structure such as spiral arms wrapping around the galaxy, dark dust lanes and colorful (when photographed) nebulae. Elliptical galaxies are ellipsoidal conglomerations of stellar material with hardly any noticeable structure. Irregular galaxies have no general shape and can range from very dull to quite exciting to view. In this issue, I want to highlight a trio of spiral galaxies.

Because of their relatively thin rotating disks, spiral galaxies can appear quite different depending on their orientation in space from our Earthly vantage point. Face-on spiral galaxies (zero inclination) allow us great views of spiral arms, central bars (for spiral galaxies that have such) and bright star forming regions. However, through a telescope, these features are very difficult to see except for a few very close and bright galaxies such as M33, M51 and M101. In most cases it is easier to see an edge-on (90° inclination) spiral galaxy than a face-on spiral of the same magnitude. This is because all of the light coming our way is concentrated along a thin edge-on disk and oval central bulge. In general, to gauge how easy it is to see a galaxy in a telescope, don't rely on just the cataloged magnitude. Also look at the inclination and angular size of the galaxy.

One exciting trio of nearly edge-on spiral galaxies visible in the same telescopic field of view contains NGC4216, NGC4206 and



The author captured this image of (left to right) NGC4222, NGC4216 and NGC4206 using a 190 mm f/5.3 Maksutov-Newtonian astrograph with an SBIG ST-2000XCM CCD camera.

NGC4222. These galaxies all reside in the constellation Coma Berenices. Search for this trio on a

Where have all the young people gone?

Unfortunately, it's been said far too many times, "Our hobby is graying."

The Astronomical League is interested in learning how your club attracts—and keeps— young people. Does it have specific outreach programs designed to connect with the young? Does it sponsor activities directed at people under the age of 19? We also would like to know how many of your members are under that age and what percentage they constitute of your club's membership. How does your club engage the young?

If you like, you may respond anonymously. Please email your comments to:

Astronomical League Executive Secretary Ron Whitehead, executivesecretary@astroleague.org.

clear moonless night after viewing the more famous and easier to find Leo Trio (M65, M66 and NGC3628), as the Leo Trio will be your guide to this Coma Berenices trio.

NGC4216 is located 14 degrees due east of M66, or 55 minutes of right ascension if you are using setting circles. As always, light pollution will hinder any deep space hunting, so find a dark observing site away from cities.

NGC4216 is the brightest galaxy in this Coma Berenices trio and resides halfway between its fainter companions. At magnitude 10.0, it is one magnitude fainter than M66, but not more difficult to find in an 8-

inch telescope. This is because the galaxy is 7.8 arcmin x 1.8 arcmin in size compared to 10.2 arcmin x 4.6 arcmin for M66. These numbers tell us NGC4216 is a more edge-on spiral and more compact in angular size than M66.

NGC4206 is two magnitudes fainter (12.2) than NGC4216 and smaller (4.7 arcmin x 0.9 arcmin). Even more challenging to see (you will probably need averted vision) is NGC4222 at magnitude 13.9. This smallest member of the trio measures 2.8 arcmin x 0.9 arcmin in size. There is a 9th magnitude star (the brightest star in the accompanying image) a few arc minutes east of NGC4222 that serves as a guide to the faint galaxy.

The three galaxies span about 0.25 degrees, making this grouping more compact than the Leo Trio. You can view this trio at a higher magnification than the Leo Trio and still capture all three in the same eyepiece field of view! ✨