

Appendix B:

Readings for Current Experiments

Run 1

Average Velocities						
Full Width						
No Vegetation						
Chainage 5m						
y	Vx	Vy		V	Angle	Perpendicular
373	-14.77	-1.13		0.15	4.374973	-0.007
400	-16.21	-1.08		0.16	3.811729	-0.006
500	-16.95	-1.08		0.17	3.645776	-0.006
600	-15.13	-1.50		0.15	5.661847	-0.010
700	-16.79	-1.26		0.17	4.291698	-0.007
800	-17.17	-1.14		0.17	3.798571	-0.006
900	-17.50	-1.18		0.18	3.857533	-0.006
1000	-16.94	-1.37		0.17	4.623657	-0.009
1100	-17.29	-1.53		0.17	5.056958	-0.010
1200	-17.16	-1.21		0.17	4.033411	-0.007
1300	-17.39	-0.98		0.17	3.225448	-0.005
1400	-17.59	-0.87		0.18	2.831537	-0.003
1500	-17.40	0.72		0.17	-2.369508	0.012
1600	-16.48	-0.79		0.16	2.744481	-0.003
1700	-17.01	-0.78		0.17	2.625481	-0.003
1799	-17.19	-0.61		0.17	2.032331	-0.001
1899	-18.20	-0.75		0.18	2.359755	-0.002
1995	-18.38	-0.70		0.18	2.181048	-0.001
2035	-18.24	-0.61		0.18	1.915428	-0.001
2060	-18.14	-0.62		0.18	1.957528	-0.001
2085	-2.97	0.00		0.03	0	0.001
Chainage 5m Additional Measurements						
373	-16.19	-0.73		0.16	2.581693	-0.002
600	-15.62	-1.12		0.16	4.101257	-0.006
1800	-17.06	-0.80		0.17	2.684822	-0.003
1850	-17.99	-0.71		0.18	2.260084	-0.002
1900	-18.28	-0.71		0.18	2.224265	-0.002
1950	-18.35	-0.64		0.18	1.997517	-0.001
2000	-18.31	-0.66		0.18	2.064383	-0.001
2050	-16.43	-0.58		0.16	2.021775	-0.001
2060	-17.57	-0.69		0.18	2.248935	-0.002
2065	-16.92	-0.35		0.17	1.185027	0.002
2070	-14.84	-0.28		0.15	1.080924	0.002
2074	-16.08	-0.08		0.16	0.285051	0.004
2078	-14.89	-0.21		0.15	0.808013	0.002
2082	-15.67	-0.21		0.16	0.767798	0.003
2084	-14.54	-0.10		0.15	0.39405	0.003
2086	-15.34	0.00		0.15	0	0.005
2088	-2.83	-0.01		0.03	0.202458	0.001
2090	-13.90	0.23		0.14	-0.947973	0.007
2092	-13.06	-0.26		0.13	1.1405	0.001
Chainage 10m						
800	-14.71	-0.48		0.15	1.868948	
1200	-16.09	-0.68		0.16	2.42001	
1300	-15.93	-0.39		0.16	1.402441	
1500	-11.99	-0.39		0.12	1.863009	
1600	-13.06	-0.23		0.13	1.008933	
1700	-13.12	-0.57		0.13	2.487658	
1800	-11.02	-0.47		0.11	2.442169	
1900	-13.25	-0.13		0.13	0.562129	
2000	-13.93	0.06		0.14	-0.246786	
2025	-3.77	-0.32		0.04	4.851673	
2050	-13.38	-0.37		0.13	1.584009	
2060	-12.51	0.11		0.13	-0.503787	
2070	-11.87	0.20		0.12	-0.965297	
2075	-10.83	0.47		0.11	-2.484961	
2080	-11.56	0.19		0.12	-0.941628	
2084	-10.58	0.03		0.11	-0.162464	
2086	-11.65	0.18		0.12	-0.885186	
2088	-1.89	0.02		0.02	-0.606282	
2090	-9.51	-0.12		0.10	0.722937	
2092	-9.66	0.01		0.10	-0.059312	
376	-12.78	-0.27		0.13	1.210294	
480	-14.22	-0.25		0.14	1.007206	
600	-14.66	-0.14		0.15	0.547146	
1000	-13.92	-0.41		0.14	1.687103	

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Chainage 5m with 2 bricks removed					
1500	-16.91	-0.36	0.17	1.219596	
1600	-16.84	-0.51	0.17	1.734675	
1700	-18.15	-0.72	0.18	2.271699	
1800	-18.53	-0.58	0.19	1.792807	
1900	-19.60	-0.69	0.20	2.016213	
1950	-19.74	-0.74	0.20	2.146861	
1400	-16.87	-0.55	0.17	1.86731	
1300	-16.44	-0.42	0.16	1.463442	
Ch 5m All bricks removed					
1300	-17.17	-0.95	0.17	3.166893	-0.004
1400	-17.39	-0.92	0.17	3.028351	-0.004
1500	-17.28	-0.67	0.17	2.220425	-0.001
1600	-16.15	-0.88	0.16	3.118915	-0.004
1700	-16.63	-0.91	0.17	3.132123	-0.004
1800	-17.85	-0.82	0.18	2.630226	-0.003
1900	-18.24	-0.77	0.18	2.417301	-0.002
1950	-18.10	-0.64	0.18	2.025084	-0.001
Ch 2m					
375	-15.01	-1.04	0.15	3.963526	
500	-15.60	-0.68	0.16	2.495928	
700	-16.22	-0.34	0.16	1.200845	
900	-16.46	-0.63	0.16	2.191903	
1100	-16.32	-0.99	0.16	3.471409	
1300	-15.90	-1.15	0.16	4.136831	
1500	-15.98	-0.52	0.16	1.863786	
1600	-15.94	-0.17	0.16	0.611036	
1700	-16.36	-0.40	0.16	1.400596	
1800	-16.41	-0.17	0.16	0.593537	
1900	-16.28	-0.36	0.16	1.266776	
1950	-16.19	-0.23	0.16	0.813906	
2000	-17.07	-0.29	0.17	0.973297	
2050	-15.53	-0.30	0.16	1.106671	
2095	-10.41	-0.12	0.10	0.660441	
2070	-15.97	-0.11	0.16	0.394642	
2030	-16.28	-0.29	0.16	1.020517	
2040	-14.90	-0.57	0.15	2.190784	
2045	-15.99	-0.39	0.16	1.397181	
2055	-16.50	-0.33	0.17	1.145763	
2060	-16.50	-0.26	0.17	0.902768	
2010	-16.07	-0.28	0.16	0.998208	
2000	-16.57	-0.29	0.17	1.00266	
1990	-16.70	-0.21	0.17	0.720448	
AVERAGE (°)				1.743708	
AVERAGE (rad)				0.030433	
Ch 8m					
2095	-8.82	-0.26	0.09	1.688502	
2050	-15.38	-0.45	0.15	1.675926	
2000	-14.41	-0.42	0.14	1.669495	
1950	-14.46	0.39	0.14	-1.544947	
1900	-15.62	-0.28	0.16	1.026959	
1800	-15.39	-0.34	0.15	1.265588	
1700	-16.32	-0.43	0.16	1.509282	
1600	-15.72	-0.69	0.16	2.513278	
1500	-17.40	-0.12	0.17	0.395137	
1400	-17.49	-0.23	0.17	0.753417	
1300	-17.31	-0.29	0.17	0.959805	
1200	-18.15	-0.22	0.18	0.69446	
1100	-17.05	-0.25	0.17	0.840054	
1000	-17.52	-0.48	0.18	1.569355	
900	-17.77	-0.48	0.18	1.547287	
800	-15.74	-0.26	0.16	0.94635	
700	-14.83	-0.14	0.15	0.540875	
600	-10.96	-0.68	0.11	3.550297	
500	-10.89	-0.90	0.11	4.724452	
400	-7.17	-0.20	0.07	1.597794	
375	-7.83	-0.94	0.08	6.845659	

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Ch 6m						
2090	-13.09	-0.06		0.13	0.262622	
2050	-16.53	-0.52		0.17	1.801814	
2000	-17.80	-0.59		0.18	1.898435	
1950	-19.54	-0.46		0.20	1.348577	
1900	-19.66	-0.71		0.20	2.068277	
1800	-20.03	-0.86		0.20	2.458518	
1700	-20.43	-1.13		0.20	3.165851	
1600	-21.31	-1.35		0.21	3.624875	
1500	-21.54	-1.05		0.22	2.790761	
1400	-21.32	-0.47		0.21	1.262883	
1300	-20.77	-0.43		0.21	1.186021	
1200	-18.98	-0.84		0.19	2.534092	
1100	-20.73	-0.73		0.21	2.016818	
1000	-18.73	-1.16		0.19	3.543957	
900	-19.80	-0.70		0.20	2.024765	
800	-20.20	-0.77		0.20	2.18299	
700	-20.80	-1.08		0.21	2.972304	
600	-21.33	-1.17		0.21	3.13966	
500	-20.95	-1.43		0.21	3.904825	
400	-21.68	-1.50		0.22	3.957884	
375	-20.44	-1.88		0.21	5.255081	

Appendix B:

Readings for Current Experiments

Run 1

[illegible]

Appendix B:

Readings for Current Experiments

Run 2

Flume Width:	Full												
Vegetation:	No Veg												
Chainage	9.98m	Vert. Gap:	10.2	mm	Lateral Dist between Propeller and ADV sample vol:					147	mm	(measured 23 Apr)	
Date:	25-May-05	Temp:	16.7	°C									
Gate Position (mm)		1020											
Time			8:30	10:36									
Q_pipe-min	(m3/h)			112.5									
Q_pipe-max	(m3/h)			114.3				Average					
Q_pipe-min	(m3/s)			0.031 3				0.031 5					
Q_pipe-max	(m3/s)			0.031 8									
V-notch	(mm)			220.3									
V-notch	(m3/s)			0.033 0				0.033 0					
Ch. 10m L0.7	Lateral Pos:	Bottom	0										
		Peak	-62.81										
	mm	Continuous	-61.21										
		Average Surface	-62.01		Estimated Cross-section Average Depth:				60.8	mm			
		Depth	62.0		Flume Width			0		1988	mm		
Ch 2m		Bottom	-2.76	-2.76	Average Velocity	according to V-notch reading				0.273	0.273	m/s	
		Peak	-66.1	-66.07		according to pipe flowmeter reading				0.261	0.261	m/s	
		Continuous	-63.61	-64.18	W.S. Slope	0.000 584							
		Average Surface	-64.855	-65.125									
		Depth	62.1	62.4									

Minature Propeller																			
Lateral	Calc Dist from Interface	Mark	Propeller Serial	Speed (Hz)												V (m/s)	Range Warning	V/sqrt(Sf)	
(mm)	(mm)				1	2	3	4	5	6	7	8	9	Aver	SD				
370	1755	L0.9	2043	38.7	38.0	38.5	39.6	40.4	40.3	40.3	38.0	39.0	39.2	1.0	0.268	Propeller 2043 OK	11.09331		
469	1656	L0.8	2043	40.5	39.4	42.6	41.4	41.8	39.2	40.3	40.1	40.8	40.7	1.1	0.277	Propeller 2043 OK	11.44726		
566	1559	L0.7	2043	41.6	42.6	40.6	41.0	39.9	41.3	42.0	41.2	42.7	41.4	0.9	0.281	Propeller 2043 OK	11.62823		
667	1458		2043	42.2	44.4	42.4	43.9	44.2	44.5	43.5	43.8	41.8	43.4	1.0	0.293	Propeller 2043 OK	12.10193		
867	1258		2043	46.6	46.0	43.0	47.2	43.1	44.6	45.9	46.2	44.8	45.3	1.5	0.303	Propeller 2043 OK	12.54637		
1067	1058		2043	45.9	45.0	46.1	46.6	47.5	45.5	46.5	46.4	44.5	46.0	0.9	0.308	Propeller 2043 OK	12.72201		
1267	858		2043	46.4	44.3	45.9	44.5	47.4	46.3	45.4	45.9	45.0	45.7	1.0	0.306	Propeller 2043 OK	12.64483		
1467	658		2043	45.4	46.6	46.5	47.3	45.4	47.4	46.4	47.5	46.0	46.5	0.8	0.310	Propeller 2043 OK	12.84177		
1667	458		2043	44.0	45.9	46.6	46.4	44.7	44.7	44.5	46.8	44.4	45.3	1.1	0.304	Propeller 2043 OK	12.56234		
1767	358		2043	45.3	44.8	43.9	43.7	42.2	44.2	44.1	44.2	44.1	44.1	0.8	0.296	Propeller 2043 OK	12.25629		
1867	258		2043	39.1	36.6	39.6	43.0	41.2	43.2	41.8	45.1	40.3	41.1	2.5	0.279	Propeller 2043 OK	11.54839		
1967	158		2043										34.0		0.238	Propeller 2043 OK	9.847832		
2037	88		2043										24.6		0.181	Propeller 2043 OK	7.50678		
2103																			
0																			

Appendix B:

Readings for Current Experiments

Run 3 - Ch 9

Flume Width:	Full							Estimated Cross-section Average Depth:	48.0	mm		
Vegetation:	1 Frame	Height of top of Propeller shaft above bottom						Flume Width	0	1988	mm	
Chainage 9.98m		at Mark L0.7:				27	mm	Average	according to V-notch reading	0.316	0.316	m/s
								Velocity	according to pipe flowmeter reading	0.302	0.302	m/s
Date:	26-Jan-06	Temp:		°C				W.S. Slope	0.000 589 at start and	0.000 400 at end		
Gate Position (mm)		1022										
Time			16:29	17:36								
Q_pipe	(m3/h)		103.9	103.9				Average for test				
Q_pipe	(m3/s)		0.028 9	0.028 9				0.028 9				
V-notch	(mm)		212.3	212.3								
V-notch	(m3/s)		0.030 1	0.030 1				0.030 1				
Location	Depth or Level	Zero Depth or Level	Height above zero			Depth at L0.7	Average Depth	Velocity Head	Total Head	Sf	Sws	
just L of 2 L0.7		10.10										
10 L0.7		13.00										
SP2 - End	0.89	54.29		53.40		63.5	61.9	7.39	60.79			
SP2 - 2 hours before start	0.83	52.82		51.99		62.1	60.5	7.56	59.55			
SP10 - End	4.8	53.49		48.69		61.7	60.5	7.55	56.24	0.000 57		0.000 59
SP 10 -2 hours before start	4.70	53.49		48.79		61.8	60.6	7.54	56.33	0.000 40		0.000 40
Right Wall to edge of Vegetation:		146	146									
		0	20									
		0	0.28									

Lateral	Mark	Dist from Interface	Propell er Serial	Speed																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Appendix B:

Readings for Current Experiments

Run 3 - Ch 10

Flume Width:	Full							Estimated Cross-section Average Depth:	47.3	mm		
Vegetation:	1 Frame	Height of top of Propeller shaft above bottom						Flume Width	0	1988	mm	
Chainage 9.98m		at Mark L0.7:				27	mm	Average according to V-notch reading	0.321	0.321	m/s	
								Velocity according to pipe flowmeter reading	0.307	0.307	m/s	
Date:	26-Jan-06	Temp:		°C				W.S. Slope	0.000 401	at start and	0.000 385	at end
Gate Position (mm)		1022										
Time			11:55	14:17								
Q pipe (m3/h)			103.9	103.9				Average for test				
Q pipe (m3/s)			0.028 9	0.028 9				0.028 9				
V-notch (mm)			212.5	212.25								
V-notch (m3/s)			0.030 2	0.030 1				0.030 2				
Location	Depth or Level	Zero Depth or Level	Height above zero		Depth at L0.7	Average Depth	Velocity Head	Total Head	Sf	Sws		
just L of 2 L0.7		10.10										
10 L0.7		13.00										
SP2 - Start	0.78	52.36	51.58		61.7	60.0	7.62	59.20				
SP2 - End	0.83	52.37	51.54		61.6	60.0	7.63	59.17				
SP10 - Start	4.79	53.16	48.37		61.4	60.2	7.61	55.98	0.000 40		0.000 40	
SP 10 - End	4.70	53.16	48.46		61.5	60.3	7.60	56.06	0.000 39		0.000 39	
Difference									Average:		0.000 39	
Right Wall to edge of Vegetation:		146	146									
		0	20									
		0	0.28									

Appendix B:

Readings for Current Experiments

Run 3 - Ch 10

Flume Width:	Full							Estimated Cross-section Average Depth:	47.3	mm		
Vegetation:	1 Frame	Height of top of Propeller shaft above bottom						Flume Width	0	1988	mm	
Chainage 9.98m		at Mark L0.7:				27	mm	Average according to V-notch reading	0.321	0.321	m/s	
								Velocity according to pipe flowmeter reading	0.307	0.307	m/s	
Date:	26-Jan-06	Temp:		°C				W.S. Slope	0.000 401	at start and	0.000 385	at end
Gate Position (mm)		1022										
Time			11:55	14:17								
Q_pipe	(m3/h)		103.9	103.9				Average for test				
Q_pipe	(m3/s)		0.028 9	0.028 9				0.028 9				
V-notch	(mm)		212.5	212.25								
V-notch	(m3/s)		0.030 2	0.030 1				0.030 2				
Location	Depth or Level	Zero Depth or Level	Height above zero	Depth at L0.7	Average Depth	Velocity Head	Total Head	Sf	Sws			
just L of 2 L0.7		10.10										
10 L0.7		13.00										
SP2 - Start	0.78	52.36	51.58	61.7	60.0	7.62	59.20					
SP2 - End	0.83	52.37	51.54	61.6	60.0	7.63	59.17					
SP10 - Start	4.79	53.16	48.37	61.4	60.2	7.61	55.98	0.000 40	0.000 40			
SP 10 - End	4.70	53.16	48.46	61.5	60.3	7.60	56.06	0.000 39	0.000 39			
Difference								Average:	0.000 39			
Right Wall to edge of Vegetation:		146	146									
		0	20									
		0	0.28									

Run 4

A line graph titled "Water Surface Profile (End of Test)". The y-axis is labeled "Level (mm)" and ranges from 52 to 59 in increments of 1. The x-axis is labeled "Stilling Pot Number" and ranges from 1 to 11. The graph shows a series of data points connected by a line, representing the water surface profile. The water level starts at approximately 58.5 mm at Stilling Pot 1, drops to about 57.2 mm at Stilling Pot 2, and then fluctuates between 55.5 mm and 56.0 mm for the remaining pots.

Stilling Pot Number	Level (mm)
1	58.5
2	57.2
3	55.8
4	55.8
5	55.6
8	54.5
9	54.5
10	54.3
11	54.3

Comment or file name addendum	Lateral (mm)	Dist L. Wall Meas Sample Vol (mm)	Dist Interface (mm)	Nominal Velocity Range (cm/s)	Vx (cm/s)	Vy (cm/s)	V (m/s)	V/SQRT (Sws)	Angle (°)							
Period 80s. Very Good SNR and Correlation		325	31	1188	100	22.84	-1.07	0.23	12.2	-2.6822						
		377	83	1136	100	25.64	-0.79	0.26	13.7	-1.7648						
		402	107	1111	100	26.27	-0.70	0.26	14.0	-1.5264						
		441	148	1072	100	25.63	-0.55	0.26	13.7	-1.2293						
		500	209	1013	100	26.36	-0.60	0.26	14.1	-1.3039						
		602	312	911	100	26.49	-0.71	0.26	14.1	-1.5353						
Stopped for break after reading		450	156	1063	100	25.66	-0.62	0.26	13.7	-1.3841						
Resumed		751	Not Detected	762	100	26.75	-0.85	0.27	14.3	-1.82						
SNR y a bit low. Very poor x correlation with 100 cms range.		900	Not Detected	613	30	26.91	-0.83	0.27	14.4	-1.7666						
		951	Not Detected	562	100	27.18	-0.77	0.27	14.5	-1.6227						
		1073	Not Detected	440	100	26.53	-0.82	0.27	14.1	-1.7704						
		1200	Not Detected	313	100	23.69	-0.62	0.24	12.6	-1.4992						
		990	Not Detected	523	100	27.46	-0.85	0.27	14.6	-1.773						
		1020	Not Detected	493	100	27.01	-0.85	0.27	14.4	-1.8025						
		1051	Not Detected	462	100	26.61	-0.87	0.27	14.2	-1.8726						
		1100	Not Detected	413	100	26.27	-0.91	0.26	14.0	-1.9839						
		1125	Not Detected	388	100	25.57	-0.84	0.26	13.6	-1.8815						
		1150	Not Detected	363	100	25.10	-0.70	0.25	13.4	-1.5975						
		1175	Not Detected	338	100	24.64	-0.71	0.25	13.1	-1.6505						
		1225	Not Detected	288	100	23.17	-0.64	0.23	12.4	-1.5822						
		1250	Not Detected	263	100	22.41	-0.48	0.22	11.9	-1.227						
		1275	Not Detected	238	100	20.60	-0.35	0.21	11.0	-0.9734						
		1300	Not Detected	213	100	20.38	-0.38	0.20	10.9	-1.0682						
		1325	Not Detected	188	100	17.74	-0.76	0.18	9.5	-2.4531						
		1351	Not Detected	162	100	19.72	-0.16	0.20	10.5	-0.4649						
		1375	Not Detected	136	100	17.40	-0.07	0.17	9.3	-0.2305						
		1400	Not Detected	113	100	16.30	-0.06	0.16	8.7	-0.2109						
		1420	Not Detected	93	100	14.99	-0.01	0.15	8.0	-0.0382						
Period increased to 200s.		1337	Not Detected	176	100	19.47	-0.27	0.19	10.4	-0.7945						
72mm long Gap produced Ch 10.2. All further measurements taken		1337	Not Detected	176	100	18.75	-0.13	0.19	10.0	-0.3972						
Period decreased to 180s.		1400	Not Detected	113	100	16.47	0.03	0.16	8.8	0.10436						
		1426	Not Detected	87	100	14.65	0.13	0.15	7.8	0.50841						
		1450	Not Detected	63	100	12.99	0.08	0.13	6.9	0.35286						
		1475	Not Detected	38	100	10.34	0.13	0.10	5.5	0.72032						
		1500	Not Detected	13	100	5.90	-0.19	0.06	3.1	-1.8445						
SNR y a bit low.		1525	Not Detected	-12	100	2.37	-0.80	0.03	1.3	-18.652						
		1545	Not Detected	-32	83(100)	2.04	-0.74	0.02	1.2	-19.938						

Appendix B:

Readings for Current Experiments

Run 5 Ch 6

Flume Width:	1724							Estimated Cross-section Average Depth:	60.8	mm	
Vegetation:	1 Frame	Approximate Height of probe centre above bottom at						Flume Width	0	1724	mm
Chainage 10m		Mark L0.7:				27	mm	Average	according to V-notch reading	0.280	0.280 m/s
		Measured						Velocity	according to pipe flowmeter reading	0.271	0.271 m/s
Date:	26-Jan-06	yesterday Temp:	20.2	°C							
Gate Position (mm)		1022									
Time			20:24	18:06							
Q_pipe	(m3/h)		102.3	102.35				Average for test			
Q_pipe	(m3/s)		0.028 4	0.028 4				0.028 4			
V-notch	(mm)		210	210							
V-notch	(m3/s)		0.029 3	0.029 3				0.029 3			
Location	Level	Level at no depth at 10L0.7		Height above bed at 10 L0.7	Difference	Sws					
SP2 - Start	264.72	329.77		65.05							
SP2 - End	264.77	329.78		65.01							
SP10 - Start	268.56	330.57		62.01	3.84	0.000 380					
SP 10 - End	268.67	330.57		61.90	3.90	0.000 389					
Target - Min	0.00				0						
Target - Max	0.00				0						
Difference		0.80									
		0.79									
Right Wall to edge of Vegetation:		126	126								

Filtered According to:	Average SNR >	7	Average Correlation >				50%	Velocity Threshold 3 standard deviations						
Comment or file name addendum	Lateral	Dist L. Wall Meas Sample Vol	Dist Interface	Nominal Velocity Range	Vx	Vy	V	V/SQRT (Sws)	Angle					
		(mm)	(mm)	(cm/s)	(cm/s)	(cm/s)	(m/s)		(°)					
		315	17.5??	1582	100(38)	30.91	-0.73	0.31	15.8	-1.3529				
		340	42 or 45	1557	100	31.05	-0.73	0.31	15.8	-1.3468				
		370	75	1527	100	28.18	-0.26	0.28	14.4	-0.5286				
		400	105	1497	100(38)	32.91	-0.90	0.33	16.8	-1.5665				
		440	146	1457	100	32.77	-0.87	0.33	16.7	-1.5208				
		500	200	1397	100(38)	Poor Correlation								
SNR not great for Vy		650	Not Detected	1247	100	32.02	-0.72	0.32	16.3	-1.2881				
SNR not great for Vy		500	207	1397	100	30.50	-1.09	0.31	15.6	-2.0467				
		561	269	1336	100	32.20	-0.84	0.32	16.4	-1.4943				
		614	321	1283	100	32.42	-0.86	0.32	16.5	-1.5195				
Poor Signal		800	Not Detected	1097	100	32.57	-1.32	0.33	16.6	-2.3208				
		951	Not Detected	946	100	33.35	-1.03	0.33	17.0	-1.769				
Probe lifted - may have been too close to bed		1101	Not Detected	796	100	34.53	-1.09	0.35	17.6	-1.808				
		1250	Not Detected	647	100	35.10	-1.18	0.35	17.9	-1.9255				
		1401	Not Detected	496	100	33.95	-1.28	0.34	17.3	-2.1592				
		1549	Not Detected	348	100	35.60	-1.28	0.36	18.2	-2.0592				
SNR not great for Vy		1650	Not Detected	247	100	29.94	-0.50	0.30	15.3	-0.9568				
SNR very poor for Vy. Not great for Vx		1461	Not Detected	436	100	34.87	-1.42	0.35	17.8	-2.3319				
SNR poor for Vy		1600	Not Detected	297	100	34.57	-0.78	0.35	17.6	-1.2925				
SNR poor for Vy		1651	Not Detected	246	100	29.97	-0.59	0.30	15.3	-1.1278				
		1680	Not Detected	217	100	28.63	-0.63	0.29	14.6	-1.2606				
Moved probe down		1710	Not Detected	187	100	27.10	-0.46	0.27	13.8	-0.9725				
		1740	Not Detected	157	100	20.98	-1.17	0.21	10.7	-3.1919				
Poor SNR		1770	Not Detected	127	100	20.44	-0.87	0.20	10.4	-2.4372				
Poor SNR		1807	Not Detected	90	100	18.52	-0.66	0.19	9.5	-2.041				
Good signal		1735	Not Detected	162	100	21.67	-0.51	0.22	11.1	-1.3482				
Good signal		1723	Not Detected	174	100	16.03	-0.96	0.16	8.2	-3.4272				
	Boundary Position			1897										
	Clear Width			0										

Appendix B:

Readings for Current Experiments

Run 5 Ch 2

Flume Width:	1724								Estimated Cross-section Average Depth:		60.7	mm
Vegetation:	1 Frame	Approximate Height of probe centre above bottom at							Flume Width	0	1724	mm
Chainage 10m		Mark L0.7:				27 mm			Average according to V-notch reading		0.281	0.281 m/s
Date:	26-Jan-06	Measured yesterday Temp:	20.2	°C					Velocity according to pipe flowmeter reading		0.272	0.272 m/s
Gate Position (mm)		1022										
Time			15:47	18:06								
Q pipe	(m ³ /h)		102.2	102.35					Average for test			
Q pipe	(m ³ /s)		0.028 4	0.028 4					0.028 4			
V-notch	(mm)		210.3	210								
V-notch	(m ³ /s)		0.029 4	0.029 3					0.029 4			
Location	Level	Level at no depth at 10L0.7	Height above bed at 10 L0.7	Difference	Sws							
SP2 - Start	264.91	329.77	64.86									
SP2 - End	264.72	329.78	65.06									
SP10 - Start	268.71	330.57	61.86	3.80	0.000 375							
SP 10 - End	268.56	330.57	62.01	3.84	0.000 381							
Target - Min	0.00			0								
Target - Max	0.00			0								
Difference		0.80										
		0.79										
Right Wall to edge of Vegetation:		126	126									
Filtered According to:	Average SNR >	7	Average Correlation >		50%							

Mark or file	Lateral (mm)	Dist L. Wall Meas Sample Vol (mm)	Dist Interface (mm)	Nominal Velocity Range (cm/s)	Vx (cm/s)	Vy (cm/s)	V (m/s)	V/SQRT (Sws)	Angle (°)							
		1810 Not Detected	88	100	9.50	-1.92	0.10	5.0	-11.426							
		1784 Not Detected	114	100	15.60	-2.70	0.16	8.1	-9.8193							
		1758 Not Detected	140	100	19.53	-3.29	0.20	10.2	-9.5622							
		1731 Not Detected	167	100	23.28	-3.73	0.24	12.1	-9.1028							
		1708 Not Detected	190	100	26.12	-4.35	0.26	13.6	-9.4552							
		1675 Not Detected	223	100	Erratic Readings											
		1675 Borderline SNR	223	30	27.59	-5.02	0.28	14.4	-10.312							
		1649 Borderline SNR	249	30	28.39	-5.77	0.29	14.9	-11.488							
		1622 Not Detected	276	100	28.04	-6.08	0.29	14.8	-12.234							
		1600 Not Detected	298	100	29.47	-5.70	0.30	15.4	-10.947							
		1574 Not Detected	324	100	31.86	-5.71	0.32	16.6	-10.161							
		1550 Not Detected	348	100	35.28	-6.02	0.36	18.4	-9.6834							
		1525 Not Detected	373	100 (38)	37.52	-6.16	0.38	19.6	-9.3236							
		1500 Not Detected	398	100 (38)	37.25	-5.83	0.38	19.4	-8.8952							
		1475 Not Detected	423	100	36.24	-5.67	0.37	18.9	-8.8922							
		1450 Not Detected	448	100(38)	Gives Junk											
		1400 Not Detected	498	30	35.00	-5.76	0.35	18.2	-9.3455							
		1300 Not Detected	598	100	34.53	-5.26	0.35	18.0	-8.6614							
		1170 Not Detected	728	100	33.01	-4.43	0.33	17.1	-7.6435							
		1040 Not Detected	858	100	31.92	-3.89	0.32	16.5	-6.9482							
		900 Few spikes filtered	998	100(38)	32.12	-3.43	0.32	16.6	-6.0953							
		750	1148	100(67)	28.43	-2.47	0.29	14.7	-4.9654							
		600	308	1298	100(38)	29.71	-1.88	0.30	15.3	-3.6208						
		450	155	1448	100	30.44	-0.93	0.30	15.7	-1.75						
		400	103	1498	100(38)	29.21	-1.50	0.29	15.0	-2.9397						
		370	72	1528	100(71)	25.80	-0.92	0.26	13.3	-2.0422						
		340 Not Detected	1558	100	28.79	-0.81	0.29	14.8	-1.6116							
		315	16	1583	100(38)	29.29	-0.92	0.29	15.1	-1.7991						
		370	73	1528	100(71)	24.77	-1.28	0.25	12.8	-2.9582						
		Boundary Position	1898													
		Clear Width	1601													

Appendix B:

Readings for Current Experiments

Run 5 Ch 10

[illegible]

Mark or file	Lateral (mm)	Dist L. Wall Meas Sample Vol (mm)	Dist Interface (mm)	Nominal Velocity Range (cm/s)	Vx (cm/s)	Vy (cm/s)	V (m/s)	V/SQRT (Sws)	V / Ave	Angle (°)						
		331	33	1552	30	25.89	-0.94	0.26	13.3	0.91768	-2					
		380	83	1503	30	28.75	-0.82	0.29	14.8	1.0188	-2					
		452	157	1431	30	29.21	-0.67	0.29	15.0	1.03495	-1					
		500	204	1383	30	29.95	-0.64	0.30	15.4	1.06114	-1					
		600	307	1283	30	30.41	-0.68	0.30	15.6	1.07746	-1					
		700	Not Detected	1183	30	30.63	-0.83	0.31	15.7	1.08538	-2					
		801	Not Detected	1082	30	30.50	-0.84	0.31	15.7	1.08079	-2					
		903	Not Detected	980	30	31.12	-0.68	0.31	16.0	1.1026	-1					
		960	Not Detected	923	30	Poor correlation - no reading										
		960	Not Detected	923	100	30.40	-0.71	0.30	15.6	1.07713	-1					
b		960	Not Detected	923	10	Poor correlation - no reading										
		1090	Not Detected	793	100	31.36	-0.82	0.31	16.1	1.11122	-1					
		1201	Not Detected	682	100	31.47	-0.71	0.31	16.2	1.11502	-1					
		1350	Not Detected	533	100	31.80	-0.54	0.32	16.3	1.12659	-1					
b		1350	Not Detected	533	30	31.66	-0.48	0.32	16.3	1.1216	-1					
		1480	Not Detected	403	100	31.11	-0.76	0.31	16.0	1.10231	-1					
		1623	Not Detected	260	100	27.73	-0.81	0.28	14.2	0.98268	-2					
		1400	Not Detected	483	100	32.13	-0.72	0.32	16.5	1.1384	-1					
		1530	Not Detected	353	100	30.55	-0.84	0.31	15.7	1.08256	-2					
		1580	Not Detected	303	100	28.41	-1.37	0.28	14.6	1.00751	-3					
		1662	Not Detected	221	100	26.75	-0.52	0.27	13.7	0.94772	-1					
		1700	Not Detected	183	100	25.41	-0.35	0.25	13.0	0.90016	-1					
		1725	Not Detected	158	100	23.89	-0.27	0.24	12.3	0.84629	-1					
		1751	Not Detected	132	100	21.43	-0.23	0.21	11.0	0.75914	-1					
		1775	Not Detected	108	100	19.97	-0.01	0.20	10.3	0.70738	0					
		1795	Not Detected	88	100	18.12	0.06	0.18	9.3	0.64185	0					
	Boundary Position			1883												
	Clear Width			1585												

Run 6

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Run 6

Page B.20

Flume Width:	1349	Clear width:		1223			Estimated Cross-section Average Depth:				59.9	mm																									
Vegetation:	1 Frame	Approximate Height of probe centre above bottom at Mark L0.7:						Flume Width				0	1349	mm																							
Chainage 10m						27	mm	Average according to V-notch reading				0.258	0.258	m/s																							
Date:	13-Feb-06	Measured Temp:	20	°C				Velocity according to pipe flowmeter reading				0.244	0.244	m/s																							
Gate Position (mm)	1021	Break Begin		Break end				Fr =				0.34																									
Time		15:33	16:14	19:46		22:19																															
Q pipe	(m3/h)	71.3	71.3	71.3	70.1		Average for test																														
Q pipe	(m3/s)	0.019 8	0.019 8	0.019 8	0.019 5		0.019 7																														
V-notch	(mm)	183	183	183	183																																
V-notch	(m3/s)	0.020 9	0.020 9	0.020 9	0.020 9		0.020 9																														
Water Surface Profile (End of Test) <table><caption>Water Surface Profile Data (End of Test)</caption><thead><tr><th>Stilling Pot Number</th><th>Level (mm)</th></tr></thead><tbody><tr><td>1</td><td>58.5</td></tr><tr><td>2</td><td>57.5</td></tr><tr><td>3</td><td>56.5</td></tr><tr><td>4</td><td>56.0</td></tr><tr><td>5</td><td>55.5</td></tr><tr><td>6</td><td>54.5</td></tr><tr><td>7</td><td>54.0</td></tr><tr><td>8</td><td>53.8</td></tr><tr><td>9</td><td>53.7</td></tr><tr><td>10</td><td>53.7</td></tr><tr><td>11</td><td>53.7</td></tr></tbody></table>														Stilling Pot Number	Level (mm)	1	58.5	2	57.5	3	56.5	4	56.0	5	55.5	6	54.5	7	54.0	8	53.8	9	53.7	10	53.7	11	53.7
Stilling Pot Number	Level (mm)																																				
1	58.5																																				
2	57.5																																				
3	56.5																																				
4	56.0																																				
5	55.5																																				
6	54.5																																				
7	54.0																																				
8	53.8																																				
9	53.7																																				
10	53.7																																				
11	53.7																																				
Location	Level	Level at no depth at 10L0.7	Height above bed at 10 L0.7	Difference	Sws																																
SP2 - Start	265.57	329.78	64.21																																		
SP2 - End	265.74	329.31	63.57																																		
SP10 - Start	269.42	330.57	61.15	3.85	0.000 383																																
SP 10 - End	269.57	330.57	61.00	3.83	0.000 321																																
Target - Min	0.00			0.00																																	
Target - Max	0.00			0																																	
Difference		0.79																																			
		1.26																																			
Right Wall to edge of Vegetation:		126	126																																		
Stilling Pot	1	2	3	4	5	6	7	8	9	10	11																										
Before Test - empty flume	322.78	322.78	322.98	323.17	323.26	Dry	Dry	323.19	323.27	323.30	323.46																										
End of Test	264.33	265.74	267.12	267.49	267.8			269.09	269	269.57	269.74																										
Difference (WS profile)	58.45	57.04	55.86	55.68	55.46			54.1	54.01	53.73	53.72																										
Filtered According to:	Average SNR >	7	Average Correlation >		50%		Velocity Threshold 3 standard deviations																														

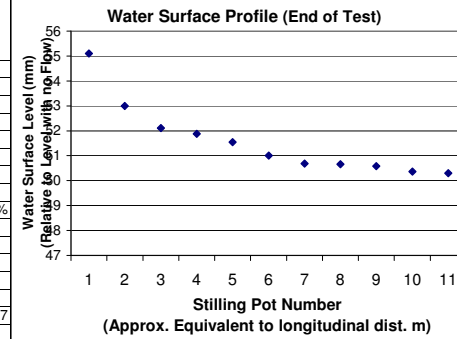
Comment or file name addendum	Lateral (mm)	Dist L. Wall Meas Sample Vol (mm)	Dist Interface (mm)	Nominal Velocity Range (cm/s)	Vx (cm/s)	Vy (cm/s)	V (m/s)	V/SQRT (Sws)	Angle (°)							
Period 80s. Very Good SNR and Correlation		325	31	1188	100	22.84	-1.07	0.23	12.2	-2.6822						
		377	83	1136	100	25.64	-0.79	0.26	13.7	-1.7648						
		402	107	1111	100	26.27	-0.70	0.26	14.0	-1.5264						
		441	148	1072	100	25.63	-0.55	0.26	13.7	-1.2293						
		500	209	1013	100	26.36	-0.60	0.26	14.1	-1.3039						
		602	312	911	100	26.49	-0.71	0.26	14.1	-1.5353						
Stopped for break after reading		450	156	1063	100	25.66	-0.62	0.26	13.7	-1.3841						
Resumed		751	Not Detected	762	100	26.75	-0.85	0.27	14.3	-1.82						
SNR y a bit low. Very poor x correlation with 100 cms range.		900	Not Detected	613	30	26.91	-0.83	0.27	14.4	-1.7666						
		951	Not Detected	562	100	27.18	-0.77	0.27	14.5	-1.6227						
		1073	Not Detected	440	100	26.53	-0.82	0.27	14.1	-1.7704						
		1200	Not Detected	313	100	23.69	-0.62	0.24	12.6	-1.4992						
		990	Not Detected	523	100	27.46	-0.85	0.27	14.6	-1.773						
		1020	Not Detected	493	100	27.01	-0.85	0.27	14.4	-1.8025						
		1051	Not Detected	462	100	26.61	-0.87	0.27	14.2	-1.8726						
		1100	Not Detected	413	100	26.27	-0.91	0.26	14.0	-1.9839						
		1125	Not Detected	388	100	25.57	-0.84	0.26	13.6	-1.8815						
		1150	Not Detected	363	100	25.10	-0.70	0.25	13.4	-1.5975						
		1175	Not Detected	338	100	24.64	-0.71	0.25	13.1	-1.6505						
		1225	Not Detected	288	100	23.17	-0.64	0.23	12.4	-1.5822						
		1250	Not Detected	263	100	22.41	-0.48	0.22	11.9	-1.227						
		1275	Not Detected	238	100	20.60	-0.35	0.21	11.0	-0.9734						
		1300	Not Detected	213	100	20.38	-0.38	0.20	10.9	-1.0682						
		1325	Not Detected	188	100	17.74	-0.76	0.18	9.5	-2.4531						
		1351	Not Detected	162	100	19.72	-0.16	0.20	10.5	-0.4649						
		1375	Not Detected	138	100	17.40	-0.07	0.17	9.3	-0.2305						
		1400	Not Detected	113	100	16.30	-0.06	0.16	8.7	-0.2109						
		1420	Not Detected	93	100	14.99	-0.01	0.15	8.0	-0.0382						
Period increased to 200s.		1337	Not Detected	176	100	19.47	-0.27	0.19	10.4	-0.7945						
72mm long Gap produced Ch 10.2. All further measurements t		1337	Not Detected	176	100	18.75	-0.13	0.19	10.0	-0.3972						
Period decreased to 180s.		1400	Not Detected	113	100	16.47	0.03	0.16	8.8	0.10436						
		1426	Not Detected	87	100	14.65	0.13	0.15	7.8	0.50841						
		1450	Not Detected	63	100	12.99	0.08	0.13	6.9	0.35286						
		1475	Not Detected	38	100	10.34	0.13	0.10	5.5	0.72032						
		1500	Not Detected	13	100	5.90	-0.19	0.06	3.1	-1.8445						
SNR y a bit low.		1525	Not Detected	-12	100	2.37	-0.80	0.03	1.3	-18.652						
		1545	Not Detected	-32	83(100)	2.04	-0.74	0.02	1.2	-19.938						

Appendix B:

Readings for Current Experiments

Run 8

Flume Width:	1988	Clear width:	1223	Estimated Cross-section Average Depth:	60.3	mm
Vegetation:	2 Frames	Approximate Height of probe centre above bottom at Mark L0.7:		Flume Width	0	1988 mm
Chainage 10.07m		(From Prev. Test - Not Adjusted)		27 mm	Average according to V-notch reading	0.166 0.166 m/s
Date:	15-Feb-06	Measured Temp:	21.8 °C	Fr =	0.22	0.158 0.158 m/s
Gate Position (mm)	1025	Break Begin	Break end			
Time		13:35				
Q_pipe	(m3/h)	68.2	68.2		Average for test	
Q_pipe	(m3/s)	0.018 9	0.018 9		0.018 9	
V-notch	(mm)	179	180			
V-notch	(m3/s)	0.019 7	0.020 0		0.019 9	
Location	Level	Level at no depth at 10L0.7	Height above bed at 10 L0.7	Difference	Sws	
SP2 - Start	264.89	329.30	331.59	64.41		
SP2 - End	265.17	329.55	331.59	64.38		
SP10 - Start	269.00	330.56	330.56	61.56	4.11 0.000 356	
SP 10 - End	269.06	330.56	330.56	61.50	3.89 0.000 357	
Target - Min	268.87			4.36		
Target - Max	270.27			4.19		
Difference		1.26				
	No Q D2-10 used:	Max	Min	Min slope	Vel Error	Max Slope
	1.13	1.26	0.67	0.000 299	-9.4%	0.000 373
	mm	mm	mm			Vel Error 2.0%
		1.01				
Right Wall to edge of Vegetation:	254	254				
Gap in vegetation frames for probe 91mm in strip nearer to interface and 118mm in strip further away.						
Stilling Pot	1	2	3	4	5	6
Before Test - No Flow	318.22	318.17	318.35	318.66	318.8	318.98
During Test: Time	13:56		14:04	14:29		
During Test: WS level	264.16	264.89	266.33	266.82		
End of Test	263.12	265.17	266.24	266.78	267.25	267.98
Difference (WS profile)	55.10	53.00	52.11	51.88	51.55	51.00
					50.68	50.66
					50.58	50.37
					50.30	



Appendix B:

Readings for Current Experiments

Run 8

Filtered According to:	Average SNR >	7	Average Correlation >			50%	Velocity Threshold 3 standard deviations					
Comment or file name addendum	Lateral	Dist L. Wall Meas Sample Vol	Dist Interface	Dist Interface	Dist Interface + Meas Dist	Nominal Velocity Range	Vx	Vy	V	V/SQRT (Sws)	Angle	Q
Started with 180s period. Temperature set in ADV to 20°C	(mm)	(mm)	(mm)	(m)		(cm/s)	(cm/s)	(cm/s)	(m/s)		(°)	(l/s)
			-154	-0.154						0		
	1651	Not Detected	-138	-0.138	-0.138	100	1.57	-0.50	0.016	0.9	-17.66519	0.00795
	1625	Not Recorded	-112	-0.112		38 (100)	1.58	-0.39	0.016	0.9	-13.86547	0.02569
	1612	32	-99	-0.099		43 (100)	1.64	-0.47	0.017	0.9	-15.99153	0.01307
Filtering Changed Vx from 1.45 to 1.55.	1606	Not Detected	-93	-0.093		100	1.55	-0.42	0.016	0.9	-15.16124	0.00599
Filtering Changed Vx from 3.35 to 3.29.	1600	Not Detected	-87	-0.087		100	3.29	-0.87	0.034	1.8	-14.81212	0.00907
b	1600	Not Detected	-87	-0.087		37 (100)	1.72	-0.45	0.018	0.9	-14.66155	0
	1593	21.5	-80	-0.080		35 (100)	1.34	-0.58	0.015	0.8	-23.40469	0.00684
	1587	Not Detected	-74	-0.074		100	1.64	-0.87	0.019	1.0	-27.94541	0.006
	1581	Not Detected	-68	-0.068		100	1.53	-0.58	0.016	0.9	-20.76096	0.00632
	1575	Not Detected	-62	-0.062		69 (100)	1.71	-0.45	0.018	0.9	-14.74356	0.00616
Temperature setting in ADV corrected to measured temperature of 21.8°C. Filtering changed Vx from 0.32 to 0.46												
	1560	Not Detected	-47	-0.047		100	0.46	-0.74	0.009	0.5	-58.13402	0.01194
	1545	Not Detected	-32	-0.032		85 (100)	1.71	-0.79	0.019	1.0	-24.79638	0.01247
	1540	Not Detected	-27	-0.027		100	1.04	-0.48	0.011	0.6	-24.77514	0.00457
	1520	29	-7	-0.007		100	2.88	-0.60	0.029	1.6	-11.76829	0.02466
Filtering Changed Vx from 4.63 to 4.55	1500	36.5	13	0.013		100	4.55	-0.43	0.05	2.4	-5.398732	0.04532
	1475	Not Detected	38	0.038		100	8.63	0.01	0.09	4.6	0.0663914	0.09955
	1460	Not Detected	53	0.053		100	10.70	0.06	0.11	5.7	0.3212814	0.08746
	1445	Not Detected	68	0.068		100	11.62	0.07	0.12	6.2	0.3451511	0.10099
	1430	Not Detected	83	0.083		100	12.72	0.09	0.13	6.7	0.4053879	0.11013
	1415	Not Detected	98	0.098		100	13.99	-0.04	0.14	7.4	-0.163819	0.12086
	1400	Not Detected	113	0.113		100	14.43	0.01	0.14	7.6	0.039706	0.12859
	1380	Not Detected	133	0.133		100	15.97	-0.04	0.16	8.5	-0.143508	0.1834
	1355	Not Detected	158	0.158		100	17.41	-0.07	0.17	9.2	-0.230367	0.25173
	1335	Not Detected	178	0.178		100	18.77	-0.10	0.19	9.9	-0.305249	0.21828
	1330	Not Detected	183	0.183		100	19.34	0.00	0.19	10.2	0	0.05748
	1326	Not Detected	187	0.187		100	18.88	0.02	0.19	10.0	0.0606947	0.04612
	1305	Not Detected	208	0.208		100	19.12	-0.35	0.19	10.1	-1.048707	0.24074
	1280	Not Detected	233	0.233		100	20.73	-0.20	0.21	11.0	-0.552764	0.30055
	1255	Not Detected	258	0.258		100	22.06	-0.26	0.22	11.7	-0.675259	0.32271
	1230	Not Detected	283	0.283		100	23.02	-0.41	0.23	12.2	-1.020364	0.34
	1200	Not Detected	313	0.313		100	23.62	-0.38	0.24	12.5	-0.921698	0.42213
	1175	Not Detected	338	0.338		100	25.04	-0.45	0.25	13.3	-1.029566	0.36701
	1150	Not Detected	363	0.363		100	25.93	-0.44	0.26	13.7	-0.972145	0.38444
	1125	Not Detected	388	0.388		100	26.81	-0.55	0.27	14.2	-1.175243	0.3978
	1100	Not Detected	413	0.413		100	27.12	-0.53	0.27	14.4	-1.119576	0.40678
	1075	Not Detected	438	0.438		100	27.69	-0.60	0.28	14.7	-1.241318	0.41342
	1050	Not Detected	463	0.463		100	27.66	-0.60	0.28	14.6	-1.242664	0.41751
	1025	Not Detected	488	0.488		100	27.67	-0.62	0.28	14.7	-1.283608	0.41736

Appendix B:

Readings for Current Experiments

Run 8

	1000	Not Detected	513	0.513		100	27.78	-0.43	0.28	14.7	-0.886797	0.41824
	950	Not Detected	563	0.563		100	27.88	-0.65	0.28	14.8	-1.335564	0.83966
	915	Not Detected	598	0.598		100						
No Reading Possible - Poor Correlation at 100cms Range and poor SNR at 30cms range.	900	Not Detected	613	0.613		100						
	850	Not Detected	663	0.663		100	27.63	-0.70	0.28	14.6	-1.451266	1.67496
No Reading Possible - Poor Correlation at 100cms Range and poor SNR at 30cms range.	800	Not Detected	713	0.713		100						
No Reading Possible - Poor Correlation at both 100cms and 30cms ranges.	775	Not Detected	738	0.738		100						
Period approx 120s	750	Not Detected	763	0.763		100	26.96	-0.77	0.27	14.3	-1.63597	1.64731
	675	Not Detected	838	0.838		100	27.13	-0.69	0.27	14.4	-1.456895	1.22417
	600	311	913	0.913	1224	100	27.05	-0.27	0.27	14.3	-0.57188	1.22598
Period for further measurements reduced to 90s.	550	259	963	0.963	1222	100	27.77	-0.61	0.28	14.7	-1.258365	0.82694
	500	209	1013	1.013	1222	100	26.37	-0.78	0.26	14.0	-1.694262	0.81684
	474	183	1039	1.039	1222	100	27.17	-0.61	0.27	14.4	-1.286145	0.42005
	450	Not Detected	1063	1.063		100	26.38	-0.80	0.26	14.0	-1.73702	0.38782
	425	132	1088	1.088	1220	100	24.79	-0.83	0.25	13.1	-1.917618	0.38608
	400	107	1113	1.113	1220	100	25.34	-0.78	0.25	13.4	-1.763086	0.37824
	375	Not Detected	1138	1.138		100	24.56	-0.60	0.25	13.0	-1.399456	0.37645
	350	56	1163	1.163	1219	100	22.71	-0.99	0.23	12.0	-2.496122	0.35669
Filtering Changed Vx from 19.99 to 20.05 cm/s.	325	32	1188	1.188	1220	100	20.05	-1.32	0.20	10.6	-3.766656	0.32295
	310	16	1203	1.203	1219	38 (100)	22.29	-0.86	0.22	11.8	-2.209508	0.19185
	Interface Position:		1513	1223	1.223				0.15			0.22507
TOTAL												17.7

Average Velocities						End Angles		
Full Width						Ch	End Dist	Angle
No Vegetation						(m)	(mm)	(°)
Chainage 5m						5a	7	0
y	Vx	Vy	V	Angle	Perpendicular Velocity	5b	32	1.957528
373	-14.77	-1.13	0.15	4.374973	-0.007	5b	22	1.080924
400	-16.21	-1.08	0.16	3.811729	-0.006	5b	18	0.285051
500	-16.95	-1.08	0.17	3.645776	-0.006	5b	10	0.767798
600	-15.13	-1.50	0.15	5.661847	-0.010	5b	8	0.39405
700	-16.79	-1.26	0.17	4.291698	-0.007	5b	6	0
800	-17.17	-1.14	0.17	3.798571	-0.006			
900	-17.50	-1.18	0.18	3.857533	-0.006			
1000	-16.94	-1.37	0.17	4.623657	-0.009			
1100	-17.29	-1.53	0.17	5.056958	-0.010	10	26	-0.965297
1200	-17.16	-1.21	0.17	4.033411	-0.007	10	21	-2.484961
1300	-17.39	-0.98	0.17	3.225448	-0.005	10	16	-0.941628
1400	-17.59	-0.87	0.18	2.831537	-0.003	10	12	-0.162464
1500	-17.40	0.72	0.17	-2.369508	0.012	10	10	-0.885186
1600	-16.48	-0.79	0.16	2.744481	-0.003	10	8	-0.606282
1700	-17.01	-0.78	0.17	2.625481	-0.003	10	6	0.722937
1799	-17.19	-0.61	0.17	2.032331	-0.001			
1899	-18.20	-0.75	0.18	2.359755	-0.002			
1995	-18.38	-0.70	0.18	2.181048	-0.001	2	28	0.394642
2035	-18.24	-0.61	0.18	1.915428	-0.001			
2060	-18.14	-0.62	0.18	1.957528	-0.001	6	6	0.262622
2085	-2.97	0.00	0.03	0	0.001			
Chainage 5m Additional Measurements								
373	-16.19	-0.73	0.16	2.581693	-0.002			
600	-15.62	-1.12	0.16	4.101257	-0.006			
1800	-17.06	-0.80	0.17	2.684822	-0.003			
1850	-17.99	-0.71	0.18	2.260084	-0.002			
1900	-18.28	-0.71	0.18	2.224265	-0.002			
1950	-18.35	-0.64	0.18	1.997517	-0.001			
2000	-18.31	-0.66	0.18	2.064383	-0.001			
2050	-16.43	-0.58	0.16	2.021775	-0.001			
2060	-17.57	-0.69	0.18	2.248935	-0.002			
2065	-16.92	-0.35	0.17	1.185027	0.002			
2070	-14.84	-0.28	0.15	1.080924	0.002			
2074	-16.08	-0.08	0.16	0.285051	0.004			
2078	-14.89	-0.21	0.15	0.808013	0.002			
2082	-15.67	-0.21	0.16	0.767798	0.003			
2084	-14.54	-0.10	0.15	0.39405	0.003			
2086	-15.34	0.00	0.15	0	0.005			
2088	-2.83	-0.01	0.03	0.202458	0.001			
2090	-13.90	0.23	0.14	-0.947973	0.007			
2092	-13.06	-0.26	0.13	1.1405	0.001			

Appendix B:

Readings for Current Experiments

Run C1

Chainage 10m					
800	-14.71	-0.48	0.15	1.868948	
1200	-16.09	-0.68	0.16	2.42001	
1300	-15.93	-0.39	0.16	1.402441	
1500	-11.99	-0.39	0.12	1.863009	
1600	-13.06	-0.23	0.13	1.008933	
1700	-13.12	-0.57	0.13	2.487658	
1800	-11.02	-0.47	0.11	2.442169	
1900	-13.25	-0.13	0.13	0.562129	
2000	-13.93	0.06	0.14	-0.246786	
2025	-3.77	-0.32	0.04	4.851673	
2050	-13.38	-0.37	0.13	1.584009	
2060	-12.51	0.11	0.13	-0.503787	
2070	-11.87	0.20	0.12	-0.965297	
2075	-10.83	0.47	0.11	-2.484961	
2080	-11.56	0.19	0.12	-0.941628	
2084	-10.58	0.03	0.11	-0.162464	
2086	-11.65	0.18	0.12	-0.885186	
2088	-1.89	0.02	0.02	-0.606282	
2090	-9.51	-0.12	0.10	0.722937	
2092	-9.66	0.01	0.10	-0.059312	
376	-12.78	-0.27	0.13	1.210294	
480	-14.22	-0.25	0.14	1.007206	
600	-14.66	-0.14	0.15	0.547146	
1000	-13.92	-0.41	0.14	1.687103	
Chainage 5m with 2 bricks removed					
1500	-16.91	-0.36	0.17	1.219596	
1600	-16.84	-0.51	0.17	1.734675	
1700	-18.15	-0.72	0.18	2.271699	
1800	-18.53	-0.58	0.19	1.792807	
1900	-19.60	-0.69	0.20	2.016213	
1950	-19.74	-0.74	0.20	2.146861	
1400	-16.87	-0.55	0.17	1.86731	
1300	-16.44	-0.42	0.16	1.463442	
Ch 5m All bricks removed					
1300	-17.17	-0.95	0.17	3.166893	-0.004
1400	-17.39	-0.92	0.17	3.028351	-0.004
1500	-17.28	-0.67	0.17	2.220425	-0.001
1600	-16.15	-0.88	0.16	3.118915	-0.004
1700	-16.63	-0.91	0.17	3.132123	-0.004
1800	-17.85	-0.82	0.18	2.630226	-0.003
1900	-18.24	-0.77	0.18	2.417301	-0.002
1950	-18.10	-0.64	0.18	2.025084	-0.001
Ch 2m					
375	-15.01	-1.04	0.15	3.963526	
500	-15.60	-0.68	0.16	2.495928	
700	-16.22	-0.34	0.16	1.200845	
900	-16.46	-0.63	0.16	2.191903	
1100	-16.32	-0.99	0.16	3.471409	
1300	-15.90	-1.15	0.16	4.136831	
1500	-15.98	-0.52	0.16	1.863786	
1600	-15.94	-0.17	0.16	0.611036	
1700	-16.36	-0.40	0.16	1.400596	
1800	-16.41	-0.17	0.16	0.593537	
1900	-16.28	-0.36	0.16	1.266776	
1950	-16.19	-0.23	0.16	0.813906	
2000	-17.07	-0.29	0.17	0.973297	
2050	-15.53	-0.30	0.16	1.106671	
2095	-10.41	-0.12	0.10	0.660441	
2070	-15.97	-0.11	0.16	0.394642	
2030	-16.28	-0.29	0.16	1.020517	
2040	-14.90	-0.57	0.15	2.190784	
2045	-15.99	-0.39	0.16	1.397181	
2055	-16.50	-0.33	0.17	1.145763	
2060	-16.50	-0.26	0.17	0.902768	
2010	-16.07	-0.28	0.16	0.998208	
2000	-16.57	-0.29	0.17	1.00266	
1990	-16.70	-0.21	0.17	0.720448	
AVERAGE (°)				1.743708	
AVERAGE (rad)				0.030433	

Ch 8m										
2095	-8.82	-0.26		0.09	1.688502					
2050	-15.38	-0.45		0.15	1.675926					
2000	-14.41	-0.42		0.14	1.669495					
1950	-14.46	0.39		0.14	-1.544947					
1900	-15.62	-0.28		0.16	1.026959					
1800	-15.39	-0.34		0.15	1.265588					
1700	-16.32	-0.43		0.16	1.509282					
1600	-15.72	-0.69		0.16	2.513278					
1500	-17.40	-0.12		0.17	0.395137					
1400	-17.49	-0.23		0.17	0.753417					
1300	-17.31	-0.29		0.17	0.959805					
1200	-18.15	-0.22		0.18	0.69446					
1100	-17.05	-0.25		0.17	0.840054					
1000	-17.52	-0.48		0.18	1.569355					
900	-17.77	-0.48		0.18	1.547287					
800	-15.74	-0.26		0.16	0.94635					
700	-14.83	-0.14		0.15	0.540875					
600	-10.96	-0.68		0.11	3.550297					
500	-10.89	-0.90		0.11	4.724452					
400	-7.17	-0.20		0.07	1.597794					
375	-7.83	-0.94		0.08	6.845659					
Ch 6m										
2090	-13.09	-0.06		0.13	0.262622					
2050	-16.53	-0.52		0.17	1.801814					
2000	-17.80	-0.59		0.18	1.898435					
1950	-19.54	-0.46		0.20	1.348577					
1900	-19.66	-0.71		0.20	2.068277					
1800	-20.03	-0.86		0.20	2.458518					
1700	-20.43	-1.13		0.20	3.165851					
1600	-21.31	-1.35		0.21	3.624875					
1500	-21.54	-1.05		0.22	2.790761					
1400	-21.32	-0.47		0.21	1.262883					
1300	-20.77	-0.43		0.21	1.186021					
1200	-18.98	-0.84		0.19	2.534092					
1100	-20.73	-0.73		0.21	2.016818					
1000	-18.73	-1.16		0.19	3.543957					
900	-19.80	-0.70		0.20	2.024765					
800	-20.20	-0.77		0.20	2.18299					
700	-20.80	-1.08		0.21	2.972304					
600	-21.33	-1.17		0.21	3.13966					
500	-20.95	-1.43		0.21	3.904825					
400	-21.68	-1.50		0.22	3.957884					
375	-20.44	-1.88		0.21	5.255081					

Appendix B:

Readings for Current Experiments

Run C2

[illegible]

ADV							
Lateral	Vx	Vy	Variance(Vy)	V	V/SQRT(Sws)	Sample Vol	Calc Dist
(mm)	(cm/s)	(cm/s)	(cm/s) ²	(cm/s)	(m/s)	End Distance Meas by Probe (mm)	from R. Wall (mm)
384	-25.75	-0.42	1.02	0.258	12.217		1719
500	-26.51	-0.24	1.02	0.265	12.576		1603
651	-27.61	-0.1	1.18	0.276	13.098		1452
701	-28.03	-0.17	1.11	0.280	13.297		1402
895	-29.12	-0.22	1.19	0.291	13.814		1218
1041	-28.56	-0.29	1.17	0.286	13.549		1062
1202	-28.33	-0.43	1.11	0.283	13.441		901
1353	-28.01	-0.12	1	0.280	13.287		750
1500	-28.38	-0.06	1.14	0.284	13.463		603
1650	-28.34	-0.21	1.3	0.283	13.444		453
1800	-26.93	-0.15	1.31	0.269	12.775	307	303
1950	-25.17	-0.02	1.07	0.252	11.940	155.5	153
2050	-22.91	-0.22	0.77	0.229	10.869	54.4	53
2070	-21.31	-0.19	0.72	0.213	10.109	31.8	33
2090	-19.98	-0.04	0.49	0.200	9.478	12.65	13
1000	-29.19	-0.2	1.15	0.292	13.847		1103
900	-29.14	-0.18	1.17	0.291	13.824		1203
800	-28.63	-0.23	1.27	0.286	13.582		1303
Average 500mm or more from side wall:					13.520		

Minature Propeller															
Lateral (mm)	Calc Dist from R. Wall (mm)	Propeller Serial	Speed (Hz)									V (m/s)	Range Warning	Note	
			1	2	3	4	5	6	7	8	9	Aver			
387	1863	1935	38.7	39.8	38.6	40.4	38.4	37.8	38.1	39.4	38.5	38.9	0.288	Propeller 1935 Out of Range	
500	1750	1935	39.1	37.1	35.6	37.5	38.6	37.2	37.3	38.5	34.8	37.3	0.279	Propeller 1935 Out of Range	
700	1550	1935	39.4	40.2	37.7	39.4	39.8	39.9	39.3	40.0	39.9	39.5	0.291	Propeller 1935 Out of Range	
900	1350	1935	38.6	41.5	40.0	40.8	41.5	41.8	41.9	40.2	40.4	40.7	0.298	Propeller 1935 OK	
1000	1250	1935	41.3	41.0	42.8	42.1	42.3	40.1	42.7	44.4	41.4	42.0	0.305	Propeller 1935 OK	
1100	1150	1935	42.4	41.4	42.1	43.0	42.9	43.0	41.3	41.6	40.9	42.1	0.306	Propeller 1935 OK	ADV excl. last bit when velocity meter was moved
1300	950	1935	41.4	41.7	43.3	40.1	42.5	43.6	42.0	42.2	40.3	41.9	0.305	Propeller 1935 OK	
1500	750	1935	41.6	41.5	42.8	39.4	43.3	40.5	43.7	41.0	41.6	41.7	0.304	Propeller 1935 OK	ADV excl. last bit when velocity meter was moved
1700	550	1935	43.4	41.8	42.4	42.4	43.6	41.5	43.6	41.1	41.1	42.3	0.307	Propeller 1935 OK	
1900	350	1935	40.5	37.0								38.8	0.287	Propeller 1935 Out	Propeller Stopped Working after 2 readings
1900	350	2043	42.8	41.8	42.6	41.8	42.4	43.5	43.3	43.1	42.2	42.6	0.286	Propeller 2043 OK	Height of Propeller uncertain
2000	250	2043	38.9	40.1	38.8	38.7	38.1	38.5	38.7	40.3	38.7	39.0	0.265	Propeller 2043 OK	Height of Propeller uncertain
2100	150	2043	35.0	37.4	35.4	37.0	35.9	35.4	35.4	37.9	36.2	36.2	0.249	Propeller 2043 OK	Height of Propeller uncertain
2138	112	2043	37.7	35.5	35.6	36.1	37.1	35.9	37.2	34.4	36.7	36.2	0.249	Propeller 2043 OK	Height of Propeller uncertain
												Average 500mm or more from side wall:	0.304		
												Average / SQRT(S):	14.4		

Run C3

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