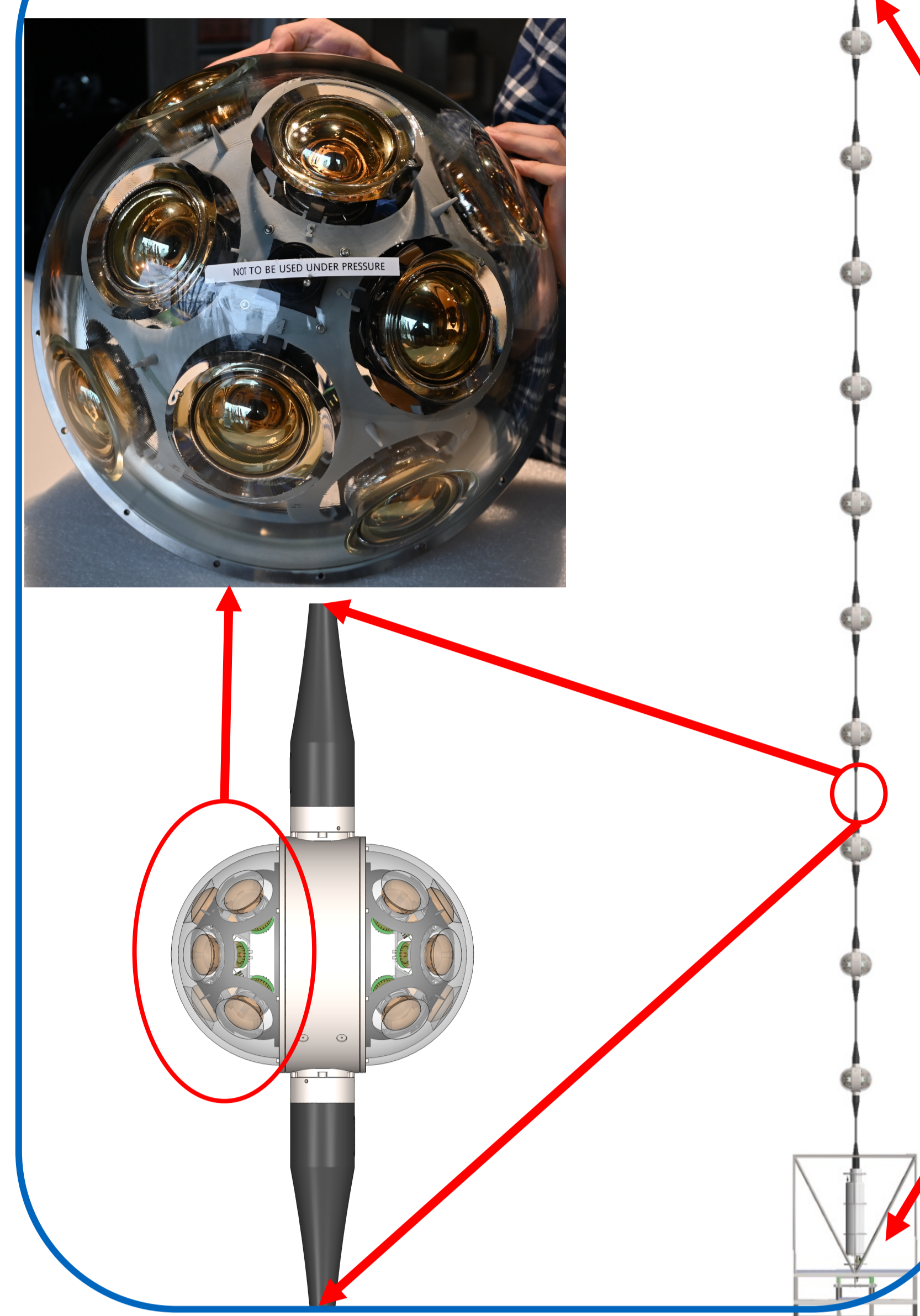
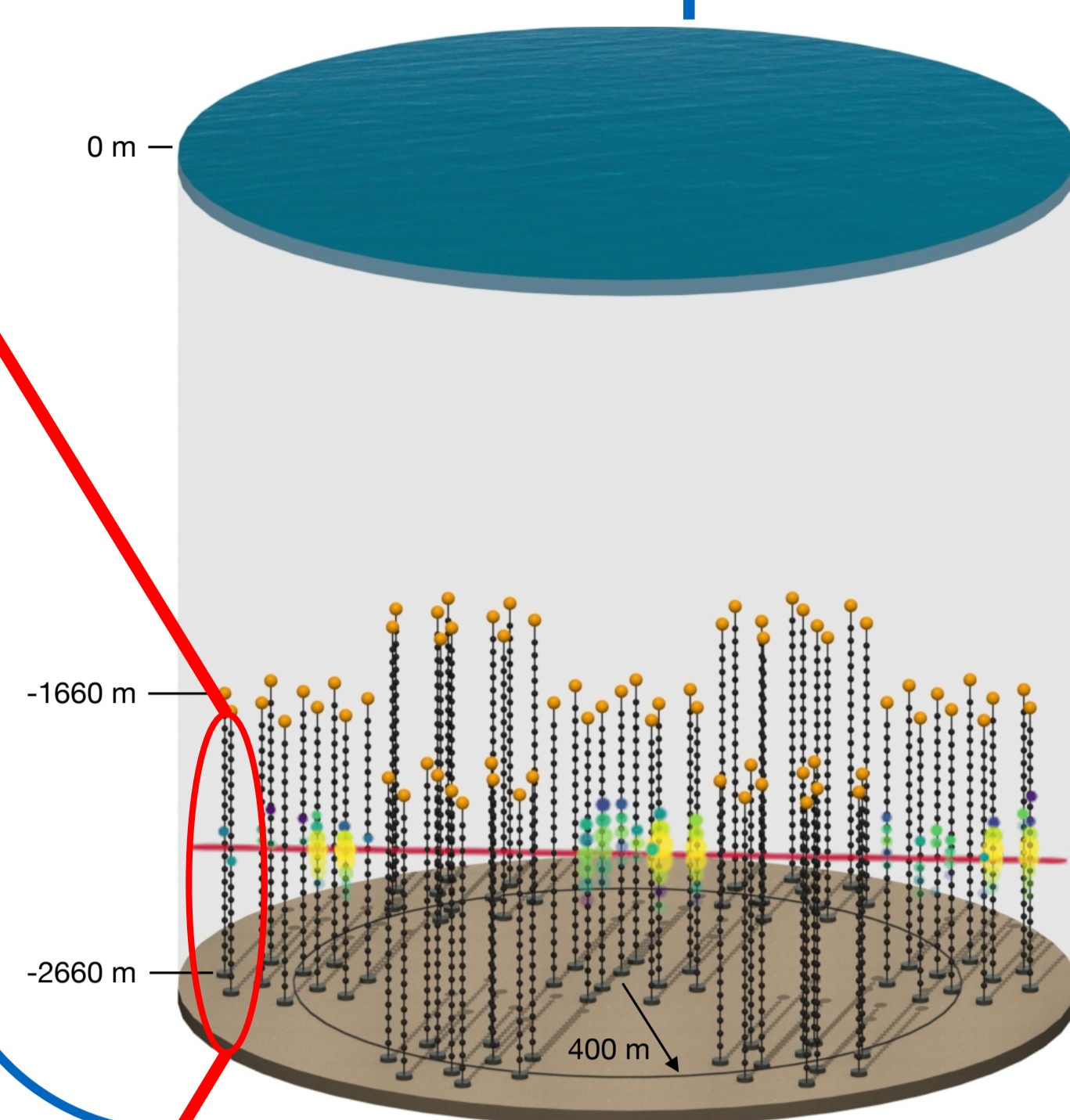


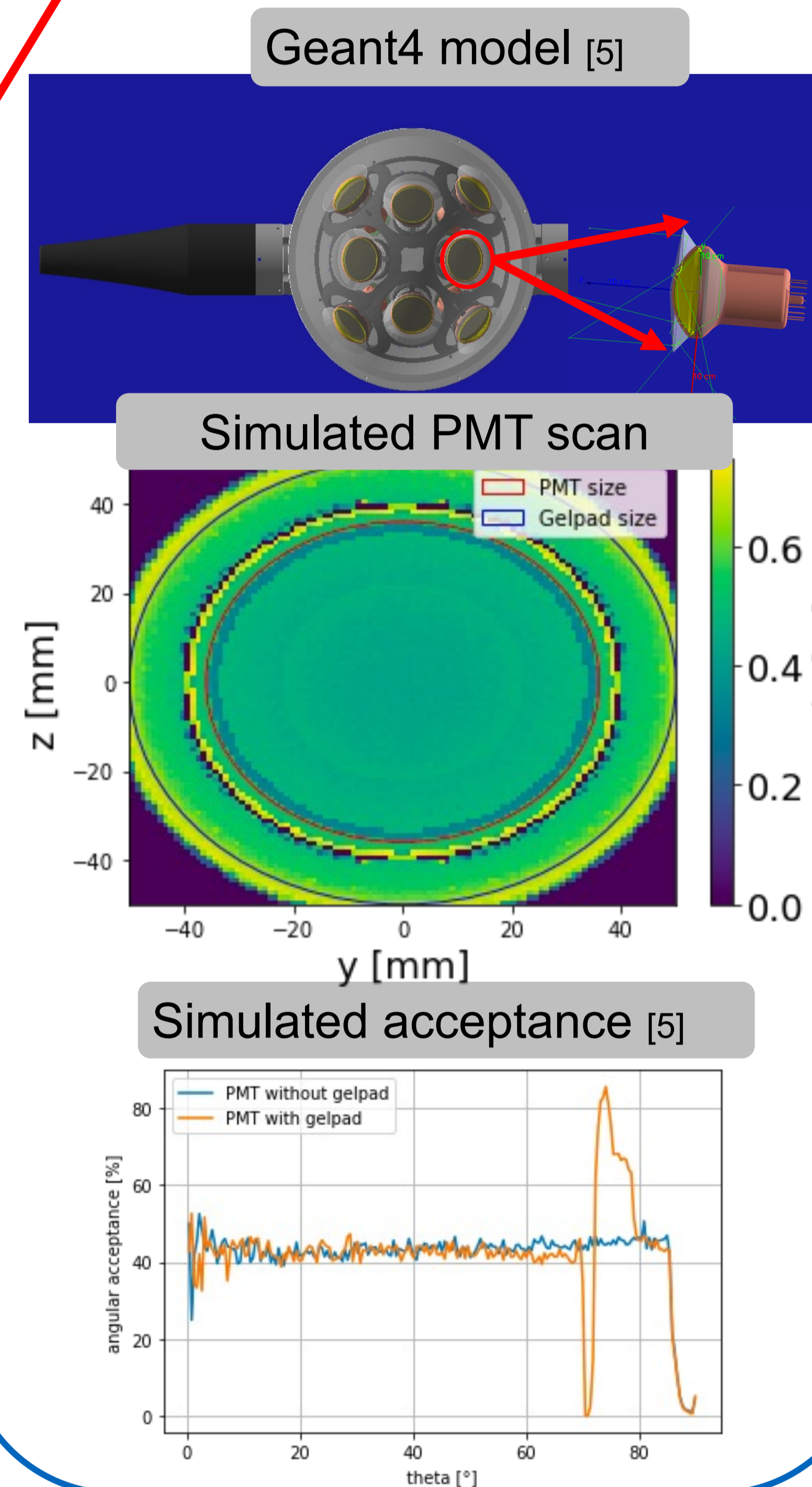
P-ONE Optical Module (P-OM)



1-Pacific-Ocean-Neutrino Experiment^[1]

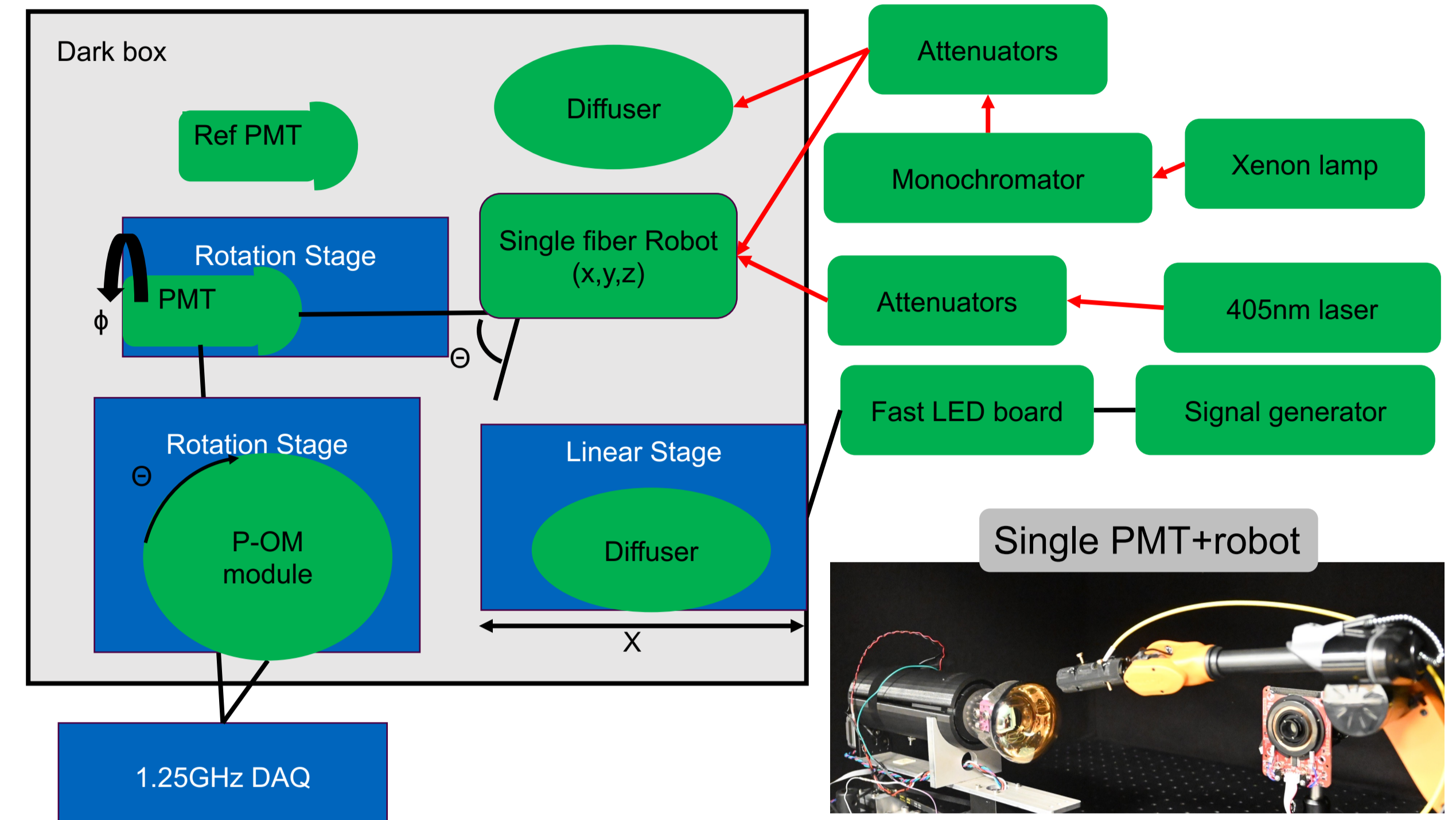
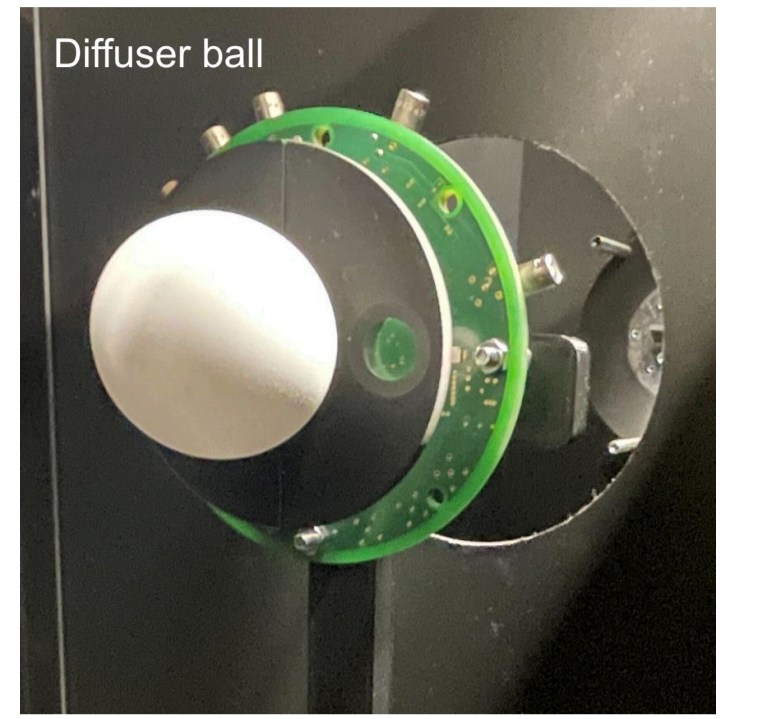


2-P-OM simulation

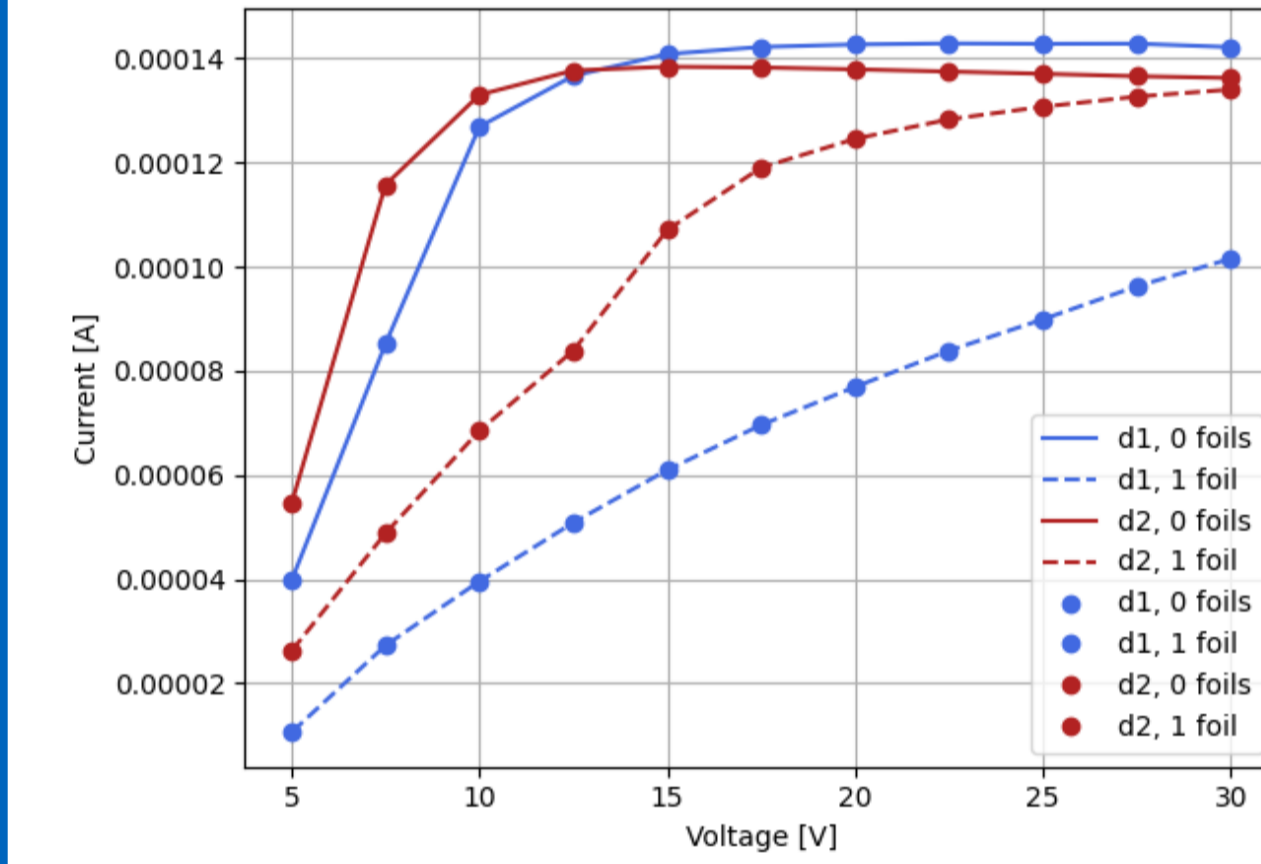


3-Optical Module Calibration Unit (OMCU)

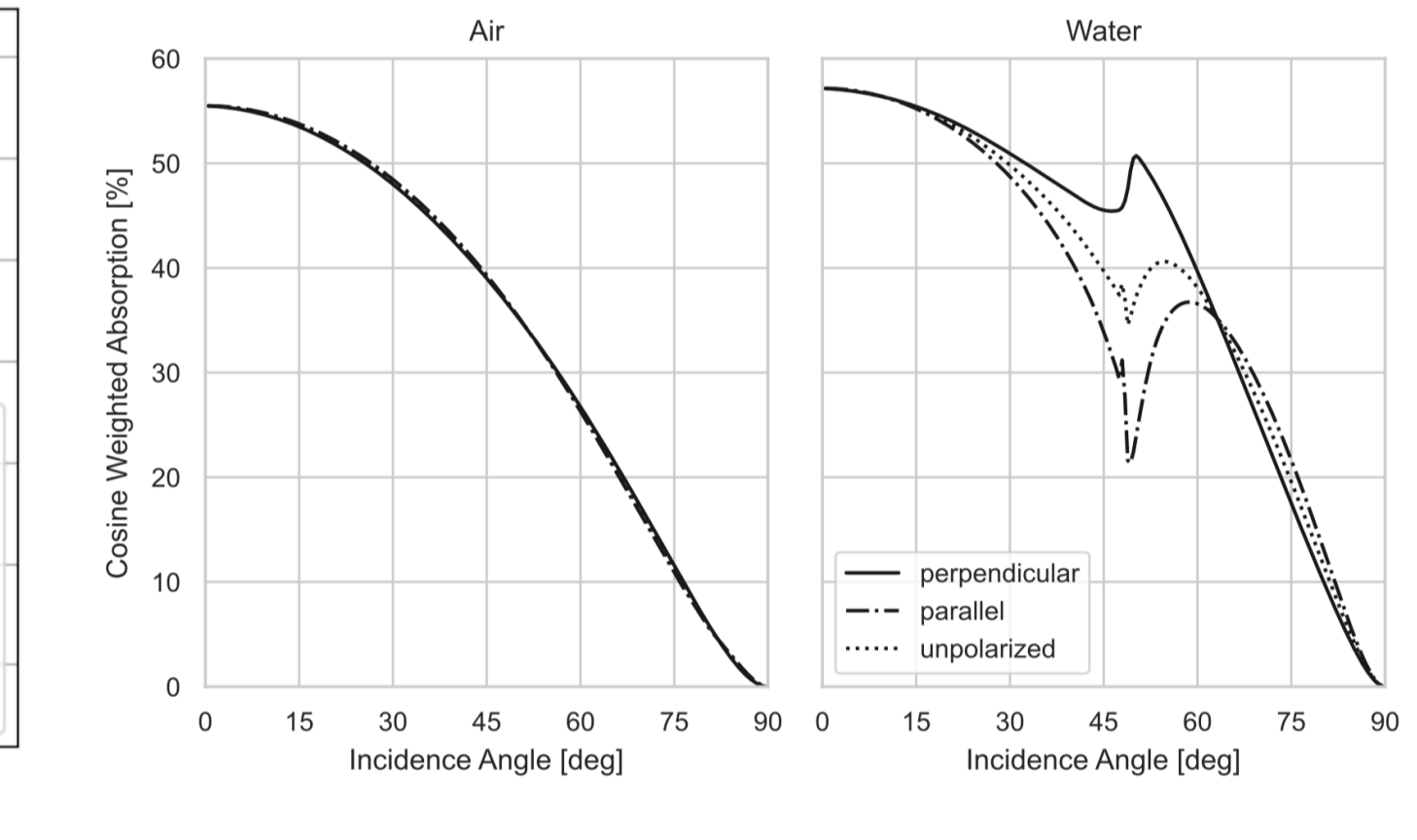
- 405 nm single photon laser (diffuse and steady point)
- Angular acceptance (moving and steady light source)
- Single PMT or P-OM module
- In development :
 - Quantum efficiency measurement
 - Saturation measurement
 - Polarization measurement



Saturation preliminary results

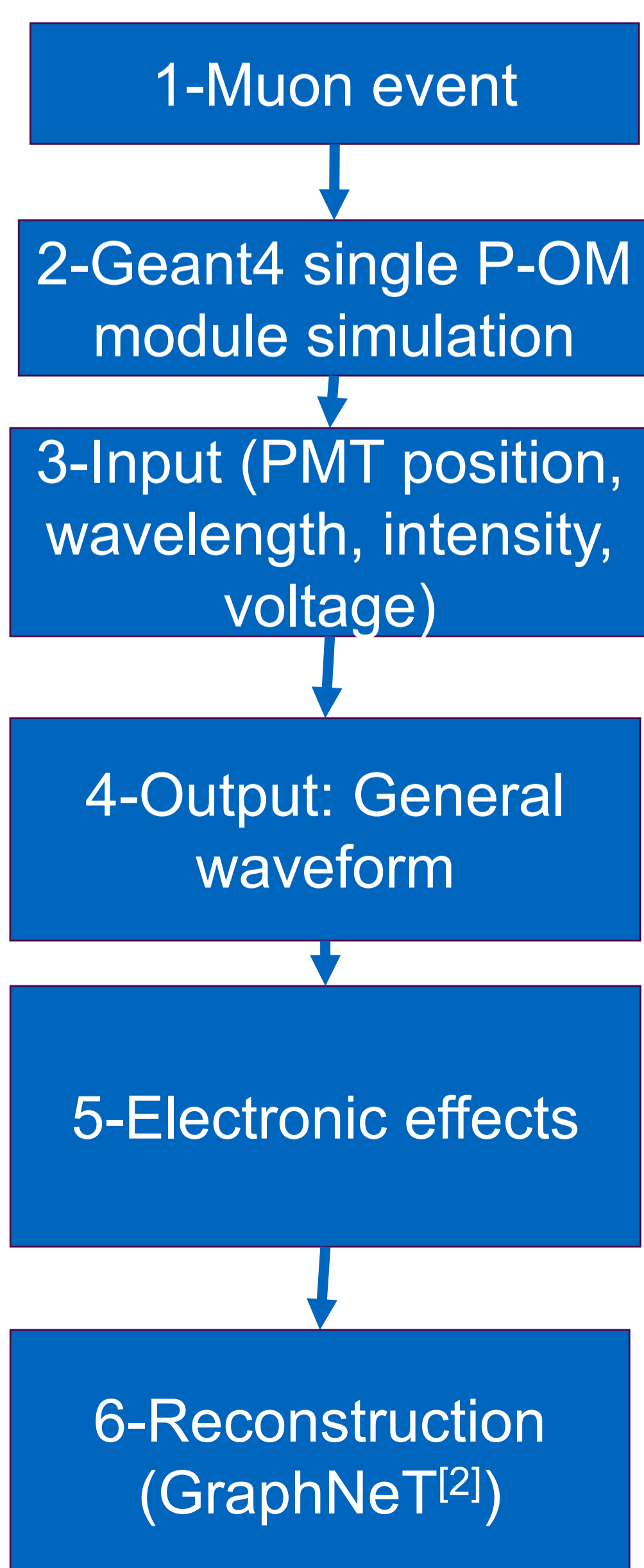


Simulated polarization effect [3]-[4]

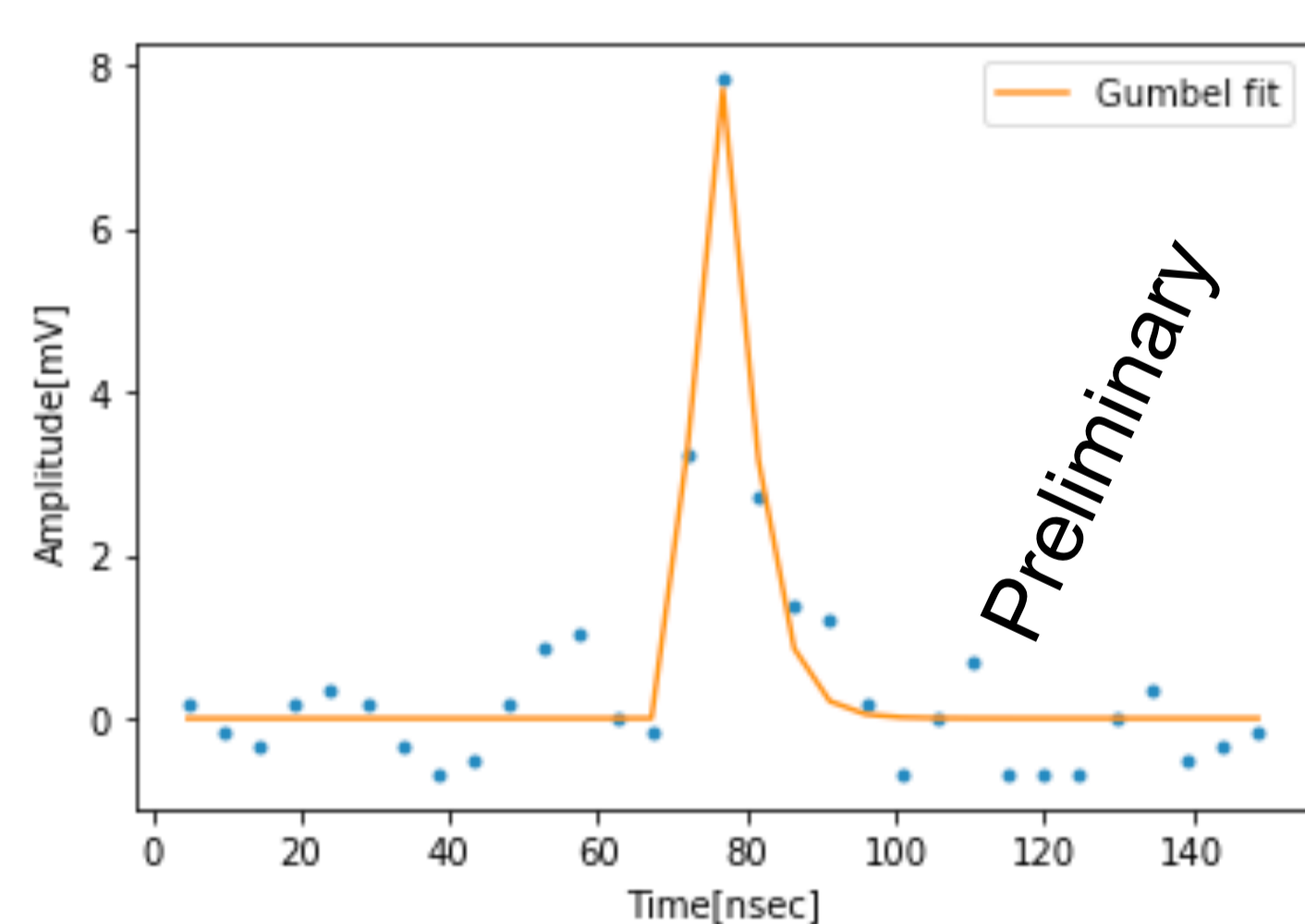


P-OM Monte-Carlo chain

- Knowing the most important calibration measurements needed before the deployment of P-ONE is challenging.
- A Monte-Carlo chain of the P-OM will be built to evaluate the importance of the available PMT measurements on the reconstruction of simulated event.
- Faster than full MC to allow quick adjustments

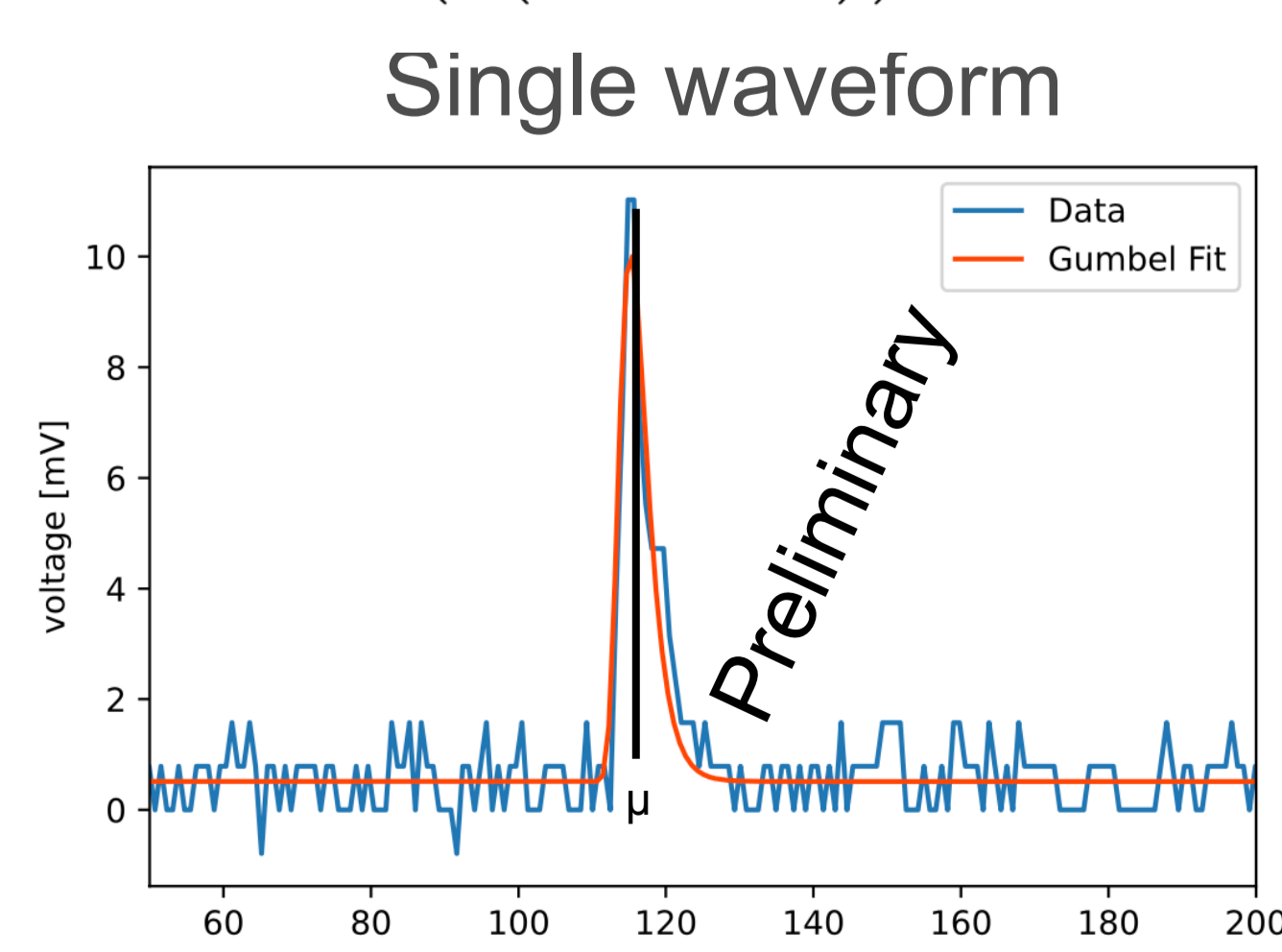


5-Mainboard PMT readout

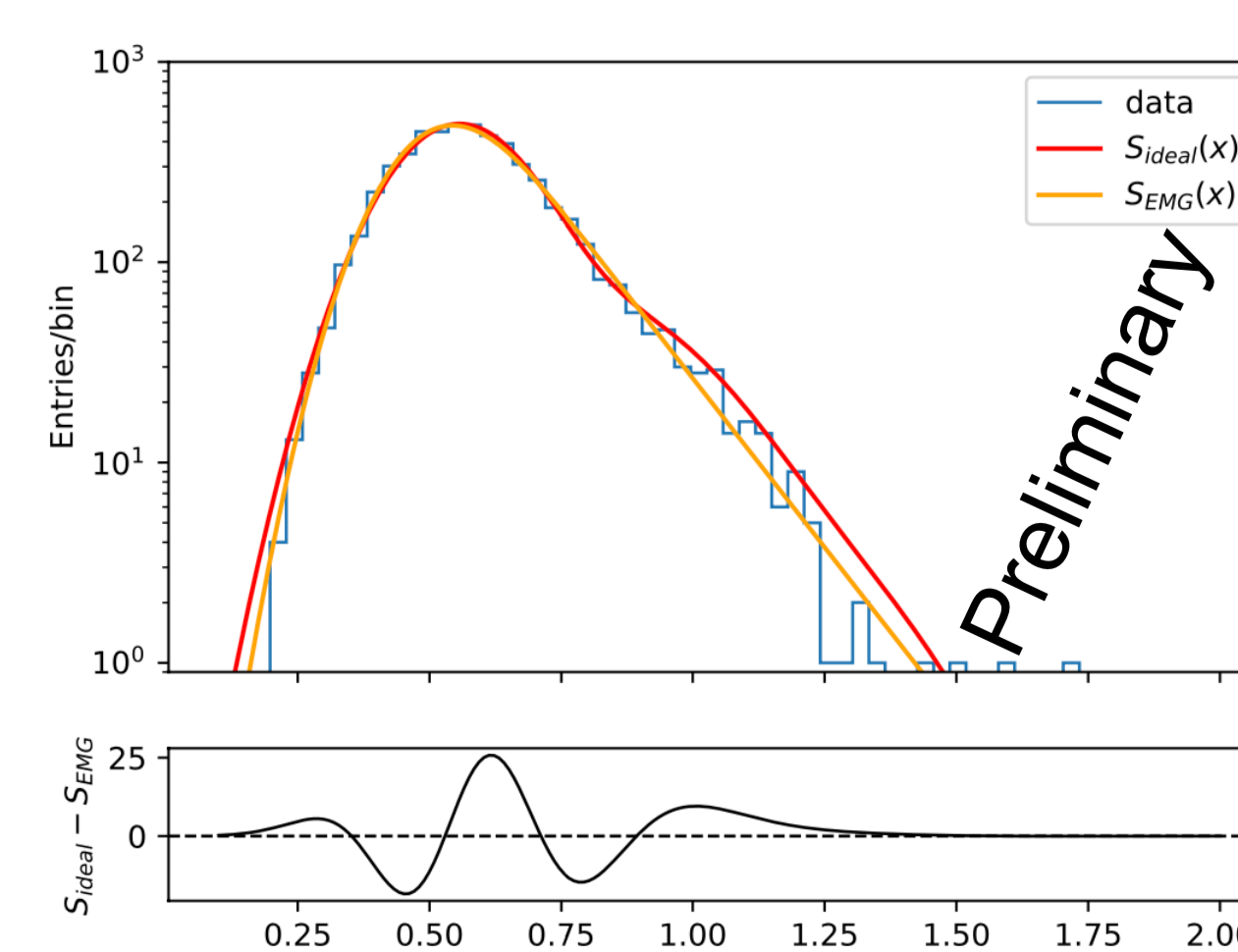


4-Parameters distribution fit

$$I(t) = A \cdot \exp\left(-\left(\frac{t-\mu}{\sigma} + e^{-\frac{t-\mu}{\sigma}}\right)\right) \cdot \frac{1}{\sigma}$$



Integrate and fit the gain



Overall fit (typical gain calibration)

