

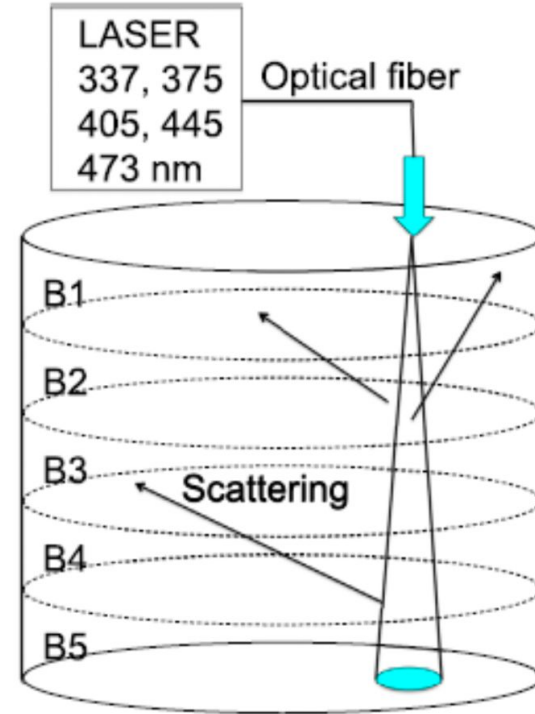
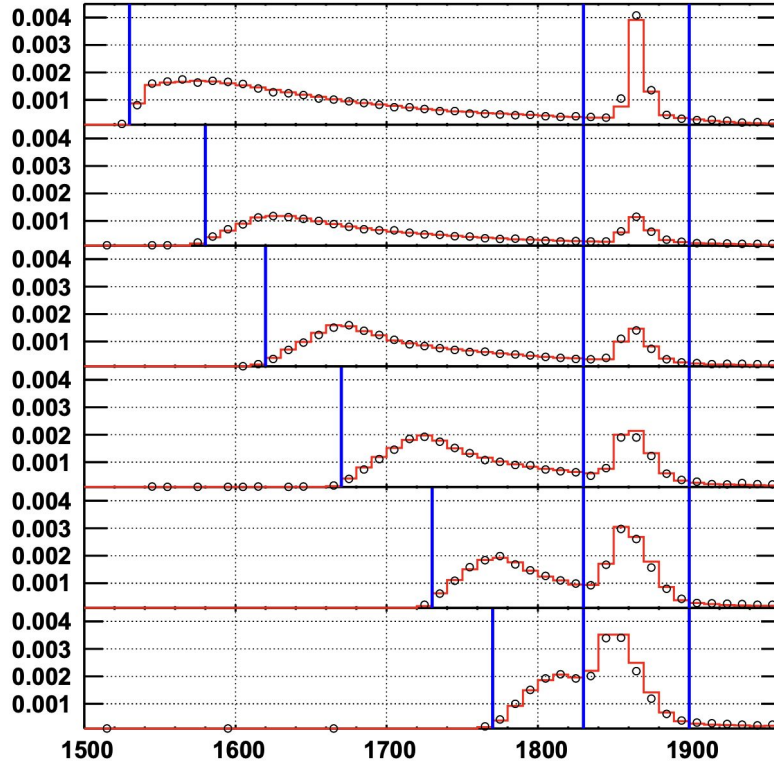
Cider Meeting

July 10, 2026

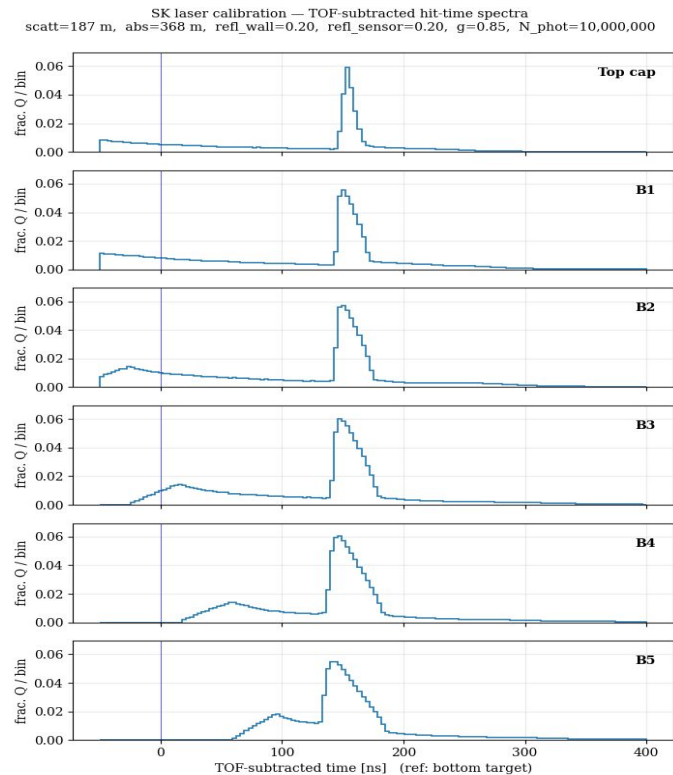
Riya Shah

Simulation Comparison - TOF

Calibration Paper

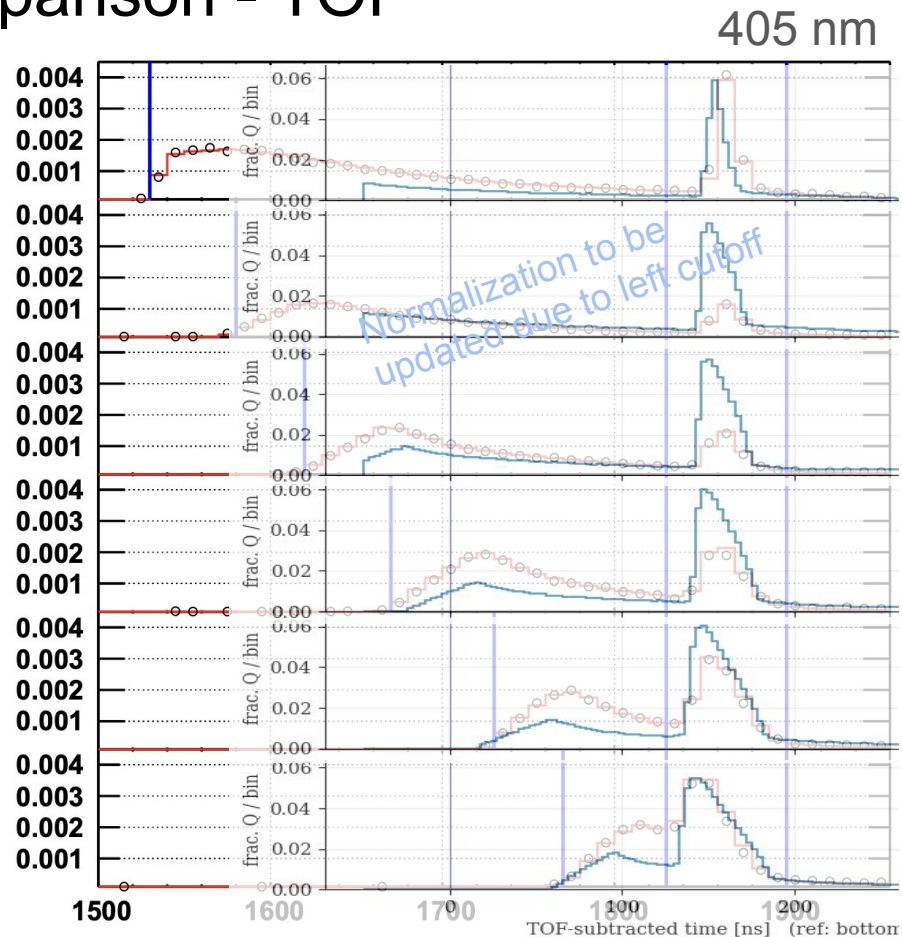
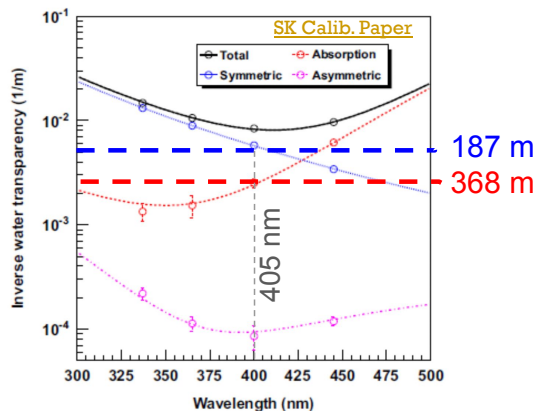


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Simulation Comparison - TOF

- Differences could be due to:
 - non-accurate wall and PMT reflection model,
 - PMT TQ response model
 - Index of refraction (speed of light)
 - Scattering/absorption lengths?
(chose same as calib paper)
- mie parameters ($g=0.85$)



Next Steps

- Document exact models currently used in LUCiD and compare to SK's
 - Update models in LUCiD to align with SK's
- Produce SK4 MC using SKDETSIM for LUCiD calibration fits
 - Thanks to Seo-san and Lee-san for help
- Compare basic distributions (e.g. average event displays, TOF)
- Compare LUCiD fit results to MC input params (i.e. Rayleigh scattering, absorption, etc.)