

Status Update
Electromagnetic-size
Prototype Module Preparation
Dual-Readout Calorimetry

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On Behalf Of Pavia Group

Contents

- PMTs
- Some damages and quick recoveries
- Some constructions towards completing the module...
- Next steps

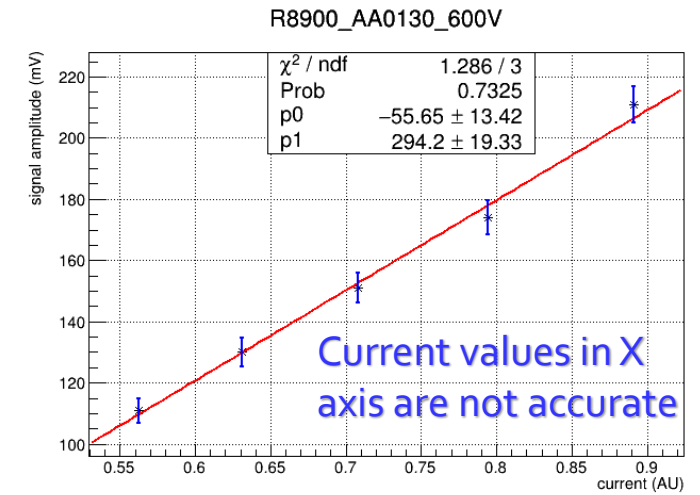
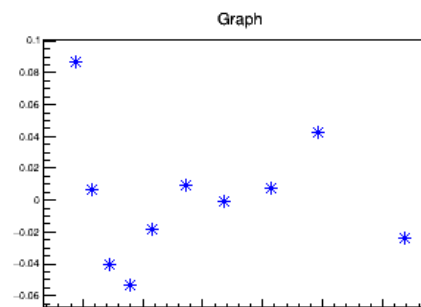
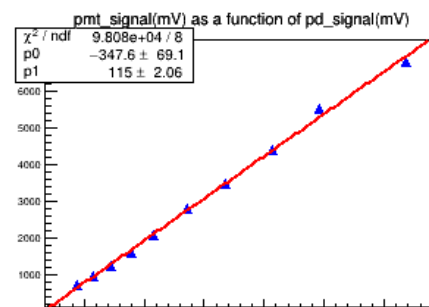
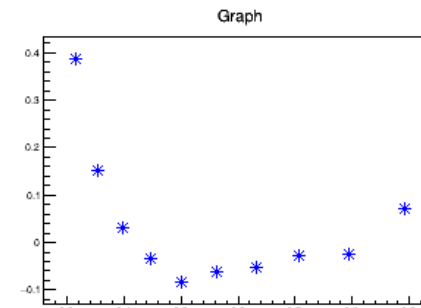
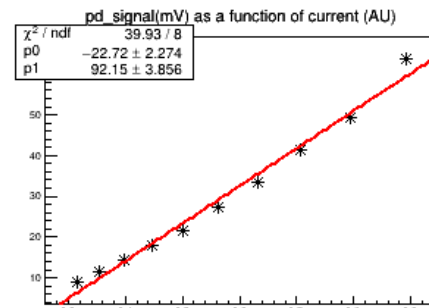
PMTs

In the Last Meeting:

All chosen PMTs are linear within **6%** (except AA0134 which is **13%**)

- Datasheet of the attenuator tells: **Poor Reproducibility!**
- For AA0134, Optical Coupling Compound was missing during test. **Optical Loss!**

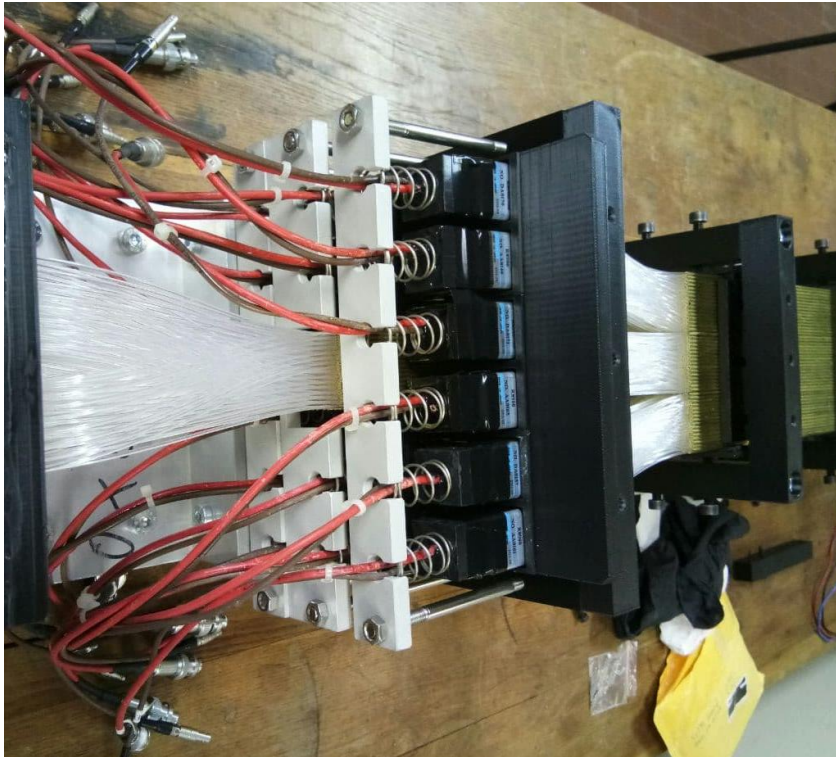
- A test setup with photodiode
- Photodiode itself not perfectly linear



- Most of the non linearity comes from the system
- Further improvement on the system not possible now

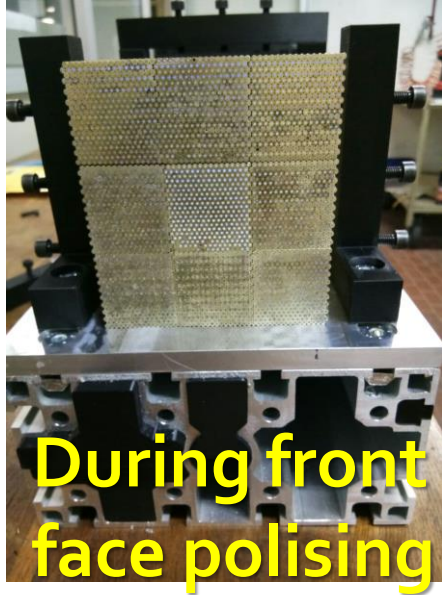
PMTs

Decision taken to mount the PMTs without further tests – already used in RD52 – previous performance tells $\sim 1\%$ linearity

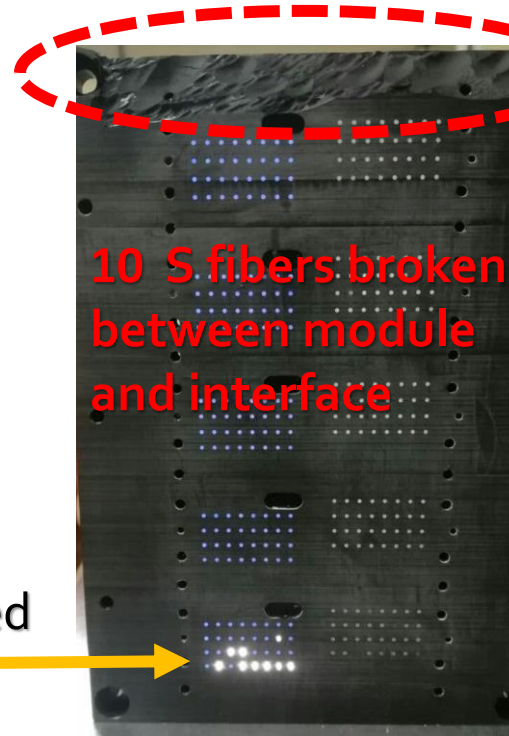


- All 16 PMTs mounted
- Yellow filters placed between two optical coupling compounds → for S fibers

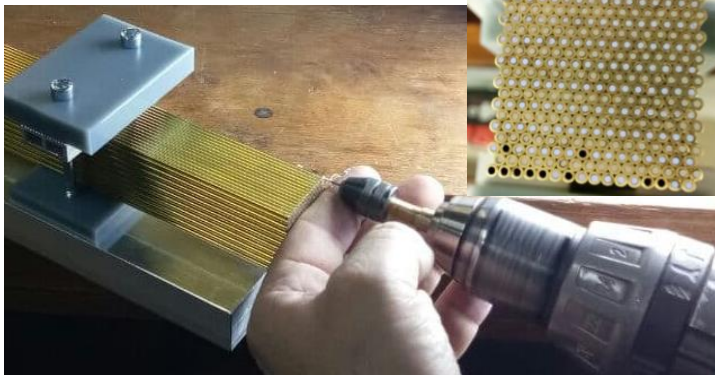
Damages and Recoveries



Milling machine stopped



Some glue applied



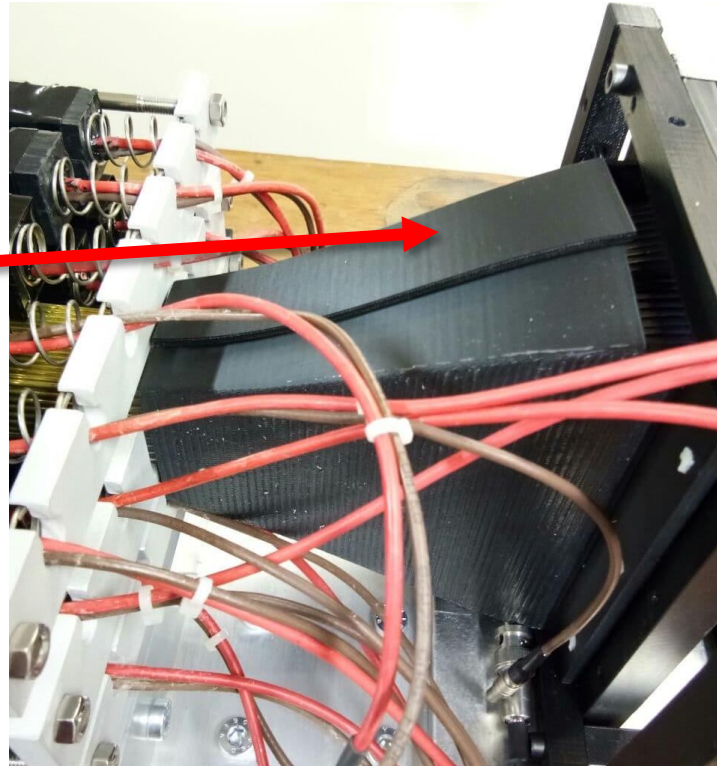
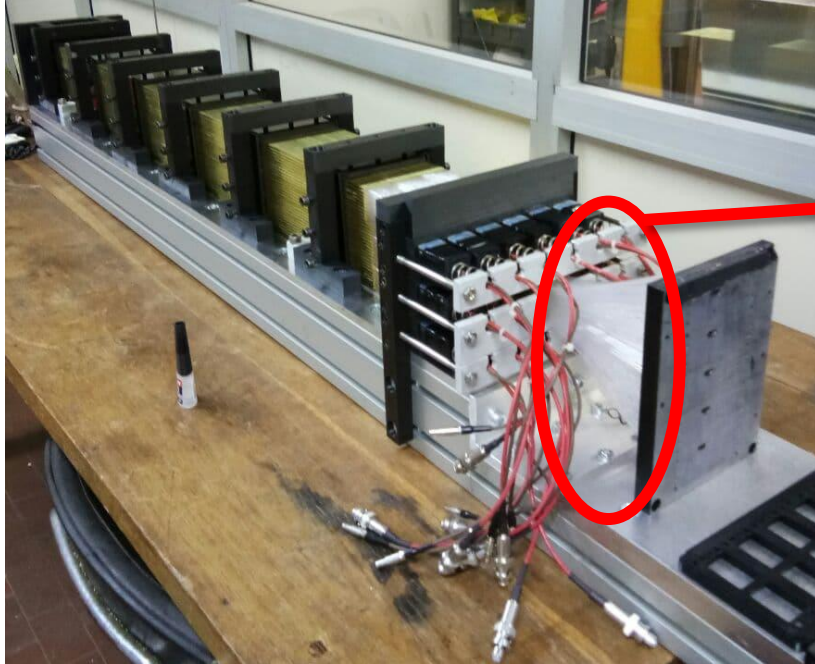
Drilling



Precise Drilling

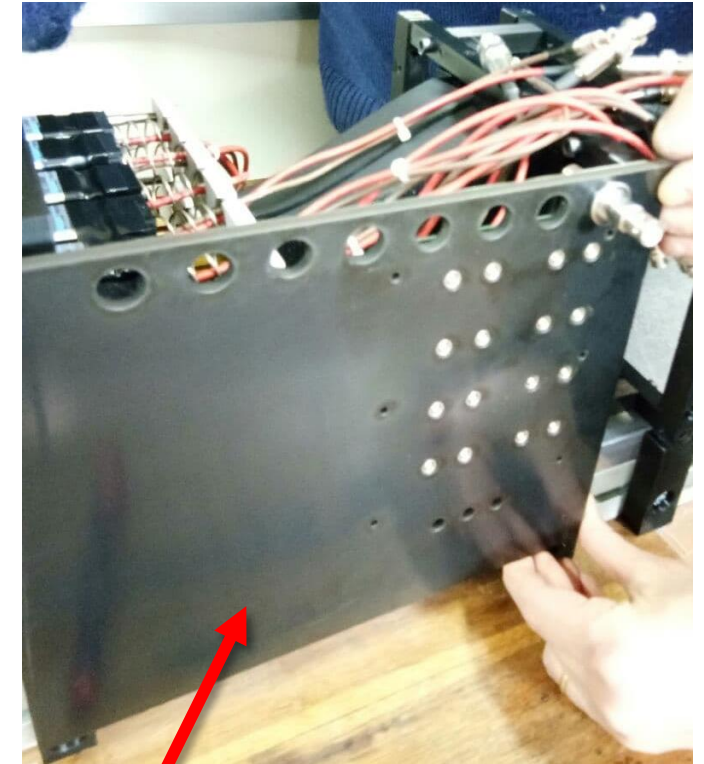
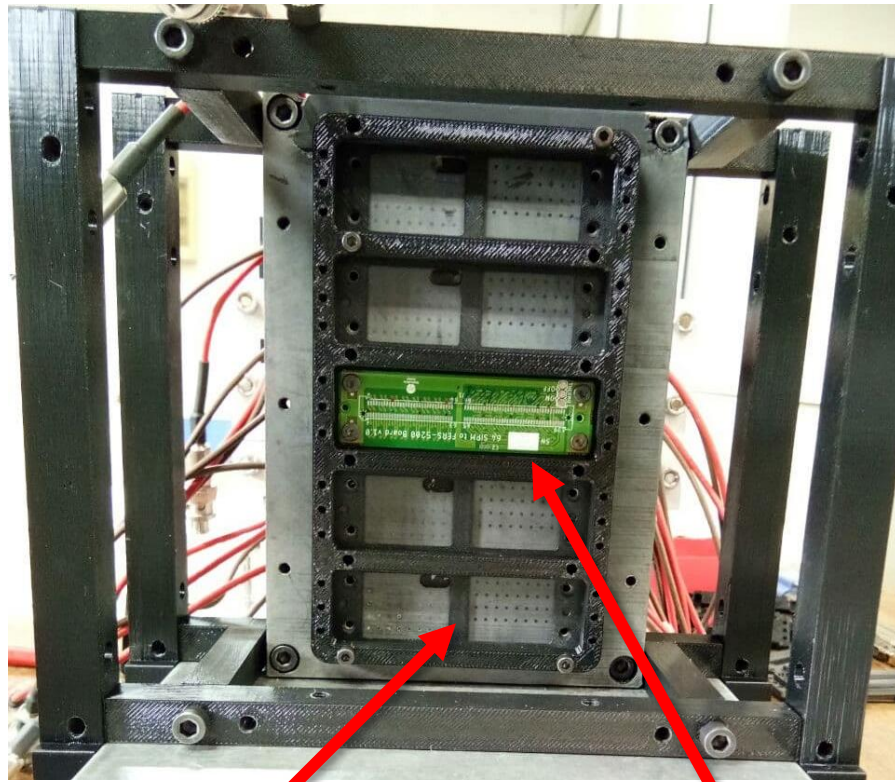
- Fibers reloaded
- Glued
- Damages Recovered

Fiber protectors



Isolating outgoing
fibers of M0 from
PMT cables

Frames and Patch Panels



Frames

- ✓ Separation between **S** and **C** – attached to the surface
- ✓ Separation between FE boards (each handling 64 channels)

Patch panel to attach the electronics for the PMTs

Next Steps ...

Further tests in the lab with

➤ Radioactive Sources

OR

➤ Cosmic Ray Test Stand

Discussions regarding setups going on these days...

Thank You!