



Eagle-L Sample Data Report

Berkeley Nucleonics ran several test exercises with a Model 940 SAM Defender (SAM) and large volume NaI scintillator. The SAM is running EAGLE-L (V.7.07). The tests performed are being done to develop baseline criteria and to exercise several functions in EALGE-L, specifically isotope-specific data logging and sigma triggering alarm functions.



Isotope Specific Data Logging Example Shown Below

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Date/Time	CPS	Latitude	Longitude	K40	Co57	Co60	Ga67	Tc99m	I125	I131	Ba133	Cs137	Ir192	Ti201	Ra226	Th232	U233	U235	U238	Pu239	Am241
2	2010-03-18T17:46:56-0400	2169.98	N37.954487	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2010-03-18T17:46:56-0400	2502.28	N37.954487	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2010-03-18T17:46:57-0400	2405.75	N37.954487	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010-03-18T17:46:58-0400	2340.67	N37.954487	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010-03-18T17:46:59-0400	2304.98	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010-03-18T17:47:00-0400	2453.73	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2010-03-18T17:47:01-0400	2248.21	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010-03-18T17:47:02-0400	2336.3	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010-03-18T17:47:03-0400	2289.12	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010-03-18T17:47:04-0400	2290.38	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2010-03-18T17:47:05-0400	2342.79	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2010-03-18T17:47:06-0400	2401.02	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010-03-18T17:47:07-0400	2370.18	N37.954486	W122.497339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	2010-03-18T17:47:08-0400	2374.47	N37.954494	W122.497340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	2010-03-18T17:47:09-0400	2336.18	N37.954493	W122.497340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The test is being performed on concrete and ground soil, with multiple radiation sources planted at various distances from the start line. The entire track is 100'. The large volume scintillator is mounted on a pull cart with the center of the detector 30cm from ground level. This mounting scheme is designed to simulate the detector mounted to the front of a utility vehicle. The distance from the ground is estimated based on current EPA exercises which include remediation and large area radiation mapping using golf carts, ATVs and other small vehicles. A target goal of the detector at this height is to provide adequate response to a square meter area in a fixed position, and to a 1 meter wide lane in a moving position.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Date/Time	CPS	Latitude	Longitude	K40	Co57	Co60	Ga67	Tc99m	I125	I131	Ba133	Cs137	Ir192
2643	2010-03-18T18:35:03-0400	2337.95	N37.954536	W122.497329	0	0	0	0	0	0	0	0	0	0
2644	2010-03-18T18:35:04-0400	2388.35	N37.954534	W122.497327	0	0	0	0	0	0	0	0	0	0
2645	2010-03-18T18:35:05-0400	2487.68	N37.954528	W122.497324	0	0	0	0	0	0	0	0	0	0
2646	2010-03-18T18:35:06-0400	2352.71	N37.954528	W122.497324	0	0	0	0	0	0	0	0	0	0
2647	2010-03-18T18:35:07-0400	2490.37	N37.954525	W122.497322	0	0	0	0	0	0	0	0	0	0
2648	2010-03-18T18:35:08-0400	2514.89	N37.954523	W122.497321	0	0	0	0	0	0	0	0	0	59.93
2649	2010-03-18T18:35:09-0400	2595.89	N37.954521	W122.497320	0	0	0	0	0	0	0	0	0	56.41
2650	2010-03-18T18:35:10-0400	2605.13	N37.954519	W122.497319	0	0	0	0	0	0	0	0	0	124.76
2651	2010-03-18T18:35:11-0400	3328.42	N37.954516	W122.497318	0	0	89.67	0	0	0	0	0	0	409.36
2652	2010-03-18T18:35:12-0400	4366.47	N37.954516	W122.497315	0	0	133.98	0	0	0	0	0	0	547.57
2653	2010-03-18T18:35:13-0400	4603.88	N37.954511	W122.497314	0	0	102.87	0	0	0	0	0	0	431.7
2654	2010-03-18T18:35:15-0400	4232.71	N37.954509	W122.497313	0	0	0	0	0	0	0	0	0	86.64
2655	2010-03-18T18:35:16-0400	2908.96	N37.954503	W122.497310	0	0	0	0	0	0	0	0	0	64.57
2656	2010-03-18T18:35:17-0400	2670.16	N37.954503	W122.497310	0	0	0	0	0	0	0	0	0	0
2657	2010-03-18T18:35:18-0400	2515.52	N37.954501	W122.497308	0	0	0	0	0	0	0	0	0	0
2658	2010-03-18T18:35:19-0400	2337.73	N37.954499	W122.497306	0	0	0	0	0	0	0	0	0	0
2659	2010-03-18T18:35:20-0400	2419.06	N37.954497	W122.497305	0	0	0	0	0	0	0	0	0	0
2660	2010-03-18T18:35:21-0400	2265.27	N37.954524	W122.497296	0	0	0	0	0	0	0	0	0	0
2661	2010-03-18T18:35:22-0400	2352.71	N37.954513	W122.497294	0	0	0	0	0	0	0	0	0	0
2662	2010-03-18T18:35:23-0400	2337.84	N37.954513	W122.497294	0	0	0	0	0	0	0	0	0	0
2663	2010-03-18T18:35:24-0400	2373.31	N37.954509	W122.497293	0	0	0	0	0	0	0	0	0	0
2664	2010-03-18T18:35:25-0400	2392.46	N37.954483	W122.497296	0	0	0	0	0	0	0	0	0	0
2665	2010-03-18T18:35:26-0400	2395.47	N37.954483	W122.497296	0	0	0	0	0	0	0	0	0	0
2666	2010-03-18T18:35:27-0400	2393.56	N37.954483	W122.497296	0	0	0	0	0	0	0	0	0	0
2667	2010-03-18T18:35:28-0400	2381.86	N37.954482	W122.497296	0	0	0	0	0	0	0	0	0	0

THE Co60 WAS OFFSET FROM THE Cs137 SO THE COUNT RATES ARE LESS FOR THE Co60, BOTH IN ABSOLUTE COUNTS AND IN DURATION OF LOGS GENERATED.

	A	B	C	D	E	F	G	H	I	J	K
1	Date/Time	CPS	Latitude	Longitude	K40	Co57	Co60	Ga67	Tc99m	I125	I131
107	2010-03-18T17:48:40-0400	2866.67	N37.954271	W122.497144	0	0	0	0	0	0	0
108	2010-03-18T17:48:41-0400	2615.11	N37.954268	W122.497140	0	0	0	0	0	0	0
109	2010-03-18T17:48:42-0400	2413	N37.954264	W122.497136	0	0	0	0	0	0	0
110	2010-03-18T17:48:43-0400	2438.72	N37.954260	W122.497132	0	0	0	0	0	0	0
111	2010-03-18T17:48:44-0400	2329.84	N37.954256	W122.497127	0	0	0	0	0	0	0
112	2010-03-18T17:48:45-0400	2370.45	N37.954252	W122.497123	0	0	0	0	0	0	0
113	2010-03-18T17:48:46-0400	2317.87	N37.954248	W122.497118	0	0	0	0	0	0	0
114	2010-03-18T17:48:47-0400	2234.35	N37.954244	W122.497113	0	0	0	0	0	0	0
115	2010-03-18T17:48:48-0400	2414.12	N37.954240	W122.497109	0	0	0	0	0	0	0
116	2010-03-18T17:48:49-0400	2333.33	N37.954236	W122.497105	0	0	0	0	0	0	0
117	2010-03-18T17:48:50-0400	2349.26	N37.954231	W122.497101	0	0	0	0	0	0	0
118	2010-03-18T17:48:51-0400	2273.65	N37.954224	W122.497093	0	0	0	0	0	0	0
119	2010-03-18T17:48:52-0400	2214.71	N37.954224	W122.497093	0	0	0	0	0	0	0
120	2010-03-18T17:48:53-0400	2360.07	N37.954221	W122.497090	0	0	0	0	0	0	0
121	2010-03-18T17:48:54-0400	2317.02	N37.954218	W122.497086	0	0	0	0	0	0	0
122	2010-03-18T17:48:55-0400	2268.24	N37.954216	W122.497084	0	0	0	0	0	0	0
123	2010-03-18T17:48:56-0400	2231.99	N37.954213	W122.497081	0	0	0	0	0	0	0
124	2010-03-18T17:48:57-0400	2335.47	N37.954211	W122.497079	0	0	0	0	0	0	0
125	2010-03-18T17:48:58-0400	2305.46	N37.954210	W122.497078	0	0	0	0	0	0	0
126	2010-03-18T17:48:59-0400	2391.39	NoData	NoData	0	0	0	0	0	0	0
127	2010-03-18T17:49:00-0400	2366.44	N37.954212	W122.497072	0	0	0	0	0	0	0
128	2010-03-18T17:49:01-0400	2369.86	N37.954215	W122.497078	0	0	0	0	0	0	0
129	2010-03-18T17:49:02-0400	2288.59	NoData	NoData	0	0	0	0	0	0	0
130	2010-03-18T17:49:03-0400	2395.54	NoData	NoData	0	0	0	0	0	0	0
131	2010-03-18T17:49:04-0400	2455.63	NoData	NoData	0	0	0	0	0	0	0
132	2010-03-18T17:49:05-0400	2356.12	N37.954217	W122.497093	0	0	0	0	0	0	0
133	2010-03-18T17:49:06-0400	2405.29	N37.954214	W122.497093	0	0	0	0	0	0	0

NOTE - NoData
THIS IS AN EXAMPLE OF GPS COORDINATE LOCK TEMPORARILY DISRUPTED.
GPS EXTERNAL ANTENNA IS RECOMMENDED TO ACHIEVE NEAR-CONTINUOUS GPS LOGGING



1	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Date/Time	CPS	Latitude	Longitude	K40	Co57	Co60	Ga67	Tc99m	I125	I131	Ba133	Cs137	Ir192	
2643	2010-03-18T18:35:03-0400	2337.95	N37.954536	W122.497329	0	0	0	0	0	0	0	0	0	
2644	2010-03-18T18:35:04-0400	2388.35	N37.954534	W122.497327	0	0	0	0	0	0	0	0	0	
2645	2010-03-18T18:35:05-0400	2487.68	N37.954528	W122.497324	0	0	0	0	0	0	0	0	0	
2646	2010-03-18T18:35:06-0400	2352.71	N37.954528	W122.497324	0	0	0	0	0	0	0	0	0	
2647	2010-03-18T18:35:07-0400	2490.37	N37.954525	W122.497322	0	0	0	0	0	0	0	0	0	
2648	2010-03-18T18:35:08-0400	2514.89	N37.954523	W122.497321	0	0	0	0	0	0	0	0	59.93	
2649	2010-03-18T18:35:09-0400	2595.89	N37.954521	W122.497320	0	0	0	0	0	0	0	0	56.41	
2650	2010-03-18T18:35:10-0400	2605.13	N37.954519	W122.497319	0	0	0	0	0	0	0	0	124.76	
2651	2010-03-18T18:35:11-0400	3328.42	N37.954516	W122.497318	0	0	89.67	0	0	0	0	0	409.36	
2652	2010-03-18T18:35:12-0400	4366.47	N37.954516	W122.497315	0	0	133.98	0	0	0	0	0	547.57	
2653	2010-03-18T18:35:13-0400	4603.88	N37.954511	W122.497314	0	0	102.87	0	0	0	0	0	431.7	
2654	2010-03-18T18:35:15-0400	4232.71	N37.954509	W122.497313	0	0	0	0	0	0	0	0	86.64	
2655	2010-03-18T18:35:16-0400	2908.96	N37.954503	W122.497310	0	0	0	0	0	0	0	0	64.57	
2656	2010-03-18T18:35:17-0400	2670.16	N37.954503	W122.497310	0	0	0	0	0	0	0	0	0	
2657	2010-03-18T18:35:18-0400	2515.52	N37.954501	W122.497308	0	0	0	0	0	0	0	0	0	
2658	2010-03-18T18:35:19-0400	2337.73	N37.954499	W122.497306	0	0	0	0	0	0	0	0	0	
2659	2010-03-18T18:35:20-0400	2419.06	N37.954497	W122.497305	0	0	0	0	0	0	0	0	0	
2660	2010-03-18T18:35:21-0400	2265.27	N37.954524	W122.497296	0	0	0	0	0	0	0	0	0	
2661	2010-03-18T18:35:22-0400	2352.71	N37.954513	W122.497294	0	0	0	0	0	0	0	0	0	
2662	2010-03-18T18:35:23-0400	2337.84	N37.954513	W122.497294	0	0	0	0	0	0	0	0	0	
2663	2010-03-18T18:35:24-0400	2373.31	N37.954509	W122.497293	0	0	0	0	0	0	0	0	0	
2664	2010-03-18T18:35:25-0400	2392.46	N37.954483	W122.497296	0	0	0	0	0	0	0	0	0	
2665	2010-03-18T18:35:26-0400	2395.47	N37.954483	W122.497296	0	0	0	0	0	0	0	0	0	
2666	2010-03-18T18:35:27-0400	2393.56	N37.954483	W122.497296	0	0	0	0	0	0	0	0	0	
2667	2010-03-18T18:35:28-0400	2381.86	N37.954483	W122.497296	0	0	0	0	0	0	0	0	0	

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