ASTR 581 - Observing

Observing Planning

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I use astroplan/astropy throughout. You can see my code here: https://github.com/TomWagg/uw-grad-classes/tree/main/581_observing/observing_planning/code.ipynb

1. APO Location

Latitude: 32.7803 degrees North
Longitude: 105.8203 degrees West

2. APO Sunset

Sunset is at 01:01 UTC and 19:01 MST.

3. Sidereal Time

Honestly a little confused on this because astropy gave me an hour angle but I *think* the time is 23:23:16.

4. Moon Phase

Waning Crescent

5. Moon time

06:49 UTC

6. Moon inteference

I think it depends. The moon is waning crescent so it's not too bright, and it doesn't rise until the B half so A half observations won't be affected. For the B half it will depend on the separation of the target from the moon and how bright it is.

7. RA/Dec of objects

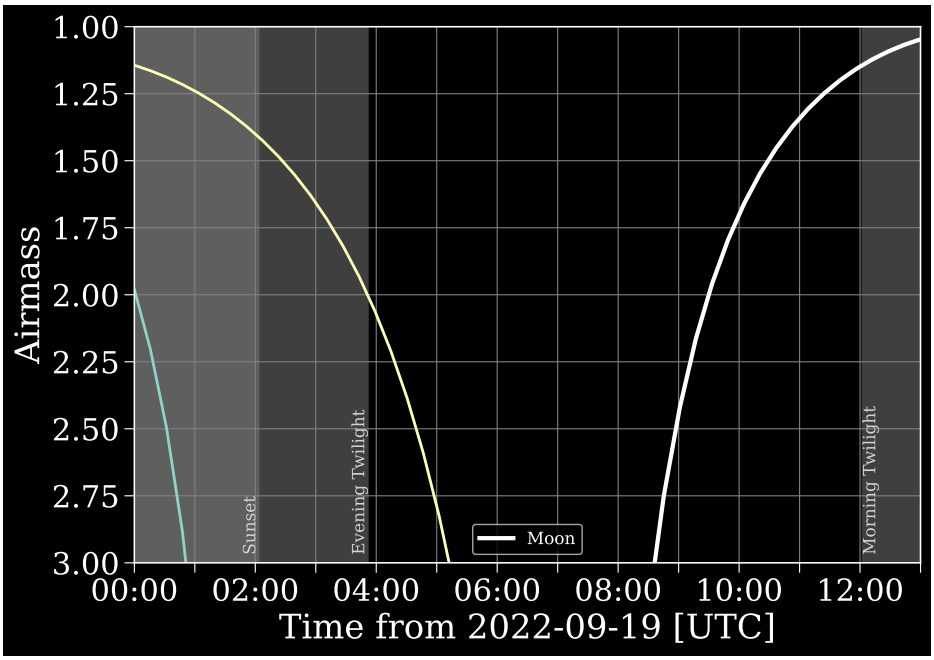
M91: (88.859260, +14.4958754)
NGC 5866: (26.6231708, +55.7633927)

8. Observable from MRO

Only NGC 5866 is observable at this time of year

9. Airmass conditions

NGC 5866 will only have an airmass less than 1.5 for about 30 minutes after sunset (before twilight) so it may be difficult to see.



10. Morning twilight

Astronomial morning twilight occurs at 12:02:20 UTC so any time after that you'll start struggling to see fainter sources.

11. Best seasons to observe

March is best for M91, and May is best for NGC 5866. These months maximise the time this object spends with airmass < 1.5 at MRO.

12. Dust?

No need to worry. These objects have galactic latitudes of 76.82963912 and 52.5908177 degrees so they are far from the galactic plane.