

BiPo1 status

- Status in Canfranc : 3 capsules
- Status in LAL : 5 more capsules in construction
- ^{241}Am calibration source deposited on scintillators
- Test bench : possibilities
- Next capsules



Status in Canfranc

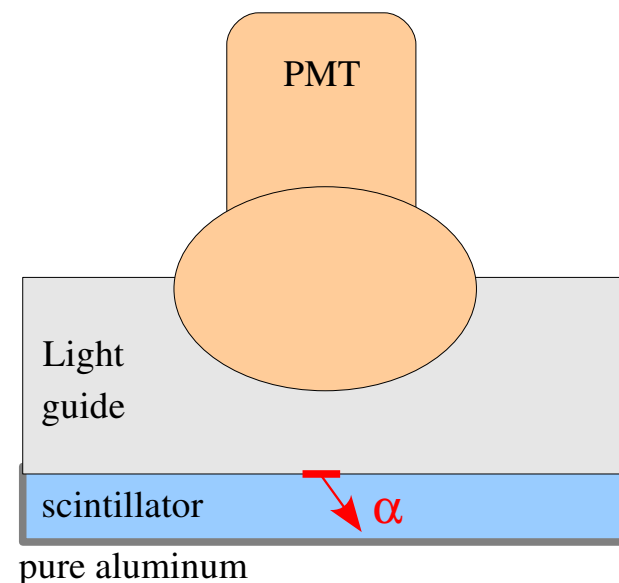
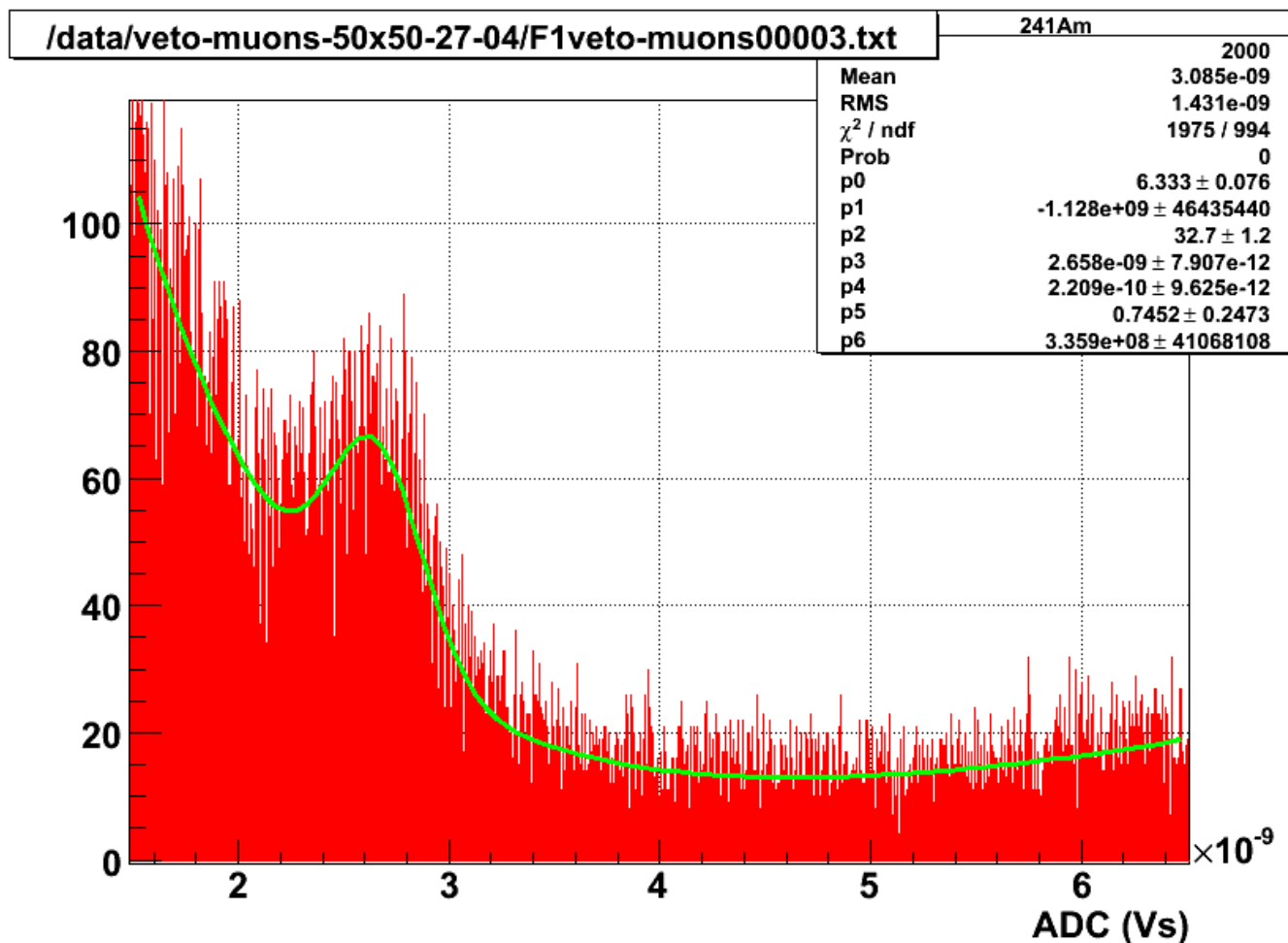
- 3 capsules :
 - 1 cm thick scintillators with pure aluminum sputtered
 - 1 cm thick scintillators covered with aluminized mylar
 - 10 cm thick scintillators for bulk contamination measurement
- Acquisition :
 - 2 Maticq boards + VME crate + acquisition PC
 - 1 CAEN power supply + 1 board (12 HV channels)
- Shielding :
 - inox vessel (lead castle inside and flushed with N_2)
 - lead bricks for 4 capsules

Status in LAL

- 5 capsules coming :
 - 10 scintillators 1 cm thick, pure aluminum sputtered and ^{241}Am calibration source deposited
- 3 more capsules boxes ready + 40 LG + PMTs
- Acquisition :
 - 1 Matacq board + VME crate + acquisition PC
 - digital oscilloscope LeCroy WAVERUNNER
- Shielding :
 - lead bricks shielding for 1 capsule
 - 1.5 cm thick pure iron plates (for Canfranc and LAL)

^{241}Am deposition on scintillators

^{241}Am liquid source deposited : $1\ \mu\text{l} = 0.05\ \text{Bq}$ (rate expected 0.1 Hz)



$128 \pm 12\ \text{mBq}$ measured
Still a contribution of
cosmic muons
(improve muons
veto in LAL)

Test bench in LAL

- Everything is done in a clean room
- Black box for setup (scintillator + LG + PMT) :
 - can be moved above a source without switching off the PMT
- Electron sources :
 - ^{207}Bi conversion electrons (~ 1 MeV)
 - spectrometer with $^{90}\text{Sr}(^{90}\text{Y})$ source (electrons with selected energy between 400 keV and 2.3 MeV)
- Alpha sources :
 - few ^{241}Am sources (5.5 MeV alphas ~ 400 keV after quenching)
- A whole capsule can be tested
- Muons veto under construction

Next capsules

- 3 boxes for capsules ready :
 - try phoswich scintillators as soon as possible
 - no changes needed just the scintillator is different (aliminized this scintillators and use the same light guides, PMTs, acquisition ...)
 - big blocks of the different scintillators from the phoswich to measure the radiopurity ?
- Coming next :
 - 10 carbon fibers capsules