

Photon Detection System: Status for the 6x6x6 m³ LAr detector

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June 20, 2018

Working table

LIGHT DETECTION SYSTEM 666 INTEGRATION WBS					
	RESPONSIBLE	RESPONSIBLE INSTITUTION	FINANCING INSTITUTION	STATUS	MAIN OPEN POINTS
PHOTOMULTIPLIERS					
Procurement of 40 PMTs	Antonio/Thorsten	CIEMAT/IFAE	CIEMAT/IFAE	COMPLETED	
Characterization and documentation	Clara	CIEMAT/IFAE	CIEMAT/IFAE	COMPLETED	Database being exported to CERN
TPB coating	Thorsten	IFAE	IFAE	About to start	To be done in July-August
PMT bases: design and manufacturing	Antonio	CIEMAT	CIEMAT	COMPLETED	
HV power supply	Filippo	CERN	CERN	To be rented	
Splitters manufacturing and tests	Antonio	CIEMAT	CIEMAT	In progress	Position in the lab, location of the light rack, size
PMT support structure: design and manufacturing	Enrique	CIEMAT	CIEMAT	COMPLETED	
Packaging and shipping PMTs	Thorsten	IFAE	IFAE	COMPLETED	

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	RESPONSIBLE	RESPONSIBLE INSTITUTION	FINANCING INSTITUTION	STATUS	MAIN OPEN POINTS
PMT POSITION IN THE DETECTOR					
Layout of PMTs in cryostat	Enrique	CIEMAT	CIEMAT	COMPLETED	
PMT position: impact on the light collection and muon tagging	Isabelle/Anne	LAPP		COMPLETED	
PMT fixation to the membrane: manufacturing and installation	Filippo/Enrique	CERN/CIEMAT	CERN	To be done	
LIGHT CALIBRATION SYSTEM					
Final design based on fiber tests and light source	Thorsten/Clara	IFAE/CIEMAT	IFAE/CIEMAT	COMPLETED	
Procurement of fibers, light source, calibration box	Thorsten/Clara	IFAE/CIEMAT	IFAE/CIEMAT	COMPLETED	Full system tested in LN2
Location of the light calibration system	Thorsten/Clara	IFAE/CIEMAT	IFAE/CIEMAT	To be finalised	In the light rack; size, power, etc. to be finalised
DAQ and trigger in light calibration mode	Thorsten	IFAE/CIEMAT/IN2P3	IFAE/CIEMAT/IN2P3	To be discussed	Document in preparation
ELECTRONICS					
Electronics: delivery and installation	Cayetano/Cyril	APC/LAPP/OMEGA	APC/LAPP/OMEGA	On going	Tests to be done
DAQ and connection with trigger	Cayetano/Cyril	APC/LAPP/OMEGA	APC/LAPP/OMEGA	On going	Discussion about 15, 25 ns or 400 ns time sampling...

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	RESPONSIBLE	RESPONSIBLE INSTITUTION	FINANCING INSTITUTION	STATUS	MAIN OPEN POINTS
INSTALLATION AT CERN					
Light rack		CERN	CERN	Position and design fixed?	
On site QA/QC (e.g test of PMTs in dark before installation)	Antonio/Thorsten	CIEMAT/IFAE	CIEMAT/IFAE	To be organized	Needed equipment
High voltage flange for 36 + spare HV channels + optical feedthroughs	Filippo	CERN	CERN	In progress	Final design to be checked
Cold cables: from PMT to flange (RG303)	Antonio	CIEMAT	CIEMAT/IFAE	COMPLETED	
Warm cables: HV cable (from power-supply to splitter)	Thorsten	IFAE	IFAE	Length to be fixed	HTC-50-3-2
Warm cables: PMT signal (from flange to splitter)	Thorsten	IFAE	IFAE	Length to be fixed	HTC-50-3-2
Warm cables: PMT signal (from splitter to FEE)	Antonio	CIEMAT	CIEMAT	In progress	
Installation PMT fixation on membrane, PMTs and cables from PMT to splitters	Enrique	CERN/CIEMAT/IFAE	CERN/CIEMAT/IFAE	To be organized	Detailed procedure and manpower to be defined
Splitters installation	Antonio	CIEMAT	CIEMAT	PENDING	Dates
Fiber calibration system installation	Thorsten/Clara	CIEMAT/IFAE	CIEMAT/IFAE	PENDING	Dates

Current schedule (from January 2018)

