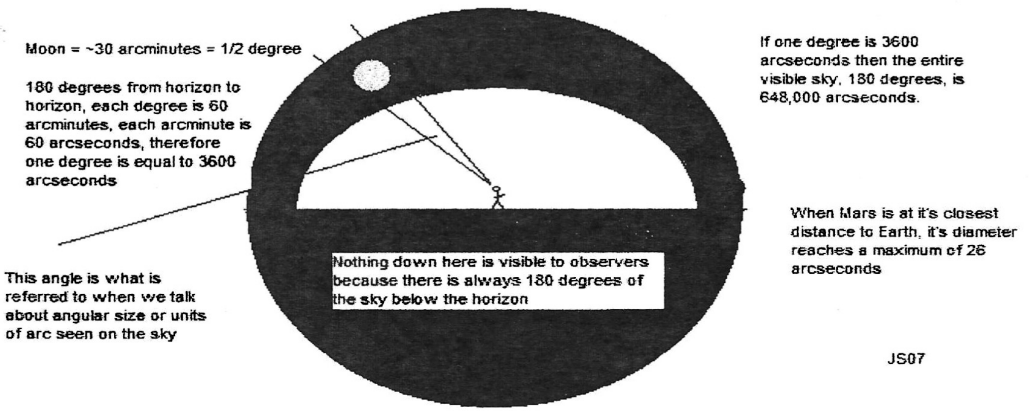
First of all, we see the sky as one half of a circle, stretching from horizon to horizon. In a complete circle there are 360 degrees, so from horizon to horizon we see half of that, 180 degrees of sky are visible at any one time. The moon has an angular diameter of about 0.5 degrees or 30 arc minutes. Converted to arcsec the moon diameter is about 1,800 arcsec! (*See the figure below*)



4100m ~4km

Here is a quick exercise to help you better understand the size of one arcsecond.
Let θ=1 arcsecond, this is our observed resolution. Let the actual size of the observed object, "***h***" be the diameter of a dime/penny measured in millimeters. Measure "***h***"

h = _____mm
Use the resolution relation to determine the distance, ***"L"***, from an observer for which a dime/penny will have a θ =1 arcsecond angular resolution.

Remember the resolution relation. Let's rearrange the relation so we can solve for ***L*** :
$L = 2.063 * 10^5 * (h/\theta)$ millimeters

What is your value for "***L***" in millimeters? _____mm

Convert your value for "***L***" from millimeters to kilometers, a much more reasonable way to think about that distance. *(Remember that one km = 10^3 meter and one meter = 10^3 millimeters)*

L=_____km

Does this help you to appreciate how small an angle one arcsecond really is?