

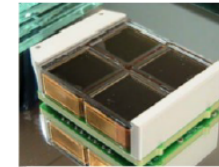
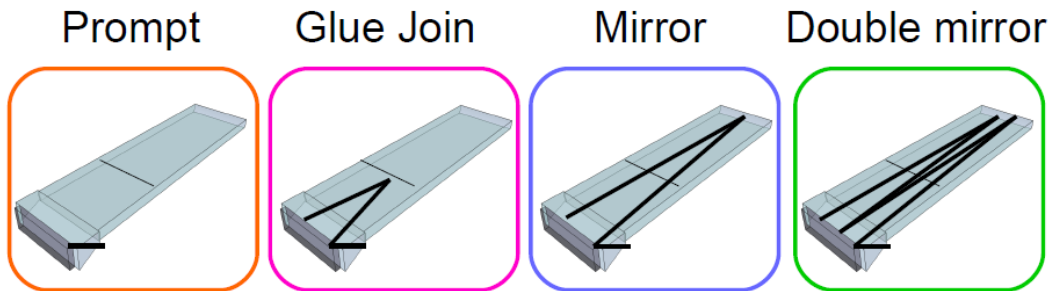
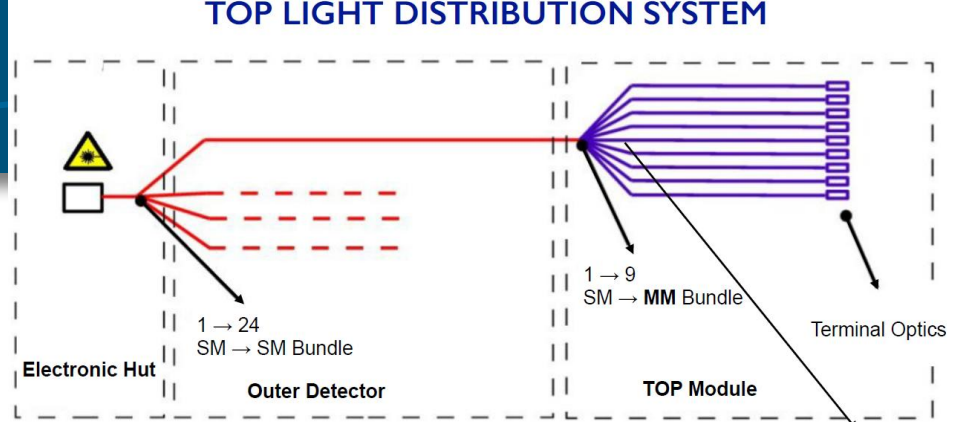
# Toward the physics run

K. Inami

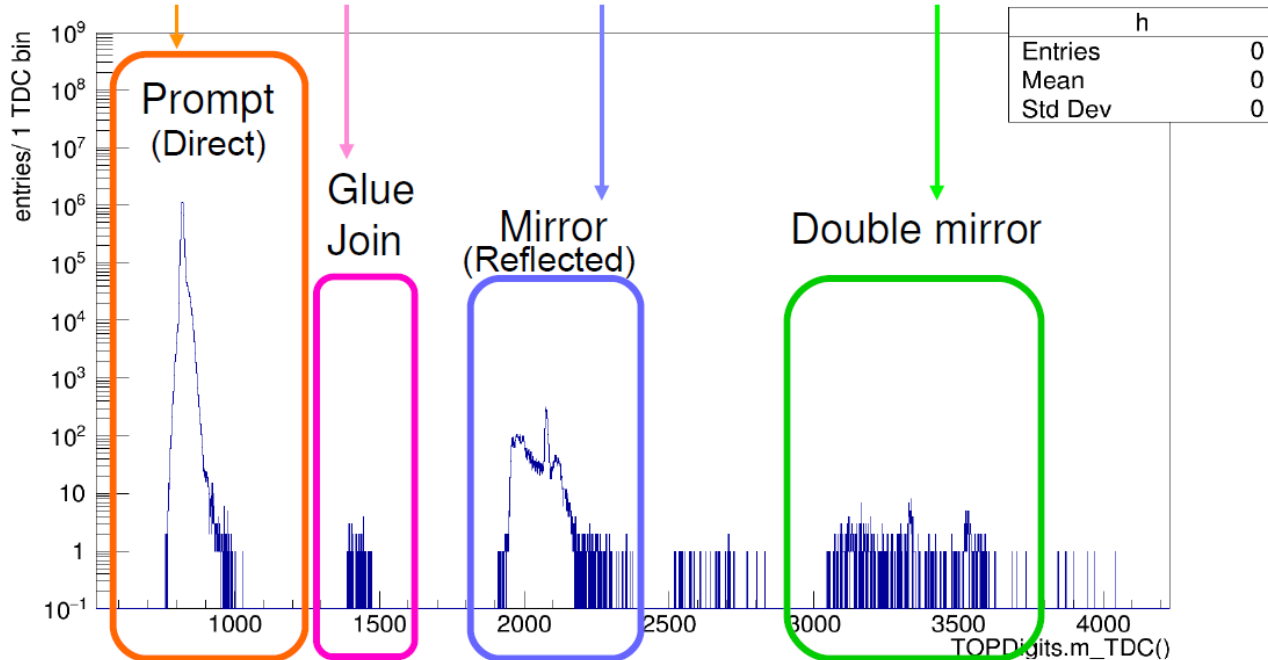
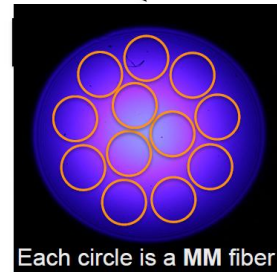
- Check cabling and performance in situ
- Put all cables (fibers, signals) and pipes (cooling etc.)
- Check all cables correctly connected.
- Readout functional
- Performance (efficiency, resolution, etc.)
- Using laser calibration pulses and cosmic-ray signals

# Test by laser signal

- Check joints by reflected laser light.

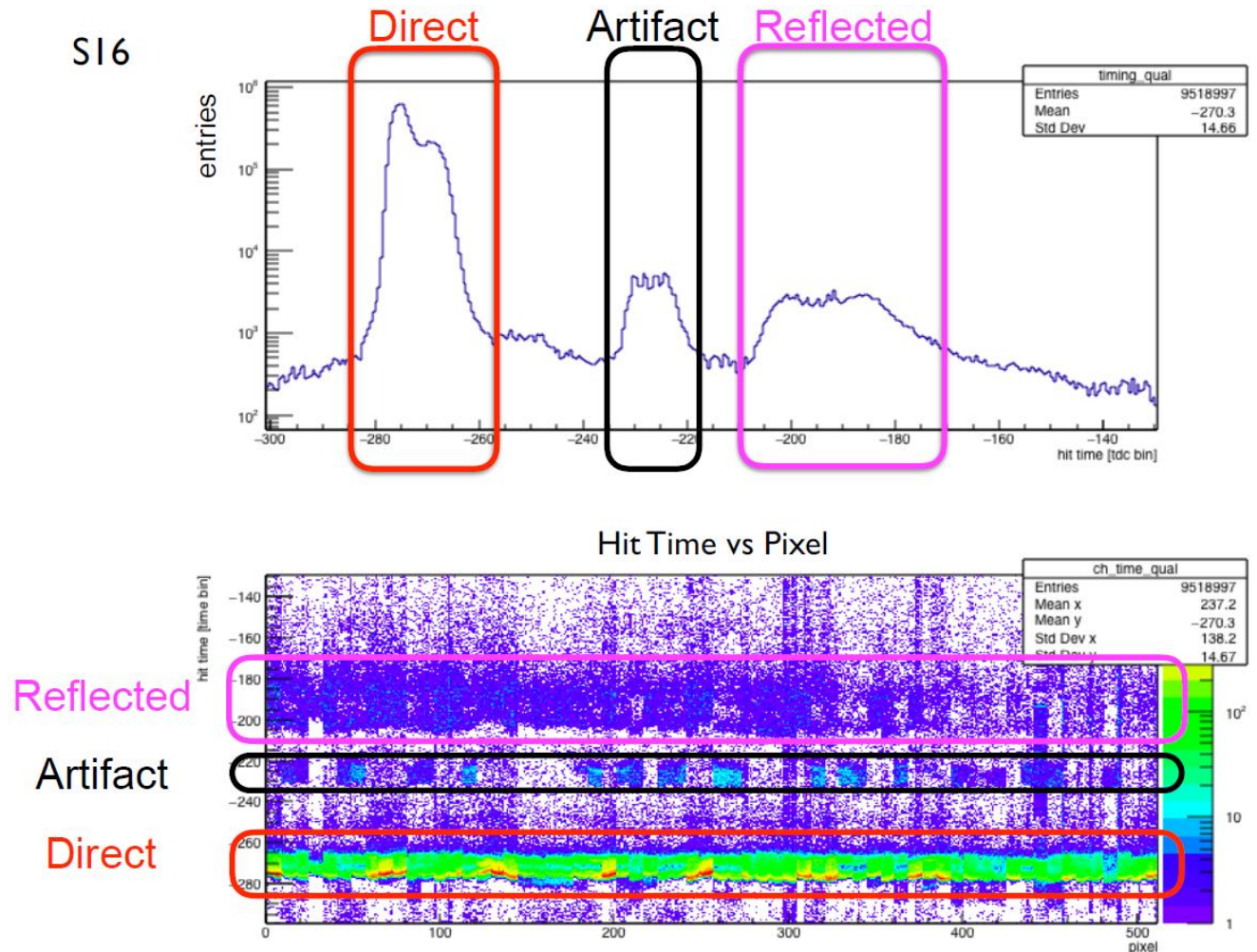


PMT's are quite reflective



# Test by laser signal

- Recent data is not perfect, contaminated by artifacts.
- Both firmware and software groups have been working hard to clean up the artifacts.



# Test by cosmic-ray

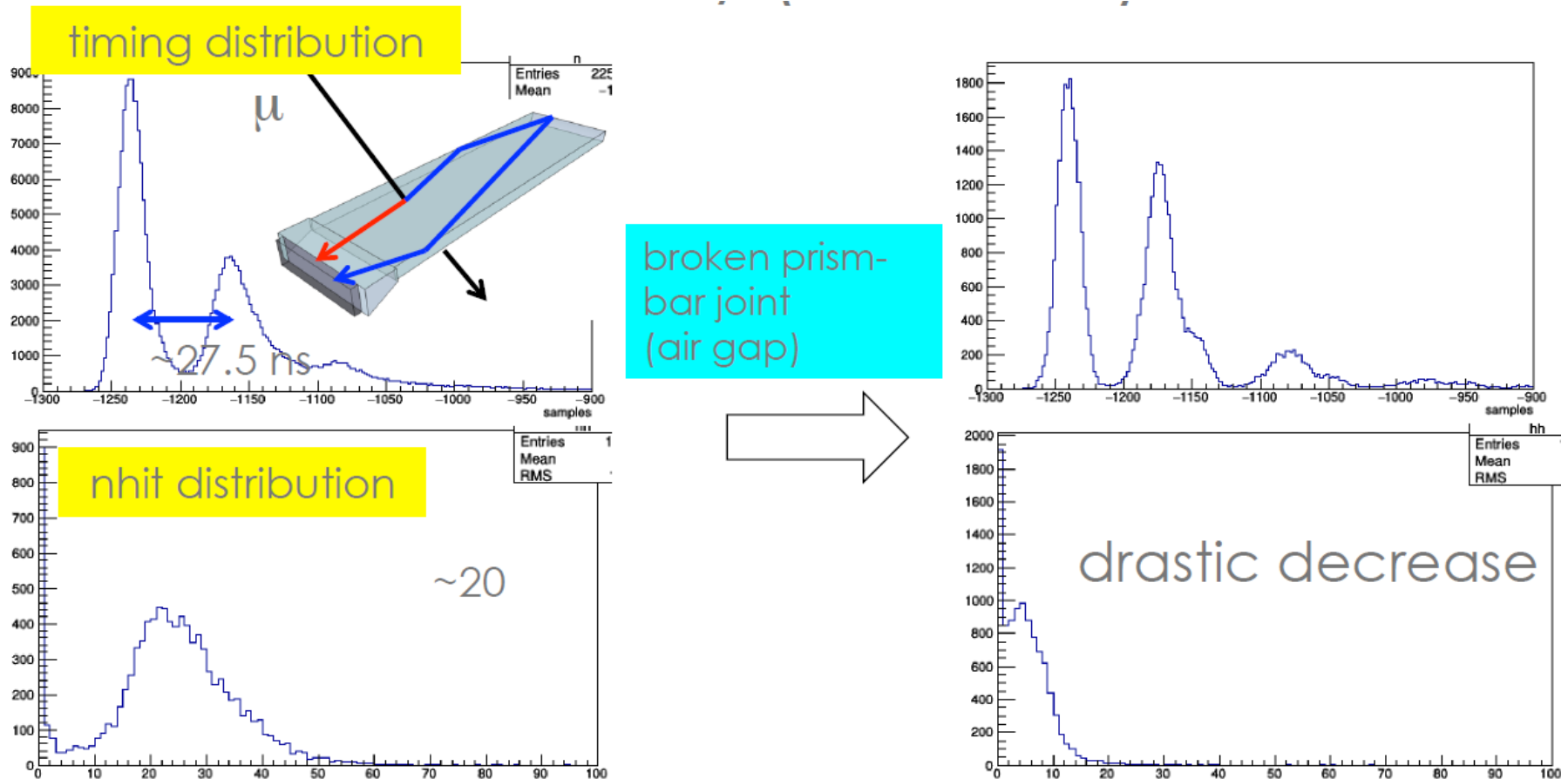
5

- Put trigger counters in Belle II, using guide pipe used for installation
- Take cosmic-ray data passing through two TOP detectors
- Check the difference of the distributions before/after installation

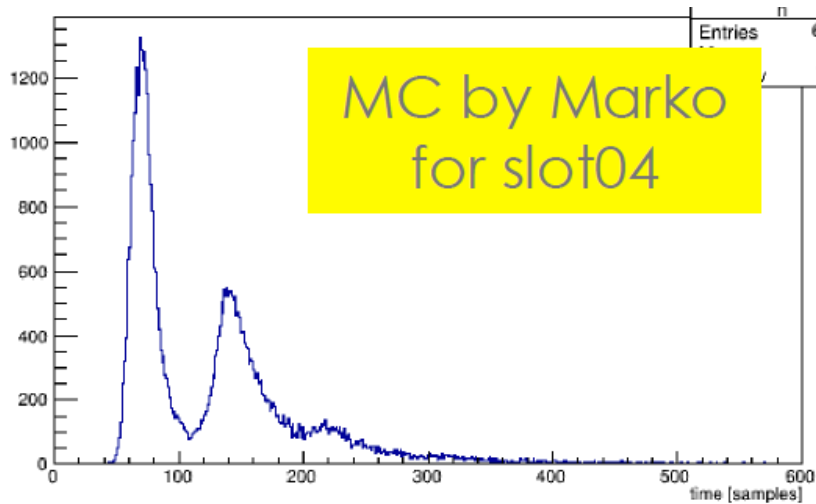


# MC expectation

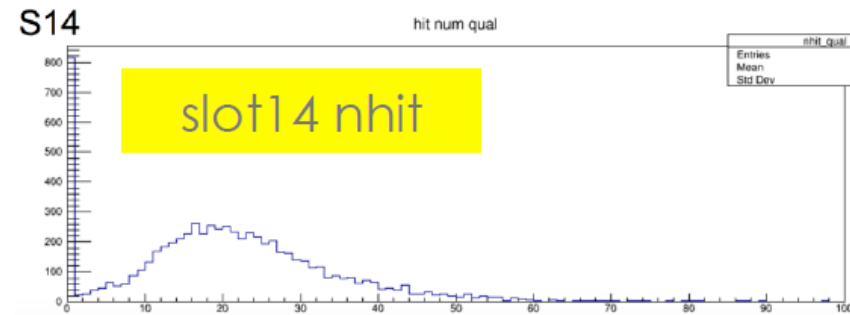
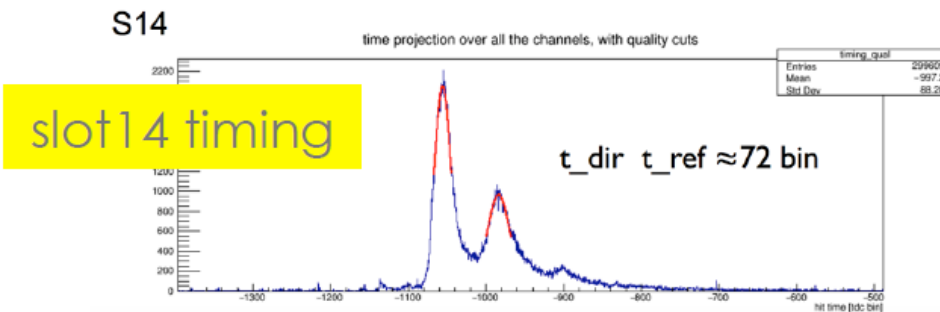
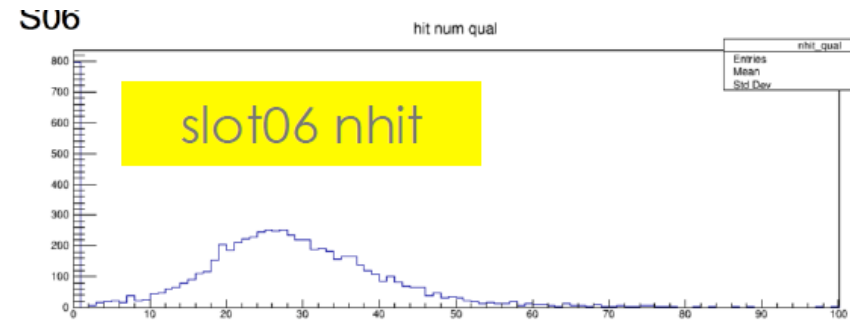
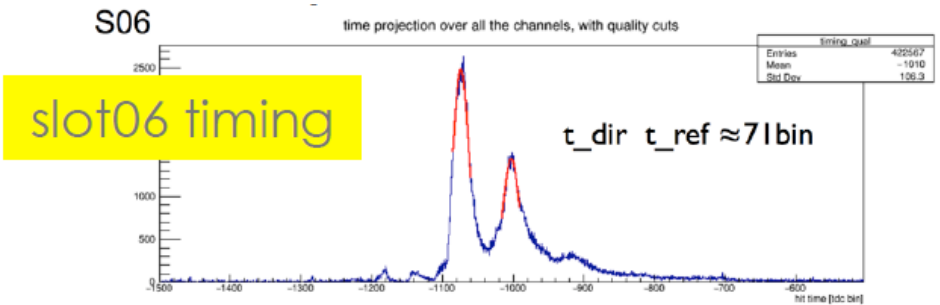
- If some joint of optics breaks due to hardware operation, the photon timing distribution and the number of hits changes drastically.
- → We can check the healthiness by cosmic-ray data too.



# Results by cosmic-ray



- All modules we have checked shows reasonable results and looks OK.

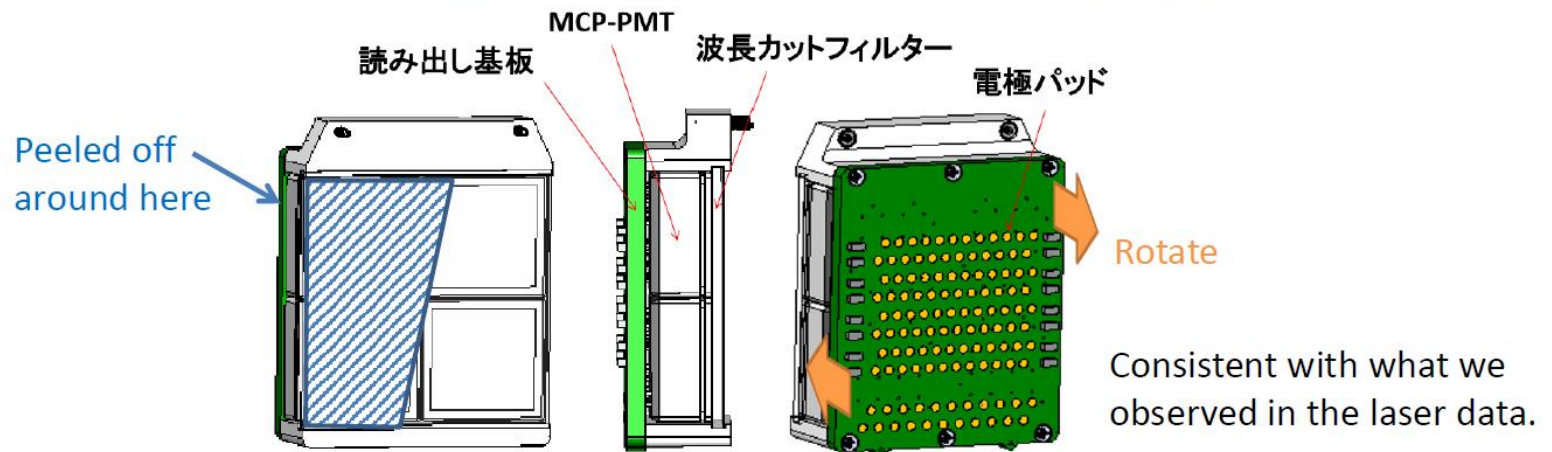
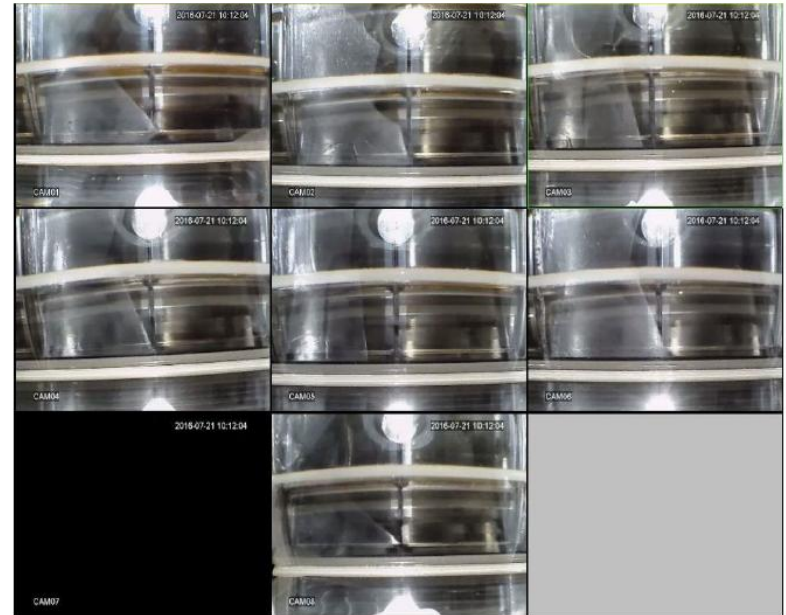


# Issue in B-field

Slot12 in 0 T (just after magnet excitation)



Slot12 in 1.5 T





- Performance test
  - Module01 with CDC
    - Check PID performance by good tracks
  - Installed modules
    - Check basic performance by lasers and rough tracks
  - Prepare/improve software tools
- Study on MCP-PMTs
  - Check installed many MCP-PMTs continuously
    - Track performances
  - Study for further improved MCP-PMT

ありがとうございました！

10

