



## XVIII Международная астрономическая олимпиада

## XVIII International Astronomy Olympiad



Литва, Вильнюс

6 – 14. IX. 2013

Vilnius, Lithuania

язык language
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<u>English</u>
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### Observational round. Questions. Clear sky

Code of participant	код участника
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#### ***Observations by the naked eye***

9. Find the object corresponding to the following criteria:
- The object is the second brightest star in its constellation.
  - The object is visible approximately 28 degrees from  $\alpha$  UMi.
  - The equatorial coordinates of the object are: RA  $11^{\text{h}}$ , dec  $+62^{\circ}$ .

Answer the questions:

*Answers:*

- What is the Bayer designation (e.g.  $\beta$  Ori) of the identified object?
- Write the name of the constellation in Latin, which the object is visible in.


*Answer:*

10. What is the angular distance between Vega ( $\alpha$  Lyr) and Albireo ( $\beta$  Cyg)?

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*Answers:*

11. a) Find the horizontal coordinates of Thuban ( $\alpha$  Dra).


- b) Find the zenith distance of Alcor  
(near  $\zeta$  Ursae Majoris).

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#### ***Observations with telescope***

12. There are 3 binary stars on the given sky chart:  $\beta$  Cyg,  $\delta$  Lyr, and  $\epsilon$  Lyr.

For each of the binaries do the following:

Point the telescope to the binary. Compare the star field seen in telescope's field of view with three star charts given on a separate sheet. Write down the designations of the binary stars in each blank box under appropriate star chart. Mark North direction on every star chart.

*The maximum total time for all tasks is 20 minutes.*



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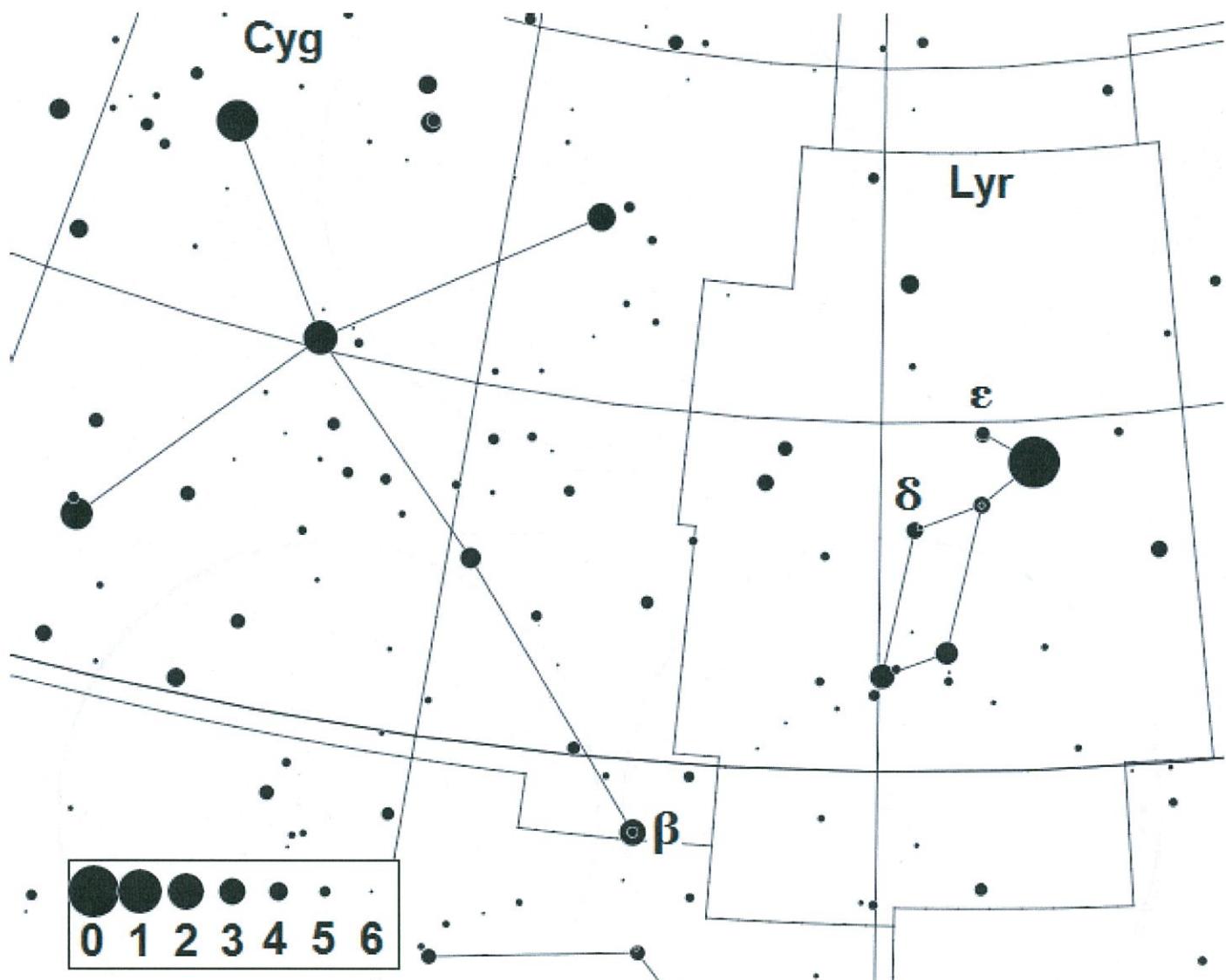
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## **Наблюдательный тур. Чистое небо** Observational round. Clean sky

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Вопросы наблюдательного тура. Чистое небо  
Observational round. Clean sky

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