Status report 03/20/2020 Michitaka Inomoto

Magnetic field effects

- In addition to the previous measurement,
 I measured the magnetic field dependence of relative efficiency of the 3-inch PMT three times.
- I used another 3-inch PMT as the monitor PMT.



Magnetic field effects

- Earth's magnetic field around two dark boxes is about 0.03 mT.
- I measured the relative efficiency in the three types of PMT's angles to Earth's magnetic field.



Relative efficiency

Relative efficiency is defined as follows :

Relative efficiency = $\frac{\mu \text{ of Poisson distribution}}{\text{Mean of monitor PMT integrated charge}}$









- 0.03 mT





0 mT



0.03 mT

Integrated charge

Relative efficiency

- I checked the magnetic field dependence of the relative efficiency.
- The efficiencies in 0 mT and 0.03 mT are similar.
- The efficiency in -0.03 mT differs from in 0 mT and 0.03 mT.



Light intensity

- I checked the mean of integrated charge of the monitor PMT.
- The result shows no rainbow curve.

