# Assignment 1: The Human Eye

The human eye is a globe with a diameter of approximately 24 mm. There are 4 membranes; a cornea, sclera, choroid and retina, with thicknesses of 1.00mm, 0.5mm, 0.2mm and 0.2 mm, respectively. The lens of the eye functions such that the dimensions are not constant, but at rest is generally 10mm in height/width and 4mm deep, sitting just behind the pupil.

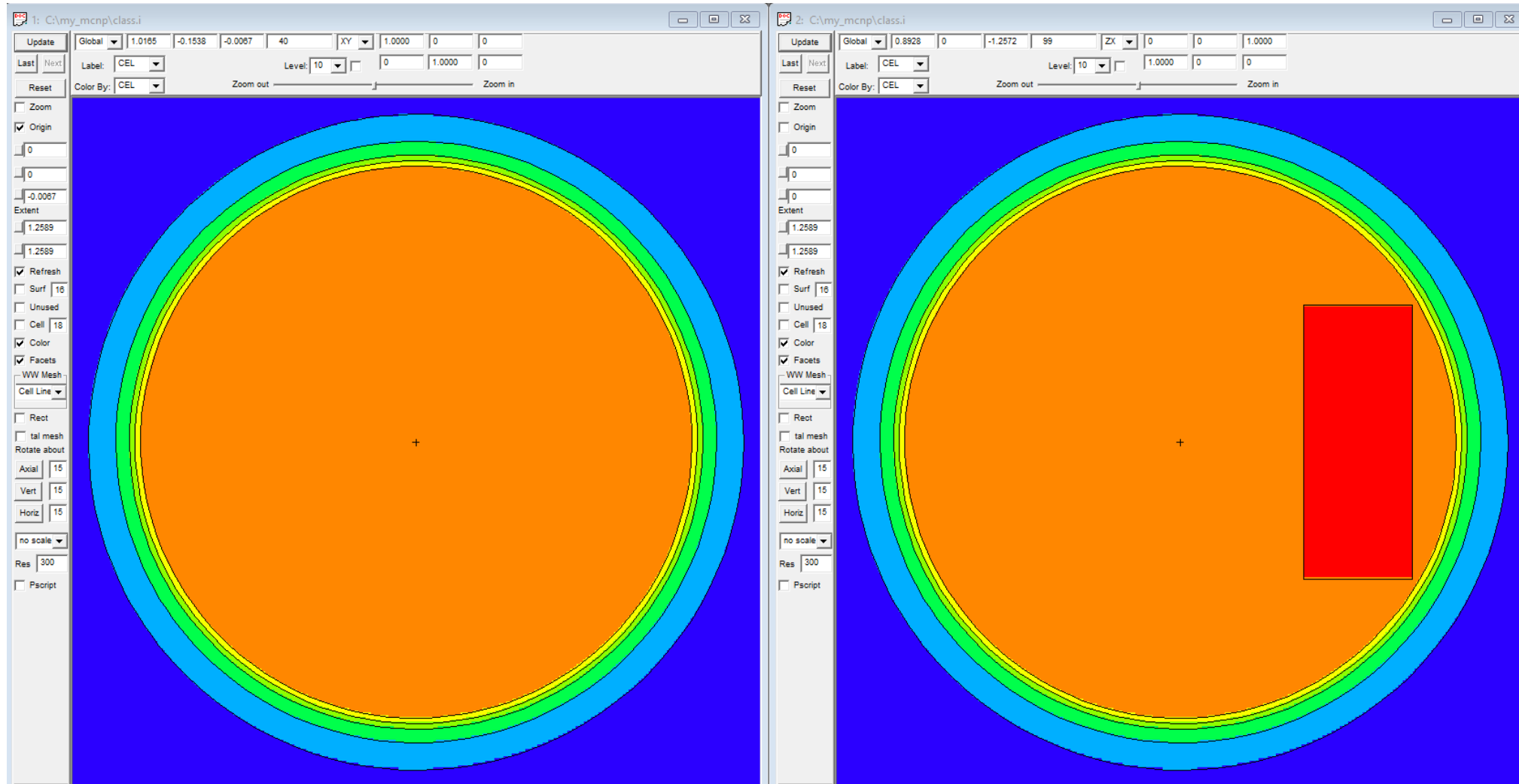In this exercise, we will model the human eye, from simple to complex.
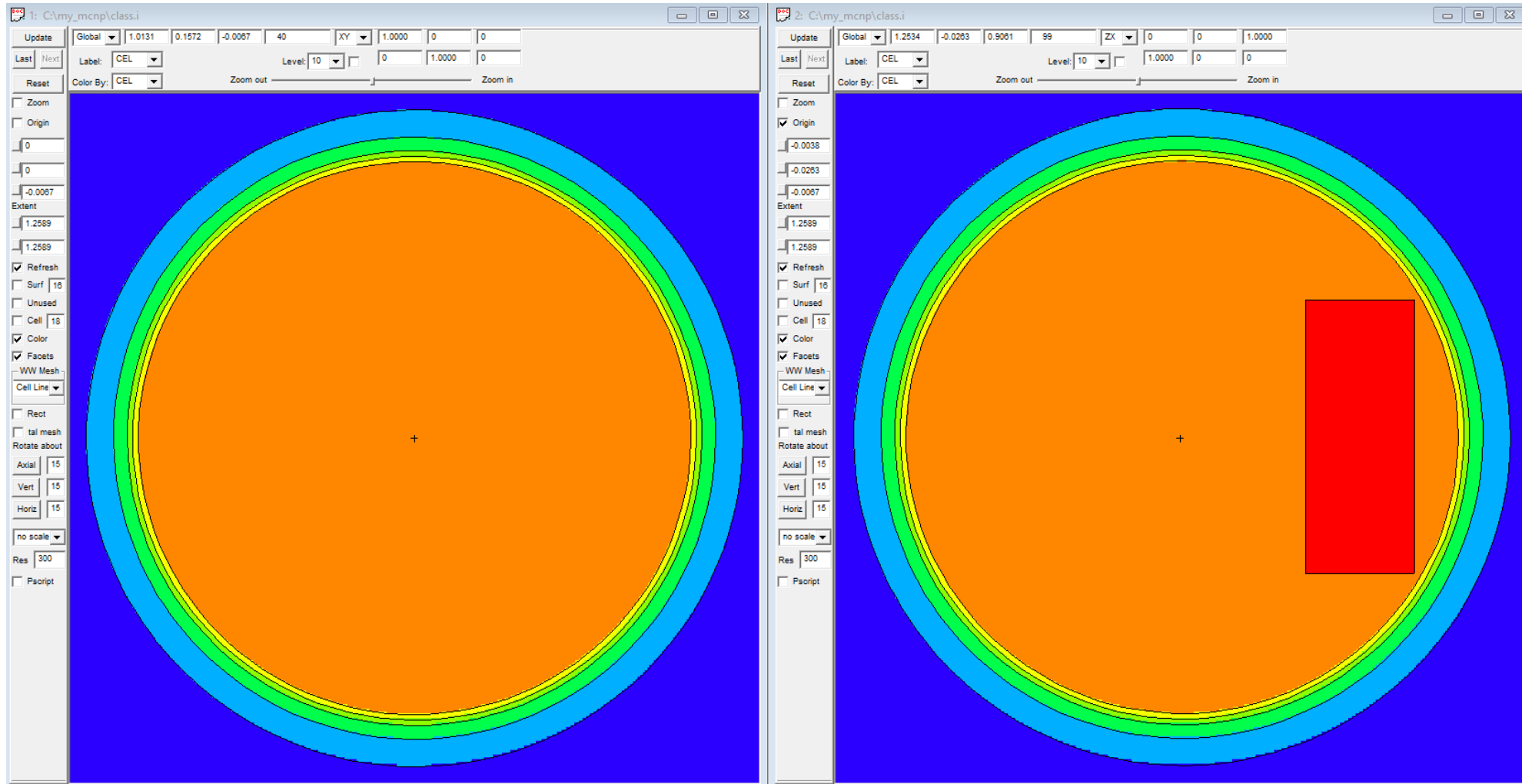
1. Model an eyeball as a simple sphere
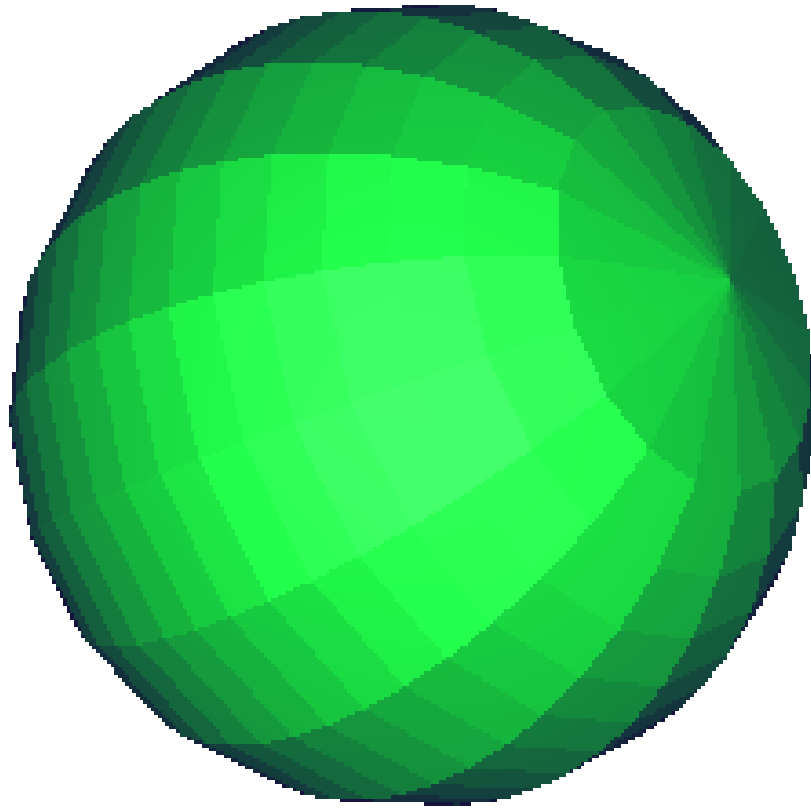
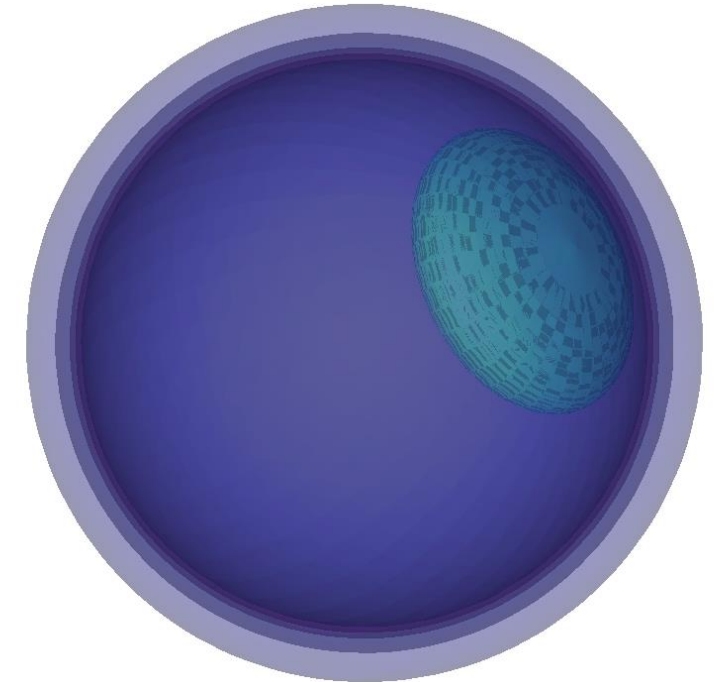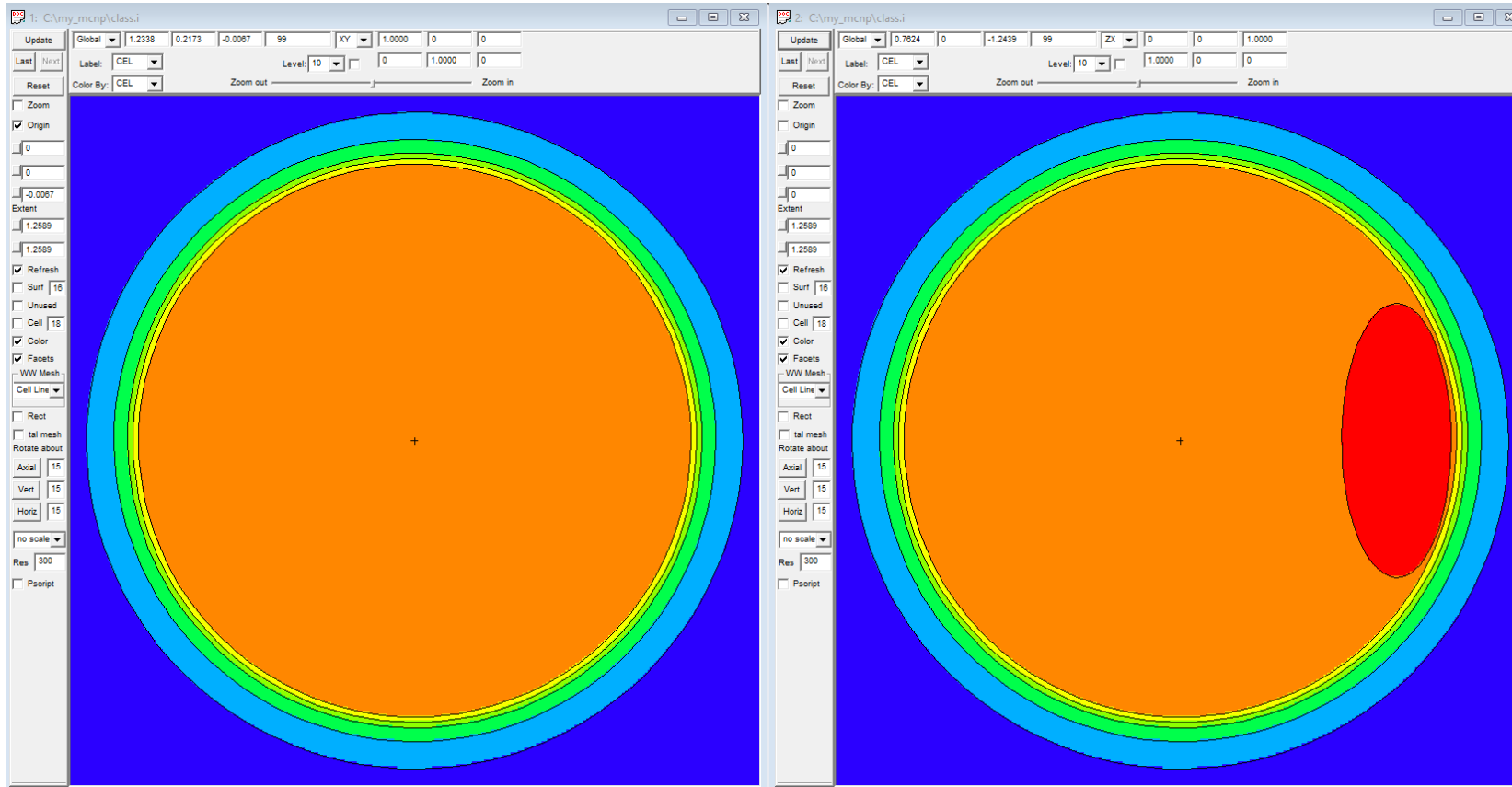# 2. Model the eyeball, adding each membrane
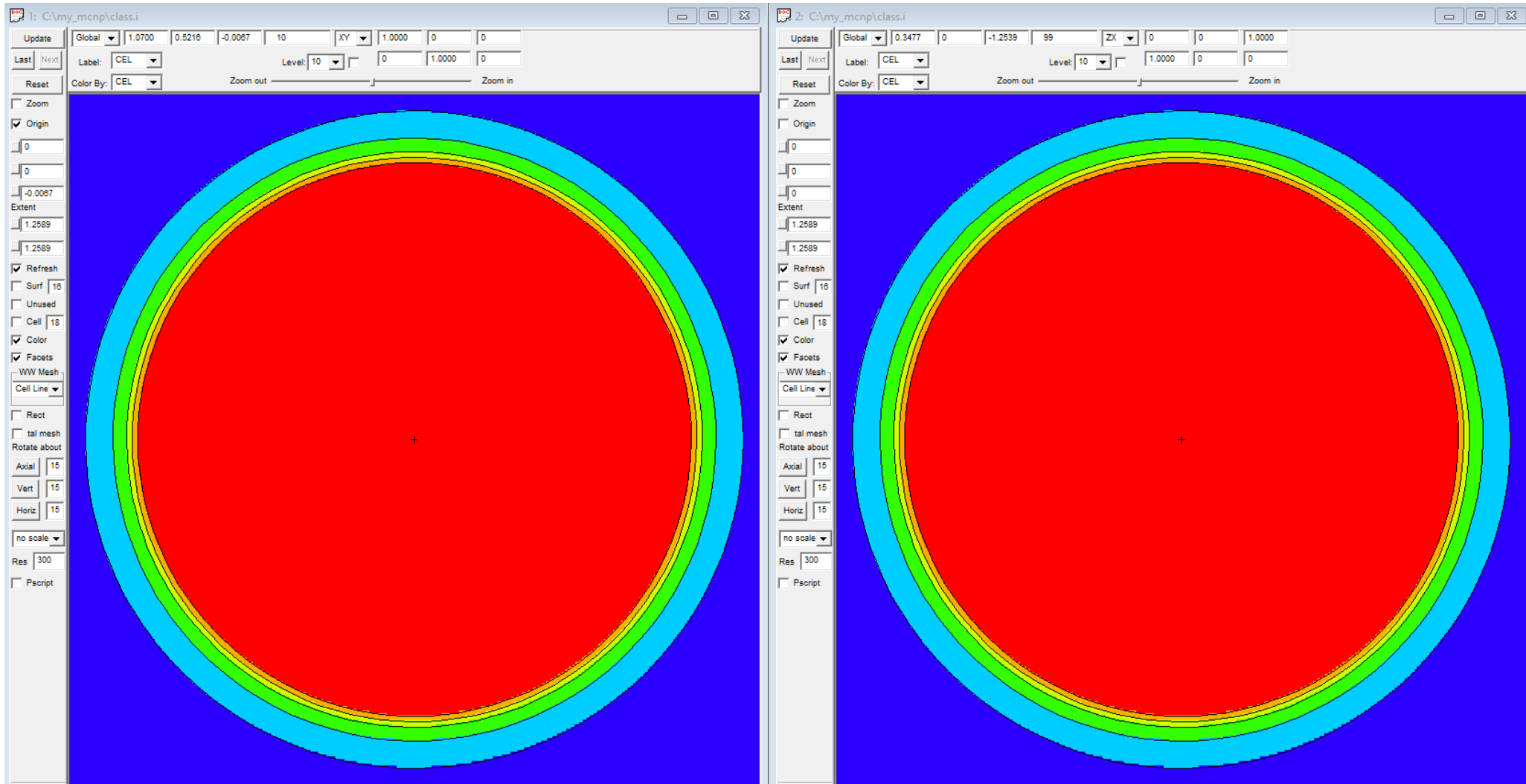
3. Add a lens as a simple rectangular macrobody

4. Add the lens using surfaces, not a macrobody (will look identical)

5. (Stretch) Add the lens as an ellipsoid with diameters 10mm, 10mm and 4 mm.

MCNP6 User Manual p. 3-9 for surface syntax description (I used SQ, but you can find what you like).