

Observation task #2

Night sky observation – Time: 20:30 – 24:00

1. Saturn observation

(20 p)

- a) Point the telescope to Saturn.
- b) Draw image of the field of view with accurate proportions of Saturn and ring sizes.
- c) If you can see it, please mark the ring gaps, Saturn's shadow on the ring, and the ring shadow on Saturn.
- d) Mark positions of background stars and Saturn's moons.
- e) Mark the N and E directions on the image.
- f) Estimate the inclination of the ring plane to the line of sight.
- g) Estimate the angular size of Saturn and calculate its linear size. (For Saturn's orbit $a = 9.5$ AU).

2. Mars–Saturn

(10 p)

- a) Estimate an angular distance between Saturn and Mars. You can use any methods, but estimate the errors.