Ay 20 Recitation 1

Fall 2019 Yuping Huang

Sun from Mars

Sun from Earth

- Average distance of Mars from the Sun is ~1.5 AU
- Solar irradiance is ~1000 W m^{-2} on earth; what is this quantity on Mars?

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Sun from Earth

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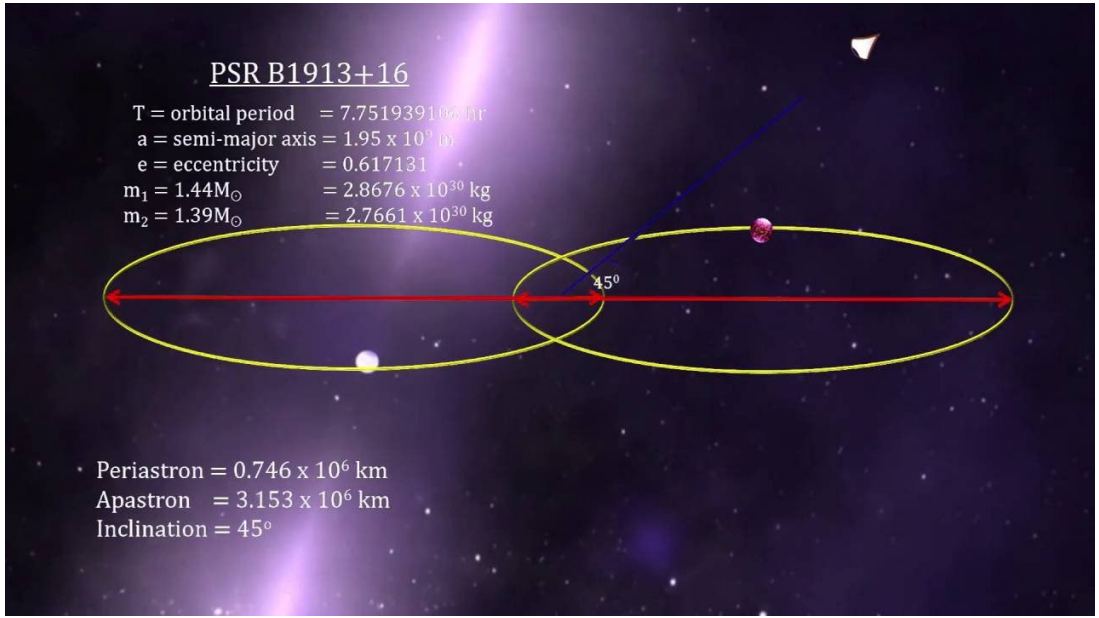
- Solar irradiance is ~1000 W m^{-2} on earth, what is this quantity on Mars?
- How much longer should you expose a photo of the Sun from Mars than a photo of the Sun from Earth?

Two neutron stars with equal mass m orbit around each other in a circular orbit with radius r.

- What is the orbital velocity? What does this velocity refer to?
- What is one neutron star's velocity around the other?
- What is each neutron star's velocity around the center of mass of the system?
- What is a good reference frame for an observer to describe the motion of the system?



In which month are these objects visible for most of the night?

Orion Nebula (M42)

05h35m17s, -05°23’28” (J2000)

Whirlpool Galaxy (M51)

13h29m53s, 47°11’42” (J2000)

Are these objects visible from Pasadena (latitude 34° N)?

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