

Task	What?	Who? (minimum)	Where?	When?	Specific Required Skills
Coincidence Measurements					
GEANT4 simulation of scanning table	Develop and validate simulation of scanning table + clover set-up for coincidence measurements	Student/postdoc with GEANT4 experience	--	Spring 2015	GEANT4 experience
Am scan to locate crystal, segment boundaries	Front and side scan with colimated Am scan; analysis; generation of transformation matrix	Student/postdoc	LBNL	June 2015	Analysis
Measurement of coincidence points	Determine optimal scan points; carry out measurements; detailed logging	Student/postdoc	LBNL	June 2015 -	--
Analysis of coincidence data	Sort, decompose and analyze single interaction point (coincidence point) data; summarize results	Student/postdoc	--	June 2015 -	Analysis
Analysis of linear combinations of single interaction point data	Combine and decompose linear combinations of experimental single interaction data; summarize results	Student/postdoc	--	June 2015 -	Analysis + code development
Detector					
Acceptance tests	Check the energy resolution of detector for compliance with the specifications; investigate microphonics and depletion voltage	GRETINA detector expert + student/postdoc	LBNL	Q9 delivery expected May 2015.	--
Impurity concentration profile	Measure and analyze preamplifier response and segment signal amplitude as a function of bias voltage using the charge injection method	GRETINA detector expert + student/postdoc	LBNL	Summer 2015	--
High Rate Performance					
Segment sums	Take data (@ ANL and LBNL + 2MeV digitizers), compare analog and digital CC and segment sum efficiency as a function of rate and integration time	Student/postdoc	ANL/LBNL	Spring- Summer 2015	Analysis
New firmware tests	Take data (LBNL + full array) with standard digitizers, analyze results	GRETINA electronics expert(s) + student/postdoc	ANL/LBNL	Complete by August 2015	Analysis
Simulation, Decomp and Tracking					
Single-interaction point decomposition	Implementing single-interaction decomp and testing performance in terms of effect on P/T, etc.	Postdoc	--	Complete by December 2015	Analysis + code development
"Super-simulation"	Modification of GEANT4 simulation output to better model signal decomposition output and predict tracking performance	Student/postdoc	--	Ongoing development	Analysis + code development
High-energy tracking	Continue and validate implementation of pair production in tracking	Student/postdoc	--	Ongoing development	Analysis + code development