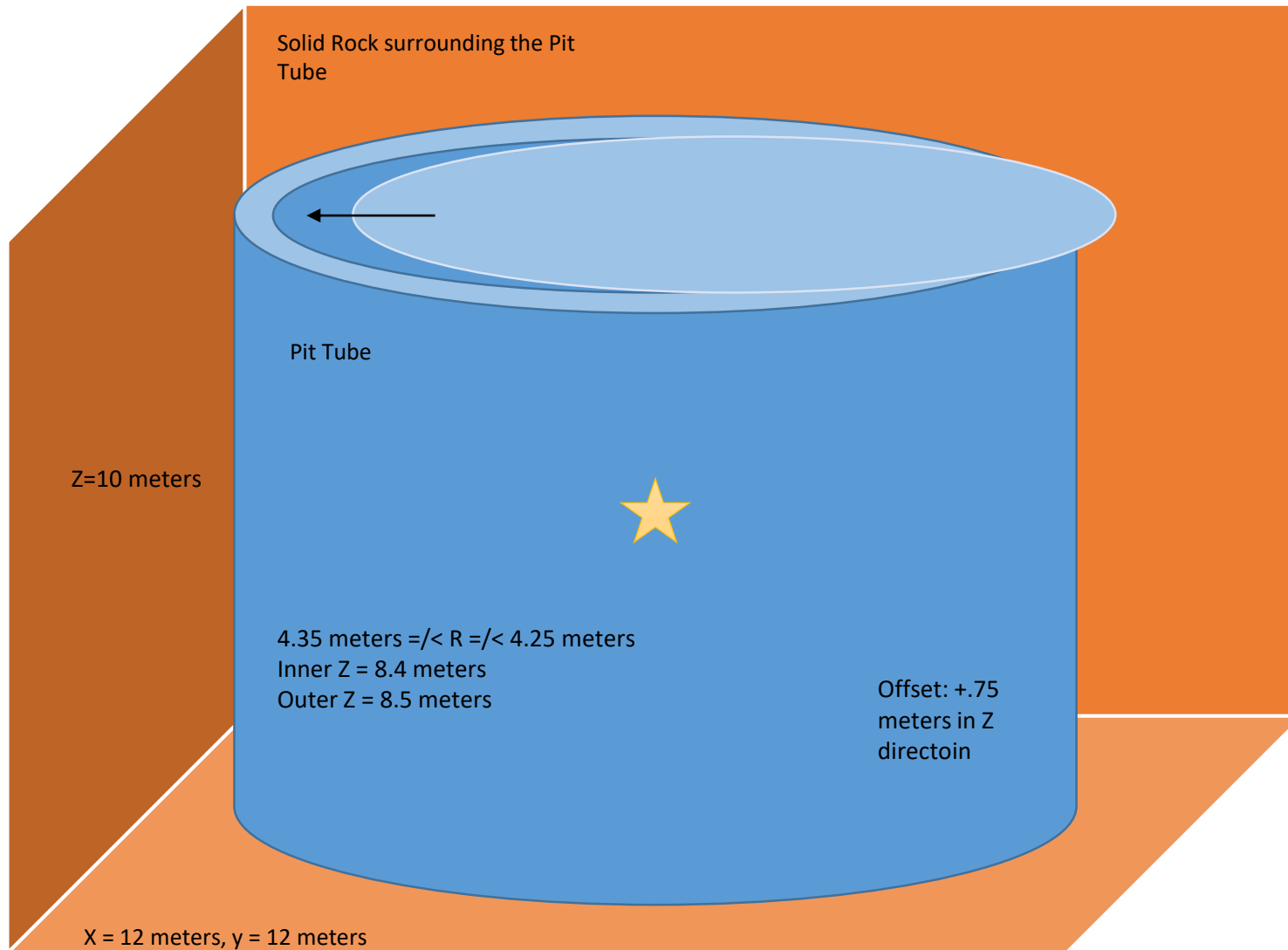
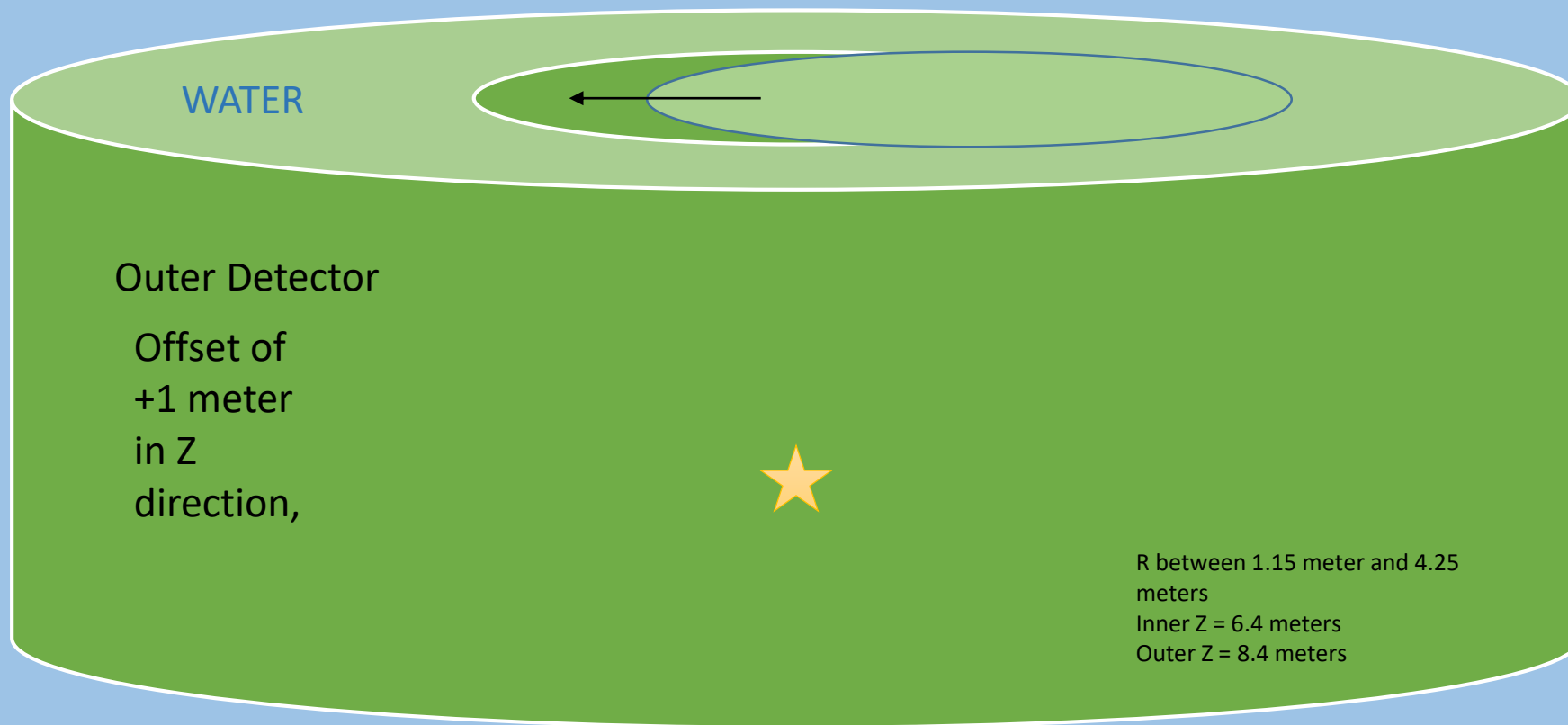
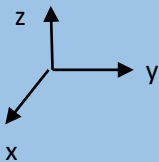


World: a 20 meter cube around this pit, centered at the star.





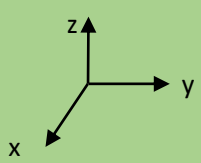
WATER

Outer Detector

Offset of  
+1 meter  
in Z  
direction,



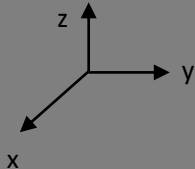
R between 1.15 meter and 4.25  
meters  
Inner Z = 6.4 meters  
Outer Z = 8.4 meters



Including supports and casing:  
Diameter of 1.15 meters  
Height of 2.2615 meters



This is our end goal  
(visualization of the  
fridge), and the next slide  
is my proposal for the  
geometry



### Dilution Refrigerator

Z=Height

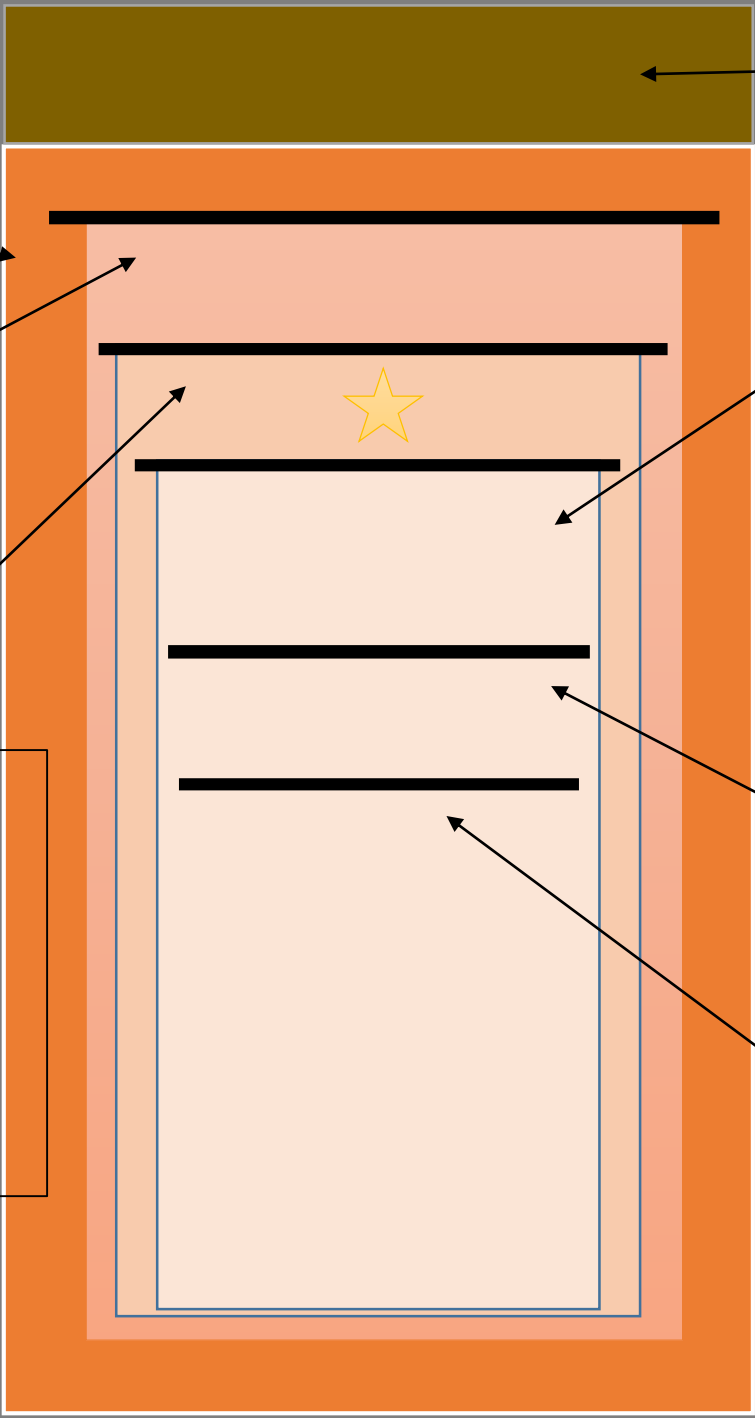
D= Diameter

Outer Casing  
Z=1.043 meters  
D= 0.372 meters

50K plate  
Z=6 millimeters  
D=0.36 meters  
Z-offset = +0.2311 meters  
Associated Cylinder:  
Z=0.8324 meters  
D= 0.339 meters  
Z-offset = +0.398 meters

4K Plate  
Z=5 millimeters  
D=0.323 meters  
Z-offset =+0.0279 meters  
Associated Cylinder:  
Z=0.6182 meters  
D=0.302 meters  
Z-offset = -0.2904 meters

Copper Cylindrical  
Cavities (50 K, 4K, 1K,  
100mK, 15mK)

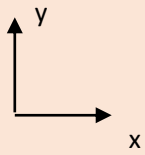


Top Hardware (Shape is simplified)  
Z=0.2367 meters  
D=0.402 meters

1K Plate  
Z=5 millimeters  
D=0.284 meters  
Z-offset = -0.1753 meters  
Associated Cylinder:  
Z=0.5042 meters  
D=0.263 meters  
Z-offset = -0.4274 meters

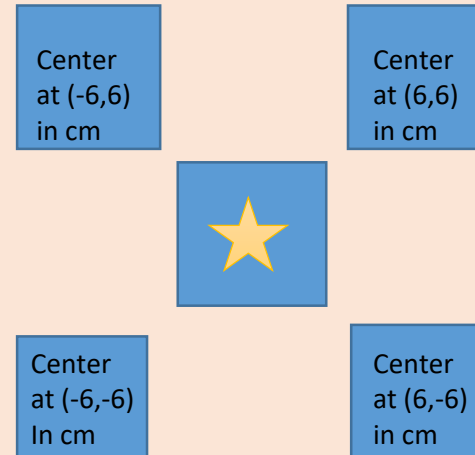
100mK Plate  
Z=3 millimeters  
D=0.250 meters  
Z-offset=-0.2253 meters  
Associated Cylinder:  
Within 1K Cylinder  
Z from bottom of 1K: 0.3742 meters

15mK Plate  
Z=4 millimeters  
D=0.250 meters  
Z-offset=-0.2995 meters  
Associated Cylinder:  
Within 1K Cylinder  
Z from bottom of 1K: 0.3 meters



Top Down View

## Crystals



Each Crystal is a  
cube of 5.2 cm

With a -0.550  
meters offset in the  
Z direction (to be in  
the near bottom of  
coldest chamber)