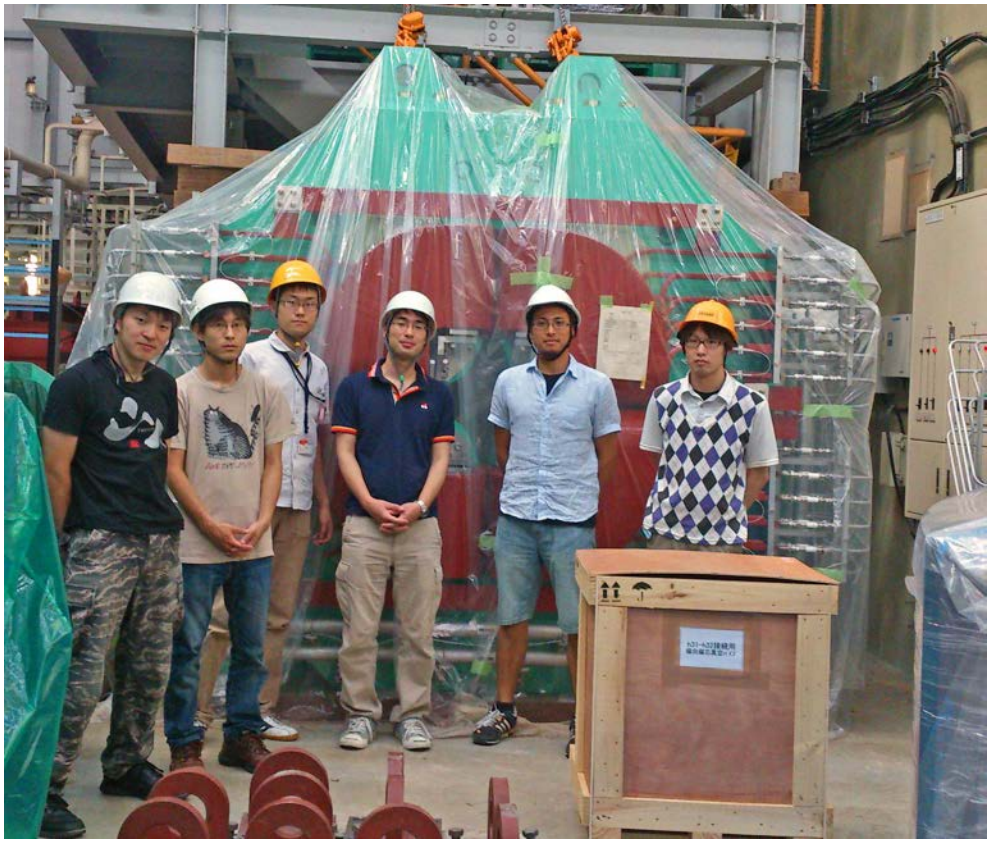
S-2S meeting

Toshiyuki Gogami

28 Oct 2014

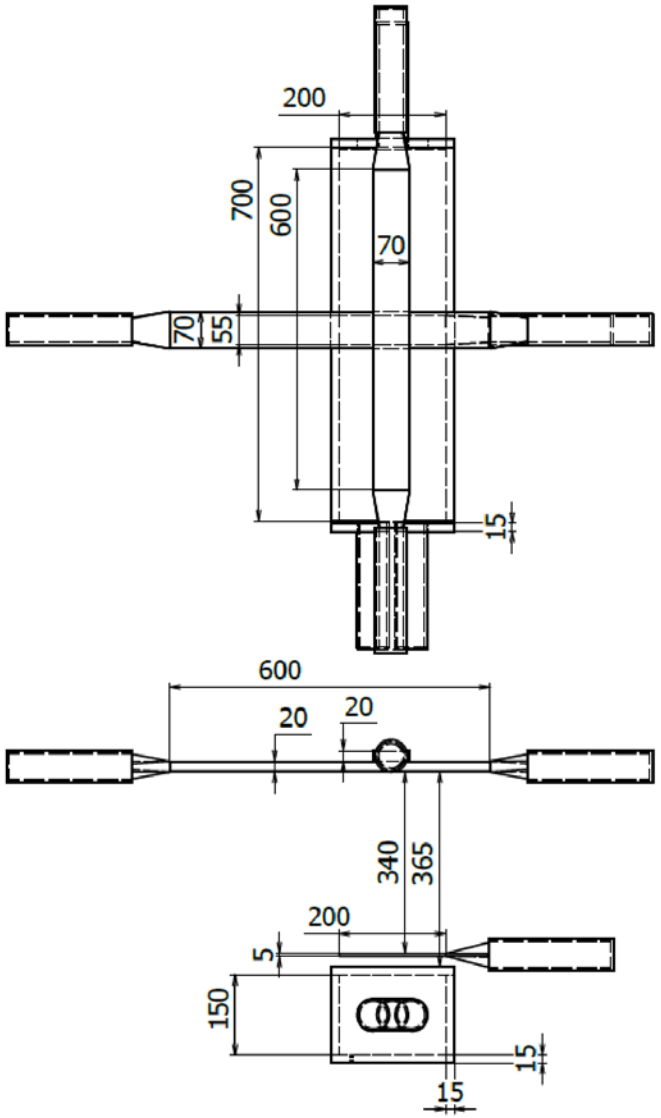


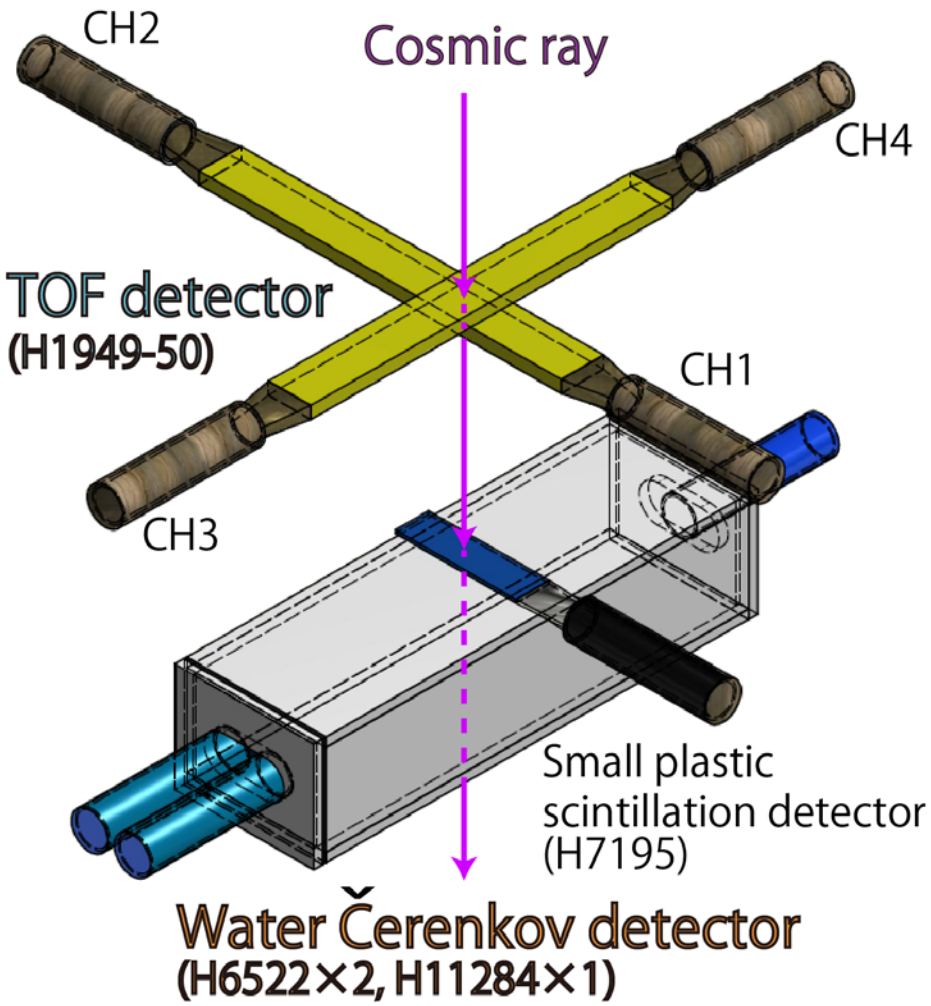
Contents

Water Cherenkov detector test with cosmic ray.

- H11284 ×1 vs. H6522 ×2

Experimental setup

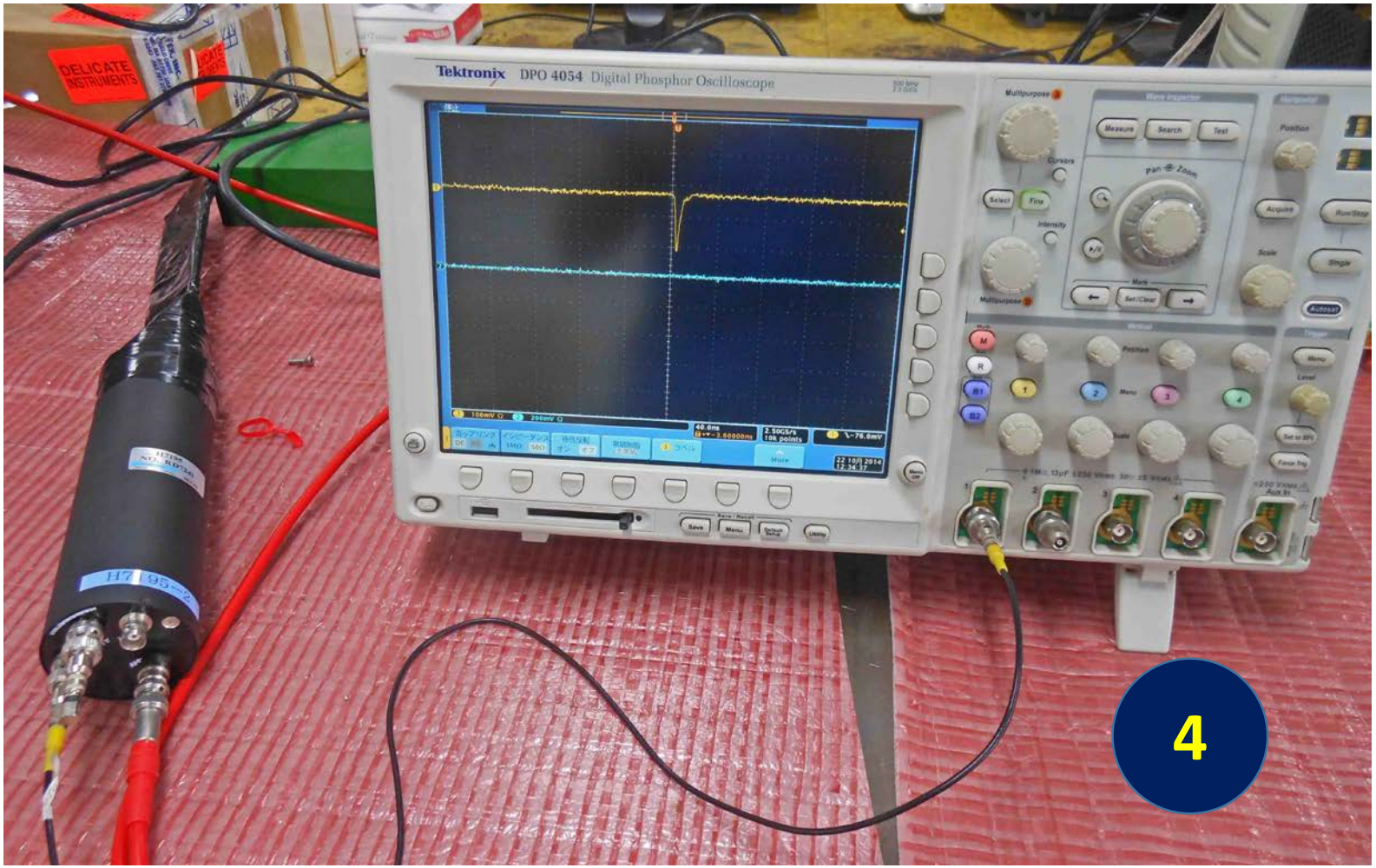




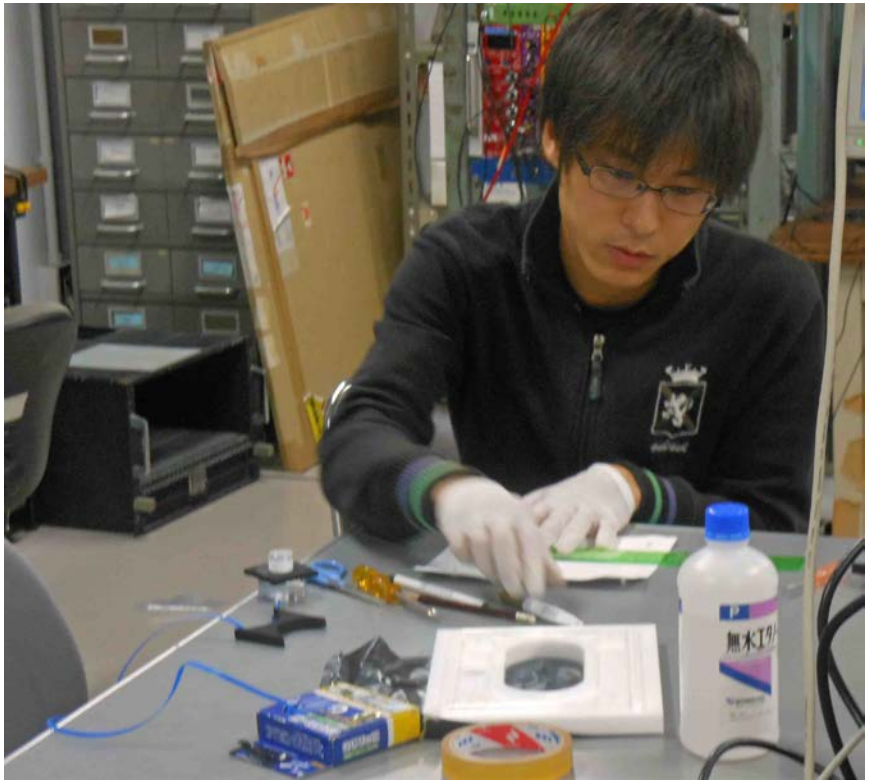
Small plastic scintillation detector

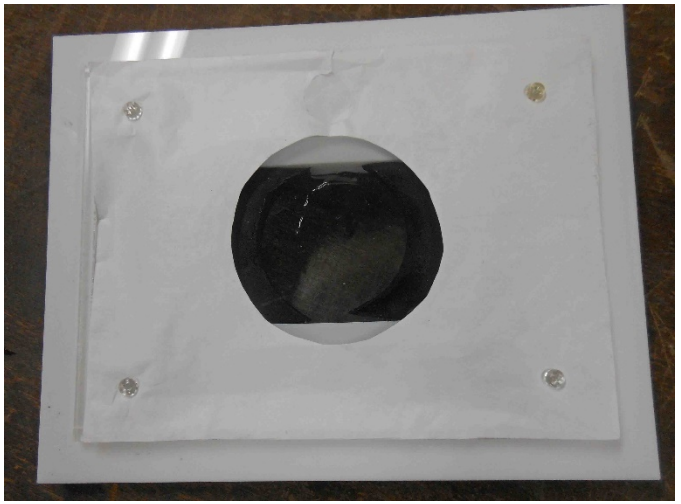
H7195 (RD7241)

Small plastic scintillation detector

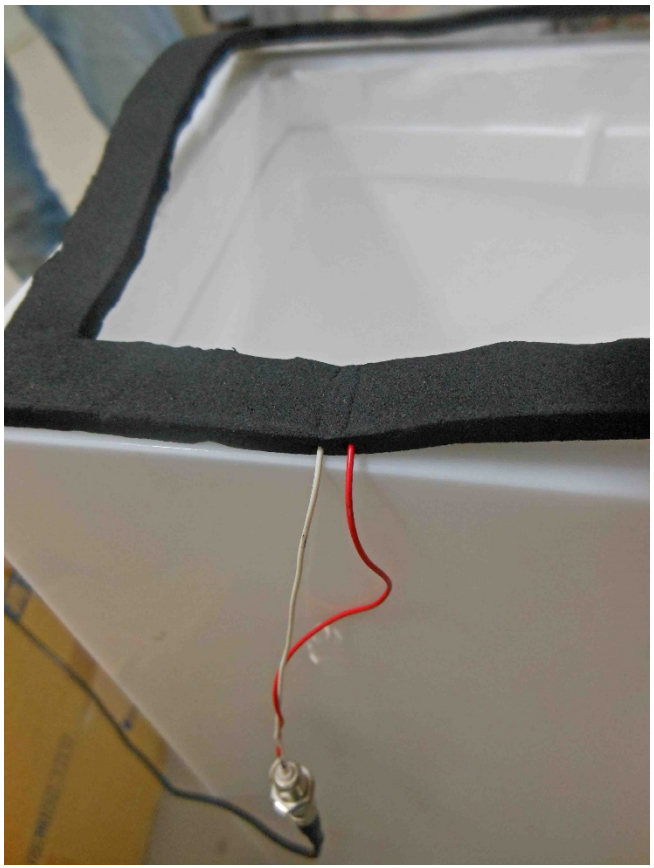


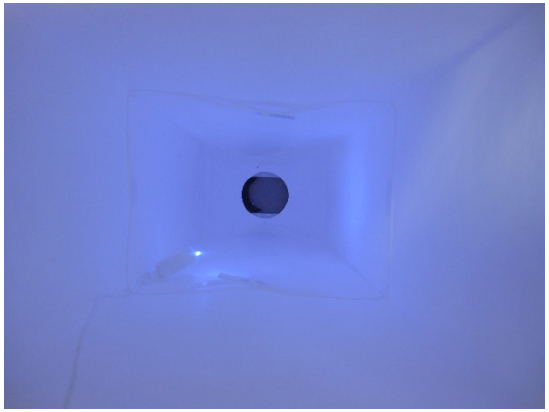
WC preparation (windows)



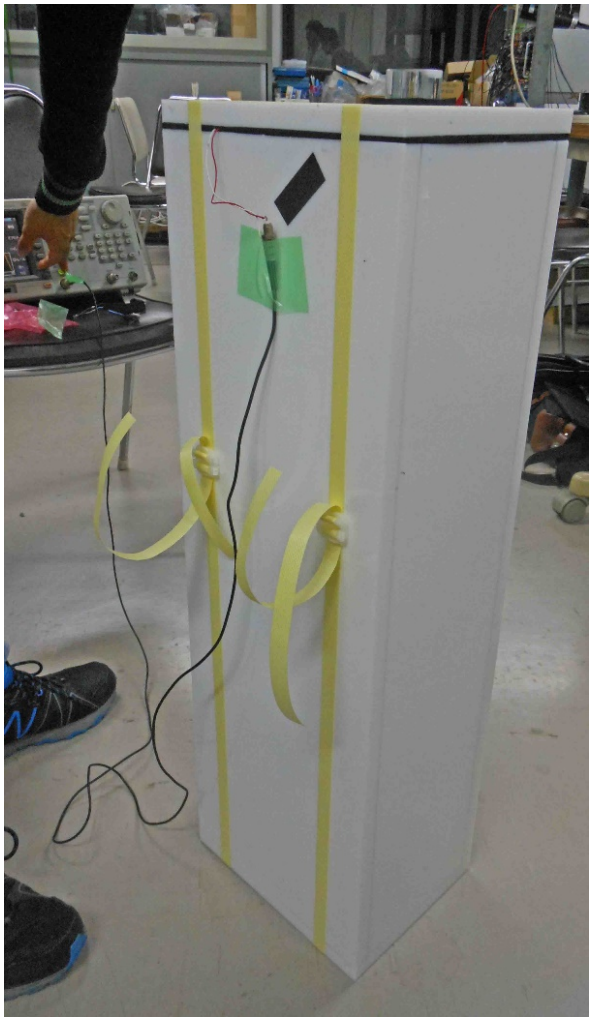


WC preparation (LED system)

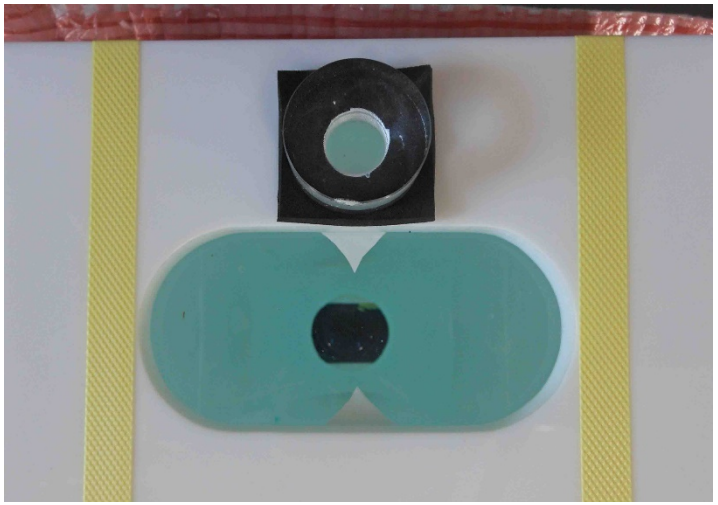


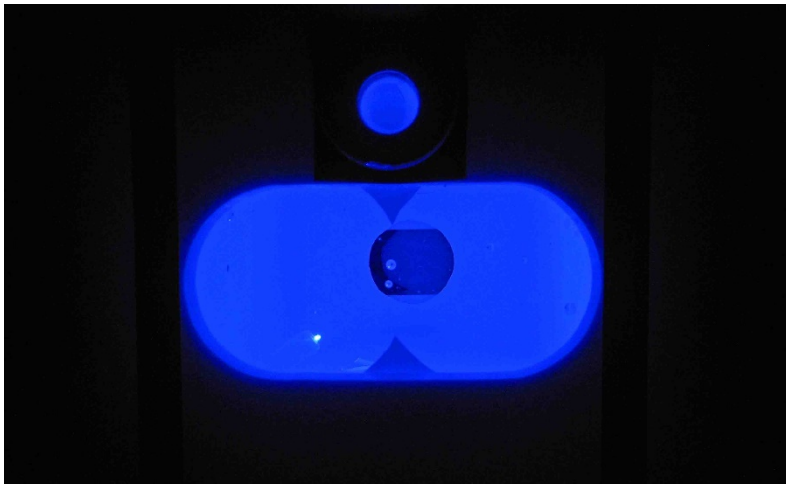


WC preparation (pouring water)

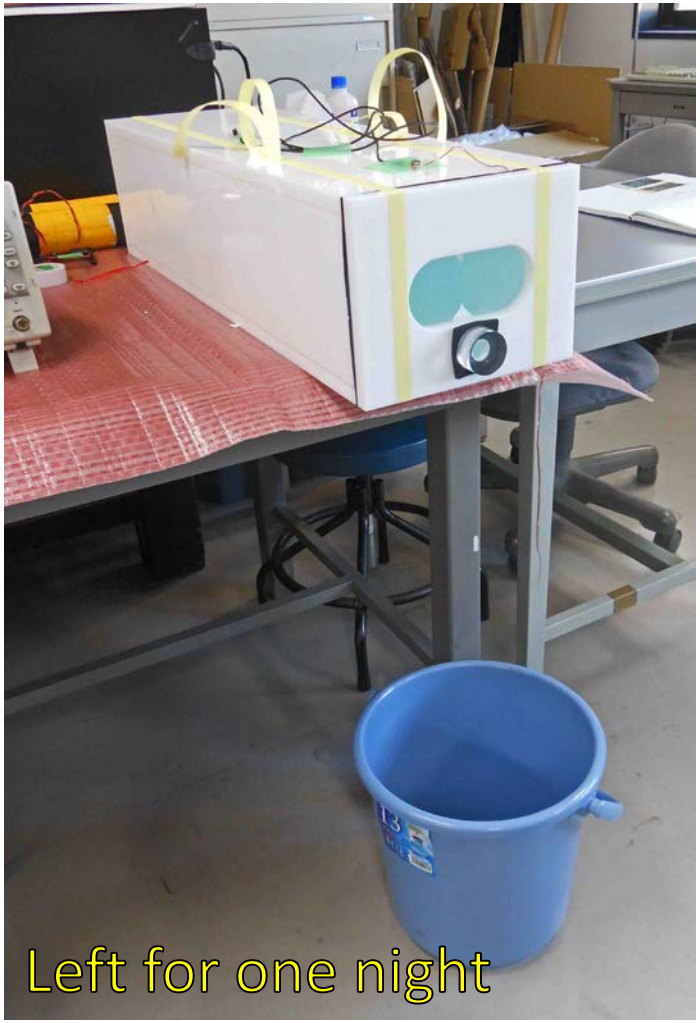


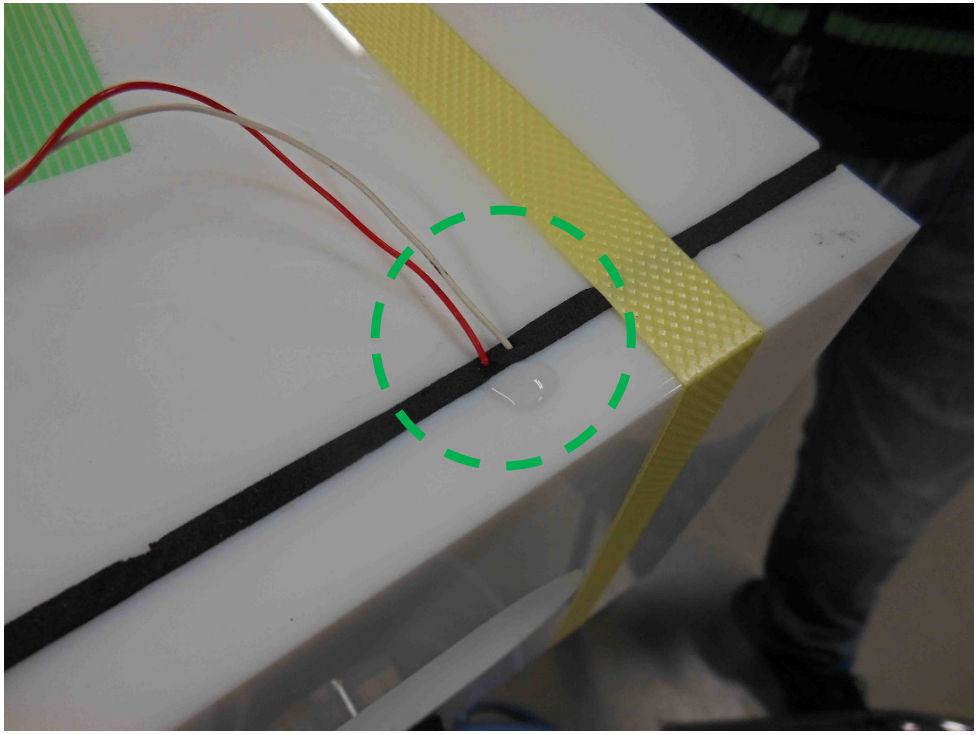
WC preparation (LED system check)





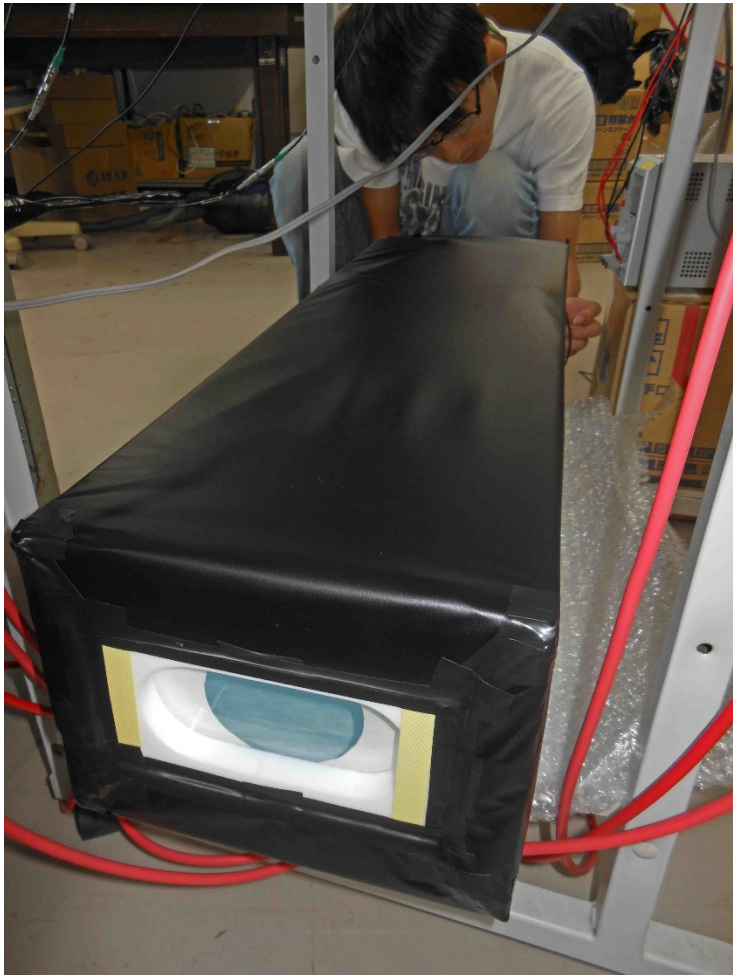
WC preparation (Water leakage check)



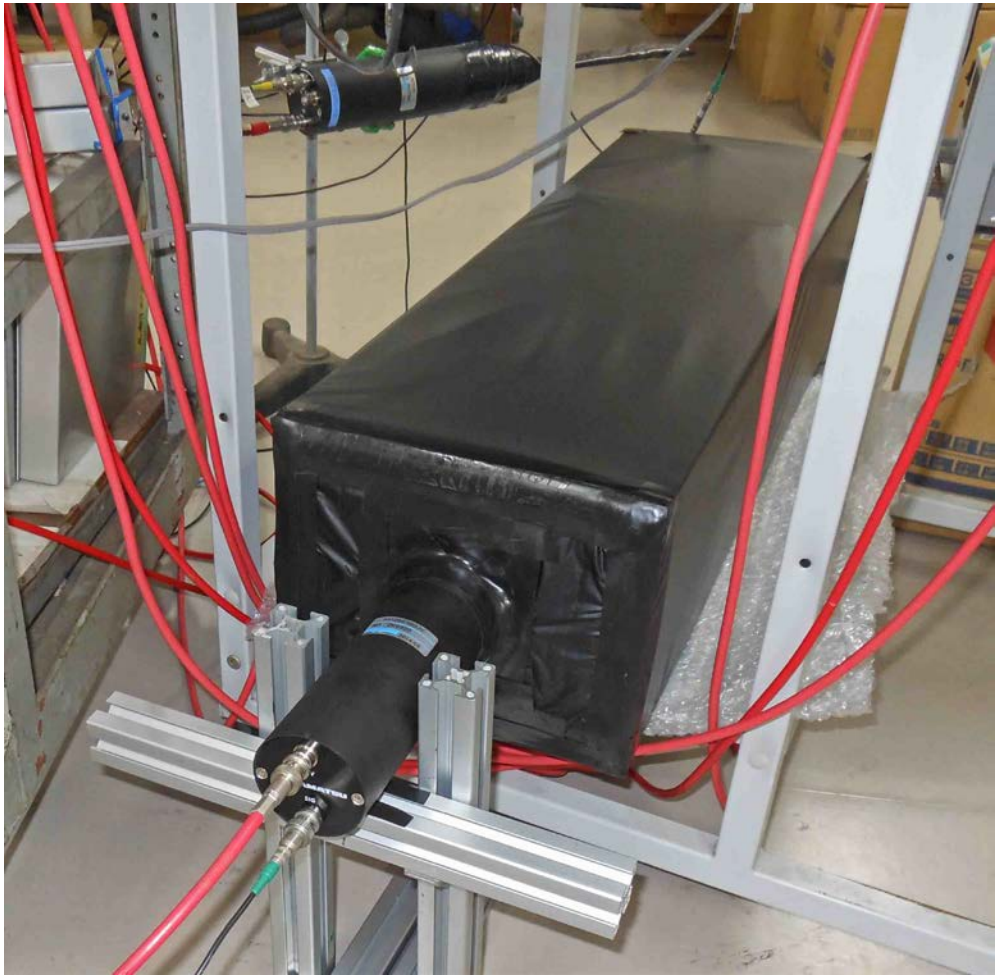


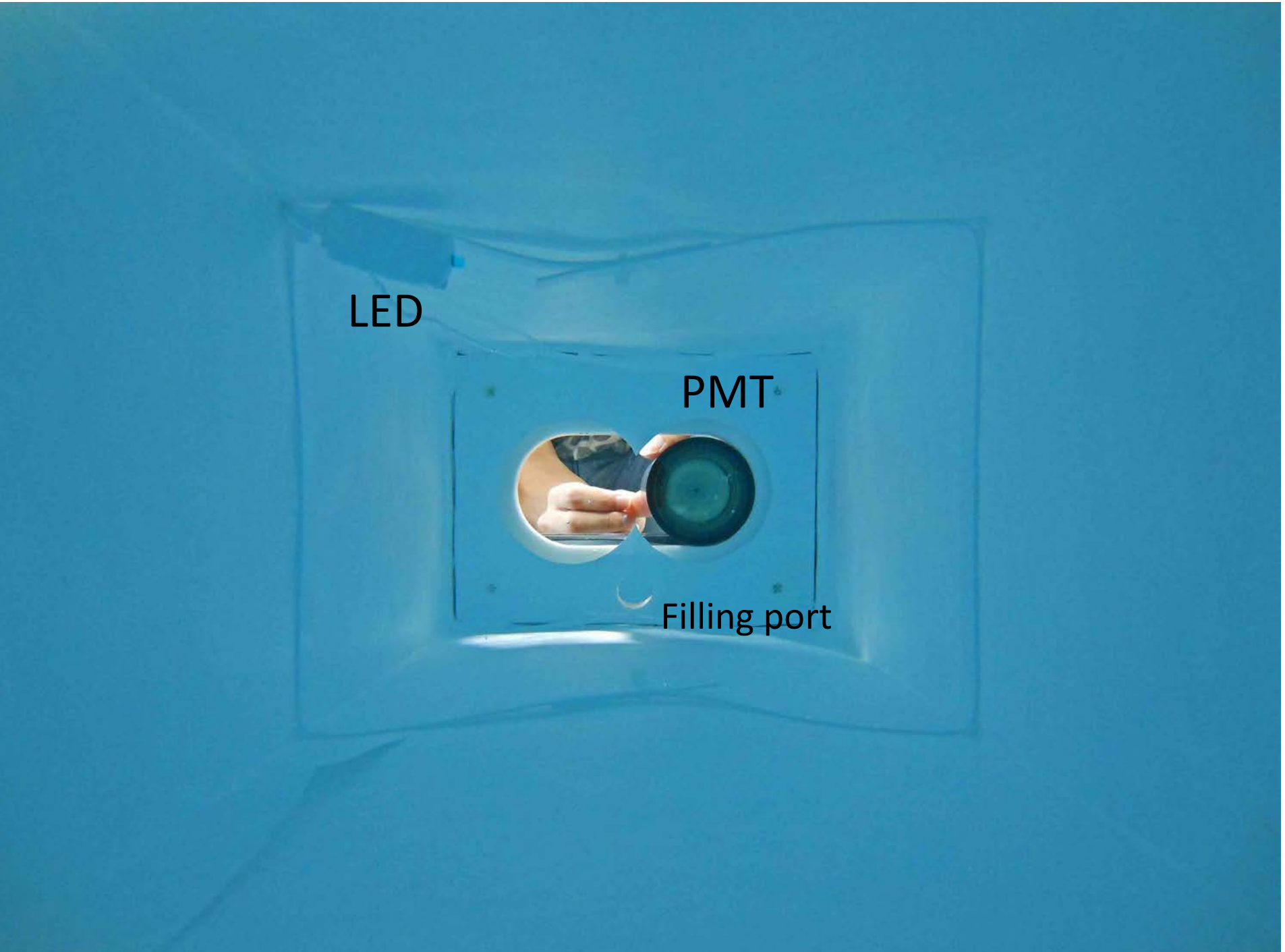
Just after water box was closed.

WC preparation (Light tight)

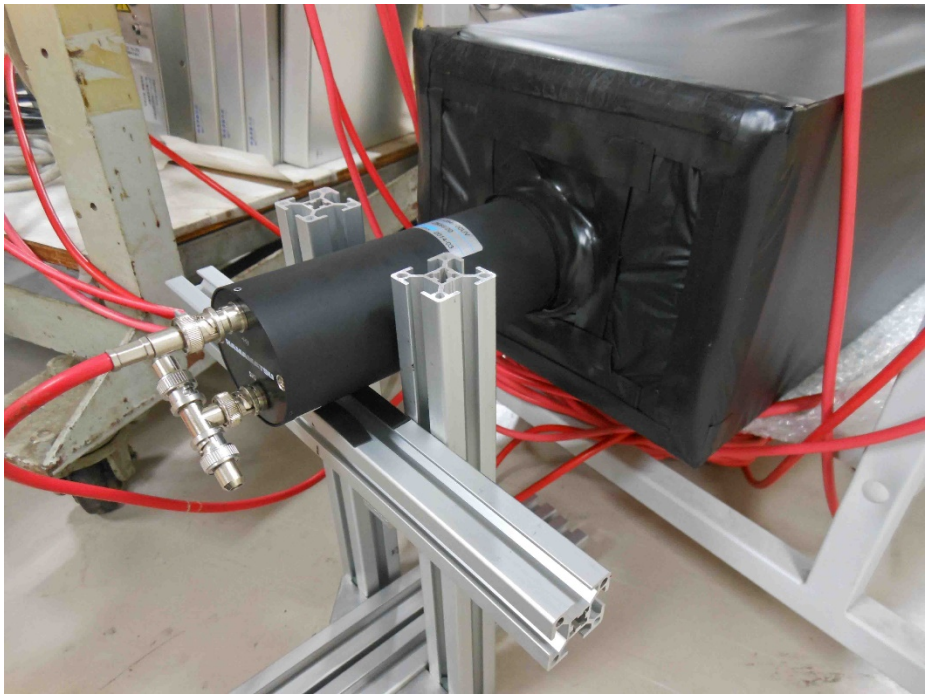


Three-turn wrap



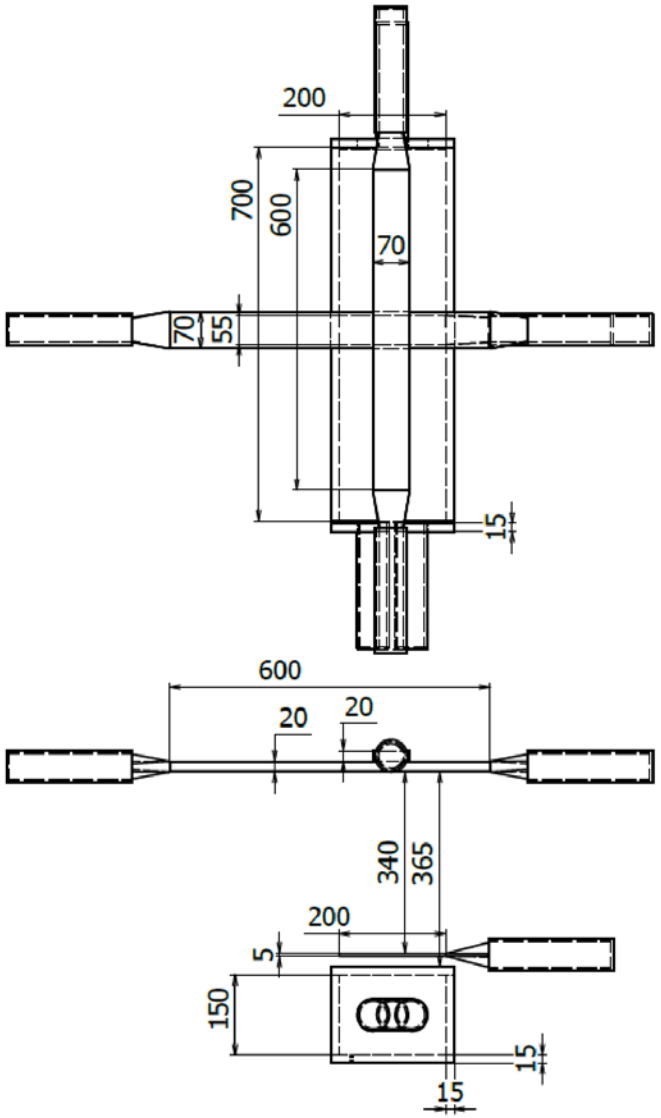

LED
PMT
Filling port

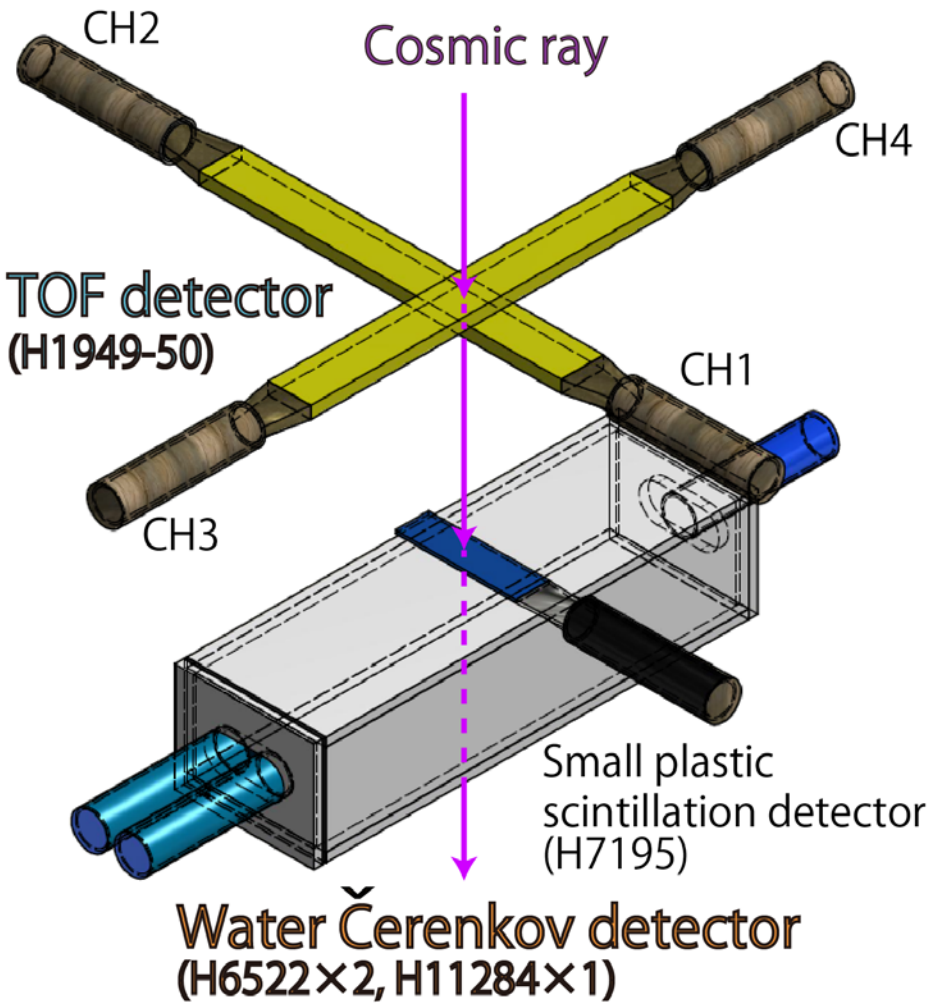
WC preparation (PMT holder)



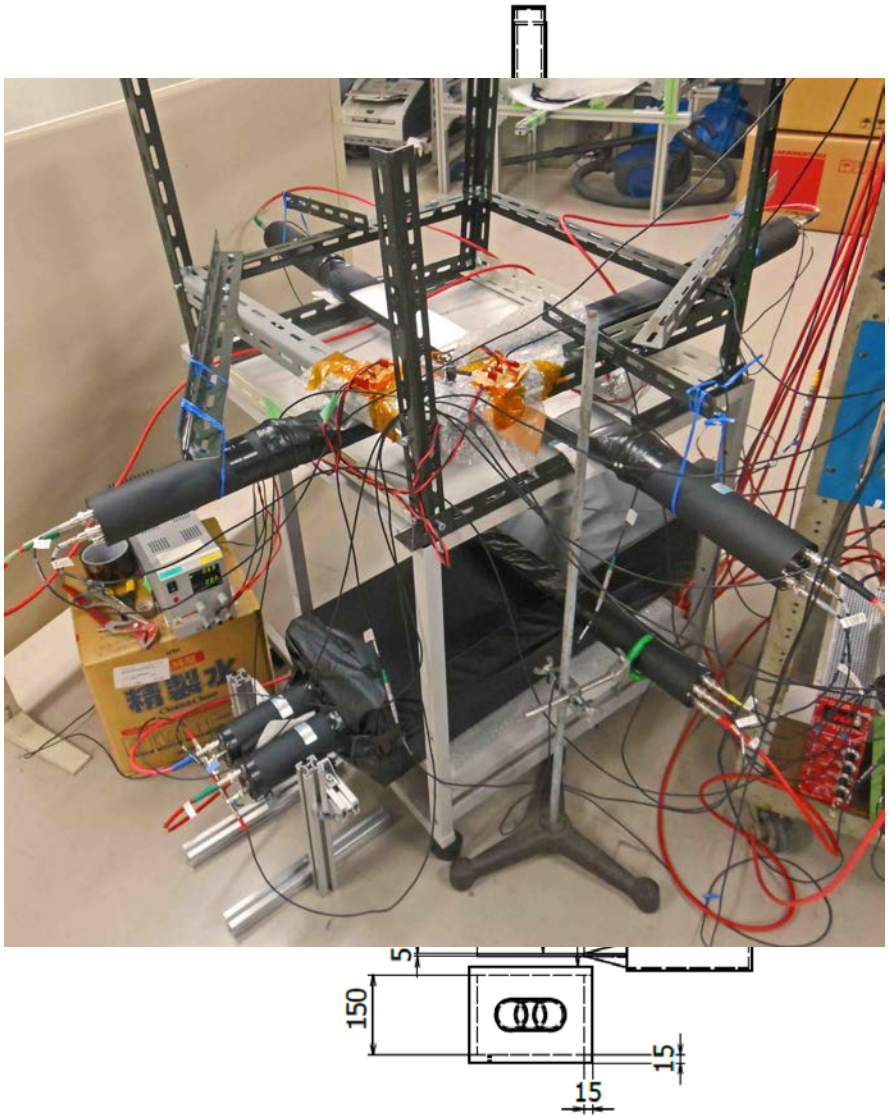
Small scintillation detecor

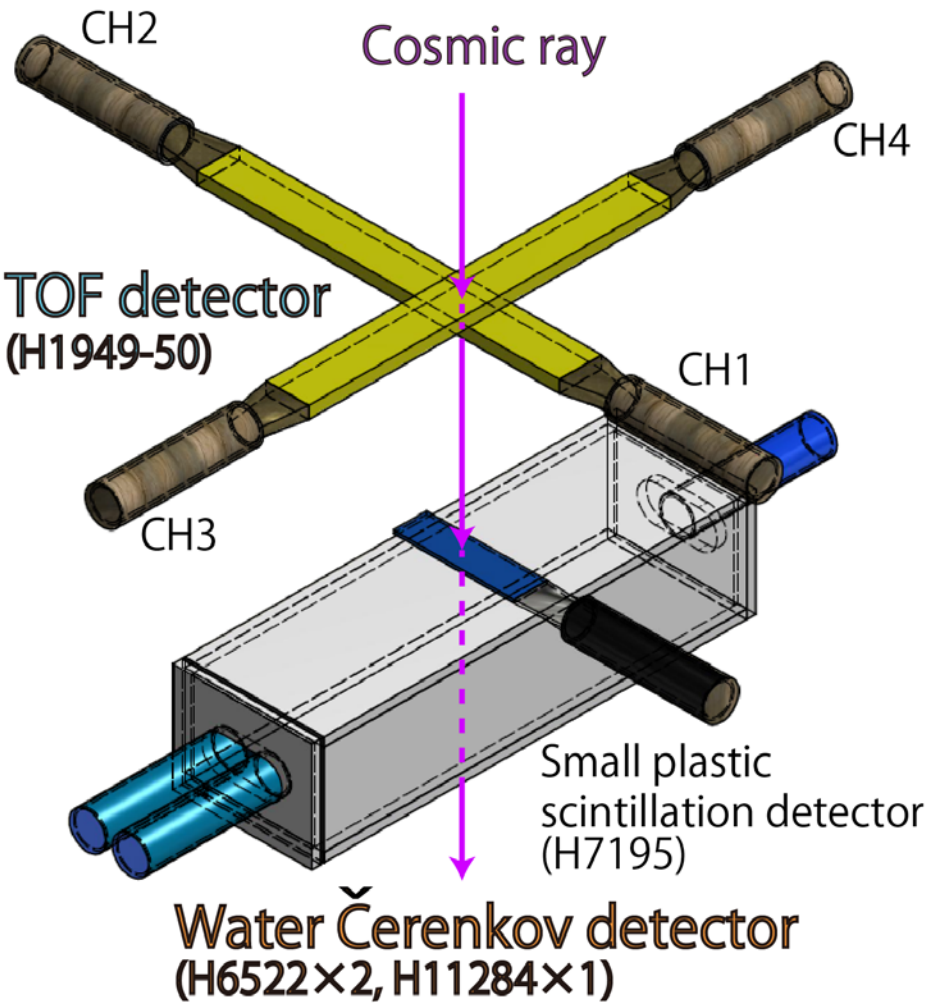
Experimental setup



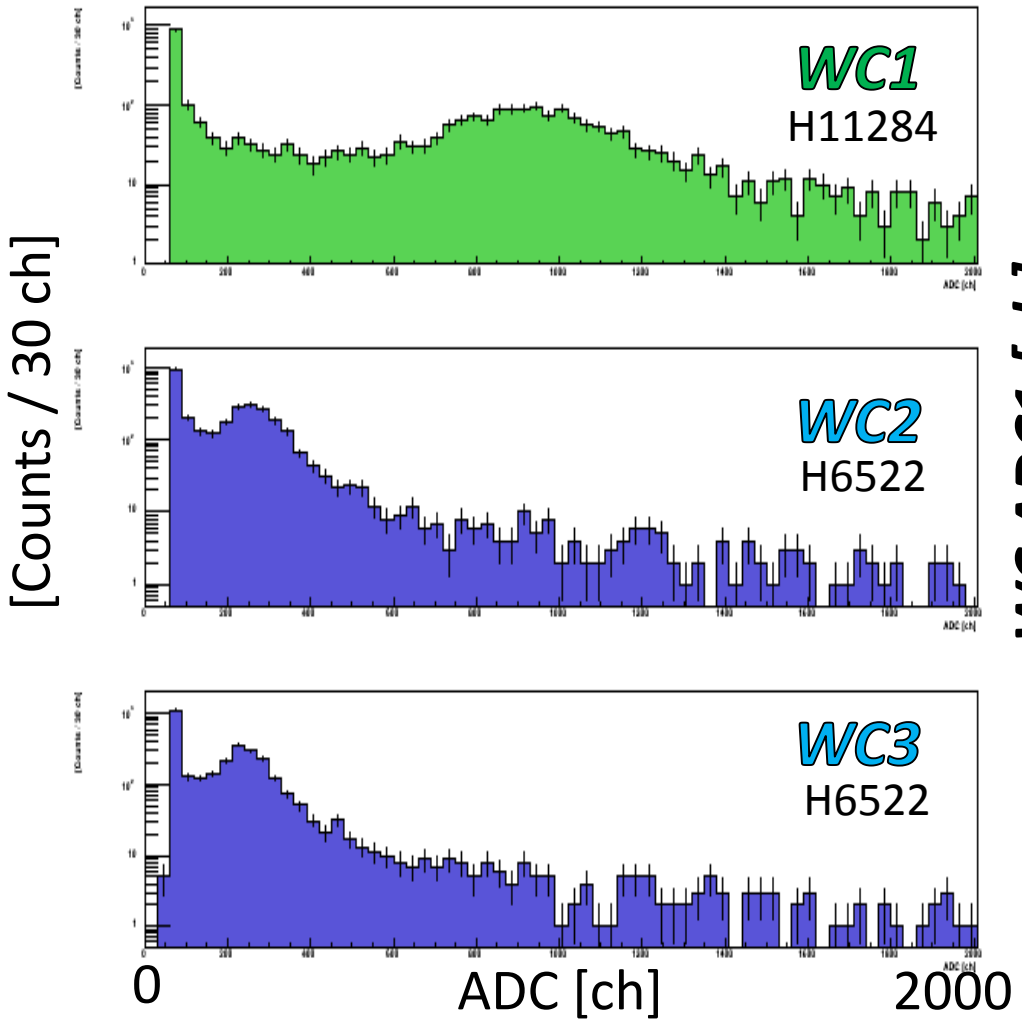


Experimental setup



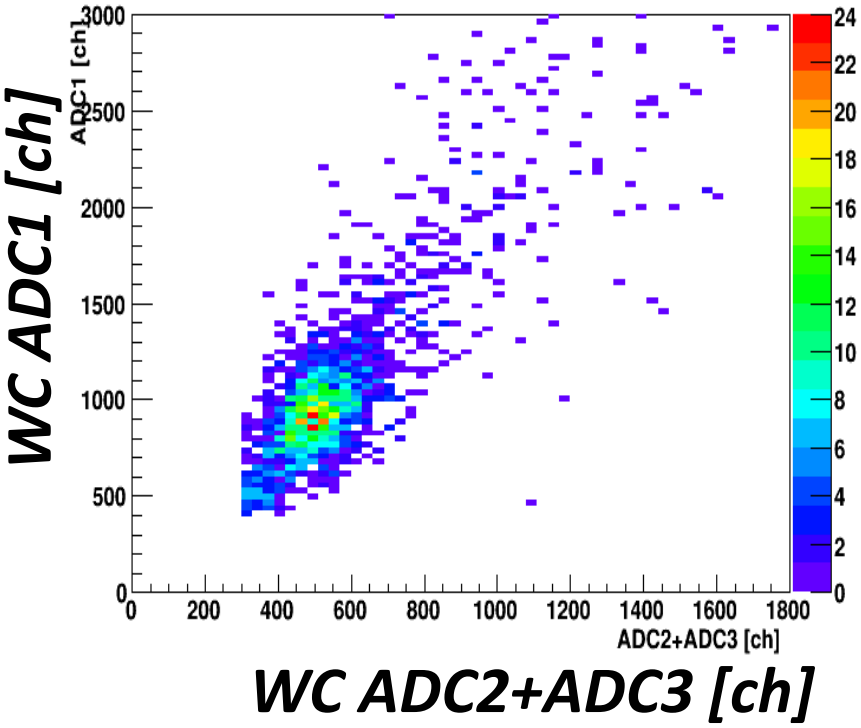


ADC spectra of Water Cherenkov detector

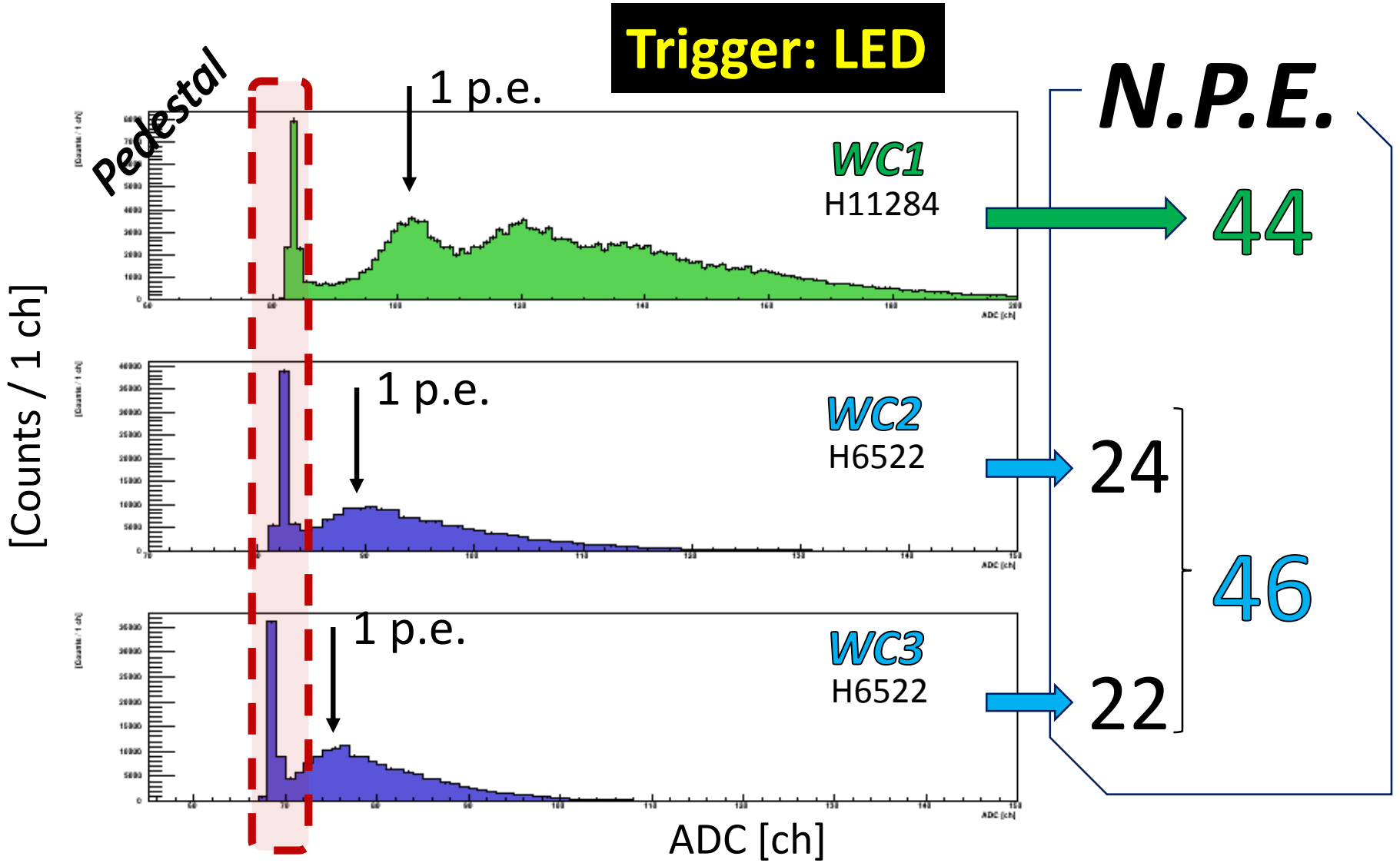


Trigger: TOF detector

Plot condition: hit the small scintillator



Rough analysis (N.P.E.)



Summary

Usage of H11284(× 1) compared to that of H6522(× 2)

- No big difference in their performance
  (according to rough analyses. Further analyses will be done.).
- Can save:
  1. manpower (light-tight *etc.*),
  2. channels,
  3. Analysis works (calibration).

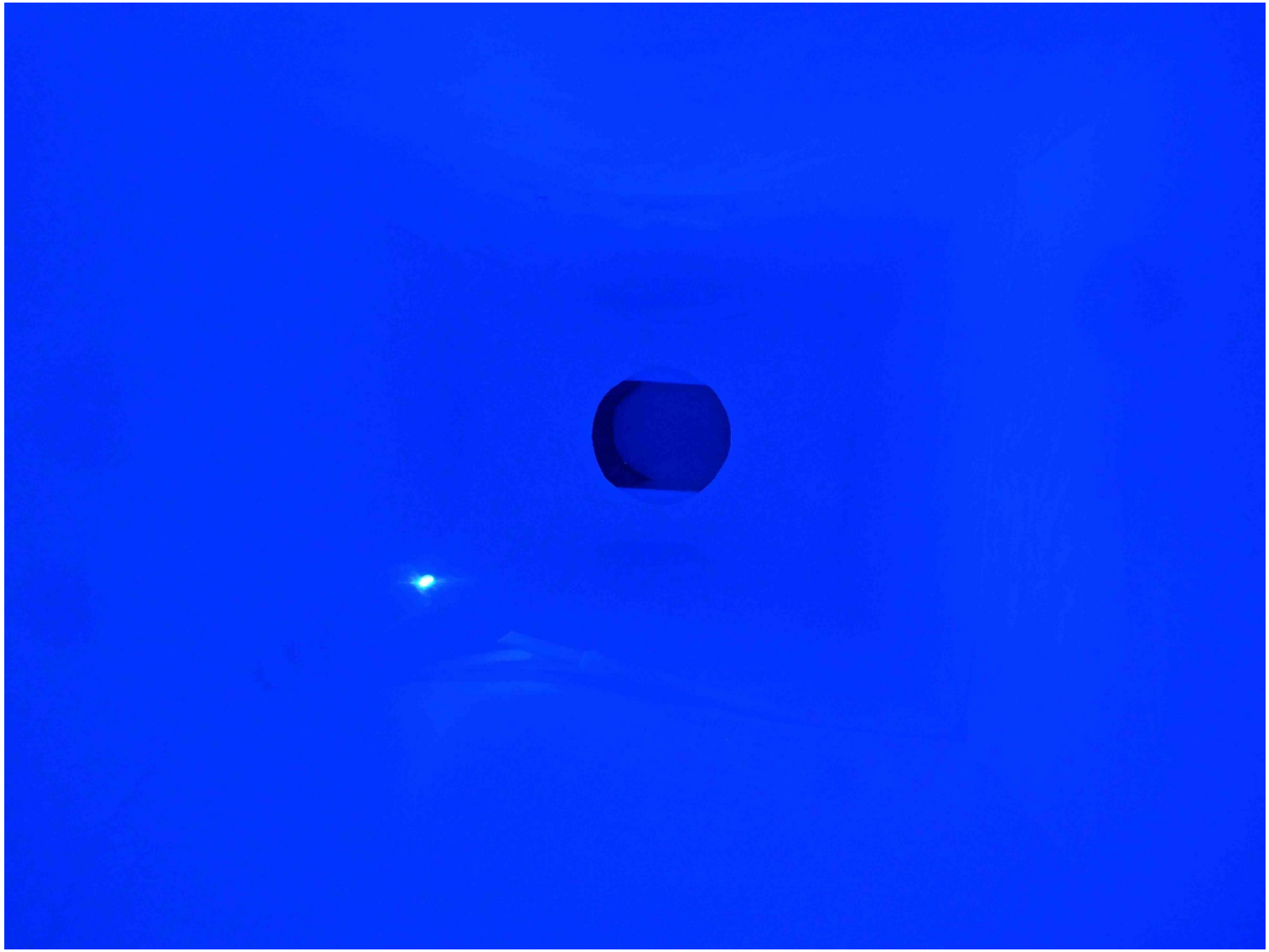
About other data

Details on web:

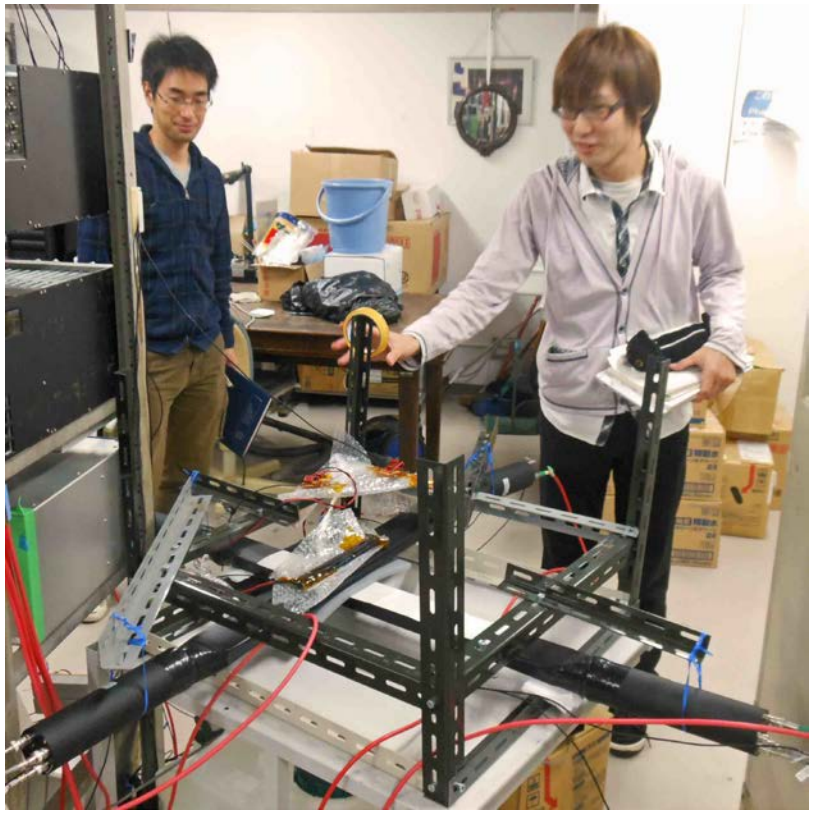
http://www-nh.scphys.kyoto-u.ac.jp/~gogami/s-2s/doc/tof/toftest2014/

- Run summary
- CAD drawing
- Raw DATA
- Sample analysis code (P.H. correction, text → ROOT)
- Pictures

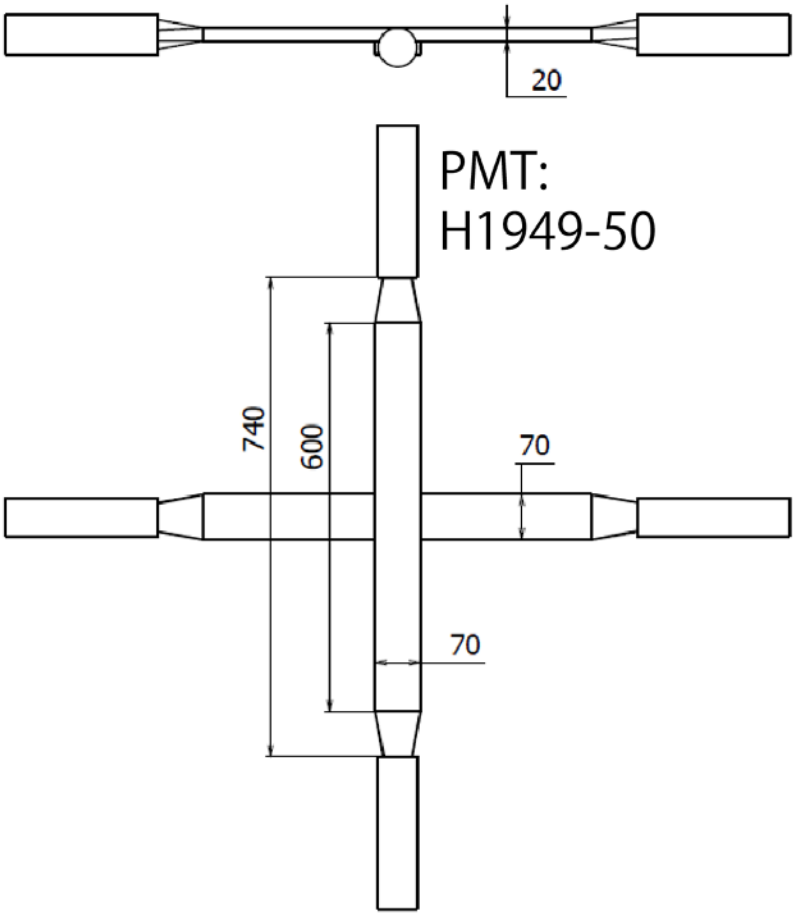
END

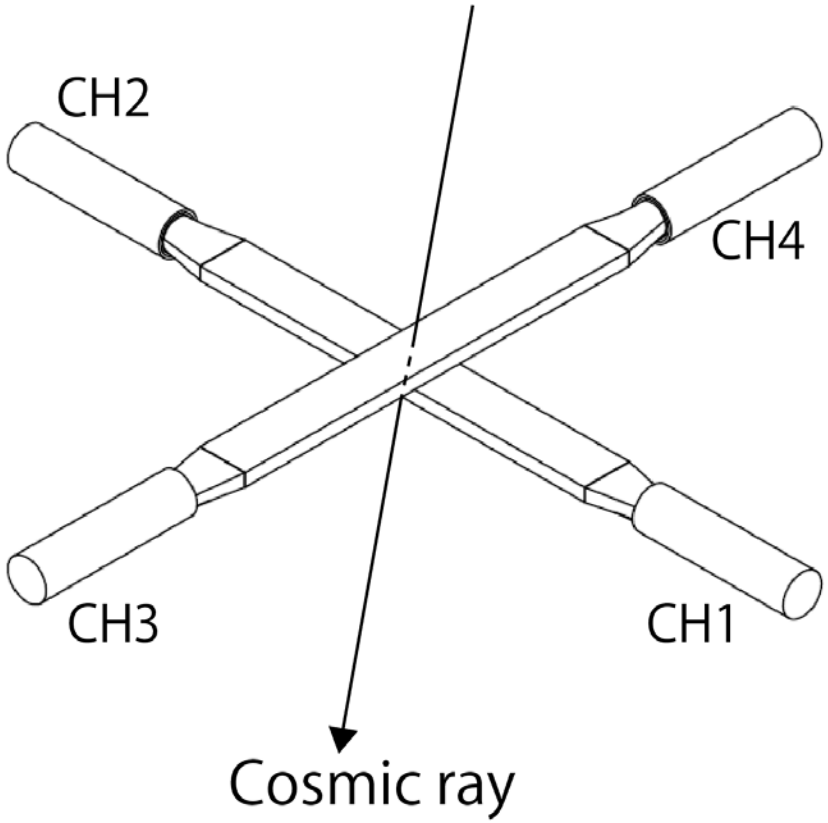


Backup

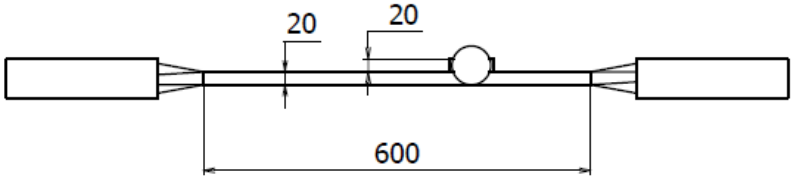


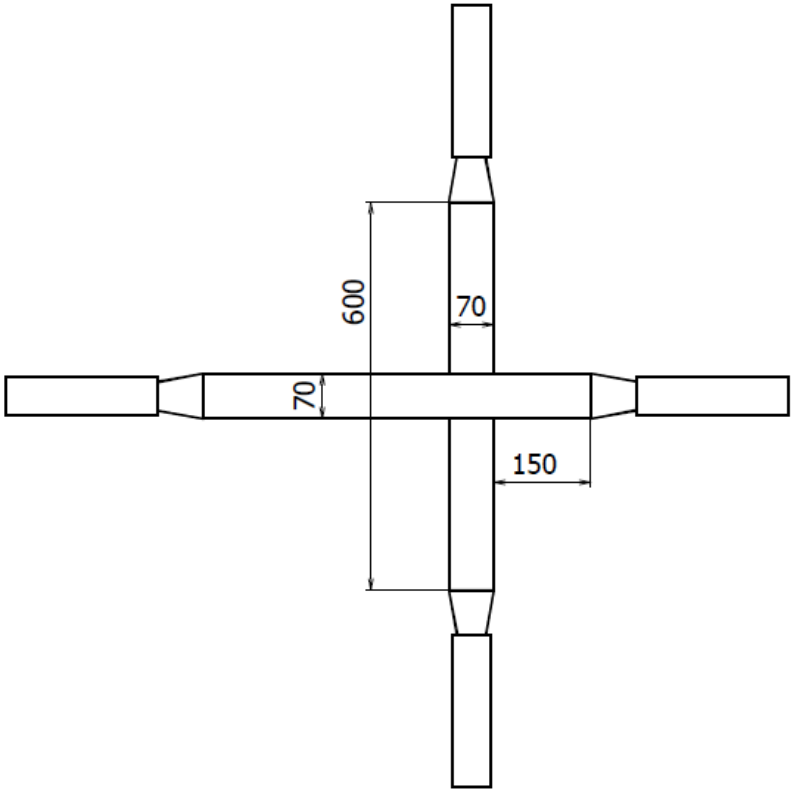
Setup 1 (run1-run56)

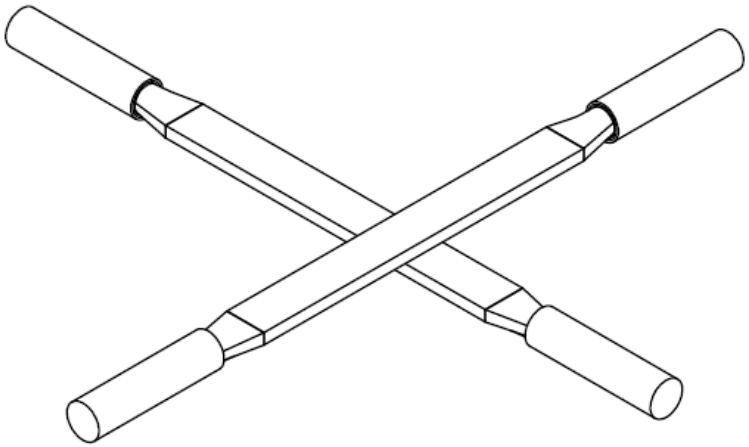




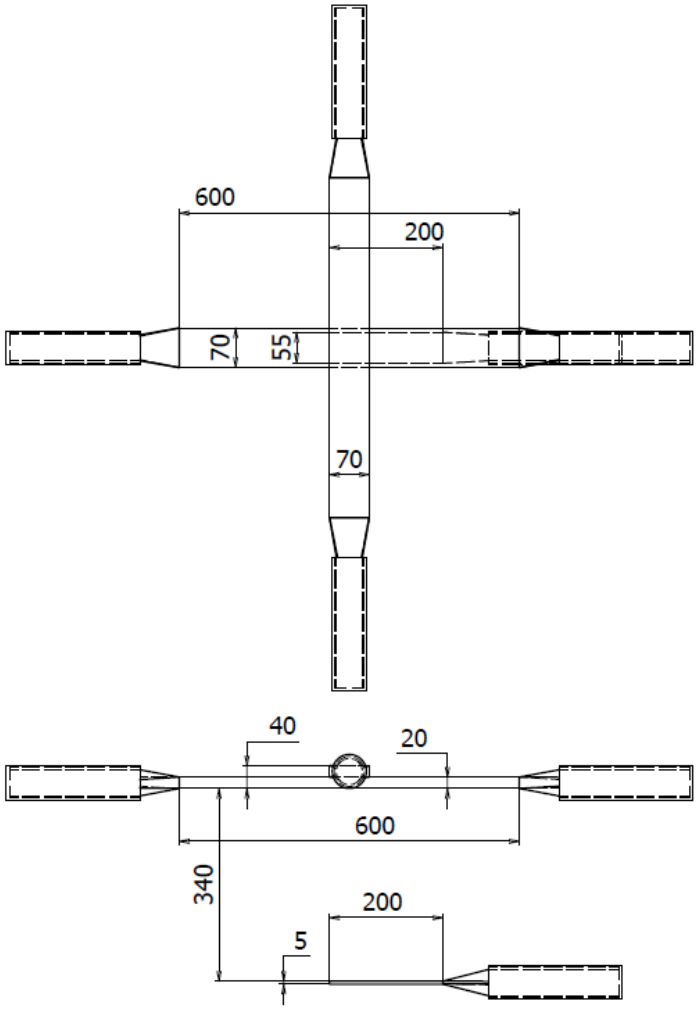
Setup 2 (run57-run93)

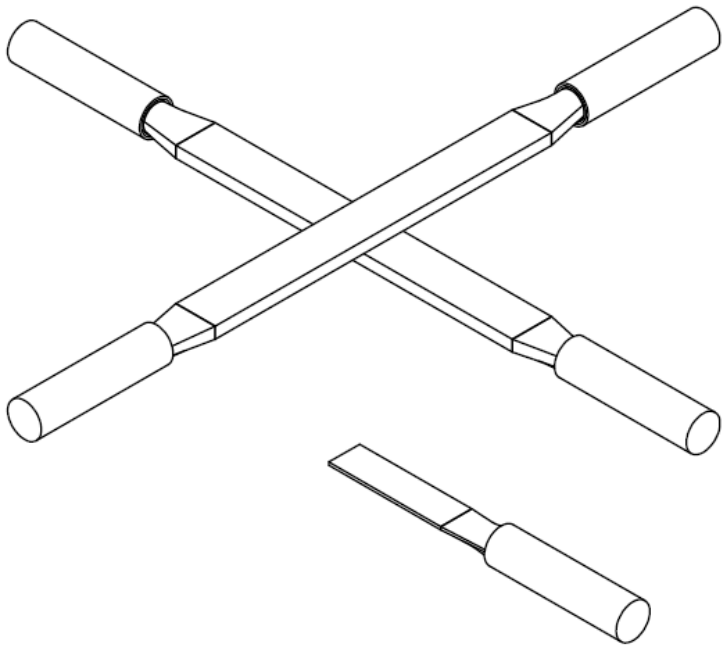




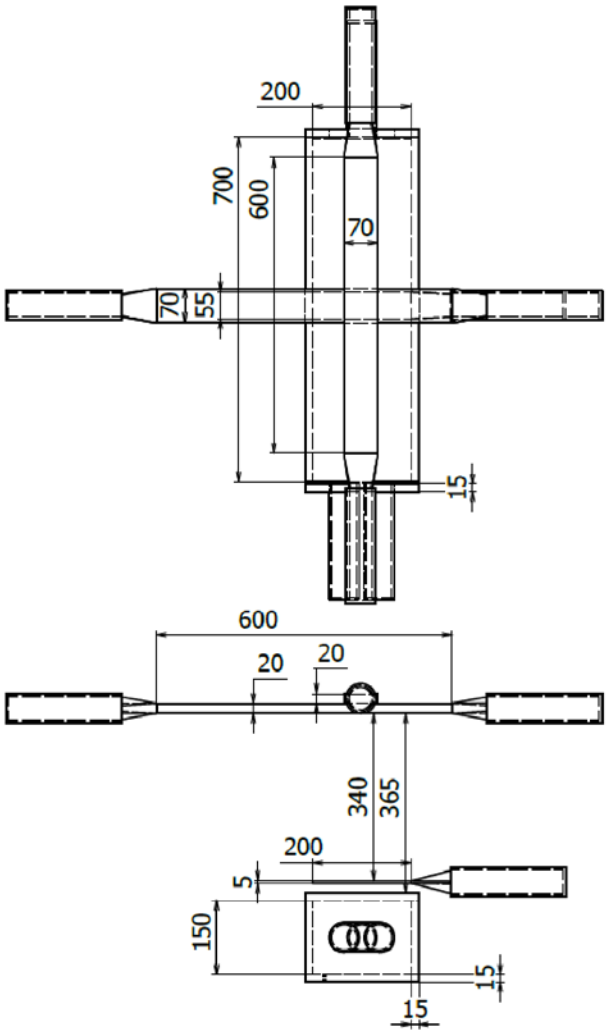


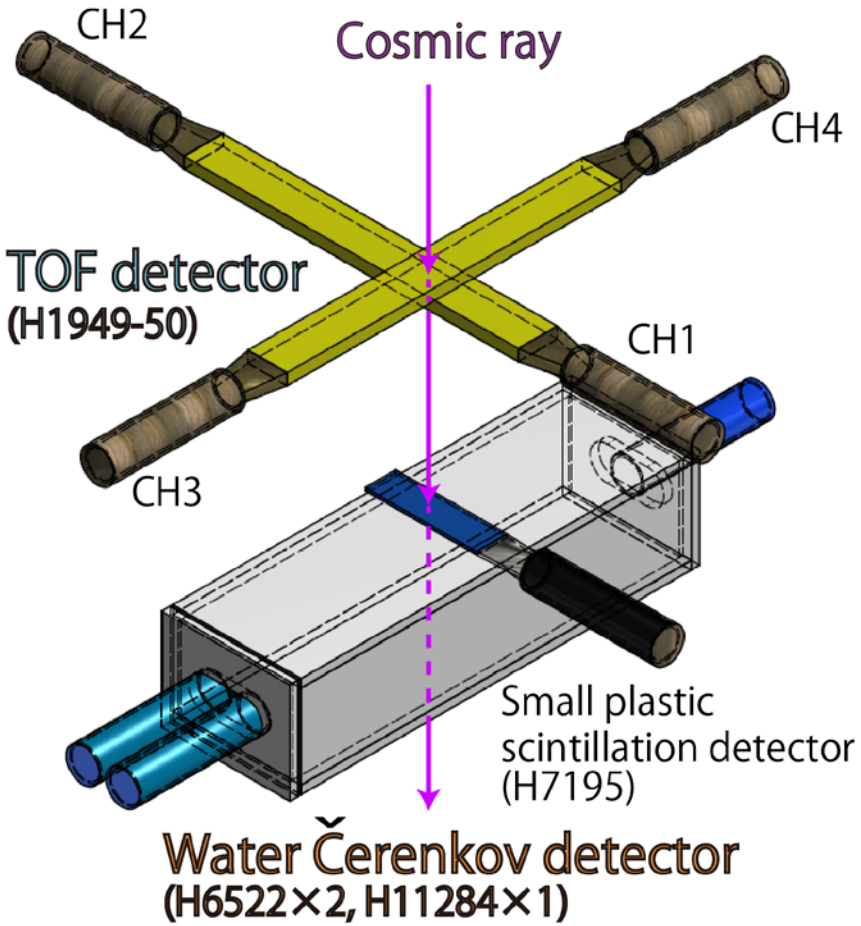
Setup 3 (run94-run113)



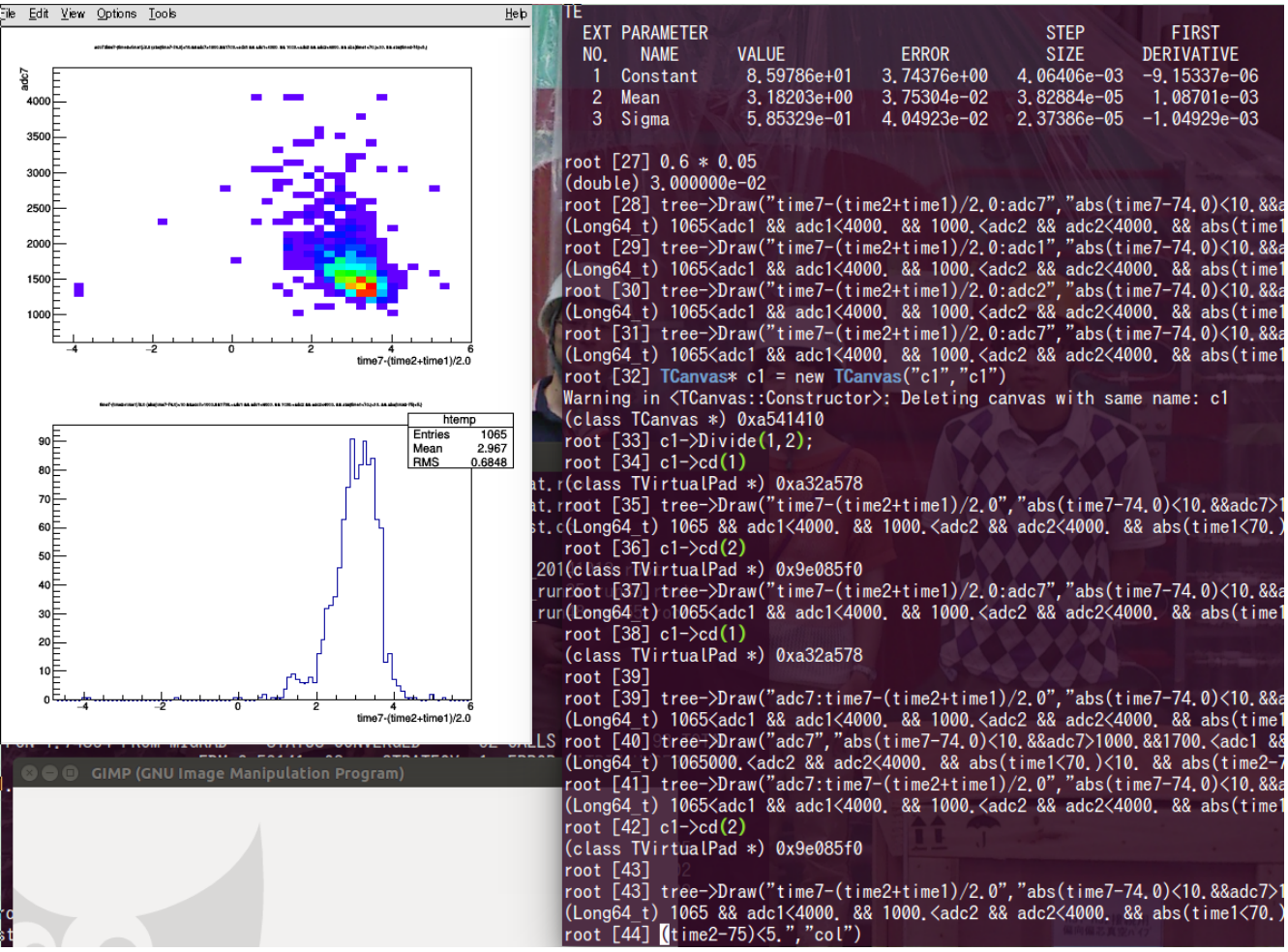


Setup 4 (run114-)





TOF resolution (time7-time1,2)



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"abs(time7-74.0)<10.
&&ad(Long64_t) 1065<adc1
&& adc1<4000.
&& 1000.<adc2 && adc2<4000.
&& abs(time1<root [32] & abs(time2-75)<5.","col")

→

TOF (time7-time1,2) resolution:
~ 600 ps (sigma)
w/o correction.

切ったブラックシート

92 × 322 cm → 二切れできる → 一つ使った