

News

Test Plans

- we discussed yesterday with Cristina, Joaquim and Fernando (from Coimbra University) about tests they can perform on gas mixtures with hydrogen;
- they have a very sensitive setup and already some bottles of gas so they intend to start soon;
- we had a short meeting today to discuss general plans for next tests on prototypes;
- here is a link to a table we are setting up:
- <https://docs.google.com/spreadsheets/d/19RxF2tdcsOC8EDZZktjbKEmdrjBIF6vXmhzQ-YXtqSk/edit?usp=sharing>

Test Plans

Deadline for
FC decision

Go to LNGS

Lab	Detector	Test	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
RM1	ORANGE	Hydrocarbon						
LNF	LEMO _n	Luminescence						
	LIME	KFC						
		Install Bandellas (if needed)						
		⁵⁵ Fe + AmBe + ¹³⁷ Cs						
		Migdal+Ar						
COIMBRA								
GSSI	MANGO	Luminescence						
		GEM thickness						
		Fluoromethanes						
		AmBe/Ba						

GSSI program seems too crowded (don't forget Negative Ions)

Perhaps we can move Fluoromethanes to Coimbra?

RD51

- we'll participate to Common Project with GDD+Dinesh for the development of innovative gas mixtures (mainly focused on Negative Ions);
- we can use a CERN budget code for a total of 10 k in 2 years;
- yesterday we had a meeting about saturation effect:
 - try to quantify if effect is comparable;
 - some suggestion on how to mitigate it;

Papers

PREPARED FOR SUBMISSION TO JINST

First evidence of luminescence in a He/CF₄ gas mixture induced by non-ionizing electron

PUBLISHED

PREPARED FOR SUBMISSION TO JINST

Stability and detection performance of a density-based Optical Readout TPC with He/CF₄ based gas mixtures

PUBLISHED

PREPARED FOR SUBMISSION TO JINST

A density-based clustering algorithm for the CYGNO data analysis

PUBLISHING

1 Identification of nuclear recoils in a He/CF₄ gas TPC with optical readout

2 E Baracchini^{1,2}, I. A. Costa⁷, S. Bianco³, C. Capocchia³, M. Caponero^{3,4}, G. D'Imperio⁵, A. Cortez^{1,2}, I. A. Costa⁷, E. Di Marco⁵, G. Dho^{1,2}, F. Iacoangeli⁵, G. Maccarrone³, M. Marafini^{5,6}, G. Mazzitelli³, A. Messina^{5,6}, R. A. Nobrega⁷, A. Orlandi³, E. Paoletti³, L. Passamonti³, F. Petrucci^{9,10}, D. Piccolo³, D. Pierluigi³, D. Pinci⁵, F. Renga⁵, F. Rosatelli³, A. Russo³, G. Saviano^{3,11} and S. Tomassini³

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A GEM-based Readout Time Projection Chamber for charged particle tracking

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WAITING REVIEWER RESPONSE

Saturation on GEM-3

Karolin M. ...

DRAFTING

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