



From: Chief Astronomer
To: Mirror Design Team
Regarding: Telescope #2

Here are the specifications for the mirror for telescope #2, which we are hoping to have up and running within 18 months:

- 1) Light gathering power: Telescope #2 should have twice the light-gathering power of telescope #1, which, as you know, has a 3-meter diameter. Knowing this will enable you to determine the diameter of the main mirror for telescope #2.

- 2) Focal Length: Telescope #2 should have a focal length of 8 meters.

Based on this data, please sketch the cross-sectional curve of the mirror for telescope #2 below. Be sure to state the value of the depth and radius of the new mirror.

Then determine the specific equation which describes that curve, in quadratic function format ($y = ax^2 + bx + c$).

I need this right away.

Ed
EH:jk

