MONTHLY OBSERVER'S CHALLENGE

Compiled by:

Roger Ivester, North Carolina

&

Sue French, New York

June 2023

Report #174

NGC 6217, Galaxy in Ursa Minor

Sharing Observations and Bringing Amateur Astronomers Together

Introduction

The purpose of the Observer's Challenge is to encourage the pursuit of visual observing. It's open to everyone who's interested, and if you're able to contribute notes and/or drawings, we'll be happy to include them in our monthly summary. 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 astronomers 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 Observer's Challenge. And for folks with an interest in astrophotography, your digital 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.

This month's target:

William Herschel logged NGC 6217 in his journal on three occasions. The discovery observation was made on December 12, 1797. The decrypted entry reads: C*onsiderably large, considerably bright, extended, a little brighter in the center. The extent almost points to 2 north preceding* [northwest] *pretty bright stars, or rather a little on the following side of them.*

This spiral galaxy sports a pronounced bar and a bright nucleus. Look for the faint star superimposed just 14 arcseconds south-south east of the nucleus. NGC 6217 dwells somewhere in the vicinity of 64million light-years away from our own Milky Way galaxy. It holds the dubious honor of being the brightest galaxy in within the boundaries of Ursa Minor.

Uwe Glahn: Observer from Germany

Object : NGC 6217

Telescope: 27″ f/4.2 Newton

Magnification: 293× - 419×

NELM: fst 6m5+

Seeing: III

Location: Edelweißspitze

Sketch follows.

You can see more of Uwe's sketches at http://www.deepsky-visuell.de/

Bertrand Laville: Observer from France

Observations Details

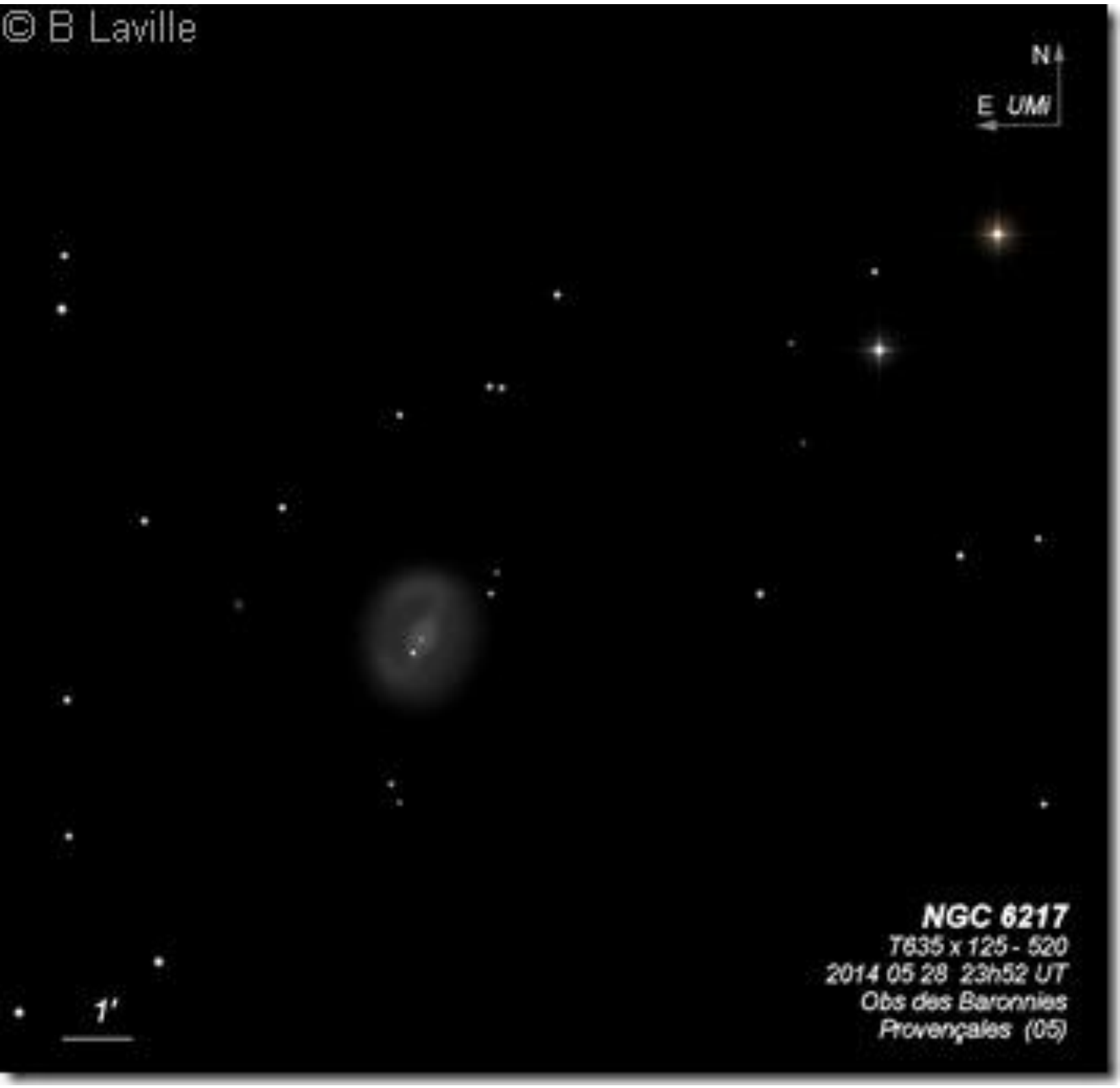
Date of sighting:	May 28, 2014 11:52 PM UT
Duration of observation:	50 mins
Object position:	Alt: 56.2°, Az: 359.3°
Viewing location:	Observatory of the Baronnies Provençales
Instrument :	TN 635 Dobsonian Obsession
Main eyepiece:	Tele Vue Ethos 8mm
Magnification:	390×

×125 ES25/100 25mm
NGC 6217 is also Arp 185. The galaxy is V1, bright, a/b ~ 1.33, concentrated CS. The bar is not obvious, the nearby stars disturb.

×390 Ethos 8mm
This is the best magnification for halo analysis. The bar is well perceived, A star next to the core is quite easy. The whorls are brighter to the E of the bar; the HII regions at the ends of the bar were not seen.

Sketch follows.

You'll find more detailed descriptions of Bertrand's sketches at: http://www.deepsky-drawings.com/


© B Laville
N
E UMi
NGC 6217
T635 x 125 - 520
2014 05 28 23h52 UT
Obs des Baronnies
Provençales (05)
1'

Larry McHenry: Observer from Pittsburgh, Pennsylvania

http://stellar-journeys.org

The barred spiral galaxy NGC 6217 (also known as Arp185) is located in the constellation of Ursa Minor, "The Little Bear". NGC 6217 is a near face-on SB type spiral about 61 million light-years distant, and about 55,000 light-years in size. NGC 6217 can be found above the horizon year-round for most northern hemisphere observers.

NGC 6217 (H1 280) was discovered by William Herschel on the night of December 12th, 1796, at his home in Slough, near Windsor Castle using his 20-ft reflector.

Using an 8-inch SCT optical tube @ f/6.3 on a GEM mount, with a CMOS color camera and broadband filter, 180-second guided exposure, live-stacked for 30 minutes.

Using EAA techniques: NGC 6217 is a bright oval-shaped disk with a star-like nucleus. The bar extends to either side of the core, with a spiral arm coming off the end of the north-western bar and another arm extending from the nucleus. A 16th mag field-star lies along the south-eastern bar near the nucleus.

A number of bright knots are visible in both spiral arms.

Image follows.

Video-Capture/EAA: 05/17/2023, from the ORAS Observatory in Western PA.

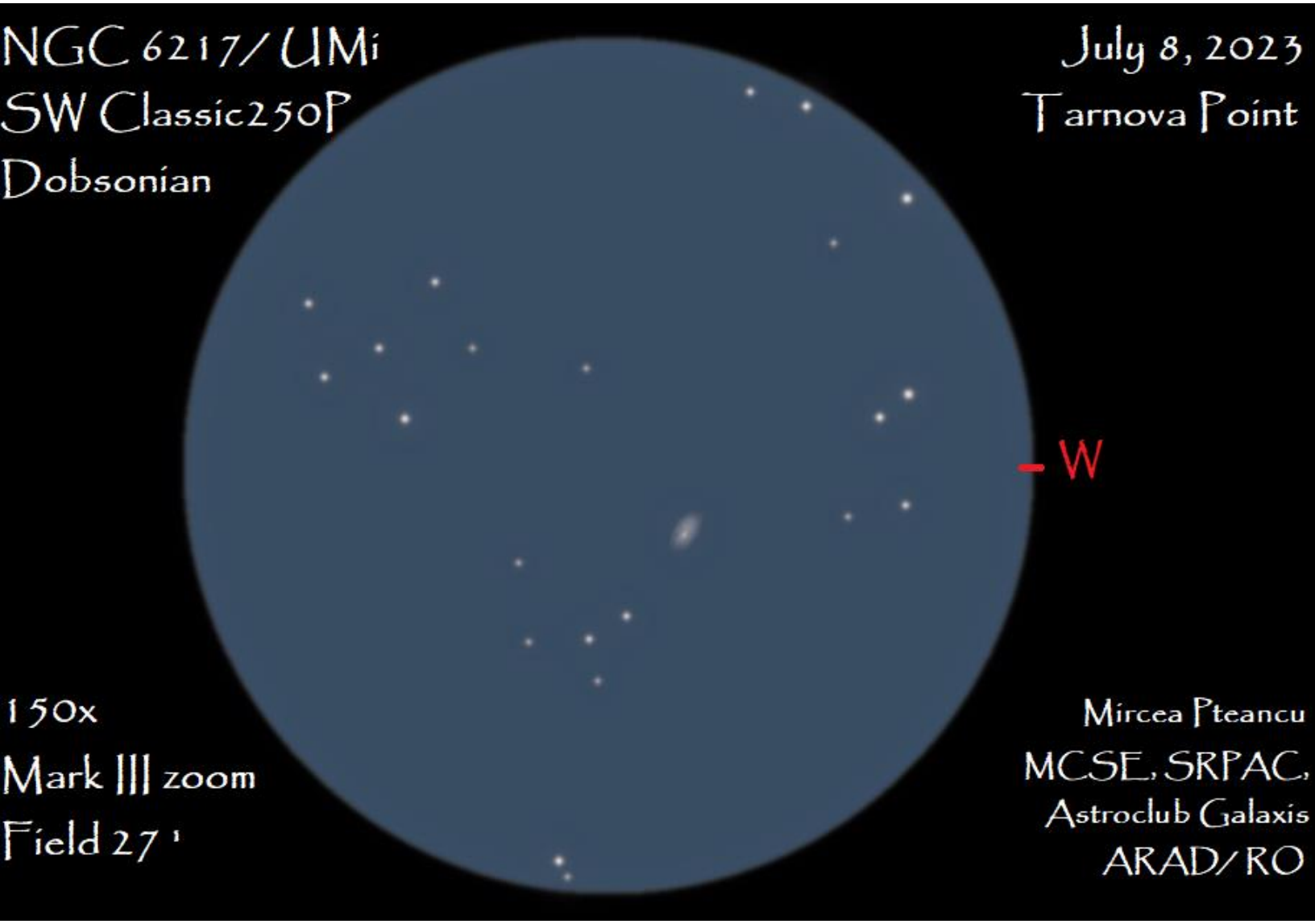
Mircea Pteancu: Observer from Arad, Romania

Mircea Pteancu of Arad, Romania
Affiliated with the Hungarian Astronomical Assoc., Romanian Society for Cultural Astronomy, "Galaxis" Astronomy Club, moderator on *astronomy.ro* forum.
https://observoergosum.blogspot.com/
https://www.astronomy.ro/forum

My observation of the galaxy NGC 6217 was made on July 8 from the spot we call ‘’Tarnova Point’’ having a Bortle 4 sky.

The instrument used was my SkyWatcher Classic 250P Dobsonian with the magnification of 150× obtained with the 8mm setting of the Baader Mark III (8 – 24) mm zoom eyepiece. In finding the galaxy I was again helped by Armand, my observing buddy, and his Sky Safari applet.

NGC 6217 was visible as a quite elongated, oval and hazy object. The central region of the galaxy is somewhat brighter, but the whole object is faint. The brightness gradient falls slowly toward the edge. This fact is in apparent contradiction with the changing visibility over the short axis of the galaxy, which improved with time.

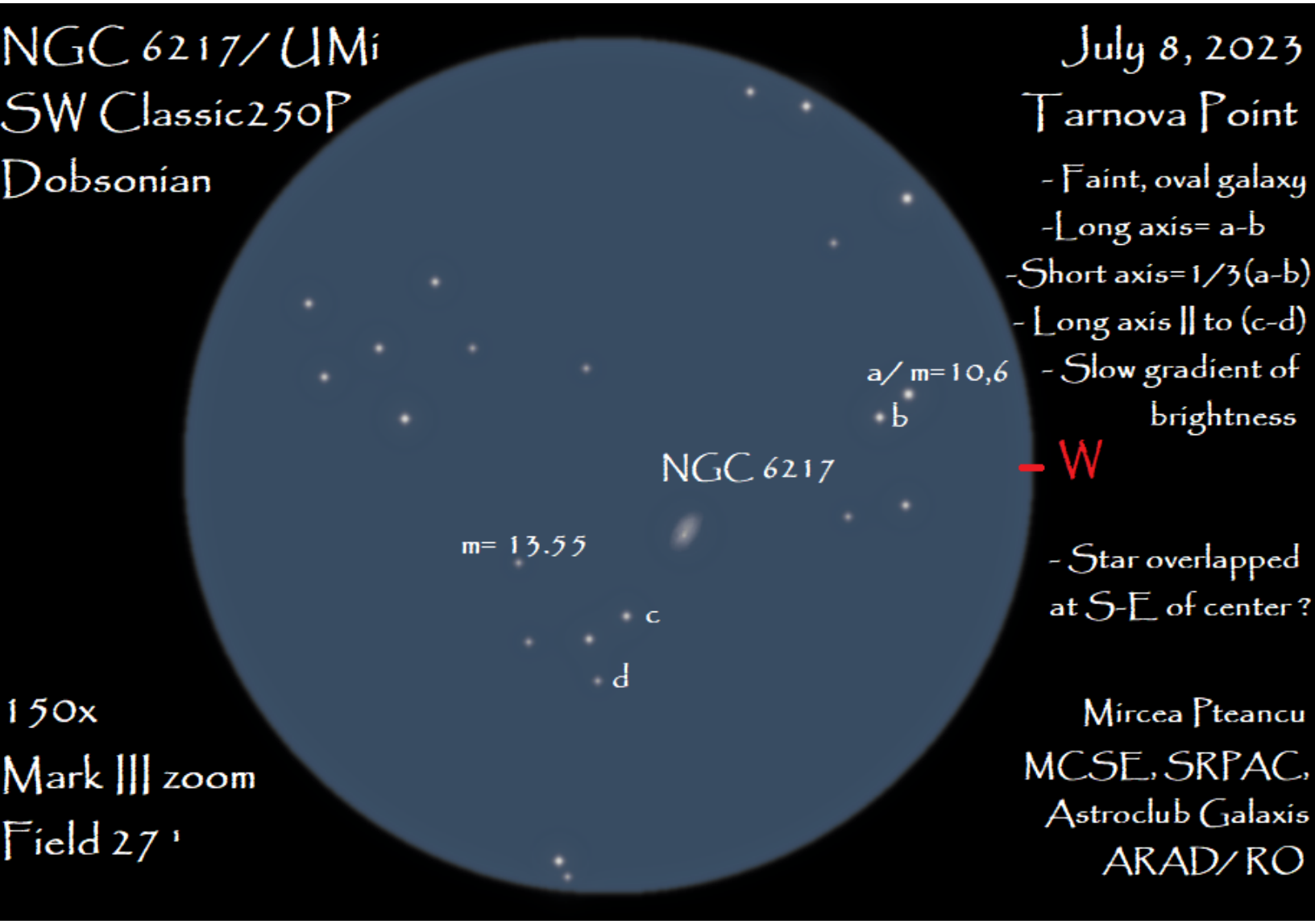


The long axis of the oval galaxy appeared to be about equal to the distance between stars "a" and "b", visible in the same field with the galaxy. This did not changed after prolonged observation.

The short axis appeared at first glance to be one quarter of the long one. After observing the field for at least ten or fifteen minutes, dimmer parts of the halo of NGC 6217 become visible. My final estimation of the short axis is of one third of the long one.

The long axis of NGC 6217 seem to be nearly parallel to the imaginary line set through the stars "c" and "d".

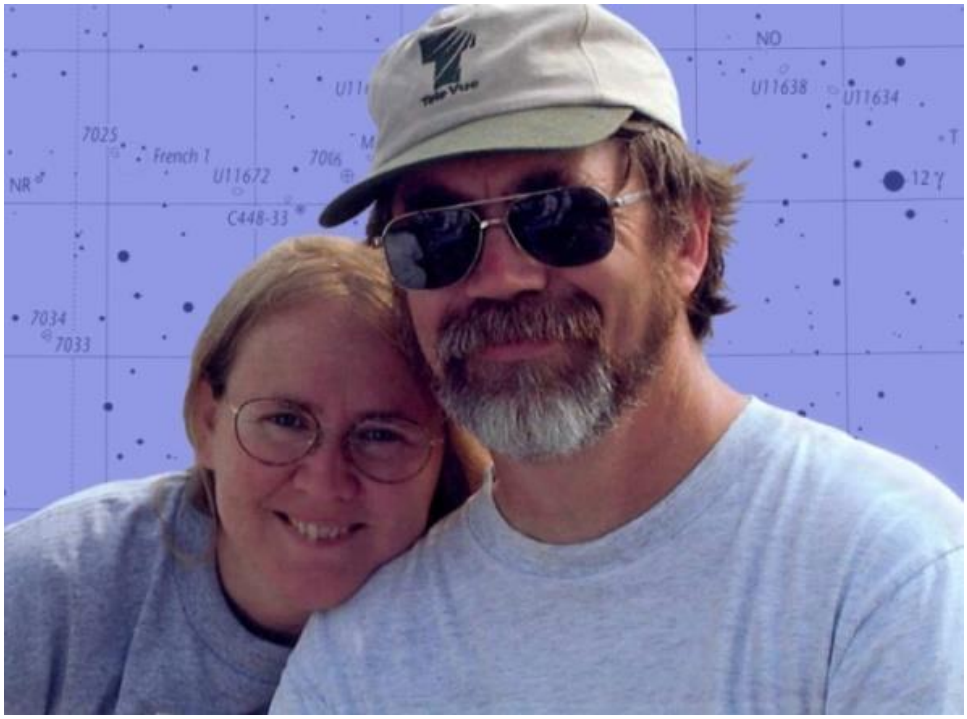
There are many dim stars in the same field with NGC 6217. I did not recorded all in my sketch. Using Aladin Lite and Stellarium, I learned that the brightest star I recorded is of 10.6 visual magnitude. The faintest star in my drawing is of magnitude 13.55.



However, one of the first things I noticed after pumping up the power to 150×, was a starlike object located to the S-E of the center of NGC 6217, along the long axis. It may be a star overlapping the galaxy. I saw this often occurring on the 1400 galaxy images examined on "Galaxy Zoo."

When "the stars will align again" I intend to re-observe NGC 6217 but with higher magnifications.

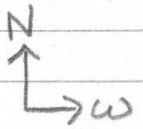
Sue French: Observer from New York



10-inch Newtonian reflector

NGC 6217 UMi Gx

13mm Nagler: bright core elongated along the galaxy's major axis. 8mm Ethos: Pretty. Subtle curves at ends of bars. Small core with substellar nucleus. Faint star superimposed just southeast of core is easy to confuse with the galaxy's nucleus.



Glenn Chaple: Observer from Massachusetts

NGC 6217 Galaxy in Ursa Minor (Magnitude 11.2, Size 3.0′ × 2.4′)

When it comes to offering galaxies for the backyard observer, Ursa Major and Ursa Minor are at opposite ends of the spectrum. *Sky and Telescope's Pocket Sky Atlas* plots several dozen in Ursa Major, nine in the Bowl alone, compared to just one in the entirety of Ursa Minor. Our July Observer's Challenge is that lone Ursa Minor galaxy, NGC 6217.

NGC 6217 was discovered by William Herschel on December 12, 1797, and is bright enough to be included in the Herschel 400 observing program. Its 2000.0 coordinates are: RA $16^{h}32^{m}39.2^{s}$, Dec $+78^{o}11'53.6''$. Star-hoppers can find their way to NGC 6217 by working their way 2.5 degrees ENE from Zeta Ursae Minoris or a similar distance NNE from Eta Ursae Minoris.

I observed NGC 6217 on the evening of June 19, 2023, using a 10-inch f/5 reflecting telescope and a magnifying power of 139X. Under my suburban magnitude 5 skies, I was able with averted vision to make out a pair of starlike specks surrounded by a faint oval-shaped haze oriented in a NW to SE direction. Upon returning indoors, I checked my resources and learned that the central-most speck was the galaxy's nucleus, while the other was a foreground Milky Way star.

Classified as a barred spiral galaxy, NGC 6217 is undergoing a high rate of star formation. Assuming a distance of 67 million light years, it has a diameter of 55,000 light-years.

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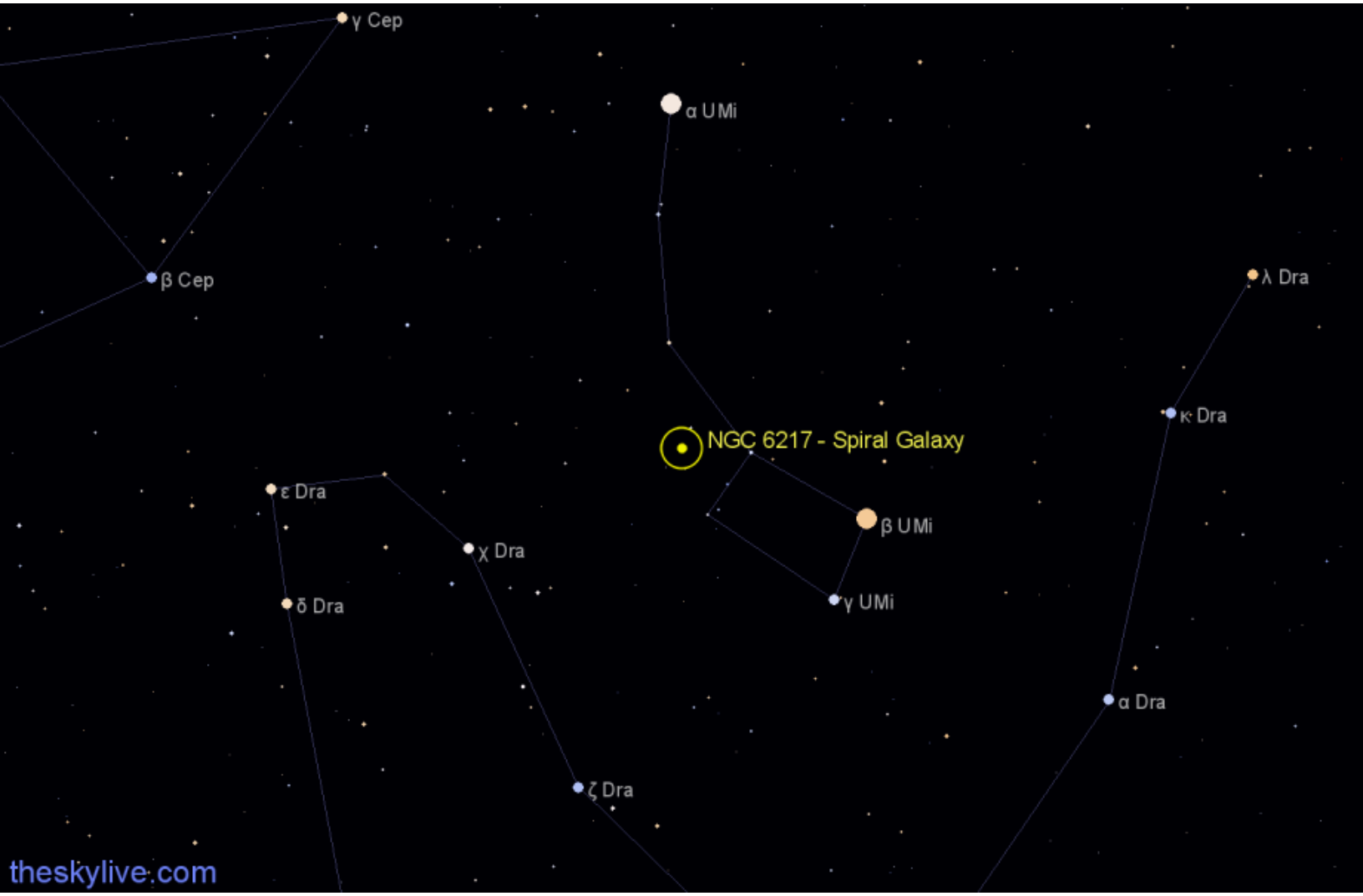
NGC 6217 Finder Chart

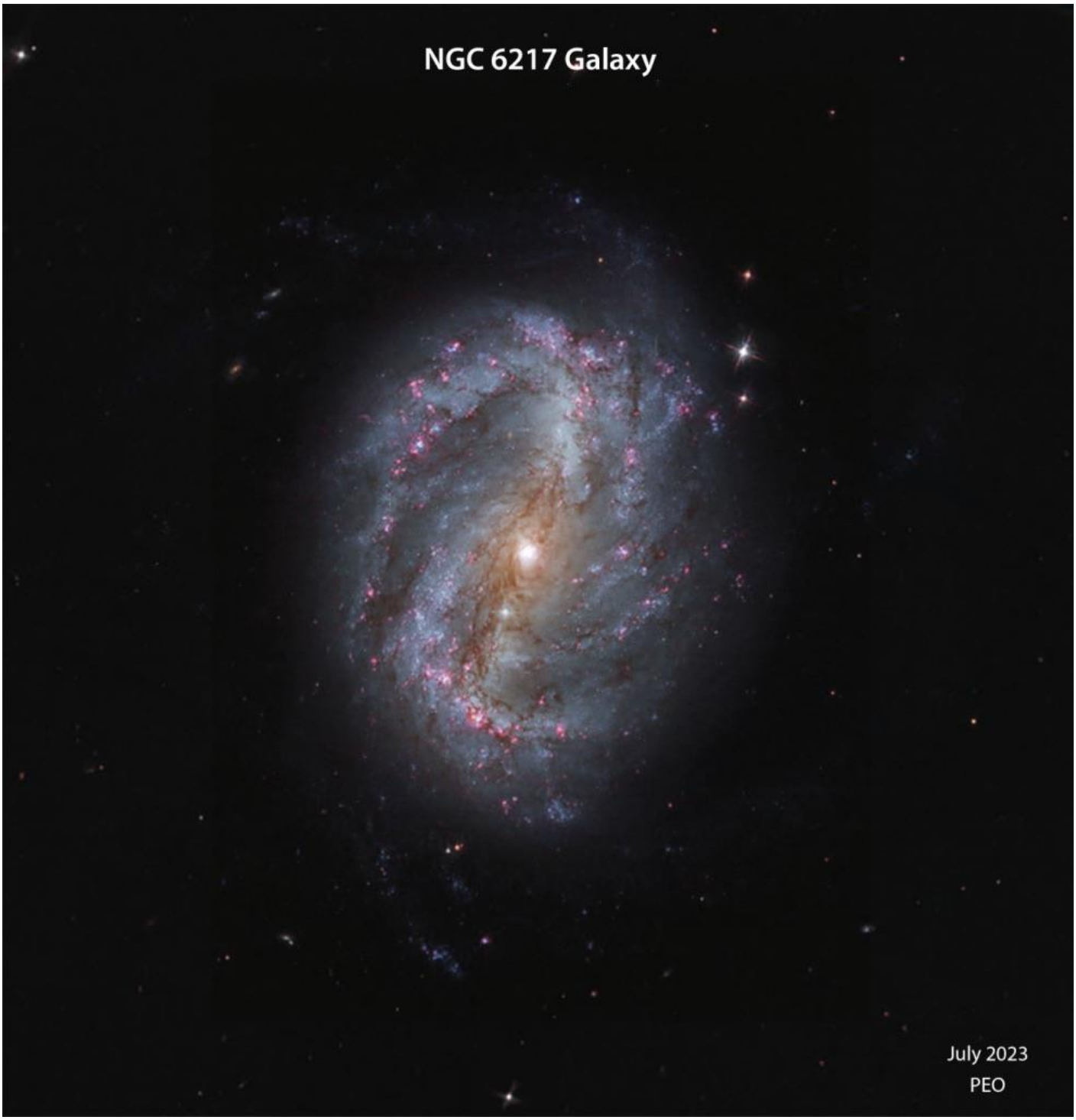


Phil Orbanes: Observer from Massachusetts

NGC 6217 is a small barred spiral, located in the constellation Ursa Minor.

It is approx. 67 million light-years away. It is undergoing a high rate of new star formation, and contains many H-II regions.

My photo would not have been so clear without the amazing new BlurXTerminator process in PixInsight. It permitted me to enlarge the composite result of approximately 8 hours of R,G,B, Ha imaging with my PlaneWave 14-inch reflector.



Mario Motta: Observer from Massachusetts

Image an details follow.

This past Saturday there was finally a small break in clouds, and a reprieve of the Canadian smoke, which allowed me to image the July Observer's Challenge object.

NGC 6217 is an interesting barred spiral, 67 Mly away in the constellation of Ursa Minor.

This is a starburst galaxy, and also reported to have a "false outer ring" to which I believe is the blue spiral outer arms, as seen in my image encircling the inner galaxy.

The following image was taken with my 32-inch scope, and ZWO ASI6200 camera with R/G/B and Lum filters. I also added some Ha filter imaging, but little showed. I recently read that for galaxies red shifting away from us, after 50-70 Mly, the "red Ha" is red shifted out of the narrow band pass that the filter will transmit. This may explain why even if a starburst galaxy, Ha regions appear less intense at this distance away. Total integration time is about four hours.

James Dire: Observer from Illinois

NGC 6217 is a small, faint, barred spiral galaxy in Ursa Minor. The galaxy is 2.5 degrees east of Zeta Ursae Minoris (magnitude 4.28). Zeta is the star that connects the cup of the Little Dipper with the handle. Zeta Ursae Minoris, NGC 6217 and Eta Ursa Minoris (magnitude 4.96) form an equilateral triangle. Zeta and Eta are the two faintest stars in the Little Dipper and are difficult to spy from suburbs.

NGC 6217 is magnitude 11.26. The galaxy measures 2.2 × 1.6 arcminutes in size, and is located some 67 million light-years away. The light we see from NGC 6217 left the galaxy when dinosaurs still walked the Earth.

NGC 6217 has the galaxy classification SBc. The S stands for spiral. The B means it's a barred spiral and the lower case c means the galactic bulge is relatively small compared to the diameter of the galaxy. The galaxy is thought to be 55,000 light years in diameter, smaller than our Milky Way.

I imaged NGC 6217 using a Unistellar eQuinox 2 telescope from my backyard at the western edge of the city of Bryan, Texas. This telescope is a 4-inch f/3.93 Newtonian with a built-in camera in place of the secondary. The exposure was 15 minutes. In the image, south is up and west to the left.

In the picture, the galaxy's core appears very star-like, similar to the view in a 10-inch telescope. The short exposure captured the bar and the faint foreground star superimposed on the southeast side of the bar. Some of the spiral structure also was captured in the image.

Image follows.


UNISTELLAR - NGC 6217 - 15min. - 31°N 96°W - JUL 15 2023

Joseph Rothchild: Observer from Massachusetts

I observed this barred spiral galaxy from dark skies on Cape Cod. I observed with my 10″ Dobsonian.

The galaxy was easily located by star hopping from a nearby asterism consisting of a small diamond and a pair of stars that pointed to the galaxy. The galaxy was visible at 53×, but best seen at 102×. It appeared too dim at 179×. It appeared as a small oval haze without any detail. I could not appreciate the bar. This was my first observation of this object.

Anas Sawallha: Observer from Jordan

This month's target is NGC 6217. This target proved to be a tough nut to crack, as it is so dim from my location and my telescope.

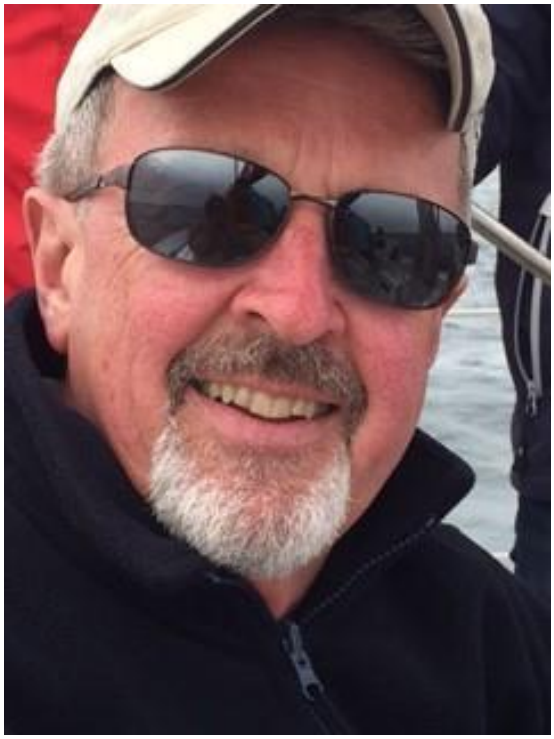
I went to a Bortle 2 site and spend a lot of time trying to squeeze every photon I could out of this galaxy. I was able to see it only through averted vision.

The galaxy appeared elongated with no bright core with two vertical arms which are slightly warped like the new models for the Milky Way. I saw no arms or the surrounding halo

Celestron 127 PS telescope, 23mm Aspheric EP
Al-Ashqaf desert Bortle 2
Seeing very good, Transparency 6/6

Sketch follows.

John Bishop: Observer from Massachusetts



On July 23, 2023, I observed NGC 6217, a barred spiral galaxy in Ursa Minor. After several months of meager observing opportunities, it was a welcome event.

I observed from a site a short distance from the harbor in Wellfleet, Massachusetts. I observed with my 8.25 inch f/11.5 Dall-Kirkham reflector, mounted on a motor driven equatorial mount, without go-to. The sky was clear. Transparency and seeing were very good (especially compared to my usual observing site closer to Boston). By midnight, after the Moon set, six of seven stars in the Little Dipper were visible directly, without averted vision. Offsetting these favorable conditions, the air was humid, and the mosquitoes were persistent. Any spot of skin uncovered by clothes or DEET would be discovered by these bloodthirsty pests.

NGC 6217 was not difficult to locate once I wrestled the OTA and the mount to the area near Polaris. The target forms an equilateral triangle with Zeta Ursae Minoris and Eta Ursae Minoris. The triangle fit nicely in the FOV of my 7×50 finder. Centering the finder on the target location between two small groups of field stars, NGC 6217 was directly visible in the main eyepiece at 48×. As others in the Challenge have noted, it was brighter than expected. (Luginbuhl and Skiff assign NGC 6217 a visual magnitude of 11.2, and a surface brightness of 13.4). At 48×, the object was a round, nebulous patch, uniformly bright. The image was steady.

As power was increased in stages to 134×, and then with Barlow, to 200× and 268×, the "starry point" referenced by Luginbuhl and Skiff was plainly seen in the center. I noticed only a single point, not the two points seen by others. At increased power, the larger, nebulous image was unsteady, expanding and contracting repeatedly. This fluctuating nebulosity may have been the faint spiral arms, hovering at the limits of visibility. It was difficult to assign a specific shape to the object. Nevertheless, over time the image appeared elongated, and brighter along that elongation.

Roger Ivester: Observer from North Carolina

NGC 6217 Galaxy in Ursa Minor

Date: June 13, 2023

Telescope: 10-inch f/4.5 Equatorial Newtonian

Sketch Magnification: 160×

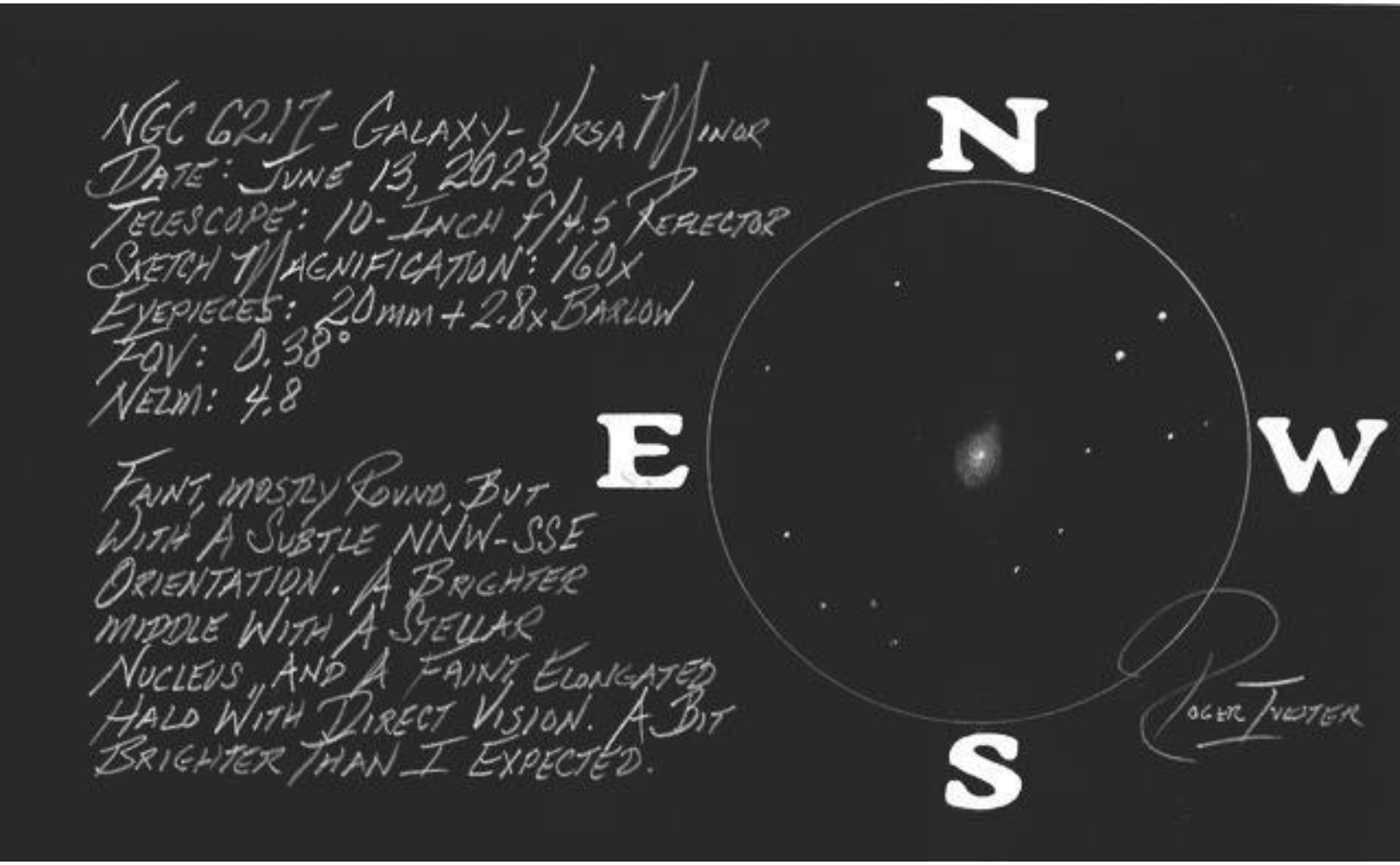
Eyepieces: 20mm + 2.8× Barlow

Field of View: 0.38º

NELM: 4.8

Faint, mostly round but with a very subtle NNW-SSE elongation. A brighter middle with a stellar nucleus and with a faint elongated halo with direct vision. A bit brighter than I expected.

Sketch follows.



The following is the complete listing of all Observer's Challenge reports to-date.

https://rogerivester.com/category/observers-challenge-reports-complete/