

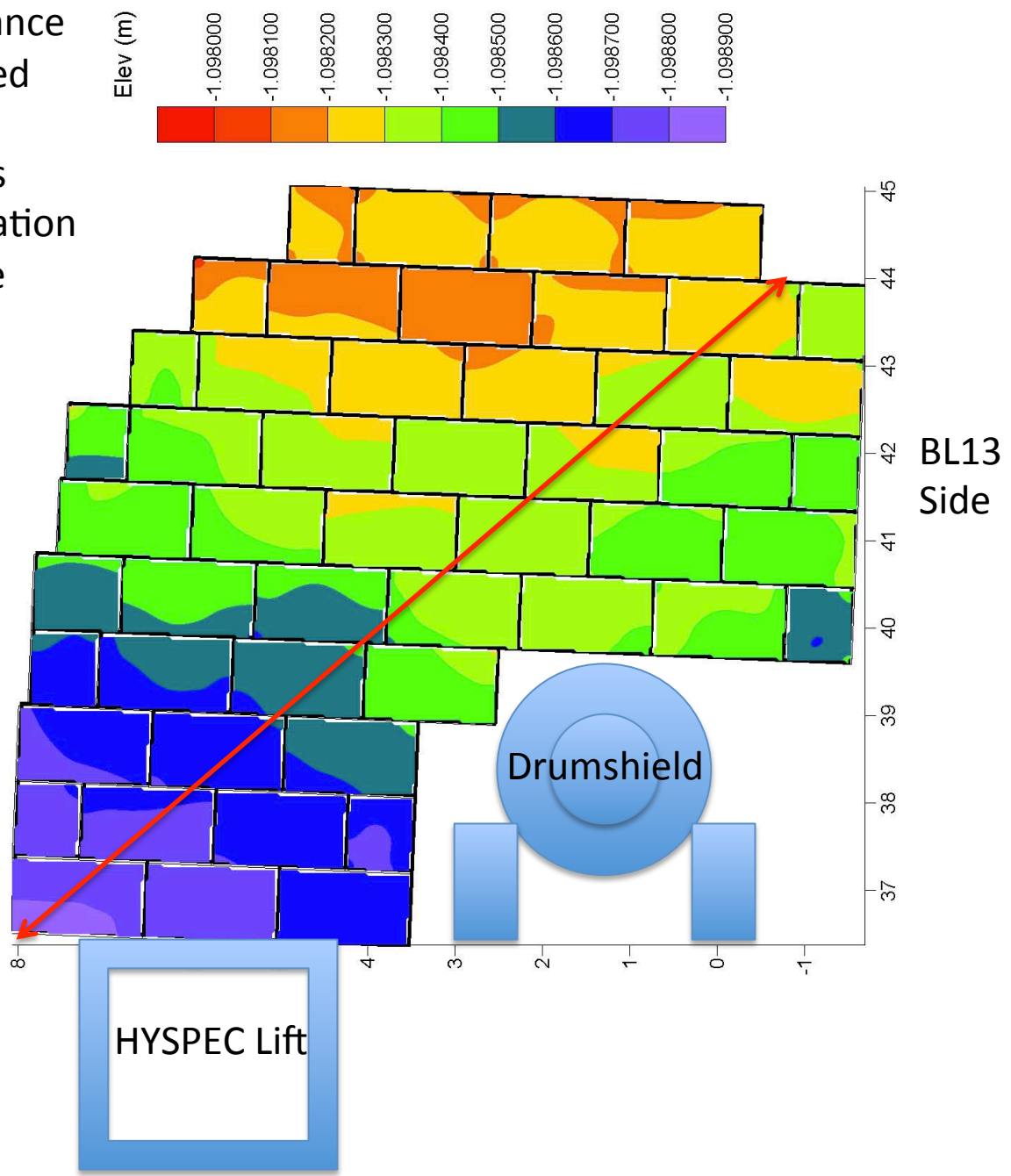


A source of Visual Definitions and Operating Parameters created by
Melissa K. Graves-Brook.

BL14B – HYSPEC COMPONENT FACTS AND FUNCTION

An integral component is the HYSPEC Granite Dance Floor. This was installed with great care and precision. There is less than a millimeter deviation from one corner to the other!

HYSPEC (BL14B) Granite Tile Floor
Elevation Survey
May 10, 2011

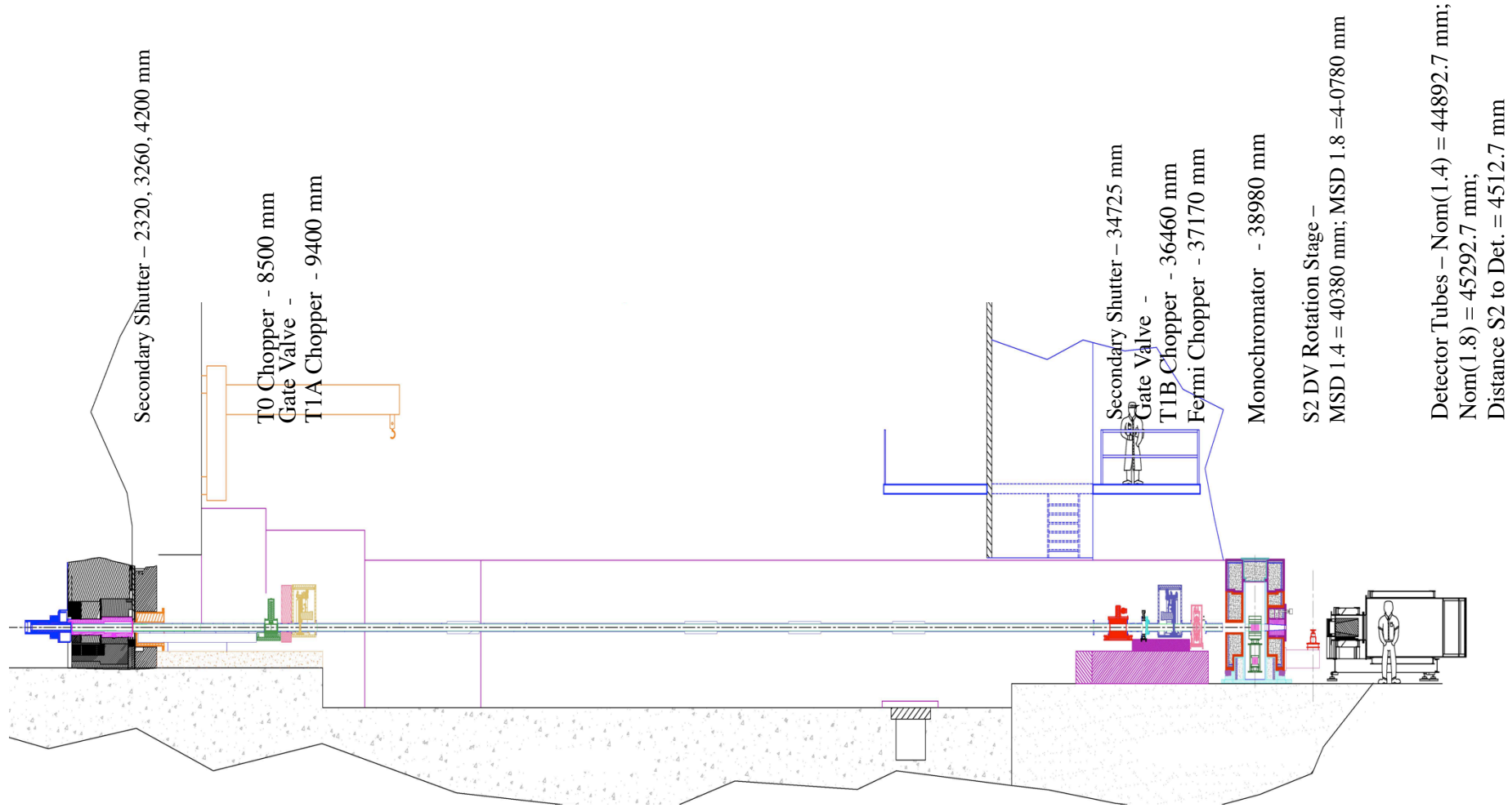


HYSPEC (BL14B) Granite Tile Floor Elevation Survey, May 10, 2011

			<u>Elevation</u>				<u>Elevation</u>				<u>Elevation</u>				<u>Elevation</u>
<u>Point ID</u>	<u>Z (meters)</u>	<u>X (meters)</u>	<u>Y (meters)</u>	<u>Point ID</u>	<u>Z (meters)</u>	<u>X (meters)</u>	<u>Y (meters)</u>	<u>Point ID</u>	<u>Z (meters)</u>	<u>X (meters)</u>	<u>Y (meters)</u>	<u>Point ID</u>	<u>Z (meters)</u>	<u>X (meters)</u>	<u>Y (meters)</u>
A1_1	36.540819	8.065158	-1.098816	B1_1	37.415143	8.032127	-1.098784	C1_1	38.278436	7.991184	-1.098727	D1_1	39.139759	7.836749	-1.098658
A1_2	37.343468	8.026639	-1.098760	B1_2	38.209134	7.998903	-1.098729	C1_2	39.079777	7.958055	-1.098723	D1_2	39.945423	7.799655	-1.098538
A1_3	37.278360	6.579416	-1.098722	B1_3	38.178553	7.304778	-1.098631	C1_3	39.016192	6.507173	-1.098669	D1_3	39.912165	7.107291	-1.098579
A1_4	36.487655	6.612183	-1.098728	B1_4	37.383954	7.342155	-1.098729	C1_4	38.221061	6.537035	-1.098689	D1_4	39.118161	7.142473	-1.098704
A1_5	36.884795	7.261577	-1.098798	B1_5	37.770697	7.670139	-1.098775	C1_5	38.642553	7.241278	-1.098685	D1_5	39.534965	7.471572	-1.098648
A2_1	36.481832	6.538682	-1.098725	B2_1	37.380293	7.271405	-1.098714	C2_1	38.216865	6.472257	-1.098727	D2_1	39.112736	7.070465	-1.098704
A2_2	37.276852	6.501225	-1.098734	B2_2	38.183875	7.236153	-1.098630	C2_2	39.015573	6.435302	-1.098603	D2_2	39.915335	7.036308	-1.098625
A2_3	37.217226	5.055941	-1.098704	B2_3	38.112872	5.788893	-1.098696	C2_3	38.955441	4.980319	-1.098581	D2_3	39.847465	5.582117	-1.098595
A2_4	36.419374	5.091243	-1.098785	B2_4	37.322626	5.817293	-1.098764	C2_4	38.158511	5.012894	-1.098663	D2_4	39.051063	5.615413	-1.098697
A2_5	36.849071	5.800445	-1.098763	B2_5	37.761696	6.449345	-1.098711	C2_5	38.602480	5.729243	-1.098636	D2_5	39.525805	6.362884	-1.098579
A3_1	36.416061	5.016651	-1.098703	B3_1	37.309991	5.746806	-1.098717	C3_1	38.155307	4.945272	-1.098690	D3_1	39.051222	5.543896	-1.098658
A3_2	37.210306	4.977757	-1.098681	B3_2	38.113981	5.711297	-1.098638	C3_2	38.953435	4.913285	-1.098603	D3_2	39.846962	5.509757	-1.098559
A3_3	37.156037	3.706777	-1.098701	B3_3	38.053918	4.263578	-1.098641	C3_3	38.890431	3.456909	-1.098460	D3_3	39.786241	4.057570	-1.098480
A3_4	36.376878	3.926082	-1.098659	B3_4	37.255196	4.291723	-1.098674	C3_4	38.088014	3.489613	-1.098520	D3_4	38.989417	4.092786	-1.098513
A3_5	36.795375	4.303305	-1.098629	B3_5	37.694647	4.990803	-1.098648	C3_5	38.516365	4.182513	-1.098581	D3_5	39.428688	4.813468	-1.098546
				B4_1	37.250677	4.222310	-1.098690					D4_1	38.982764	4.027261	-1.098502
				B4_2	38.049897	4.189860	-1.098645					D4_2	39.779731	3.991900	-1.098484
				B4_3	38.023174	3.498670	-1.098602					D4_3	39.721559	2.537726	-1.098272
				B4_4	37.230455	3.672342	-1.098693					D4_4	38.937482	2.861700	-1.098495
				B4_5	37.643953	3.892185	-1.098708					D4_5	39.334602	3.311135	-1.098435

HYSPEC (B114B) Granite Tile Floor Elevation Survey, May 10, 2011

Elevation				Elevation				Elevation							
Point ID	Z (meters)	X (meters)	Y (meters)	Point ID	Z (meters)	X (meters)	Y (meters)	Point ID	Z (meters)	X (meters)	Y (meters)	Point ID	Z (meters)	X (meters)	Y (meters)
E1 1	40.013418	7.812614	-1.098599	F1 1	40.873457	7.560119	-1.098406	G1 1	41.740534	7.433973	-1.098515	H1 1	42.576854	6.696094	-1.098378
E1 2	40.812171	7.776430	-1.098470	F1 2	41.669967	7.521408	-1.098496	G1 2	42.531521	7.395498	-1.098247	H1 2	43.377435	6.660074	-1.098342
E1 3	40.774532	6.846103	-1.098475	F1 3	41.608024	6.042784	-1.098485	G1 3	42.516919	6.765299	-1.098412	H1 3	43.347112	5.965332	-1.098295
E1 4	39.982355	6.878474	-1.098560	F1 4	40.813684	6.073584	-1.098471	G1 4	41.711425	6.798587	-1.098521	H1 4	42.545978	6.002324	-1.098383
E1 5	40.373449	7.310073	-1.098530	F1 5	41.240681	6.802123	-1.098412	G1 5	42.137115	7.109640	-1.098488	H1 5	42.956903	6.305832	-1.098402
E2 1	39.969073	6.813784	-1.098558	F2 1	40.807732	6.004947	-1.098438	G2 1	41.708072	6.733774	-1.098478	H2 1	42.543483	5.929936	-1.098352
E2 2	40.774513	6.779944	-1.098489	F2 2	41.612345	5.977420	-1.098430	G2 2	42.511902	6.699723	-1.098429	H2 2	43.338607	5.903901	-1.098353
E2 3	40.708838	5.324698	-1.098413	F2 3	41.541711	4.520795	-1.098325	G2 3	42.440924	5.247119	-1.098373	H2 3	43.280895	4.442224	-1.098237
E2 4	39.912645	5.357728	-1.098614	F2 4	40.748434	4.554864	-1.098426	G2 4	41.645250	5.274425	-1.098346	H2 4	42.486708	4.475321	-1.098278
E2 5	40.382022	6.138516	-1.098463	F2 5	41.178022	5.257576	-1.098389	G2 5	42.094806	5.930420	-1.098410	H2 5	42.940340	5.161087	-1.098297
E3 1	39.906425	5.282174	-1.098665	F3 1	40.742289	4.485338	-1.098321	G3 1	41.644203	5.205533	-1.098336	H3 1	42.479940	4.406197	-1.098299
E3 2	40.705224	5.251596	-1.098428	F3 2	41.543205	4.450183	-1.098250	G3 2	42.445418	5.177197	-1.098414	H3 2	43.281378	4.368568	-1.098253
E3 3	40.644727	3.796291	-1.098417	F3 3	41.475616	2.997813	-1.098268	G3 3	42.380650	3.719191	-1.098271	H3 3	43.214854	2.922177	-1.098154
E3 4	39.844268	3.834252	-1.098546	F3 4	40.679291	3.032748	-1.098382	G3 4	41.586847	3.754196	-1.098364	H3 4	42.420132	2.956081	-1.098295
E3 5	40.277434	4.527691	-1.098528	F3 5	41.128439	3.771123	-1.098316	G3 5	42.003774	4.460848	-1.098307	H3 5	42.873026	3.587994	-1.098256
E4 1	39.841356	3.760642	-1.098562	F4 1	40.678421	2.961143	-1.098392	G4 1	41.580260	3.678942	-1.098361	H4 1	42.411061	2.883563	-1.098279
E4 2	40.642629	3.733332	-1.098413	F4 2	41.479455	2.931650	-1.098328	G4 2	42.381724	3.661746	-1.098325	H4 2	43.214843	2.849759	-1.098155
E4 3	40.581080	2.278176	-1.098381	F4 3	41.415515	1.477102	-1.098331	G4 3	42.316554	2.193700	-1.098319	H4 3	43.149893	1.394049	-1.098239
E4 4	39.855452	2.307653	-1.098391	F4 4	40.616906	1.509469	-1.098362	G4 4	41.517318	2.227636	-1.098316	H4 4	42.354220	1.433647	-1.098305
E4 5	40.260662	2.986701	-1.098359	F4 5	41.044825	2.184719	-1.098371	G4 5	41.928655	2.931315	-1.098380	H4 5	42.785461	2.155442	-1.098233
E5 1	39.893308	2.234209	-1.098354	F5 1	40.608828	1.437618	-1.098389	G5 1	41.512664	2.162587	-1.098356	H5 1	42.347262	1.360836	-1.098296
E5 2	40.577734	2.206370	-1.098376	F5 2	41.413056	1.408095	-1.098307	G5 2	42.307843	2.123167	-1.098333	H5 2	43.142068	1.330282	-1.098271
E5 3	40.512888	0.749676	-1.098361	F5 3	41.351742	-0.045244	-1.098381	G5 3	42.249563	0.678742	-1.098267	H5 3	43.086787	-0.115832	-1.098315
E5 4	39.717820	0.790329	-1.098501	F5 4	40.553976	-0.013871	-1.098437	G5 4	41.450938	0.702806	-1.098320	H5 4	42.290744	-0.091307	-1.098326
E5 5	40.233608	1.541787	-1.098319	F5 5	40.960051	0.660081	-1.098442	G5 5	41.876667	1.403853	-1.098299	H5 5	42.705220	0.582738	-1.098330
E6 1	39.719222	0.717823	-1.098335	F6 1	40.547433	-0.086950	-1.098445	G6 1	41.447750	0.640117	-1.098444	H6 1	42.286860	-0.159136	-1.098327
E6 2	40.514355	0.686683	-1.098416	F6 2	41.346863	-0.115962	-1.098417	G6 2	42.236937	0.606539	-1.098324	H6 2	43.079770	-0.196479	-1.098311
E6 3	40.449855	-0.768354	-1.098421	F6 3	41.287570	-1.574382	-1.098390	G6 3	42.185706	-0.839098	-1.098404	H6 3	43.023779	-1.648743	-1.098338
E6 4	39.653251	-0.734581	-1.098479	F6 4	40.491318	-1.539787	-1.098315	G6 4	41.391425	-0.816875	-1.098436	H6 4	42.220238	-1.617302	-1.098343
E6 5	40.079881	-0.040783	-1.098408	F6 5	40.968762	-0.845794	-1.098455	G6 5	41.825433	-0.162607	-1.098424	H6 5	42.671696	-0.948160	-1.098266
E7 1	39.650703	-0.809075	-1.098570					G7 1	41.386059	-0.883027	-1.098471				
E7 2	40.443757	-0.843611	-1.098527					G7 2	42.178556	-0.916851	-1.098459				
E7 3	40.419528	-1.539289	-1.098405					G7 3	42.152335	-1.612335	-1.098386				
E7 4	39.615725	-1.503244	-1.098421					G7 4	41.358900	-1.579523	-1.098450				
E7 5	40.065412	-1.183802	-1.098587					G7 5	41.786821	-1.291890	-1.098498				



Key Component Distances

Beam Line Components

- Mon1 = 35.64 m
- Mon2 = 37.40 m
- Mon3 = Variable on X-rail
- T0 = 8.5 m
- T1A = 9.4 m
- T1B = 36.46 m
- Fermi = 37.17 m
- Monochromator = 39.00 m

Pyrolytic Graphite Monochromator Limits

Rotation Stage

- M1PG (23.5015 to -22.9988)

Translation Stage

- MTPG (9.737 to -8.535)

Tilt Stage

- MGPG (11.754 to -11.748)

Focusing Element

- MFPG (1.7 to -0.1)

MEL (590.3 to 15.4)

- MELPG = 29

Prompt Pulse impact assuming 3 ms tail and 1.8 m between focusing element and sample

