



Code of participant код участника

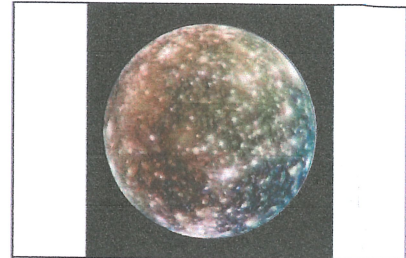
Round on Maps and Images. Images for problem 11



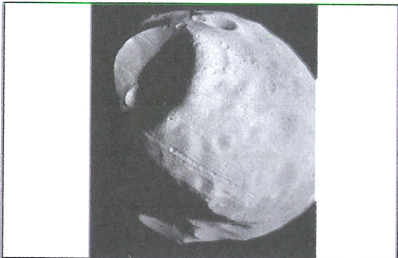
- Hyperion
- Comet P/1
- Mimas
- Enceladus



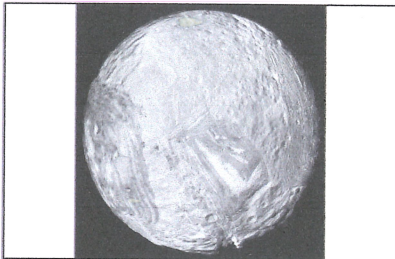
- Halley comet
- Comet P/47
- Comet P/67
- Hale-Bopp comet



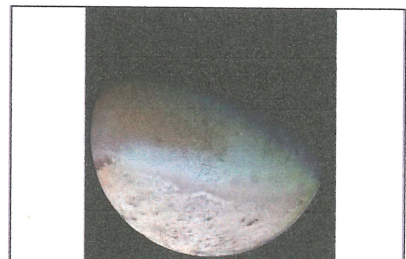
- Moon (far side)
- Ganymede
- Mercury
- Callisto



- Calypso
- Deimos
- Phobos
- Amalthea



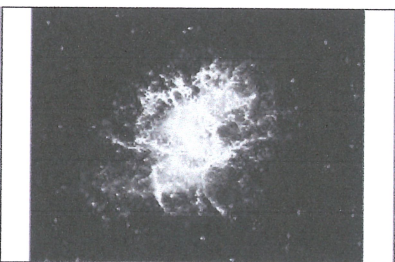
- Miranda
- Ariel
- Umbriel
- Titania



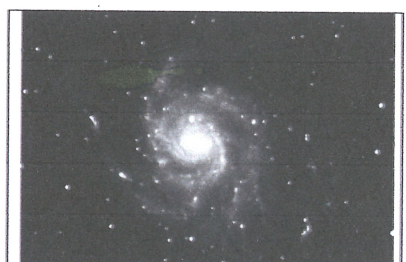
- Nereid
- Mimas
- Triton
- Pluto



- M1
- M31
- M45
- M101



- M1
- M31
- M45
- M101



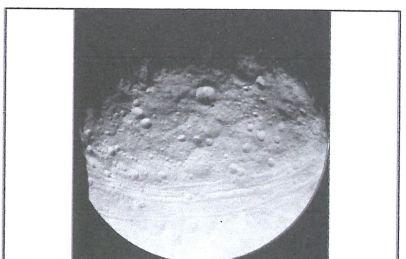
- M1
- M45
- M31
- M101



- M1
- M31
- M45
- M101



- Comet Tempel 1
- Comet P/67
- Comet Tempel 2
- Comet P/47



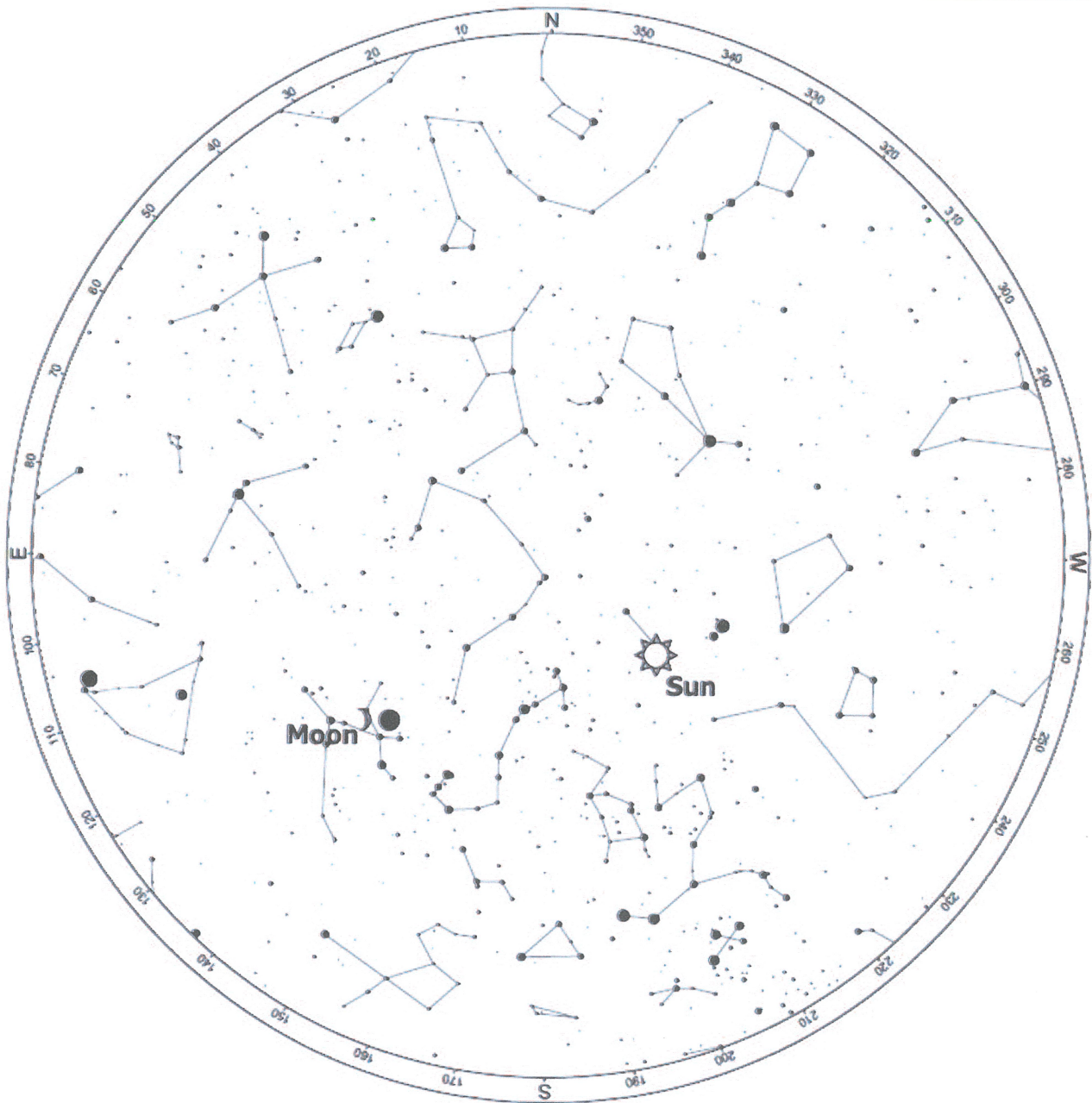
- Orcus
- Vesta
- Charon
- Pluto



Code of participant код участника

Round on Maps and Images. Map for problem 10

$\varphi =$





Round on Maps and Images. Questions to answer

10. Where is my planet?

The attached map shows the sky as it could be observed at 13:00 UT of November 8, 2021, if no atmosphere was present, from a locality on the Earth located at longitude $\lambda = 0^\circ$ and latitude φ . The positions of the Sun and of the Moon (as a small sickle) are shown. In the map planets Jupiter, Mars, Mercury, Saturn and Venus are also visible, represented with dots whose dimension is proportional to their current luminosity.

- 10.1. Estimate the latitude φ of the place where observation could be made and write it in degrees inside the box on right top of the map.
- 10.2. Draw on the map as a dotted line the ecliptic and identify with "Ecl".
- 10.3. Draw on the map as a continuous line the celestial equator and identify with "Eq".
- 10.4. Identify on the map the planets and indicate them with their standard designation (like ♃, ♀, ♂, ♄, ♀, ♁, ♃, ♄, ♅, ♆, ♁, ♃, ♄, ♅, ♆, ♁, ♃, ♄, ♅, ♆).
- 10.5. Identify on the map the following 14 constellation, writing their three letter code nearby: **Aql, Boo, Cen, Cru, Crv, Del, Her, Leo, Lib, Lyr, Oph, Sgr, TrA, Vir.**
- 10.6. Identify on the map the following 5 stars, writing the indicated three digit code nearby: Acrux (**Acr**), Albireo (**Alb**), Antares (**Ant**), Denebola (**Den**), Mizar (**Miz**).

11. Who is who?

You are provided with a sheet where images of 12 astronomical objects are shown. Identify these objects marking the correct answer among the listed four. Multiple choose or corrections are not allowed.