Observing Special Interest Group
Session 9 – April 21, 2021

INTRODUCTION

Hello all. Hope you are well and ready to start observing again. Soon the pandemic will be over and we can go back to our favorite hobby. This month we will look at “Wuz Up” with Chaz to see if there are meteor showers, or occultations. Chaz can help us locate the planet positions and other interesting events in our solar system. Next, I have a few good objects for you to hunt down this month. And finally, Gary will walk you through the ins and outs of using the digital program Sky Safari.

First, I want to start with a member who has garnered **TWO** AL observing awards this month. Michael Harang has been observing the moon and will receive the Telescopic Lunar Certificate and the Binocular Lunar Certificate. Congratulations! Michael, would you like to say a few words about your accomplishments?

Q&A

Next, can we answer any questions that you might have that pertain to Astro Observing?

Chaz Hafey Constellation of the Month: Leo

Next, we have the objects of the month.

MAY OBJECTS 2021

I've been promising you galaxies for quite a while now, and I have to say, that April and May are the months for them. There are a myriad of galaxies all over the sky as we are gathered in our meeting tonight. Bright galaxies can be found in great numbers in all of the following constellations: Ursa Major, Canes Venatici, Coma Berences, Leo Minor, Leo Major and of course Virgo. Even Sextans and Crater contain some very nice galaxies if you have a large scope. So, don't restrict yourself to just the few galaxies that I will speak about tonight. There are dozens available right now.

I have chosen the constellation of Leo for us to look at in May. There are seven very nice galaxies in this constellation that are fairly easy to find. Also, I have two very nice double stars in the "Sickle" that are bright enough to be naked eye and therefore no star hopping or hunting is necessary to find these. Let's get started.

Lets go for three bright galaxies at once! That's right, it's the famous "Leo Trio". NGC 3628 sits at the top of this group. To find it, look for the star Chertan, (Theta Leonis) in the groin area of the lion. Follow the line 2½˚ south Chertan to Eta Leonis and then about 1˚ to the east to find these guys. You should find M66 & M65 located close to the south of NGC 3628. All three should fit in your low power eyepiece at the same time. If not, your eyepiece should hold M65 & M66 easily. NGC 3628 is spread out to14' x 3.6' which makes it dimmer than you might expect for a 9.2 magnitude galaxy. Perhaps this is why Messier missed it. Remember that whatever telescope you are using, it is much better than the one Messier used. Scopes of 16" and more can see a dark band that runs along the equator of NGC 3628. In a 5" refractor I can barely see the galaxy at all. Can you see it? Can you see the dark band?

Next let's talk about M66 & M65. These two galaxies are smaller which helps them to be brighter in apparent magnitudes. At any rate, M66 is 10.2' x 4.6' at Magnitude 9.0 and most interestingly, M66 has two brighter arms that can be seen in medium size telescopes. Look for these arms.

M65 is the smallest of the trio at 7.6'x 1.9' and a magnitude of 9.2. M65 is angled slightly to our line of sight and has a faint dust lane that will require a very large scope. Finally, its core is quite bright and tiny making it look almost stellar with a surrounding haze in small telescopes.

The sight of these three galaxies together is always pleasing. It makes you want to see it again and again. In a 5" refractor they all appear less than half their official size but are

clearly there. Remember, the light you're seeing had to travel 42 million years at a speed of 186,282 mi/sec to hit your eye tonight. ** Be sure the Leo Trio is on your spring observing list.

This next group I consider to be a bit of a challenge object. It is harder to find than the trio, and to see all of it at one time, takes at least a 2˚ field of view. Let's take a quick look at the Leo Quartet. That's right, four at a time in the eyepiece of an 8" scope under good skies.

The Leo Quartet lies directly under the belly of the beast. The best visual clue is k Leonis, but at 5.5 magnitude it is hard to see, so It's a good idea to first locate it in binoculars. k lies half way on the line between Regulus and Chertan. M105 and NGC 3384 sit side by side and lay 1 ½˚ under the star k Leonis. Galaxy NGC 3384 is a lenticular shaped football that has a hint of a central bar. It is large, bright and easily seen as a galaxy in an 8" scope but nearly invisible in a 5" refractor. If you see another very small galaxy nearby, that is NGC 3373 and it is not part of this group since it is over twice as far away.

M105 is a bright elliptical galaxy without much detail but is rounder than 3384. M105 was not in the original Messier list but was added in 1947 by Helen Hogg. Both of these galaxies are much larger than they appear visually.

Following that same line from k through M105 another 48' further south, brings you to M96. It lies nearest to the center of the quartet; so if you want to try to center all four galaxies at once, put M96 in the middle. M96 is a spiral galaxy with dim arms that create a hint of a swirl that tells us it is a spiral galaxy. It has a very bright center and a rather prominent dust lane that you should try to see in a larger scope.

M95, the fourth member of the quartet is a bright barred spiral galaxy. Both M96 & M95 are bright and rather easy to see in small scopes like a 5" refractor. All four of the quartet along with M65 & M66 belong to the Leo I group of galaxies. There are several more members of this group that are not mentioned here. All I can say is, research this group of galaxies. There is so much more to learn about it. My purpose tonight is mostly help you find the biggest and brightest members and give you clues as to what you may see. It will be up to you to center each galaxy and tease out any details.

Before we go, a quick note about two outstanding, easy to find double stars in Leo. The front of the Lion is called the "Sickle". It is composed of six naked eye stars. Moving up from the bottom Regulus (Alpha) is first, and Algieba (Gamma) is the third. Both are easy and beautiful double stars that can be split in a small telescope. Check them out too!

Are there any questions about this month's objects?

SKY SAFARI

Finally, Gary Carter will talk you through how to use the Sky Safari program. It is an electronic program that you can take into the field on your phone or I-Pad. This is a very useful tool that I have with me at all times and I use it extensively. Gary, take it away.