

# Reflector

Published by the Astronomical League

Vol. 66, No. 1

December 2013



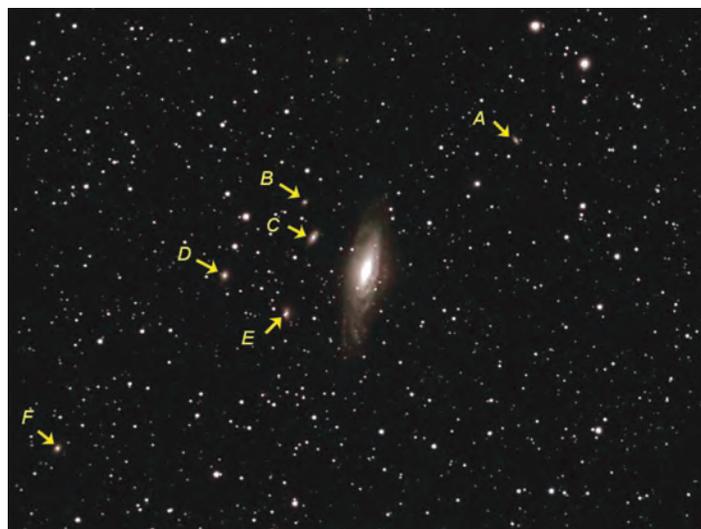
**Astronomical League's New Observing Program**  
**Report on ALCon 2013: Summer Skies, Southern Hospitality**  
**New Series: History of Astronomical League's Newsletter**  
**Recovering Comet ISON**

**P**egasus, the winged horse, is best known for its Great Square asterism. Marked by the four stars Alpheratz, Scheat, Markab, and Algenib, this celestial diamond is a landmark in the autumn night sky. Alpheratz is actually just across the border in Andromeda, but the interior of the Great Square definitely belongs to the winged horse. From suburban skies, the interior of the Great Square appears devoid of stars, since no interior stars are brighter than magnitude 4.5. Besides the stars marking the corners of the square, the stars Matar, northwest of the square, and Enif, in the southwest corner of the constellation, are the only other stars in the constellation brighter than third magnitude.

Other than the impressive globular cluster M15, Pegasus is not known for deep space objects reachable with eight-inch telescopes. However, there is one galaxy in Pegasus worth hunting in medium sized amateur instruments: NGC 7331. Discovered by William Herschel in 1784, NGC 7331 is bright enough that it could have been found earlier by Charles Messier—but Messier never happened across the galaxy, so it is not listed in his famous catalogue. More recently, NGC 7331 has been called the Deer Lick Galaxy by astronomy author Tomm Lorenzin, who gave the name to the NGC 7331

## DEEP-SKY OBJECTS TWELFTH OF A SERIES PEGASUS'S BEST GALAXY

By Dr. James R. Dire, Kauai Educational Association for Science & Astronomy



A: NGC 7315; B: NGC 7336; C: NGC 7335; D: NGC 7340;  
E: NGC 7337; F: NGC 7343.

group of galaxies in honor of Deer Lick Gap in the mountains of North Carolina.

At magnitude 9.3, NGC 7331 is the brightest galaxy in Pegasus. The spiral galaxy is inclined about 20 degrees to edge-on and spans 9.3 by 3.8 arcminutes. The long axis is oriented almost perfectly north-south. The galaxy lies 49 million light-years away and may have a diameter of 30,000 light-years. NGC 7331 is thought to be very similar to the Milky Way in size and shape, although the

Milky Way is actually a barred spiral galaxy.

To find NGC 7331, start at the star Matar (Eta Pegasi) and pan four degrees north and one degree west. There is a pair of sixth-magnitude stars separated by 10 arcminutes located one degree north of the Deer Lick Galaxy that can help you find the proper field. In a six- to eight-inch telescope, the galaxy will appear as an elongated unresolved smudge, with a core much brighter than the outer regions. Larger telescopes will

begin to reveal its spiral nature.

The accompanying image of NGC 7331 was taken with a 190 mm f/5.3 Maksutov-Newtonian. It is a two-hour exposure with an SBIG ST-2000XCM CCD camera. North is up and west is to the right. The brightest stars in the image are the two ninth-magnitude stars in the upper right hand corner. The faintest stars in the image are magnitude 18.

There are six other galaxies in the Deer Lick Group between 13th and 15th magnitudes in this image. The yellow arrows indicate their positions. All six are spiral galaxies and should be visible in 14- to 18-inch telescopes in very steady, transparent, dark skies. The image contains numerous fainter galaxies, many of which are hard to distinguish from myriad faint stars.

About one-half degree south-southwest of NGC 7331, just outside of the field of the accompanying image, lies another galaxy group called Stephan's Quintet. The galaxies in the quintet are all approximately 13th magnitude and lie within a 4-arcminute region. I have seen all five galaxies simultaneously in a 14-inch Newtonian telescope. Four of the five galaxies in Stephan's Quintet are gravitationally interacting with each other and will probably merge together in the distant future. The fifth is a line-of-sight galaxy. ☼

### Call for League officer nominations

The two-year terms of the offices of the Astronomical League president and vice president end on August 31, 2014. If you are interested in using your talents to serve in one of these important positions, we would like to hear from you. Please volunteer!

For specific information regarding the duties and responsibilities of these offices, please refer to the League's bylaws, which can be accessed on the League website at [www.astroleague.org/all/bylaws/bylawsrs.html](http://www.astroleague.org/all/bylaws/bylawsrs.html).

Candidates should send Nominating Committee chair Ann House, [secretary@astroleague.org](mailto:secretary@astroleague.org), background statements explaining why they are interested and photos of themselves for publication in the *Reflector*. Please limit all statements to approximately 250 words. All nomination materials must be submitted by March 15, 2014.

### The Astronomical League's 2014 Youth Awards: Prepare Now!

Wouldn't it be great to be young again and to be entering amateur astronomy! Now is the time to start considering the Astronomical League's youth awards for 2014: the National Young Astronomer Award and the four Jack Horkheimer Youth Service Awards.

If you know a young person who has been involved in an astronomy-related research project—either of his or her own doing or through an educational institution—please consider nominating that person for the National Young Astronomer Award. He or she must be between 14 and 19 years old.

If you know a League member, 18 years old or younger, who has brought amateur astronomy to your club or to the public through outreach, presentations, writing, or observing, please consider nominating that person for one of the three Horkheimer Service Awards. One of these awards—the Horkheimer/O'Meara Journalism Award—is more specialized than the others: it requires a person who is 8 to 14 years old to compose a 300- to 500-word essay on any science related topic.

Since the deadlines are January 31, 2014 for the National Young Astronomer Award and March 31, 2014 for the Horkheimer Awards, now is the time for potential candidates to work on their projects and to participate in various astronomy events.

If you are a club officer, nominate them. **If you don't, no one else will!** Complete information about each award can be found at [www.astroleague.org/al/awards/awards.html](http://www.astroleague.org/al/awards/awards.html).