

## **Observational round (the day's part). Problem to solve**

Group A.

### STARS ON THE DAYTIME SKY

#### **Introduction:**

You cannot see stars at daytime with a naked eye. And can they be seen with a telescope? If yes, explain why? Write here your explanation:

You have an opportunity to test that with the help of a guide of 1-meter telescope of SAO. Its objective-glass diameter is 20 cm, focus distance is 3 m, and field of seeing is  $21'$ .

#### **Preparation to observation.**

Using the map of stars, select a star.

Point here your object:

Its coordinates:

#### **Observation.**

An operator input the coordinates of your object into a computer controlling the 1-m telescope. After the telescope is pointed on it, check if it is seen into the guide.

The winner of the observational round competition is one who sees the faintest star at a minimum distance from the Sun.

## Observational round by photos

Groups A and B.

*Sorry, photos are possible only in SAO.*

### **Photo 1.**

What nebulae do you recognize?

Why most of them are red, but some are blue?

### **Photo 2.**

What stellar clusters are seen in the photo?

What constellations do the photo borders cross?

What part of the Galaxy is seen in Photo 1 and 2?

### **Photo 3.**

What objects are seen in the photo, their names or at least the types?

In what region of the Galaxy they are?

### **Photo 4.**

Australian aborigines call this system of dark nebulae "Emu" (Australian ostrich).

In what constellations are its body, neck and head?

What object of the photo is the nearest and the most distant?