

Appendix E: Sample Output Analysis of the ITPM

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Table E.1 Comparison Between On-Board Observation Data and Model Output.

Data # 1 Vs. Simulat on output			Data # 2 Vs. Simulat on output			Data # 3 Vs. Simulat on output			Data # 4 Vs. Simulat on output		
time(1)	data1	sim.out	time(2)	data2	sim.out	time(3)	data3	sim.out	time(4)	data4	sim.out
50	203.9	134.2	47	203.8	124.1	37	203.9	124.1	126	379.7	795.5
123	726.2	795.5	87	379.7	475.5	80	379.0	389.0	156	726.2	931.3
236	1599.3	1567.0	107	726.2	743.0	101	726.5	715.5	397	1599.3	2867.5
248	1740.8	1651.3	303	1740.8	2063.2	215	1599.3	1483.3	409	1740.8	2867.5
330	2559.2	2178.5	326	1941.1	2124.3	231	1740.8	1523.2	477	2337.9	3110.4
396	2958.2	2867.5	343	2058.1	2344.0	256	1941.1	1741.8	545	3103.3	3530.9
417	3103.3	2867.5	387	2337.9	2859.2	310	2337.9	2098.6	678	4377.8	4634.2
476	3529.2	3109.7	417	2559.2	2867.5	349	2559.2	2383.4	734	4711.5	4714.6
493	3687.6	3151.4	477	2958.2	3110.4	436	2958.2	2867.5	962	5164.5	5235.2
558	4377.8	3666.2	501	3103.3	3151.4	463	3103.3	2979.7	993	5446.7	5454.7
614	4711.5	4336.9	692	4377.8	4714.6	530	3349.9	3370.7	1080	6097.4	6016.0
951	5164.5	5235.2	746	4711.5	4714.6	559	3687.6	3677.1	1113	6223.5	6233.9
991	5446.7	5453.0	921	5164.5	4986.6	656	4377.8	4607.7	1177	6411.8	6255.0
1083	6097.4	6046.7	1002	5446.7	5543.3	710	4711.5	4714.6	1268	6837.8	6446.0
1169	6411.8	6255.0	1056	5894.6	5872.1	1057	5446.7	5882.2	1300	7055.6	6783.9
1216	6837.8	6255.0	1096	6097.4	6095.8	1162	6097.4	6255.0	1369	7978.9	7546.1
1234	7055.6	6413.6	1184	6411.8	6255.0	1298	6411.8	6753.8	1387	8162.1	7603.5
1244	7413.8	6446.0	1283	7055.6	6601.9	1362	6606.7	7461.8	1446	8458.3	8163.7
1284	7978.9	6610.9	1365	7978.9	7502.4	1375	6837.8	7568.3	1483	8765.7	8461.8
1304	8162.1	6832.0	1512	8765.7	8773.7	1403	7055.6	7841.1	1866	9109.9	9123.5
1420	8765.7	7911.4	1877	9109.9	9171.6	1419	7413.8	7899.1	2029	10052.8	10137.1
1870	9109.9	9130.1	2028	10052.8	10137.1	1524	7978.9	8773.7	2100	10602.4	10251.7
1977	10052.8	9580.7	2205	10602.4	11212.6	1599	8458.3	8773.7	2235	11466.2	11512.4
2057	10602.4	10137.1	2324	11466.2	11660.3	1633	8765.7	8773.7	2273	11651.7	11660.3
2197	11466.2	11082.2	2374	11651.7	11660.3	1869	9109.9	9127.3	2478	12234.3	12047.3
2233	11651.7	11501.2	2485	12234.3	12065.7	1982	10052.8	9644.4	2587	12996.8	12809.3
2481	12234.3	12065.7	2560	12509.0	12536.9	2099	10602.4	10239.0	2596	13134.1	12951.1
2502	12331.4	12228.2	2648	13751.1	13337.7	2219	11466.2	11440.4	2615	13326.2	13117.4
2512	12509.0	12264.3	2697	14180.9	13865.4	2267	11651.7	11660.3	2648	13751.1	13337.7
2587	13134.1	12809.3	2724	14621.1	14054.4	2502	12331.4	12228.2	2682	14180.9	13764.1
2597	13221.4	12964.4	2779	14813.4	14625.9	2517	12509.0	12269.5	2708	14621.1	13935.3
2607	13326.2	13025.6	2874	15433.3	15112.3	2545	12744.7	12473.2	2769	14813.4	14577.7
2636	13751.1	13237.4	2902	15682.8	15301.5	2567	13134.1	12622.7	2807	15075.6	14687.1
2700	14180.9	13869.6	2930	15955.5	15442.5	2577	13221.4	12753.2	2872	15433.3	15097.7
2723	14621.1	14037.9	3482	18130.0	17633.1	2586	13326.2	12797.8	2903	15682.8	15306.9
2768	14813.4	14577.7	3525	18381.5	18069.2	2629	13751.1	13209.5	2943	15955.5	15578.0
2798	15075.6	14687.1	3605	19088.8	18412.4	2686	14180.9	13776.4	3381	16426.7	16318.1
2886	15433.3	15247.6	3699	19516.2	19530.0	2705	14621.1	13908.0	3408	16797.9	16628.1
2944	15955.5	15594.1	3956	19788.4	19818.6	2775	14813.4	14592.7	3449	17773.1	17242.4
3390	16426.7	16437.1	4138	20744.3	21796.9	2805	15075.6	14687.1	3485	18130.0	17686.0
3402	16797.9	16518.4	4148	20936.8	22023.3	2887	15433.3	15247.6	3526	18381.5	18074.7
3456	17773.1	17342.4	4165	21199.9	22181.9	2939	15955.5	15510.7	3590	19088.8	18408.4
3491	18130.0	17764.9	4187	21552.4	22510.2	3413	16426.7	16718.5	3658	19516.2	19168.9
3538	18381.5	18150.0	4229	22490.0	22857.1	3441	16797.9	17068.1	3979	19788.4	19818.6

Data # 1 Vs. Simulation output			Data # 2 Vs. Simulation output			Data # 3 Vs. Simulation output			Data # 4 Vs. Simulation output		
time(1)	data1	sim.out	time(2)	data2	sim.out	time(3)	data3	sim.out	time(4)	data4	sim.out
3602	19088.8	18408.4	4321	23061.3	23079.5	3455	17373.6	17331.1	4114	20936.8	21524.7
3693	19516.2	19473.6	4525	23184.9	23232.1	3481	17773.1	17613.5	4128	21199.9	21614.9
3980	19788.4	19818.6	4563	23517.4	23570.5	3513	18130.0	18000.6	4154	21552.4	22114.5
4140	20744.3	21845.7	4658	24088.7	24209.1	3559	18381.5	18322.4	4173	22121.1	22318.5
4160	20936.8	22143.0	4719	24373.2	24554.9	3618	19088.8	18588.1	4209	22490.0	22706.2
4179	21199.9	22424.7	4727	24572.2	24596.5	3694	19516.2	19485.5	4317	23061.3	23079.5
4201	21552.4	22630.9	4741	24779.4	24754.7	3928	19788.4	19763.7	4523	23184.9	23218.4
4212	22121.1	22706.2	4770	25169.3	25017.0	4032	20744.3	20761.3	4553	23517.4	23557.3
4317	23061.3	23079.5	4786	25428.0	25080.4	4043	20936.8	20839.1	4585	23630.0	23674.9
4525	23184.9	23232.1	4805	25600.7	25181.6	4059	21199.9	20918.9	4600	23725.3	23722.5
4553	23517.4	23557.3	4829	25783.5	25424.3	4079	21552.4	21094.3	4620	23903.7	23884.2
4595	23630.0	23721.1	4835	25913.5	25451.1	4091	22121.1	21219.0	4641	24088.7	24076.8
4625	23725.3	23927.0	4848	26044.6	25588.1	4121	23061.3	21568.7	4670	24244.7	24274.4
4643	23903.7	24094.5	4868	26183.0	25766.7	4618	24088.7	23856.8	4722	24572.2	24580.8
4661	24088.7	24239.7	4875	26363.3	25806.5	4633	24244.7	23973.3	4740	24779.4	24742.2
4751	24779.4	24814.3	4885	26441.7	25901.6	4661	24572.2	24239.7	4787	25169.3	25090.3
4795	25169.3	25108.4	4938	26510.1	26330.6	4693	24779.4	24316.9	4810	25428.0	25196.1
4817	25428.0	25253.8				4743	25169.3	24776.8	4838	25600.7	25465.9
4859	25783.5	25650.6				4760	25428.0	24920.7	4853	25783.5	25623.5
4867	25913.5	25755.1				4779	25600.7	25021.2	4864	25913.5	25714.4
4889	26183.0	25939.3				4802	25783.5	25158.3	4888	26044.6	25931.4
4933	26510.1	26262.5				4813	25913.5	25211.9	4902	26183.0	26036.3
4973	26751.8	26538.3				4834	26044.6	25449.0	4911	26363.3	26082.8
5002	27058.6	26771.7				4852	26183.0	25623.5	4921	26441.7	26189.4
						4868	26363.3	25766.7	4947	26510.1	26385.6
						4885	26441.7	25901.6	4999	26751.8	26751.2
						4904	26751.8	26056.8			
						5010	27366.1	26809.3			

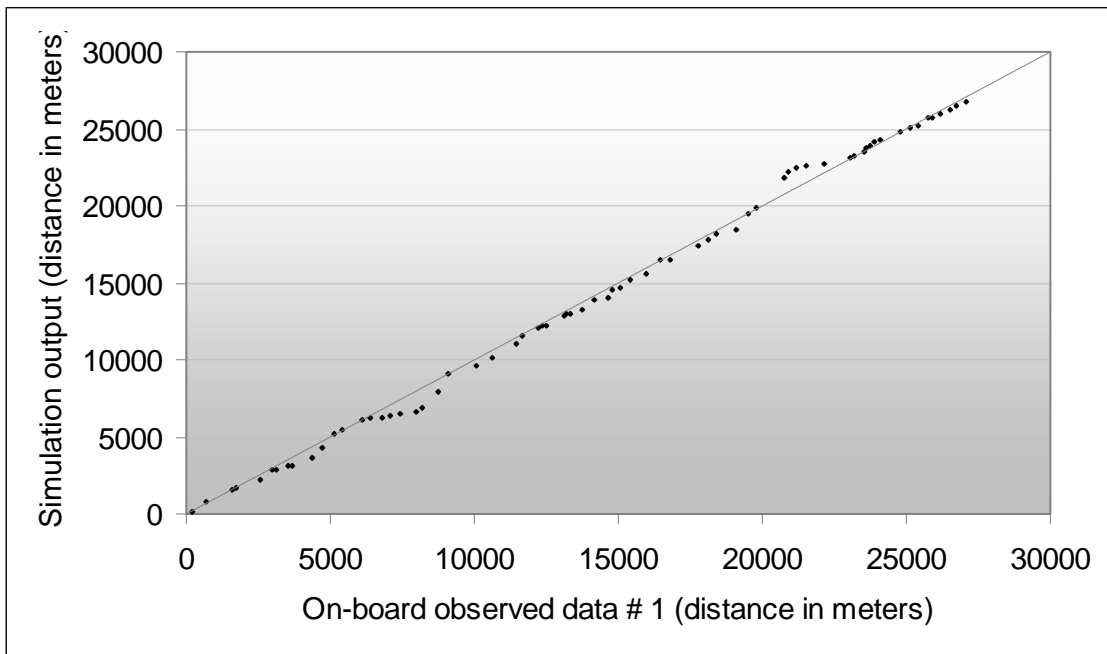


Figure E.1 Correlation Between Data Set # 1 and the Simulation Output.

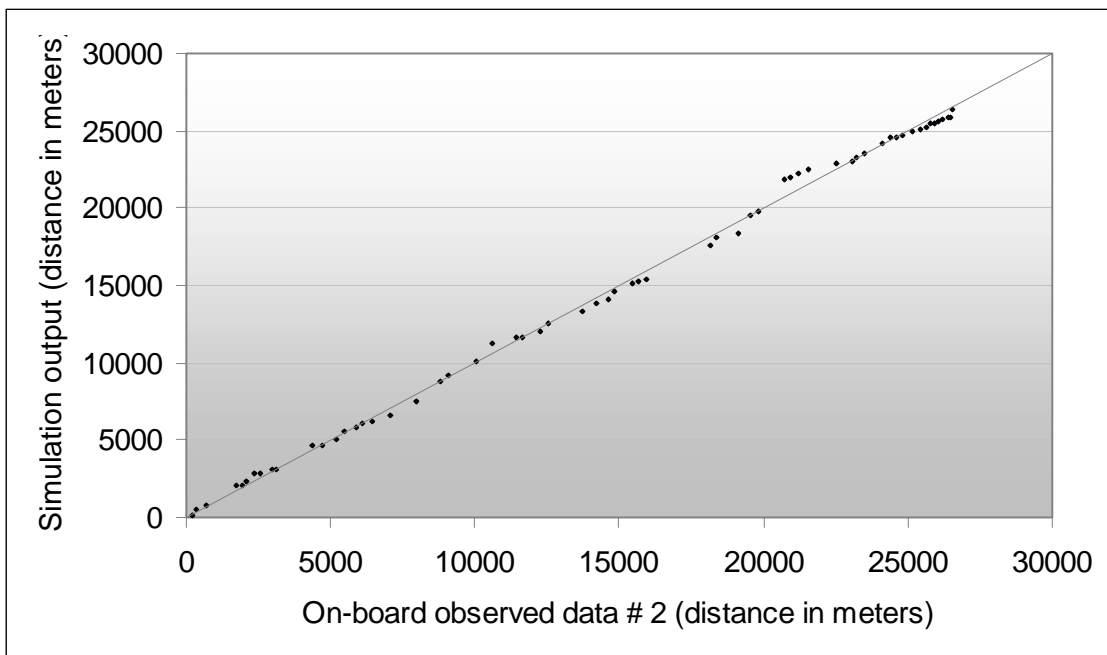


Figure E.2 Correlation Between Data Set # 2 and the Simulation Output.

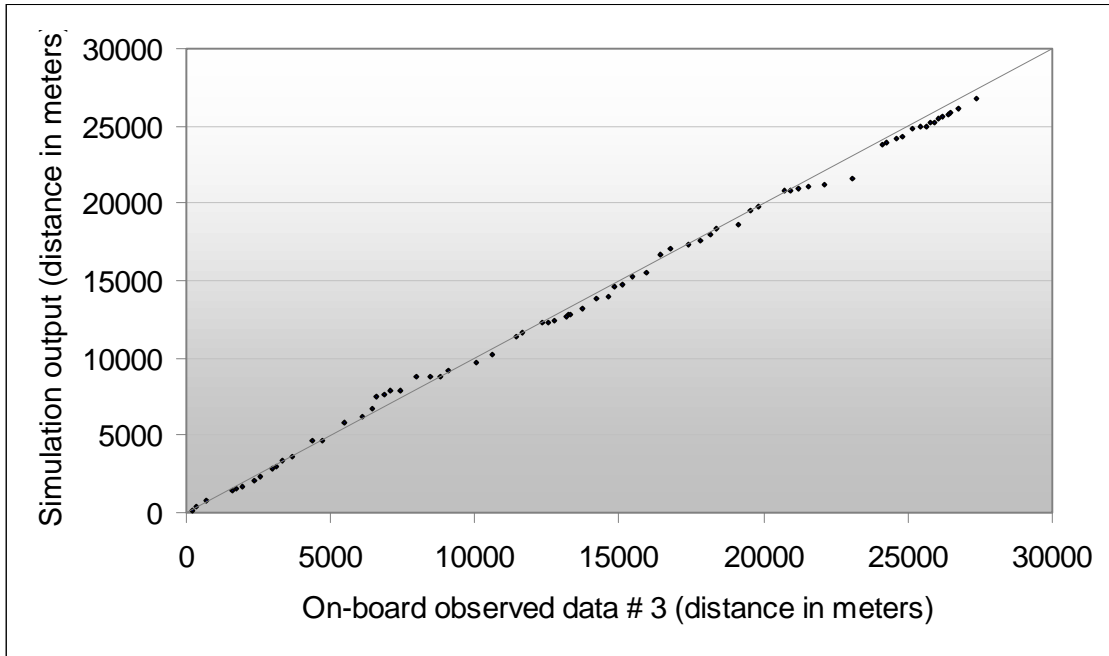


Figure E.3 Correlation Between Data Set # 3 and the Simulation Output.

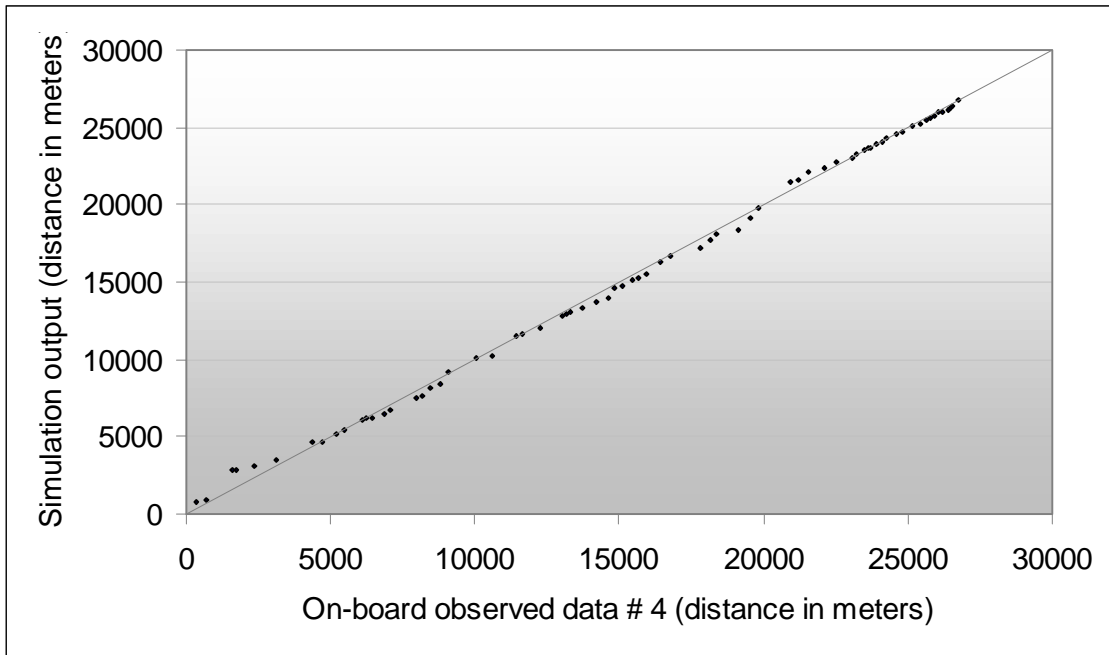


Figure E.4 Correlation Between Data Set # 4 and the Simulation Output.

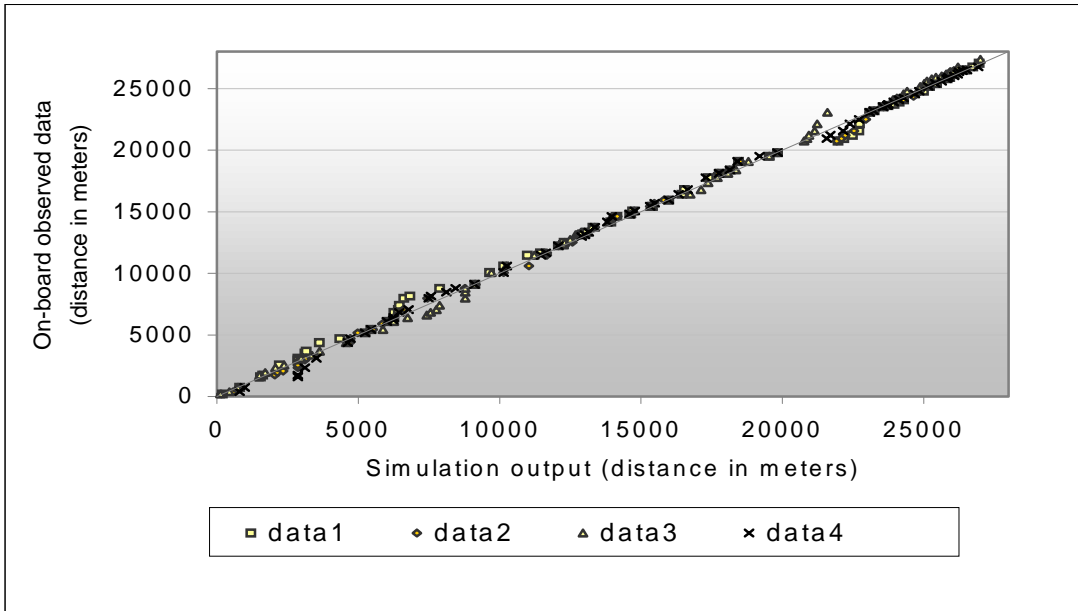


Figure E.5 Correlation Between Data and the Simulation Output (Route 1).

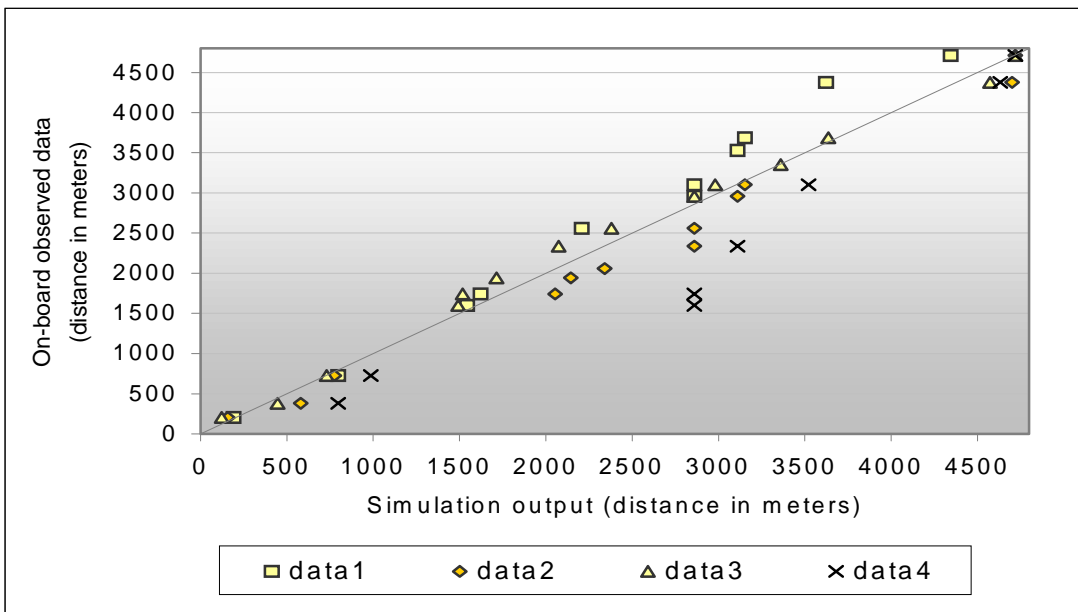


Figure E.6 Correlation Between Data and the Simulation Output (Section1).

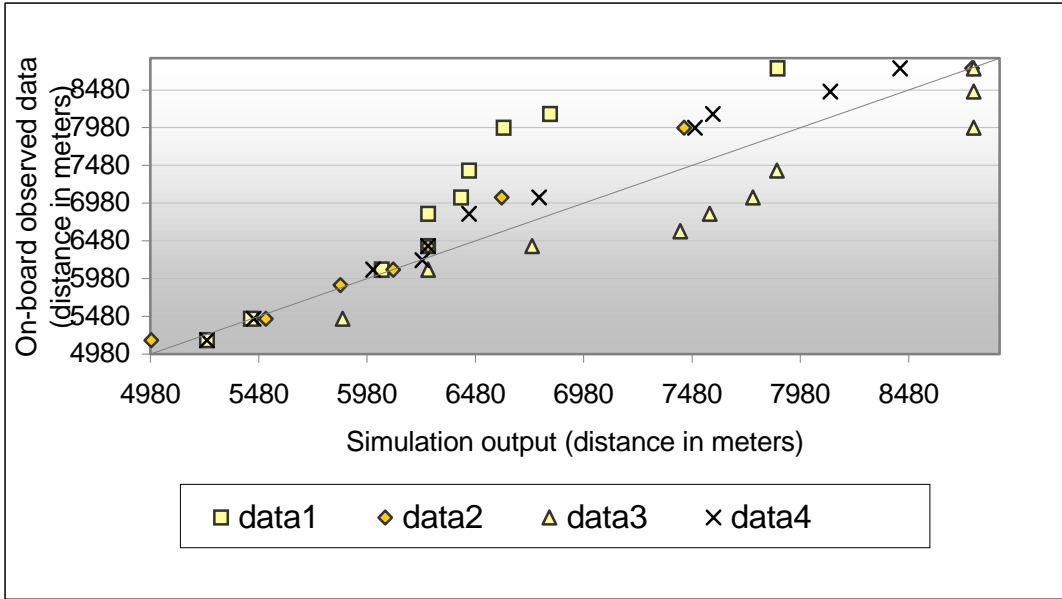


Figure E.7 Correlation Between Data and the Simulation Output (Section2).

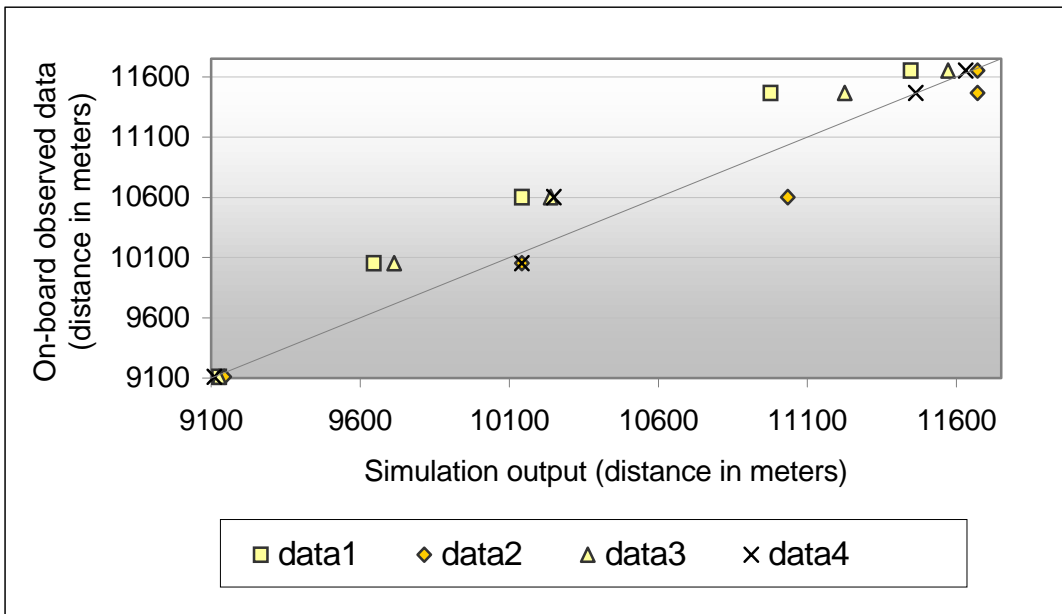


Figure E.8 Correlation Between Data and the Simulation Output (Section3).

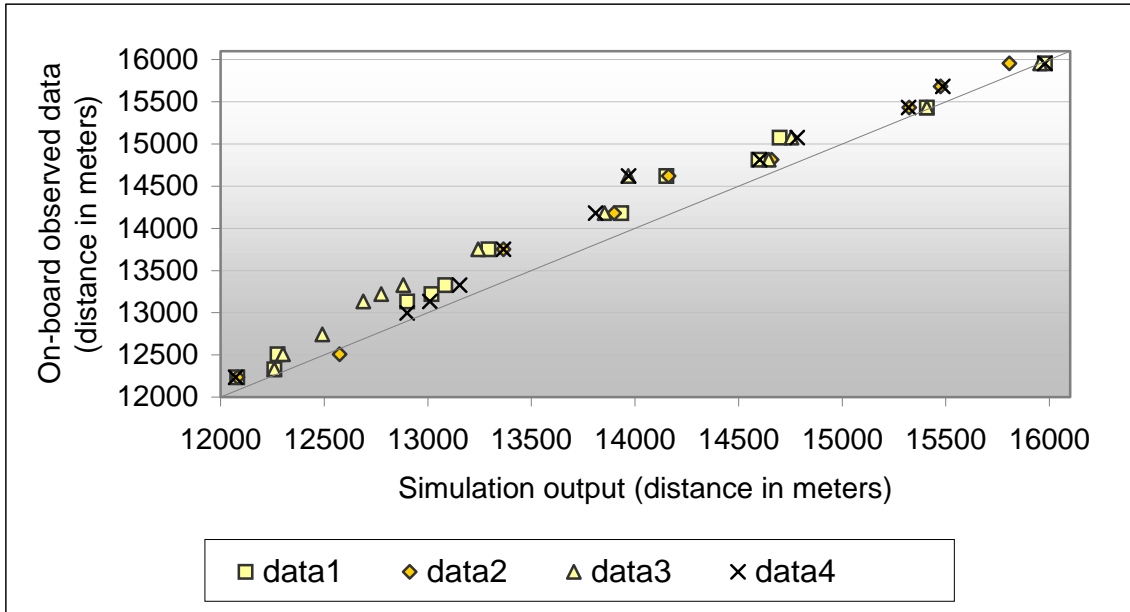


Figure E.9 Correlation Between Data and the Simulation Output (Section4).

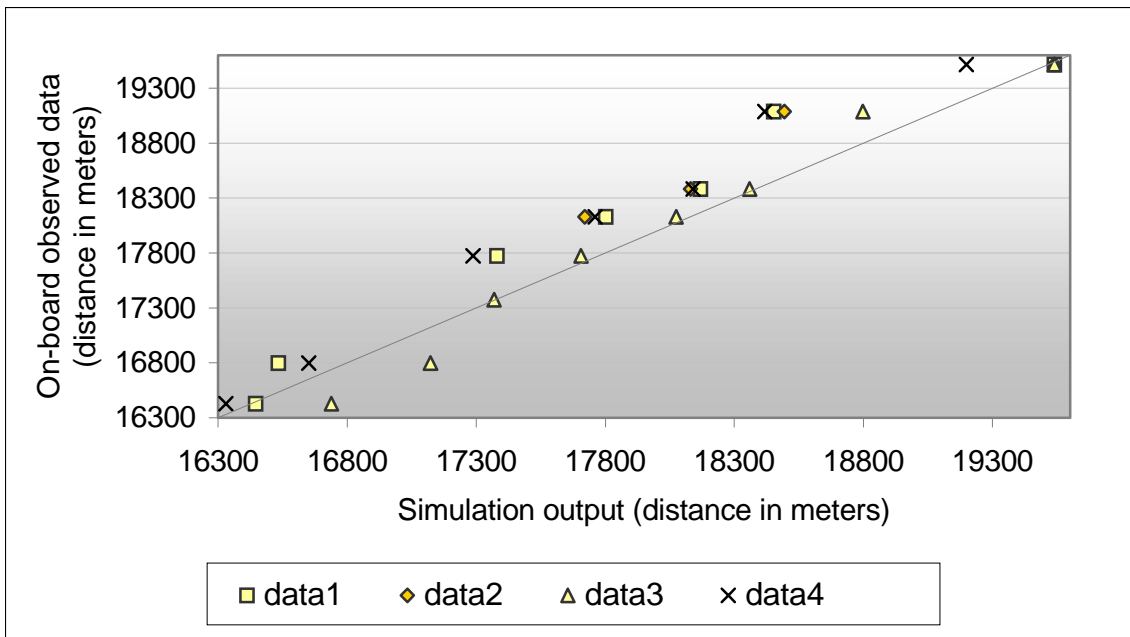


Figure E.10 Correlation Between Data and the Simulation Output (Section 5).

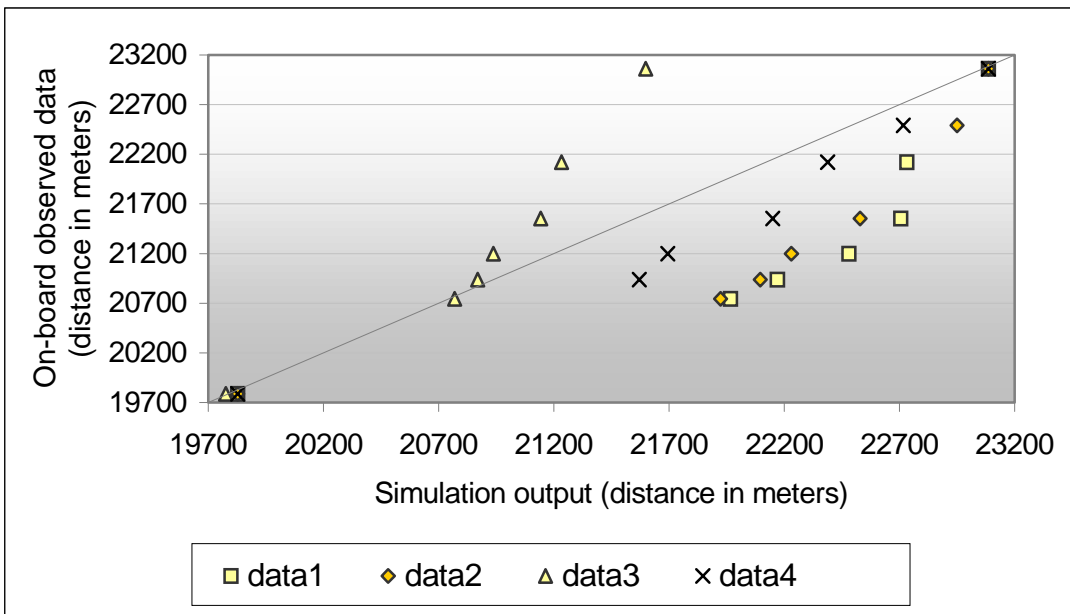


Figure E.11 Correlation Between Data and the Simulation Output (Section6).

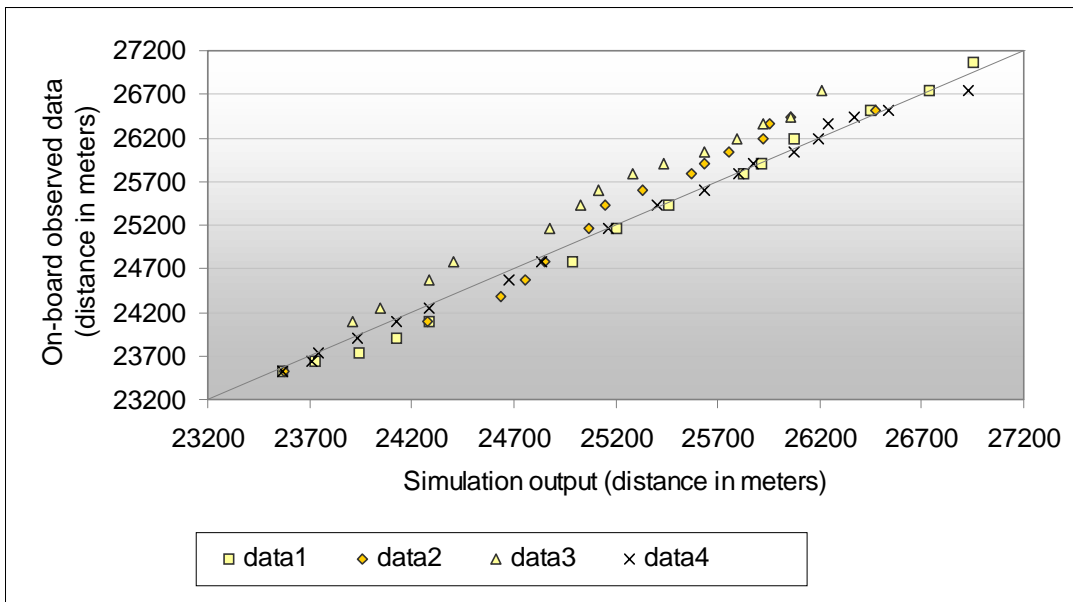


Figure E.12 Correlation Between Data and the Simulation Output (Section 7).