The South Shore Astronomical Society

and

Unistellar Optics

present

March Messier Madness

An Initiative to Engage in Astronomical Observing

Welcome to the month of March, a time of the year when astronomy enthusiasts can view every object in Charles Messier's venerable catalog of 'non-comets' in the course of just one overnight, should they choose to do so.

But seeing every Messier object in one night, also known as a Messier Marathon, is a daunting prospect indeed. The observer needs to be blessed with not only dark enough skies and low enough horizons to see the very first and very last objects on the list, but he also has to get lucky with the weather and have clear skies for a nearly twelve hour stretch throughout the night. The first two requirements can be met by carefully choosing your observing site. The third, unfortunately, cannot.

For these reasons and perhaps others, most observers tend to shy away from Messier Marathon participation, especially when the group you're affiliated with insists on sticking to a purist's approach – the one where only star hopping to every object and only visual sighting through the eyepiece is considered the right way to do it. While there is something to be said for completing the challenge in that manner, it also has a tendency to push many would-be observers to the sidelines.

So what if the rules were changed? And what if a variety of approaches to observing Messier's during the month of March were considered not only acceptable, but were encouraged? Enter Unistellar Optics, a French company that markets a unique telescope, the Unistellar eVscope. The eVscope is unlike the traditional optical equipment that most of us are used to. It's a telescope that, through the magic of Electronically Assisted Astronomy (EAA), helps observers of all levels to see dim celestial objects, even under less than ideal conditions. Unistellar had a vision about the Messier Marathon, and they acted on it.

In February of 2021, Unistellar reached out to the amateur astronomy community with a proposal – do the traditional Messier Marathon if you want, but if you don't, then consider our proposed options – and also consider becoming a part of a collective global effort to observe Messier objects throughout the month of March. Of course they would like it if you bought and used their telescope to do it, but never did they imply that it was required. They merely encouraged participation in the project.

And so we did. On the following pages is a chronicle of the South Shore Astronomical Society's participation in what we've coined March Messier Madness. Every member of the group was encouraged to participate, no matter what level of observing skills they possessed or amount of ambition they have. Naked eye, binocular, telescopic, imaging – it's all good in our book. The hope was that every member would add at least one small piece to the project and help to produce the club's most comprehensive and collective effort to date of observing the wonders of the night sky.

On March 4th 2021, the South Shore Astronomical Society got things started when a dozen members met at Centennial Field in Norwell, MA to participate in a constellation study session. Present were *Mike M., Louis G., Chris L., Jim R., Ted C., Jeff S., Patty B., Judy M., George C., Leslie and Vernon F. and Alden W.* The constellations studied included Perseus, Taurus, Auriga, Orion, Gemini, Canis Major and Canis Minor. Messier objects seen by all participants either naked-eye or through binoculars included M34, M35, M36, M37, M38, M41, M42 and M45 (with Mars).

On March 7th 2021, eight members of the South Shore Astronomical Society gathered at Centennial Field in Norwell for an evening of telescopic observing. Several members were concentrating their efforts on Messier objects as part of the Unistellar *Global Messier Marathon Project*.

At that gathering, *Mike M.* used a 4.5" F/8 Newtonian reflector on a Dobsonian mount and attempted/saw/or did not see the following Messier objects via star-hopping and looking through a low-power eyepiece;

M74 – not seen, in the trees.
M33 – attempted, not seen.
M32 – seen, fairly resolved.
M52 – seen, faintly resolved.
M76 – seen, fairly resolved, tiny.

M77 – not seen, in the trees.
M31 – seen, poorly resolved.
M110 – attempted, not seen.
M103 – seen, well resolved.
M34 – seen, well resolved.

M45 – seen, well resolved w/Mars.
M42 – seen, well resolved.
M78 – seen, faintly resolved.
M38 – seen, well resolved.
M37 – seen, well resolved.

M79 – seen, fairly resolved, faint.
M43 – seen, averted vision resolved.
M1 – seen, faintly resolved.
M36 – seen, well resolved.
M35 – seen, well resolved.

M41 – seen, well resolved.
M47 – seen, well resolved.
M93 – seen, well resolved.
M44 – seen, well resolved.
M81 – seen, well resolved.

M50 – seen, well resolved.
M46 – seen, well resolved.
M48 – seen, well resolved.
M67 – seen, well resolved.
M82 – seen, well resolved.

M108 – seen, faintly resolved.
M109 – attempted, not seen.
M51 – seen, faintly resolved.

M97 – seen, averted vision resolved.
M101 – seen, faintly resolved.

Total: **35 attempted/30 seen**

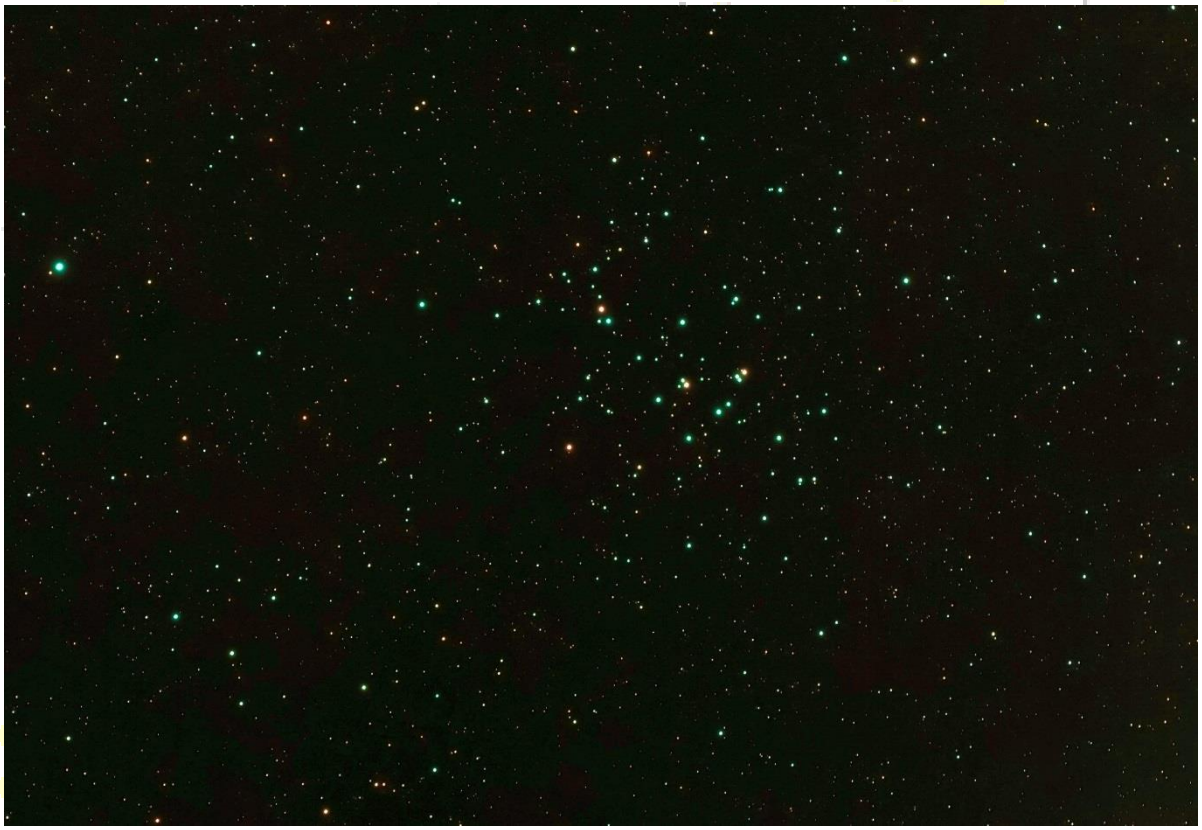
***Louis G.* reported seeing the following eight Messier objects** on that evening using his 18" Newtonian reflector on a Dobsonian mount via star-hopping and looking through the eyepiece; M45, M38, M37, M36, M41, M81, M82, M65, and M66. Louis also reported seeing a significant amount of nebulosity in the eyepiece while viewing the Pleiades.

On March 9th 2021, *Matt S.* shared the following images of Messier objects. Equipment used included a William Optics RedCat 51 w/DSLR on a tracking mount;

Mars and M45, aka The Pleiades, The Seven Sisters, Subaru

The Leo Triplet – M65, M66, NGC 3628

M101, aka The Pinwheel Galaxy



M44, aka The Beehive Cluster, Praesepe

On March 9th 2021, *Jim A.* shared the following image. Equipment used included a Celestron C8 Schmidt-Cassegrain telescope w/ZWO camera on a Celestron AVX mount;

M42/43, aka Great Orion Nebula

On the night of March 9th 2021, *Mike M.* got out in his driveway, and using a 10" F/5 Newtonian reflector on a Dobsonian mount he attempted and saw the following Messier objects;

M109 – seen, faintly resolved.
M40 – seen, well resolved.
M96 – seen, well resolved.
M65 – seen, well resolved.
M63 – seen, well resolved.
M102 – seen, well resolved.
M64 – seen, well resolved.
M98 – seen, well resolved.
M99 – seen, well resolved.
M84 – seen, well resolved.
M87 – seen, well resolved.
M90 – seen, well resolved.
M91 – seen, well resolved.
M59 – seen, well resolved.
M49 – seen, well resolved.
M104 – seen, well resolved.
M106 – seen, well resolved.
M95 – seen, well resolved.
M105 – seen, well resolved.
M66 – seen, well resolved.
M94 – seen, well resolved.
M53 – seen, well resolved.
M3 – seen, well resolved.
M85 – seen, well resolved.
M100 – seen, well resolved.
M86 – seen, well resolved.
M89 – seen, well resolved.
M88 – seen, well resolved.
M58 – seen, well resolved.
M60 – seen, well resolved.
M61 – seen, well resolved.
Total: 31 attempted/31 seen

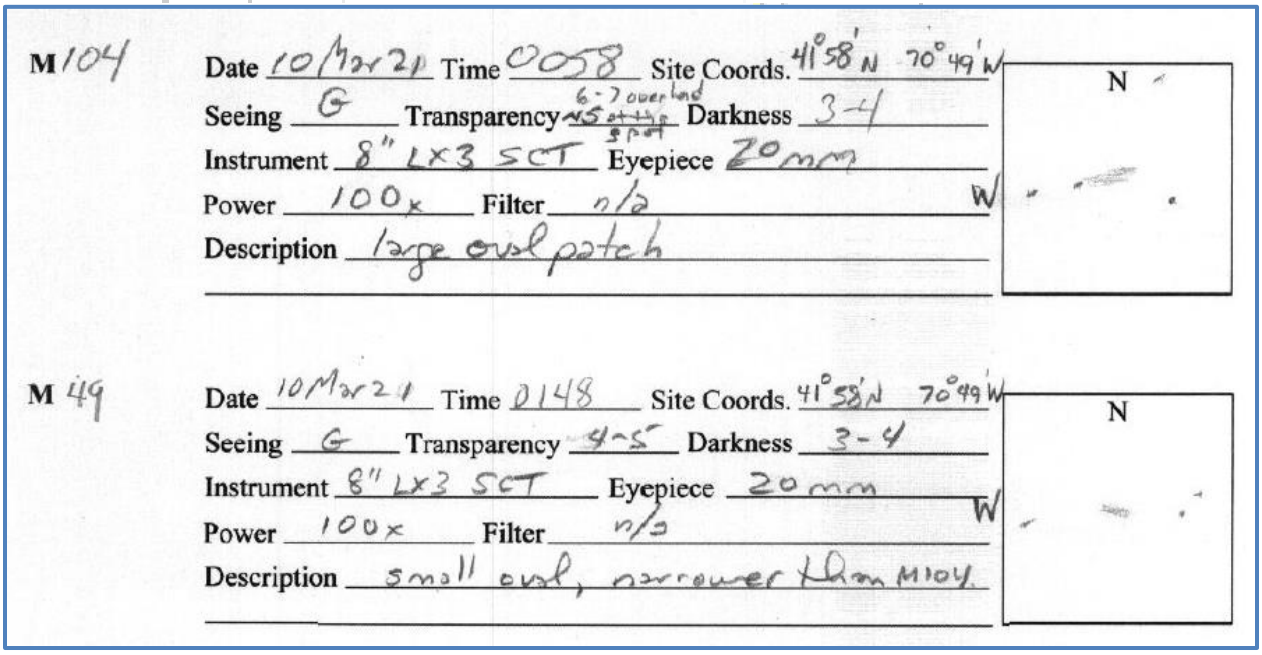
On March 10th 2021, UNISTELLAR marked the official beginning of their global Messier marathon effort with a promotional e-mail:

We're Off to the Races!

Messier Marathon Week starts March 10! Share your plans and observations using #UnistellarMarathon. Join a Unistellar race or create your own. There's no wrong way to Messier during the Unistellar Marathon!

On March 10th 2021, *Barry D.* reported the following observing experience. Equipment used included a Meade 8" Schmidt-Cassegrain telescope mounted on an equatorial wedge, and his targets were acquired through the use of conventional setting circles;

"Well, it's a start, anyway. I had a problem with my DewZapper and was cut short by dew. Oh, and…it was cold! I think I might have caught Galaxy Fever. I've never really spent time looking at galaxies besides M31. I was struck by just what I was seeing – the combined light of hundreds of billions of stars. Very cool".



M104
Date 10Mar21 Time 0058 Site Coords. 41°58'N 70°49'W
Seeing G Transparency ~~4-5~~ 6-7 overhead 5 at hor Darkness 3-4
Instrument 8" LX3 SCT Eyepiece 20mm
Power 100x Filter n/a
Description large oval patch
N W

M 49
Date 10Mar21 Time 0148 Site Coords. 41°58'N 70°49'W
Seeing G Transparency 4-5 Darkness 3-4
Instrument 8" LX3 SCT Eyepiece 20mm
Power 100x Filter n/a
Description small oval, narrower than M104
N W

Barry D Observing Notes; March 10th 2021

On March 10th 2021, *Patty B.* reported having seen M45 and Mars, M34, M35, M36, M37, M38, M41 and M42 in binoculars recently and she offered the following further information on one of her all-time favorites, the Pleiades;

The Pleiades is an open star cluster which can be viewed with binoculars as well as the naked eye. It is comprised of more than 1,000 stars with the brightest being hot blue stars. It is located north-west of the constellation Taurus the Bull. It also is one of the closest Messier objects to the earth.

This year on March 3, 2021 Pleiades and Mars had their closest conjunction since 1991, 2.6 degrees, when Mars passed south of Pleiades. Their next closest conjunction won't be seen again until February 4, 2038 when the difference will be 2.0 degrees.

On March 10th 2021, *Vernon F.* shared the following notes about his recent Messier object viewing experiences;

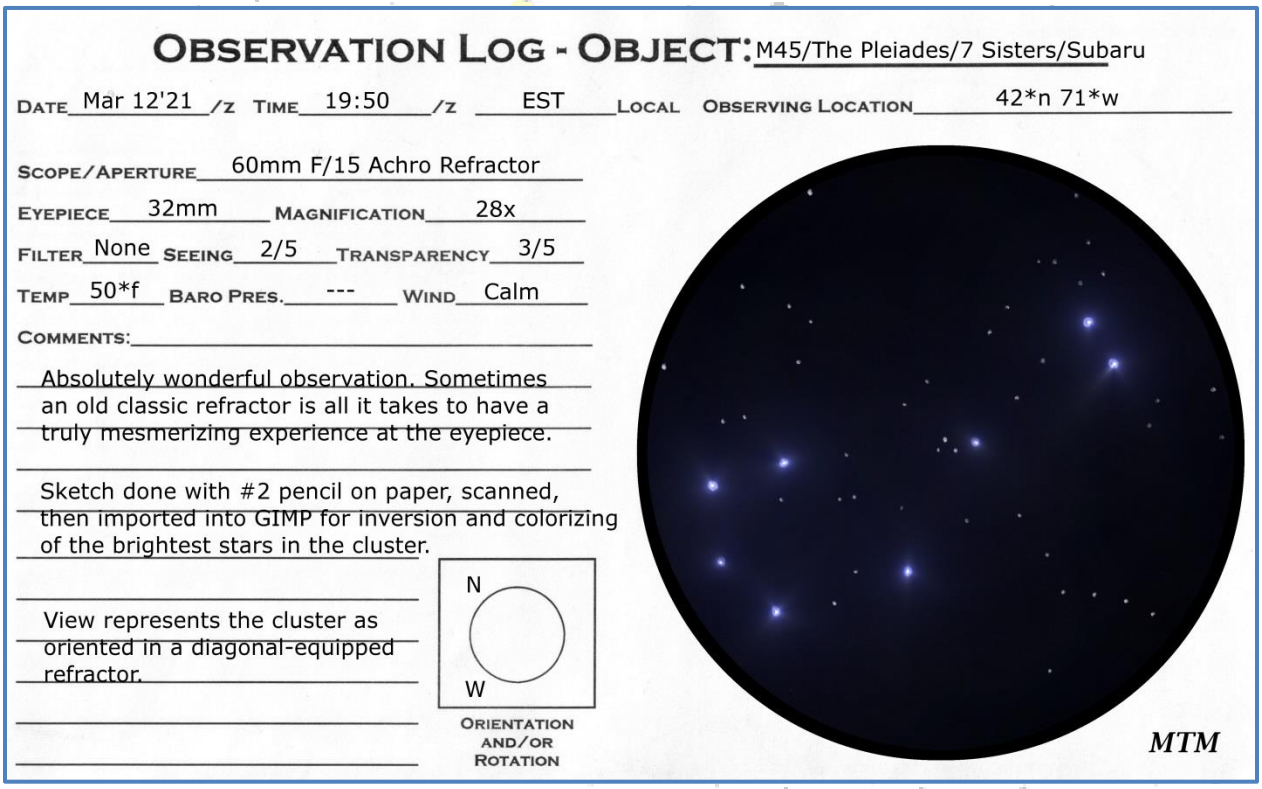
I have a couple of notes on M35 in Gemini and M41 in Canis Major: at our last constellation tour on March 4th I found both with 20X80 binos. They appeared as small collections of faint stars. I looked up some landmark stars on the Skyguide app to position them. M41 appeared a few degrees south of Sirius, and a couple degrees west of a little triangle of stars ID'd as Pi CMa, 15CMa and 17CMa. M35 showed just off of Castor's toe star ID'd as 1 Gem.

I also attended the observing night Sunday, March 7 of SSASTROS at Centennial Field, where I learned about several other Messier objects and observed them through more powerful instruments: a 4.7 inch apo refractor belonging to Brendan, and an 18 inch open strut Dob belonging to Louis. Through these I saw the Leo Triplet of galaxies, 3 faint elongated powderpuffs in one field, just south of Theta Leo, ID'd as M65, M66 and NGC 3628 (asteroid Vesta also appeared just north of Theta in a separate view as it works its way westward--Sky & Telescope page 47). Also, I got to see open cluster M50 as a bright sprinkle of stars in Monoceros west of Procyon and M60 galaxy (another elongated powderpuff) east of Denebola in Leo in one or the other of the above two scopes. Last of all, I took in the Owl Cluster in Cassiopeia (the bird was upside down, 2 bright "eye" stars at the bottom of a dimmer oval outlining its body). I'm happy to have learned a bit more now about where to look for more sky objects.

On March 11th 2021, *Jim R.* shared the following image of M1, the Crab Nebula. Equipment used included a Meade 8" Schmidt-Cassegrain on an alt/az mount, camera unknown.

On March 12th 2021, *Mike M.* got out for a very pleasant evening of observing at the eyepiece of a classic telescope. Even though a high wind watch was in effect for the area, the 'calm before the storm' so to speak was insanely pleasant, with temperatures in the 50's and no wind at all. Objects viewed included Messier's 34, 35, 36, 37, 38, 41, 42, 43, 44, 45, 81, and 82. Other targets included the binary systems of Polaris, Castor, Algieba, Regulus, and 145 Canis Majoris, as well as the Tau Canis Majoris association.

Equipment used included a 1970's era 60mm F/15 achromatic refractor modified with an upgraded focuser to accept 1.25" eyepieces. A simple set of Plossl eyepieces ranging in focal length from 32mm down to 9mm were used. The sketch below was made while looking though the 32mm eyepiece, providing 28x and an approximate 1.8° true field of view.



Unistellar ***created a novel approach to the traditional Messier marathon, but without destroying the long-lived tradition of staying up all night and observing every Messier object on the list from one dusk until the next dawn. Essentially they said, if you've got the skies, got the horizons, got the skills, and got the stamina –then go for it! But if you don't, then we've got something for you.***

For those of us without the skies, or without the horizons, or without the skills, or perhaps lacking in stamina they said 'hey, we get it, so here's a variety of options to participate in our global event and we hope you'll join us'. And what a list of options! They made it really hard to resist participating.

One definitely gets the feeling that you're o/k in Unistellar's book if you just go out and use any method whatsoever to take in a single Messier object, or if you actually go the distance and observe every Messier object on the list. Just get out and look is what they conveyed, and if you like the idea of a category to guide we'll give you lots of those too. From motivation to resources, it was all there.

On March 13th 2021, we were presented with clear skies for at least the first half of the night, and at least two groups from the SSASTROS got together and observed. Four members met at Centennial Field in Norwell, and five members met at Ellisville State Park in Plymouth. **Brendan S. offered the following notes** from the night at Ellisville;

A beautiful night last night at Ellisville Harbor State Park (a.k.a. Norwell South). We had five people show up—Garrett, Vernon and Leslie, and Ted. Just great fun! The wind had died down and it was quite comfortable. Started off with Cassiopeia and Perseus since it was a little cloudy at first in the south. Looked at the Double Cluster and Kemble's Cascade in Camelopardalis with NGC 1502.

Then to the south, all the great sights. The Orion Nebula and the trapezium, M41 below Sirius and the Winter Albireo, M50 in Monoceros and the Christmas Tree cluster (NGC 2264). Garrett found what we think is Hubble's Variable Nebula nearby, which looked a little like a comet. Really amazing!
We also looked at M35 in Gemini and the Beehive in Cancer. Later we had some company of two cars with teenage girls who parked on the other side and didn't bother us at all, except for the occasional loud laughter and the smell of weed wafting toward us. All in all, a beautiful evening enjoyed by everyone!

Louis G. provided the following list of Messier targets observed on the same night from Centennial Field with his 18" Newtonian reflector; M's 40, 109, 97, 108, 105, 95, 96, 98, 99, 100, 52, and 42. M97 was viewed with an OIII filter in place, as was the Bubble Nebula near M52.

Author's note; ***as a young guy growing up in a car-culture America, a common refrain amongst muscle car performance enthusiasts was 'there's no replacement for displacement', meaning that the more cubic inches your engine displaced the more power it would make, and any modifications to smaller displacement power plants just couldn't compete with having bigger guns. It was undisputed fact, and at the time nobody dared openly challenge it.***

The same could be said for visual observing with a telescope; there's no replacement for objective diameter. When it comes to eye-to-the-eyepiece viewing of photons from distant objects, the bigger the lens, the more light it collects. With everything else being equal, the bigger lens will provide the more powerful and impactful view. When astronomy was all about eye-to-the-eyepiece, the larger optic won out every time.

Fast forward to today and a thing we commonly refer to as 'modern technology'. Turbochargers, superchargers, and modern electronic control systems have turned small displacement power-plants into giant killers, tiny little monsters that regularly leave old muscle cars in the dust. Along a similar vein, modern imaging systems have turned small aperture telescopes into giant killers, using modern technology to collect and combine light from distant objects into an image that rivals what can be seen through the eyepiece of the largest amateur telescopes.

The Unistellar eVscope is just such a thing. Possessing a diminutive 4.5" mirror, but using a modern Sony imaging sensor coupled with automatic stacking-on-the-fly software, the little scope can put up images that would otherwise never be realized with a conventional 4.5" scope. Is it the same as looking through the eyepiece? No, but with the ever-increasing problem of light pollution that isn't looking like it's going away any time soon, it could be a viable option to the compromised visual observing experience that we all too often have to endure these days.

On March 14th 2021, *Matt S.* shared the following notes and image;

I managed to get a better Bodes/Cigar than my last one. Plus I was pulling off 10 minute exposures with the new mount. So that was an exciting milestone in terms of bettering my acquisition process.

Still light years to go, but we can add it to our marathon.

M82, aka The Cigar Galaxy, and M81, aka Bode's Nebula, plus bonus galaxies NGC's 3077 and 2976

On March 14th 2021, *Carl B.* shared the following notes and images;

Hello,

I imaged 4 messier targets over the past few days. All with my 6" 150mm f/4 Newtonian, ASI 294MC Pro (-10C), with darks and flats (although they are not removing the dust bunnies very well). All processed in PixInsight.

m81/m82 - 40x180s
m3 - 51x120s
m106 (with some companion galaxies) - 41x240s.

M82, aka the Cigar Galaxy, and M81, aka Bodes Nebula

M3, Globular Cluster in Canes Venatici

M106, Spiral Galaxy in Canes Venatici, along with bonus galaxies NGC's 4217, 4220, 4226, 4248 and interacting galaxies NGC's 4231 and 4232.

On March 13th 2021, ***Mike M.*** joined a group of members at Centennial Field in Norwell for some observing, with the primary objective being that of observing and sketching the Beehive Cluster. The conditions were very good considering that the day had been quite windy, and the calm conditions in the evening led to a lovely observation of a spectacular object, a sketch of which is shown here;

OBSERVATION LOG - OBJECT: M44/The Beehive Cluster/Praesepe

DATE Mar13'21 /z TIME 20:00 /z EST LOCAL OBSERVING LOCATION Centennial Field, Norwell, MA

SCOPE/APERTURE 5" F/9.3 Achro Refractor

EYEPIECE 24mm 82* MAGNIFICATION 49x/1.65* tfov

FILTER --- SEEING 2.5/5 TRANSPARENCY 3/5

TEMP 30*f BARO PRES. --- WIND Calm

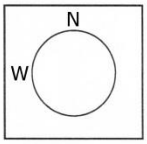
COMMENTS:

One of my favorite all-time open clusters, and a favorite for late winter/early spring outreach as well.

There is just nothing quite like the sight of a bright open cluster in the eyepiece of a good refractor telescope.

Sketch done with #2 pencil on paper, then scanned and imported into GIMP for inversion.

Orientation as seen through a diagonal-equipped refractor.



ORIENTATION AND/OR ROTATION

MTM

On March 14th 2021, *Vernon F.* shared the following notes about he and Leslie's experience at Ellisville on the prior Saturday evening;

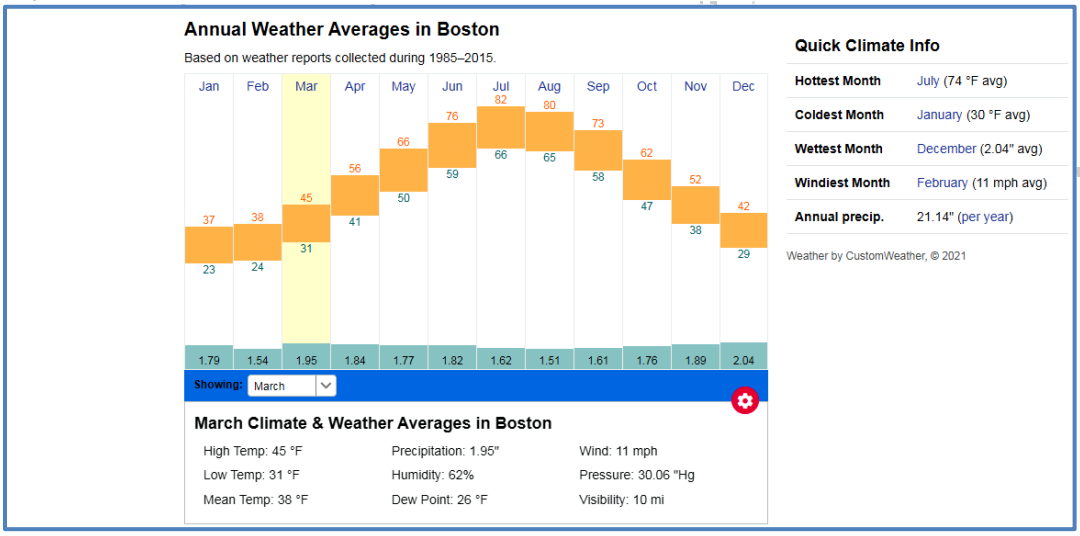
Last night Leslie and myself joined Garrett, Brendan and Ted for a terrific dark sky observing session at Ellisville State Park off 3A a few miles north of Cape Cod Canal. Having New Moon helped too. We saw all the Messier's I have submitted from previous observing at Centennial Field plus "Winter Albireo" in Canis Major, Flaming Star Nebula and Messier 38 in Auriga, Hydra's snakehead, Coma Berenices with no optical aid.

Author's Choice; ***Is March truly the cruelest month of the year? One might have a case for that when considering that today, on the 15th, it is 22°f outside with 30mph wind gusts making for a wind chill temperature in the low teens and near single-digit lows are expected for tonight. Not exactly comfortable observing conditions for sure, and a bit of a slap after the record setting warmth just four days prior. In like a lion, and out like a lamb – we hope!***

So yes, wild temperature swings and ruthless teases of spring-is-on-the-way for our winter-weary souls are quite common in March, but perhaps the most frustrating weather element for intrepid sky-gazers is the relentless wind that seems to accompany every March, regardless of temperature variables or not. High winds make an observer's life miserable. They wreak havoc with equipment stability, they blow all manner of debris into the air, and finally, they try to suck every last BTU of heat out of our bodies, making a steady night in January or February feel downright balmy by comparison.

But is March really the windiest month in our region? It seems that way to me, but I'm just going by my gut and from experience. I enjoy the outdoors and engage in a few outdoor activities on a regular basis. One of those is cycling, and if you want to know where and when the breeze is the stiffest for any given location or time of year, ask a cyclist. The battle against the headwind is a mighty one, and cyclists remember them well. When your speed is cut in half while your energy is output doubled, you remember.

But guts and memories rarely tell the story accurately. Ask any detective investigating an incident and interviewing eyewitnesses. The recollections rarely align, even when the witnesses were in the same place at the same time. Reliable data rules, so here it is, the weather averages data for our area;



On March 15th 2021, *Jim A.* shared the following notes and images;

There's been no suitable seeing in my primetime of 11pm until the sun strikes the upper atmosphere. Wind buffeting the OTA and shaking it, jet stream moving too fast, rising/falling of cold air, high altitude fuzzy stuff. So advantage goes to those at the eyepieces.

Autoguiding is challenged in these conditions and so I am challenged to image. Perhaps in May with a better equilibrium of temps of the lower and upper atmosphere there will be an improvement. But I have experienced the occasional good April night. Anyway, managed a decent M64 image in a fleeting moment of good seeing, and one of M99 as well;

M64, the Black Eye Galaxy in Coma Berenices

M99, Grand Design Spiral Galaxy in Coma Berenices

On March 15th 2021, *Jim R.* shared the following sketches and notes on Messier's he observed;

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OBSERVING FORM

Astronomy magazine

MESSIER 6K (PLUS 2) - OBJECTS FROM EACH CATEGORY

Observer: Jim R.

Date: 3/13/21

Time: 21:00 EST

Location: NORWELL, MA (CENTENNIAL FIELD)

Sky conditions: CLEAR, NEW MOON

Seeing: BELOW AVG TO AVG.

Transparency: ABOVE AVG.

Object: M108 SURFBOARD GALAXY

Type: BARRED SPIRAL GALAXY

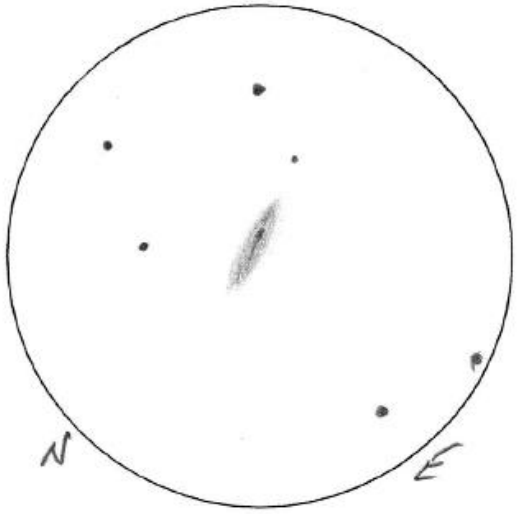
Constellation: URSA MAJOR

Magnitude: 10.0

Telescope: 8" F/10 SCT (WITH CORRECT IMAGE AMICI PRISM DIAGONAL)

Magnification: 118X TFOV 0.6° (17MM)

Notes: ALTHOUGH THE GALAXY WAS VISIBLE AS LONG AND FUZZY, BRIGHT PARTS OF THE INNER GALAXY COULD BE SEEN WITH AVERTED VISION.



Object: M78

Type: DIFFUSE REFLECTION NEBULA

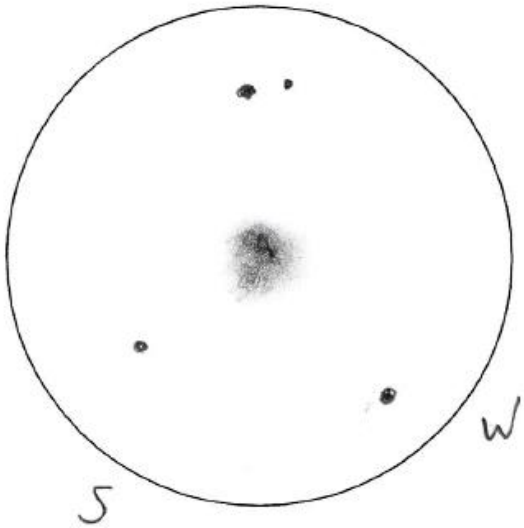
Constellation: ORION

Magnitude: 8.3

Telescope: 8" F/10 SCT (WITH CORRECT IMAGE AMICI PRISM DIAGONAL)

Magnification: 118 X TFOV 0.6° (17MM)

Notes: APPEARS AS A FUZZY PATCH IN THE EYEPIECE BUT WITH TWO BRIGHT CENTER REGIONS VISIBLE.



OBSERVING FORM

Astronomy magazine

MESSIER 6K (PLUS 2) - OBJECTS FROM EACH CATEGORY)

Observer: Jim R.

Date: 3/13/21

Time: 20:00 - 21:00 EST

Location: NORWELL, MA (CENTENNIAL FIELD)

Sky conditions: CLEAR, NEW MOON

Seeing: BELOW AVG TO AVG.

Transparency: ABOVE AVG.

Object: M63 "SUNFLOWER GALAXY"

Type: SPIRAL GALAXY

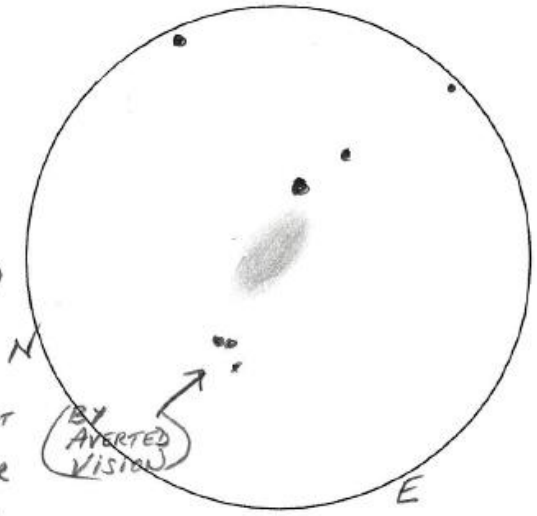
Constellation: CANES VENATICI

Magnitude: 8.6

Telescope: 8" F/10 SCT (WITH AMICI PRISM CORRECT IMAGE DIAGONAL)

Magnification: 118X TFoV 0.6° (17mm)

Notes: ALTHOUGH FAINT WITHOUT DETAIL, THE GALAXY WAS VERY VISIBLE AND BRIGHT IN THE EYEPIECE. BEAUTIFUL! THE LOWER STARS WERE VISIBLE BY AVERTED VISION.



Object: M97 OWL NEBULA

Type: PLANETARY NEBULA

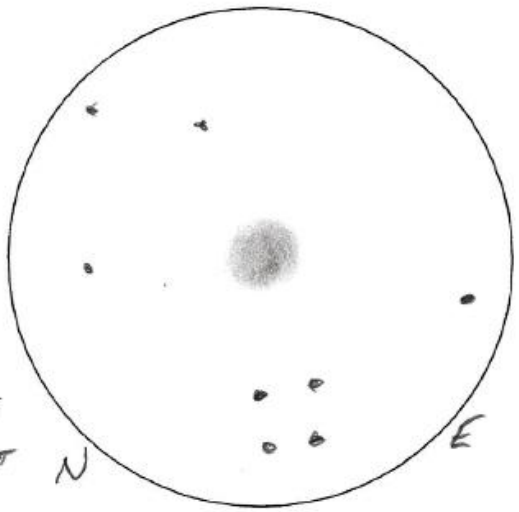
Constellation: URSA MAJOR

Magnitude: 9.9

Telescope: 8" F/10 SCT (WITH CORRECT IMAGE AMICI PRISM DIAGONAL)

Magnification: 118 TFoV 0.6° (17mm)

Notes: OWL EYES WERE FAINTLY VISIBLE WITH OXYGEN III FILTER, BUT NOT WITHOUT IT. THE ENTIRE NEBULA WAS FAINT, BUT CLEARLY VISIBLE IN EYEPIECE.



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OBSERVING FORM

Astronomy magazine

MESSIER 6K (PLUS 2) – OBJECTS FROM EACH CATEGORY

Observer: Jim R.

Date: 3/13/21

Time: 21:00 EST

Location: Norwell, MA (Centennial Field)

Sky conditions: Clear, New Moon

Seeing: Below Avg to Avg.

Transparency: Above Avg.

Object: M3

Type: Globular Cluster

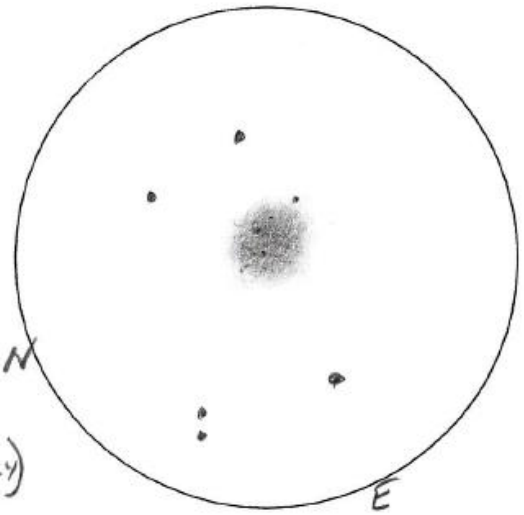
Constellation: Canes Venatici

Magnitude: 6.2

Telescope: 8" F/10 SCT (with correct image Amici Prism Diagonal)

Magnification: 118x TFoV 0.6° (17mm)

Notes: Bright and beautiful in the eyepiece! Some stars were faintly visible near center (only a few clearly)



Object: M1 Crab Nebula

Type: Supernova Remnant

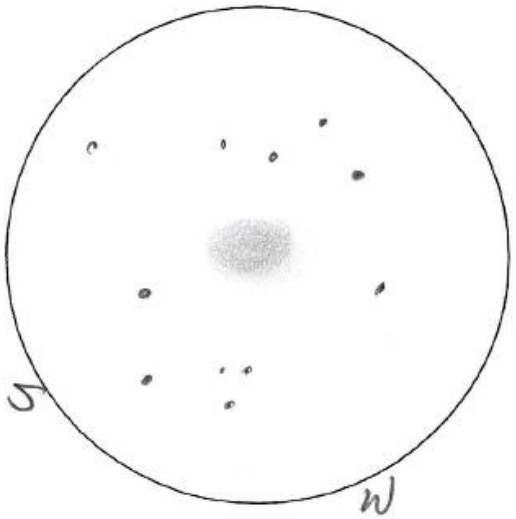
Constellation: Taurus

Magnitude: 8.4

Telescope: 8" F/10 SCT (with correct image Amici Prism Diagonal)

Magnification: 118x TFoV 0.6° (17mm)

Notes: The nebula was faintly visible with no detail. It was like a fuzzy patch.



OBSERVING FORM

Astronomy magazine

MESSIER 6K (PLUS 2) - OBJECTS FROM EACH CATEGORY

Observer: Jim R.

Date: 3/13/21

Time: 21:00 EST

Location: NORWELL, MA (CENTENNIA FIELD)

Sky conditions: CLEAR, NEW MOON

Seeing: BELOW AVG. TO AVG.

Transparency: ABOVE AVG.

Object: M40

Type: DOUBLE STAR

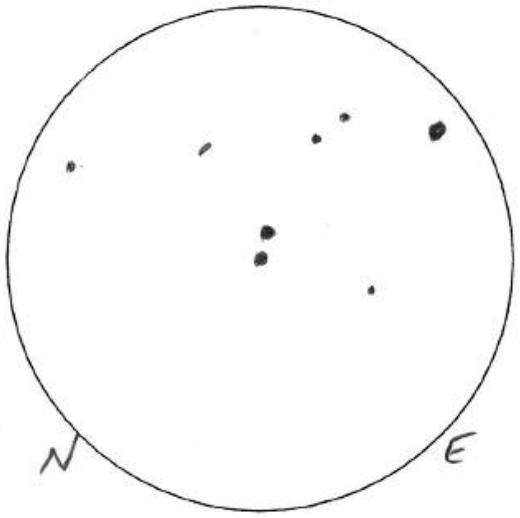
Constellation: URSA MAJOR

Magnitude: 9.7 AND 10.1 (SAO 28253 / SAO 28255)

Telescope: 8" F/10 SCT (WITH CORRECT IMAGE AMICI PRISM DIAGONAL)

Magnification: 118x TFoV 0.6° (17MM)

Notes: CLEARLY SEPARATED DOUBLE STAR. UNLIKE OTHER TYPICAL MESSIER OBJECTS.



Object: M44 BEEHIVE CLUSTER

Type: OPEN CLUSTER

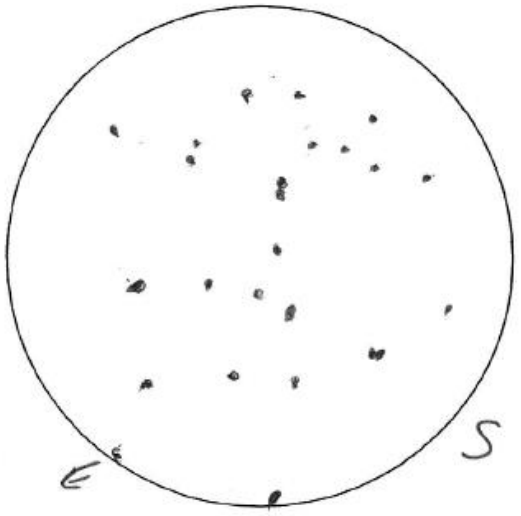
Constellation: CANCER

Magnitude: 3.7

Telescope: 8" F/10 SCT (WITH CORRECT IMAGE AMICI PRISM DIAGONAL)

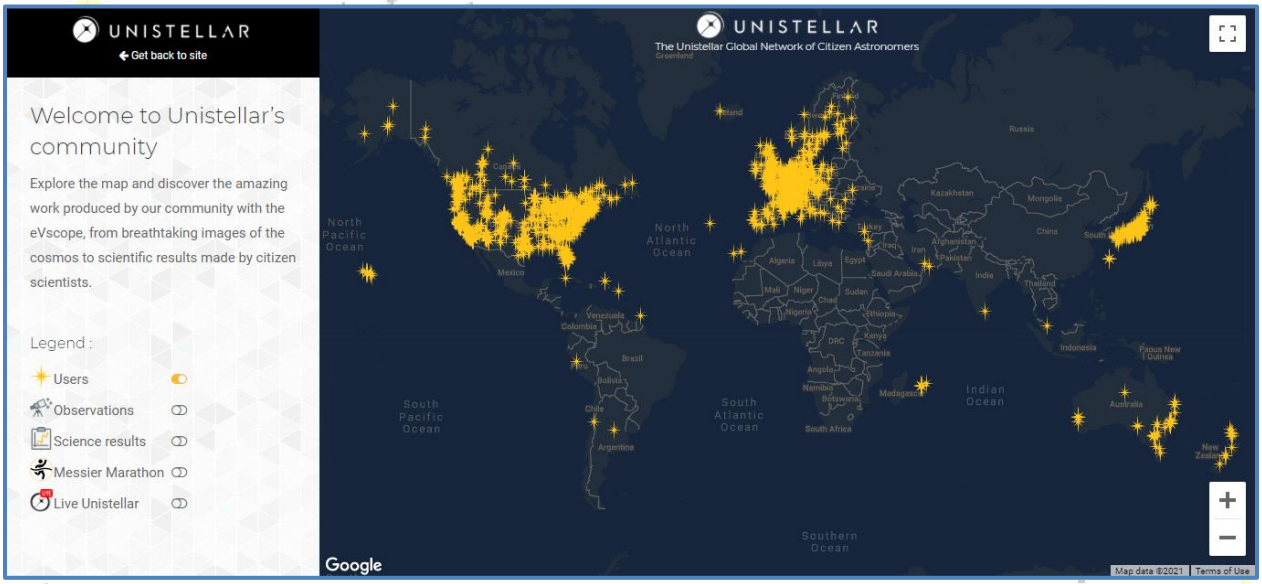
Magnification: 77x TFoV 0.8° (26MM)

Notes: VERY BEAUTIFUL CLUSTER IN THE EYEPIECE. BRIGHT AND FILLS THE FOV WITH INTERESTING STAR FORMATIONS AROUND IT.



So, just what did we get ourselves into? To find out, I spent some time prowling around the Unistellar website. There, under the 'Events' drop-down menu I found a choice labeled 'The Network', so I clicked on it.

In 2020, Unistellar fulfilled and shipped 4,000 orders for their eVscope. Distribution looks truly global.



eVscope distribution shows heavy concentrations in the U.S., Europe and Japan., with a good presence being shown in Australia and New Zealand, and a smattering around South America.

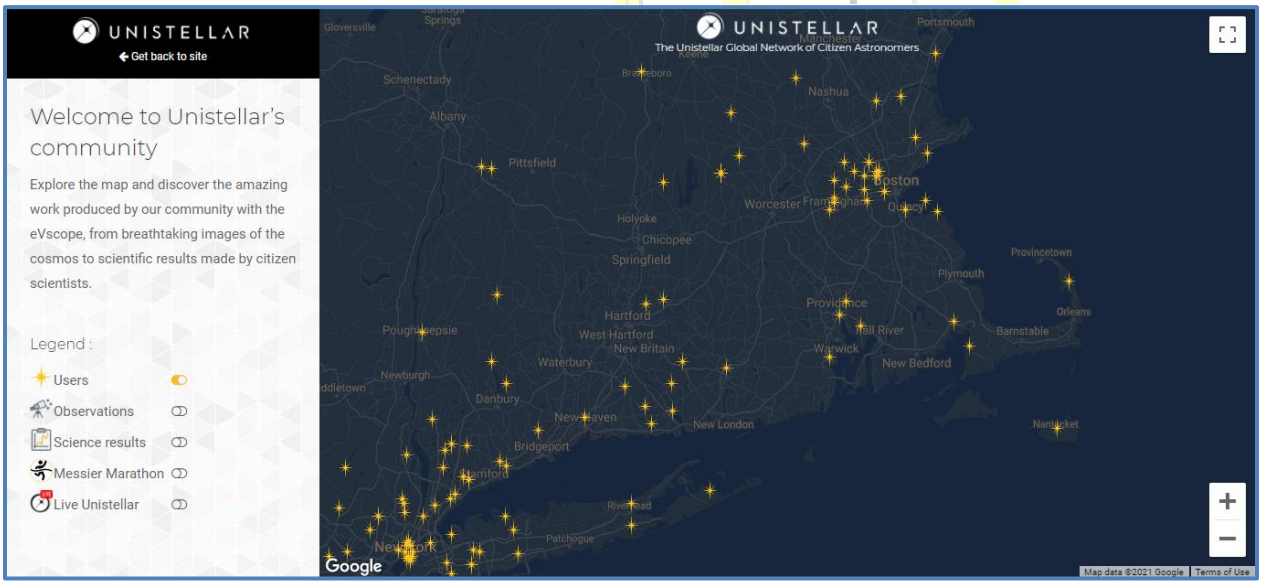
Several users have submitted sample observations made with their eVscope's which can be viewed by website visitors, and a few have claimed to have done legitimate science work with the eVscope (mostly asteroid sightings).

eVscope user contributions can be viewed by clicking on the scope icons on the pin map. There are some very nicely done images on display.

As for the global Messier Marathon, the participation this year looks to have been almost entirely an American thing. Why is that? Can't Messier objects be seen from the northern hemisphere everywhere around the globe? Of course they can. Even more surprising is that for a French-based company, only one science center in France was signed up for the event. Perhaps the pandemic dampened enthusiasm for participation? It has been a difficult time, of that we're sure. We must also take into consideration that we have been very fortunate to be able to do what we have done. We have definitely been lucky.

Unistellar's Global Messier Marathon participation, according to the pin-map as seen on the 15th, was enjoyed by just ten entities – mostly in the U.S. Five science centers, one school, three astronomy clubs and one individual (a Unistellar employee) signed up to take part in the observing of Messier's.

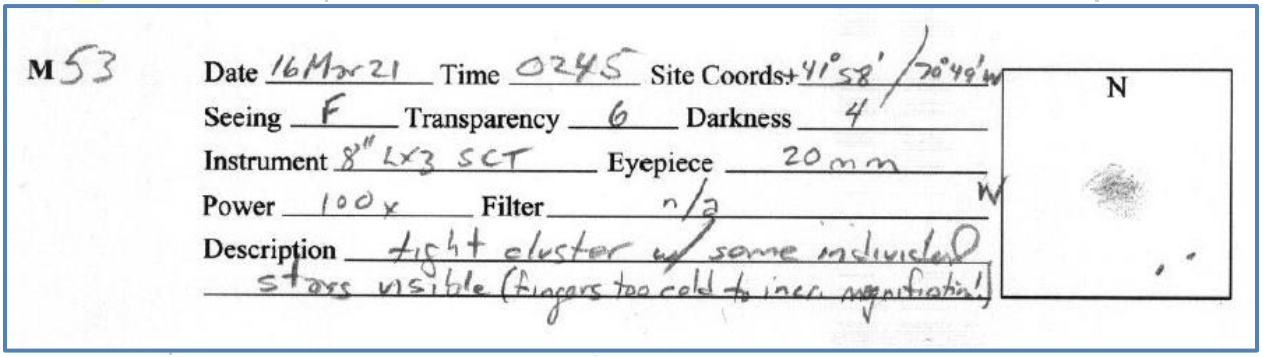
Scrolling in on the scope distribution map shows that several eVscopes have been sold in our general area. Interestingly, Unistellar reached out to scope owners local to us to see if they'd like to join us for some observing during the Messier project. Unfortunately they haven't yet heard back from anyone.



According to the pin-map there are a couple of eVscope owners located very close to us. We need to meet these people. The company's tag-line is "Prepare to Be Amazed". We're prepared – amaze us!

On March 16th 2021, *Barry D.* shared the following notes and sketch from a brief observing session in the wee-hours of the morning on a *very* cold night;

Here's my take on M53. I really wanted to stay out longer, but my fingers were starting to not work anymore (with double gloves on!).

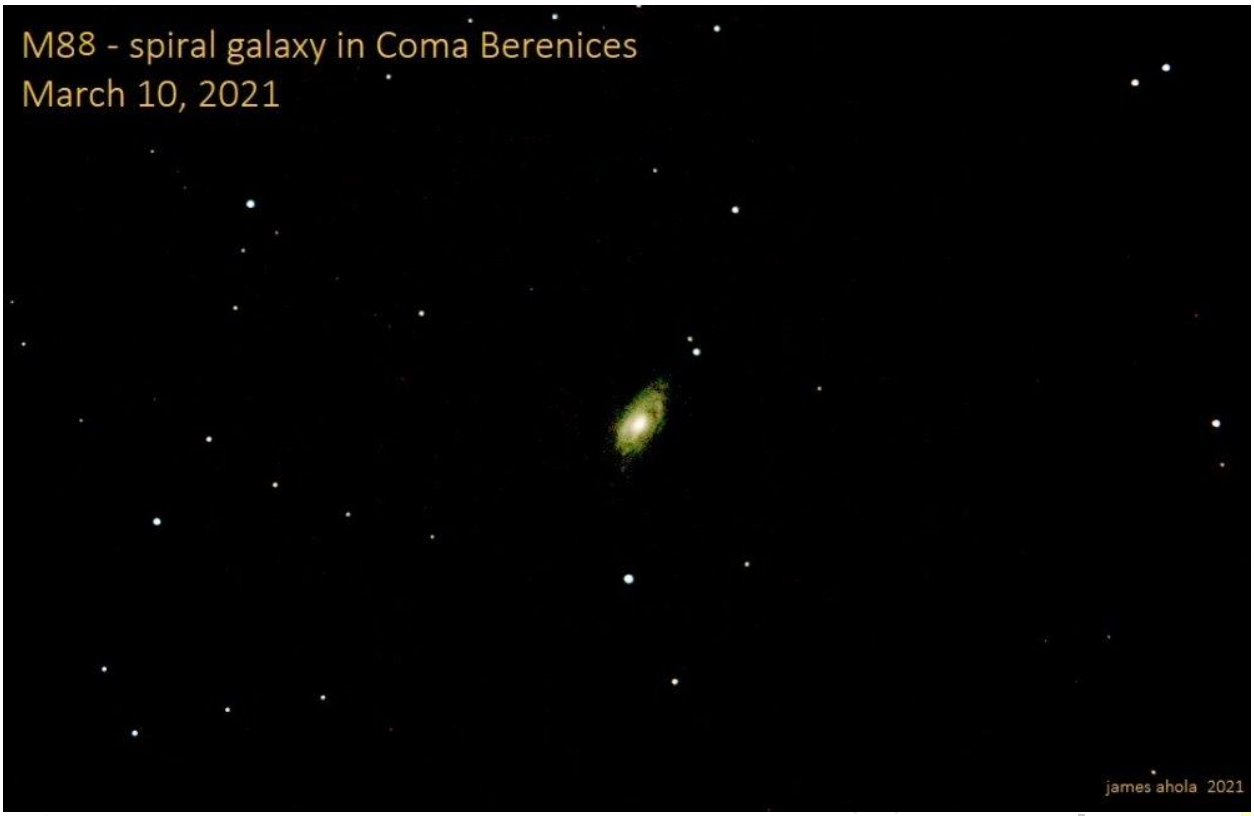


Barry D. observing notes; March 16th 2021.

On March 17th 2021, *Jim A.* got caught up on processing and shared the following images from the nights of the 10th, 15th and 16th. He experienced problems with wind, mediocre seeing, and incipient problems in autoguiding during the sessions. Equipment used included a Celestron C8 Schmidt-Cassegrain telescope (f/ratio 6.3) w/QHY183c camera on a Celestron AVX mount. Autoguided in PHD2. Guiding at best was .79 RMS (ideal would be .39 – his calculated resolution) and the PHD2 RMS often rode higher.

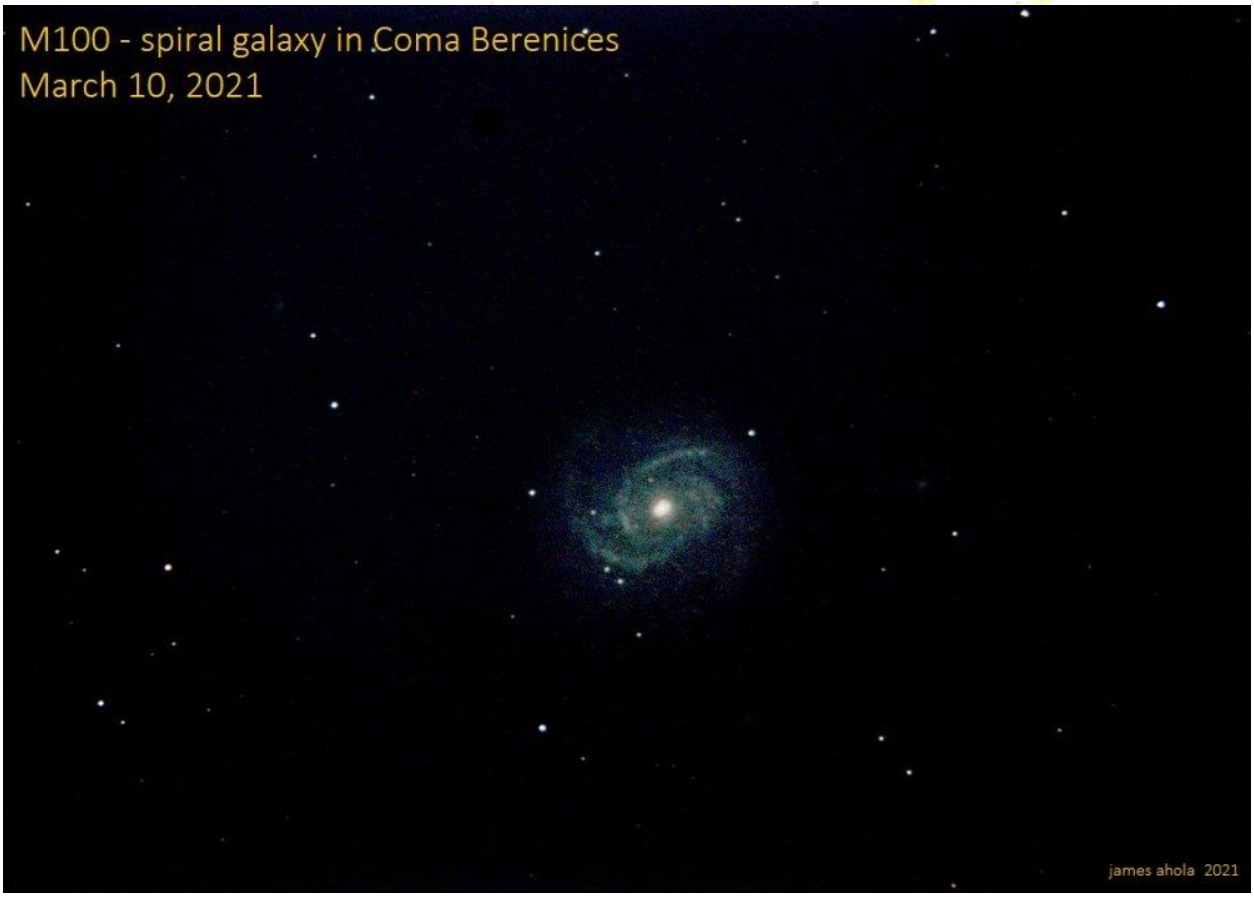

M90 - spiral galaxy in Virgo
March 10, 2021
james ahola 2021


M85 - lenticular galaxy in Coma Berenices
March 10, 2021
james ahola 2021


M88 - spiral galaxy in Coma Berenices
March 10, 2021
james ahola 2021

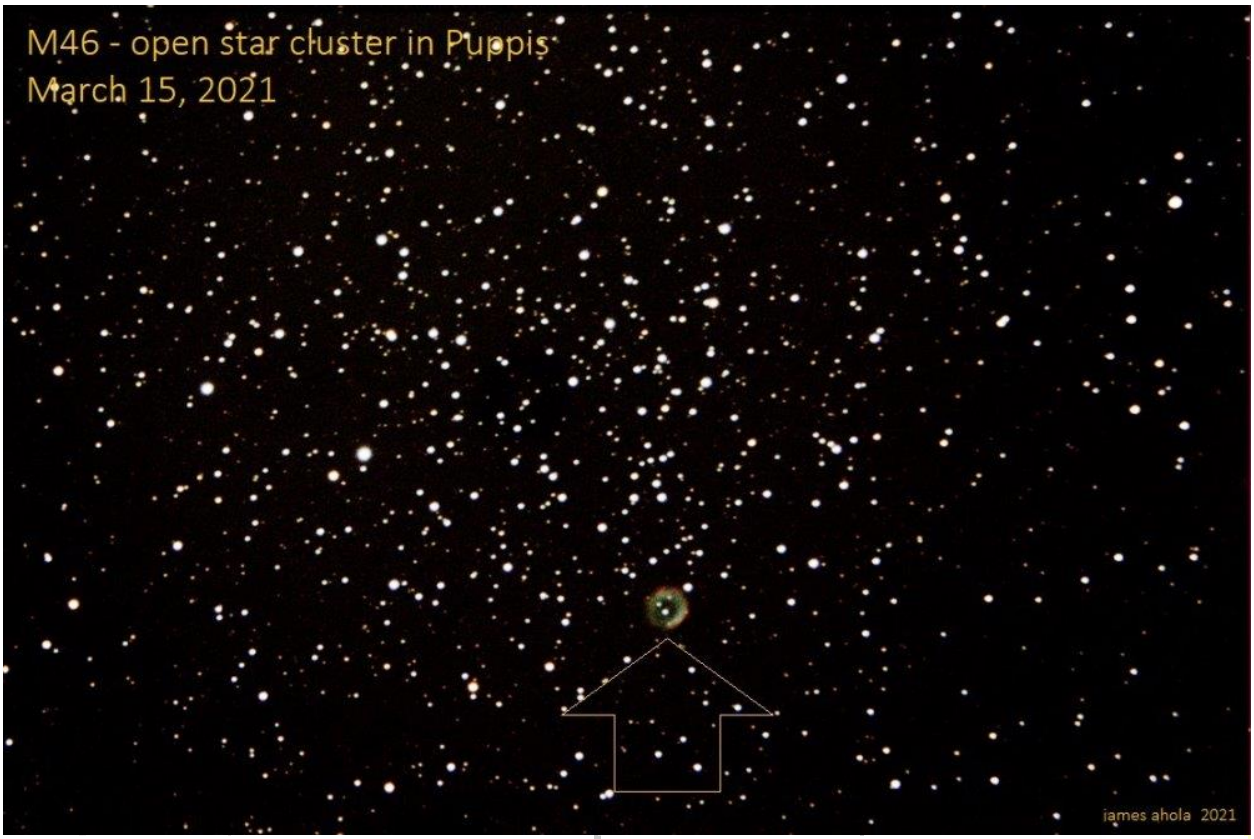

M87 - elliptical galaxy in Virgo
March 10, 2021
james ahola 2021


M89 - elliptical galaxy in Virgo
March 10, 2021
james ahola 2021


M100 - spiral galaxy in Coma Berenices
March 10, 2021
james ahola 2021


M1 - Crab Nebula
March 10, 2021
james ahola 2021

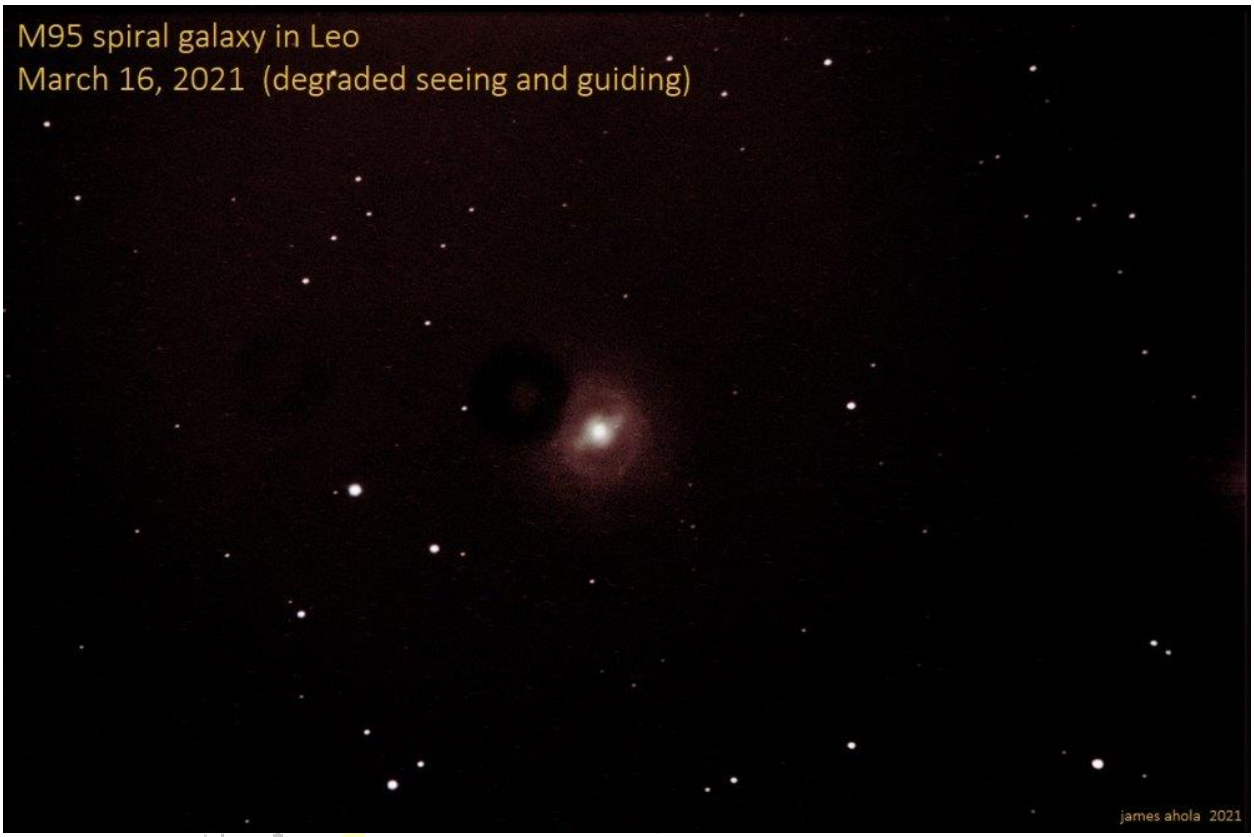

M47 - open star cluster in Puppis
March 15, 2021
james ahola 2021


M46 - open star cluster in Puppis
March 15, 2021
james ahola 2021


M48 - open star cluster in Hydra
March 15, 2021
james ahola 2021


M67 - open star cluster in Cancer
March 15, 2021
james ahola 2021


M96 spiral galaxy in Leo
March 16, 2021 (mediocre seeing & guiding)
james ahola 2021


M95 spiral galaxy in Leo
March 16, 2021 (degraded seeing and guiding)
james ahola 2021


M91 spiral galaxy in Coma Berenices
March 16, 2021 (sun was coming up)
james ahola 2021

And there you have it! It will be obvious to anyone who reads this document that the members of the South Shore Astronomical Society stepped up and produced a laudable effort to observe Messier objects during the month of March, 2021. From old-school visual observations to complex multiple-exposure imaging, our approaches to seeing and enjoying Messier's ran the gamut. It's been a lot of fun collecting everyone's notes, sketches, images and comments and compiling them into one document that we can look back on and perhaps use as inspiration for future observing projects. I hope you all enjoyed this project as much as I did!

Some final words;

- ***Thank you and congratulations to everyone who participated in our March Messier Madness project! In all we had at least 17 members partake in the viewing of Messier's through the use of an optical instrument, and in some cases multiple instruments were used.***

- ***We covered at least six of Unistellar's proposed categories for approaching the Messier Marathon ; Relay, 'till Midnight, 6k, Galaxy Sprint, Majestic Capture, and Outstanding Observation. I'll let you guys decide for yourself what's majestic and what's outstanding.***

- ***Collectively we viewed well over half of the Messier objects, some with just a glimpse and others with a deep, long look.***

- ***This project was a welcome respite from the doldrums of pandemic-life. It served to get us out under the stars, which is a distinctly positive place and a place we all love to be.***

Keep Looking Up! *Mike M.*