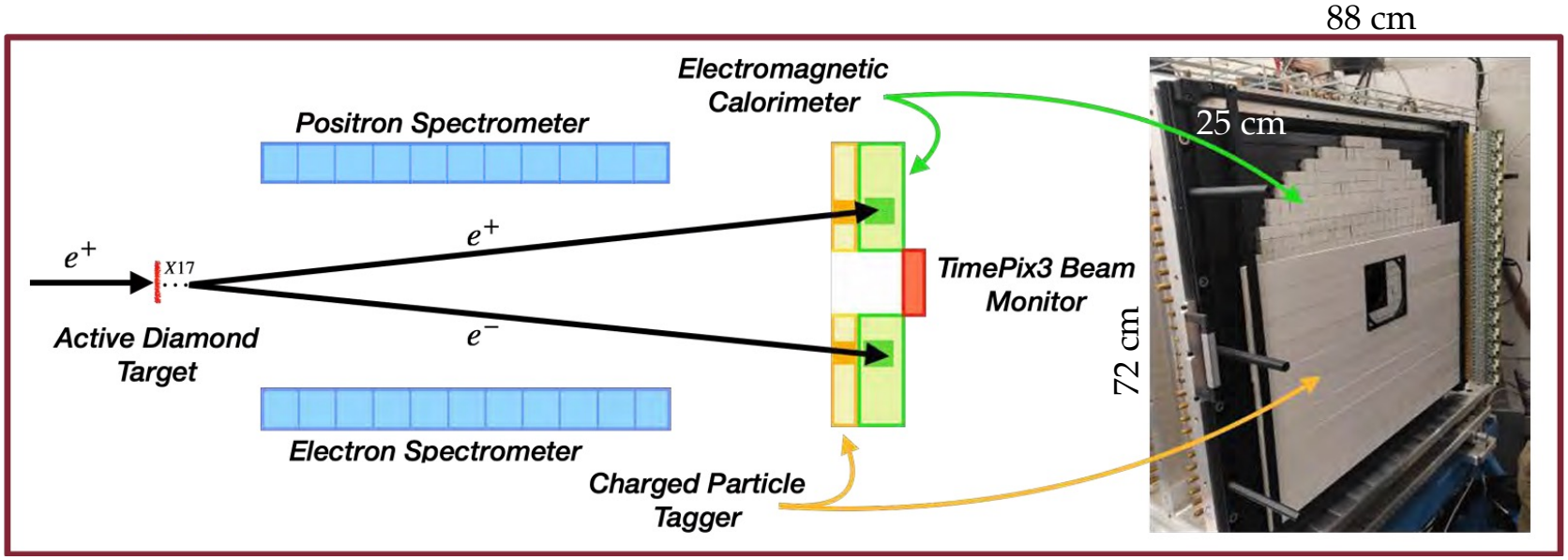
General Idea

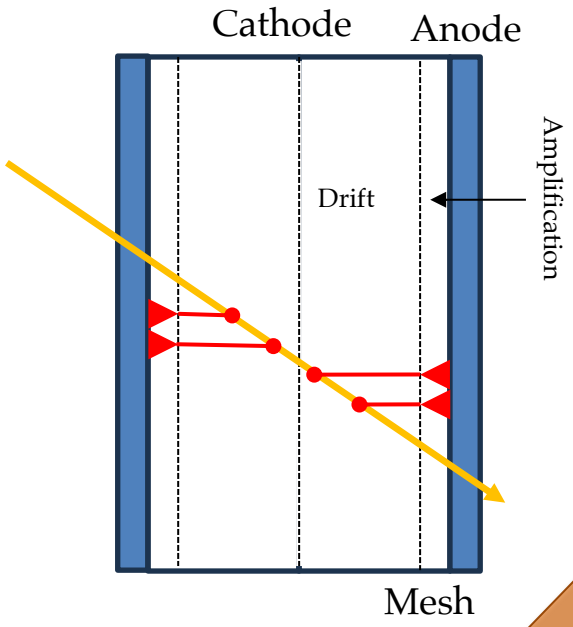


General idea:

- need a light detector capable for tracking (material budget: few%X_0)
- use a TPC based on MM technology (drift gap of 5cm)

DAQ:

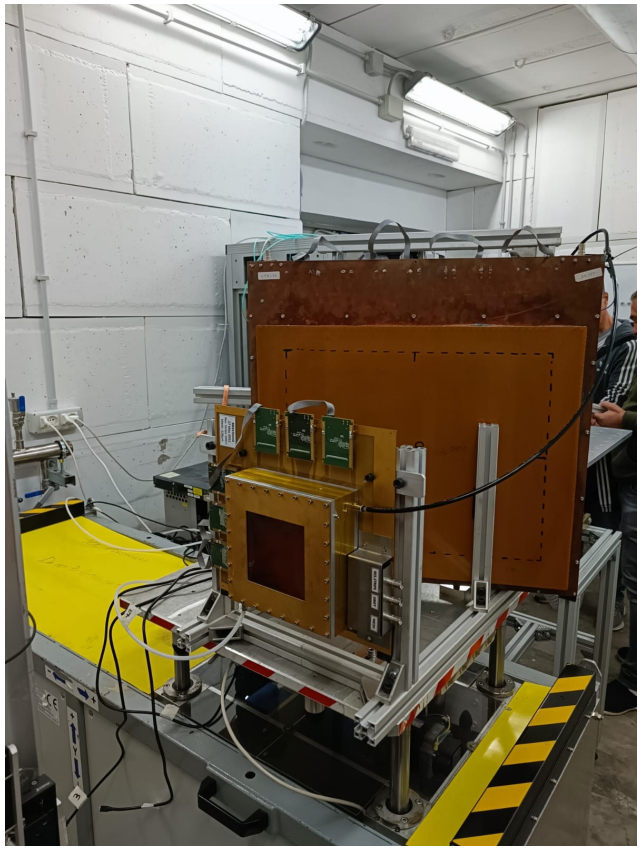
- APV based -> acquisition window of ~700ns
- Fast gas mixture Ar:CF4:Iso (88:10:2)

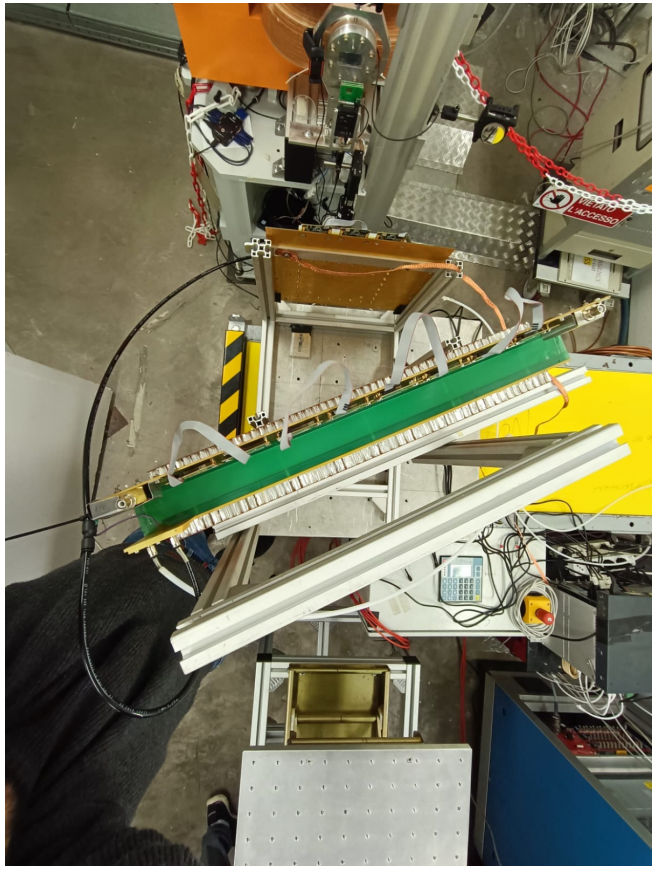


Test Beam in BTF

Thanks for the effort!

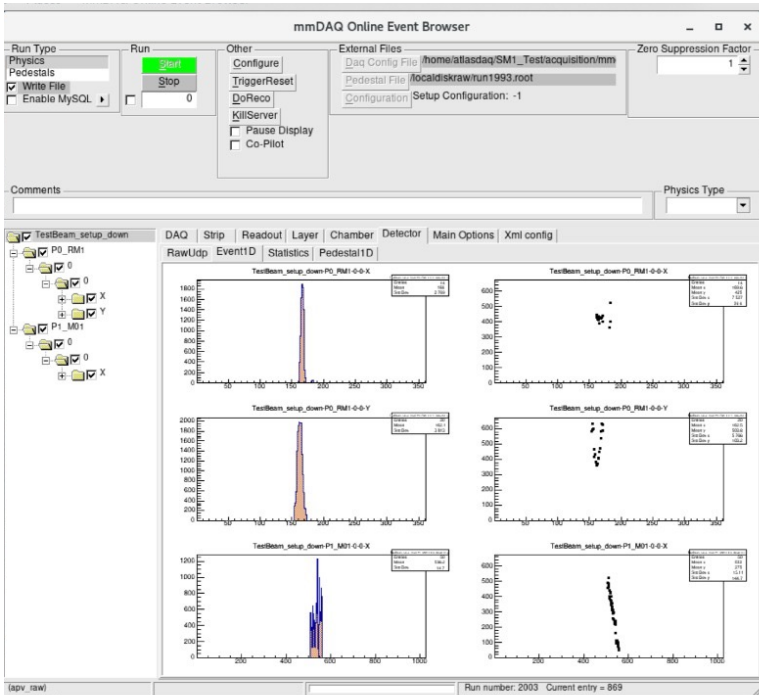
Great success!

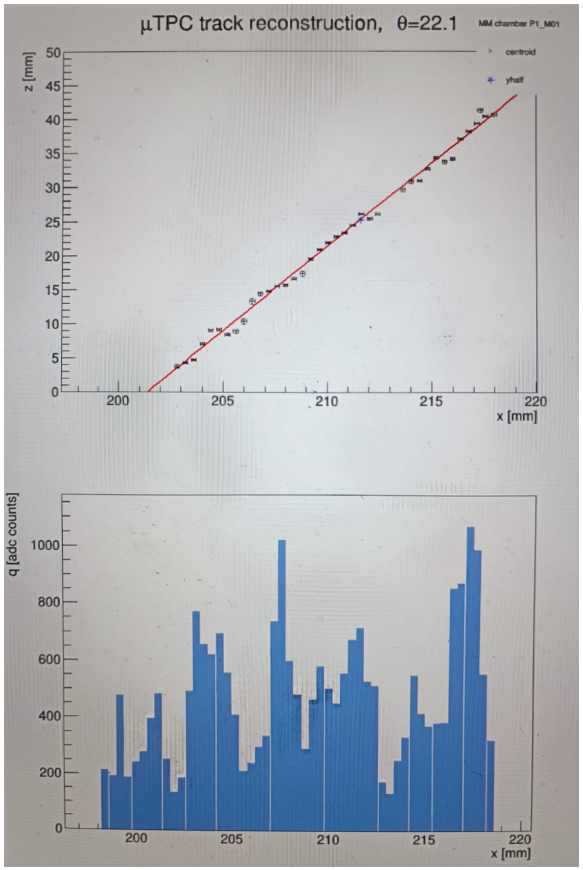


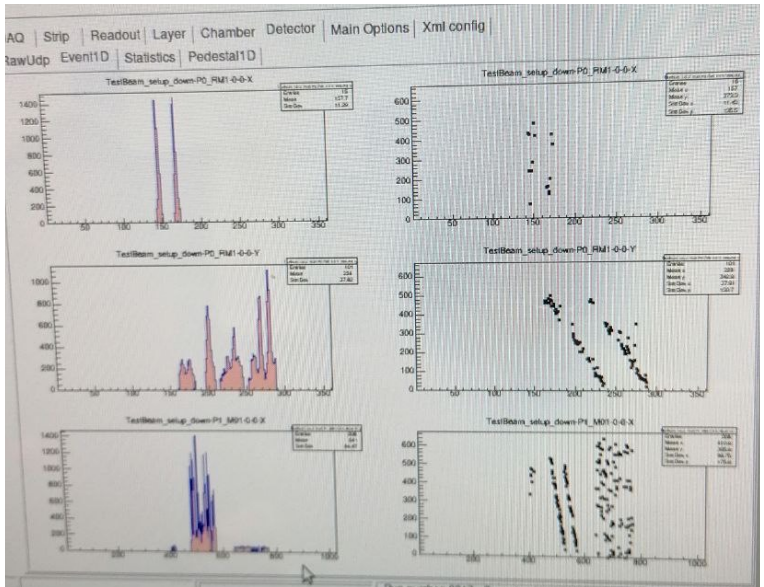


Test Beam in BTF

Few event displays and reconstructed tracks:

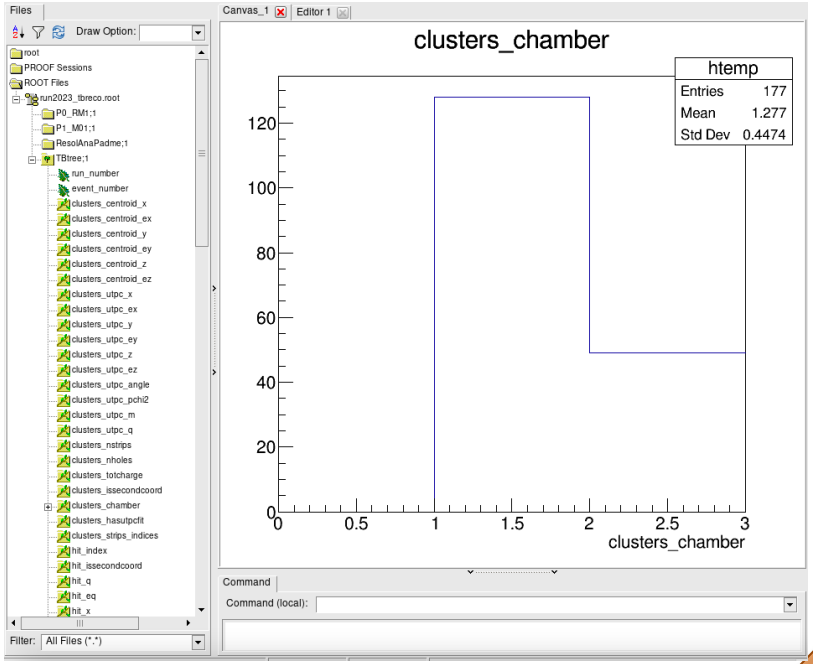






Data and analysis code in sharing:

- inside atlasui -> padMMe directory
- all atlas and padme users should have access
- I will copy the code there with all the raw and reco data + some debug plots
- reco ntuples includes plots and a tree to be used for simple macros
- Logbook:

  https://docs.google.com/spreadsheets/d/1BMz_SQ0aQujxPrjG2gUZOpf8K51RphMMYqKRy_mhv40/

```
[atlasdaq@pcmancini3 TestBeamMMTPC]$ ls
README  Root  TBReco  TBReco.C  TBReco.C
~  TBReco_C.d  TBReco_C.so  TBReco_C_ACL
iC_dict_rdict.pcm  calib_t0_LNFNov23Setu
pBTF_APV.root  raw  reco  reco_plots  ro
otlogon.C
[atlasdaq@pcmancini3 TestBeamMMTPC]$
root -l -b -q 'TBReco.C++("2023")'
```