**Observing Proposal**

**Observer Information**

**Name: Sydnee**

**Group: unknown**

**Observatory Information**

**Location: My Yard**

**Latitude: 29 degrees**

**Longitude: -82 degrees**

**Observation Date: October 19th, 2022**

**Sunset: 6:54 pm**

**Sunrise: 7:33 am**

**Sidereal Time at Midnight: 11:42 Hrs**

**Moonrise: 1:53 am**

**Moonset: 5:02 pm**

**Moon Phase: Waxing Crescent**

**Target Information**

*The radio targets should be Galactic locations and maybe the Sun and Moon. No other targets are expected to be detectable.*

* **Can’t observe sun at night. Only other option - moon**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Target Name** | **Type** | **RA** | **DEC** | **Rise Time** | **Transit Time** | **Set Time** |
| **Moon** | *moon* | **21 h 18 m 01 s** | **-21 degrees 51 ‘ 00 ‘’** | **1:53 am** | **8:12 am** | **5:02 pm** |
| **Galactic midplane** | *Galactic location* | **288.42 deg** | **10.72 deg** |  |  |  |
| **NGC 188** | **Galactic location** | **00h 50m 4.35s** | **85 deg 23’ 35.52’’** | **circumpolar** | **00:29** | **circumpolar** |
| **Deneb** | **Galactic location** | **20h 42m 12s** | **45 deg 21’ 54’’** | **12:40 pm** | **9:05 pm** | **5:29 am** |
| **M 27** | **Galactic location** | **20h 00m 34s** | **22 deg 47’ 10’’** | **1:26 pm** | **8:23 pm** | **3:20 am** |

**Deneb**

**JNow: 20h 42m 12s 45° 21' 54"**

**J2000: 20h 41m 26s 45° 16' 49"**

**AzAlt: 37° 00' 54" 68° 56' 23"**

**Galactic: 84 26 04.25 01 56 35.21**

**Dumbell Nebula**

**JNow: 20h 00m 35s 22° 47' 10"**

**J2000: 19h 59m 36s 22° 43' 16"**

**AzAlt: 137° 10' 32" 80° 48' 20"**

**Galactic: 61 00 34.81 -3 51 15.09**

**Moon**

**Galactic: 26 54 16.62 -41 30 31.99**

**Telescope Information**

**Telescope Type/Diameter: radio 1.5 meter**

**Resolution (Beam Size): 9.2 degrees**

**Accessible altitude & azimuth ranges:30 deg 90 deg**

**Step-by-Step Observation Plan**

*Your plan should include time to set up the telescope, time to slew the telescope from one target to the next, and integration time. Budget enough time that, if you make a mistake, you can correct it without going over time.*

**7:00 pm set up telescope**

**7:30 pm take any calibrating images/data**

**8:00 pm image dumbbell nebula**

**8:30 pm image Deneb**

**9:30 pm image galactic midplane**

**10:30 pm image NGC 188**

**11 pm break down**

***Weather Provisions/Contingencies:***

***Put the telescope away and plan for Sunday night***

**Scientific Justification:**

*Discuss why you are interested in observing the objects you have selected and what you actually hope to accomplish with these observations (photometric magnitude calculations, color images, HR diagram, or some other measurement)*

From the galactic midplane and NGC 188 open cluster I would like to see if I can produce an HR diagram. From the dumbbell nebula I would like to create a color image. From deneb I would like to take spectra to see if I can determine the major compositions of the star.

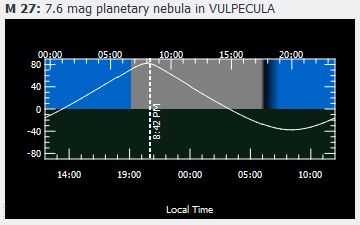
***Include altitude plots for your target(s).***

***Galactic midplane***

***Chart

Description automatically generated***

***M 27***

***A picture containing star, outdoor object

Description automatically generated***

***Chart

Description automatically generated***

***Deneb***

***A screenshot of a computer

Description automatically generated with medium confidenceA picture containing text, indoor, white, light

Description automatically generated***

***Chart

Description automatically generated***

***Moon***

***Chart

Description automatically generated with medium confidenceA close up of the moon

Description automatically generated with medium confidence***

***Not up***