

06.06.2014

Problems

1. In the microquasar GRS 1915+105, the radio blob moved sideways with the speed of 2 arcseconds within a month of observations. What is the apparent velocity of this blob, if the distance estimate to this source was 12.5 kiloparsec? What can be its real velocity, taking into account the effects of projection?
2. Calculate the optical depth of the Earth's atmosphere for X-ray photons and show why this radiation cannot reach the surface of our planet.

(due date: 12.06.2014)