

MINUTES: aMUSE SB meeting. Dec. 20th, 2022

WP1

Martin Felt: g-2 running again. Switching to Mu2e. Agreement at Fermilab: Mu2e commissioning has the priority.

Simona Giovannella: Mu2e status. The Calorimeter is progressing very well. Disk 1 has been completely assembled. The cabling will follow and first data with dismiss are expected during the first part of the 2023. The Disk 2 is planned to be sent to Fermilab. The assembly of the Disk 2 will start during the first part of 2023.

WP2

Eleonora Diociaiuti: BF2 based detector update. High transmission for the fast component, emphasised by this hard coated quartz glass.

Stefan Muller: Submission of the proceeding about the target simulation for Mu2e.

WP3

Donatella Lucchesi. A milestone has been accomplished. Full running of the ICL software. For Snowmass a tutorial about this software has been released. Muon collider software for simulating the behaviour of the detector is available and working. Up to 3 TeV the full configuration of the detector is ready.

Massimo Casarsa: Workshop at Fermilab on muon collider. Organised by US colleagues. The WP3 has been invited to share the gained experience and to share the tools and tutorials. One of the topics was starting of thinking of detector able to work at 20 TeV.

Angela Papa: Compressed muon: Extract through an orifice, Extraction-Re-acceleration: 3 pairs of strip electrodes will confine and guide muons to re-acceleration region. Re-acceleration to 10 keV: Electrostatically with a series of ring electrodes. Simulation goal: 1. Transport and re-accelerate the beam with 100% efficiency. 2. Study beam quality at $B = 0.1$ T position by varying extraction region pressure

WP4

Michele Gallinaro and Francesco Collamati: Muon Collider Software. Two major milestones: Benchmark software: DONE. Benchmark on DL algorithms applied to particle identification. Contribution at the muon collider workshop at CERN, Oct.2022

WP5

Giorgia Burzachechi: Very active via social media: website, Twitter, Video, Outreach activities. We are welcome to send all the material to Giorgia or submit by ourselves tagging aMUSE.

WP6

Anna Ferrari. Irradiation campaign to validate the electronics of the Mu2e Calorimeter ongoing. Proton neutron facilities: The cyclotron at UC Davis. Possible slots for irradiation at the end of January 2023. Otherwise, Medical Center in March 2023. Other options at HZDR (possible travel support via RADNEXT EU Project). Secondments HZDR-SLAC will start in 2023. Mainly activities MC related, tests of the calorimeter for laser applications foreseen later. Machine Learning

training courses in the first semester 2023. Training courses to be organised in correspondence of the aMUSE collaboration meeting.

Angela Papa: Proton Irradiation facility available at PSI. All general info available in the website of PSI, about the main characteristics of the beam, how to submit a time beam request and the safety: <https://www.psi.ch/en/pif/how-to-order-beamtime>.

Michal Silarski. DD Neutron generator and DT Neutron generator up to 10^8 n/s (new up to 10^9 n/s). LaBrCe crystal: 2 inches x 2 inches coupled to PMT, from Saint Gobain. Not visible deterioration of the crystal performances in the 2 MeV region while something seems visible at levels of electronics.

WP 7:

Simona Giovannella: Summary of secondments and Deliverables 2022. Projection secondments and deliverables 2023.

Angela Papa: All contributions are available in the indico page.