



This should create two studies, each of which has a CT series, a PT series and a REG series. The CT series and PT series represent a pair of spheres, one at  $(-175,0,0)$  and one at  $(175,0,0)$ . The sphere on the right  $(-175, 0, 0)$  has an outer radius of 70 mm and an inner radius of 65 mm. Between the inner radius and outer radius, the density is that of bone. Inside the inner radius, the density is that of water

## Understanding the Config file

There are several examples of configuration files in the `config`

- $rx=<d>$
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The CT density generator works by going down the object list, in order until it finds the first object that the point is inside of. It returns the `ct_density` property of this object. If none is found it returns the -1000 (the density of air). It will print a message to `STDERR` if it encounters an object with no `ct_density` property.

#### PT Pixel Plane Generator

For each pixel in the volume, the value is calculated by executing the “Density Generator” function for the specified modality (check `$DensityGenerators` in the file `include/Posda/PseudoPhantom.pm`). After the values are generated, they are scaled to the maximum of the range of the modality.