

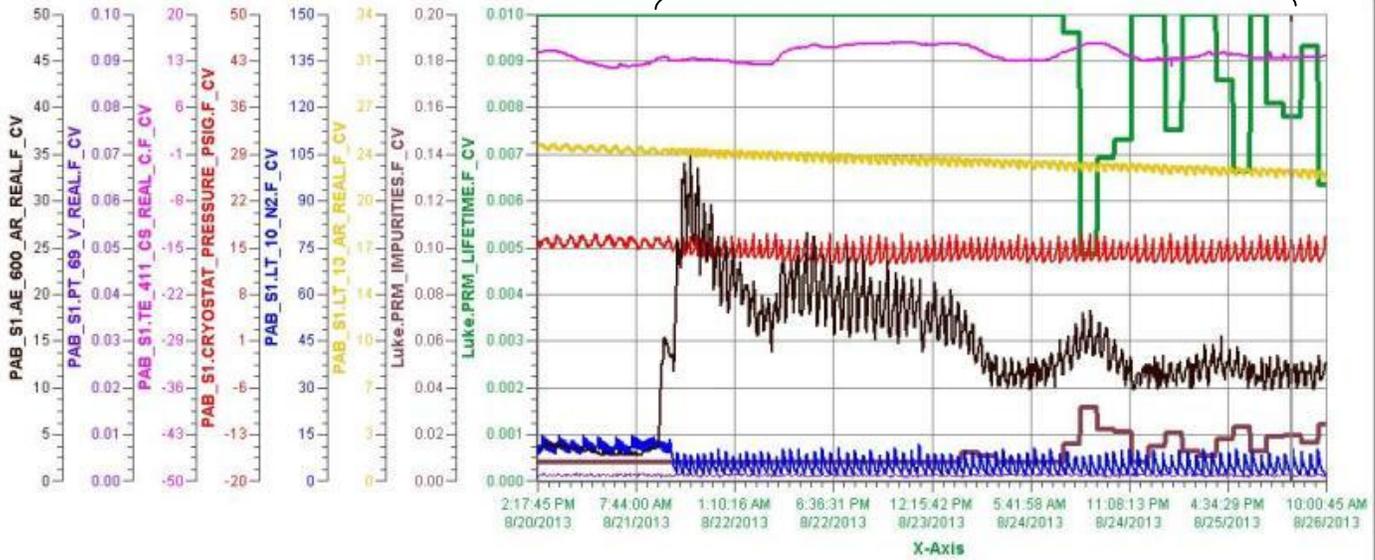
**MicroBooNE Silicon Rubber Ring Test 8/20/2013 – 8/26/2013**

<b><i>PAB Materials Test System</i></b>	
<b>Date of Receipt</b>	8/26/2013 eLog entry # 4241
<b>Sample Name/Description</b>	Silicone rubber ring (small red ring) will be used for the UV laser feedthrough in MicroBooNE
<b>Sample</b>	
<b>Composition:</b>	Silicone rubber is an inorganic synthetic elastomer made from a crosslinked silicon-based polymer reinforced with filler
<b>Picture Location:</b>	data base
<b>Weight:</b>	1 g
<b>Dimensions/Area:</b>	ring -ID 30 mm, OD 36 mm,
<b>Source:</b>	Thomas Strauss
<b>Preparation:</b>	cleaned with cloth
<b>Submerging in LAr or LH2</b>	x
<b>Time in the airlock(hrs)</b>	
<b>Purge:</b>	for 23 hours from the bottle, 2 hour from Luke
<b>Vacuum:</b>	
<b>Room Test</b>	
<b>Start Time/Date, End Time/Date</b>	: 8/21/13 2:10 pm, 8/26/2013 10:00 am
<b>PrM run # :</b>	18563
<b>Condenser state:</b>	on
<b>Filter state:</b>	off
<b>O2 reading:</b>	x
<b>H2O reading:</b>	increased to 32 ppb in 2 hours, then decreased and sabilized at 10-15 ppb
<b>Liquid level</b>	24.2 to 22.5 inches (approximately 170 kg of liquid argon in Luke)
<b>Lifetime:</b>	slowly decreased from >10 ms to 8-10 ms
<b>Results/comments</b>	



# 1. Room temperature test.

1



Pen Name	Description	Value	Eng Units	High Over Range	Low Over Range
— Luke_PRM_LIFETIME_F_CV	Luke_PRM_LIFETIME_F_CV	0.00776	sec	0.02000	0.00481
— Luke_PRM_IMPURITIES_F_CV	Luke_PRM_IMPURITIES_F_CV	0.0193	Impc	0.0312	0.0075
— PAB_S1_LT_13_AR_REAL_F_CV	Luke Argon Level Probe	22.3	inches	24.5	22.0
— PAB_S1_LT_10_N2_F_CV	Luke Condenser LN2 Level Probe (F_CV)	2.2	inches	14.4	1.5
— PAB_S1_CRYOSTAT_PRESSURE...	Luke Vapor Pressure	15.0	psig	17.1	12.2
— PAB_S1_TE_411_CS_REAL_C_F_CV	TC on Luke top flange (F_CV)	13.5	C	16.0	11.9
— PAB_S1_PT_69_V_REAL_F_CV	Seal Monitor Vacuum	0.0013	Torr	0.0016	-0.0003
— PAB_S1_AE_600_AR_REAL_F_CV	Luke Halo (F_CV)	11.9	ppb	34.8	2.7

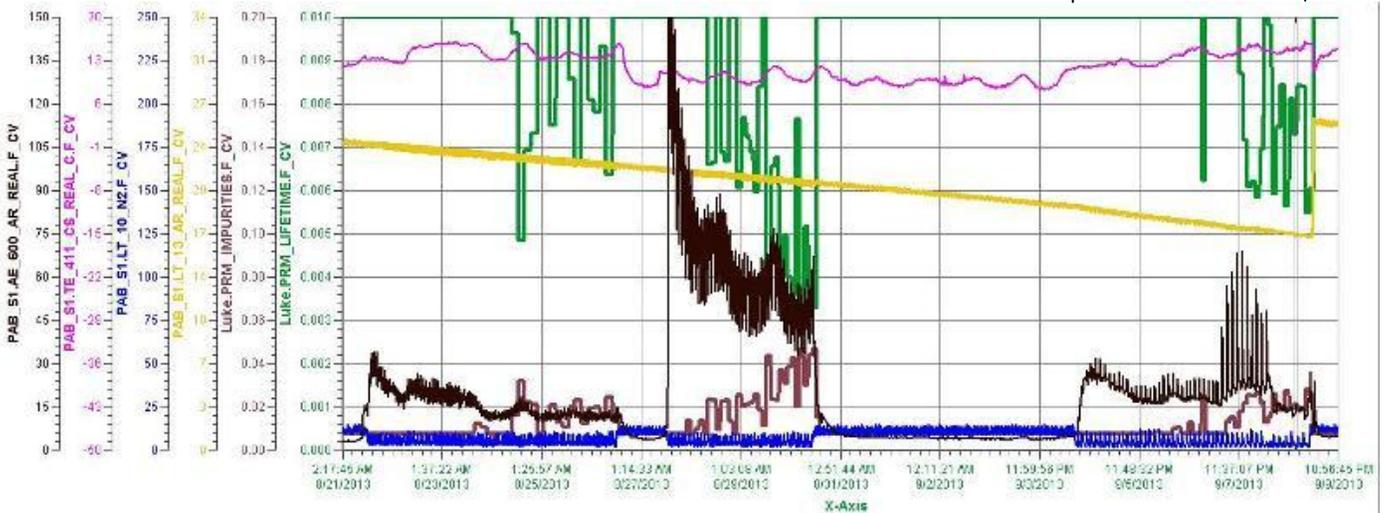
# 2. Different sample (PAI)

# 3. Zero test.

1

2

3



Pen Name	Description	Value	Eng Units	High Over Range	Low Over Range
— Luke_PRM_LIFETIME_F_CV	Luke_PRM_LIFETIME_F_CV	0.00726	sec	0.02000	0.00398
— Luke_PRM_IMPURITIES_F_CV	Luke_PRM_IMPURITIES_F_CV	0.0037	Impc	0.0190	0.0025
— PAB_S1_LT_13_AR_REAL_F_CV	Luke Argon Level Probe	15.8	inches	26.0	16.5
— PAB_S1_LT_10_N2_F_CV	Luke Condenser LN2 Level Probe (F_CV)	1.2	inches	14.8	0.9
— PAB_S1_TE_411_CS_REAL_C_F_CV	TC on Luke top flange (F_CV)	14.8	C	16.0	0.1
— PAB_S1_AE_600_AR_REAL_F_CV	Luke Halo (F_CV)	12.9	ppb	193.7	2.5