Names:

Grade

Project Workday I

# Part 1: Observing with the Professor Robert L. Mutel Telescope

1. Using the MACRO Observation Planning Tool, fill in the chart below to determine some objects observable by the MACRO Professor Robert L. Mutel Telescope tonight. Some targets may not be observable at all; note this if so.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Object Name | Other Name | Object Type (star cluster, nebula, galaxy, etc.) | Time Observable(UTC) | Best Timeto Observe(if Observable) |
| Messier 1 |  |  |  |  |
| Messier 13 |  |  |  |  |
| Messier 16 |  |  |  |  |
| Messier 27 |  |  |  |  |
| Messier 31 |  |  |  |  |
| Messier 42 |  |  |  |  |
| Messier 51 |  |  |  |  |
| Messier 81 |  |  |  |  |
| Messier 82 |  |  |  |  |
| NGC 6888 |  |  |  |  |
| NGC 6992 |  |  |  |  |

# Part 2: Object Selection and Observation Plan

1. Review the Final Observing Project Description document. What object type has your group picked to study (star cluster, nebula, or galaxy), and why? List three facts about this type of astronomical object below.
2. Now that you have picked which type of object to study, go back to the chart on the previous page and select one target to observe. What is the name of your target?
3. Using the internet, research some general information about your observation target, and write a short paragraph about its characteristics. You may want to include information about your target’s age, distance, apparent magnitude, and any fun facts you find.
4. Based on what you just learned about your observation target, which 3 filters would be best for observing it, and why?
5. Using the object and filters you selected, fill out the chart below. You can find appropriate exposure times for each filter on Part 2 of the lab webpage. Once you have completed the chart below, share it with your TA to receive a stamp.

|  |  |  |  |
| --- | --- | --- | --- |
| Object Choice | Filters | ExposureTime | TA Stamp |
|  |  |  |  |
|  |  |
|  |  |

**Important note**: After receiving a stamp, your group **must** submit your observation request via the form located at the bottom of Part 2 of the lab webpage.