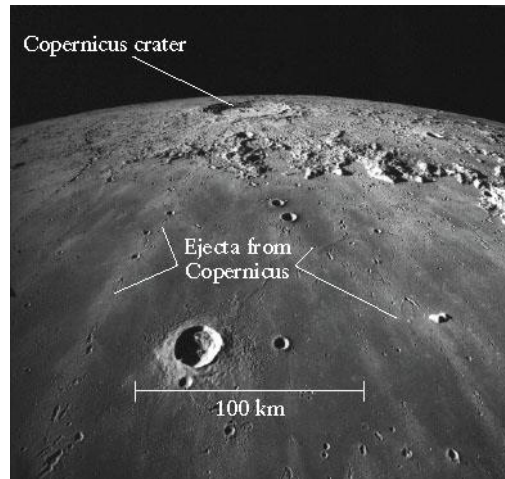


Introduction to Astronomy

HW20131202

due in one week

1. During the period of the most intense bombardment by space debris, a new 1-km radius crater formed somewhere on the Moon about once per century. During the same period, what was the probability that such a crater would be created within 1 km of a certain location on the Moon during a 100-year period? During a 1 Myr period?



2. Where is the largest crater known on Earth located? How old is it estimated to be?
3. The *Galileo* spacecraft that orbited Jupiter from 1995 to 2003 discovered that Ganymede has a magnetic field twice as strong as that of Mercury. Why is this discovery interesting?
4. What is the evidence that other stars existed before our Sun was formed?
5. The planet orbiting the star 70 Virginis, 59 light years from Earth, moves in an orbit with a semimajor axis 0.48 AU and eccentricity 0.40. The orbital period is 116.7 days. Find the mass of 70 Virginis.