

SHENANDOAH ASTRONOMICAL SOCIETY

June 2009

Arp 274



On April 1-2, the Hubble Space Telescope photographed the winning target in the Space Telescope Science Institute's "You Decide" competition in celebration of the International Year of Astronomy (IYA). The winner is a group of galaxies called Arp 274. The striking object received 67,021 votes out of the nearly 140,000 votes cast for the six candidate targets.

Slashing your way through the spring sky

The spring and fall months are a favorite time for Galaxy observing. The weather is still tolerable, the humidity is low and galaxies are in abundance!! They dominate the sky around the Milky Way's north and south galactic poles where the dust and dark matter can't obscure them from our view. Galaxies represent the overwhelming majority of observable, non-stellar deepsky objects. While there are about 1000 Open Clusters, 1400 Planetary Nebula,

and 150 Globular clusters in the Milky Way there are more than a million galaxies catalogued so far. Galaxies go through an evolutionary process like all other objects in the Universe. They have been broken down (by Edwin Hubble) into these major groups (with examples):

- 1) Spiral galaxies. (Disk + central bulge.)
M51 Whirlpool Galaxy [type Sc].
M31 Andromeda Galaxy [type Sb].
- 2) Barred spiral galaxies. (Disk + central bulge with bar.)
M83 in Hydra
M91 in Virgo Cluster
- 3) Elliptical galaxies. (All bulge, elliptical shape, no disk; stars but no gas.)
M87 giant elliptical galaxy, the dominant galaxy in Virgo Cluster.
- 4) Irregular galaxies. (Irregular shape.)
M82. [type Ir]

How did galaxies get that way? Some of the explanations thrown about today are if all the gas is made into stars before the gas has time to form a disk, then you get an elliptical galaxy. If the gas has time to stabilize into a disk before it is all used up, then you get a spiral galaxy. Or perhaps some of the elliptical galaxies are made from the merging of other types of galaxies. Observations of distant galaxies indicates that spiral galaxies were more common in the past than they are today. So maybe yesterday's spirals are today's ellipticals. This is an active research area. One problem is that if most of the mass in galaxies is unaccounted for (remember we're still searching for "dark matter"), we have a harder time understanding the dynamics of galaxy formation. In addition, galaxies tend to group into clusters and super clusters. Our own Milky Way is one member out of 30 galaxies in a group known as the local group. The Virgo Cluster is another example.

By Matt Orsie (former member of SAS 2000)

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In an area of the sky to the west and north of Spica in the Constellations of Virgo and Coma Berenices, there is a large number of both Messier galaxies and dimmer ones listed in the New General Catalog (NGC). There are eighteen of the M Galaxies and many, many more of the dimmer NGC galaxies.

Now is a good time to find some dim fuzzies up there. So I took out the ten inch Dobsonian to give it a try. I did not use a chart or even try to identify each one, just wanted to spot a few. I know this is a lazy kind of observing but I just wanted to do it that way. And not expecting to find anything new, only wanting to spot some of those elusive galaxies some millions of light-years away, I simply pointed up there and surfed the area.

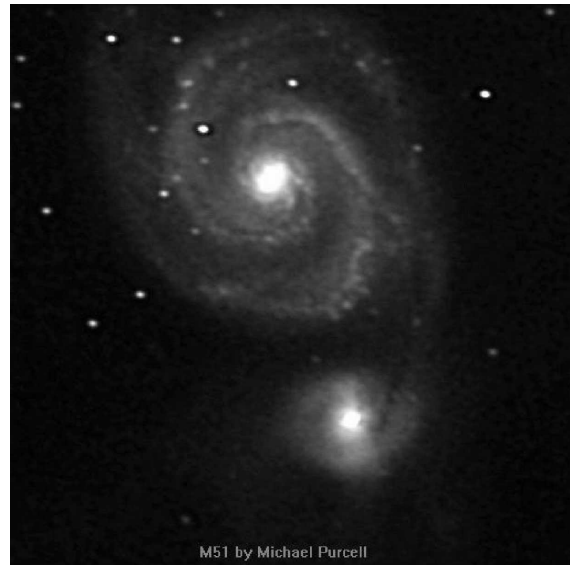
Finding them took some careful scanning but they began to appear before long. I located about 8 to 10 in all and this is from my house in Front Royal where you never see stars dimmer than the fifth magnitude. The galaxies I saw had to be the brighter ones so I think I saw M87. Then I feel sure I did find the three that are closest to the star Vindemiatrix, that is, M58, M59, and M60, only about 4 to 6 degrees away.

The star Vindemiatrix is near the eastern edge of this large group of galaxies and is a good starting place to look for them. The western edge is marked by the star Denebola in Leo but the galaxies are several degrees from it. Anyway, if you locate these two stars and then search between them and to the north, you will be in the right place. – Jim Adkins

JUNE PROGRAM at LFCC

June 13 at 7:00 PM

John Jankauskas is presenting domes and things for amateurs. He has built himself an observatory at home so I am sure he will be sharing some pictures of that and some information on what has been become available in that area of the hobby. I think that will be very good. It should be interesting even though most of us will not be making one. I thought it would be a great subject for one evening. So come on out.



Whirlpool Galaxy – M51

By the way, while I was out looking for galaxies in Virgo, I also saw M51 from the middle of town with the 10 inch telescope. Jim Adkins