2019 **Telescope Observer’s Challenge:**

 If you came to the Table Mountain Star Party (TMSP) with your telescope or have access to a telescope while at the TMSP this program is for you. This program will give you an opportunity to observe 20 or more showcase objects under the ideal conditions of the pristine Eden Valley skies. It’s not super challenging this year, but will get progressively harder each year. You will get a button for finding just 20objects. All observations must be done during the TMSP. “The Neighborhood” program consists of a list of our neighboring galaxies and their buddies. You must observe and document twenty neighbors. You must find the objects yourself, without help from anyone else. Enter the required information and for at least three of the galaxies you must sketch what you see through the eyepiece. Any size telescope can be used. All objects are within range of medium to large sized telescopes, and are available for observation between 10:00PM and 4:00AM any time during the TMSP. All objects are listed in Right Ascension order so that you can observe them before they set in the West, or as they rise in the East.

* Every item on this list is a required item from the Astronomical League’s Observation Program; Local Galaxy Group & Neighborhood.

This is the pin that you can earn from the Astronomical League

if you observe and sketch all 88 of the required objects. If you

have any questions concerning Astronomical League Observing

Programs please ask Ron or Mark.

To receive your button, turn in you observations to ***Mark Simonson or Ron Mosher (Observation Challenge Coordinators)*** any time during the TMSP. If you finish the list the last night of TMSP, and we are not available to give you your button, just mail your observations to me at 1519 Ridge Dr., Camano Island, WA. 98282, or email your observations to me at [marknilse@yahoo.com](mailto:marknilse@yahoo.com), and I will see that you get a button. Enjoy the Neighborhood-

**NGC Number Other Names Galaxy Type Constellation Right Ascension (J2000) Declination (J2000) Apparent Magnitude**

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|  | **205** | **M110** | **Elliptical** | **Andromeda** | **00h 40m 22.0s** | **+41° 41′ 07″** | **9.4** |
|  | **221** | **M32** | **Elliptical** | **Andromeda** | **00h 42m 41.9s** | **+40° 51′ 57″** | **9.2** |
|  | **224** | **M31 Andromeda** | **Spiral** | **Andromeda** | **00h 42m 44.3s** | **+41° 16′ 09″** | **4.3** |
|  | **598** | **M33 Triangulum** | **Spiral** | **Triangulum** | **01h 33m 51.0s** | **+30° 39′ 37″** | **6.3** |
|  | **2366** |  | **Irregular** | **Camelopardalis** | **07h 28m 54.6s** | **+69° 12′ 57″** | **11.4** |
|  | **2403** |  | **Spiral** | **Camelopardalis** | **07h 36m 51.4s** | **+65° 36′ 09″** | **8.9** |
|  | **3031** | **M81** | **Spiral** | **Ursa Major** | **09h 55m 33.2s** | **+69° 03′ 55″** | **8.1** |
|  | **3034** | **M82** | **Irregular** | **Ursa Major** | **09h 55m 52.2s** | **+69° 40′ 49″** | **9.2** |
|  | **3077** |  | **Irregular** | **Ursa Major** | **10h 03m 20.0s** | **+68° 44′ 02″** | **10.9** |
|  | **3756** |  | **Spiral** | **Ursa Major** | **11h 36m 47.8s** | **+54° 17′ 39″** | **11.2** |
|  | **3769** |  | **Spiral** | **Ursa Major** | **11h 37m 44.1s** | **+47° 53′ 21″** | **11.5** |
|  | **3556** | **M108** | **Spiral** | **Ursa Major** | **11h 11m 31.3s** | **+55° 40′ 31″** | **10.7** |
|  | **3992** | **M109** | **Spiral** | **Ursa Major** | **11h 57m 35.9s** | **+53° 22′ 35″** | **10.7** |
|  | **4013** |  | **Spiral** | **Ursa Major** | **11h 58m 31.4s** | **+43° 56′ 51″** | **12.4** |
|  | **4096** |  | **Spiral** | **Ursa Major** | **12h 06m 01.0s** | **+47° 28′ 31″** | **11.5** |
|  | **4100** |  | **Spiral** | **Ursa Major** | **12h 06m 08.3s** | **+49° 34′ 58″** | **11.2** |
|  | **4144** |  | **Spiral** | **Ursa Major** | **12h 10m 33.0s** | **+46° 23′ 46″** | **12.0** |
|  | **4157** |  | **Spiral** | **Ursa Major** | **12h 11m 04.4s** | **+50° 29′ 05″** | **11.3** |
|  | **4111** |  | **Lenticular** | **Canes Venatici** | **12h 07m 03.1s** | **+43° 03′ 57″** | **10.7** |
|  | **4217** |  | **Spiral** | **Canes Venatici** | **12h 15m 50.9s** | **+47° 05′ 30″** | **12.4** |
|  | **4220** |  | **Spiral** | **Canes Venatici** | **12h 16m 11.8s** | **+47° 52′ 59″** | **13.1** |
|  | **4236** |  | **Spiral** | **Draco** | **12h 16m 41.8s** | **+69° 28′ 10″** | **10.7** |
|  | **4244** |  | **Spiral** | **Canes Venatici** | **12h 17m 30.1s** | **+37° 48′ 30″** | **10.2** |
|  | **4248** |  | **Irregular** | **Canes Venatici** | **12h 17m 50.4s** | **+47° 24′ 33″** | **12.5** |
|  | **4258** | **M106** | **Spiral** | **Canes Venatici** | **12h 18m 57.5s** | **+47° 18′ 14″** | **9.6** |
|  | **4490** | **Cocoon** | **Spiral** | **Canes Venatici** | **12h 30m 36.2s** | **+41° 38′ 38″** | **9.8** |
|  | **4618** |  | **Irregular** | **Canes Venatici** | **12h 41m 32.5s** | **+41° 09′ 00″** | **11.5** |
|  | **4736** | **M94** | **Spiral** | **Canes Venatici** | **12h 50m 52.6s** | **+41° 07′ 09″** | **8.7** |
|  | **4826** | **M64 Black Eye** | **Spiral** | **Coma Berenices** | **12h 56m 43.9s** | **+21° 41′ 00″** | **8.9** |
|  | **5023** |  | **Spiral** | **Canes Venatici** | **13h 12m 11.8s** | **+44° 02′ 17″** | **12.8** |
|  | **5055** | **M63 Sunflower** | **Spiral** | **Canes Venatici** | **13h 15m 49.3s** | **+42° 01′ 47″** | **9.7** |
|  | **5204** |  | **Spiral** | **Ursa Major** | **13h 29m 36.5s** | **+58° 25′ 07″** | **11.7** |
|  | **5194** | **M51 Whirlpool** | **Spiral** | **Canes Venatici** | **13h 29m 52.4s** | **+47° 11′ 41″** | **8.8** |
|  | **5238** |  | **Irregular** | **Canes Venatici** | **13h 34m 43.8s** | **+51° 36′ 33″** | **14.2** |
|  | **5457** | **M101 Pinwheel** | **Spiral** | **Ursa Major** | **14h 03m 12.5s** | **+54° 20′ 53″** | **8.7** |
|  | **5474** |  | **Peculiar** | **Ursa Major** | **14h 05m 01.6s** | **+53° 39′ 44″** | **11.3** |
|  | **5477** |  | **Irregular** | **Ursa Major** | **14h 05m 33.1s** | **+54° 27′ 40″** | **14.5** |



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