

## BCAL Beam Test Analysis – 3 (Energy Resolution)

September 2007

The objective of this document is to outline the goals and priorities of the BCAL Beam Test Analysis from the Hall-B data, to be prepared for the next GlueX Collaboration Meeting (October 25-27, 2007).

Suggested runs to be analyzed next at Regina to further study the energy resolution are shown in the table below, in order of priority. These results will be added to those runs already analyzed (2334, 2363, 2367, 2368 and 2369). MC simulations will also be run for these configurations.

Description	Run No	Z (cm)	$\theta$ (deg)	Details	
y-scan	2319	0	90	y=+3cm	<b>Theta=90, z=0, y-scan</b>  (For cell intercalibration)
	2322	0	90	y=+2cm	
	2323	0	90	y=+1cm	
	2324	0	90	y=-1cm	
	2332	0	90	y=-2cm	
	2333	0	90	y=-3cm	
z-scan	2335	-100	90	<b>Theta=90, z-scan</b>  (For attenuation length check)	
	2336	+50	90		
	2353	+50	90		
	2354	+100	90		
Small Angles	2388	-100	40	<b>Z=-100cm, small angle scan</b>  (Note that theta=15 corresponds to the forward rear corner of the BCAL)	
	2389	-100	30		
	2390	-100	25		
	2391	-100	20		
	2392	-100	15		
	2393	-100	10	<b>Theta=12, z-scan</b>  (Note that 2407 has HV=2096 V for S7, and all other runs have HV=1900 V – gain recalibration is needed for S7)	
Steep Angle	2407	-145	12		
	2408	-145	12		
	2412	-140	12		
	2413	-135	12		
	2416	-130	12		
	2417	-160	12		
	2418	-170	12		
	2419	-180	12		
	2420	-190	12		
	2421	-185	12		
	2422	-175	12		
	2423	-165	12		

Following this, the analysis of other runs will take place, including trigger, threshold, and beam current runs.