MONTHLY OBSERVER'S CHALLENGE

Las Vegas Astronomical Society

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&

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MARCH 2015

Introduction

The purpose of the Observer's Challenge is to encourage the pursuit of visual observing. It's open to everyone that's interested, and if you're able to contribute notes, and/or drawings, we'll be happy to include them in our monthly summary. We also accept digital imaging. Visual astronomy depends on what's seen through the eyepiece. Not only does it satisfy an innate curiosity, but it allows the visual observer to discover the beauty and the wonderment of the night sky. Before photography, all observations depended on what the astronomer saw in the eyepiece, and how they recorded their observations. This was done through notes and drawings, and that's the tradition we're stressing in the Observers Challenge. We're not excluding those with an interest in astrophotography, either. Your images and notes are just as welcome. The hope is that you'll read through these reports and become inspired to take more time at the eyepiece, study each object, and look for those subtle details that you might never have noticed before.

NGC-2683 (The UFO Galaxy) Edge-On Galaxy In Lynx

NGC-2683 is also called "The UFO Galaxy." It was discovered by William Herschel on February 5, 1788. He gave it the designation H-200-1. It lies about 16 to 25 million light-years away and is almost edge-on from our point of view, giving it that narrow, but fat almost streak-like appearance. Though it was once thought to be an un-barred spiral galaxy, recent studies suggest it is now a barred spiral.

It shines at a modest mag 10.6, depending on the source, of course. It's possible to see it in small apertures if the conditions are favorable and if your observing skills are also put to use. It's a great Challenge object.

Observations/Drawings/Photos (Contributors listed in alphabetical order)

Gary Ahlers: LVAS Treasurer

NGC-2683 is a spiral galaxy in the constellation Lynx, about 25 million light years distant and comparable to the Milky Way but smaller. It is nearly edge on but the slight tilt of the disk makes it interesting. It has a very bright core and easily-distinguishable dust lanes along the arms. The high inclination makes it difficult to tell if this is a barred galaxy. Stats: Apparent mag. 10.4, apparent size, 9'.3 X 2'2, type SA. March has been a rather bad month for galaxy hunting, so far. I did this image from March 3, 2015 under poor conditions, with 2/5 seeing and 3/5 transparency using a 10-inch SCT @ f/4, a Mallincam 418XT, and exposures of 20 frames at 30 seconds each. I thought the inverted image showed some interesting detail, not easily discernible in the original image.

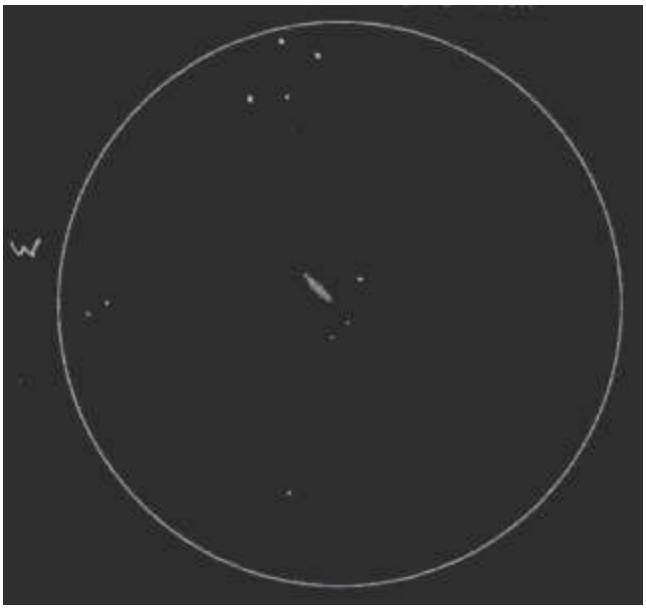
Gary Bruno: LVAS Member from Las Vegas

Sunday, February 15, 2015, 22:00 hrs. Not a bad night and a good location in the sky for me to do the March challenge, NGC-2683". Using a 10-inch reverse binocular with magnifications of 65X & 41X, I could see a bright and elongated galaxy. It was a still night, so it showed up rather well. Alongside of the target was a pinpoint of light. It looked very distant and since I couldn't find anything of that low of a brightness on any of my star charts, I have no idea what it was. Still, the two next to each other made an interesting contrast.

Glenn Chaple: LVAS Friend from Massachusetts

On March 19, 2015, with Mag. 5 NELM skies, I observed NGC-2683 with a 10-inch f/5 reflector. "I saw it easily at 39X. There wasn't much detail at 139X; and looks like M82 when viewed with a small-aperture scope."

On January 11, 1978, under Mag. 6 NELM skies, I observed the galaxy with a 3-inch f/10 reflector at 60X. "It was quite faint, but unmistakable and slightly elongated."



Dr. James Dire: LVAS Friend From Hawaii

NGC-2683 is a faint galaxy in the constellation Lynx. It was discovered by William Hershel in February 1788. The galaxy is located 6° west and 1° south of Alpha Lyncis and 5° north and 1° east of Iota Cancri. NGC-2683 is a nearly edge-on barred spiral galaxy measuring 9 by 1 arcminutes in size. At mag. 9.1, the galaxy can be seen in small refractors, I viewed the galaxy on March 21, 2015 with a 6-inch doublet refractor. At 38X, it was small and faint. The core was bright compared to the rest of the galaxy and its elongated shape was readily apparent. Higher magnification didn't bring out any more detail.

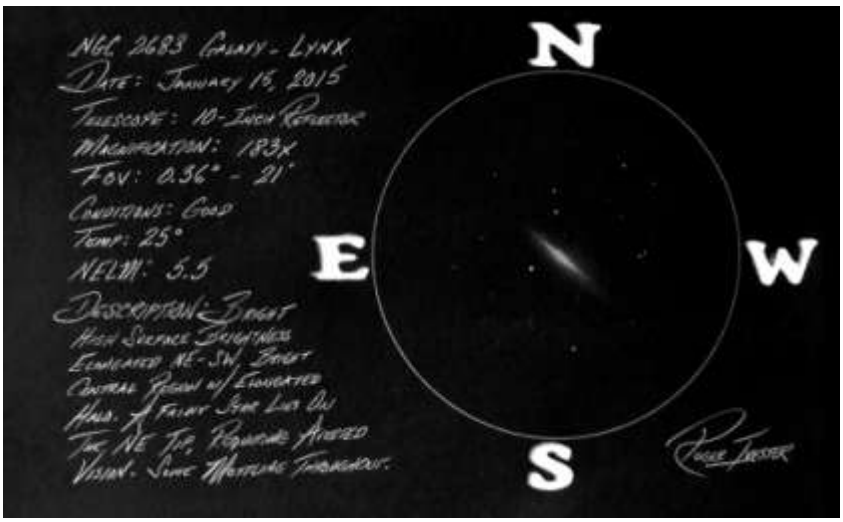
My image was taken with an 8-inch f/8 Ritchey-Chretien Cassegrain telescope with a 0.8X focal reducer/field flattener. The exposure was 60 minutes using an SBIG ST-2000XCN CCD camera. The spiral structure is apparent, with dark dust lanes and bright HII regions coming into view. The magnification and resolution were not sufficient to see the galaxy's bar. However, the galactic core and central bulge are readily apparent.

Just south of the galaxy lies a mag. 16.4 edge on spiral galaxy. Many of the fainter star-like objects on the image are more distant galaxies. The brightest stars in the image are mag. 11, while the dimmest are fainter than mag. 17.

Roger Ivester: LVAS Member from North Carolina

On January 15, 2015, I observed NGC-2683 in Lynx with a 10-inch reflector at 183X. The sky conditions were good with a temperature of 25º and a NELM of 5.5.

This edge-in spiral galaxy was highly elongated, oriented NE-SW and spindle shaped which was easy to locate with a low power eyepiece. The high surface-brightness allowed me to use high magnification. At 183X, the central region was very bright and elongated with some mottling. I spotted a faint star on the NE tip. The galaxy was easy to locate just inside the border of Lynx from Cancer.



Gus Johnson: LVAS Friend from Maryland

In March, 1985, using an 8-inch reflector at 58X, NGC-2683 was NW of Sigma CNC, making it very easy to locate. This spindle-shaped galaxy was fairly bright, with a brighter middle, axis oriented NE-SW.

Rob Lambert: LVAS President in Las Vegas

From my observations, NGC 2683 resembles a spindle or needle, similar to other near edge-on galaxies I've seen. In this orientation of the image, North is to the right and West is down, so the galaxy appears to be oriented southwest to northeast for reference purposes. It definitely appears to be an elongated, obviously edge-on spiral galaxy with a significantly brighter core and surrounding nuclear bulge. At a magnification of only about 60x, I was not able to see much detail and could definitely not see any dust lanes. Many of what seem to be fuzzy stars in this image are actually other galaxies at greater distances than the 16 to 20 million light-years that NGC 2683 is from Earth. I'm intrigued by the pattern of stars off the southern end of the galaxy. The four brighter stars are an easily recognizable pattern in Starry Night Pro, when zoomed in to about a 2-degree by 1-degree field of view.

Again, I have not done any post-processing of this image and have tried to present it as being close to what one might see at the eyepiece. This is a 10-second integration captured from Death Valley National Park on 4 April.

Fred Rayworth: LVAS Vice President and AL Coordinator from Las Vegas

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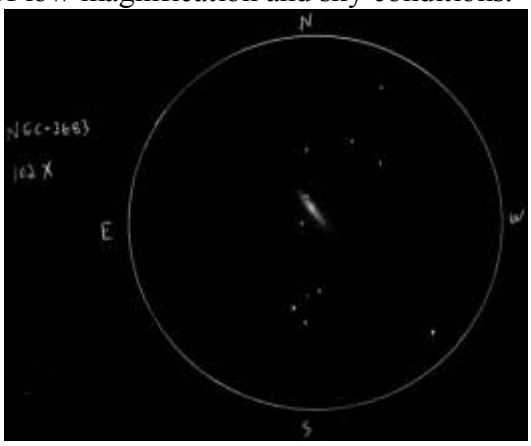
The first time I saw NGC-2683 was at the Sunset Overview on the western shore of Lake Mead, Nevada. At 1,375 feet, it was a fairly dark site back then before they started work on the new water intakes for the Las Vegas Valley Water District, because of the low lake levels. That project lit the center of the lake like a Christmas tree.

The night was January 15, 2005. There was 1/3 moon. A high haze

was coming in from the north and the southwest. There was no wind and it was pleasantly cool. About 9:30, the haze crept in so that there was only a small window to the southeast that was clear and about half of the zenith. I think the haze was coming in long before that because I couldn't even find M-108, or M-109 with all the stars in the area visible. Several others couldn't find M-81/82. I gave up by then. The sky was very stable though and the moon and Saturn looked great with the haze to settle things down.

Using my home-built 16-inch f/6.4 at 70X, I saw a very faint streak next to a star. It was faint but with slight mottling. I'm betting I didn't see that much because of a combination of low magnification and sky conditions.



The next observation, and the more detailed one for the Challenge came on February 14, 2015 from Redstone Picnic Area on the North Shore Road, also at Lake Mead, but much further north and with a range of hills blocking the lake itself. This is my usual observing site.

There was a cool, slight breeze that died off at dark. Some high thin clouds drifted across the sky. I thought they would affect the transparency, and did to some effect. However, when the holes opened up, they really did and the sky became awesome in spots. I found a lot of Herschel galaxies in some areas to the east, while other areas I could barely pull anything in. Stars had nebulae around them while others were clean. Same old stuff, yet I picked up some beauts. It still wasn't the best night but not bad in the long run. I finally got too tired to go on, partially because of a bout of food poisoning. Still had a great time.

Using my commercial 16-inch f/4.5, the galaxy was a nice, fat, elongated streak with a star touching the northwestern edge at 102X. 229X brought it out a lot more and showed mottling that spread out from the core.

My drawing shows it at 102X with just a touch of the mottling, which I wasn't able to draw well enough to include in the 229X detail, so I went with the simpler impression this time.

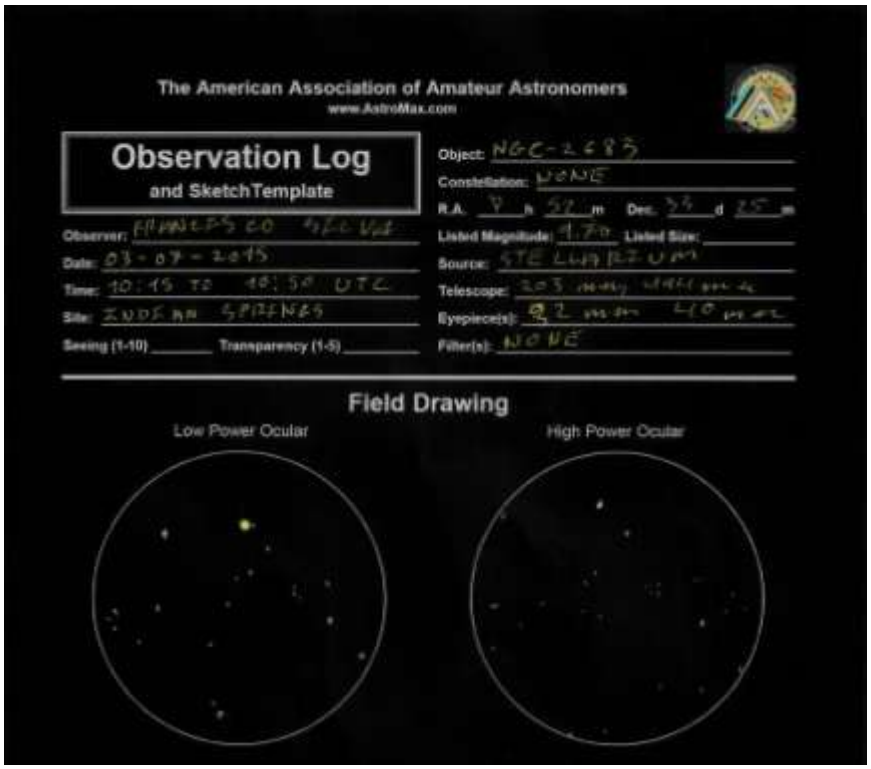
Jaakko Saloranta: LVAS Friend from Finland

Easily visible with 8 inch Newtonian, @ 50X (50'), the best view was @ 200X (12'). It was a high surface-brightness, fairly bright, nearly edge on galaxy. It had a brighter, non-stellar nucleus with an obvious central bulge. Size 8' x 2'. There was a mag. 12 star SE of the nucleus and two mag. 13 stars visible north of the nucleus. The sky conditions were decent with an SQM-L reading at the zenith of 21.25, naked eye limiting mag. 6.8.

M13 was visible with direct vision while M3 was barely detectable.

Francisco Silva: LVAS Member from Las Vegas

I think this is one of the most difficult so far. I had to use my two telescopes, the manual and one with GOTO, yet I had to use the stars of the constellations of Cancer and Lynx to locate the area of this object. Personally, I think that I have not been able to see it but I still leave you the result of my effort. I have no idea how William Herschel could discover it in 1788.



Jay Thompson: LVAS Member from Henderson, NV

I observed NGC-2683 in Lynx from Meadview, AZ on February 21, 2015 with a 17-inch reflector. It was very obvious at 63X.

At 125X, an elongated brighter nucleus area was evident with dimmer outlying arms. I could see the arms from the side. There was a star embedded in the following arms.

At 227X, the central part became more distinct, but the arms a little less so. The star in the arm following was very evident. That star and two to the north formed a right isosceles triangle. The two stars not in the arm were probably a little more following than being to the north, but they were roughly parallel to the axis of the galaxy.

At 425x, the central elongated core and some of the arm glow was apparent. There were hints of some darkness or structure on the preceding part of the flat disc, but not very evident. The best views were at 227X and 125X, with a slight preference for 227X. I could trace the arms out further at 125X than 227X, though.