



Muon Activities 2020

CMS BA Group Meeting
Feb 14 2020

Piet Verwilligen – INFN Bari

- *RPC Activities*
- *GEM Activities*

CERN, Feb 03 2020



Overview of the Situation

Situation Phase-1:

- Second year of LS2; LS2 just over half way
- **Negative Endcap GE-1/1 installed** (but to be uncabled for new ME-1/1 extraction to replace cooling -> delays in commissioning)
- **Positive Endcap GE+2/1** at last step of QC: **cosmic test** for Eff
- **Leak reparation RPC Barrel** (big amount of work last year 4m of Bari Technicians) --- will continue up to July 2020

Phase-2 upgrade of the Muon system:

- Launch construction of GE2/1
 - **Need decision for foils of GE2/1!**
- Construction & Quality Tests of ME0 prototypes
- **Test beam with GE2/1 & Final Electronics**
 - Also neutron beam test with ME0?
- Installation of Services RE3-4/1 & GE2/1
- Decision on FEB for RE3/4/1 --- **Further iRPC + Feb tests ?**
- GIF++ ageing tests RPC & iRPC / New Gasmixture / HF analysis

RPC

- **RPC Subsystem manager:**
- RPC Barrel Leak Repair:
- RE3-4/1 services (gas impedance box)

G.Pugliese
G.P. M.Franco
N.Lacalamita

GIF++ iRPC Prototype Tests & FEB integration tests
A. Gelmi (will defend thesis), R. Aly, I. Marieka guided by G.Iaselli

GIF++ iRPC Ageing test, HF analysis, P5 HF Analysis:
G. Pugliese, A. Gelmi

RE4 Commissioning & RPC (Barrel & Endcap) in Global Runs:
to be decided: R. Ali, W.Elmatanawee, I.Marieka ???

RPC Cluster size studies (finished → new task ?)
W.Elmatanawee, M.Abbrescia

GEM

- **GEM Electronics coordinator:**
- GEM Production & R&D coordinator:
- GEM Bari Production site manager:
- GEM simulation convener

F.Licciulli

J. Merlin

P.Verwilligen

P.Verwilligen

- **Activities within GEM collaboration**

Installation, Cabling & Uncabling of GE1/1
Services GE2/1

M.F, N.L

Nicola L, F.Maiorano

Test of packaged VFAT3 for GE2/1

F.Licciulli, G.DeRobertis A.T.

QC8: Cosmic Test GE+1/1
Invest. of Double-Polarity sig

R.Venditti, C.Aruta, A.Pellecchia
J. Merlin, F.Licciulli, P.Verwilligen

Preparation of GE2/1 & ME0 Construction

M.Gul, P.Verwilligen

Discharge Tests

J.Merlin, A.Stamerra, A.Colaleo

Design of ME0 readout

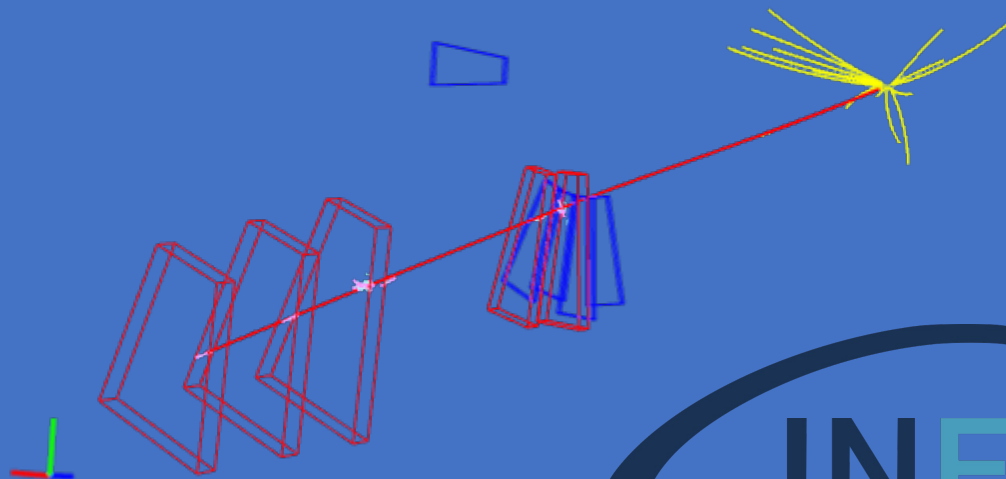
P.Verwilligen, F.Licciulli

Common Muon

- **Muon Resource Manager:** **A.Colaleo**
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- Activities for common Muon DPG
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- Development of Machine Learning for Online DQM Monitoring
 - R.Venditti, F.Simone
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 - Simulation of Neutron background
 - P.Verwilligen
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Backup



CERN, Jan 10 2019