**2023 Telescope/Binocular Observer’s Challenge:**

 If you came to the Table Mountain Star Party (TMSP) with your binoculars and telescope or have access to binoculars and a telescope while at the TMSP this program is for you. This program will give you an opportunity to observe 50 several showcase objects under the ideal conditions of the pristine Eden Valley skies. You will get a button for completing the observations. All observations must be done during the TMSP.

You must find the objects yourself, without help from anyone else. For at least three of the objects, you must sketch what you see through your binoculars or telescope. This year the Binocular and Telescope Observer’s Challenge is concentrated on “Our Solar and Galactic Neighborhood”.

Any size binoculars or telescope can be used. All objects are within range of small to medium sized binoculars and are available for observation between 10:00PM and 4:00AM any time during the TMSP.

The **“OUR SOLAR NEIGHBORHOOD”** Club will have 8 stars that are within 10 parsecs (32.4 light years) from our sun (selected from the Solar Neighborhood Observing Program (https://www.astroleague.org/content/solar-neighborhood-observing-program)) and 12 galaxies from the local galaxy group that our Milky Way galaxy is part of (selected from the **Local Galaxy Group and Neighbors Observing Program** (https://www.astroleague.org/node/412)). You will need to observe all 20 objects to get your button. If you are using a smaller scope and have a little trouble with some of the objects, mark it as “tried” and move on. You will still get credit for the object.

Any size telescope can be used. All observations must be done at TMSP to qualify. All objects are within range of an 8” or 10” telescope and are available for observation between 10:00PM and 4:00AM any time during the TMSP. “Go-To” telescopes are allowed to aid in finding these objects. Each person completing this list will receive an official TMSP Observers Challenge button. These buttons are not sold at the TMSP and can only be acquired by completing the program, so wear them proudly.

To receive your pin, turn in your observations to Mark Simonson or Ron Mosherany time during the TMSP. If you finish the list the last night of TMSP, or if we are not available to give you your pin, just mail your observations to me at 1519 Ridge Drive, Camano Island, WA 98282 and I will see that you get a button.

Good luck and good observing. Now, let's get out there and **observe!!!**

***THE LIST***

**Observer’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Binoculars/Telescope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Our Solar Neighborhood**

The following table lists the 8 solar neighborhood stars you must observe.

Record the date and time of your observation and the color the star appears to be.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Star** | **RA** | **Dec** | **Magnitude** | **Date** | **Time** | **Color** |
| **Xi UMa** | 11h 18m 10.1s | +31o 31’ 32” | 4.4 |  |  |  |
| **Beta Com** | 13h 11m 51.0s | +27o 53’ 02” | 4.3 |  |  |  |
| **Xi Boo** | 14h 51m 23.6s | +19o 06’ 00” | 4.6 |  |  |  |
| **36 Oph** | 17h 15m 19.9s | -26o 36’ 33” | 4.3 |  |  |  |
| **Mu Her** | 17h 46m 27.0s | +27o 42’ 57” | 3.4 |  |  |  |
| **70 Oph** | 18h 05m 27.5s | +02o 29’ 38” | 4.2 |  |  |  |
| **Chi Dra** | 18h 21m 05.4s | +72o 43’ 50” | 3.6 |  |  |  |
| **Altair (Aql)** | 19h 50m 47.8s | +08o 52’ 15” | 0.8 |  |  |  |

**Local Galaxy Group and Neighbors**

The 13 galaxies you must observe that are within the local group of galaxies that our Milky Way galaxy is part of are listed in the table below. These galaxies were selected from the Astronomical League’s Local Galaxy Group and Neighbors Observing Program’s supplemental observing guide. The galaxies in this table were selected from the M51, M64, M66, M81, M83, M101 and M109 Galaxy Groups. Record the Date and Time of your observation.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Object** | **RA** | **Dec** | **Magnitude** | **Size** | **Date** | **Time** |
| **NGC 3077** | 10h 05m 09.3s | +68o 37’ 10” | 10.6 | 5.4’ x 4.4’ |  |  |
| **NGC 2976** | 09h 49m 08.7s | +67o 48’ 23” | 10.8 | 5.8’ x 3.0’ |  |  |
| **NGC 5023** | 13h 13m 12.2s | +43o 54’ 49” | 12.8 | 6.2’ x 0.8’ |  |  |
| **NGC 5204** | 13h 30m 27.0s | +58o 17’ 50” | 11.7  | 4.5’ x 2.8’ |  |  |
| **NGC 5474** | 14h 05m 49.2s | +53o 32’ 58” | 11.5 | 2.4’ x 1.6’ |  |  |
| **NGC 5585** | 14h 20m 30.5s | +56o 37’ 16” | 11.4 | 4.3’ x 2.6’ |  |  |
| **NGC 4144** | 12h 11m 07.2s | +46o 19’ 36” | 12.0 | 5.2’ x 1.0’ |  |  |
| **NGC 4490** | 12h 31m 42.7s | +41o 30’ 52” | 9.8 | 6.8’ x 1.7’ |  |  |
| **NGC 5195** | 13h 30m 56.3s | +47o 08’ 41” | 10.5 | 5.5’ x 4.4’ |  |  |
| **NGC 3593** | 11h 15m 48.5s | +12o 41’ 34” | 11.8 | 4.7’ x 1.9’ |  |  |
| **NGC 3628** | 11h 21m 28.4s | +13o 27’ 47” | 10.0 | 11.0’ x 3.4’ |  |  |
| **NGC 3631** | 11h 22m 20.3s | +53o 02’ 28” | 10.7 | 3.7’ x 3.1’ |  |  |





