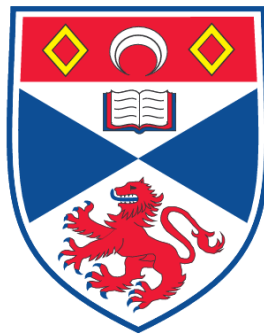


**PROCESSES OF CREVASSE FORMATION AND THE DYNAMICS
OF CALVING GLACIERS:
A STUDY AT BREIÐAMERKULJÖKULL**

Ruth Mottram

Appendix B4: Calving Front Surveys

**A Thesis Submitted for the Degree of PhD
at the
University of St. Andrews**



2008

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author: Ruth Mottram

created: 01-Aug-05

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description / purpose:

Summary of data from calving front surveys

Data from Summer 2005 at Breiðamerkurjökull

Waterline surveys

First Survey 28/07/2005

Distance above waterline = $\sin\phi H$

Time: 11.15am

Point Number	Height	Hyp. Distance	H _z	V	Phi	Phi rad	sin phi	Distance
1	690.601	690.601		93.327	3.327	0.058067	0.058034478	40.07867
2	698.071	698.071		93.286	3.286	0.057352	0.057320084	40.01349
3	681.973	681.973		93.363	3.363	0.058695	0.058661726	40.00571
4	681.258	681.258		93.367	3.367	0.058765	0.058731419	40.01125
5	680.31	680.31		93.369	3.369	0.0588	0.058766265	39.97928
6	680.858	680.858		93.37	3.37	0.058818	0.058783688	40.02334
7	678.503	678.503		93.381	3.381	0.05901	0.058975341	40.01495
8	677.365	677.365		93.388	3.388	0.059132	0.059097301	40.03044
9	676.772	676.772		93.392	3.392	0.059202	0.059166992	40.04256
10	678.286	678.286		93.381	3.381	0.05901	0.058975341	40.00215
Mean								40.02018

Time:14.05

Point Number	Height	Hyp. Distance	H _z	V	Phi	Phi rad	sin phi	Distance
1	656.569	656.569		93.488	3.488	0.060877	0.060839489	39.94532
2	663.077	663.077		93.456	3.456	0.060319	0.060282009	39.97161
3	663.491	663.491		93.452	3.452	0.060249	0.060212323	39.95033
4	665.859	665.859		93.44	3.44	0.060039	0.060003262	39.95371
5	665.859	665.859		93.438	3.438	0.060004	0.059968418	39.93051
6	667.595	667.595		93.43	3.43	0.059865	0.059829043	39.94157
7	666.451	666.451		93.433	3.433	0.059917	0.059881309	39.90796
8	667.29	667.29		93.431	3.431	0.059882	0.059846465	39.93495
9	666.768	666.768		93.434	3.434	0.059935	0.059898731	39.93856
10	667.067	667.067		93.435	3.435	0.059952	0.059916152	39.96809

Second Survey

Time: 10.05 - 10.25

Point Number	Height	Hyp. Distance	H _z	Distance	H _z	V
1	-40.199	674.237				
2	-40.216	689.546				
3	-40.227	714.414				
4	-40.219	726.003				
5	-40.171	730.369				
6	-40.211	736.206				
7	-40.244	740.751				
8	-40.244	732.853				
9	-40.242	735.854				
10	-40.262	743.914				
Mean	40.2235					

Third Survey

Time: 10.50 - 10.57

Point Number	H _z	V	V	Hyp Dist	Phi	Phi Rad	sin Phi	Distance				
1	100	39	35	93	28	15	93.47	658.213	3.47	0.060577	0.06054	39.8485
2	101	11	50	93	22	45	93.38	677.215	3.38	0.058978	0.058943	39.91735
3	101	34	35	93	20	40	93.34	684.587	3.34	0.058372	0.058338	39.93773
4	102	13	40	93	18	15	93.30	691.997	3.30	0.057669	0.057637	39.88437
5	103	44	0	93	15	5	93.25	703.986	3.25	0.056747	0.056717	39.92797
6	105	0	35	93	17	5	93.28	696.988	3.28	0.057329	0.057298	39.93589
7	106	42	55	93	19	45	93.33	688.202	3.33	0.058105	0.058072	39.96542
8	107	48	10	93	18	25	93.31	691.47	3.31	0.057717	0.057685	39.88747
9	109	15	15	93	16	40	93.28	699.057	3.28	0.057208	0.057177	39.96985
10	110	32	25	93	18	10	93.30	692.54	3.30	0.057644	0.057612	39.89891
Mean												39.91735

First survey from the west side
 Date: 28/07/2005
 Time: 11.40am

Height above waterline 40.02018

Point ID	Hz	Degrees	Radians	V	V decimal Dip	V rad	Tan (rad)	distance to point	h'	Height	X	Y	Z	Position	Distance
1a	-20	18	3	-19.6992	-0.34382	91.426	1.426	0.024888	0.024894	1607.65371	40.02018	0	-541.91	1513.566	0
1b	-20	18	3	-19.6992	-0.34382	91.416	1.416	0.024714	0.024719	1607.65371	39.73942	0.280761	-541.91	1513.566	0.280761
1c	-20	18	3	-19.6992	-0.34382	91.259	1.259	0.021974	0.021977	1607.65371	35.33178	4.688405	-541.91	1513.566	4.688405
2a	-19	73	4	-17.7822	-0.31036	91.428	1.428	0.024923	0.024928	1605.401163	40.02018	0	-490.289	1528.702	51.62113
2b	-19	73	4	-17.7822	-0.31036	91.418	1.418	0.024749	0.024754	1605.401163	39.73982	0.280368	-490.289	1528.702	51.6219
2c	-19	73	4	-17.7822	-0.31036	91.362	1.362	0.023771	0.023776	1605.401163	38.1698	1.850386	-490.289	1528.702	51.65429
2d	-19	73	4	-17.7822	-0.31036	91.163	1.163	0.020298	0.020301	1605.401163	32.5912	7.428988	-490.289	1528.702	52.15296
3a	-19	26	1	-18.5664	-0.32404	91.431	1.431	0.024976	0.024981	1602.034147	40.02018	0	-510.093	1518.657	31.81752
3b	-19	26	1	-18.5664	-0.32404	91.42	1.42	0.024784	0.024789	1602.034147	39.71243	0.307759	-510.093	1518.657	31.81901
3c	-19	26	1	-18.5664	-0.32404	91.359	1.359	0.023719	0.023723	1602.034147	38.00581	2.01437	-510.093	1518.657	31.88122
3d	-19	26	1	-18.5664	-0.32404	91.34	1.34	0.023387	0.023392	1602.034147	37.47427	2.545919	-510.093	1518.657	31.91921
4a	-18	16	9	-17.7308	-0.30946	91.44	1.44	0.025133	0.025138	1592.017255	40.02018	0	-484.842	1516.393	57.06844
4b	-18	16	9	-17.7308	-0.30946	91.424	1.424	0.024853	0.024859	1592.017255	39.57533	0.444853	-484.842	1516.393	57.07018
4c	-18	16	9	-17.7308	-0.30946	91.05	1.05	0.018326	0.018328	1592.017255	29.17851	10.84168	-484.842	1516.393	58.08915
5a	-17	78	4	-15.6989	-0.274	91.441	1.441	0.02515	0.025155	1590.911989	40.02018	0	-430.472	1531.566	111.4386
5b	-17	78	4	-15.6989	-0.274	91.995	1.995	0.034819	0.034833	1590.911989	55.41687	-15.3967	-430.472	1531.566	112.4972
6a	-17	95	1	-15.4167	-0.26907	91.421	1.421	0.024801	0.024806	1613.312811	40.02018	0	-428.878	1555.263	113.0329
6b	-17	95	1	-15.4167	-0.26907	91.402	1.402	0.02447	0.024474	1613.312811	39.48486	0.53532	-428.878	1555.263	113.0342
6c	-17	95	1	-15.4167	-0.26907	91.185	1.185	0.020682	0.020685	1613.312811	33.37154	6.648646	-428.878	1555.263	113.2283
7a	-16	74	0	-14.7667	-0.25773	91.417	1.417	0.024731	0.024736	1617.868841	40.02018	0	-412.368	1564.434	129.5428
7b	-16	74	0	-14.7667	-0.25773	91.399	1.399	0.024417	0.024422	1617.868841	39.51161	0.508576	-412.368	1564.434	129.5438
7c	-16	74	0	-14.7667	-0.25773	91.143	1.143	0.019949	0.019952	1617.868841	32.27933	7.740853	-412.368	1564.434	129.7738
8a	-16	45	6	-15.2483	-0.26613	91.406	1.406	0.024539	0.024544	1630.531564	40.02018	0	-428.835	1573.129	113.0755
8b	-16	45	6	-15.2483	-0.26613	91.294	1.294	0.022585	0.022588	1630.531564	36.8311	3.189083	-428.835	1573.129	113.1205
9a	-15	38	4	-14.3656	-0.25073	91.394	1.394	0.02433	0.024335	1644.573316	40.02018	0	-408.031	1593.152	133.8794
9b	-15	38	4	-14.3656	-0.25073	91.379	1.379	0.024068	0.024073	1644.573316	39.58938	0.430801	-408.031	1593.152	133.88
9c	-15	38	4	-14.3656	-0.25073	91.209	1.209	0.021101	0.021104	1644.573316	34.70734	5.312841	-408.031	1593.152	133.9847
10a	-15	97	3	-13.3825	-0.23357	90.984	0.984	0.017174	0.017176	2330.042905	40.02018	0	-539.29	2266.774	2.620192
10b	-15	97	3	-13.3825	-0.23357	90.899	0.899	0.015691	0.015692	2330.042905	36.56256	3.457622	-539.29	2266.774	4.338267
11a	-15	37	0	-14.3833	-0.25104	90.98	0.98	0.017104	0.017106	2339.555151	40.02018	0	-581.165	2266.223	39.25408
11b	-15	37	0	-14.3833	-0.25104	90.97	0.97	0.01693	0.016931	2339.555151	39.61174	0.408448	-581.165	2266.223	39.25621
11c	-15	37	0	-14.3833	-0.25104	90.821	0.821	0.014329	0.01433	2339.555151	33.52614	6.494046	-581.165	2266.223	39.78763
12a	-15	15	4	-14.7489	-0.25742	90.957	0.957	0.016703	0.016704	2395.793543	40.02018	0	-609.929	2316.854	68.01835
12b	-15	15	4	-14.7489	-0.25742	90.946	0.946	0.016511	0.016512	2395.793543	39.5601	0.460086	-609.929	2316.854	68.0199
12c	-15	15	4	-14.7489	-0.25742	90.715	0.715	0.012479	0.01248	2395.793543	29.88991	10.12128	-609.929	2316.854	68.76726
13a	-14	45	1	-13.2497	-0.23125	90.947	0.947	0.016528	0.01653	2421.096995	40.02018	0	-554.905	2356.648	12.99452
13b	-14	45	1	-13.2497	-0.23125	90.938	0.938	0.016371	0.016373	2421.096995	39.63978	0.380408	-554.905	2356.648	13.00009
13c	-14	45	1	-13.2497	-0.23125	90.774	0.774	0.013509	0.01351	2421.096995	32.70822	7.311962	-554.905	2356.648	14.91048
14a	-14	3	-13.95	-0.24347	90.944	0.944	0.016476	0.016477	2428.792558	40.02018	0	-585.521	2357.159	43.61088	
14b	-14	3	-13.95	-0.24347	90.932	0.932	0.016266	0.016268	2428.792558	39.51136	0.508821	-585.521	2357.159	43.61385	
14c	-14	3	-13.95	-0.24347	90.701	0.701	0.012235	0.012235	2428.792558	29.71717	10.30301	-585.521	2357.159	44.8181	
15a	-13	49	4	-12.1822	-0.21262	90.945	0.945	0.016493	0.016495	2426.221942	40.02018	0	-511.985	2371.587	29.9254
15b	-13	49	4	-12.1822	-0.21262	90.794	0.794	0.013858	0.013859	2426.221942	33.62453	6.395656	-511.985	2371.587	30.60121
16a	-12	54	6	-11.0983	-0.1937	90.868	0.868	0.015149	0.015151	2641.488755	40.02018	0	-508.469	2592.088	33.44122
16b	-12	54	6	-11.0983	-0.1937	90.141	0.141	0.002461	0.002461	2641.488755	6.50049	33.51969	-508.469	2592.088	47.34855
17a	-11	94	1	-9.43306	-0.16464	90.866	0.866	0.015115	0.015116	2647.590123	40.02018	0	-433.927	2611.789	107.9833
17b	-11	94	1	-9.43306	-0.16464	90.231	0.231	0.004032	0.004032	2647.590123	10.67437	29.34581	-433.927	2611.789	111.8999
18a	-11	28	9	-10.5308	-0.1838	90.851	0.851	0.014853	0.014854	2694.264446	40.02018	0	-492.416	2648.884	49.49418
18b	-11	28	9	-10.5308	-0.1838	90.376	0.376	0.006562	0.006563	2694.264446	17.6812	22.33899	-492.416	2648.884	54.30197
19a	-8	29	9	-7.51417	-0.13115	90.714	0.714	0.012462	0.012462	3211.30107	40.02018	0	-419.946	3183.724	121.9643
19b	-8	29	9	-7.51417	-0.13115	90.525	0.525	0.009163	0.009163	3211.30107	29.42591	10.59428	-419.946	3183.724	122.4236
19c	-8	29	9	-7.51417	-0.13115	90.401	0.401	0.006999	0.006999	3211.30107	22.47553	17.54466	-419.946	3183.724	123.2198
20a	-7	83	0	-5.61667	-0.09803	90.694	0.694	0.012113	0.012113	3303.855217	40.02018	0	-323.356	3287.993	218.5542
20b	-7	83	0	-5.61667	-0.09803	90.518	0.518	0.009041	0.009041	3303.855217	29.87033	10.14986	-323.356	3287.993	218.7888
21a	-7	62	9	-5.96417	-0.10409	90.684	0.684	0.011938	0.011939	3352.161884	40.02018	0	-348.311	3334.017	193.5992
21b	-7	62	9	-5.96417	-0.10409	90.581	0.581	0.01014	0.010141	3352.161884	33.9933	6.026881	-348.311	3334.017	193.6929
22a	-7	27	0	-6.55	-0.11432	90.676	0.676	0.011798	0.011799	3391.836187	40.02018	0	-386.908	3369.697	155.0029
22b	-7	27	0	-6.55	-0.11432	90.387	0.387	0.006754	0.006755	3391.836187	22.91025	17.10994	-386.908	3369.697	155.9444
23a	-6	39	9	-5.3475	-0.09333	90.668	0.668	0.011659	0.011659	3432.460727	40.02018	0	-319.892	3417.522	222.0187
23b	-6	39	9	-5.3475	-0.09333	90.373	0.373	0.00651	0.00651	3432.460727	22.3459	17.67428	-319.892	3417.522	222.7211
24a	-5	94	5	-3.43194	-0.0599	90.663	0.663	0.011572	0.011572	3458.348892	40.02018	0	-207.027	3452.147	334.8836
24b	-5	94	5	-3.43194	-0.0599	90.332	0.332	0.005794	0.005795	3458.348892	20.0396	19.98058	-207.027	3452.147	335.4791
25a	-5	31	9	-4.48083	-0.07821	90.66	0.66	0.011519	0.01152	3474.070059	40.02018	0	-271.414	3463.452	270.4966
25b	-5	31	9	-4.48083	-0.07821	90.624	0.624	0.010891	0.010891	3474.070059	37.83709	2.183097	-271.414	3463.452	270.5054
25c	-5	31	9	-4.48083	-0.07821	90.601	0.601	0.010489	0.01049	3474.070059	36.44235	3.577837	-271.414	3463.452	270.5203
26a	-4	85	5	-2.58194	-0.04506	90.656	0.656	0.011449	0.01145	3495.255282	40.02018	0	-157.455	3491.707	384.4555
26b	-4	85	5	-2.58194	-0.04506	90.479	0.479	0.00836	0.00836	3495.255282	29.22146	10.79873	-157.455	3491.707	384.6072

28b	-4	29	2	-3.51611	-0.06137	90	40	3	90.403	0.403	0.007034	0.007034	3458.348892	24.32531	15.69487	-212.098	3451.839	330.1859
29a	-4	94		-2.43333	-0.04247	90	66		90.66	0.66	0.011519	0.01152	3474.070059	40.02018	0	-147.498	3470.937	394.4121
29b	-4	94		-2.43333	-0.04247	90	53	5	90.535	0.535	0.009338	0.009338	3474.070059	32.44011	7.580072	-147.498	3470.937	394.485
32a	0	33	0	0.55	0.009599	90	70	7	90.707	0.707	0.012339	0.01234	3243.099406	40.02018	0	31.13104	3242.95	573.0415
32b	0	33	0	0.55	0.009599	90	55	6	90.556	0.556	0.009704	0.009704	3243.099406	31.47212	8.54806	31.13104	3242.95	573.1052
33a	0	26	5	0.434722	0.007587	90	69	9	90.699	0.699	0.0122	0.0122	3280.22017	40.02018	0	24.88789	3280.126	566.7983
33b	0	26	5	0.434722	0.007587	90	53	2	90.532	0.532	0.009285	0.009285	3280.22017	30.45822	9.561967	24.88789	3280.126	566.879
34a	-359	99	3	-357.349	-6.23692	90	69	4	90.694	0.694	0.012113	0.012113	3303.855217	40.02018	0	152.8009	3300.32	694.7113
34b	-359	99	3	-357.349	-6.23692	90	35	9	90.359	0.359	0.006266	0.006266	3303.855217	20.70134	19.31884	152.8009	3300.32	694.9799
35a	-359	78	0	-357.7	-6.24304	90	69	8	90.698	0.698	0.012182	0.012183	3284.920092	40.02018	0	131.8297	3282.274	673.7402
35b	-359	78	0	-357.7	-6.24304	90	54		90.54	0.54	0.009425	0.009425	3284.920092	30.96056	9.059625	131.8297	3282.274	673.8011
37a	-354	99	0	-352.35	-6.14967	90	66	3	90.663	0.663	0.011572	0.011572	3458.348892	40.02018	0	460.38	3427.569	1002.29
37b	-354	99	0	-352.35	-6.14967	90	61	6	90.616	0.616	0.010751	0.010752	3458.348892	37.18293	2.837254	460.38	3427.569	1002.294
38a	-354	68	9	-352.864	-6.15864	90	66	6	90.666	0.666	0.011624	0.011624	3442.76935	40.02018	0	427.6679	3416.103	969.5784
38b	-354	68	9	-352.864	-6.15864	90	59	8	90.598	0.598	0.010437	0.010437	3442.76935	35.93373	4.086459	427.6679	3416.103	969.587
39a	-354	59	0	-353.017	-6.1613	90	66	9	90.669	0.669	0.011676	0.011677	3427.329528	40.02018	0	416.6968	3401.904	958.6073
39b	-354	59	0	-353.017	-6.1613	90	56	7	90.567	0.567	0.009896	0.009896	3427.329528	33.91802	6.102166	416.6968	3401.904	958.6267
40a	-354	24	5	-353.599	-6.17146	90	67		90.67	0.67	0.011694	0.011694	3422.213646	40.02018	0	381.5529	3400.877	923.4634
40b	-354	24	5	-353.599	-6.17146	90	59	1	90.591	0.591	0.010315	0.010315	3422.213646	35.30103	4.719155	381.5529	3400.877	923.4754
41a	-354	23	0	-353.617	-6.17178	90	66	4	90.664	0.664	0.011589	0.011589	3453.140069	40.02018	0	383.9196	3431.732	925.83
42a	-354	47		-353.217	-6.16479	90	86	8	90.868	0.868	0.015149	0.015151	2641.488755	40.02018	0	311.9998	2622.998	853.9102
42b	-354	47		-353.217	-6.16479	90	49	6	90.496	0.496	0.008657	0.008657	2641.488755	22.8675	17.15269	311.9998	2622.998	854.0825
43a	-353	35	9	-352.414	-6.15079	90	66	1	90.661	0.661	0.011537	0.011537	3468.813815	40.02018	0	457.9226	3438.455	999.8331
43b	-353	35	9	-352.414	-6.15079	90	48	8	90.488	0.488	0.008517	0.008517	3468.813815	29.54532	10.47487	457.9226	3438.455	999.8879
44a	-353	31	7	-352.481	-6.15196	90	66	4	90.664	0.664	0.011589	0.011589	3453.140069	40.02018	0	451.8373	3423.451	993.7477
44b	-353	31	7	-352.481	-6.15196	90	48	6	90.486	0.486	0.008482	0.008483	3453.140069	29.29127	10.72891	451.8373	3423.451	993.8056
45a	-347	96	1	-345.4	-6.02836	90	54	5	90.545	0.545	0.009512	0.009512	4207.189915	40.02018	0	1060.523	4071.331	1602.434
45b	-347	96	1	-345.4	-6.02836	90	39	4	90.394	0.394	0.006877	0.006877	4207.189915	28.93161	11.08858	1060.523	4071.331	1602.472
46a	-344	97	0	-342.383	-5.97572	90	51	4	90.514	0.514	0.008971	0.008971	4460.945812	40.02018	0	1350.093	4251.739	1892.003
46b	-344	97	0	-342.383	-5.97572	90	45	9	90.459	0.459	0.008011	0.008011	4460.945812	35.73767	4.28251	1350.093	4251.739	1892.008
46c	-344	97	0	-342.383	-5.97572	90	43	4	90.434	0.434	0.007575	0.007575	4460.945812	33.7911	6.229083	1350.093	4251.739	1892.013
46d	-344	97	0	-342.383	-5.97572	90	29	6	90.296	0.296	0.005166	0.005166	4460.945812	23.04623	16.97395	1350.093	4251.739	1892.079
47a	-344	85	6	-342.582	-5.97918	90	54	7	90.547	0.547	0.009547	0.009547	4191.806207	40.02018	0	1254.801	3999.589	1796.711
47b	-344	85	6	-342.582	-5.97918	90	43	7	90.437	0.437	0.007627	0.007627	4191.806207	31.9719	8.048286	1254.801	3999.589	1796.729
47c	-344	85	6	-342.582	-5.97918	90	1	90.401	0.401	0.006999	0.006999	4191.806207	29.33797	10.68222	1254.801	3999.589	1796.743	
47d	-344	85	6	-342.582	-5.97918	90	27	4	90.274	0.274	0.004782	0.004782	4191.806207	20.04622	19.97397	1254.801	3999.589	1796.822
48a	-344	65	7	-342.915	-5.98499	90	54	5	90.545	0.545	0.009512	0.009512	4207.189915	40.02018	0	1236.05	4021.52	1777.961
48b	-344	65	7	-342.915	-5.98499	90	51	7	90.517	0.517	0.009023	0.009024	4207.189915	37.96399	2.056197	1236.05	4021.52	1777.962
48c	-344	65	7	-342.915	-5.98499	90	46	6	90.466	0.466	0.008133	0.008133	4207.189915	34.21882	5.801368	1236.05	4021.52	1777.97
49a	-344	47	4	-343.216	-5.99024	90	54	4	90.544	0.544	0.009495	0.009495	4214.924186	40.02018	0	1217.152	4035.36	1759.062
49b	-344	47	4	-343.216	-5.99024	90	51	5	90.515	0.515	0.008988	0.008989	4214.924186	37.88664	2.133547	1217.152	4035.36	1759.063
49c	-344	47	4	-343.216	-5.99024	90	41	3	90.413	0.413	0.007208	0.007208	4214.924186	30.38258	9.6376	1217.152	4035.36	1759.088
50a	-344	36	4	-343.399	-5.99344	90	54	4	90.544	0.544	0.009495	0.009495	4214.924186	40.02018	0	1204.233	4039.234	1746.144
50b	-344	36	4	-343.399	-5.99344	90	50	5	90.505	0.505	0.008814	0.008814	4214.924186	37.15094	2.869248	1204.233	4039.234	1746.146
50c	-344	36	4	-343.399	-5.99344	90	39	1	90.391	0.391	0.006824	0.006824	4214.924186	28.76409	11.25609	1204.233	4039.234	1746.18
51a	-352	19	5	-351.682	-6.13801	90	67		90.67	0.67	0.011694	0.011694	3422.213646	40.02018	0	495.0849	3386.213	1036.995
51b	-352	19	5	-351.682	-6.13801	90	66	6	90.666	0.666	0.011624	0.011624	3422.213646	39.78124	0.238948	495.0849	3386.213	1036.996
51c	-352	19	5	-351.682	-6.13801	90	65	4	90.654	0.654	0.011414	0.011415	3422.213646	39.06439	0.95579	495.0849	3386.213	1036.995
51d	-352	19	5	-351.682	-6.13801	90	64	6	90.646	0.646	0.011275	0.011275	3422.213646	38.5865	1.433683	495.0849	3386.213	1036.996
51e	-352	19	5	-351.682	-6.13801	90	61	7	90.617	0.617	0.010769	0.010769	3422.213646	36.85415	3.166031	495.0849	3386.213	1037
51f	-352	19	5	-351.682	-6.13801	90	59	9	90.599	0.599	0.010455	0.010455	3422.213646	35.77891	4.241272	495.0849	3386.213	1037.004
51g	-352	19	5	-351.682	-6.13801	90	28		90.28	0.28	0.004887	0.004887	3422.213646	16.72422	23.29596	495.0849	3386.213	1037.257
52a	-351	63	8	-349.948	-6.10774	90	66		90.66	0.66	0.011519	0.01152	3474.070059	40.02018	0	606.384	3420.74	1148.294
52b	-351	63	8	-349.948	-6.10774	90	65	1	90.651	0.651	0.011362	0.011363	3474.070059	39.47441	0.545777	606.384	3420.74	1148.295
52c	-351	63	8	-349.948	-6.10774	90	64		90.64	0.64	0.01117	0.011171	3474.070059	38.80735	1.212835	606.384	3420.74	1148.295
52d	-351	63	8	-349.948	-6.10774	90	60	3	90.603	0.603	0.010524	0.010525	3474.070059	36.56363	3.456556	606.384	3420.74	1148.3
52e	-351	63	8	-349.948	-6.10774	90	58	9	90.589	0.589	0.01028	0.01028	3474.070059	35.71466	4.305523	606.384	3420.74	1148.303
52f	-351	63	8	-349.948	-6.10774	90	28		90.28	0.28	0.004887	0.004887	3474.070059	16.97764	23.04254	606.384	3420.74	1148.526
53a	-360	96	9	-358.398	-6.25522	90	66	6	90.666	0.666	0.011624	0.011624	3442.76935	40.02018	0	96.27792	3441.423	638.1884
53b	-360	96	9	-358.398	-6.25522	90	66		90.66	0.66	0.011519	0.01152	3442.76935	39.65961	0.360574	96.27792	3441.423	638.1885
53c	-360	96	9	-358.398	-6.25522	90	65	3	90.653	0.653	0.011397	0.011397	3442.76935	39.23894	0.781243	96.27792	3441.423	638.

First survey from the west side

Date: 01/08/2005
Time: 10.30am

Height above waterline 40.2235

X1 Y1
-408.031 1593.152
-827.946 -523.616

Point ID	Hz		Hz-deg	Hz - Rad	V		V - deg	Dip-rad	Distance	h'	Height	X	Y	X'	Y'
1a	310	52	15 310.8708	5.4257	91	24	35 91.40972	0.024604	1634.486	40.2235	0	-1235.98	1069.536	-408.031	1593.152
1b	310	52	15 310.8708	5.4257	91	22	5 91.36806	0.023877	1634.486	39.03417	1.189331	-1235.98	1069.536	-408.031	1593.152
1c	310	52	15 310.8708	5.4257	91	37	15 91.62083	0.028289	1634.486	46.25012	-6.02662	-1235.98	1069.536	-408.031	1593.152
2a	311	28	2 311.4672	5.4361	91	24	55 91.41528	0.024701	1628.068	40.2235	0	-1219.97	1078.093	-392.022	1601.708
2b	311	28	2 311.4672	5.4361	91	23	25 91.39028	0.024265	1628.068	39.5127	0.710805	-1219.97	1078.093	-392.022	1601.708
2c	311	28	2 311.4672	5.4361	91	54	35 91.90972	0.033331	1628.068	54.28513	-14.0616	-1219.97	1078.093	-392.022	1601.708
3a	312	24	35 312.4097	5.4526	91	25	35 91.42639	0.024895	1615.38	40.2235	0	-1192.7	1089.457	-364.756	1613.073
3b	312	24	35 312.4097	5.4526	91	23	55 91.39861	0.02441	1615.38	39.43987	0.783635	-1192.7	1089.457	-364.756	1613.073
3c	312	24	35 312.4097	5.4526	91	41	5 91.68472	0.029404	1615.38	47.51226	-7.28876	-1192.7	1089.457	-364.756	1613.073
4a	312	53	25 312.8903	5.4610	91	25	5 91.41806	0.02475	1624.877	40.2235	0	-1190.48	1105.886	-362.534	1629.502
4b	312	53	25 312.8903	5.4610	91	24	25 91.40694	0.024556	1624.877	39.9082	0.315297	-1190.48	1105.886	-362.534	1629.502
4c	312	53	25 312.8903	5.4610	91	49	5 91.81806	0.031731	1624.877	51.57638	-11.3529	-1190.48	1105.886	-362.534	1629.502
5a	313	44	35 313.7431	5.4758	91	26	0 91.43333	0.025016	1607.551	40.2235	0	-1161.37	1111.502	-333.426	1635.117
5b	313	44	35 313.7431	5.4758	91	25	5 91.41806	0.02475	1607.551	39.79459	0.428915	-1161.37	1111.502	-333.426	1635.117
5c	313	44	35 313.7431	5.4758	91	6	1 91.10028	0.019203	1607.551	30.87435	9.349153	-1161.37	1111.502	-333.426	1635.117
6a	313	44	35 313.7431	5.4758	91	25	5 91.41806	0.02475	1624.877	40.2235	0	-1173.89	1123.482	-345.943	1647.097
6b	313	44	35 313.7431	5.4758	91	25	1 91.41694	0.02473	1624.877	40.19197	0.03153	-1173.89	1123.482	-345.943	1647.097
6c	313	44	35 313.7431	5.4758	91	15	0 91.25	0.021817	1624.877	35.45495	4.768552	-1173.89	1123.482	-345.943	1647.097
7a	314	16	20 314.2722	5.4851	91	25	35 91.42639	0.024895	1615.38	40.2235	0	-1156.66	1127.646	-328.717	1651.261
7b	314	16	20 314.2722	5.4851	91	25	1 91.41694	0.02473	1615.38	39.95706	0.266438	-1156.66	1127.646	-328.717	1651.261
7c	314	16	20 314.2722	5.4851	91	4	2 91.06722	0.018627	1615.38	30.09243	10.13107	-1156.66	1127.646	-328.717	1651.261
8a	314	39	45 314.6625	5.4919	91	26	5 91.43472	0.025041	1605.994	40.2235	0	-1142.28	1128.9	-314.333	1652.516
8b	314	39	45 314.6625	5.4919	91	24	55 91.41528	0.024701	1605.994	39.67814	0.545363	-1142.28	1128.9	-314.333	1652.516
8c	314	39	45 314.6625	5.4919	91	1	15 91.02083	0.017817	1605.994	28.61686	11.60664	-1142.28	1128.9	-314.333	1652.516
9a	315	32	20 315.5389	5.5072	91	26	4 91.43444	0.025036	1606.305	40.2235	0	-1125.1	1146.462	-297.15	1670.077
9b	315	32	20 315.5389	5.5072	91	25	2 91.41722	0.024735	1606.305	39.74037	0.483129	-1125.1	1146.462	-297.15	1670.077
9c	315	32	20 315.5389	5.5072	90	58	4 90.96778	0.016891	1606.305	27.13453	13.08897	-1125.1	1146.462	-297.15	1670.077
10a	316	5	5 316.0847	5.5167	91	26	3 91.43417	0.025031	1606.616	40.2235	0	-1114.34	1157.352	-286.394	1680.968
10b	316	5	5 316.0847	5.5167	91	26	0 91.43333	0.025016	1606.616	40.20012	0.023382	-1114.34	1157.352	-286.394	1680.968
10c	316	5	5 316.0847	5.5167	91	2	5 91.03472	0.018059	1606.616	29.01753	11.20597	-1114.34	1157.352	-286.394	1680.968
11a	316	36	55 316.6153	5.5260	91	25	55 91.43194	0.024992	1609.111	40.2235	0	-1105.29	1169.434	-277.342	1693.049
11b	316	36	55 316.6153	5.5260	91	24	25 91.40694	0.024556	1609.111	39.52096	0.702538	-1105.29	1169.434	-277.342	1693.049
11c	316	36	55 316.6153	5.5260	91	11	2 91.18389	0.020663	1609.111	33.2534	6.970103	-1105.29	1169.434	-277.342	1693.049
12a	318	0	30 318.0083	5.5503	91	24	0 91.4	0.024435	1645.842	40.2235	0	-1101.11	1223.259	-273.159	1746.874
12b	318	0	30 318.0083	5.5503	91	23	0 91.38333	0.024144	1645.842	39.74446	0.479038	-1101.11	1223.259	-273.159	1746.874
12c	318	0	30 318.0083	5.5503	91	7	35 91.12639	0.019659	1645.842	32.36009	7.863412	-1101.11	1223.259	-273.159	1746.874
13a	318	22	20 318.3722	5.5566	91	24	5 91.40139	0.024459	1644.21	40.2235	0	-1092.23	1229.007	-264.284	1752.623
13b	318	22	20 318.3722	5.5566	91	22	4 91.36778	0.023872	1644.21	39.2584	0.965097	-1092.23	1229.007	-264.284	1752.623
13c	318	22	20 318.3722	5.5566	91	15	2 91.25056	0.021826	1644.21	35.89273	4.330767	-1092.23	1229.007	-264.284	1752.623
13d	318	22	20 318.3722	5.5566	91	6	1 91.10028	0.019203	1644.21	31.57841	8.645087	-1092.23	1229.007	-264.284	1752.623
14a	317	44	5 317.7347	5.5455	90	59	15 90.9875	0.017235	2333.578	40.2235	0	-1569.48	1726.939	-741.535	2250.554
15a	318	0	45 318.0125	5.5504	90	58	3 90.9675	0.016886	2381.827	40.2235	0	-1593.37	1770.39	-765.422	2294.006
15b	318	0	45 318.0125	5.5504	90	32	5 90.53472	0.009333	2381.827	22.22944	17.99406	-1593.37	1770.39	-765.422	2294.006
16a	318	37	20 318.6222	5.5610	90	57	25 90.95694	0.016702	2408.105	40.2235	0	-1591.81	1806.964	-763.862	2330.579
16b	318	37	20 318.6222	5.5610	90	56	55 90.94861	0.016556	2408.105	39.87316	0.350342	-1591.81	1806.964	-763.862	2330.579
16c	318	37	20 318.6222	5.5610	90	45	5 90.75139	0.013114	2408.105	31.5822	8.641298	-1591.81	1806.964	-763.862	2330.579

17a	319	18	15	319.3042	5.5729	90	57	2	90.95056	0.01659	2424.293	40.2235	0	-1580.74	1838.055	-752.798	2361.671
17b	319	18	15	319.3042	5.5729	90	56	1	90.93361	0.016295	2424.293	39.50635	0.717145	-1580.74	1838.055	-752.798	2361.671
17c	319	18	15	319.3042	5.5729	90	42	35	90.70972	0.012387	2424.293	30.03123	10.19227	-1580.74	1838.055	-752.798	2361.671
18a	319	57	2	319.9506	5.5842	90	57	5	90.95139	0.016605	2422.169	40.2235	0	-1558.54	1854.145	-730.595	2377.761
18b	319	57	2	319.9506	5.5842	90	56	1	90.93361	0.016295	2422.169	39.47174	0.751756	-1558.54	1854.145	-730.595	2377.761
18c	319	57	2	319.9506	5.5842	90	42	35	90.70972	0.012387	2422.169	30.00492	10.21858	-1558.54	1854.145	-730.595	2377.761
19a	321	13	15	321.2208	5.6064	90	52	45	90.87917	0.015344	2621.182	40.2235	0	-1641.7	2043.384	-813.754	2567
19b	321	13	15	321.2208	5.6064	90	52	2	90.86722	0.015136	2621.182	39.67694	0.546564	-1641.7	2043.384	-813.754	2567
19c	321	13	15	321.2208	5.6064	90	48	25	90.80694	0.014084	2621.182	36.91874	3.304757	-1641.7	2043.384	-813.754	2567
19d	321	13	15	321.2208	5.6064	90	36	5	90.60139	0.010496	2621.182	27.5135	12.71	-1641.7	2043.384	-813.754	2567
19e	321	13	15	321.2208	5.6064	90	32	5	90.53472	0.009333	2621.182	24.46332	15.76018	-1641.7	2043.384	-813.754	2567
19f	321	13	15	321.2208	5.6064	90	25	5	90.41806	0.007296	2621.182	19.12565	21.09785	-1641.7	2043.384	-813.754	2567
19g	321	13	15	321.2208	5.6064	90	21	3	90.35083	0.006123	2621.182	16.05021	24.17329	-1641.7	2043.384	-813.754	2567
19h	321	13	15	321.2208	5.6064	90	10	5	90.16806	0.002933	2621.182	7.688271	32.53523	-1641.7	2043.384	-813.754	2567
20a	321	54	0	321.9	5.6182	90	52	2	90.86722	0.015136	2657.29	40.2235	0	-1639.64	2091.114	-811.697	2614.73
20b	321	54	0	321.9	5.6182	90	52		90.86667	0.015126	2657.29	40.19773	0.025772	-1639.64	2091.114	-811.697	2614.73
20c	321	54	0	321.9	5.6182	90	41	5	90.68472	0.011951	2657.29	31.75787	8.465628	-1639.64	2091.114	-811.697	2614.73
20d	321	54	0	321.9	5.6182	90	39	4	90.65111	0.011364	2657.29	30.19883	10.02467	-1639.64	2091.114	-811.697	2614.73
20e	321	54	0	321.9	5.6182	90	41	35	90.69306	0.012096	2657.29	32.14441	8.079085	-1639.64	2091.114	-811.697	2614.73
20f	321	54	0	321.9	5.6182	90	29	55	90.49861	0.008702	2657.29	23.1254	17.0981	-1639.64	2091.114	-811.697	2614.73
20g	321	54	0	321.9	5.6182	90	16	3	90.2675	0.004669	2657.29	12.40633	27.81717	-1639.64	2091.114	-811.697	2614.73
21a	322	28	15	322.4708	5.6282	90	51	2	90.85056	0.014845	2709.367	40.2235	0	-1650.45	2148.646	-822.507	2672.262
21b	322	28	15	322.4708	5.6282	90	39	5	90.65139	0.011369	2709.367	30.8038	9.419698	-1650.45	2148.646	-822.507	2672.262
21c	322	28	15	322.4708	5.6282	90	37	1	90.61694	0.010768	2709.367	29.17481	11.04869	-1650.45	2148.646	-822.507	2672.262
21d	322	28	15	322.4708	5.6282	90	23	5	90.38472	0.006715	2709.367	18.19278	22.03072	-1650.45	2148.646	-822.507	2672.262
22a	322	51	5	322.8514	5.6348	90	51	1	90.85028	0.01484	2710.253	40.2235	0	-1636.68	2160.266	-808.734	2683.882
22b	322	51	5	322.8514	5.6348	90	30	55	90.51528	0.008993	2710.253	24.37476	15.84874	-1636.68	2160.266	-808.734	2683.882
23a	324	24	10	324.4028	5.6619	90	45	45	90.7625	0.013308	3022.296	40.2235	0	-1759.23	2457.517	-931.283	2981.132
23b	324	24	10	324.4028	5.6619	90	45	2	90.75056	0.0131	3022.296	39.59333	0.630168	-1759.23	2457.517	-931.283	2981.132
23c	324	24	10	324.4028	5.6619	90	30	55	90.51528	0.008993	3022.296	27.18113	13.04237	-1759.23	2457.517	-931.283	2981.132
24a	325	7	35	325.1264	5.6745	90	44	0	90.73333	0.012799	3142.515	40.2235	0	-1796.79	2578.167	-968.844	3101.783
24b	325	7	35	325.1264	5.6745	90	23	15	90.3875	0.006763	3142.515	21.25363	18.96987	-1796.79	2578.167	-968.844	3101.783
25a	326	0	25	326.0069	5.6899	90	42	0	90.987	0.012217	3292.174	40.2235	0	-1840.63	2729.559	-1012.68	3253.175
25b	326	0	25	326.0069	5.6899	90	33	15	90.55417	0.009672	3292.174	31.84301	8.380487	-1840.63	2729.559	-1012.68	3253.175
26a	326	27	20	326.4556	5.6977	90	41	15	90.6875	0.011999	3352.038	40.2235	0	-1852.28	2793.781	-1024.34	3317.397
26b	326	27	20	326.4556	5.6977	90	24	55	90.41528	0.007248	3352.038	24.29588	15.92762	-1852.28	2793.781	-1024.34	3317.397
27a	327	17	0	327.2833	5.7122	90	40	3	90.6675	0.01165	3452.483	40.2235	0	-1866.02	2904.759	-1038.07	3428.375
27b	327	17	0	327.2833	5.7122	90	40	25	90.67361	0.011757	3452.483	40.59179	-0.36829	-1866.02	2904.759	-1038.07	3428.375
27c	327	17	0	327.2833	5.7122	90	20	45	90.34583	0.006036	3452.483	20.8392	19.3843	-1866.02	2904.759	-1038.07	3428.375
29a	327	44	20	327.7389	5.7201	90	40	1	90.66694	0.01164	3455.359	40.2235	0	-1844.4	2921.936	-1016.45	3445.552
29b	327	44	20	327.7389	5.7201	90	17	25	90.29028	0.005066	3455.359	17.50605	22.71745	-1844.4	2921.936	-1016.45	3445.552
30a	328	11	25	328.1903	5.7280	90	40	5	90.66806	0.01166	3449.612	40.2235	0	-1818.29	2931.491	-990.345	3455.107
30b	328	11	25	328.1903	5.7280	90	9	1	90.15028	0.002623	3449.612	9.047808	31.17569	-1818.29	2931.491	-990.345	3455.107
31a	329	38	50	329.6472	5.7534	90	40	1	90.66694	0.01164	3455.359	40.2235	0	-1746.07	2981.735	-918.126	3505.35
31b	329	38	50	329.6472	5.7534	90	39	4	90.65111	0.011364	3455.359	39.26851	0.954993	-1746.07	2981.735	-918.126	3505.35
31c	329	38	50	329.6472	5.7534	90	9	5	90.15139	0.002642	3455.359	9.129891	31.09361	-1746.07	2981.735	-918.126	3505.35
32a	332	56	25	332.9403	5.8109	90	42	35	90.70972	0.012387	3247.072	40.2235	0	-1477.15	2891.624	-649.209	3415.24
32b	332	56	25	332.9403	5.8109	90	31	1	90.51694	0.009022	3247.072	29.29712	10.92638	-1477.15	2891.624	-649.209	3415.24

Third survey from the west side
 Date: 31/08/2005
 Time: 10:50 AM 12:02PM

Height above waterlin 39.91735

X1 Y1
 -408.031 1593.152
 1965.301 -1053.77

Point ID	Hz	Hz - Rad	V	V decimal	Dip	Tan dip	Distance	h'	Height	X	Y	C^2	Cumul c	X'	Y'	Position	Distance	Notches				
1a	70	53	45	1.237366	91	23	15	91.3875	1.3875	0.024216	0.024221	1648.035	39.91735	0	1557.27	539.3798	0	0	-408.031	1593.152	0	
1b	70	53	45	1.237366	91	21	10	91.35278	1.352778	0.02361	0.023615	1648.035	38.91804	0.999309	1557.27	539.3798	0	83.07411	-408.031	1593.152	0	
1c	70	53	45	1.237366	90	37	20	90.62222	0.622222	0.01086	0.01086	1648.035	17.89808	22.01927	1557.27	539.3798	83.07411	83.07411	-408.031	1593.152	0	0 t
2a	73	33	35	1.283859	91	25	0	91.41667	1.416667	0.024725	0.024731	1614.091	39.91735	0	1548.1	456.8133	0	83.07411	-417.201	1510.585	83.07411	166.1482
2b	73	33	35	1.283859	91	24	0	91.4	1.4	0.024435	0.024439	1614.091	39.44754	0.469804	1548.1	456.8133	0	83.07411	-417.201	1510.585	83.07411	
2c	73	33	35	1.283859	91	8	30	91.14167	1.141667	0.019926	0.019928	1614.091	32.16639	7.75096	1548.1	456.8133	0	96.78869	-417.201	1510.585	83.07411	
2d	73	33	35	1.283859	90	53	40	90.89444	0.894444	0.015611	0.015612	1614.091	25.19963	14.71772	1548.1	456.8133	13.71458	96.78869	-417.201	1510.585	83.07411	83.07411 t
3a	74	2	35	1.292295	91	24	55	91.41528	1.415278	0.024701	0.024706	1615.676	39.91735	0	1553.422	444.1734	0	96.78869	-411.879	1497.945	95.28404	247.1062
3b	74	2	35	1.292295	91	23	35	91.39306	1.393056	0.024313	0.024318	1615.676	39.29033	0.627018	1553.422	444.1734	0	153.3696	-411.879	1497.945	95.28404	
3c	74	2	35	1.292295	91	12	15	91.20417	1.204167	0.021017	0.02102	1615.676	33.96113	5.956212	1553.422	444.1734	56.58092	153.3696	-411.879	1497.945	95.28404	t
4a	75	59	40	1.326353	91	25	40	91.42778	1.427778	0.024919	0.024925	1601.525	39.91735	0	1553.915	387.5947	0	153.3696	-411.385	1441.367	151.8221	345.5412
4b	75	59	40	1.326353	91	24	15	91.40417	1.404167	0.024507	0.024512	1601.525	39.25697	0.660378	1553.915	387.5947	0	222.553	-411.385	1441.367	151.8221	
4c	75	59	40	1.326353	91	3	10	91.05278	1.052778	0.018374	0.018377	1601.525	29.43044	10.48691	1553.915	387.5947	69.18334	222.553	-411.385	1441.367	151.8221	t
5a	77	37	20	1.354763	91	23	0	91.38333	1.383333	0.024144	0.024148	1653.001	39.91735	0	1614.578	354.3315	0	222.553	-350.723	1408.103	193.7191	405.374
5b	77	37	20	1.354763	91	21	45	91.3625	1.3625	0.02378	0.023785	1653.001	39.31595	0.601393	1614.578	354.3315	0	244.7004	-350.723	1408.103	193.7191	
5c	77	37	20	1.354763	91	15	10	91.25278	1.252778	0.021865	0.021869	1653.001	36.14878	3.768563	1614.578	354.3315	22.14745	244.7004	-350.723	1408.103	193.7191	t
6a	78	10	55	1.364532	91	22	15	91.37083	1.370833	0.023926	0.02393	1668.08	39.91735	0	1632.721	341.6302	0	244.7004	-332.58	1395.402	211.655	916.6751
6b	78	10	55	1.364532	91	21	35	91.35972	1.359722	0.023732	0.023736	1668.08	39.59368	0.323667	1632.721	341.6302	0	896.5091	-332.58	1395.402	211.655	
6c	78	10	55	1.364532	91	15	15	91.25417	1.254167	0.021889	0.021893	1668.08	36.51899	3.398357	1632.721	341.6302	651.8087	936.234	-332.58	1395.402	211.655	t
7a	77	14	10	1.348024	90	59	10	90.98611	0.986111	0.017211	0.017213	2319.079	39.91735	0	2261.772	512.3631	39.72498	1013.006	296.4712	1566.135	705.0201	1515.494
8a	77	46	25	1.357406	90	58	20	90.97222	0.972222	0.016968	0.01697	2352.215	39.91735	0	2298.863	498.1403	76.77175	1013.006	333.5628	1551.912	742.7396	1553.214
9a	79	3	45	1.379901	90	57	0	90.95	0.95	0.016581	0.016582	2407.248	39.91735	0	2363.52	456.7467	0	1013.006	398.2194	1510.519	810.474	1662.79
9b	79	3	45	1.379901	90	55	30	90.925	0.925	0.016144	0.016146	2407.248	38.86671	1.050642	2363.52	456.7467	0	1057.352	398.2194	1510.519	810.474	
9c	79	3	45	1.379901	90	49	50	90.83056	0.830556	0.014496	0.014497	2407.248	34.89775	5.019601	2363.52	456.7467	44.34578	1057.352	398.2194	1510.519	810.474	t
10a	79	41	0	1.390737	90	56	10	90.93611	0.936111	0.016338	0.01634	2442.971	39.91735	0	2403.475	437.5077	0	1057.352	438.1745	1491.28	852.3155	1909.188
10b	79	41	0	1.390737	90	55	5	90.91806	0.918056	0.016023	0.016024	2442.971	39.14729	0.770052	2403.475	437.5077	0	1262.437	438.1745	1491.28	852.3155	
10c	79	41	0	1.390737	90	45	30	90.75833	0.758333	0.013235	0.013236	2442.971	32.33562	7.581732	2403.475	437.5077	205.0856	1262.437	438.1745	1491.28	852.3155	t
11a	81	20	15	1.419607	90	52	5	90.86806	0.868056	0.01515	0.015152	2634.532	39.91735	0	2604.479	396.797	0	1262.437	639.1788	1450.569	1056.872	2132.323
11b	81	20	15	1.419607	90	51	30	90.85833	0.858333	0.014981	0.014982	2634.532	39.47021	0.447142	2604.479	396.797	0	1281.259	639.1788	1450.569	1056.872	
11c	81	20	15	1.419607	90	23	25	90.39028	0.390278	0.006812	0.006812	2634.532	17.94574	21.9716	2604.479	396.797	18.82182	1281.259	639.1788	1450.569	1056.872	t
12a	81	30	50	1.422686	90	51	45	90.8625	0.8625	0.015053	0.015055	2651.505	39.91735	0	2622.475	391.2816	0	1304.765	657.1744	1445.053	1075.451	2165.386
12b	81	30	50	1.422686	90	14	0	90.23333	0.233333	0.004072	0.004072	2651.505	10.79814	29.11921	2622.475	391.2816	23.50579	1304.765	657.1744	1445.053	1075.451	t
13a	81	59	10	1.430928	90	51	35	90.85972	0.859722	0.015005	0.015006	2660.073	39.91735	0	2634.095	370.8491	0	1364.319	668.7949	1424.621	1089.934	2238.315
13b	81	59	10	1.430928	90	17	35	90.29306	0.293056	0.005115	0.005115	2660.073	13.60582	26.31153	2634.095	370.8491	59.55389	1364.319	668.7949	1424.621	1089.934	t
14a	82	34	55	1.441327	90	50	35	90.84306	0.843056	0.014714	0.014715	2712.669	39.91735	0	2689.965	350.2275	0	1435.078	724.6645	1403.999	1148.381	2366.777
14b	82	34	55	1.441327	90	27	30	90.45833	0.458333	0.007999	0.008	2712.669	21.70025	18.21709	2689.965	350.2275	70.75947	1435.078	724.6645	1403.999	1148.381	t
15a	83	12	35	1.452284	90	49	25	90.82361	0.823611	0.014375	0.014376	2776.721	39.91735	0	2757.244	328.3069	0	1509.445	791.9429	1382.079	1218.396	2511.103
15b	83	12	35	1.452284	90	18	25	90.30694	0.306944	0.005357	0.005357	2776.721	14.87557	25.04178	2757.244	328.3069	74.36689	1509.445	791.9429	1382.079	1218.396	t
16a	83	35	0	1.458804	90	48	10	90.80278	0.802778	0.014011	0.014012	2848.791	39.91735	0	2830.944	318.3752	0	1589.425	865.6436	1372.147	1292.707	2665.33
16b	83	35	0	1.458804	90	36	45	90.6125	0.6125	0.01069	0.010691	2848.791	30.45514	9.462211	2830.944	318.3752	79.98028	1589.425	865.6436	1372.147	1292.707	t
17a	84	5	0	1.467531	90	46	55	90.78194	0.781944	0.013648	0.013648	2924.701	39.91735	0	2909.12	301.4836	0	1668.85	943.8199	1355.255	1372.624	2824.444
17b	84	5	0	1.467531	90	21	20	90.35556	0.355556	0.006206	0.006206	2924.701	18.1498	21.76755	2909.12	301.4836	79.42436	1668.85	943.8199	1355.255	1372.624	t
18a	84	36	40	1.476742	90	45	45	90.7625	0.7625	0.013308	0.013309	2999.292	39.91735	0	2986.036	281.6793	0	1702.889	1020.736	1335.451	1451.821	2937.652
18b	84	36	40	1.476742	90	15	10	90.25278	0.252778	0.004412	0.004412	2999.292	13.23238	26.68497	2986.036	281.6793	34.03905	1702.889	1020.736	1335.451	1451.821	t
19a	84	45	30	1.479312	90	45	15	90.75417	0.754167	0.013163	0.013163	3032.438	39.91735	0	3019.757	277.0338	0	1849.333	1054.456	1330.806	1485.831	3114.396
19b	84	45	30	1.479312	90	15	30	90.25833	0.258333	0.004509	0.004509	3032.438	13.67265	26.2447	3019.757	277.0338	146.444	1849.333	1054.456	1330.806	1485.831	t
20a	84	50	40	1.480815	90	43	10	90.71944	0.719444	0.012557	0.012557	3178.807	39.91735	0	3165.947	285.6478	0	1864.984	1200.647	1339.42	1628.565	3271.437
20b	84	50	40	1.480815	90	27	10	90.45278	0.452778	0.007902	0.007903	3178.807	25.12093	14.79642	3165.947	285.6478	15.65164	1864.984	1200.647	1339.42	1628.565	t
21a	85	1</																				

23b	86	9	5	1.503625	90	35	15	90.5875	0.5875	0.010254	0.010254	3367.345	34.52932	5.388024	3359.751	226.0177	24.34869	2158.594	1394.45	1279.789	1829.518	t
24a	86	29	30	1.509564	90	40	35	90.67639	0.676389	0.011805	0.011806	3381.175	39.91735	0	3374.838	206.9067	81.47877	2158.594	1409.538	1260.678	1847.727	3818.545
25a	87	9	55	1.521321	90	39	45	90.6625	0.6625	0.011563	0.011563	3452.066	39.91735	0	3447.842	170.7221	0	2231.424	1482.541	1224.494	1926.18	3896.999
25b	87	9	55	1.521321	90	31	50	90.53056	0.530556	0.00926	0.00926	3452.066	31.96684	7.950507	3447.842	170.7221	72.82961	2231.424	1482.541	1224.494	1926.18	t
26a	88	16	5	1.540568	90	39	25	90.65694	0.656944	0.011466	0.011466	3481.261	39.91735	0	3479.671	105.216	0	2265.179	1514.37	1158.988	1970.818	3950.177
26b	88	16	5	1.540568	90	19	10	90.31944	0.319444	0.005575	0.005575	3481.261	19.40948	20.50787	3479.671	105.216	33.75513	2265.179	1514.37	1158.988	1970.818	t
27a	88	49	25	1.550264	90	39	25	90.65694	0.656944	0.011466	0.011466	3481.261	39.91735	0	3480.528	71.47175	0	2336.991	1515.227	1125.244	1979.358	3991.402
27b	88	49	25	1.550264	90	10	55	90.18194	0.181944	0.003176	0.003176	3481.261	11.05489	28.86246	3480.528	71.47175	71.81232	2336.991	1515.227	1125.244	1979.358	t
28a	89	58	40	1.570408	90	39	15	90.65417	0.654167	0.011417	0.011418	3496.045	39.91735	0	3496.045	1.355944	0	2387.068	1530.744	1055.128	2012.043	4006.843
28b	89	58	40	1.570408	90	8	45	90.14583	0.145833	0.002545	0.002545	3496.045	8.898404	31.01894	3496.045	1.355944	50.07654	2387.068	1530.744	1055.128	2012.043	t
29a	90	38	40	1.582044	90	39	35	90.65972	0.659722	0.011514	0.011515	3466.602	39.91735	0	3466.383	-38.9904	0	2387.068	1501.082	1014.781	1994.8	4395.682
29b	90	38	40	1.582044	90	38	55	90.64861	0.648611	0.01132	0.011321	3466.602	39.245	0.67235	3466.383	-38.9904	0	5789.09	1501.082	1014.781	1994.8	t
29c	90	38	40	1.582044	89	58	25	89.97361	-0.02639	-0.00046	-0.00046	3466.602	-1.59662	41.51397	3466.383	-38.9904	3402.022	5789.09	1501.082	1014.781	1994.8	t
30a	31	36	15	0.551597	90	39	55	90.66528	0.665278	0.011611	0.011612	3437.651	39.91735	0	1801.494	2927.809	0	5789.09	-163.807	3981.581	2400.883	4448.053
30b	31	36	15	0.551597	90	38	45	90.64583	0.645833	0.011272	0.011272	3437.651	38.75056	1.166787	1801.494	2927.809	0	9415.373	-163.807	3981.581	2400.883	t
30c	31	36	15	0.551597	89	57	10	89.95278	-0.04722	-0.00082	-0.00082	3437.651	-2.83325	42.7506	1801.494	2927.809	3626.283	9466.948	-163.807	3981.581	2400.883	t
31a	95	20	35	1.66405	90	40	0	90.66667	0.666667	0.011636	0.011636	3430.488	39.91735	0	3415.583	-319.443	51.57576	9466.948	1450.282	734.3288	2047.17	4061.074
32a	95	35	50	1.668486	90	40	35	90.67639	0.676389	0.011805	0.011806	3381.175	39.91735	0	3365.054	-329.782	0	9509.358	1399.753	723.9901	2005.873	4019.777
32b	95	35	50	1.668486	90	26	25	90.44028	0.440278	0.007684	0.007684	3381.175	25.98246	13.93488	3365.054	-329.782	42.40929	9509.358	1399.753	723.9901	2005.873	t
33a	96	18	25	1.680873	90	40	40	90.67778	0.677778	0.011829	0.01183	3374.246	39.91735	0	3353.824	-370.677	0	9582.238	1388.523	683.0948	2013.904	4096.721
33b	96	18	25	1.680873	90	27	30	90.45833	0.458333	0.007999	0.008	3374.246	26.9926	12.92474	3353.824	-370.677	72.88005	9582.238	1388.523	683.0948	2013.904	t
34a	97	5	15	1.694497	90	40	0	90.66667	0.666667	0.011636	0.011636	3430.488	39.91735	0	3404.276	-423.271	0	9582.238	1438.975	630.5011	2082.817	4201.91
34b	97	5	15	1.694497	90	23	25	90.39028	0.390278	0.006812	0.006812	3430.488	23.36759	16.54976	3404.276	-423.271	0	9632.863	1438.975	630.5011	2082.817	t
34c	97	5	15	1.694497	90	16	20	90.27222	0.272222	0.004751	0.004751	3430.488	16.29897	23.61838	3404.276	-423.271	50.62503	9632.863	1438.975	630.5011	2082.817	t
35a	97	51	0	1.707805	90	39	45	90.6625	0.6625	0.011563	0.011563	3452.066	39.91735	0	3419.717	-471.484	0	9632.863	1454.416	582.2883	2119.093	4277.567
35b	97	51	0	1.707805	90	35	25	90.59028	0.590278	0.010302	0.010303	3452.066	35.56544	4.351903	3419.717	-471.484	0	9672.255	1454.416	582.2883	2119.093	t
35c	97	51	0	1.707805	90	25	5	90.41806	0.418056	0.007296	0.007297	3452.066	25.18826	14.72909	3419.717	-471.484	39.39217	9672.255	1454.416	582.2883	2119.093	t
36a	98	5	30	1.712023	90	39	20	90.65556	0.655556	0.011442	0.011442	3488.637	39.91735	0	3453.905	-491.051	0	9672.255	1488.604	562.7209	2158.475	4324.662
36b	98	5	30	1.712023	90	37	10	90.61944	0.619444	0.010811	0.010812	3488.637	37.71833	2.199013	3453.905	-491.051	0	9714.384	1488.604	562.7209	2158.475	t
36c	98	5	30	1.712023	90	15	0	90.25	0.25	0.004363	0.004363	3488.637	15.22215	24.6952	3453.905	-491.051	42.12897	9714.384	1488.604	562.7209	2158.475	t
37a	98	46	25	1.723925	90	39	25	90.65694	0.656944	0.011466	0.011466	3481.261	39.91735	0	3440.526	-530.999	0	9771.848	1475.226	522.7727	2166.187	4323.035
37b	98	46	25	1.723925	90	27	0	90.45	0.45	0.007854	0.007854	3481.261	27.34232	12.57502	3440.526	-530.999	57.46449	9771.848	1475.226	522.7727	2166.187	t
38a	99	35	30	1.738202	90	39	45	90.6625	0.6625	0.011563	0.011563	3452.066	39.91735	0	3403.807	-575.202	0	9771.848	1438.506	478.5702	2156.848	4313.695
38b	99	35	30	1.738202	90	39	20	90.65556	0.655556	0.011442	0.011442	3452.066	39.49889	0.418458	3403.807	-575.202	0	9771.848	1438.506	478.5702	2156.848	1
38c	99	35	30	1.738202	90	38	10	90.63611	0.636111	0.011102	0.011103	3452.066	38.32721	1.590133	3403.807	-575.202	0	9771.848	1438.506	478.5702	2156.848	2
38d	99	35	30	1.738202	90	36	15	90.60417	0.604167	0.010545	0.010545	3452.066	36.40234	3.515008	3403.807	-575.202	0	9771.848	1438.506	478.5702	2156.848	3
38e	99	35	30	1.738202	90	30	15	90.50417	0.504167	0.008799	0.0088	3452.066	30.37678	9.540565	3403.807	-575.202	0	9795.466	1438.506	478.5702	2156.848	4
38f	99	35	30	1.738202	90	21	20	90.35556	0.355556	0.006206	0.006206	3452.066	21.42247	18.49488	3403.807	-575.202	23.61789	9795.466	1438.506	478.5702	2156.848	t
39a	99	57	55	1.744723	90	39	50	90.66389	0.663889	0.011587	0.011588	3444.843	39.91735	0	3392.87	-596.135	0	9795.466	1427.57	457.6371	2158.431	4316.861
39b	99	57	55	1.744723	90	39	10	90.65278	0.652778	0.011393	0.011394	3444.843	39.24922	0.668131	3392.87	-596.135	0	9795.466	1427.57	457.6371	2158.431	1
39c	99	57	55	1.744723	90	38	25	90.64028	0.640278	0.011175	0.011175	3444.843	38.49757	1.419775	3392.87	-596.135	0	9795.466	1427.57	457.6371	2158.431	2
39d	99	57	55	1.744723	90	36	40	90.61111	0.611111	0.010666	0.010666	3444.843	36.74375	3.173597	3392.87	-596.135	0	9820.784	1427.57	457.6371	2158.431	3
39e	99	57	55	1.744723	90	19	20	90.32222	0.322222	0.005624	0.005624	3444.843	19.37345	20.5439	3392.87	-596.135	25.31774	9820.784	1427.57	457.6371	2158.431	t
40a	100	22	10	1.751777	90	39	55	90.66528	0.665278	0.011611	0.011612	3437.651	39.91735	0	3381.506	-618.759	0	9820.784	1416.205	435.0133	2160.815	4321.63
40b	100	22	10	1.751777	90	39	5	90.65139	0.651389	0.011369	0.011369	3437.651	39.08393	0.83342	3381.506	-618.759	0	9820.784	1416.205	435.0133	2160.815	1
40c	100	22	10	1.751777	90	37	45	90.62917	0.629167	0.010981	0.010981	3437.651	37.75046	2.166883	3381.506	-618.759	0	9820.784	1416.205	435.0133	2160.815	2
40d	100	22	10	1.751777	90	36	30	90.60833	0.608333	0.010617	0.010618	3437.651	36.50035	3.416994	3381.506	-618.759	0	9820.784	1416.205	435.0133	2160.815	3
40e	100	22	10	1.751777	90	34	40	90.57778	0.577778	0.010084	0.010084	3437.651	34.66687	5.250472	3381.506	-618.759	0	9851.138	1416.205	435.0133	2160.815	4
40f	100	22	10	1.751777	90	18	15	90.30417	0.304167	0.005309	0.005309	3437.651	18.24966	21.66768	3381.506	-618.759	30.35356	9851.138	1416.205	435.0133	2160.815	t
41a	100	49	0	1.759583	90	40	5	90.66806	0.													

42e	101	32	25	1.772212	90	20	35	90.34306	0.343056	0.005987	0.005988	3416.253	20.45488	19.46246	3347.191	-683.444	197.2857	10092.19	1381.89	370.3274	2167.745	t
43a	103	59	5	1.814876	90	41	50	90.69722	0.697222	0.012169	0.012169	3280.134	39.91735	0	3182.912	-792.688	0	10092.19	1217.611	261.0842	2101.694	4203.387
43b	103	59	5	1.814876	90	41	35	90.69306	0.693056	0.012096	0.012097	3280.134	39.67877	0.238573	3182.912	-792.688	0	10092.19	1217.611	261.0842	2101.694	1
43c	103	59	5	1.814876	90	40	20	90.67222	0.672222	0.011732	0.011733	3280.134	38.48591	1.431433	3182.912	-792.688	0	10092.19	1217.611	261.0842	2101.694	2
43d	103	59	5	1.814876	90	39	20	90.65556	0.655556	0.011442	0.011442	3280.134	37.53163	2.385714	3182.912	-792.688	0	10161.37	1217.611	261.0842	2101.694	3
43e	103	59	5	1.814876	90	28	20	90.47222	0.472222	0.008242	0.008242	3280.134	27.03493	12.88242	3182.912	-792.688	69.1758	10161.37	1217.611	261.0842	2101.694	t
44a	105	11	20	1.835892	90	41	55	90.69861	0.698611	0.012193	0.012194	3273.613	39.91735	0	3159.257	-857.693	0	10161.37	1193.956	196.0787	2125.6	4251.2
44b	105	11	20	1.835892	90	41	15	90.6875	0.6875	0.011999	0.012	3273.613	39.28242	0.63493	3159.257	-857.693	0	10161.37	1193.956	196.0787	2125.6	
44c	105	11	20	1.835892	90	39	15	90.65417	0.654167	0.011417	0.011418	3273.613	37.37765	2.539702	3159.257	-857.693	0	10161.37	1193.956	196.0787	2125.6	1
44d	105	11	20	1.835892	90	36	25	90.60694	0.606944	0.010593	0.010594	3273.613	34.67926	5.238085	3159.257	-857.693	0	10402.02	1193.956	196.0787	2125.6	2
44e	105	11	20	1.835892	90	18	25	90.30694	0.306944	0.005357	0.005357	3273.613	17.53754	22.37981	3159.257	-857.693	240.652	10402.02	1193.956	196.0787	2125.6	t
45a	105	51	40	1.847625	90	39	5	90.65139	0.651389	0.011369	0.011369	3510.955	39.91735	0	3377.282	-959.566	0	10402.02	1411.982	94.20548	2357.814	4713.175
45b	105	51	40	1.847625	90	35	30	90.59167	0.591667	0.010327	0.010327	3510.955	36.25727	3.660073	3377.282	-959.566	0	10433.54	1411.982	94.20548	2357.814	t
45c	105	51	40	1.847625	90	29	15	90.4875	0.4875	0.008508	0.008509	3510.955	29.87361	10.04374	3377.282	-959.566	31.52038	10433.54	1411.982	94.20548	2357.814	t
46a	106	18	55	1.855552	90	39	15	90.65417	0.654167	0.011417	0.011418	3496.045	39.91735	0	3355.261	-982.118	0	10433.54	1389.96	71.65369	2355.362	4710.723
46b	106	18	55	1.855552	90	38	35	90.64306	0.643056	0.011223	0.011224	3496.045	39.23929	0.678059	3355.261	-982.118	0	10433.54	1389.96	71.65369	2355.362	1
46c	106	18	55	1.855552	90	35	25	90.59028	0.590278	0.010302	0.010303	3496.045	36.01855	3.8988	3355.261	-982.118	0	10433.54	1389.96	71.65369	2355.362	2
46d	106	18	55	1.855552	90	34	0	90.56667	0.566667	0.00989	0.009891	3496.045	34.57771	5.339638	3355.261	-982.118	0	10599.05	1389.96	71.65369	2355.362	3
46e	106	18	55	1.855552	90	31	35	90.52639	0.526389	0.009187	0.009187	3496.045	32.11984	7.797511	3355.261	-982.118	165.5047	10599.05	1389.96	71.65369	2355.362	t
47a	106	45	35	1.863309	90	37	30	90.625	0.625	0.010908	0.010909	3659.208	39.91735	0	3503.773	-1055.16	0	10599.05	1538.473	-1.39269	2516.237	5032.474
47b	106	45	35	1.863309	90	36	45	90.6125	0.6125	0.01069	0.010691	3659.208	39.11894	0.798408	3503.773	-1055.16	0	10599.05	1538.473	-1.39269	2516.237	
47c	106	45	35	1.863309	90	35	10	90.58611	0.586111	0.01023	0.01023	3659.208	37.43342	2.483925	3503.773	-1055.16	0	10599.05	1538.473	-1.39269	2516.237	1
47d	106	45	35	1.863309	90	33	35	90.55972	0.559722	0.009769	0.009769	3659.208	35.74792	4.169426	3503.773	-1055.16	0	10599.05	1538.473	-1.39269	2516.237	2
47e	106	45	35	1.863309	90	31	10	90.51944	0.519444	0.009066	0.009066	3659.208	33.17534	6.742003	3503.773	-1055.16	0	11162.33	1538.473	-1.39269	2516.237	
47f	106	45	35	1.863309	90	6	20	90.10556	0.105556	0.001842	0.001842	3659.208	6.741337	33.17601	3503.773	-1055.16	563.2816	11162.33	1538.473	-1.39269	2516.237	t
48a	107	1	15	1.867866	90	32	30	90.54167	0.541667	0.009454	0.009454	4222.204	39.91735	0	4037.265	-1235.92	0	11162.33	2071.964	-182.149	3049.93	6099.859
48b	107	1	15	1.867866	90	31	55	90.53194	0.531944	0.009284	0.009284	4222.204	39.20084	0.716507	4037.265	-1235.92	0	11162.33	2071.964	-182.149	3049.93	1
48c	107	1	15	1.867866	90	29	45	90.49583	0.495833	0.008654	0.008654	4222.204	36.53955	3.377798	4037.265	-1235.92	0	11162.33	2071.964	-182.149	3049.93	
48d	107	1	15	1.867866	90	28	25	90.47361	0.473611	0.008266	0.008266	4222.204	34.90185	5.015501	4037.265	-1235.92	0	11162.33	2071.964	-182.149	3049.93	2
48e	107	1	15	1.867866	90	27	0	90.45	0.45	0.007854	0.007854	4222.204	33.1618	6.755549	4037.265	-1235.92	0	11162.33	2071.964	-182.149	3049.93	
48f	107	1	15	1.867866	90	25	25	90.42361	0.423611	0.007393	0.007394	4222.204	31.21705	8.700296	4037.265	-1235.92	0	11162.33	2071.964	-182.149	3049.93	3
48g	107	1	15	1.867866	90	21	55	90.36528	0.365278	0.006375	0.006375	4222.204	26.91818	12.99916	4037.265	-1235.92	0	11162.33	2071.964	-182.149	3049.93	
48h	107	1	15	1.867866	90	18	25	90.30694	0.306944	0.005357	0.005357	4222.204	22.61937	17.29797	4037.265	-1235.92	0	11213.29	2071.964	-182.149	3049.93	4
48i	107	1	15	1.867866	90	8	15	90.1375	0.1375	0.0024	0.0024	4222.204	10.13258	29.78476	4037.265	-1235.92	50.96486	11213.29	2071.964	-182.149	3049.93	t
49a	107	22	25	1.874023	90	32	10	90.53611	0.536111	0.009357	0.009357	4265.96	39.91735	0	4071.339	-1273.82	0	11213.29	2106.038	-220.049	3099.716	6225.064
49b	107	22	25	1.874023	90	31	30	90.525	0.525	0.009163	0.009163	4265.96	39.09	0.827349	4071.339	-1273.82	0	11239.78	2106.038	-220.049	3099.716	
49c	107	22	25	1.874023	90	7	5	90.11806	0.118056	0.00206	0.00206	4265.96	8.789845	31.1275	4071.339	-1273.82	26.48411	11239.78	2106.038	-220.049	3099.716	t
50a	107	34	0	1.877392	90	32	0	90.53333	0.533333	0.009308	0.009309	4288.18	39.91735	0	4088.207	-1294.24	0	11239.78	2122.906	-240.467	3125.348	6250.696
50b	107	34	0	1.877392	90	30	45	90.5125	0.5125	0.008945	0.008945	4288.18	38.35799	1.559356	4088.207	-1294.24	0	11239.78	2122.906	-240.467	3125.348	
50c	107	34	0	1.877392	90	28	55	90.48194	0.481944	0.008412	0.008412	4288.18	36.07095	3.846394	4088.207	-1294.24	0	11239.78	2122.906	-240.467	3125.348	1
50d	107	34	0	1.877392	90	27	30	90.45833	0.458333	0.007999	0.008	4288.18	34.30371	5.613636	4088.207	-1294.24	0	11239.78	2122.906	-240.467	3125.348	
50e	107	34	0	1.877392	90	26	25	90.44028	0.440278	0.007684	0.007684	4288.18	32.9523	6.965049	4088.207	-1294.24	0	11239.78	2122.906	-240.467	3125.348	2
50f	107	34	0	1.877392	90	24	20	90.40556	0.405556	0.007078	0.007078	4288.18	30.35345	9.563901	4088.207	-1294.24	0	11239.78	2122.906	-240.467	3125.348	
50g	107	34	0	1.877392	90	21	35	90.35972	0.359722	0.006278	0.006278	4288.18	26.92299	12.99435	4088.207	-1294.24	0	11256.63	2122.906	-240.467	3125.348	3
50h	107	34	0	1.877392	90	15	55	90.26528	0.265278	0.00463	0.00463	4288.18	19.85429	20.06306	4088.207	-1294.24	16.85184	11256.63	2122.906	-240.467	3125.348	t
51a	107	44	5	1.880326	90	31	55	90.53194	0.531944	0.009284	0.009284	4299.377	39.91735	0	4095.058	-1309.63	0	11256.63	2129.757	-255.863	3139.94	6279.881
51b	107	44	5	1.880326	90	28	55	90.48194	0.481944	0.008412	0.008412	4299.377	36.16514	3.752208	4095.058	-1309.63	0	11256.63	2129.757	-255.863	3139.94	
51c	107	44	5	1.880326	90	26	30	90.44167	0.441667	0.007709	0.007709	4299.377	33.14257	6.77478	4095.058	-1309.63	0	11256.63	2129.757	-255.863	3139.94	1
51d	107	44	5	1.880326	90	24	45	90.4125	0.4125	0.007199	0.0072	4299.377	30.95383	8.963519	4095.058	-1309.63	0	11256.63	2129.757	-255.863	3139.94	
51e	107	44	5	1.880326	90	23	0	90.38333	0.383333	0.00669	0.006691	4299.377	28.76511	11.15224	4095.058	-1309.63						