

Status report of the TOF-Wall



M. Morrocchi, on behalf of the TW group



IX FOOT Collaboration Meeting

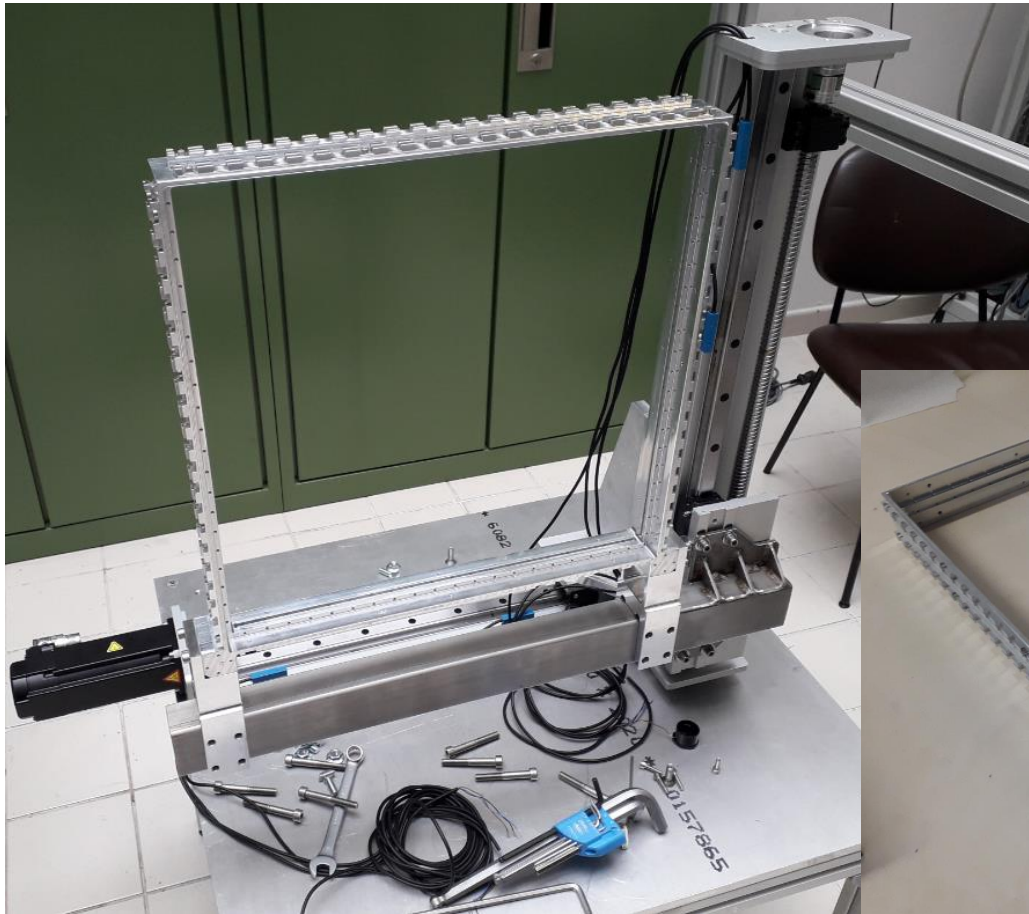
9-11 December 2020

Updates with respect to VIII GM

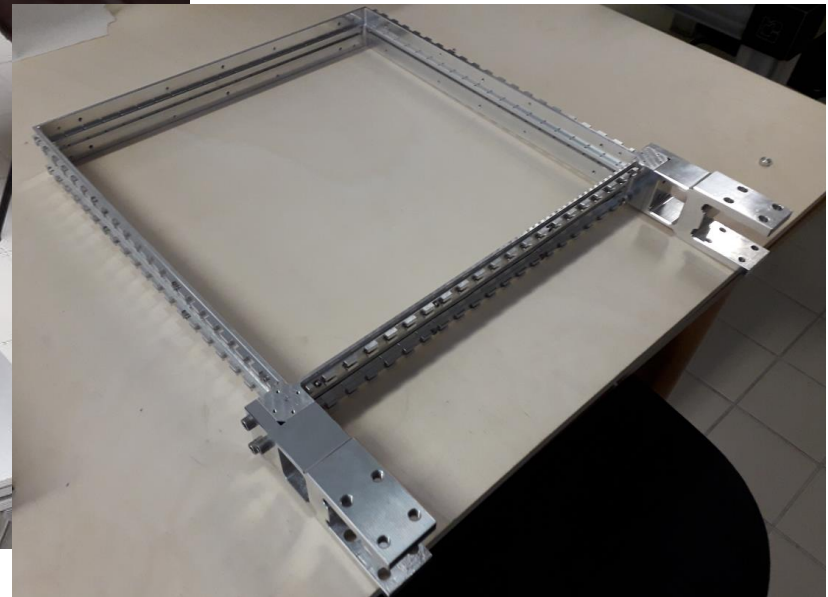


- All the mechanical parts have been received
- All the SiPM boards have been tested without critical issues
- SiPMs have been studied to model the response and for a better understanding of the signal obtained with the TW
- Measurements on a single bar have been performed in laboratory with an electron source.

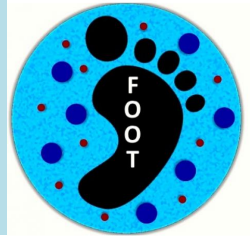
Detector assembly



All the parts needed for the detector assembly are available in laboratory.



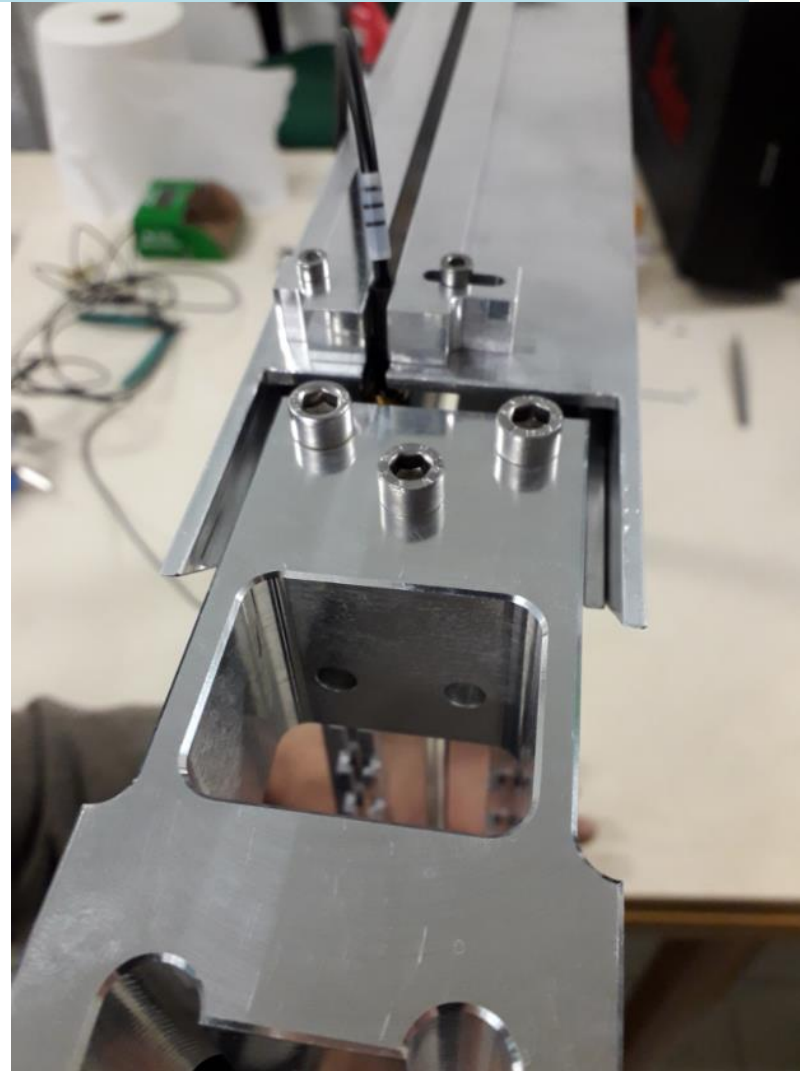
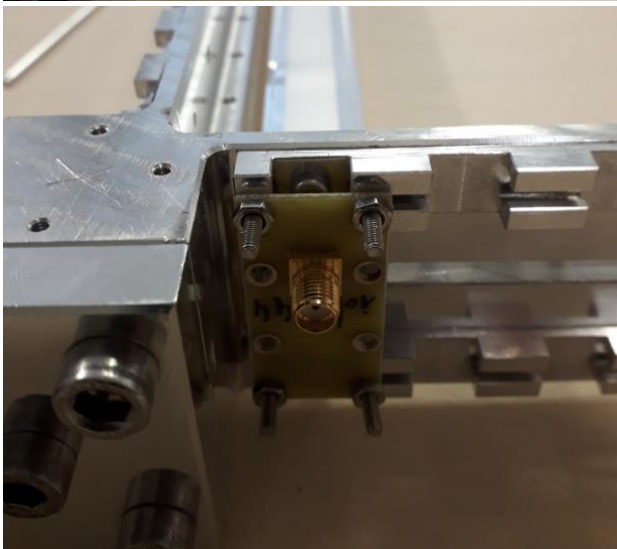
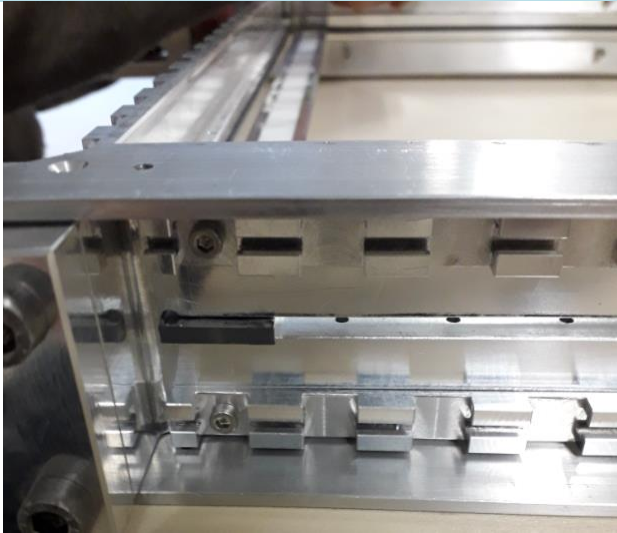
Detector assembly



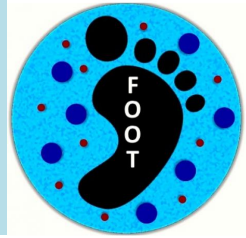
TW assembly started today, with some delay respect to the original schedule, mainly due to Covid restrictions.

We expect to finish the assembly before Christmas, so to acquire as much cosmic rays as possible.

Detector assembly



Detector motion

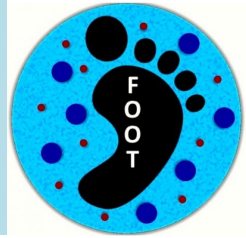


A company is taking care of the management of the 360V supply to the system and of the interface with the controllers.

- The new motion system is much more reliable compared to the old one but the interaction with it is much more complex
- A certified 360V cabinet will be provided
- We expect to receive soon all the software needed for motion

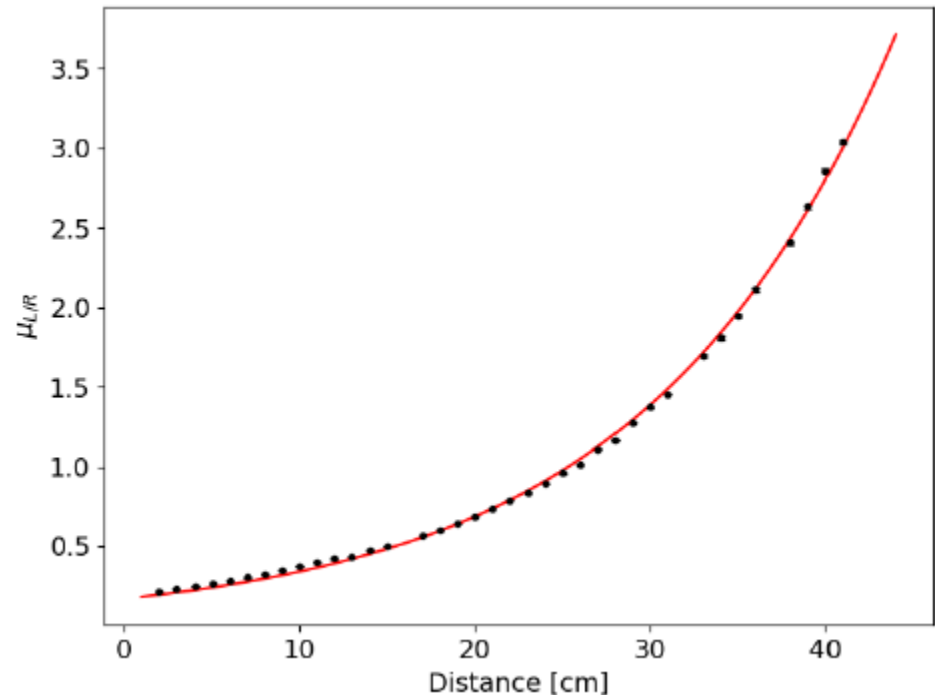


Detector calibration



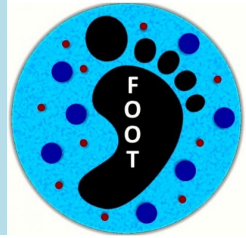
As Marco will show later, some disagreements raised between the results obtained with electrons on a single bar in laboratory and ions on the TW at CNAO

More measurements need to be performed to clearly understand this behavior



Measurements with ^{90}Y (higher energy β^- emitter, about 2,3MeV end-point) at Santa Chiara Hospital in Pisa are planned to be performed in January, with the whole TW detector

TW performance paper



The paper *Performance Evaluation of the TOF-Wall Detector of the FOOT Experiment* has been accepted for publication in Transaction on Nuclear Science

