



One LBNE cryostat with 10 light paddles per APA. The size of the cryostat:  $1397.54 \times 1502.54 \times 2821.26$  in cm.

The geometry of each light paddle:  $0.476 \times 10.16 \times 224.999$  in cm.

- Sensitive Detectors

The light paddles are set as photon detectors with quantum efficiency 1.

- Voxelization schemes

750\*800\*1400 for one cryostat. The number of voxels in one LBNE cryostat is 107.52 times of MicroBooNE.

- Building library

I submitted 1000 jobs to the grid, each job has 1000 voxels. 1000 photons were produced in each voxel.

Each job took about 25 minutes. The library produced for these 1,000,000 voxels is 38MB. Building the complete library for one cryostat requires 350,000 hours of cpu time and 31GB.

1000 photons in each voxel may not be enough compared with 100,000 in MicroBooNE library building. If the same number of photons are produced in each voxel for LBNE, it will take more than 3,400,000 hours of cpu time.