News

- We have to close 2019 Consuntivi: please send to your Local Responsible the list of talks, posters, proceedings and papers;

- We’ve been asked to prepare a report by LNGS Scientific Committee for March;

- We are preparing agreement papers for Brazilian and English collaborators;

Pubblications

- Solar neutrino proposal (Elisabetta)
- Nuclear recoils in CYGNO, with head-tail (Emanuele)
- Tracking performance at BTF (Giovanni+Luca)
- Comparison of performance 60/40 and 70/30 with ^{55}Fe +PMT (Igor+Rafael)
- Effect of filters on CYGNO images (Brazilian team)
- The Cygno Experiment (Davide)

Analyses and Simulation

- Finalise ^{55}Fe analisys: camera+PMT (Igor) [January]

- Evaluate sensor noise behavior for threshold settings (Brazilian) [February]

- AmBe data (Camera and PMT) analysis toward a PID efficiency and rejection factor paper (Emanuele) [February]

- finalise BTF analysis for the “Tracking performance paper” (Giovanni M) [February]

- “digitise” Marconato data on 1 keV->100 keV nuclear recoils for CMOS (Fabrizio/Flavio) [January]

- “digitise” Marconato data on 1 keV->100 keV nuclear recoils for PMT (GSSI) [January]

- analyse them (PMT+CMOS) and compare results with same energy electron recoils to get a rejection factor (Fabrizio) [February]

- we need an evaluation of CYGNO rejection factor in the 1-20 keV range: 10^3? 10^4? [February]

Background effect simulation

It would be possibile that we have to survive with some background in the detector;

What would be the performance of CYGNO?

Study with the simulation the performance of CYGNO in different background scenarios (GSSI).

[February]

CYGNO drawings

To start we need last inputs from Simulation about:

- plexiglass width;
- copper width; Roma1 [February]

- Once we have, we can close drawings of these parts; LNF [April]

Meanwhile we choose low radioactive materials and techniques GSSI (?) [February]

- Once we have we can start material procurement; Roma1 [July]

We can start assemble CYGNO sensitive part ([er] Core); LNF [September]

Radioactivity

- Contact people working with low radioactive Plexiglass and understand how to get it (Betta); [February]

- Contact people working with low radioactive Cupper and understand how to get it (Betta); [February]

- Contact people working with low radioactive quarz-glass for lens (Heraeus) and understand how to get it (Davide); [February]

- Get results of radioactivity measurements of sensors and measure the new cameras: Fusion, Teledyne (Betta) [March]

DAQ

Organise a meeting with them (Andrea, Francesco I.); [January]

Test all PMT/SiPM we have to decide what to use (Francesco I.); [February]

Measurement	Prototype	Where	Lab	Source	Gases	Time Needed	When	CMOS	Status
CMOS performance	LEMON	LNF	Bunker	55Fe	Pure	1 d	20 Feb	Compact Teledyne	Done
CMOS performance	LEMON	LNF	Bunker	55Fe	Pure	1 d	21 Feb	Hamamatsu Bare	Friday
CMOS radioactivity	No	LNGS	Mattias's	No	No	5 d	13-18 Feb	Compact Teledyne	Done
CMOS radioactivity	No	LNGS	Mattias's	No	No	5 d	>20 Feb	Hamamatsu Fusion	
LIME Tests	LIME	LNF	Clean Room	55Fe, Cosmics	?	1 Month	March	Hamamatsu ORCA	
COBRA	MANGO	LNF				4 d	4-7 Feb	Hamamatsu Fusion	Done (?)
Linearity	ORANGE-NET	LNF	ASTRA	X-ray tube + 55Fe	Pre-Mixed	5 d	2-6 March	Hamamatsu ORCA	
Linearity	LEMON	LNF	Bunker	55Fe	Pure	1d	24-28 Feb	Picoammeter	Done
Electro-luminscence	OR4NGE	LNF	Bunker	55Fe	Pure	1d	24-28 Feb	Hamamatsu ORCA	Cancelled
Electro-luminscence	MANGO	LNF/LNGS	Bunker	55Fe	Pure/premixed	2 d/ ???	13-14 Feb	Hamamatsu ORCA	Done

Lot of experimental works

See next presentations for results