ECEn 560
Electromagnetic Wave Theory

Homework #20
Due Mar. 24, 2016 (may be turned in late for half credit)

1. Model a red laser beam as a Gaussian beam. (a) If the beam waist is 1 mm wide at the earth, what is the width of the beam at the moon? (b) What is the depth of focus of the beam?
2. For the red laser, how far away from a 5 mm aperture is the far field approximation valid? How does this compare to the depth of focus of the Gaussian beam in the previous problem?