



XXIII Международная астрономическая олимпиада
XXIII International Astronomy Olympiad

Шри-Ланка, Коломбо

6-14. X. 2018

Colombo, Sri Lanka

ЯЗЫК	<i>English</i>
language	

For translation only.

Observational round. Questions. Cloudy sky

Venue: Arthur C Clarke Institute for Modern Technologies (6°47'N, 79°54'W)
Date: October 9, 2018

The maximum total time for all tasks is 25 minutes.

9. Practical using telescope.

Your telescope has already been Polar aligned!

- 9.1. Point the telescope to the Zenith manually as accurately as possible.
- 9.2. Adjust the DEC axis setting circle approximately to $\delta = +7^\circ$.
- 9.3. Point the telescope to the celestial equator using the DEC axis setting circle.

10. Practical using “TheSky” Astronomy Software.

You are provided with an image of a region of the real night sky (Image (A), see separate sheet) and “TheSky” Astronomy Software on the computer. (When you place and left click the computer mouse on a celestial object on the software it will display the information in a small window). Use these tools to answer the questions:

10.1. Identify the star pattern in Image(A) in the “TheSky” software in the computer only by looking at the computer screen. Once you identify the star pattern you should show the **Star(4)** and **Star(1)** to the examiner using mouse pointer.

10.2. In the software, place and left click the computer mouse on the stars named **Star(4)** and **star(1)** in the image(A) and identify their names («Name» column) and Equatorial Coordinates (RA – Right Ascension, DEC – Declination) using the information window. Write down the answers in the table in the Answer sheet.

10.3. Using the “Rotate Button” on the software identify the “North(N)” direction and mark the north direction(N) in Image(A).

 NORMAL.SKY - TheSky Astronomy Software

File Edit View Orientation Data Tools Telescope Help

Rotate Button



10.4. Using the RA (Right Ascension) coordinates of the stars in question 10.2. identify and mark the other directions (E, W and S) in the Image(A).

10.5. Calculate the field of view (angular width and height) of the “SKY REGION” in the software. Your calculations should be clearly written down in the framed space provided in the Answer sheet.