SAND Physics/Software WG

M. Tenti - Bologna

INFN
Istituto Nazionale di Fisica Nucleare

The Contributors

21 people in total

Paolo Gauzzi	Sapienza/Roma1
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~~Artem Chukanov~~	~~JINR~~
Paolo Bernardini	Lecce
Antonio Surdo	Lecce
Francesca Alemanno	Lecce
Denise Casazza	Ferrara
Riccardo D'Amico	Ferrara
Lea Di Noto	Genova
Matteo Sorbara	Roma2
Antonio Gioiosa	Roma2

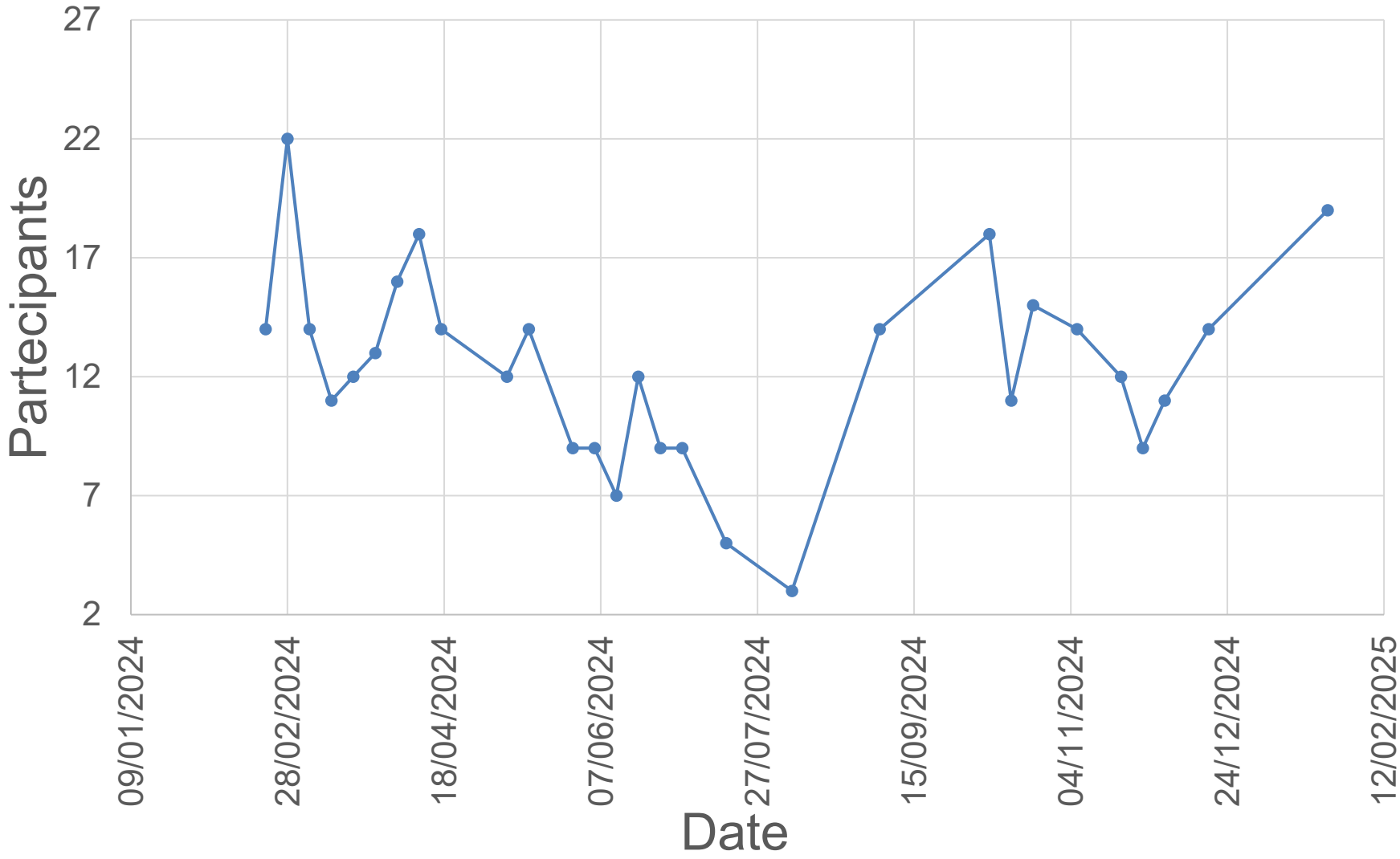
Valerio Pia	Bologna
Giulia Lupi	Bologna
Gianfranco Ingratta	Bologna
Valentina Cicero	Bologna
M. Tenti	Bologna
F. Battisti	Bologna
A. Ruggeri	Bologna
F. Mei	Bologna
N. Tosi	Bologna
V. Cicero	Bologna
M. Pozzato	Bologna
G. Santoni	Bologna
G. Sirri	Bologna

ECAL	Kalman Filter	GRAIN reco and analysis	H sample w/ fast reco	Straw -VS drift- based tracker	Event reconstruction	CAF	Integration Framework Workflow, CI	Beam spill
Casazza D'Amico Gauzzi Ruggeri	Pia Lupi Battisti Pozzato	Mei Cicero Tosi	Ingratta	Sorbara Gioiosa Ruggeri	Bernardini Surdo Alemanno	Di Noto Casazza	Tenti Tosi Sirri Battisti	Santoni

Meetings

- Starting from 21/02 we have regular weekly meetings
- Meetings are recorded [here the folder]
- A list of action items is produced and checked during the meeting
- Slides, video and action items can be found in the corresponding indico agenda

Participants



Agenda SAND Phys/SW session

- 15’ TDR – Paolo Bernardini
- 15’ Anti-mu + n Channel – Gianfranco Ingratta
- 8’ Simulations for ASIC design requirements – [Speaker Needed]
- 10’ Update on event reconstruction with lens and coded-mask detectors – [Speaker Needed]
- 10’ Tracker Reconstruction – [Speaker Needed]
- 10’ ECAL – [Speaker Needed]
- 10’ Vertex Reconstruction Study – [Speaker Needed]

- Recommendations for Speakers:

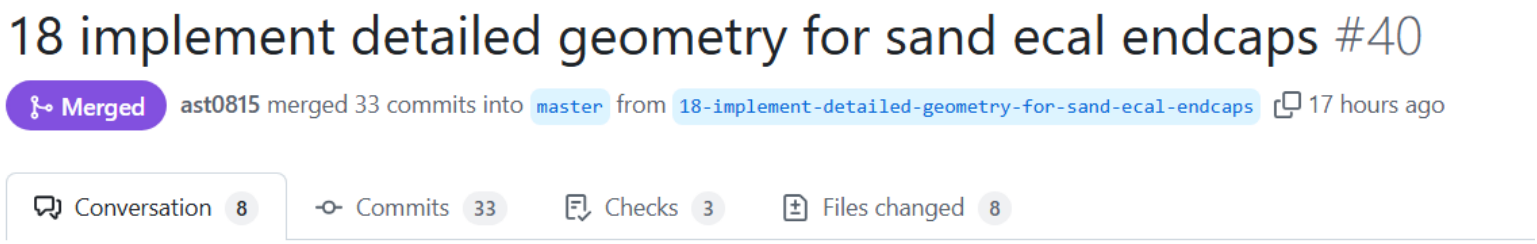
- Please prepare your slides in advance and send them to me by **tomorrow**
- Be mindful of the **allotted time** for your presentation
- Kindly confirm the **title** of your talk and the **name** of the speaker

sandreco WS

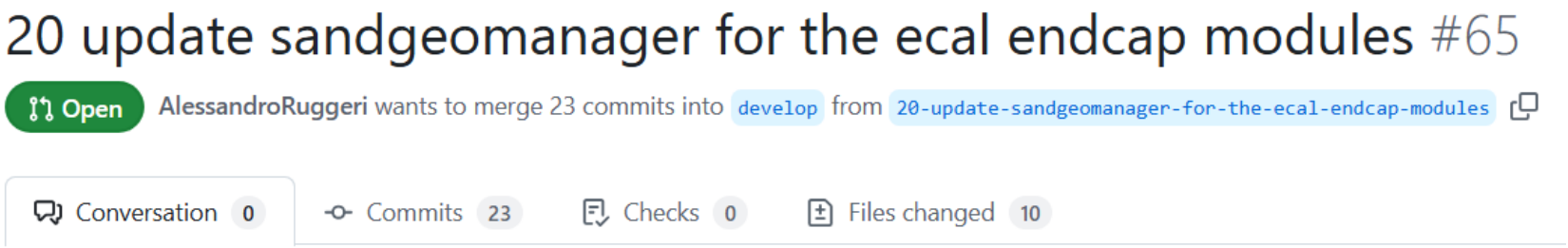
- **1st sandreco WS**: Bologna 09/12 to 11/12. The goal was to tag a version of sandreco before the new year. The key goals for this version are to:
  - work with the supported tracker geometries and includes the new ECAL endcap geometry
  - include the digitization of the entire ECAL
  - include the digitization of the tracker for both options
  - include track reconstruction with the Kalman filter
  - include cluster reconstruction in the ECAL
  - include vertex reconstruction of tracks
- The goal was not fully accomplished but it was a **success**. Soon the 2nd will follow
- The **outcome** can be found here

Updated ECAL Endcap geometry

- A dunendggd PR was successfully merged:

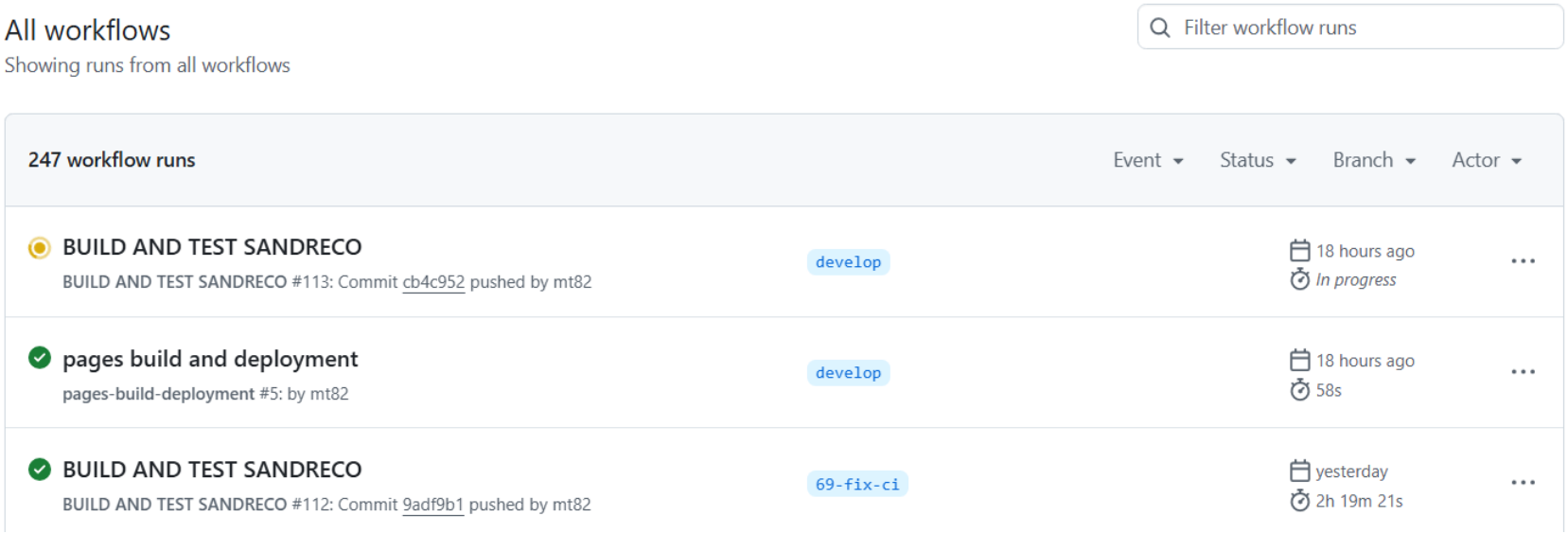


- A corresponding PR in `sandreco` is ready for a review:



sandreco CI

- A github workflow based on github actions was setup



- It takes 2h to check the code is ok. It is not sustainable
- Alternative solutions (based on docker images) are under development and discussion

ufw

- Repo: https://baltig.infn.it/dune/ufw
- microFrameWork (ufw) is a minimalistic (**simple** and **lightweight**) application framework that allows developers to create dynamic C++ applications configured using .json files.
- Concepts:
  - process representing algorithms
  - product representing data
- A json file (or collection of files) is used to encapsulate:
  - the configuration options of processes and
  - metadata about products

Thank you