

First GRAIN WG meeting

Lea Di Noto e Alessandro Montanari

March, 24th 2022



To do list for the 1st meeting

The proposed agenda for this first meeting should include:

- 1) Define a person or a method (recording of the meeting) to take minutes.
- 2) Discuss and define the scope of your activity to some level of detail having in mind that the final goals are the completion of the detector installation and the readiness for operation.
- 3) Define an initial set of deliverables and the related time schedule
- 4) Make an initial survey of the available resources and identify possible deficiencies.
- 5) Define at least two referent (a chair plus a co-chair) persons for your working group to take the responsibility to call and organize meetings and coordinate other activities (this does not need to be the “initial” chair).

2. Scope of the GRAIN WG

The WG is going to work on:

- **Cryostat**
 - Mechanics
 - Cryogenics → meeting
 - monitoring
- **Detector (lens/hadamard)**
 - Design
 - Electronics
 - Prototyping
 - Simulation/reconstruction tool development
 - update → main meeting on Thursday at 14.30
- **Physics requirement and achievement**
 - update → main meeting in SAND Physics

3. Set of deliverables

- Integration/optimization of detectors inside the cryostat
 - A: lens+hadamard , B: SiPM only
- Finalization of final cryostat dimensions and other technical requirements
 - input from detector based on simulations
 - input on STT design
- Finalization of cryogenic facility based on 1kW of maximum power dissipation (baseline option)
 - by the end of the year
 - General scheme done to be improved by October
- First estimate of electronics requirements for matrix readout based on 1kW of maximum power dissipation
 - September
 - (number of channels, dynamic range, time window, ...)
 - toward an ASIC development
- Defining a plan for prototyping and tests with lenses and hadamard

End of May

4. Meeting time and people

- Bi-weekly meeting at this time (Thursday at 11.00)

Institution	First Name	Last Name	Email	Country	Position	T: STT+GRAIN (Support Structure)	T: GRAIN (Engineering Design, R&D, Prototyping)	T: GRAIN (Cryogenics and Purification)	T: GRAIN (Readout Electronics)	T: GRAIN (Optical Devices)
FNAL	Claudio	Montanari	cmontana@fnal.gov	USA	SS		X	X		
INFN/UNIV-Bologna	Marco	Guerzoni	marco.guerzoni@bo.infn.it	Italy	EN		X			
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INFN/UNIV-Bologna	Michele	Pozzato	Michele.pozzato@BO.INFN.IT	Italy	SS		X			
INFN/UNIV-Bologna	Nicoletta	Mauri	nicoletta.mauri@CERN.CH	Italy	SC		X			
INFN/UNIV-Bologna	Valentina	Cicero	valentina.cicero2@unibo.it	Italy	PD		X			
INFN/UNIV-Bologna	Valerio	Pia	valerio.pia2@unibo.it	Italy	PD		X			
INFN/UNIV-Bologna	Alessandro	Ruggeri	alessandro.ruggeri7@studio.unibo.it	Italy	TS		X		X	
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INFN-Lab. Naz. Di Frascati	Mihai	Iliescu	Mihail.Antoniu.Iliescu@CERN.CH	Italy	SS		X			
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SUMMARY					29	5	26	6	6	6