



# News

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Reconstruction & analysis meeting, 2 February 2023

- All data taken with LIME at LNGS are reconstructed with “Autumn22” tag of the code
  - Only images from the camera are reconstructed and reco quantities stored in the trees
  - PMT data to be reconstructed with the code by S. Piacentini, F. Borra, et al.
    - Plan is to integrate the code in reconstruction chain, to allow storing in the reconstructed ROOT trees both image and PMT information
    - Since the PMT reco is allegedly faster than image reco, modularity of the code is envisaged (one can run either one or the other asynchronously and then merge the outputs, eg. when there is a major update of one of the two)
- The Run-1 reconstructed data are available in [this cloud directory](#), but all the information are in [the usual wiki page](#).

- A grouping by macro-areas to guide the data analysis on different topics

Numbers	Description	PMT	Source	Gas Flux	PMT Thr	WHO	Reco?	WHY?	
3000-3003	Scan HV PMT	Yes	None	20 l/h	15 mV		Yes		
3161-3201	BKG: first study, crashed after 40 runs	Yes	None	20 l/h	15 mV		Yes		
3358-3551	BKG	Yes	None	20 l/h	15 mV		Yes		
3554-3568	BKG: first study, crashed after 18 runs	Yes	None	20 l/h	15 mV		Yes		
3569-4128	BKG	No	None	20 l/h	15 mV		Yes		
4141-4143	scan HVGEM All	Yes	55Fe	20 l/h	15 mV		Yes		
4366-4381	Test Trigger	Yes	55Fe	20 l/h	15 mV		Yes		
4145-4201	scan Z, scan VGEM1 with pmt Trg: LVL2, 15mV thr, veto 10 us	Yes	55Fe	20 l/h	15 mV		Yes	check efficiency	
4257-4266	scan Z, scan VGEM1 with pmt Trg: LVL2, 15mV thr, veto 10 us	Yes	55Fe	20 l/h	15 mV		Yes		
4271-4302	scan Z, scan VGEM1 with pmt Trg: LVL2, 15mV thr, veto 10 us	Yes	55Fe	20 l/h	15 mV		Yes		
3009-3116	stability while flushing gas (Z=5cm)	Yes	55Fe	20 l/h	15 mV		Yes	stability of the response while starting the gas flow	
3125-3160	stability while flushing gas (Z=25cm)	Yes	55Fe	20 l/h	15 mV		Yes		
4202-4256	stability (Z=25cm), thr 15 mV	Yes	55Fe	20 l/h	15 mV		Yes	history of 55Fe response (light, n clusters, cluster size). Check T, P. Data taking conditins stable with 15 mV PMT threshold for trigger and flux = 20l/h	
4314-4365	stability (Z=25cm), thr 15 mV	Yes	55Fe	20 l/h	15 mV		Yes		
4391-4468	stability (Z=25cm), thr 15 mV	Yes	55Fe	20 l/h	15 mV		Yes		
4469-4475	stability (Z=25cm), thr 5 mV	Yes	55Fe	20 l/h	5 mV		Yes	as above with PMT thr = 5 mV. Maybe same as above for images	
4493-4512	stability (Z=25cm), thr 5 mV	Yes	55Fe	20 l/h	5 mV		Yes		
4513-4780	55Fe: stability (Z=25cm), thr 5 mV, flux 3l/h	Yes	55Fe	3 l/h	5 mV		Yes	Stability with different gas fluxes	
5107-5162	55Fe: (Z = 25 cm) thr 5 mV, flux 20l/h, after operations on gas system	Yes	55Fe	20 l/h	5 mV		Yes		
5163-5174	55Fe: (Z = 25 cm) thr 5 mV, flux 1l/h, after operations on gas system	Yes	55Fe	1 l/h	5 mV		Yes		
5175-5178	WARNING: the sequencer was on while the cap was removed, the data of these runs could be thrash	Yes	55Fe	1 l/h	5 mV		Yes		
5179-5366	55Fe: (Z = 25 cm) thr 5 mV, flux 1l/h	Yes	55Fe	1 l/h	5 mV		Yes		
5377-5491	55Fe: (Z = 25 cm) thr 5 mV, flux 1l/h - new PMT HV (part 1)	Yes	55Fe	1 l/h	5 mV		Yes		
5507-5650	55Fe: (Z = 25 cm) thr 5 mV, flux 1l/h - new PMT HV (part 2)	Yes	55Fe	1 l/h	5 mV		Yes		
5652-5692	55Fe: (Z = 25 cm) thr 5 mV, flux 10 l/h - new PMT HV - to study the effect of new gas	Yes	55Fe	10 l/h	5 mV		Yes		
5694-5730	55Fe: (Z = 25 cm) thr 5 mV, flux 10 l/h - new PMT HV - stable	Yes	55Fe	10 l/h	5 mV		Yes		
4475-4492	BKG: 5 mV, flux 20l/h	Yes	None	20 l/h	5 mV		Yes		Golden runs with different gas fluxes.
4782-4935	BKG: 5 mV, flux 3l/h	Yes	None	3 l/h	5 mV		Yes		
5001-5106	BKG: 5 mV, thr 5 mV, flux 3l/h	Yes	None	3 l/h	5 mV		Yes		
5741-5908	BKG: thr 2 mV, flux 10 l/h - new PMT HV - (part 1)	Yes	None	10 l/h	2 mV		Yes		
5922-6287	BKG: thr 2 mV, flux 10 l/h - new PMT HV - (part 2)	Yes	None	10 l/h	2 mV		Yes		
6288 - 6744	BKG: thr 2 mV, flux 10 l/h - new PMT HV - (part 2) - no BGTZ	Yes	None	10 l/h	2 mV		Yes		
4936-4947	55Fe: 100 ms exposure, thr 5 mV, flux 3l/h	Yes	55Fe	3 l/h	5 mV		Yes	Test with 100 ms exposure	
4949-4963	55Fe: (Z = 5 cm) thr 5 mV, flux 3l/h, test equalization	Yes	55Fe	3 l/h	5 mV		Yes	PMT studies (rate)	
4964-4972	55Fe: (Z = 25 cm) thr 100 mV, flux 3l/h	Yes	55Fe	3 l/h	5 mV		Yes		
4973-4977	55Fe: (Z = 25 cm) thr 75 mV, flux 3l/h	Yes	55Fe	3 l/h	5 mV		Yes		
4978-4982	55Fe: (Z = 25 cm) thr 50 mV, flux 3l/h	Yes	55Fe	3 l/h	5 mV		Yes		
4983-4987	55Fe: (Z = 25 cm) thr 200 mV, flux 3l/h	Yes	55Fe	3 l/h	5 mV		Yes		
4988-4992	55Fe: (Z = 25 cm) thr 255 mV, flux 3l/h	Yes	55Fe	3 l/h	5 mV		Yes		
4993-5000	55Fe: (Z = 25 cm) thr 5 mV, flux 3l/h, scan drift field	Yes	55Fe	3 l/h	5 mV		Yes	Drift field scan	
5732-5740	55Fe: (Z = 25 cm) thr 2 mV, flux 10 l/h - new PMT HV - Drift Field Scan	Yes	55Fe	10 l/h	2 mV		Yes		
5910-5921	55Fe: (Z = 25 cm) thr 2 mV, flux 10 l/h - new PMT HV - PMT HV Scan	Yes	55Fe	10 l/h	2 mV		Yes		