

APPENDIX I: SEDIMENT TEXTURAL RESULTS

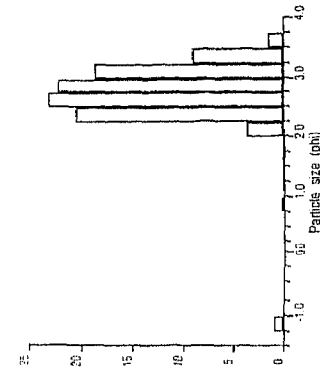
RSA analysis of sediment textural characteristics and settling velocity are presented in the following.

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: surfclub_beim

Size distribution histogram



Results summary

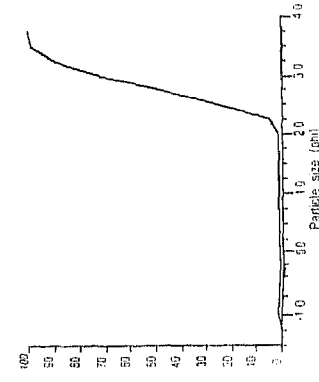
Textural size classes
Gravel= 1.05% Sand= 98.95% Silt= 0.00% Clay= 0.00%
Gravel bearing detrital sediment
Slightly Gravelly Sand

Moment method parameters (phi)
Mean= 2.76 Sorting= 0.55 Skewness= -3.87 Kurtosis= 27.97

Graphical method parameters (phi)
Mean= 2.77 Sorting= 0.37 Skewness= 0.06 Kurtosis= 0.84
Median= 2.76 C= -1.01 D35= 2.60 D65= 2.93

Textural description:
Well sorted, Near symmetrical, Platykurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Cumulative interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.18	1.05	1.05
-0.75	1.6818	0.18	0.00	1.05
-0.50	1.4142	0.18	0.00	1.05
-0.25	1.1892	0.16	0.00	1.05
0.00	1.0000	0.19	0.06	1.11
0.25	0.8409	0.19	0.00	1.11
0.50	0.7071	0.19	0.00	1.11
0.75	0.5946	0.19	0.00	1.11
1.00	0.5000	0.24	0.29	1.41
1.25	0.4204	0.25	0.06	1.45
1.50	0.3536	0.25	0.00	1.46
1.75	0.2973	0.25	0.00	1.46
2.00	0.2500	0.25	0.00	1.46
2.25	0.2102	0.90	3.81	5.27
2.50	0.1768	4.42	20.62	25.89
2.75	0.1487	8.37	23.14	49.03
3.00	0.1250	12.17	22.26	71.29
3.25	0.1051	15.37	18.75	80.04
3.50	0.0854	16.93	9.14	89.18
3.75	0.0743	17.19	1.52	100.70

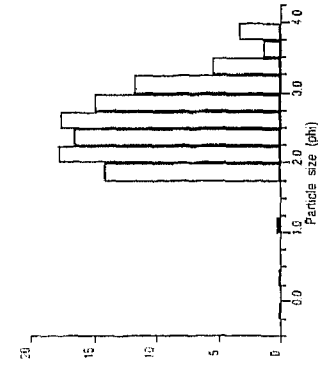
Total weight = 17.07 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: surfclub_dune

Size distribution histogram



Results summary

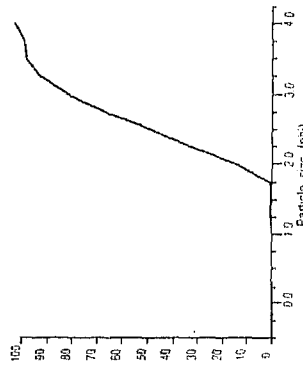
Textural size classes
Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
Gravel free detrital sediment
Sand

Moment method parameters (phi)
Mean= 2.53 Sorting= 0.53 Skewness= -0.04 Kurtosis= 2.97

Graphical method parameters (phi)
Mean= 2.53 Sorting= 0.49 Skewness= 0.08 Kurtosis= 0.84
Median= 2.52 C= 1.76 D35= 2.29 D65= 2.73

Textural description:
Well sorted, Near symmetrical, Platykurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Cumulative interval frequency (%)	Cumulative frequency (%)
-0.25	1.1892	-0.01	-0.06	-0.06
0.00	1.0000	0.01	0.11	0.06
0.25	0.8409	0.01	0.00	0.06
0.50	0.7071	0.03	0.11	0.17
0.75	0.5946	0.03	0.00	0.17
1.00	0.5000	0.03	0.00	0.17
1.25	0.4204	0.09	0.34	0.51
1.50	0.3536	0.09	0.00	0.51
1.75	0.2973	0.09	0.00	0.51
2.00	0.2500	2.60	14.10	14.61
2.25	0.2102	5.75	17.70	32.30
2.50	0.1768	8.69	16.52	48.82
2.75	0.1487	11.78	17.36	66.18
3.00	0.1250	14.41	14.78	80.96
3.25	0.1051	16.46	11.52	92.47
3.50	0.0864	17.42	5.39	97.87
3.75	0.0743	17.64	1.24	99.10
4.00	0.0625	18.22	3.26	102.36

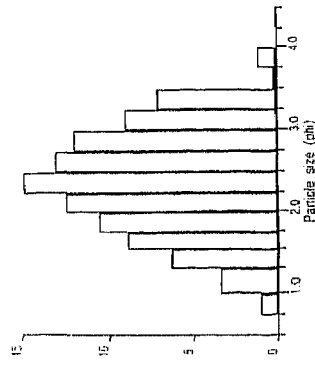
Total weight = 17.60 g

PARTICLE SIZE ANALYSIS

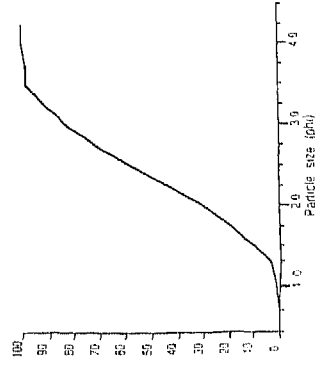
Earth Sciences - University of Waikato

Sample: surfclub_beachface

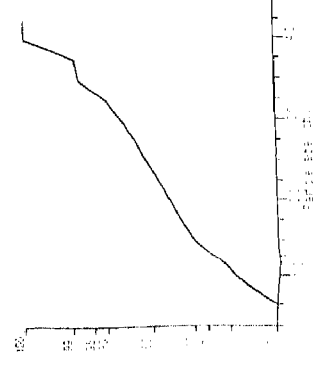
Size distribution histogram



Cumulative frequency



Cumulative frequency



Results summary

Textural size classes
 Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.36 Sorting= 0.64 Skewness= -0.07 Kurtosis= 2.35

Graphical method parameters (phi)
 Mean= 2.36 Sorting= 0.67 Skewness= -0.04 Kurtosis= 0.89
 Median= 2.37 C= 1.00 D35= 2.10 D65= 2.65

Textural description:
 Moderately well sorted, Near symmetrical, Platykurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
0.75	0.5946	-0.01	-0.06	-0.06
1.00	0.5000	0.16	1.00	0.94
1.25	0.4204	0.75	3.47	4.41
1.50	0.3536	1.83	6.35	10.76
1.75	0.2973	3.34	8.88	19.64
2.00	0.2500	5.14	10.58	30.22
2.25	0.2102	7.25	12.40	42.62
2.50	0.1768	9.77	14.81	57.44
2.75	0.1487	11.98	12.99	70.43
3.00	0.1250	14.02	11.99	82.42
3.25	0.1051	15.55	8.99	91.42
3.50	0.0884	16.76	7.11	98.53
3.75	0.0743	16.81	0.29	98.82
4.00	0.0625	17.01	1.18	100.00
4.25	0.0526	17.01	0.00	100.00

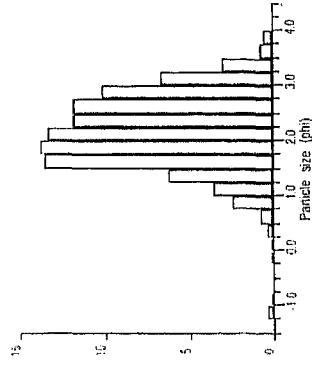
Total weight = 17.01 g

PARTICLE SIZE ANALYSIS

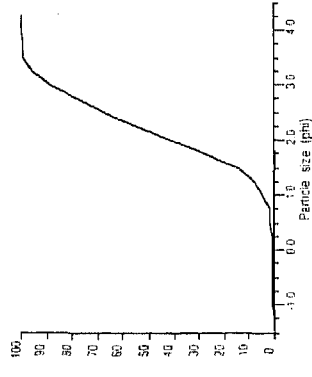
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Sample: surfclub_swash

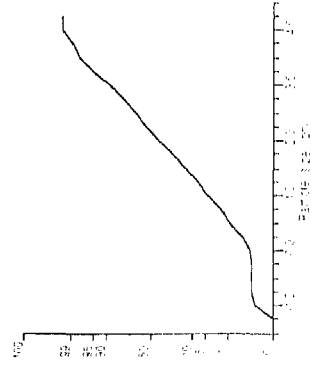
Size distribution histogram



Cumulative frequency



Cumulative frequency



Results summary

Textural size classes
 Gravel= 0.39% Sand= 98.67% Silt= 0.73% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 2.15 Sorting= 0.69 Skewness= -0.41 Kurtosis= 4.42

Graphical method parameters (phi)
 Mean= 2.20 Sorting= 0.67 Skewness= 0.03 Kurtosis= 0.92
 Median= 2.16 C= 0.51 D35= 1.89 D65= 2.47

Textural description:
 Moderately well sorted, Near symmetrical, Mesokurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.07	0.39	0.39
-0.75	1.6818	0.08	0.06	0.45
-0.50	1.4142	0.08	0.00	0.45
-0.25	1.1892	0.08	0.00	0.45
0.00	1.0000	0.09	0.06	0.51
0.25	0.8409	0.11	0.11	0.62
0.50	0.7071	0.17	0.34	0.96
0.75	0.5946	0.31	0.79	1.75
1.00	0.5000	0.75	2.48	4.23
1.25	0.4204	1.38	3.55	7.78
1.50	0.3536	2.49	6.26	14.04
1.75	0.2973	4.88	13.47	27.51
2.00	0.2500	7.32	13.75	41.26
2.25	0.2102	9.68	13.30	54.57
2.50	0.1768	11.76	11.72	66.29
2.75	0.1487	13.86	11.84	78.13
3.00	0.1250	15.65	10.09	88.22
3.25	0.1051	16.84	6.71	94.93
3.50	0.0884	17.38	3.04	97.97
3.75	0.0743	17.52	0.75	98.75
4.00	0.0625	17.61	0.51	99.27
4.25	0.0526	17.61	0.00	99.27

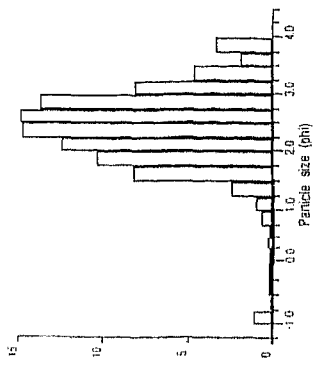
Total weight = 17.61 g

PARTICLE SIZE ANALYSIS

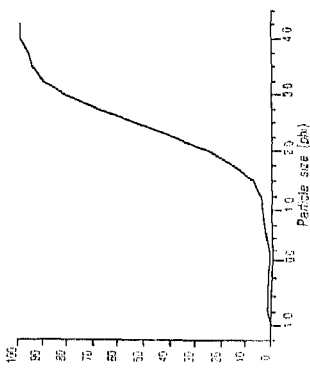
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Sample: north_dune

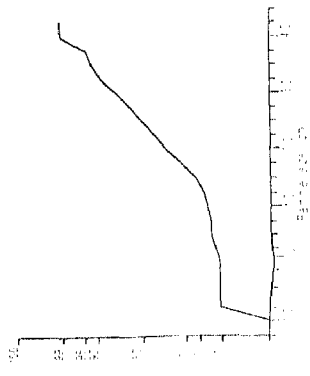
Size distribution histogram



Cumulative frequency



Cumulative frequency



Results summary

Textural size classes
 Gravel= 0.00% Sand= 99.24% Silt= 0.76% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.38 Sorting= 0.76 Skewness= -1.06 Kurtosis= 6.51

Graphical method parameters (phi)
 Mean= 2.44 Sorting= 0.66 Skewness= -0.02 Kurtosis= 1.06
 Median= 2.45 C= -0.78 D35= 2.19 D65= 2.71

Textural description:
 Moderately well sorted, Near symmetrical, Mesokurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.00	2.0000	0.00	0.00	0.00
-0.75	1.6818	0.15	1.14	1.14
-0.50	1.4142	0.17	0.15	1.30
-0.25	1.1892	0.20	0.23	1.52
0.00	1.0000	0.24	0.30	1.83
0.25	0.8409	0.27	0.23	2.06
0.50	0.7071	0.32	0.38	2.44
0.75	0.5946	0.36	0.30	2.74
1.00	0.5000	0.45	0.69	3.43
1.25	0.4204	0.59	1.07	4.50
1.50	0.3536	0.91	2.44	6.94
1.75	0.2973	1.99	8.23	15.17
2.00	0.2500	3.35	10.37	25.53
2.25	0.2102	4.98	12.42	37.95
2.50	0.1768	6.91	14.71	52.67
2.75	0.1487	8.87	14.94	67.61
3.00	0.1250	10.66	13.64	81.25
3.25	0.1051	11.73	8.16	89.41
3.50	0.0894	12.34	4.65	94.05
3.75	0.0743	12.53	1.83	95.88
4.00	0.6525	13.02	3.55	99.24
4.25	0.6525	13.02	0.00	99.24

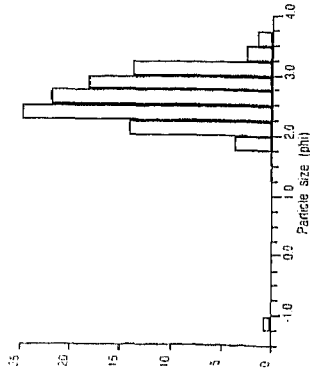
Total weight = 13.10 g

PARTICLE SIZE ANALYSIS

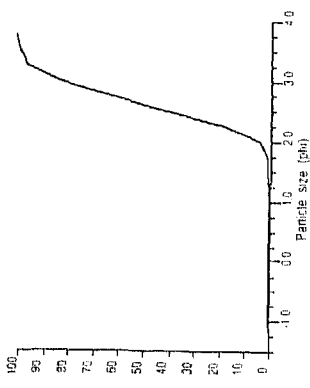
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Sample: north_berm

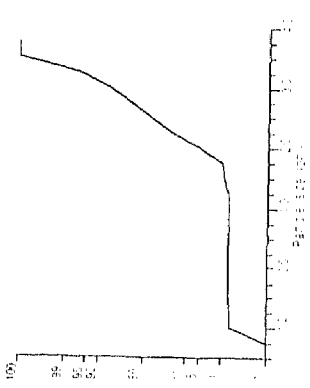
Size distribution histogram



Cumulative frequency



Cumulative frequency



Results summary

Textural size classes
 Gravel= 0.69% Sand= 99.31% Silt= 0.00% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 2.62 Sorting= 0.50 Skewness= -2.95 Kurtosis= 22.97

Graphical method parameters (phi)
 Mean= 2.59 Sorting= 0.38 Skewness= 0.06 Kurtosis= 0.87
 Median= 2.57 C= 1.62 D35= 2.41 D65= 2.74

Textural description:
 Well sorted, Near symmetrical, Platykurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.10	0.69	0.69
-0.75	1.6818	0.10	0.00	0.69
-0.50	1.4142	0.11	0.07	0.76
-0.25	1.1892	0.11	0.00	0.76
0.00	1.0000	0.11	0.00	0.76
0.25	0.8409	0.11	0.00	0.76
0.50	0.7071	0.11	0.00	0.76
0.75	0.5946	0.11	0.00	0.76
1.00	0.5000	0.11	0.00	0.76
1.25	0.4204	0.11	0.00	0.76
1.50	0.3536	0.13	0.14	0.90
1.75	0.2973	0.16	0.21	1.10
2.00	0.2500	0.70	3.72	4.83
2.25	0.2102	2.75	14.14	18.97
2.50	0.1768	6.33	24.69	43.66
2.75	0.1487	9.51	21.93	65.59
3.00	0.1250	12.13	18.67	83.66
3.25	0.1051	14.11	13.66	97.31
3.50	0.0894	14.50	2.69	100.00
3.75	0.0743	4.71	1.45	101.45

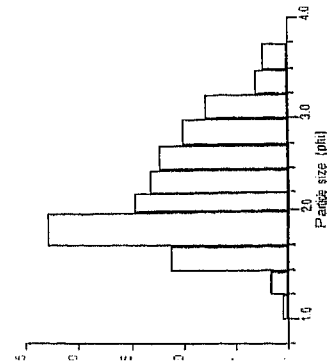
Total weight = 14.50 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: north_swash

Size distribution histogram



Results summary

Textural size classes
Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%

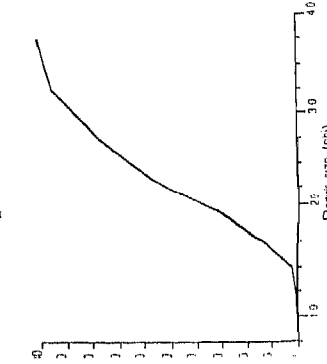
Gravel free detrital sediment
Sand

Moment method parameters (phi)
Mean= 2.34 Sorting= 0.55 Skewness= 0.31 Kurtosis= 2.31

Graphical method parameters (phi)
Mean= 2.31 Sorting= 0.54 Skewness= 0.21 Kurtosis= 0.83
Median= 2.23 C= 1.31 D35= 1.98 D65= 2.51

Textural description:
Moderately well sorted, Fine skewed, Platykurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
1.00	0.5000	0.00	0.00	0.00
1.25	0.4204	0.09	0.63	0.63
1.50	0.3536	0.32	1.60	2.23
1.75	0.2973	1.94	11.28	13.51
2.00	0.2500	5.24	22.98	36.49
2.25	0.2102	7.37	14.83	51.32
2.50	0.1768	9.29	13.37	64.69
2.75	0.1487	11.07	12.40	77.09
3.00	0.1250	12.52	10.10	87.19
3.25	0.1051	13.67	8.01	95.19
3.50	0.0884	14.14	3.27	98.47
3.75	0.0743	14.50	2.51	100.97

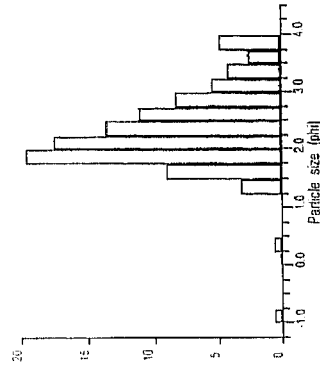
Total weight = 14.36 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: north_beachface

Size distribution histogram



Results summary

Textural size classes
Gravel= 0.00% Sand= 99.86% Silt= 0.14% Clay= 0.00%

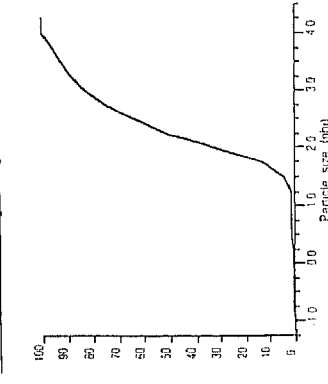
Gravel free detrital sediment
Sand

Moment method parameters (phi)
Mean= 2.35 Sorting= 0.69 Skewness= -0.15 Kurtosis= 5.41

Graphical method parameters (phi)
Mean= 2.36 Sorting= 0.65 Skewness= 0.31 Kurtosis= 1.06
Median= 2.24 C= 0.35 D35= 2.03 D65= 2.52

Textural description:
Moderately well sorted, Strongly fine skewed, Mesokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.00	2.0000	0.00	0.00	0.00
-0.75	1.6818	0.09	0.63	0.63
-0.50	1.4142	0.09	0.00	0.63
-0.25	1.1892	0.09	0.00	0.63
0.00	1.0000	0.09	0.00	0.63
0.25	0.8409	0.11	0.14	0.77
0.50	0.7071	0.19	0.56	1.33
0.75	0.5946	0.19	0.00	1.33
1.00	0.5000	0.19	0.00	1.33
1.25	0.4204	0.19	0.00	1.33
1.50	0.3536	0.64	3.14	4.47
1.75	0.2973	1.92	8.94	13.42
2.00	0.2500	4.72	19.57	32.98
2.25	0.2102	7.23	17.54	50.52
2.50	0.1768	9.15	13.42	63.94
2.75	0.1487	10.71	10.90	74.84
3.00	0.1250	11.88	8.18	83.02
3.25	0.1051	12.66	5.45	88.47
3.50	0.0884	13.25	4.12	92.59
3.75	0.0743	13.62	2.59	95.18
4.00	0.0625	14.29	4.68	99.86
4.25	0.0525	14.29	0.00	99.86

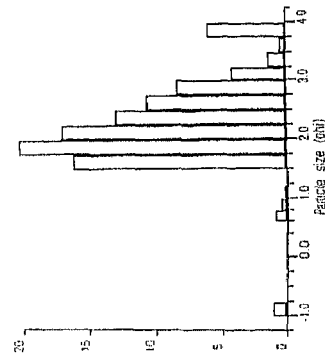
Total weight = 14.31 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: stream_dune

Size distribution histogram



Results summary

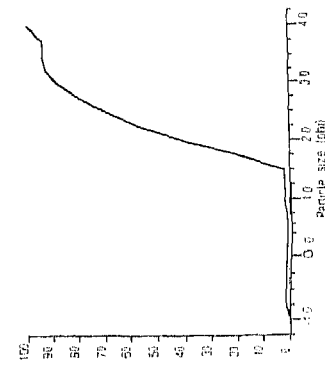
Textural size classes
 Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.26 Sorting= 0.70 Skewness= -0.28 Kurtosis= 6.54

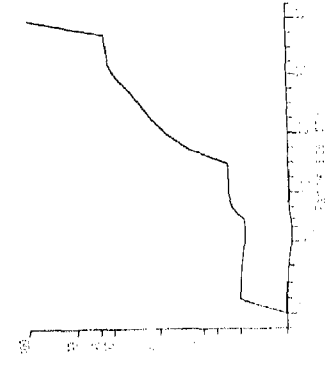
Graphical method parameters (phi)
 Mean= 2.24 Sorting= 0.63 Skewness= 0.33 Kurtosis= 1.14
 Median= 2.16 C= -0.76 D85= 1.95 D65= 2.42

Textural description:
 Moderately well sorted, Strongly fine skewed, Leplokurtic

Cumulative frequency



Cumulative frequency



Total weight = 13.55 g

Raw data summary

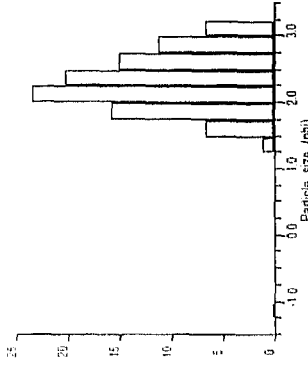
Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.00	2.0000	0.00	0.00	0.00
-0.75	1.6818	0.14	1.02	1.02
-0.50	1.4142	0.14	0.00	1.02
-0.25	1.1892	0.14	0.00	1.02
0.00	1.0000	0.14	0.00	1.02
0.25	0.8409	0.14	0.00	1.02
0.50	0.7071	0.14	0.00	1.02
0.75	0.5946	0.27	0.95	1.98
1.00	0.5000	0.33	0.44	2.42
1.25	0.4204	0.35	0.15	2.56
1.50	0.3536	0.35	0.00	2.56
1.75	0.2973	2.58	16.33	18.89
2.00	0.2500	5.35	20.28	39.17
2.25	0.2102	7.70	17.20	56.37
2.50	0.1768	9.48	13.03	69.40
2.75	0.1487	10.95	10.76	80.16
3.00	0.1250	12.09	8.35	88.51
3.25	0.1051	12.65	4.10	92.61
3.50	0.0884	12.82	1.24	93.85
3.75	0.0743	12.89	0.51	94.36
4.00	0.0625	13.69	5.85	100.22

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: stream_berm

Size distribution histogram



Results summary

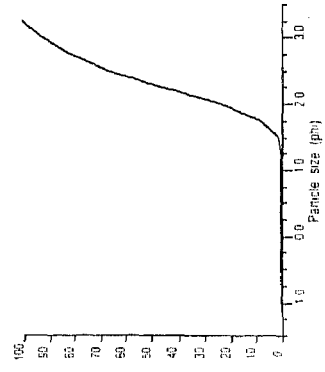
Textural size classes
 Gravel= 0.34% Sand= 99.66% Silt= 0.00% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 2.32 Sorting= 0.48 Skewness= -1.48 Kurtosis= 12.69

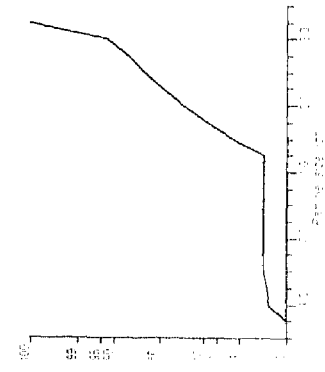
Graphical method parameters (phi)
 Mean= 2.32 Sorting= 0.44 Skewness= 0.09 Kurtosis= 0.94
 Median= 2.28 C= 1.37 D85= 2.12 D65= 2.47

Textural description:
 Well sorted, Near symmetrical, Mesokurtic

Cumulative frequency



Cumulative frequency



Total weight = 17.64 g

Raw data summary

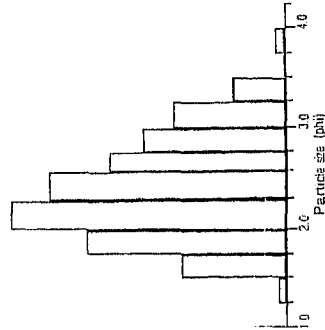
Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.06	0.34	0.34
-0.75	1.6818	0.07	0.06	0.40
-0.50	1.4142	0.08	0.06	0.45
-0.25	1.1892	0.08	0.00	0.45
0.00	1.0000	0.08	0.00	0.45
0.25	0.8409	0.08	0.00	0.45
0.50	0.7071	0.08	0.00	0.45
0.75	0.5946	0.08	0.00	0.45
1.00	0.5000	0.08	0.00	0.45
1.25	0.4204	0.08	0.00	0.45
1.50	0.3536	0.26	1.13	1.59
1.75	0.2973	1.44	6.58	8.16
2.00	0.2500	4.21	15.70	23.87
2.25	0.2102	8.33	23.36	47.22
2.50	0.1768	11.88	20.12	67.35
2.75	0.1487	14.52	14.97	82.31
3.00	0.1250	16.53	11.39	93.71
3.25	0.1051	17.73	6.90	100.51

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

file: stream_swash

distribution histogram



Results summary

Textural size classes
 Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.40 Sorting= 0.49 Skewness= 0.34 Kurtosis= 2.53

Graphical method parameters (phi)
 Mean= 2.38 Sorting= 0.50 Skewness= 0.14 Kurtosis= 0.91
 Median= 2.33 C= 1.52 D35= 2.14 D65= 2.54

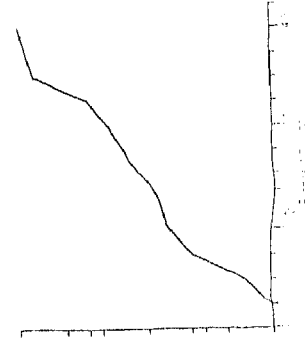
Textural description:
 Moderately well sorted, Fine skewed, Mesokurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
1.25	0.4204	-0.02	-0.13	-0.13
1.50	0.3536	0.08	0.64	0.51
1.75	0.2973	1.32	7.96	8.48
2.00	0.2500	3.69	15.22	23.70
2.25	0.2102	6.93	20.81	44.51
2.50	0.1768	9.76	18.18	62.68
2.75	0.1487	11.87	13.55	76.24
3.00	0.1250	13.57	10.92	87.15
3.25	0.1051	14.90	9.54	95.70
3.50	0.0884	15.52	3.98	99.68
3.75	0.0743	15.54	0.13	99.81
4.00	0.0625	15.56	0.77	100.58

Total weight = 15.57 g

Cumulative frequency

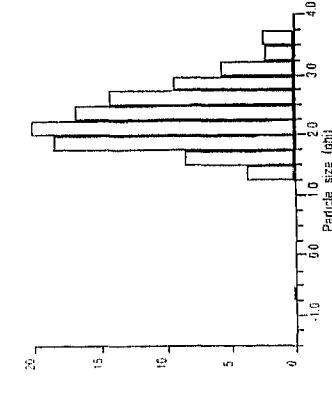


PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

file: stream_beachface

Size distribution histogram



Results summary

Textural size classes
 Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.34 Sorting= 0.53 Skewness= -0.19 Kurtosis= 4.50

Graphical method parameters (phi)
 Mean= 2.28 Sorting= 0.50 Skewness= 0.12 Kurtosis= 0.94
 Median= 2.24 C= 1.30 D35= 2.05 D65= 2.46

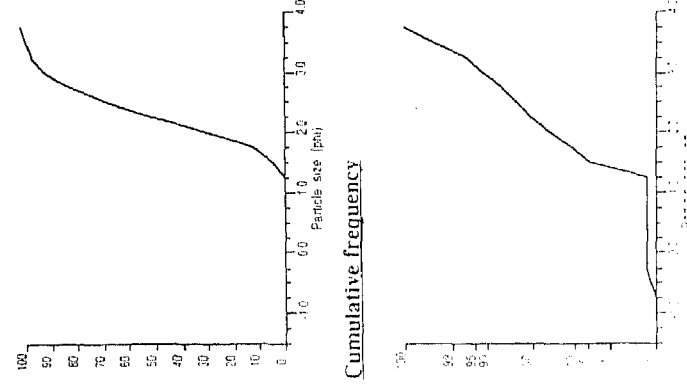
Textural description:
 Well sorted, Fine skewed, Mesokurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.00	0.00	0.00
-0.75	1.6818	0.01	0.06	0.06
-0.50	1.4142	0.03	0.11	0.17
-0.25	1.1892	0.04	0.06	0.22
0.00	1.0000	0.04	0.00	0.22
0.25	0.8409	0.04	0.00	0.22
0.50	0.7071	0.04	0.00	0.22
0.75	0.5946	0.04	0.00	0.22
1.00	0.5000	0.04	0.00	0.22
1.25	0.4204	0.04	0.00	0.22
1.50	0.3536	0.70	3.71	3.94
1.75	0.2973	2.20	8.44	12.37
2.00	0.2500	5.48	18.45	30.82
2.25	0.2102	9.06	20.13	50.96
2.50	0.1768	12.05	16.99	67.94
2.75	0.1487	14.61	14.23	82.17
3.00	0.1250	15.28	9.39	91.56
3.25	0.1051	17.29	5.68	97.24
3.50	0.0884	17.66	2.19	99.44
3.75	0.0743	18.10	2.35	101.80

Total weight = 17.79 g

Cumulative frequency

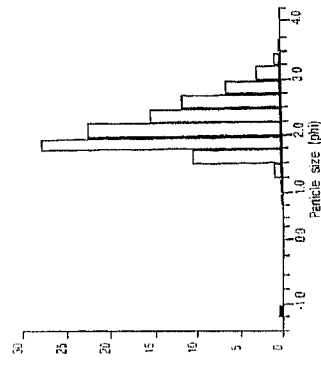


PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: loop_berm

Size distribution histogram



Textural size classes

Gravel= 0.44% Sand= 99.50% Silt= 0.00% Clay= 0.00%

Gravel bearing detrital sediment

Slightly Gravelly Sand

Moment method parameters (phi)

Mean= 2.16 Sorting= 0.48 Skewness= -1.15 Kurtosis= 12.71

Graphical method parameters (phi)

Mean= 2.18 Sorting= 0.42 Skewness= 0.23 Kurtosis= 0.96

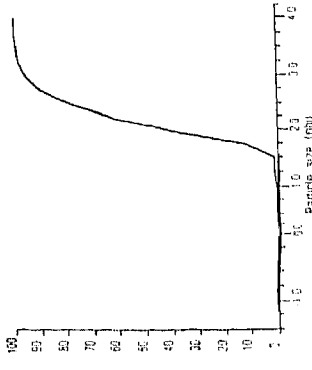
Median= 2.11 C= 1.25 D35= 1.96 D65= 2.29

Textural description:

Well sorted, Fine skewed, Mesokurtic

Results summary

Cumulative frequency



Cumulative frequency



Total weight = 17.99 g

Raw data summary

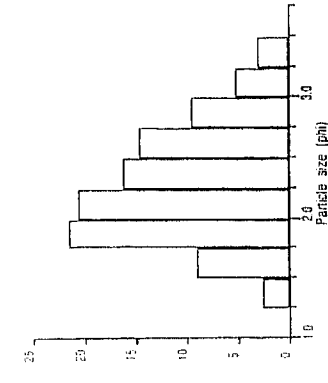
Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.08	0.44	0.44
-0.75	1.6818	0.09	0.06	0.50
-0.50	1.4142	0.09	0.00	0.50
-0.25	1.1892	0.09	0.00	0.50
0.00	1.0000	0.10	0.06	0.56
0.25	0.8409	0.10	0.00	0.56
0.50	0.7071	0.11	0.06	0.61
0.75	0.5946	0.12	0.06	0.67
1.00	0.5000	0.15	0.17	0.83
1.25	0.4204	0.18	0.17	1.00
1.50	0.3536	0.34	0.89	1.89
1.75	0.2973	2.21	10.39	12.28
2.00	0.2500	7.19	27.68	39.97
2.25	0.2102	11.23	22.46	62.42
2.50	0.1768	13.99	15.34	77.77
2.75	0.1487	16.09	11.67	89.44
3.00	0.1250	17.26	6.50	95.94
3.25	0.1051	17.77	2.63	98.58
3.50	0.0884	17.91	0.78	99.56
3.75	0.0740	17.98	0.39	99.94
4.00	0.0625	17.98	0.00	99.94

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: loop_beachface

Size distribution histogram



Textural size classes

Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%

Gravel free detrital sediment

Sand

Moment method parameters (phi)

Mean= 2.32 Sorting= 0.47 Skewness= 0.10 Kurtosis= 2.29

Graphical method parameters (phi)

Mean= 2.25 Sorting= 0.46 Skewness= 0.14 Kurtosis= 0.90

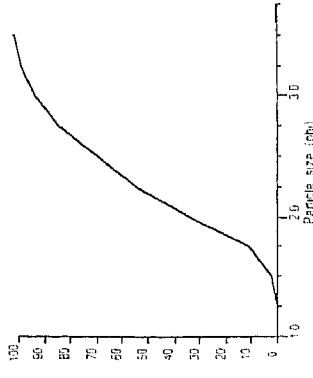
Median= 2.21 C= 1.36 D35= 2.03 D65= 2.43

Textural description:

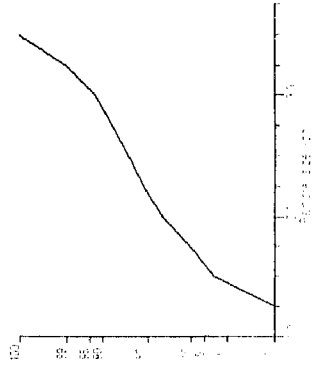
Well sorted, Fine skewed, Platykurtic

Results summary

Cumulative frequency



Cumulative frequency



Total weight = 17.56 g

Raw data summary

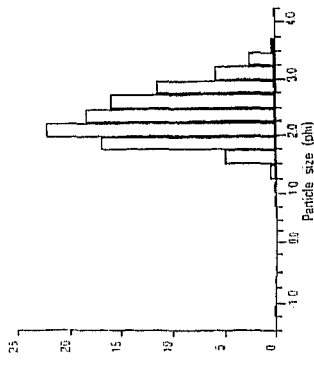
Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
1.25	0.4204	-0.03	-0.17	-0.17
1.50	0.3536	0.43	2.62	2.45
1.75	0.2973	1.98	8.83	11.28
2.00	0.2500	5.74	21.41	32.69
2.25	0.2102	9.35	20.56	53.25
2.50	0.1768	12.20	16.23	69.48
2.75	0.1487	14.78	14.69	84.17
3.00	0.1250	16.43	9.40	93.56
3.25	0.1051	17.37	5.35	98.92
3.50	0.0884	17.89	2.96	101.88

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: loop_swash

Size distribution histogram



Textural size classes

Gravel= 0.16% Sand= 99.73% Silt= 0.00% Clay= 0.00%
Gravel bearing detrital sediment
Slightly Gravelly Sand

Moment method parameters (phi)

Mean= 2.35 Sorting= 0.48 Skewness= -0.50 Kurtosis= 7.50

Graphical method parameters (phi)

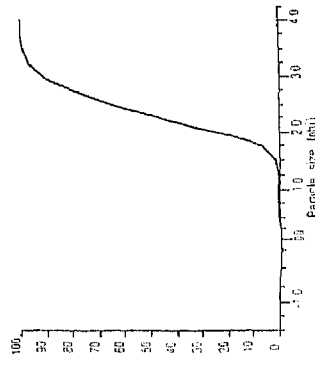
Mean= 2.35 Sorting= 0.46 Skewness= 0.14 Kurtosis= 0.92
Median= 2.31 C= 1.42 D35= 2.13 D65= 2.52

Textural description:

Well sorted, Fine skewed, Mesokurtic

Results summary

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.03	0.16	0.16
-0.75	1.6818	0.03	0.00	0.16
-0.50	1.4142	0.03	0.00	0.16
-0.25	1.1692	0.03	0.00	0.16
0.00	1.0000	0.04	0.05	0.22
0.25	0.8409	0.05	0.05	0.27
0.50	0.7071	0.06	0.05	0.32
0.75	0.5946	0.07	0.05	0.38
1.00	0.5000	0.09	0.11	0.49
1.25	0.4204	0.11	0.11	0.59
1.50	0.3536	0.22	0.59	1.19
1.75	0.2973	1.15	5.03	5.22
2.00	0.2500	4.23	16.93	23.15
2.25	0.2102	8.38	22.17	45.32
2.50	0.1768	11.78	18.39	59.71
2.75	0.1487	14.72	15.90	79.61
3.00	0.1250	15.83	11.41	91.02
3.25	0.1051	17.91	5.84	96.86
3.50	0.8664	19.33	2.60	99.46
3.75	0.6745	19.47	0.43	99.89
4.00	0.5525	19.47	0.00	99.89

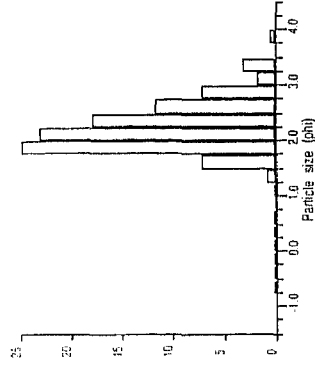
Total weight = 19.47 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: islandview_dune

Size distribution histogram



Textural size classes

Gravel= 0.00% Sand= 99.51% Silt= 0.49% Clay= 0.00%
Gravel free detrital sediment
Sand

Moment method parameters (phi)

Mean= 2.22 Sorting= 0.50 Skewness= -0.29 Kurtosis= 7.83

Graphical method parameters (phi)

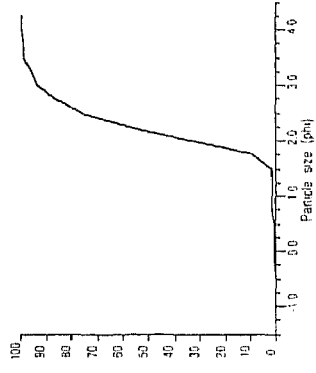
Mean= 2.23 Sorting= 0.46 Skewness= 0.23 Kurtosis= 1.08
Median= 2.18 C= 1.04 D35= 2.01 D65= 2.36

Textural description:

Well sorted, Fine skewed, Mesokurtic

Results summary

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.00	0.00	0.00
-0.75	1.6818	0.00	0.00	0.00
-0.50	1.4142	0.05	0.27	0.27
-0.25	1.1892	0.08	0.16	0.43
0.00	1.0000	0.10	0.11	0.54
0.25	0.8409	0.12	0.11	0.65
0.50	0.7071	0.14	0.11	0.76
0.75	0.5946	0.17	0.16	0.92
1.00	0.5000	0.18	0.05	0.98
1.25	0.4204	0.21	0.16	1.14
1.50	0.3536	0.36	0.81	1.95
1.75	0.2973	1.69	7.21	9.16
2.00	0.2500	6.25	24.72	33.88
2.25	0.2102	10.48	22.93	56.80
2.50	0.1768	13.79	17.94	74.74
2.75	0.1487	15.96	11.76	86.50
3.00	0.1250	17.28	7.15	93.66
3.25	0.1051	17.64	1.95	95.61
3.50	0.0884	18.23	3.20	98.81
3.75	0.0743	18.24	0.05	98.86
4.00	0.6525	18.36	0.65	99.51
4.25	0.5525	18.36	0.00	99.51

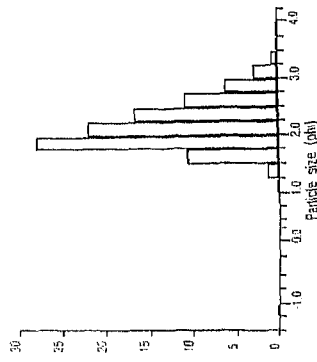
Total weight = 18.36 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: islandview_berm

Size distribution histogram



Results summary

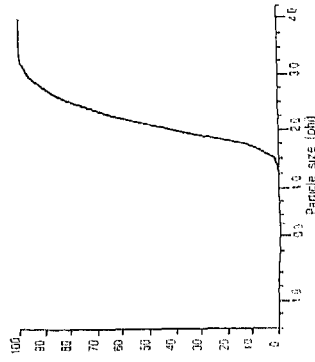
Textural size classes
 Gravel= 0.11% Sand= 99.95% Silt= 0.00% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 2.17 Sorting= 0.42 Skewness= 0.10 Kurtosis= 6.51

Graphical method parameters (phi)
 Mean= 2.17 Sorting= 0.42 Skewness= 0.22 Kurtosis= 0.98
 Median= 2.11 C= 1.39 D35= 1.95 D65= 2.29

Textural description:
 Well sorted, Fine skewed, Mesokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.02	0.11	0.11
-0.75	1.6818	0.02	0.00	0.11
-0.50	1.4142	0.02	0.00	0.11
-0.25	1.1892	0.02	0.00	0.11
0.00	1.0000	0.02	0.00	0.11
0.25	0.8409	0.02	0.00	0.11
0.50	0.7071	0.02	0.00	0.11
0.75	0.5946	0.02	0.00	0.11
1.00	0.5000	0.02	0.00	0.11
1.25	0.4204	0.04	0.11	0.21
1.50	0.3536	0.30	1.37	1.58
1.75	0.2973	2.32	10.67	12.25
2.00	0.2500	7.61	27.93	40.18
2.25	0.2102	11.83	22.28	62.46
2.50	0.1768	14.95	16.53	78.99
2.75	0.1487	17.02	10.68	89.66
3.00	0.1250	18.23	5.39	95.05
3.25	0.1051	18.79	2.96	98.01
3.50	0.0884	19.91	0.63	98.64
3.75	0.0743	19.93	0.11	98.95
4.00	0.0625	19.95	0.11	100.00

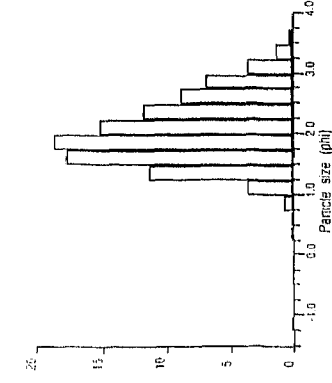
Total weight = 19.95 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: islandview_beachface

Size distribution histogram



Results summary

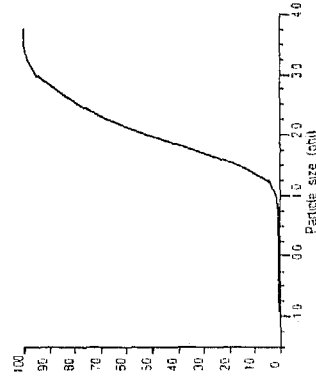
Textural size classes
 Gravel= 0.26% Sand= 99.72% Silt= 0.00% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 2.03 Sorting= 0.58 Skewness= -0.20 Kurtosis= 5.12

Graphical method parameters (phi)
 Mean= 2.03 Sorting= 0.55 Skewness= 0.18 Kurtosis= 0.92
 Median= 1.97 C= 0.85 D35= 1.77 D65= 2.21

Textural description:
 Moderately well sorted, Fine skewed, Mesokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.05	0.28	0.28
-0.75	1.6818	0.06	0.06	0.34
-0.50	1.4142	0.06	0.00	0.34
-0.25	1.1892	0.06	0.00	0.34
0.00	1.0000	0.06	0.00	0.34
0.25	0.8409	0.07	0.06	0.40
0.50	0.7071	0.09	0.11	0.51
0.75	0.5946	0.12	0.17	0.68
1.00	0.5000	0.26	0.79	1.47
1.25	0.4204	0.88	3.50	4.97
1.50	0.3536	2.87	11.24	16.21
1.75	0.2973	5.99	17.62	33.82
2.00	0.2500	9.27	18.52	52.34
2.25	0.2102	11.95	15.13	67.48
2.50	0.1768	14.01	11.63	79.11
2.75	0.1487	15.57	8.81	87.92
3.00	0.1250	16.77	6.78	94.59
3.25	0.1051	17.42	3.67	98.36
3.50	0.0884	17.66	1.36	99.72
3.75	0.0743	17.72	0.34	100.00

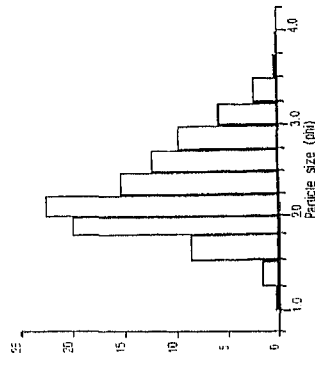
Total weight = 17.72 g

PARTICLE SIZE ANALYSIS

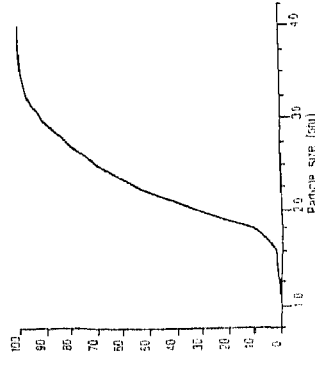
Earth Sciences - University of Waikato

Sample: islandview_swash

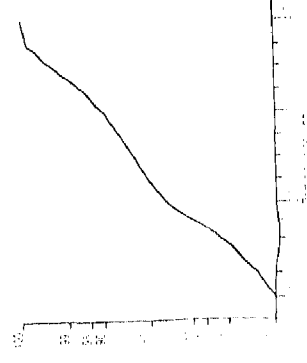
Size distribution histogram



Cumulative frequency



Cumulative frequency



Results summary

Textural size classes
 Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.29 Sorting= 0.48 Skewness= 0.43 Kurtosis= 2.71

Graphical method parameters (phi)
 Mean= 2.28 Sorting= 0.49 Skewness= 0.20 Kurtosis= 0.93
 Median= 2.21 C= 1.33 D35= 2.05 D65= 2.44

Textural description:
 Well sorted, Fine skewed, Mesokurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
1.00	0.5000	-0.01	-0.06	-0.06
1.25	0.4204	0.07	0.45	0.39
1.50	0.3536	0.39	1.80	2.19
1.75	0.2973	1.94	8.72	10.92
2.00	0.2500	5.49	19.98	30.89
2.25	0.2102	9.49	22.51	53.40
2.50	0.1768	12.21	15.31	68.71
2.75	0.1487	14.44	12.55	81.26
3.00	0.1250	16.20	9.90	91.16
3.25	0.1051	17.26	5.97	97.13
3.50	0.0884	17.67	2.31	99.44
3.75	0.0743	17.74	0.39	99.83
4.00	0.0625	17.78	0.23	100.06

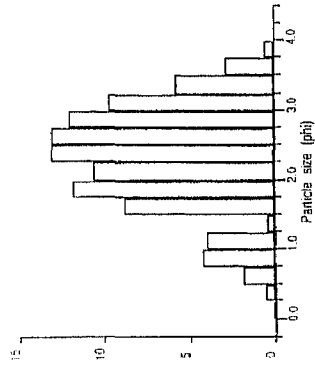
Total weight = 17.77 g

PARTICLE SIZE ANALYSIS

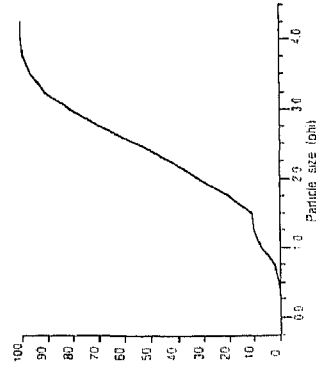
Earth Sciences - University of Waikato

Sample: north_silt

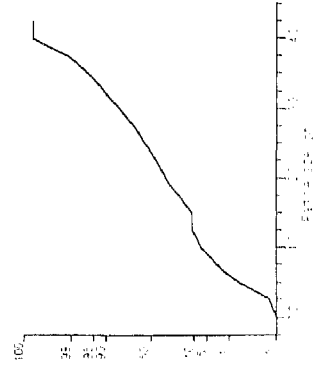
Size distribution histogram



Cumulative frequency



Cumulative frequency



Total weight = 15.25 g

Results summary

Textural size classes
 Gravel= 0.00% Sand= 99.74% Silt= 0.26% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.32 Sorting= 0.74 Skewness= -0.41 Kurtosis= 2.76

Graphical method parameters (phi)
 Mean= 2.37 Sorting= 0.75 Skewness= -0.11 Kurtosis= 1.02
 Median= 2.40 C= 0.54 D35= 2.08 D65= 2.68

Textural description:
 Moderately sorted, Coarse skewed, Mesokurtic

Raw data summary

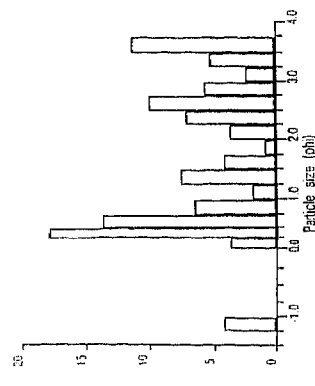
Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
0.00	1.0000	0.00	0.00	0.00
0.25	0.8409	0.03	0.20	0.20
0.50	0.7071	0.11	0.52	0.72
0.75	0.5946	0.40	1.90	2.62
1.00	0.5000	1.04	4.20	6.82
1.25	0.4204	1.65	4.00	10.82
1.50	0.3536	1.72	0.46	11.28
1.75	0.2973	3.06	8.79	20.07
2.00	0.2500	4.85	11.74	31.80
2.25	0.2102	6.47	10.62	42.43
2.50	0.1768	8.46	13.05	55.48
2.75	0.1487	10.47	13.18	68.66
3.00	0.1250	12.30	12.00	80.66
3.25	0.1051	13.78	9.70	90.36
3.50	0.0884	14.67	5.84	96.20
3.75	0.0743	15.12	2.95	99.15
4.00	0.0625	15.21	0.59	99.74
4.25	0.0526	15.21	0.00	99.74

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: north_25m

Size distribution histogram



Results summary

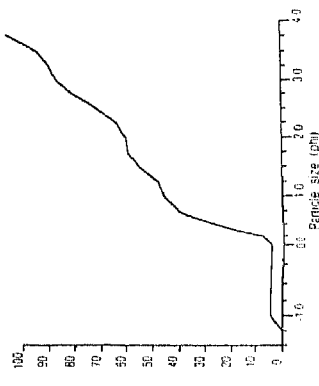
Textural size classes
 Gravel= 4.23% Sand= 95.77% Silt= 0.00% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 1.70 Sorting= 1.33 Skewness= -0.18 Kurtosis= 1.89

Graphical method parameters (phi)
 Mean= 1.52 Sorting= 1.15 Skewness= 0.25 Kurtosis= 0.67
 Median= 1.32 C= -1.19 D35= 0.67 D65= 2.27

Textural description:
 Poorly sorted, Fine skewed, Platykurtic

Cumulative frequency



Cumulative frequency



Total weight = 242g

Raw data summary

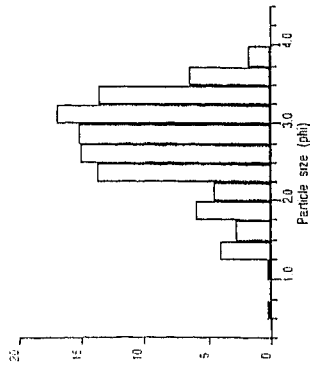
Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.09	4.23	4.23
-0.75	1.6818	0.09	0.00	4.23
-0.50	1.4142	0.09	0.00	4.23
-0.25	1.1892	0.09	0.00	4.23
0.00	1.0000	0.09	0.00	4.23
0.25	0.8409	0.17	3.76	7.98
0.50	0.7071	0.55	17.84	25.82
0.75	0.5946	0.84	13.62	39.44
1.00	0.5000	0.98	6.57	46.01
1.25	0.4204	1.02	1.88	47.89
1.50	0.3536	1.18	7.51	55.40
1.75	0.2973	1.27	4.23	59.62
2.00	0.2500	1.29	0.94	60.56
2.25	0.2102	1.37	3.76	64.32
2.50	0.1768	1.52	7.04	71.35
2.75	0.1487	1.73	9.86	81.22
3.00	0.1250	1.85	5.63	86.85
3.25	0.1051	1.90	2.35	89.20
3.50	0.0884	2.01	5.16	94.37
3.75	0.0743	2.05	11.27	105.63

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: loop_5m

Size distribution histogram



Results summary

Textural size classes
 Gravel= 0.00% Sand= 99.94% Silt= 0.06% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.74 Sorting= 0.61 Skewness= -0.58 Kurtosis= 3.00

Graphical method parameters (phi)
 Mean= 2.77 Sorting= 0.62 Skewness= -0.16 Kurtosis= 1.05
 Median= 2.81 C= 1.27 D35= 2.56 D65= 3.05

Textural description:
 Moderately well sorted, Coarse skewed, Mesokurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
0.50	0.7071	0.00	0.00	0.00
0.75	0.5946	0.05	0.31	0.31
1.00	0.5000	0.06	0.06	0.37
1.25	0.4204	0.11	0.31	0.68
1.50	0.3536	0.75	3.98	4.66
1.75	0.2973	1.20	2.80	7.45
2.00	0.2500	2.16	5.96	13.42
2.25	0.2102	2.88	4.47	17.89
2.50	0.1768	5.07	13.60	31.49
2.75	0.1487	7.47	14.91	46.40
3.00	0.1250	9.89	15.03	61.43
3.25	0.1051	12.61	16.89	78.32
3.50	0.0884	14.78	13.48	91.80
3.75	0.0743	15.81	6.40	98.20
4.00	0.0625	16.09	1.74	99.94
4.25	0.0526	15.09	0.00	99.94

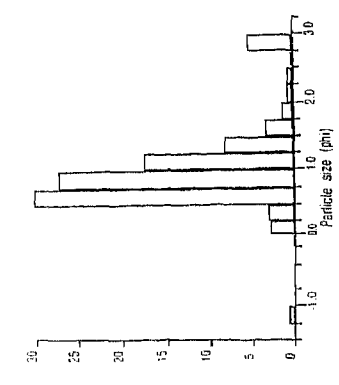
Total weight = 1610 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: loop_30m

Size distribution histogram



Results summary

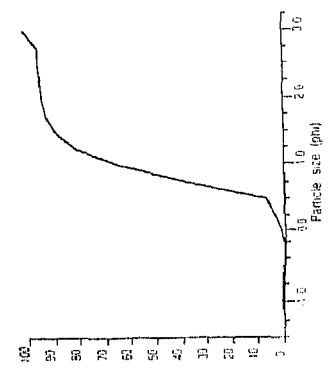
Textural size classes
Gravel= 0.72% Sand= 99.28% Silt= 0.00% Clay= 0.00%
Gravel bearing detrital sediment
Slightly Gravelly Sand

Moment method parameters (phi)
Mean= 1.02 Sorting= 0.61 Skewness= 1.22 Kurtosis= 6.41

Graphical method parameters (phi)
Mean= 0.92 Sorting= 0.44 Skewness= 0.29 Kurtosis= 1.36
Median= 0.87 C= 0.00 D35= 0.73 D65= 1.01

Textural description:
Well sorted, Fine skewed, Leptokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Cumulative interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.08	0.72	0.72
-0.75	1.6818	0.08	0.00	0.72
-0.50	1.4142	0.08	0.00	0.72
-0.25	1.1892	0.08	0.00	0.72
0.00	1.0000	0.11	0.27	0.99
0.25	0.8409	0.42	2.79	3.78
0.50	0.7071	0.77	3.15	6.94
0.75	0.5946	4.12	30.18	37.12
1.00	0.5000	7.15	27.30	64.41
1.25	0.4204	9.08	17.39	81.80
1.50	0.3536	10.01	8.36	90.19
1.75	0.2973	10.39	3.42	93.60
2.00	0.2500	10.54	1.35	94.95
2.25	0.2102	10.62	0.72	95.66
2.50	0.1768	10.70	0.72	96.40
2.75	0.1487	10.73	0.27	96.67
3.00	0.1250	11.32	5.32	101.98

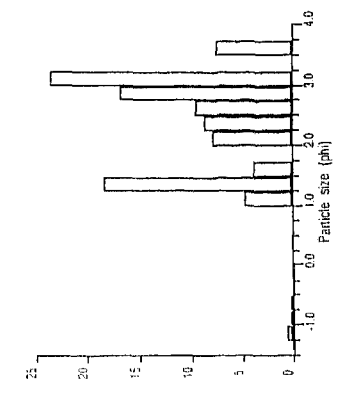
Total weight = 11.10 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: island_view_5

Size distribution histogram



Results summary

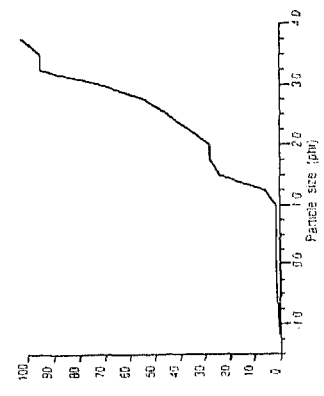
Textural size classes
Gravel= 0.64% Sand= 99.36% Silt= 0.00% Clay= 0.00%
Gravel bearing detrital sediment
Slightly Gravelly Sand

Moment method parameters (phi)
Mean= 2.48 Sorting= 0.84 Skewness= -1.07 Kurtosis= 4.32

Graphical method parameters (phi)
Mean= 2.39 Sorting= 0.79 Skewness= -0.34 Kurtosis= 0.64
Median= 2.64 C= -0.51 D35= 2.22 D65= 2.91

Textural description:
Moderately sorted, Strongly Coarse skewed, Very platykurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Cumulative interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.07	0.64	0.64
-0.75	1.6818	0.09	0.18	0.82
-0.50	1.4142	0.11	0.18	1.00
-0.25	1.1892	0.11	0.00	1.00
0.00	1.0000	0.11	0.00	1.00
0.25	0.8409	0.11	0.00	1.00
0.50	0.7071	0.11	0.00	1.00
0.75	0.5946	0.11	0.00	1.00
1.00	0.5000	0.11	0.00	1.00
1.25	0.4204	0.64	4.84	5.84
1.50	0.3536	2.63	18.17	24.02
1.75	0.2973	3.07	4.02	28.04
2.00	0.2500	3.07	0.00	28.04
2.25	0.2102	3.94	7.95	35.98
2.50	0.1768	4.89	8.68	44.66
2.75	0.1487	5.93	9.50	54.16
3.00	0.1250	7.76	16.71	70.87
3.25	0.1051	10.34	23.56	94.43
3.50	0.0854	10.34	0.00	94.43
3.75	0.0743	11.18	7.67	102.10

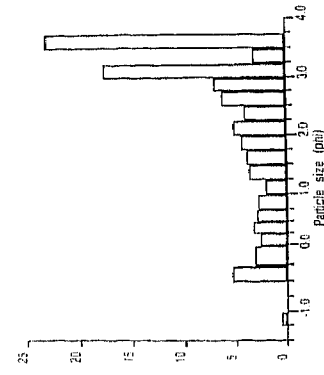
Total weight = 10.95 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: island_view_20m

Size distribution histogram



Results summary

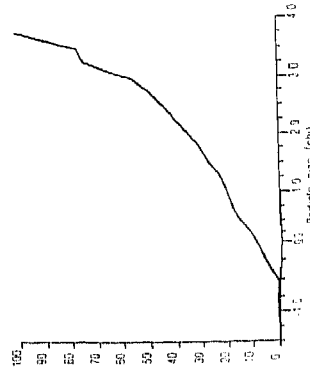
Textural size classes
Gravel= 0.62% Sand= 99.38% Silt= 0.00% Clay= 0.00%
Gravel bearing detrital sediment
Slightly Gravelly Sand

Moment method parameters (phi)
Mean= 2.32 Sorting= 1.31 Skewness= -0.86 Kurtosis= 2.44

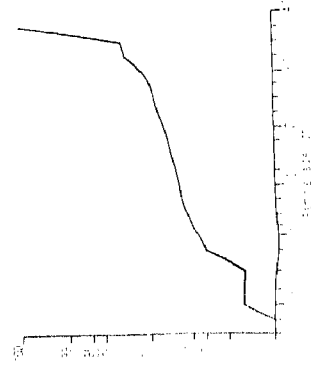
Graphical method parameters (phi)
Mean= 2.29 Sorting= 1.35 Skewness= -0.48 Kurtosis= 0.88
Median= 2.72 C= -0.48 D35= 1.99 D65= 3.10

Textural description:
Poorly sorted, Strongly Coarse skewed, Platykurtic

Cumulative frequency



Cumulative frequency



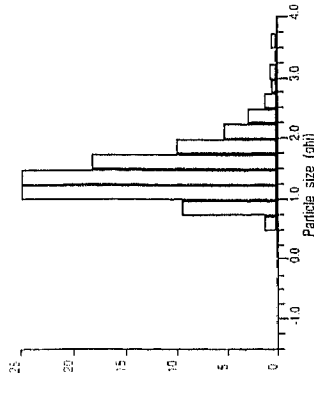
Total weight = 15.00 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: island_view_25m

Size distribution histogram



Results summary

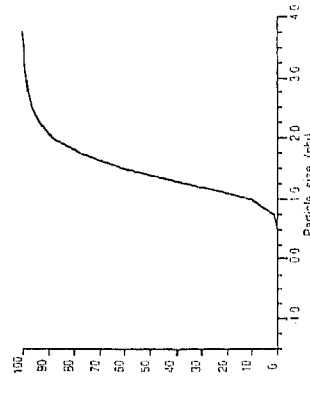
Textural size classes
Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
Gravel free detrital sediment
Sand

Moment method parameters (phi)
Mean= 1.48 Sorting= 0.48 Skewness= 1.33 Kurtosis= 5.94

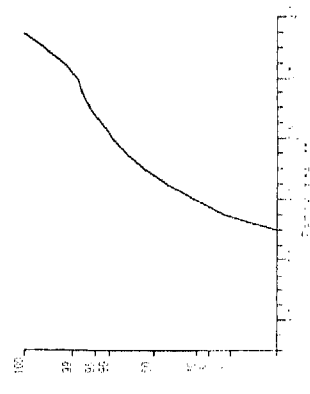
Graphical method parameters (phi)
Mean= 1.45 Sorting= 0.44 Skewness= 0.23 Kurtosis= 1.11
Median= 1.40 C= 0.67 D35= 1.25 D65= 1.57

Textural description:
Well sorted, Fine skewed, Mesokurtic

Cumulative frequency



Cumulative frequency



Total weight = 15.25 g

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.00	0.00	0.00
-0.75	1.6818	0.00	0.00	0.00
-0.50	1.4142	0.00	0.00	0.00
-0.25	1.1892	0.00	0.00	0.00
0.00	1.0000	0.00	0.00	0.00
0.25	0.8409	0.00	0.00	0.00
0.50	0.7071	0.01	0.06	0.06
0.75	0.5946	0.23	1.35	1.42
1.00	0.5000	1.75	9.35	10.77
1.25	0.4204	5.76	24.68	35.45
1.50	0.3536	9.78	24.74	60.18
1.75	0.2973	12.73	18.15	78.34
2.00	0.2500	14.35	9.97	88.31
2.25	0.2102	15.23	5.42	93.72
2.50	0.1769	15.70	2.89	96.62
2.75	0.1487	15.91	1.29	97.91
3.00	0.1250	16.01	0.62	98.52
3.25	0.1051	16.13	0.74	99.26
3.50	0.0884	16.18	0.31	99.57
3.75	0.0743	16.27	0.55	100.12

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.10	0.62	0.62
-0.75	1.6818	0.10	0.00	0.62
-0.50	1.4142	0.10	0.00	0.62
-0.25	1.1892	0.96	5.38	6.00
0.00	1.0000	1.46	3.12	9.12
0.25	0.8409	1.88	2.62	11.75
0.50	0.7071	2.41	3.31	15.06
0.75	0.5946	2.89	3.00	18.06
1.00	0.5000	3.34	2.81	20.88
1.25	0.4204	3.67	2.06	22.94
1.50	0.3535	4.29	3.88	26.81
1.75	0.2973	4.92	3.94	30.75
2.00	0.2500	5.63	4.44	35.19
2.25	0.2102	5.47	5.25	40.44
2.50	0.1768	7.13	4.12	44.56
2.75	0.1487	8.13	6.25	50.81
3.00	0.1250	9.27	7.13	57.94
3.25	0.1051	12.07	17.50	75.44
3.50	0.0884	12.55	3.06	78.50
3.75	0.0743	12.25	23.95	102.45

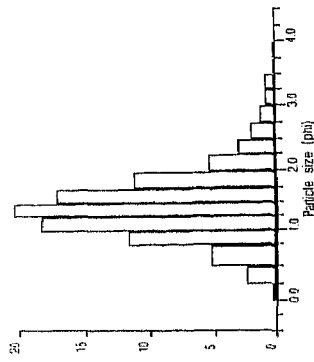
Total weight = 15.00 g

PARTICLE SIZE ANALYSIS

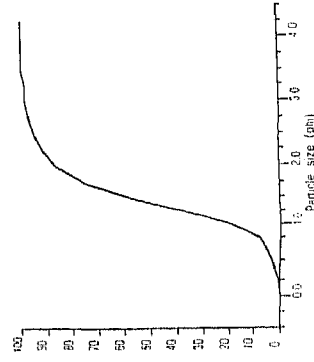
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Sample: island_view_30m

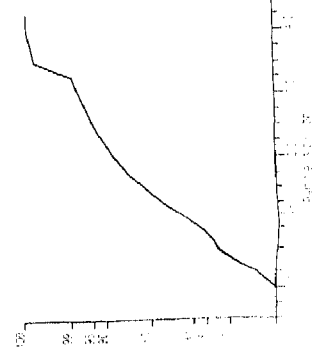
Size distribution histogram



Cumulative frequency



Cumulative frequency



Results summary

Textural size classes
 Gravel= 0.00% Sand= 99.86% Silt= 0.14% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 1.45 Sorting= 0.56 Skewness= 0.75 Kurtosis= 4.18

Graphical method parameters (phi)
 Mean= 1.42 Sorting= 0.54 Skewness= 0.12 Kurtosis= 1.17
 Median= 1.40 C= 0.31 D35= 1.21 D65= 1.60

Textural description:
 Moderately well sorted, Fine skewed, Leptokurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-0.25	1.1892	0.00	0.00	0.00
0.00	1.0000	0.00	0.00	0.00
0.25	0.8409	0.06	0.41	0.41
0.50	0.7071	0.41	2.39	2.79
0.75	0.5946	1.17	5.18	7.98
1.00	0.5000	2.86	11.52	19.50
1.25	0.4204	5.55	18.34	37.83
1.50	0.3536	8.53	20.31	58.15
1.75	0.2973	11.05	17.18	75.32
2.00	0.2500	12.67	11.04	86.37
2.25	0.2102	13.47	5.45	91.82
2.50	0.1768	13.92	3.07	94.89
2.75	0.1487	14.22	2.04	96.93
3.00	0.1250	14.40	1.23	98.16
3.25	0.1051	14.52	0.82	98.98
3.50	0.0884	14.63	0.75	99.73
3.75	0.0743	14.64	0.07	99.80
4.00	0.0625	14.65	0.07	99.86
4.25	0.0526	14.65	0.00	99.86

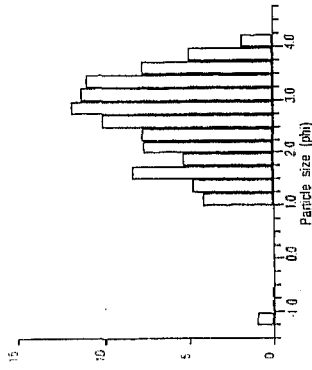
Total weight = 14.67 g

PARTICLE SIZE ANALYSIS

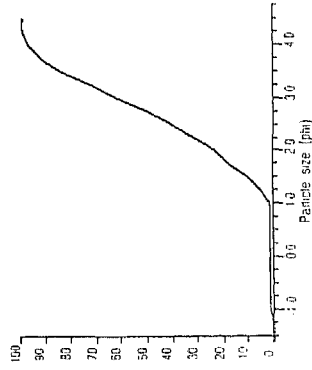
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Sample: Offshore_1

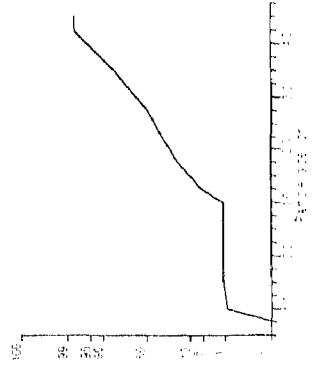
Size distribution histogram



Cumulative frequency



Cumulative frequency



Results summary

Textural size classes
 Gravel= 0.95% Sand= 95.31% Silt= 3.74% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 2.57 Sorting= 0.87 Skewness= -0.76 Kurtosis= 4.64

Graphical method parameters (phi)
 Mean= 2.65 Sorting= 0.87 Skewness= -0.16 Kurtosis= 0.88
 Median= 2.76 C= -0.92 D35= 2.36 D65= 3.08

Textural description:
 Moderately sorted, Coarse skewed, Platykurtic

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.13	0.95	0.95
-0.75	1.6818	0.15	0.15	1.10
-0.50	1.4142	0.16	0.07	1.17
-0.25	1.1892	0.16	0.00	1.17
0.00	1.0000	0.16	0.00	1.17
0.25	0.8409	0.16	0.00	1.17
0.50	0.7071	0.16	0.00	1.17
0.75	0.5946	0.16	0.00	1.17
1.00	0.5000	0.16	0.00	1.17
1.25	0.4204	0.74	4.25	5.42
1.50	0.3536	1.39	4.76	10.18
1.75	0.2973	2.52	8.28	18.46
2.00	0.2500	3.24	5.27	23.74
2.25	0.2102	4.29	7.69	31.43
2.50	0.1768	5.35	7.77	39.19
2.75	0.1487	6.73	10.11	49.30
3.00	0.1250	8.36	11.94	61.25
3.25	0.1051	9.99	11.28	72.53
3.50	0.0884	11.39	10.92	83.44
3.75	0.0743	12.45	7.77	91.21
4.00	0.0625	13.14	5.05	96.26
4.25	0.0526	13.40	1.90	98.17
4.50	0.0442	13.40	0.00	98.17

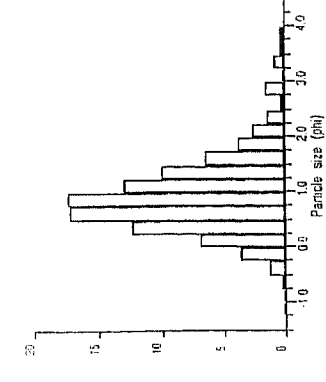
Total weight = 13.65 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: Offshore_3

Size distribution histogram



Results summary

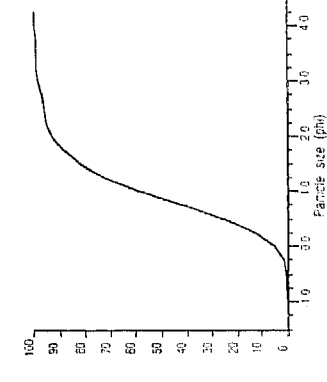
Textural size classes
 Gravel= 0.20% Sand= 99.25% Silt= 0.55% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 0.95 Sorting= 0.72 Skewness= 1.02 Kurtosis= 5.18

Graphical method parameters (phi)
 Mean= 0.93 Sorting= 0.67 Skewness= 0.19 Kurtosis= 1.19
 Median= 0.87 C= -0.44 D85= 0.65 D65= 1.11

Textural description:
 Moderately well sorted, Fine skewed, Leptokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.03	0.20	0.20
-0.75	1.6818	0.05	0.14	0.34
-0.50	1.4142	0.10	0.34	0.68
-0.25	1.1892	0.28	1.23	1.91
0.00	1.0000	0.80	3.55	5.46
0.25	0.8409	1.80	6.83	12.29
0.50	0.7071	3.61	12.35	24.64
0.75	0.5946	6.12	17.13	41.77
1.00	0.5000	8.66	17.34	59.11
1.25	0.4204	10.56	12.97	72.08
1.50	0.3536	12.00	9.83	81.91
1.75	0.2973	12.93	6.35	88.26
2.00	0.2500	13.49	3.82	92.08
2.25	0.2102	13.85	2.46	94.54
2.50	0.1768	14.04	1.30	95.84
2.75	0.1487	14.08	0.34	96.18
3.00	0.1250	14.32	1.57	97.75
3.25	0.1051	14.35	0.20	97.95
3.50	0.0884	14.45	0.68	98.63
3.75	0.0743	14.51	0.41	99.04
4.00	0.0625	14.57	0.41	99.45
4.25	0.0536	14.57	0.00	99.45

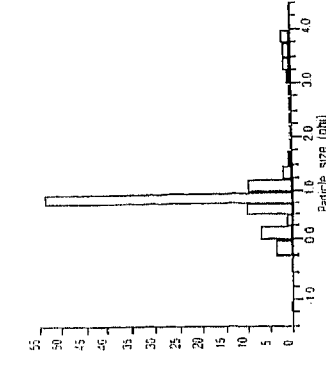
Total weight = 14.57 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: Offshore_2

Size distribution histogram



Results summary

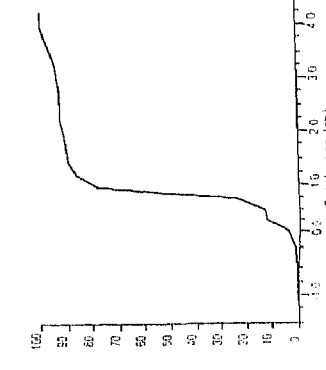
Textural size classes
 Gravel= 0.55% Sand= 96.90% Silt= 0.55% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 0.97 Sorting= 0.80 Skewness= 1.96 Kurtosis= 8.09

Graphical method parameters (phi)
 Mean= 0.87 Sorting= 0.66 Skewness= 0.23 Kurtosis= 5.89
 Median= 0.87 C= -0.45 D85= 0.80 D65= 0.94

Textural description:
 Moderately well sorted, Fine skewed, Extremely leptokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.07	0.55	0.55
-0.75	1.6818	0.09	0.16	0.71
-0.50	1.4142	0.11	0.16	0.87
-0.25	1.1892	0.19	0.63	1.49
0.00	1.0000	0.63	3.46	4.96
0.25	0.8409	1.55	7.24	12.20
0.50	0.7071	1.71	1.26	13.45
0.75	0.5946	3.03	10.39	23.84
1.00	0.5000	9.84	53.58	77.42
1.25	0.4204	11.10	9.91	87.33
1.50	0.3536	11.38	2.20	89.54
1.75	0.2973	11.52	1.10	90.64
2.00	0.2500	11.61	0.71	91.35
2.25	0.2102	11.71	0.79	92.13
2.50	0.1768	11.74	0.24	92.37
2.75	0.1487	11.80	0.47	92.84
3.00	0.1250	11.86	0.47	93.31
3.25	0.1051	11.89	0.94	94.25
3.50	0.0884	12.00	1.73	95.99
3.75	0.0743	12.41	1.66	97.64
4.00	0.0625	12.54	1.81	99.45
4.25	0.0536	12.64	0.60	99.45

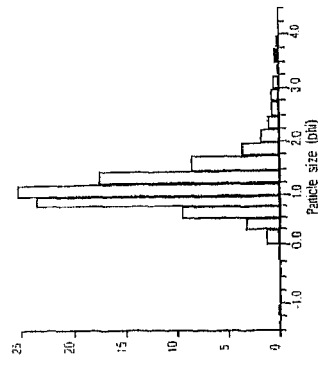
Total weight = 12.7 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: Offshore_4

Size distribution histogram



Results summary

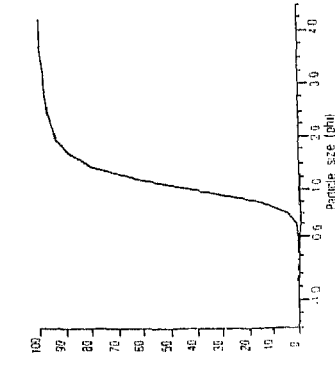
Textural size classes
 Gravel= 0.28% Sand= 99.65% Silt= 0.07% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 1.18 Sorting= 0.55 Skewness= 1.22 Kurtosis= 7.76

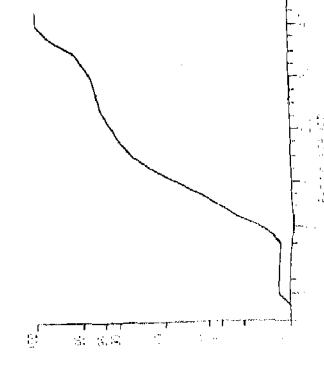
Graphical method parameters (phi)
 Mean= 1.15 Sorting= 0.46 Skewness= 0.19 Kurtosis= 1.24
 Median= 1.11 C= 0.07 D35= 0.96 D65= 1.27

Textural description:
 Well sorted, Fine skewed, Leptokurtic

Cumulative frequency



Cumulative frequency



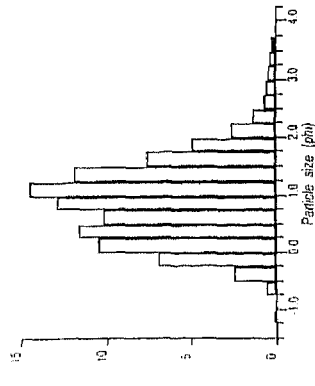
Total weight = 14.91 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: Offshore_5

Size distribution histogram



Results summary

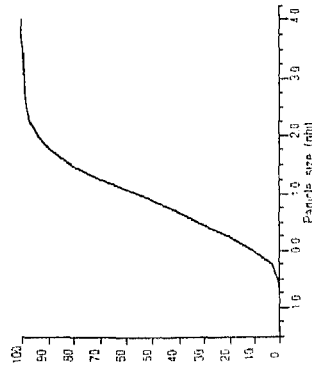
Textural size classes
 Gravel= 0.12% Sand= 99.82% Silt= 0.00% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 0.91 Sorting= 0.73 Skewness= 0.50 Kurtosis= 3.51

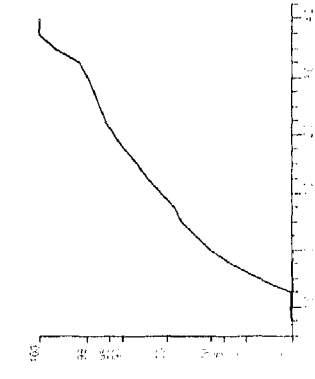
Graphical method parameters (phi)
 Mean= 0.88 Sorting= 0.71 Skewness= 0.01 Kurtosis= 0.93
 Median= 0.91 C= -0.46 D35= 0.58 D65= 1.17

Textural description:
 Moderately sorted, Near symmetrical, Mesokurtic

Cumulative frequency



Cumulative frequency



Total weight = 16.25 g

Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.04	0.28	0.28
-0.75	1.6818	0.04	0.00	0.28
-0.50	1.4142	0.04	0.00	0.28
-0.25	1.1892	0.04	0.00	0.28
0.00	1.0000	0.09	0.35	0.63
0.25	0.8409	0.28	1.33	1.96
0.50	0.7071	0.75	3.35	5.31
0.75	0.5946	2.15	9.71	15.02
1.00	0.5000	5.51	23.46	38.50
1.25	0.4204	9.12	25.23	63.73
1.50	0.3536	11.65	17.68	81.41
1.75	0.2973	12.90	8.74	90.15
2.00	0.2500	13.43	3.70	93.85
2.25	0.2102	13.70	1.89	95.74
2.50	0.1768	13.87	1.19	96.93
2.75	0.1487	13.99	0.77	97.69
3.00	0.1250	14.03	0.70	98.39
3.25	0.1051	14.15	0.56	98.95
3.50	0.0884	14.21	0.35	99.30
3.75	0.0743	14.27	0.42	99.72
4.00	0.0625	14.30	0.21	99.93
4.25	0.0525	14.30	0.00	99.93

Raw data summary

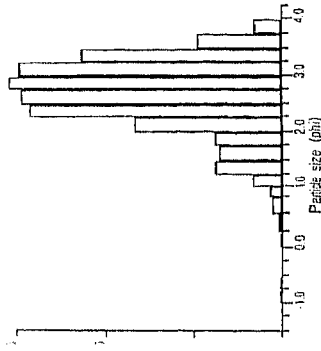
Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.02	0.12	0.12
-0.75	1.6818	0.02	0.00	0.12
-0.50	1.4142	0.10	0.49	0.62
-0.25	1.1892	0.50	2.46	3.08
0.00	1.0000	1.62	6.89	9.96
0.25	0.8409	3.31	10.39	20.36
0.50	0.7071	5.19	11.56	31.92
0.75	0.5946	6.84	10.15	42.07
1.00	0.5000	8.92	12.79	54.86
1.25	0.4204	11.28	14.51	69.37
1.50	0.3536	13.19	11.75	81.12
1.75	0.2973	14.43	7.63	88.75
2.00	0.2500	15.22	4.86	93.60
2.25	0.2102	15.64	2.58	96.19
2.50	0.1768	15.86	1.35	97.54
2.75	0.1487	15.98	0.74	98.28
3.00	0.1250	16.07	0.55	98.83
3.25	0.1051	16.14	0.43	99.26
3.50	0.0884	16.20	0.37	99.63
3.75	0.0743	16.25	0.31	99.94
4.00	0.0625	16.25	0.00	99.94

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: Offshore_7

Size distribution histogram



Results summary

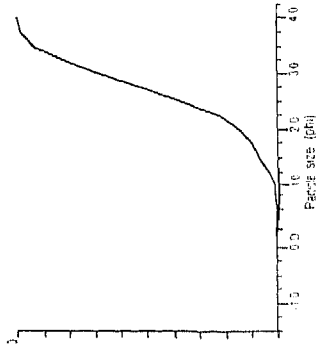
Textural size classes
 Gravel= 0.00% Sand= 100.00% Silt= 0.00% Clay= 0.00%
 Gravel free detrital sediment
 Sand

Moment method parameters (phi)
 Mean= 2.64 Sorting= 0.67 Skewness= -0.86 Kurtosis= 4.19

Graphical method parameters (phi)
 Mean= 2.68 Sorting= 0.65 Skewness= -0.16 Kurtosis= 1.08
 Median= 2.71 C= 0.73 D35= 2.46 D65= 2.96

Textural description:
 Moderately well sorted, Coarse skewed, Mesokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.00	0.00	0.00
-0.75	1.6818	0.01	0.07	0.07
-0.50	1.4142	0.02	0.07	0.15
-0.25	1.1892	0.02	0.00	0.15
0.00	1.0000	0.02	0.00	0.15
0.25	0.8409	0.04	0.15	0.30
0.50	0.7071	0.07	0.22	0.52
0.75	0.5946	0.14	0.52	1.04
1.00	0.5000	0.24	0.75	1.79
1.25	0.4204	0.47	1.71	3.50
1.50	0.3536	0.99	3.80	7.30
1.75	0.2973	1.46	3.58	10.88
2.00	0.2500	1.97	3.80	14.68
2.25	0.2102	3.09	9.35	23.03
2.50	0.1768	5.01	14.31	37.33
2.75	0.1487	6.99	14.75	52.09
3.00	0.1250	9.06	15.42	67.51
3.25	0.1051	11.05	14.83	82.34
3.50	0.0884	12.95	11.40	93.74
3.75	0.0743	13.22	4.77	98.51
4.00	0.0625	13.43	1.56	100.00

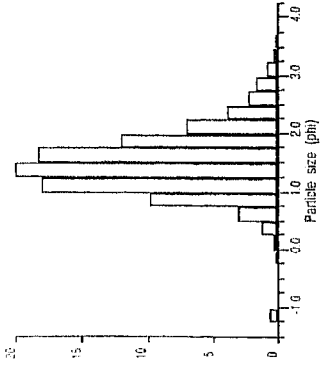
Total weight = 13.43 g

PARTICLE SIZE ANALYSIS

Earth Sciences - University of Waikato

Sample: Offshore_6

Size distribution histogram



Results summary

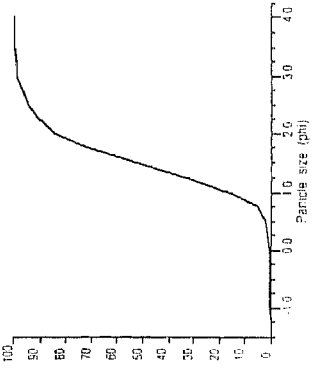
Textural size classes
 Gravel= 0.65% Sand= 98.97% Silt= 0.00% Clay= 0.00%
 Gravel bearing detrital sediment
 Slightly Gravelly Sand

Moment method parameters (phi)
 Mean= 1.49 Sorting= 0.58 Skewness= 0.05 Kurtosis= 5.75

Graphical method parameters (phi)
 Mean= 1.50 Sorting= 0.53 Skewness= 0.15 Kurtosis= 1.11
 Median= 1.46 C= 0.19 D35= 1.27 D65= 1.66

Textural description:
 Moderately well sorted, Fine skewed, Mesokurtic

Cumulative frequency



Raw data summary

Size (phi)	Size (mm)	Cumulative weight (g)	Interval frequency (%)	Cumulative frequency (%)
-1.25	2.3784	0.00	0.00	0.00
-1.00	2.0000	0.10	0.65	0.65
-0.75	1.6818	0.10	0.00	0.65
-0.50	1.4142	0.10	0.00	0.65
-0.25	1.1892	0.10	0.00	0.65
0.00	1.0000	0.11	0.06	0.71
0.25	0.8409	0.17	0.39	1.10
0.50	0.7071	0.36	1.23	2.33
0.75	0.5946	0.84	3.10	5.43
1.00	0.5000	2.35	9.75	15.18
1.25	0.4204	5.13	17.96	33.14
1.50	0.3536	8.23	20.03	53.17
1.75	0.2973	11.08	18.41	71.58
2.00	0.2500	12.93	11.95	83.53
2.25	0.2102	14.01	6.98	90.50
2.50	0.1768	14.61	3.88	94.38
2.75	0.1487	14.95	2.20	96.58
3.00	0.1250	15.20	1.61	98.19
3.25	0.1051	15.32	0.78	98.97
3.50	0.0884	15.38	0.39	99.35
3.75	0.0743	15.42	0.25	99.61
4.00	0.0625	15.42	0.00	99.61

Total weight = 15.43 g

APPENDIX II: MODEL MATRICES OF BEACH FACE SEDIMENTS

Sediment trend matrices for the MCCLAREN (1981) model and the Waihi model for beach face samples.

SEDIMENT TREND MATRIX FOR BEACH FACE SEDIMENTS USING THE McCLAREN (1981) MODEL

Sediment Deposit	Sediment Source					Grain Size Characteristic
	CCS49	CCS50	CCS53	CCS51	CCS52	
CCS49		<i>coarser</i> <i>poorer</i> -	<i>coarser</i> <i>poorer</i> +	<i>coarser</i> <i>better</i> +	<i>coarser</i> <i>better</i> +	M (∅) SD (∅) Sk (∅)
CCS50	<i>finer</i> <i>better</i> +		<i>coarser</i> <i>better</i> +	<i>coarser</i> <i>better</i> +	<i>coarser</i> <i>better</i> +	M (∅) SD (∅) Sk (∅)
CCS53	<i>finer</i> <i>better</i> -	<i>finer</i> <i>poorer</i> -		<i>coarser</i> <i>better</i> -	<i>coarser</i> <i>better</i> -	M (∅) SD (∅) Sk (∅)
CCS51	<i>finer</i> <i>poorer</i> -	<i>finer</i> <i>poorer</i> -	<i>finer</i> <i>poorer</i> +		<i>coarser</i> <i>poorer</i> -	M (∅) SD (∅) Sk (∅)
CCS52	<i>finer</i> <i>poorer</i> -	<i>finer</i> <i>poorer</i> -	<i>finer</i> <i>poorer</i> +	<i>finer</i> <i>better</i> +		M (∅) SD (∅) Sk (∅)

The mean grain size is finer or coarser, the sorting is better or poorer, and the skewness is more positive (+) or more negative (-), when relating the deposited sediment to the possible sediment source. Boxes in italics indicate trends that are impossible between a deposit and its source based on the McCLAREN (1981) model.

SEDIMENT TREND MATRIX FOR BEACH FACE SEDIMENTS USING THE WAIHI MODEL

		Sediment Source					Grain Size Characteristic
		CCS49	CCS50	CCS53	CCS51	CCS52	
Sediment Deposit	CCS49		coarser poorer -	coarser poorer +	coarser better +	coarser better +	M (Ø) SD (Ø) Sk (Ø)
	CCS50	finer better +		coarser better +	coarser better +	coarser better +	M (Ø) SD (Ø) Sk (Ø)
	CCS53	finer better -	finer poorer -		coarser better -	coarser better -	M (Ø) SD (Ø) Sk (Ø)
	CCS51	finer poorer -	finer poorer -	finer poorer +		coarser poorer -	M (Ø) SD (Ø) Sk (Ø)
	CCS52	finer poorer -	finer poorer -	finer poorer +	finer better +		M (Ø) SD (Ø) Sk (Ø)

The mean grain size is finer or coarser, the sorting is better or poorer, and the skewness is more positive (+) or more negative (-), when relating the deposited sediment to the possible sediment source. Boxes in italics indicate trends that are impossible between a deposit and its source based on the Waihi model.

APPENDIX III: CALIBRATION RESULTS

RMSE and BSS for significant wave height and wave direction at WAI1 and WAI3. Calibration runs 1-6 each have a different bed roughness and eddy viscosity set to the default setting of 10. Calibration runs 7-10 have differing eddy viscosity values and a default bottom roughness of 0.01.

WAI1

		Significant Wave Height		Wave Direction	
Calibration Run	Bed Roughness	RMSE	BSS	RMSE	BSS
1	0.1	0.5555	0.6937	22.5140	0.5584
2	0.01	0.5304	0.7207	22.5140	0.5584
3	0.05	0.5789	0.6673	22.4880	0.5594
4	0.001	0.6066	0.6347	22.5370	0.5575
5	0.005	0.6041	0.6376	22.4880	0.5594
6	0.0001	0.5356	0.7152	22.5140	0.5584

		Significant Wave Height		Wave Direction	
Calibration Run	Eddy Viscosity	RMSE	BSS	RMSE	BSS
7	1	1.2565	-0.5675	40.1060	-0.4014
8	5	0.6165	0.6227	22.2690	0.5679
9	15	0.5886	0.6560	23.0280	0.5380
10	20	0.3532	0.8762	23.5850	0.5154

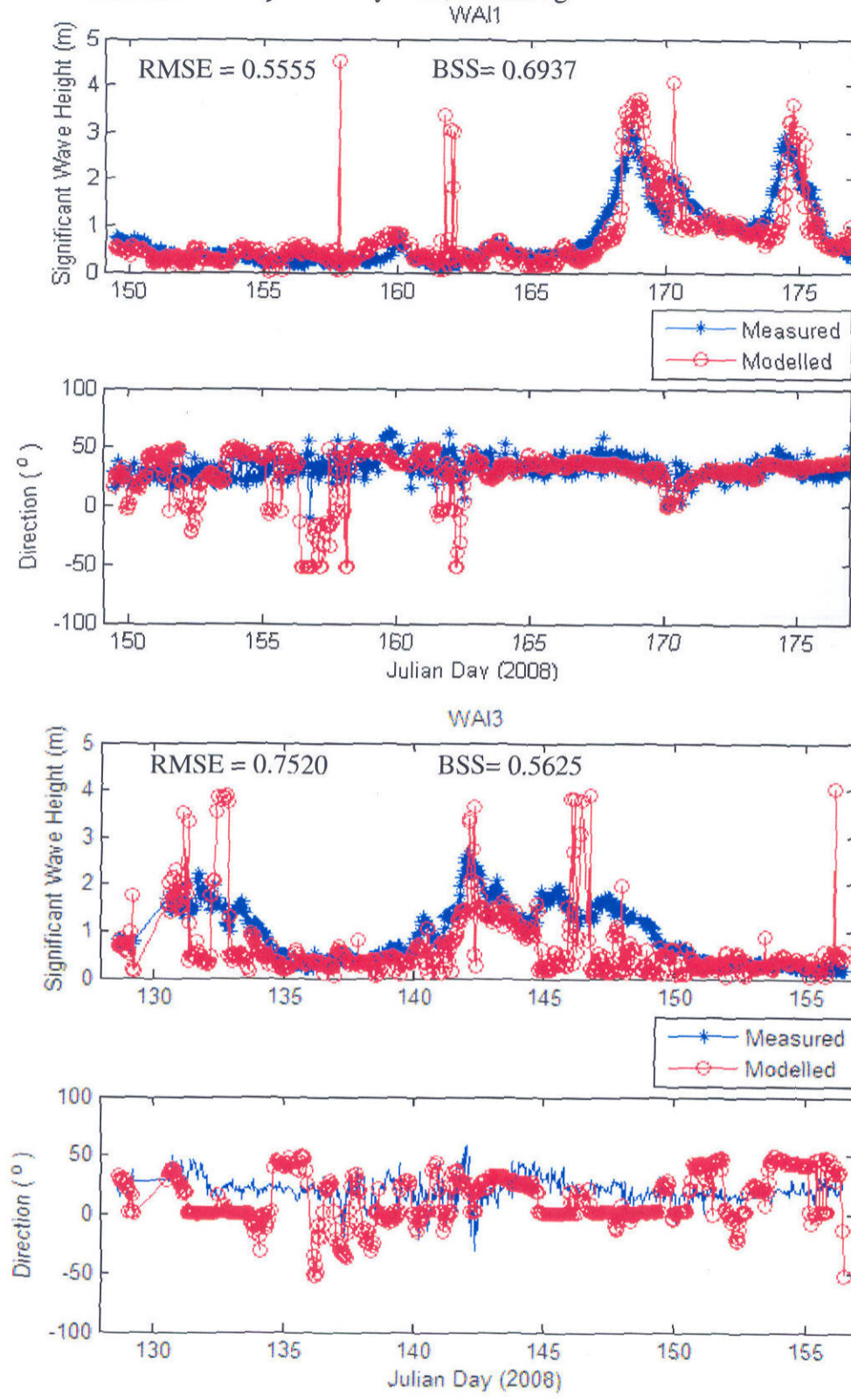
WAI3

Calibration Run	Bed Roughness	Significant Wave Height		Wave Direction	
		RMSE	BSS	RMSE	BSS
1	0.1	0.7520	0.5625	23.5660	0.0436
2	0.01	0.7918	0.5151	23.5660	0.0436
3	0.05	0.7727	0.5381	23.5660	0.0436
4	0.001	0.7963	0.5094	23.5660	0.0436
5	0.005	0.7943	0.5120	23.5660	0.0436
6	0.0001	0.7968	0.5089	23.5660	0.0436

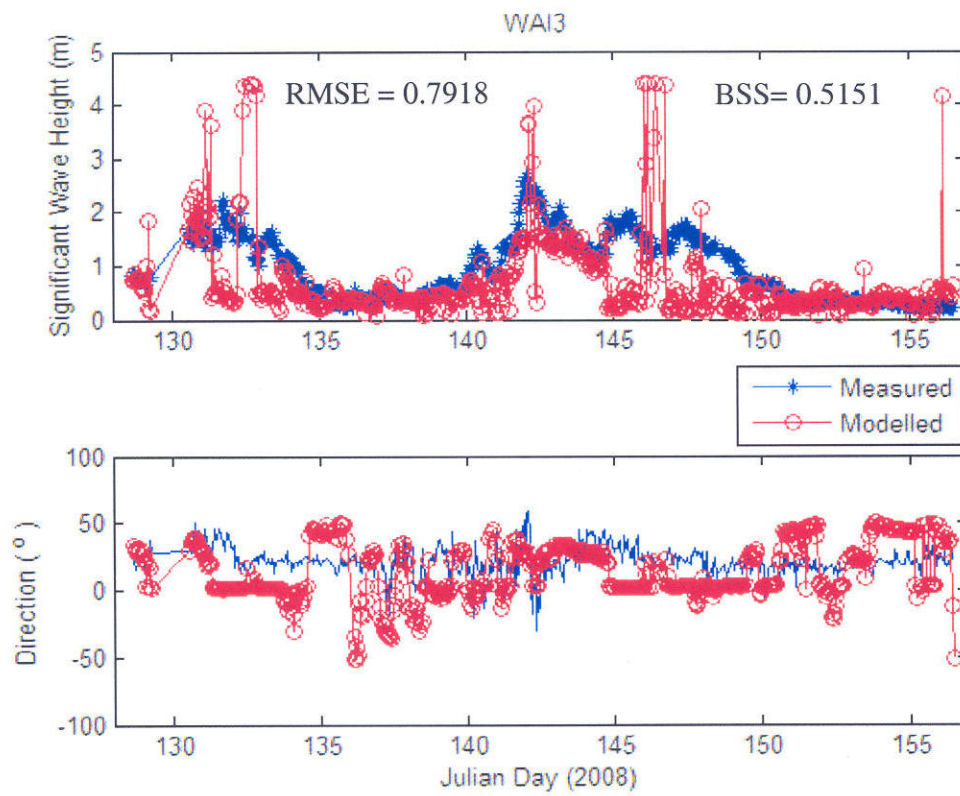
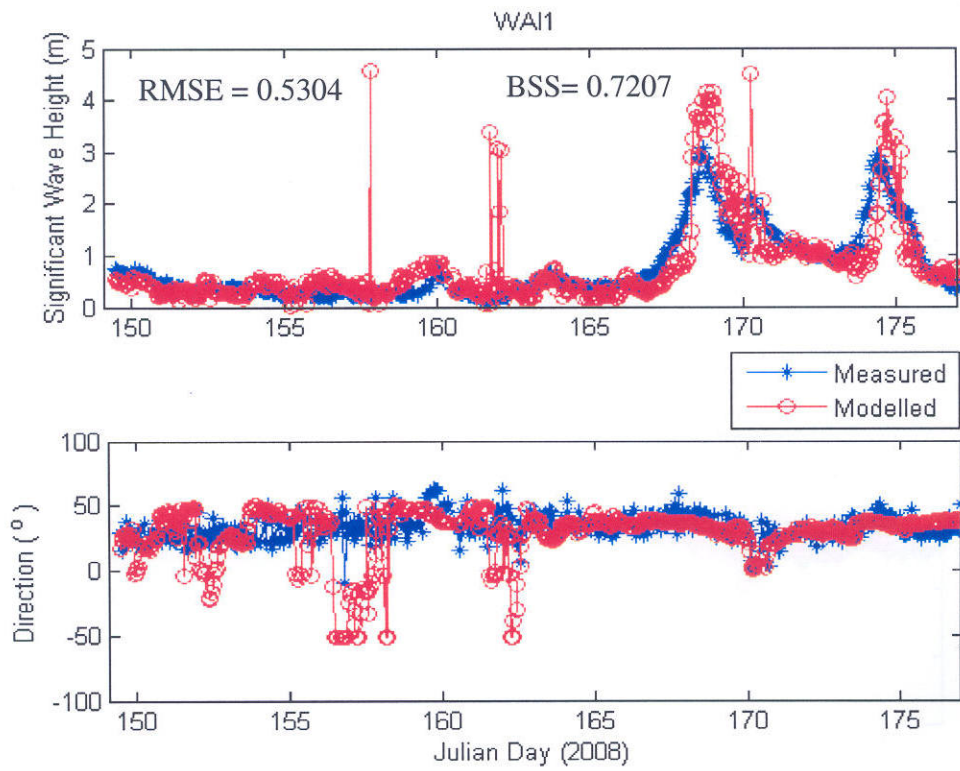
Calibration Run	Eddy Viscosity	Significant Wave Height		Wave Direction	
		RMSE	BSS	RMSE	BSS
7	1	1.2431	-0.1955	25.3370	-0.1057
8	5	0.8204	0.4794	23.9660	0.0108
9	15	0.7175	0.6017	23.5230	0.0471
10	20	0.6140	0.7084	23.4950	0.0493

Model Calibration Graphs

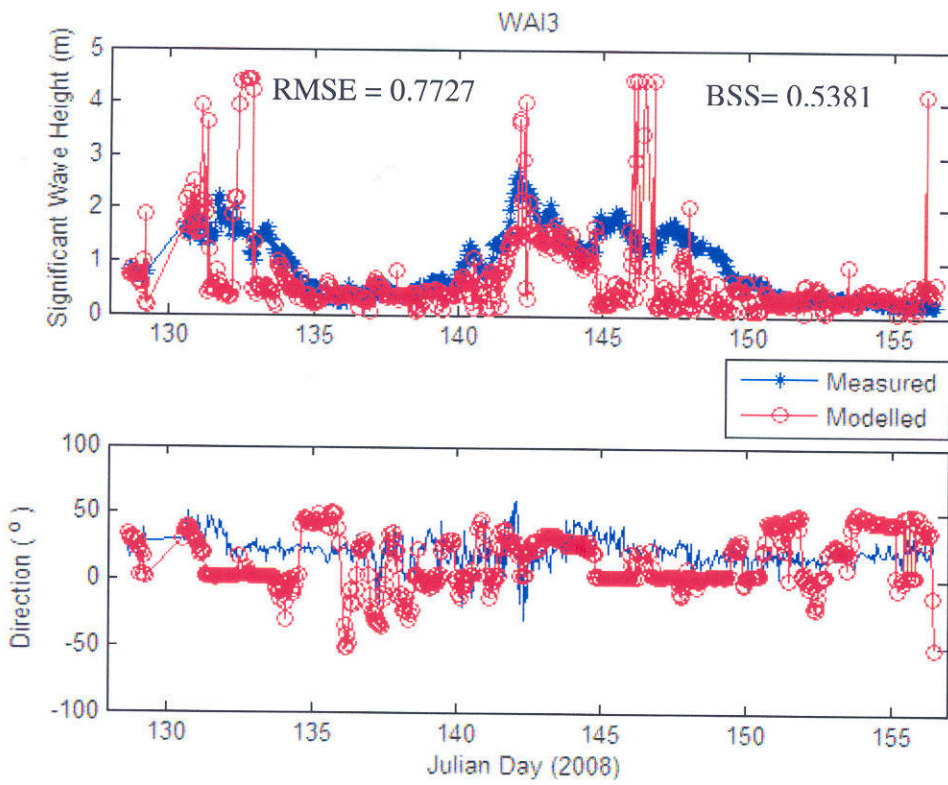
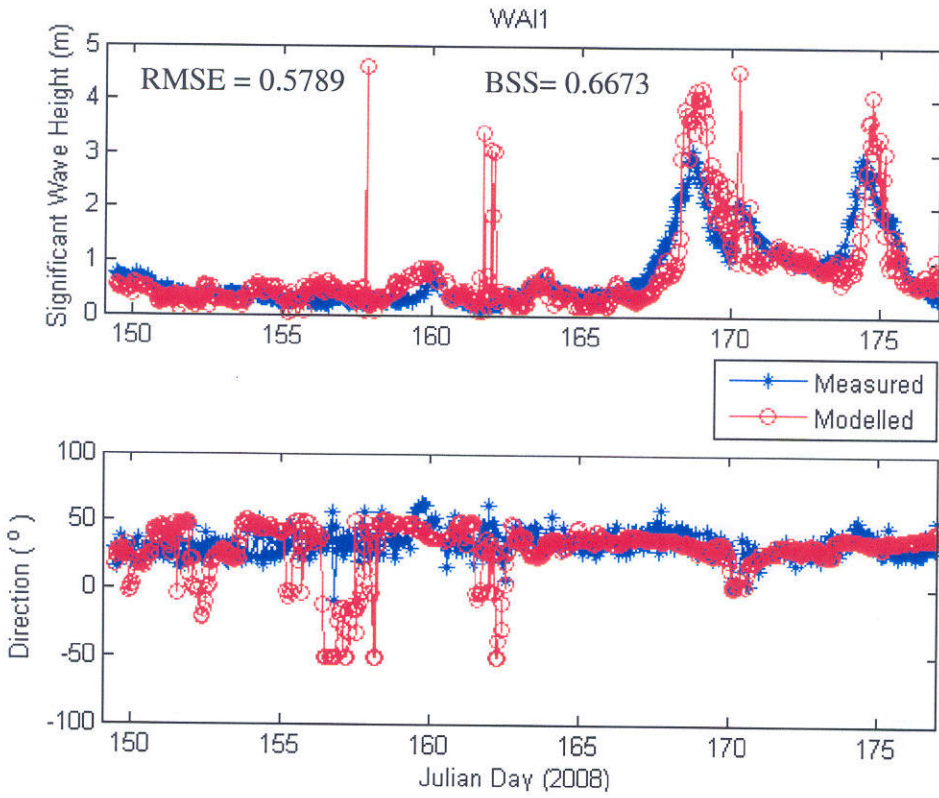
Calibration Run 1: Eddy Viscosity = 10; Bed Roughness = 0.1



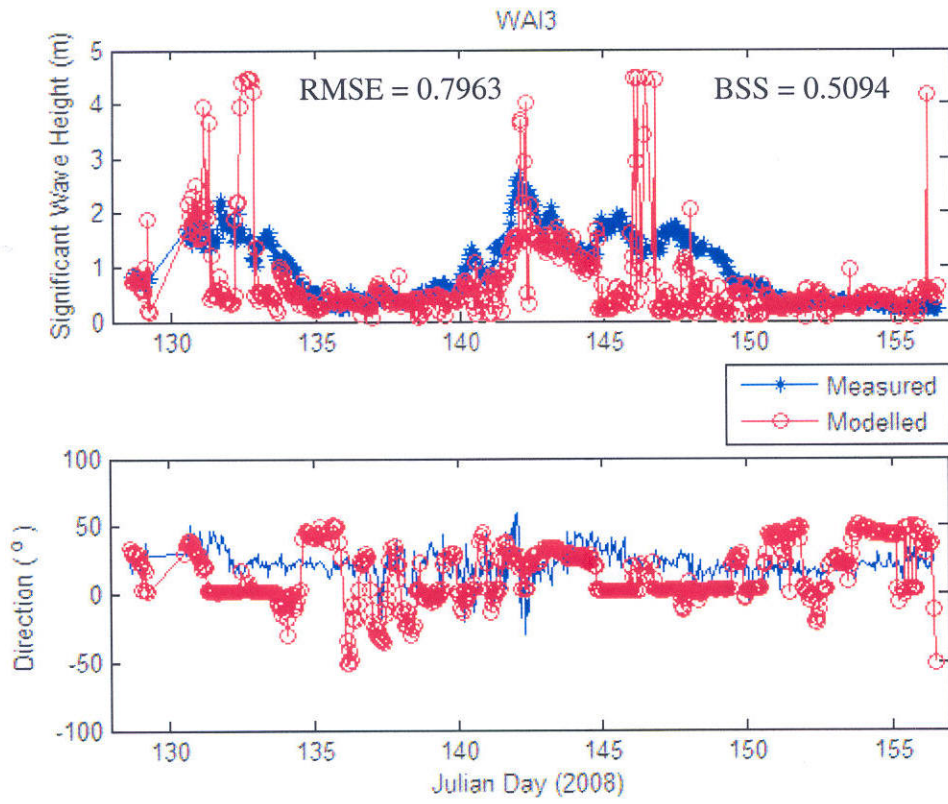
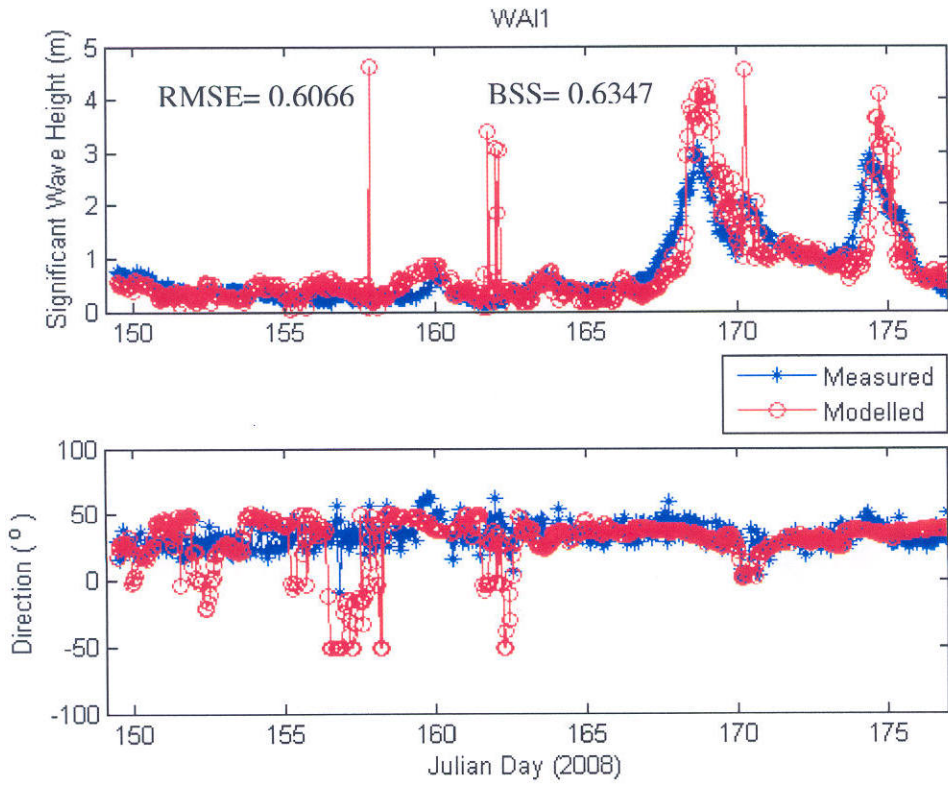
Calibration Run 2: Eddy Viscosity = 10; Bed Roughness = 0.01



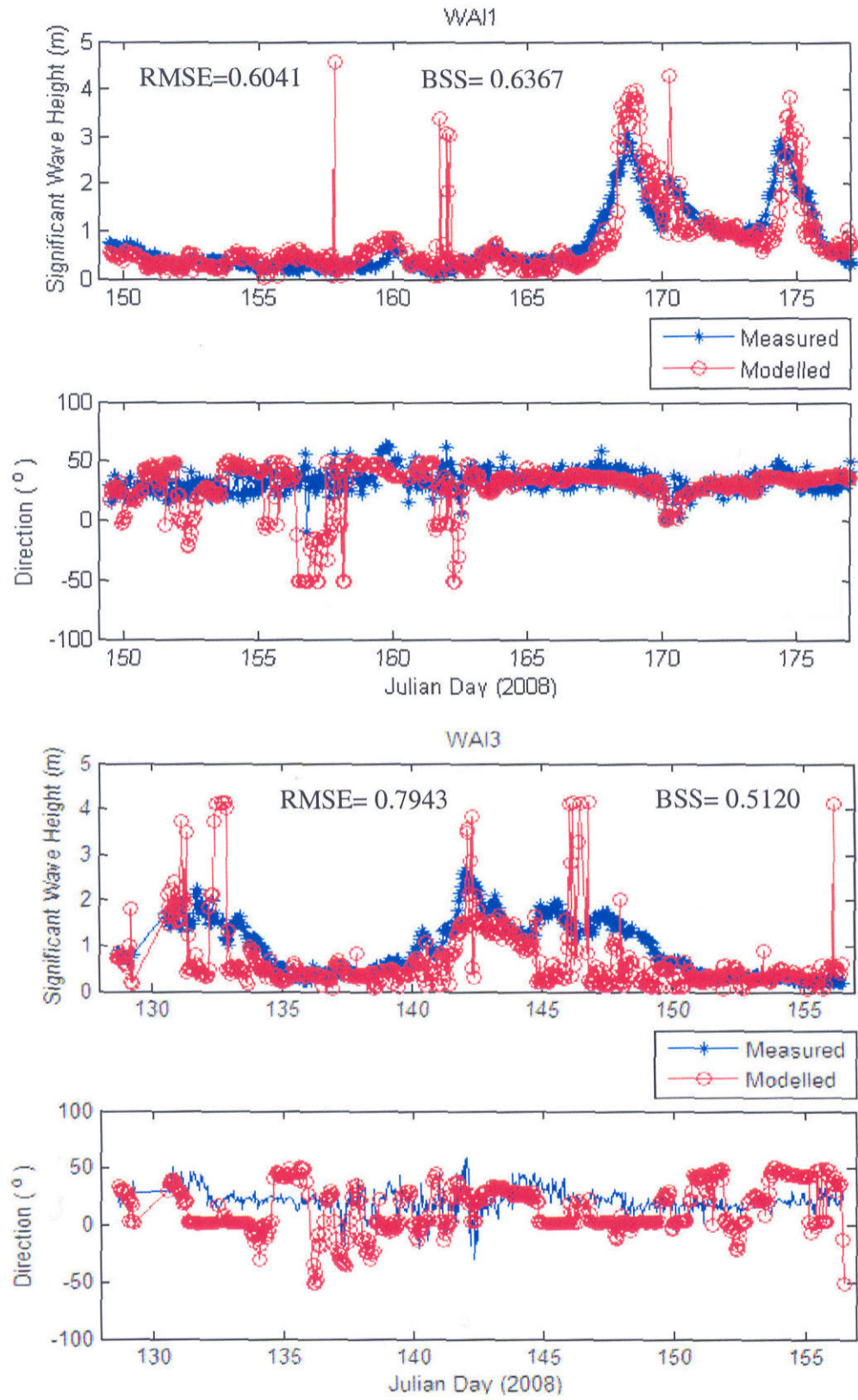
Calibration Run 3: Eddy Viscosity = 10; Bed Roughness = 0.05



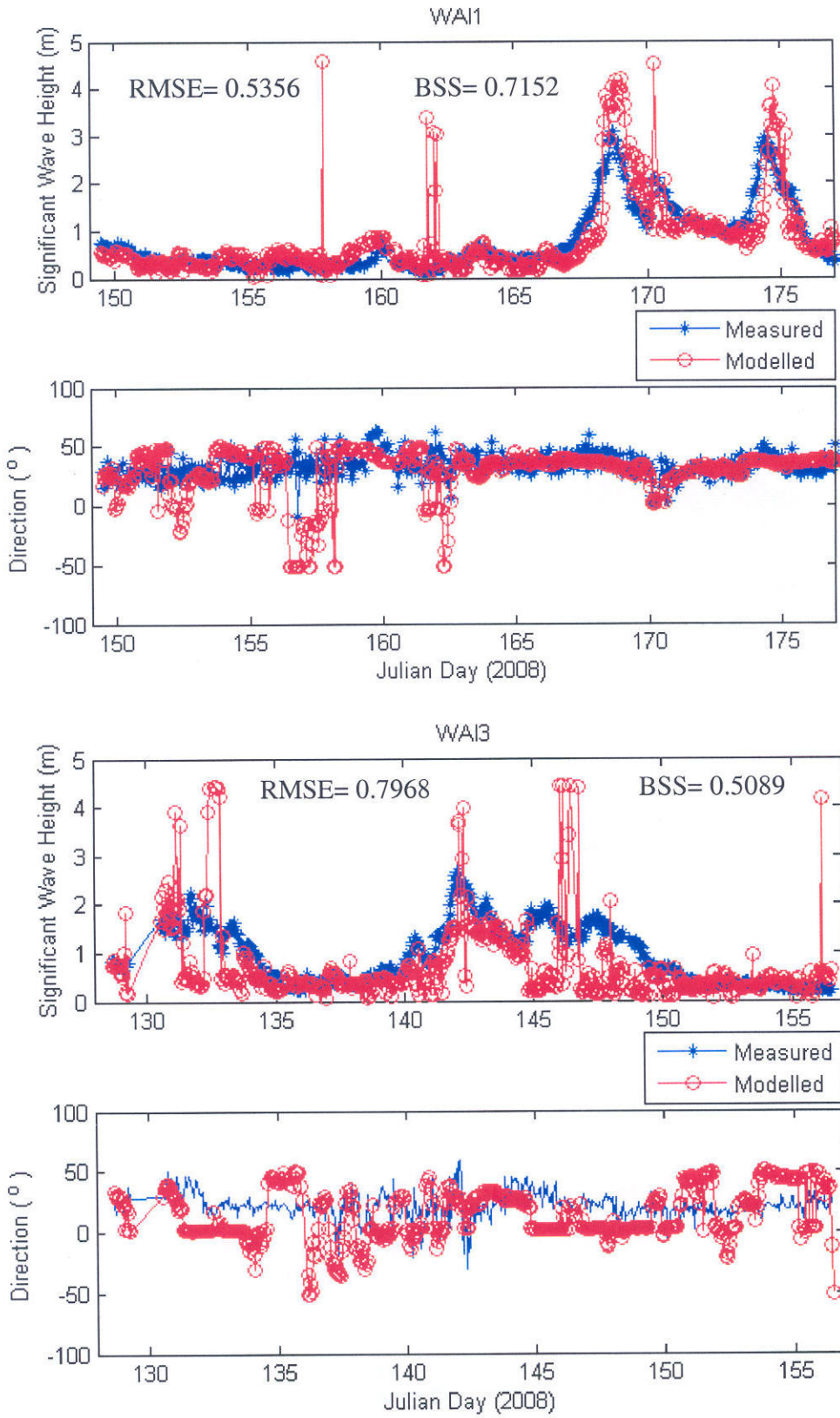
Calibration Run 4: Eddy Viscosity = 10; Bed Roughness = 0.001



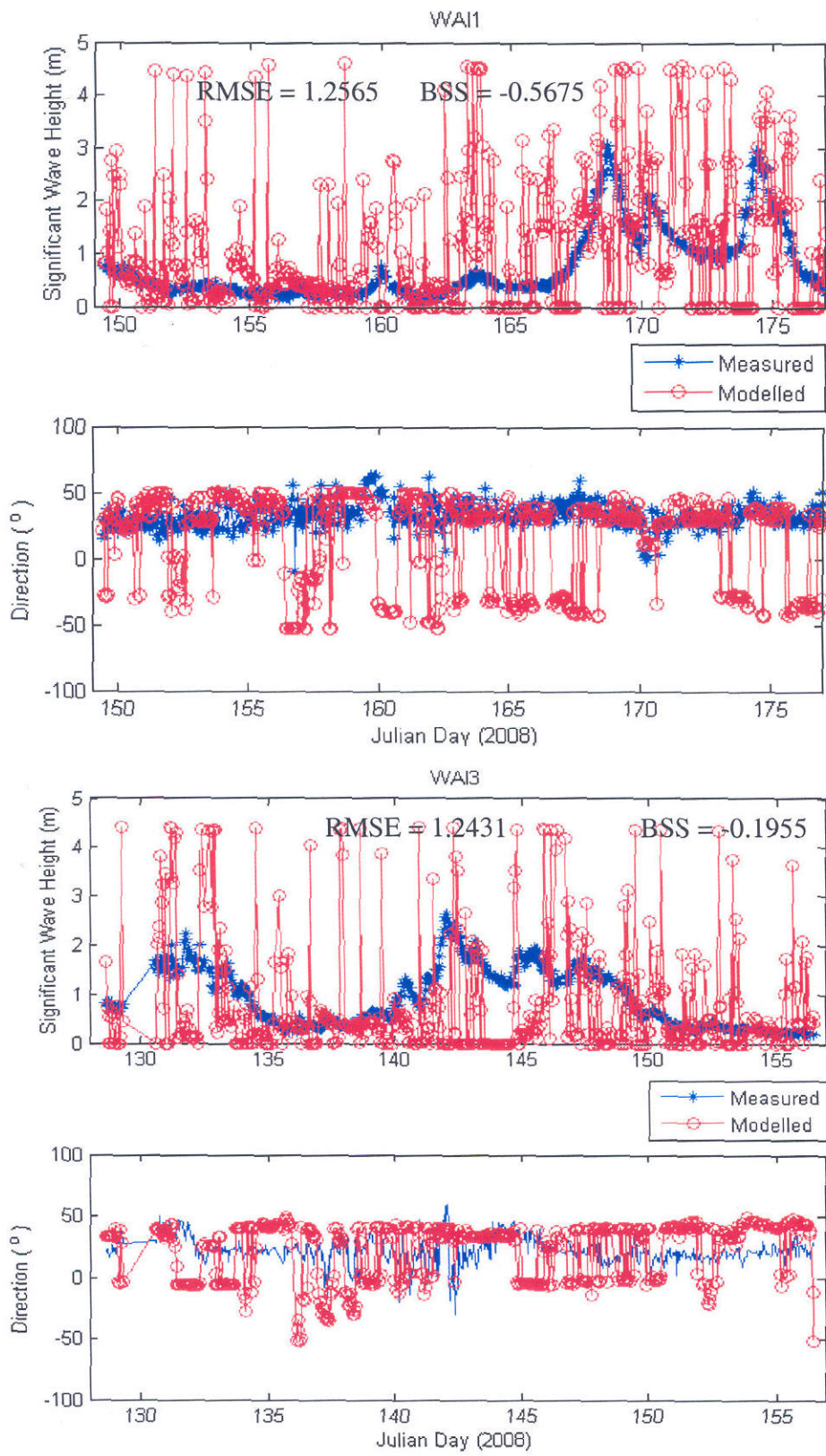
Calibration Run 5: Eddy Viscosity = 10; Bed Roughness = 0.005



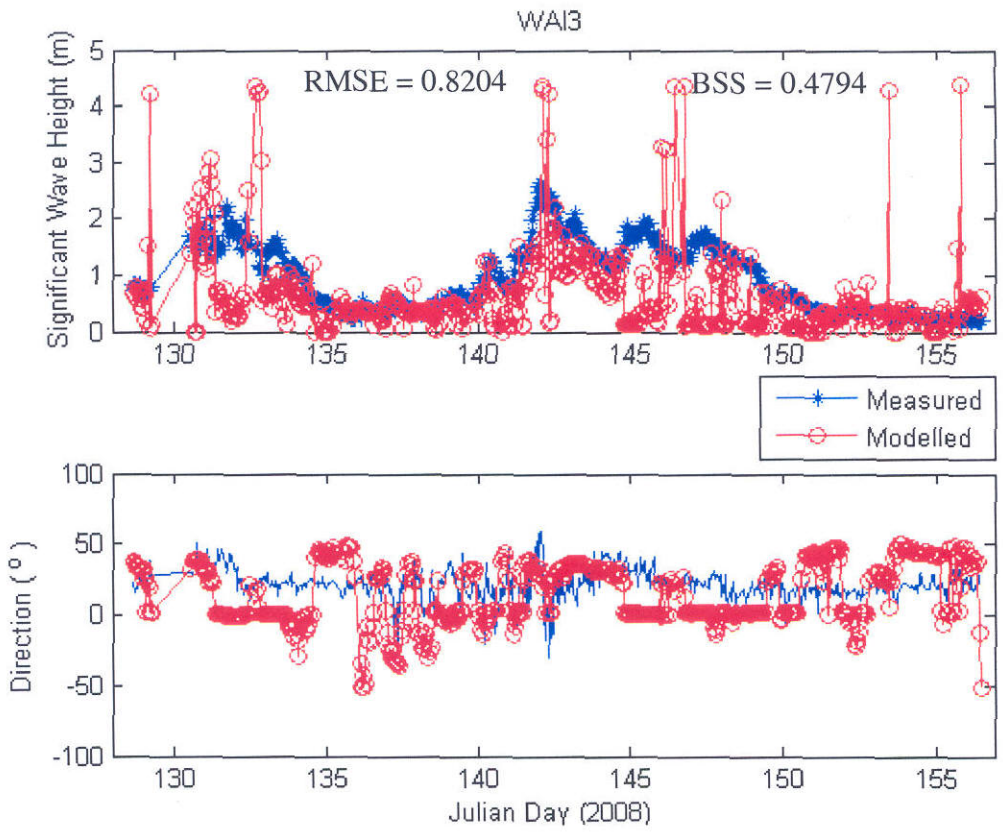
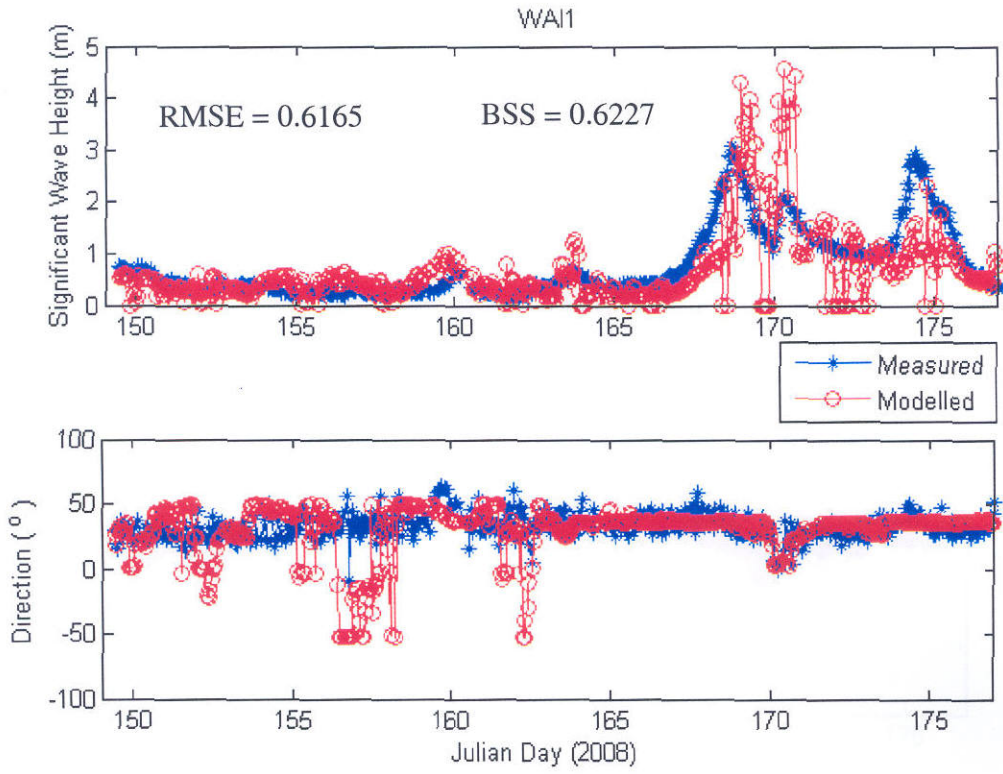
Calibration Run 6: Eddy Viscosity = 10; Bed Roughness = 0.0001



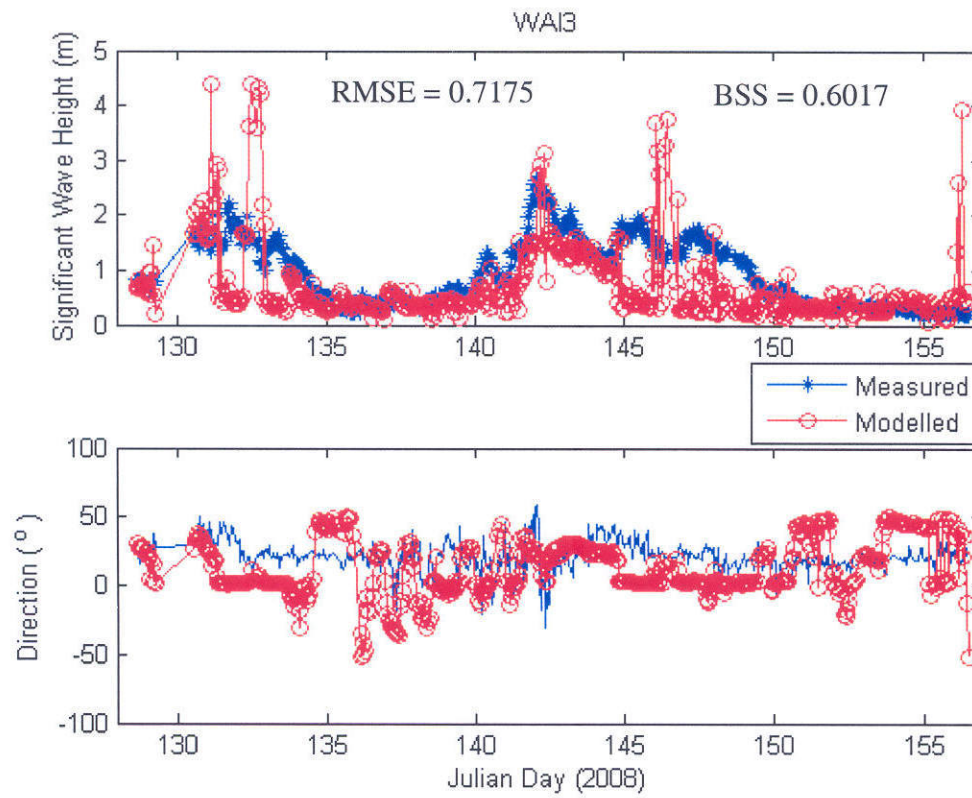
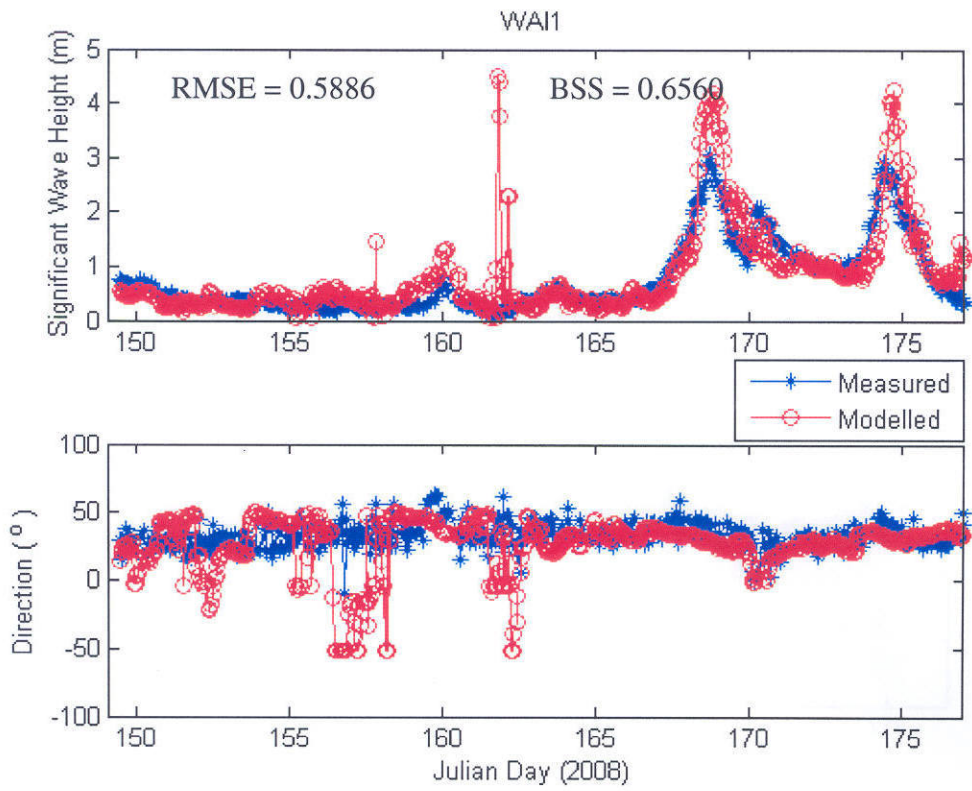
Calibration Run 7: Eddy Viscosity = 1; Bed Roughness = 0.01



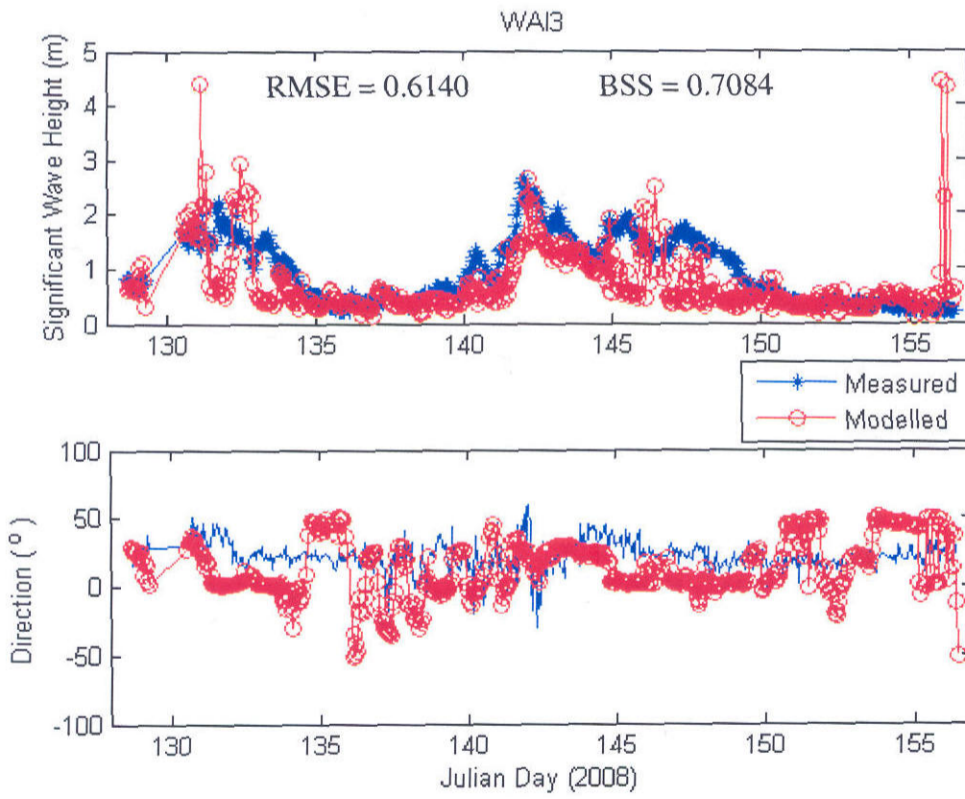
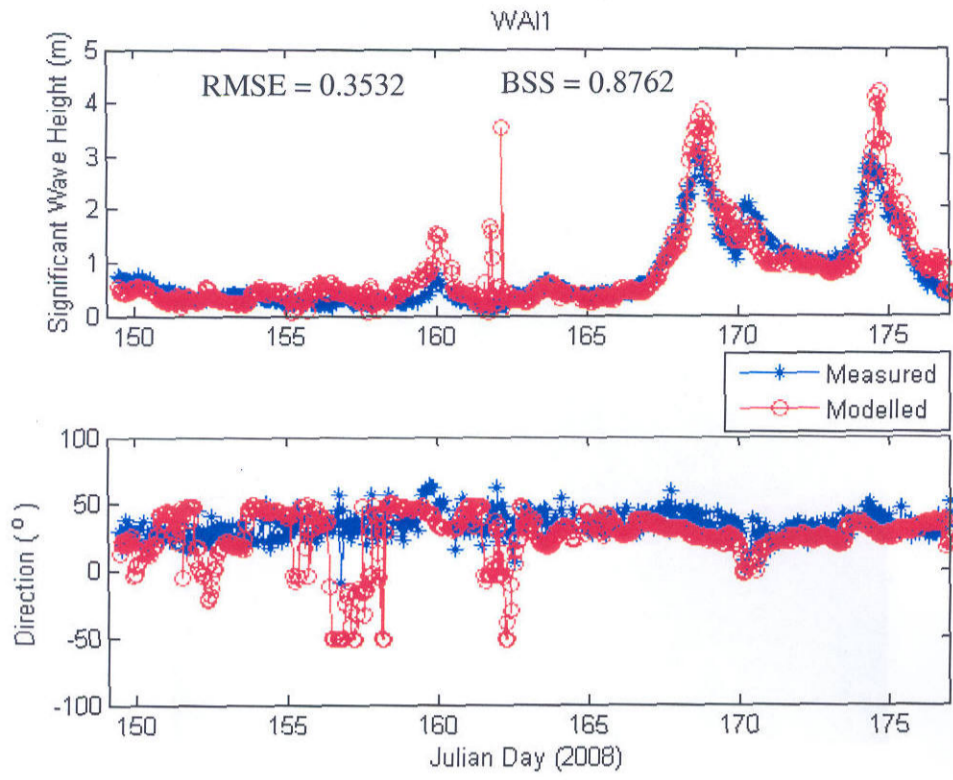
Calibration Run 8: Eddy Viscosity = 5; Bed Roughness = 0.01



Calibration Run 9: Eddy Viscosity = 15; Bed Roughness = 0.01



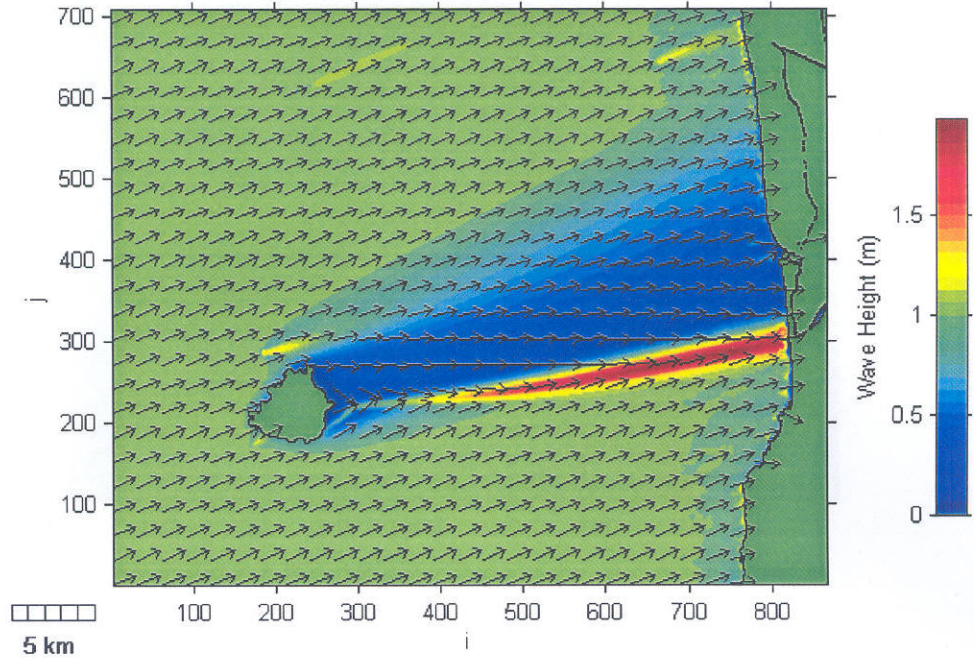
Calibration Run 10: Eddy Viscosity = 20; Bed Roughness = 0.01



APPENDIX IV: WBEND SCENARIOS

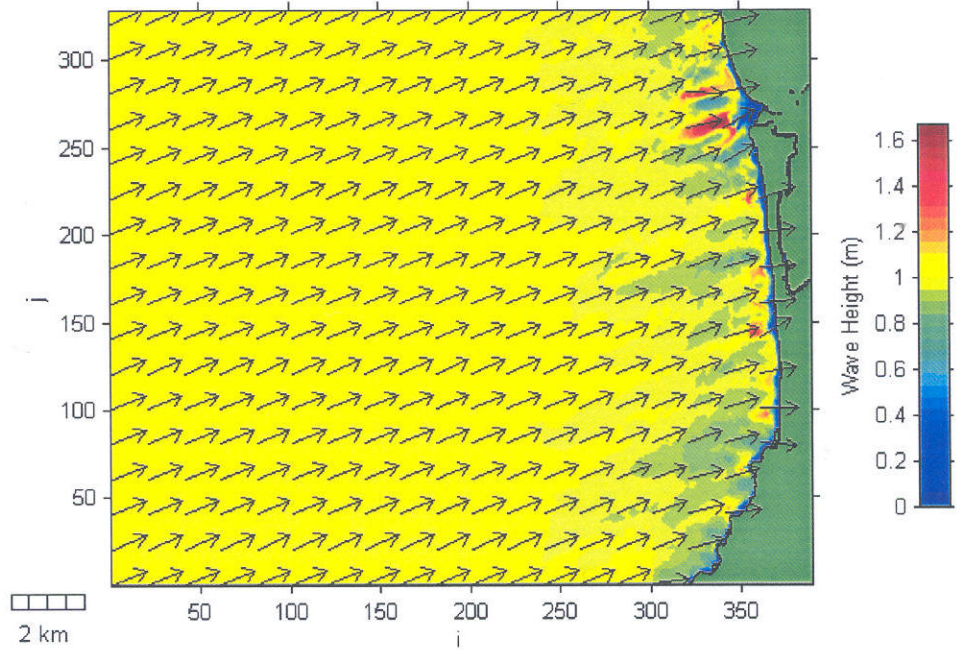
ASR Ltd Model WBEND

(Angle) vector & Height at t = 0 hours

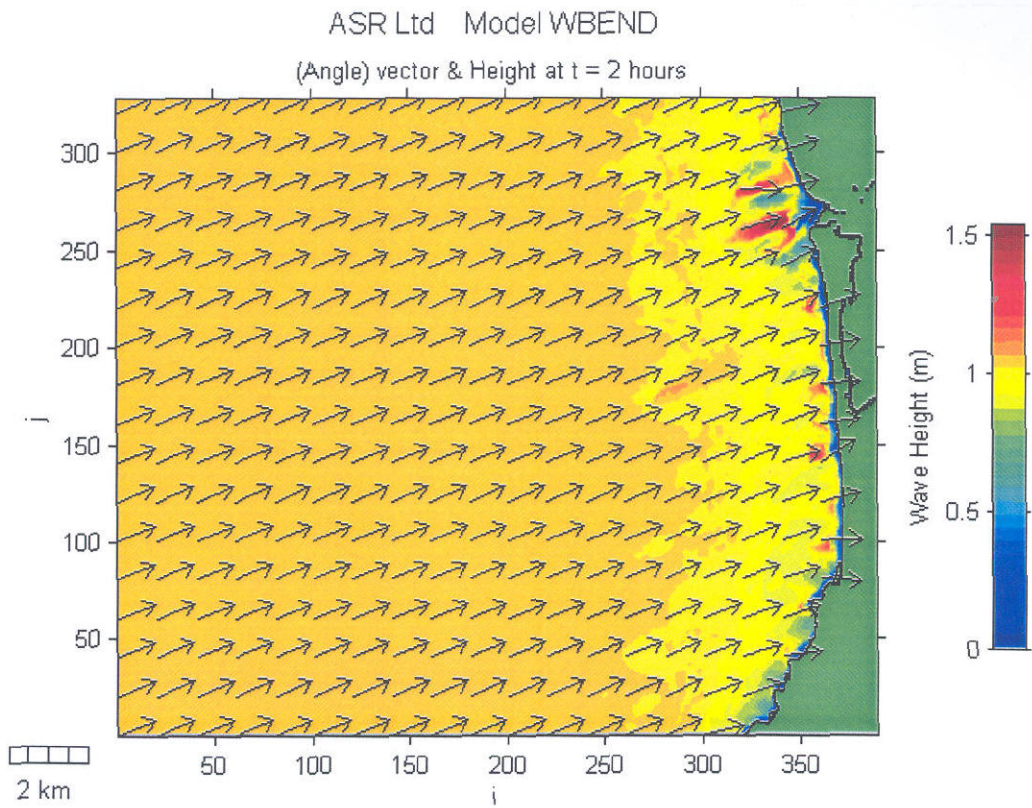
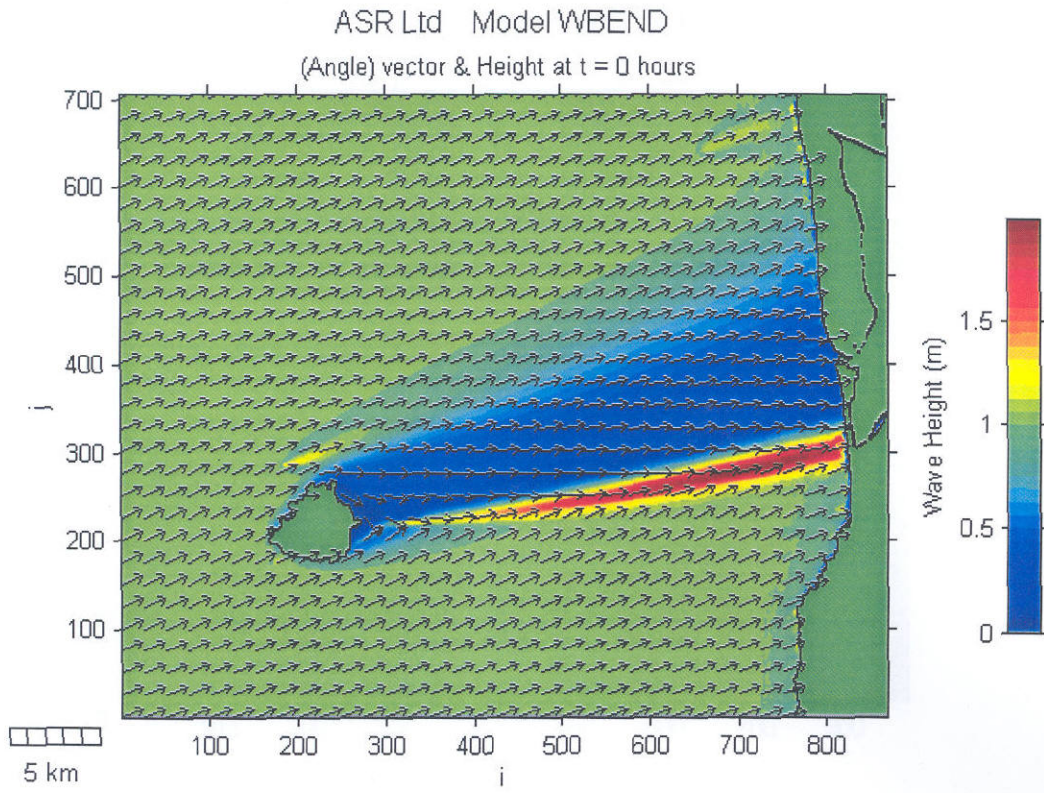


ASR Ltd Model WBEND

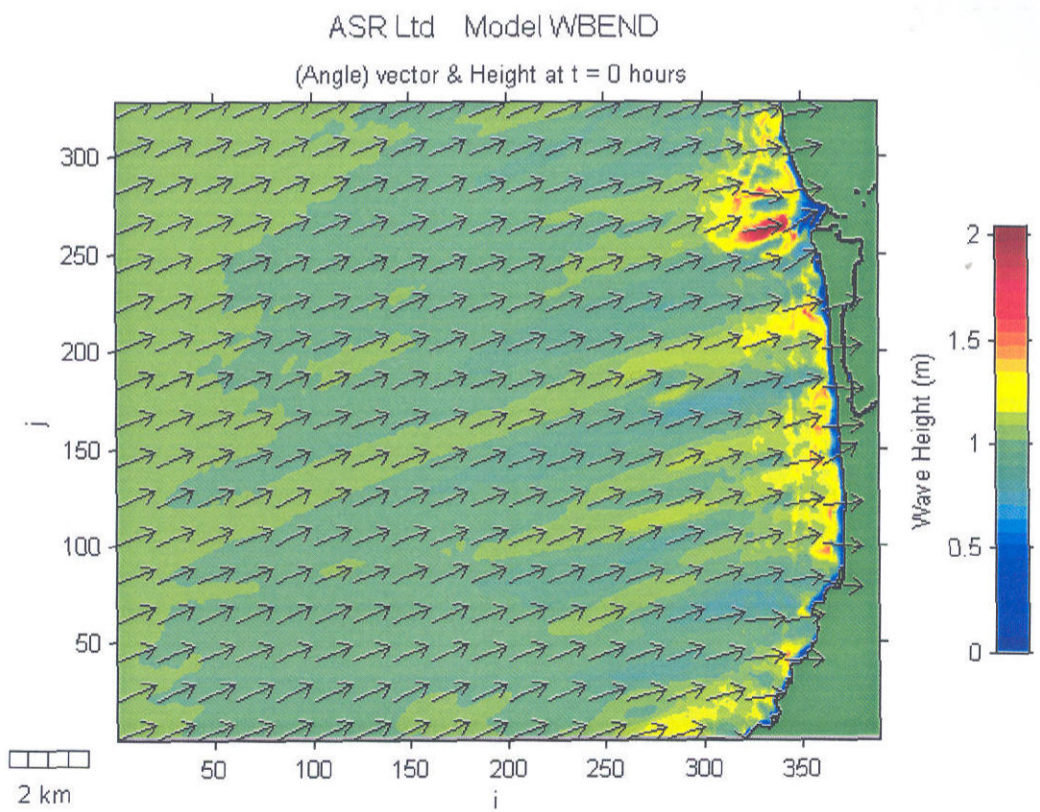
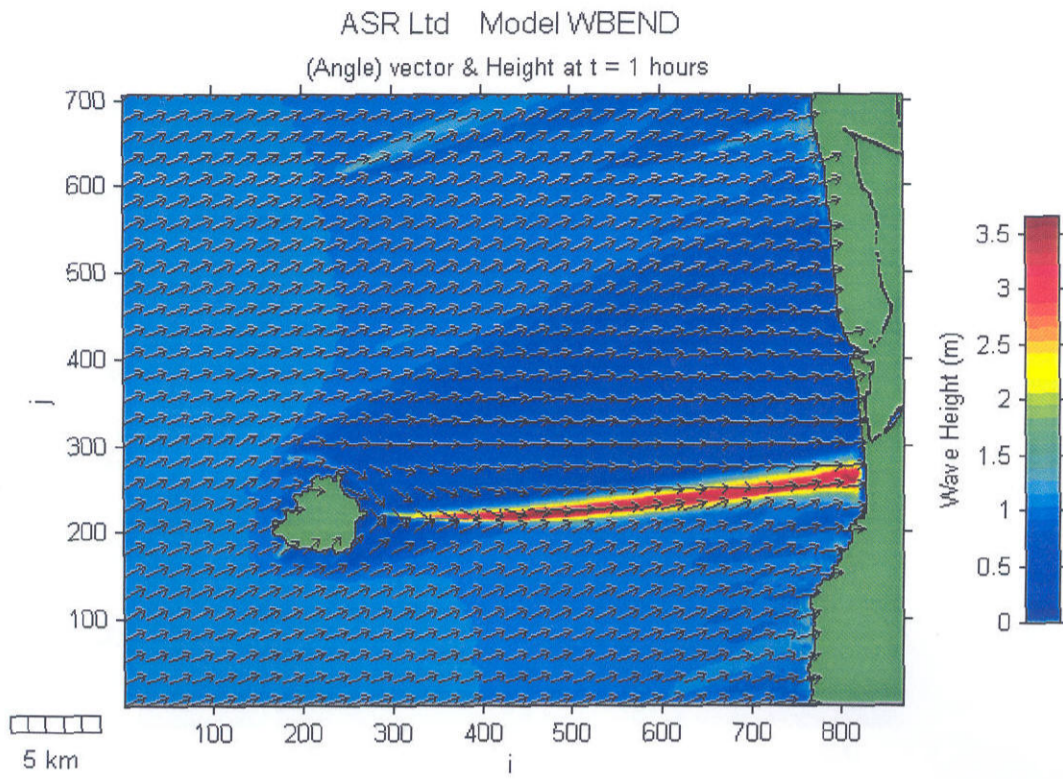
(Angle) vector & Height at t = 4 hours



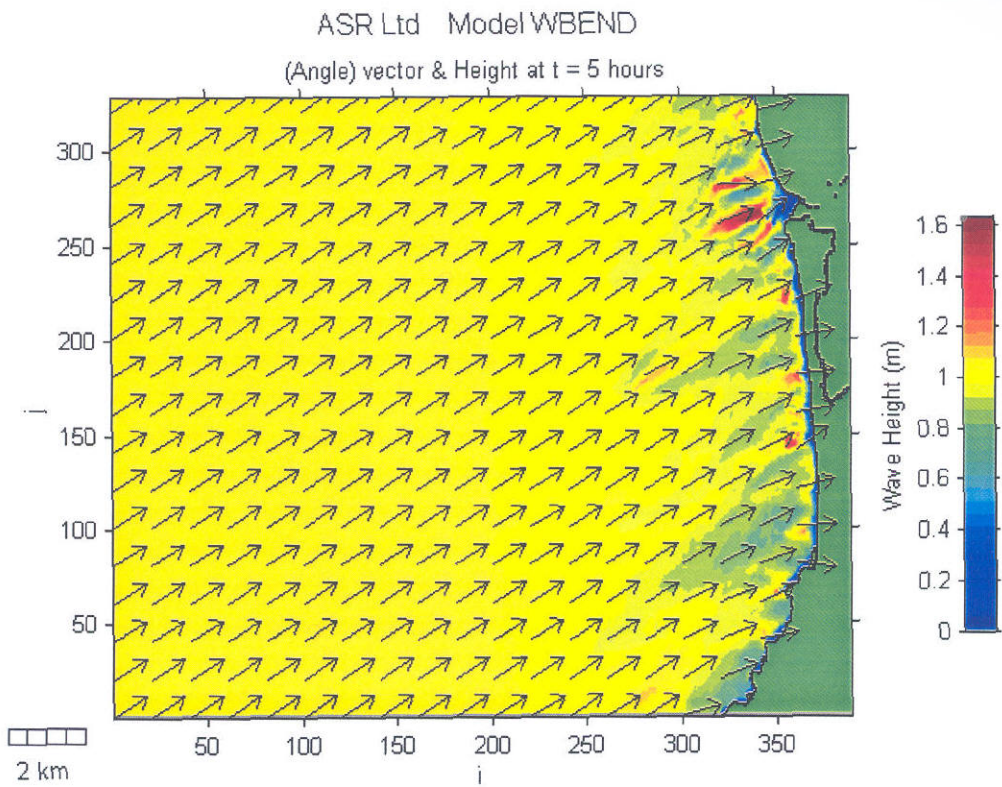
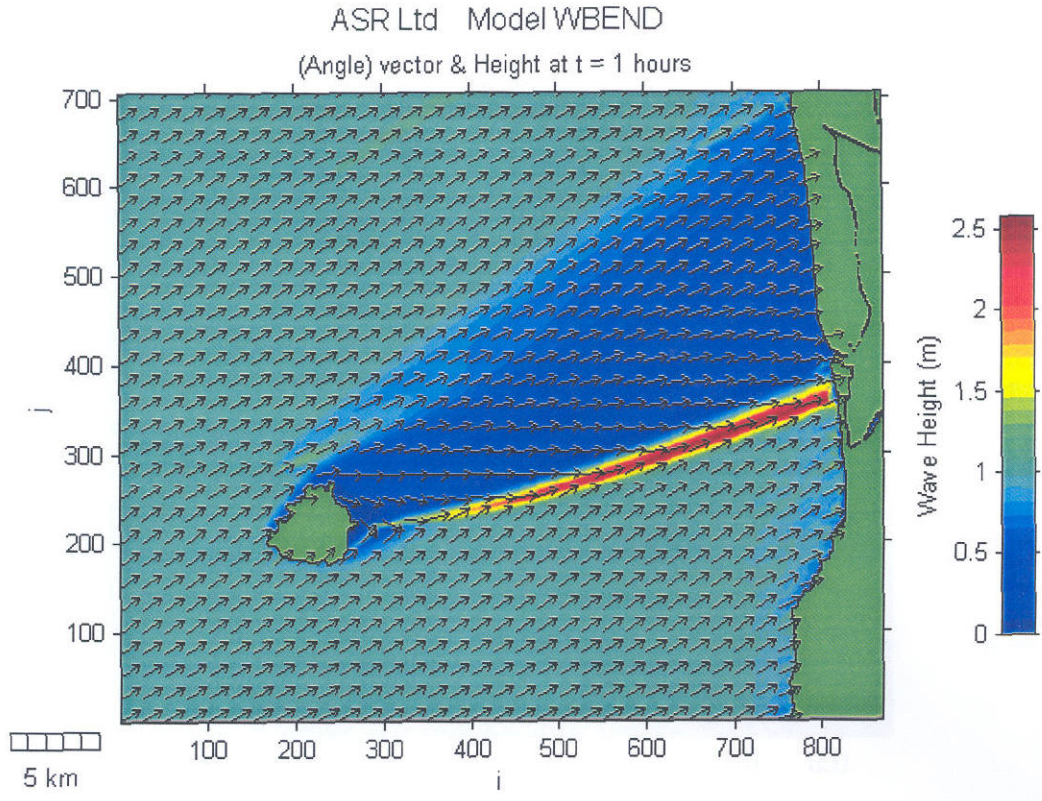
Scenario 1: 1.04 m, 6.99 s, 22.5°



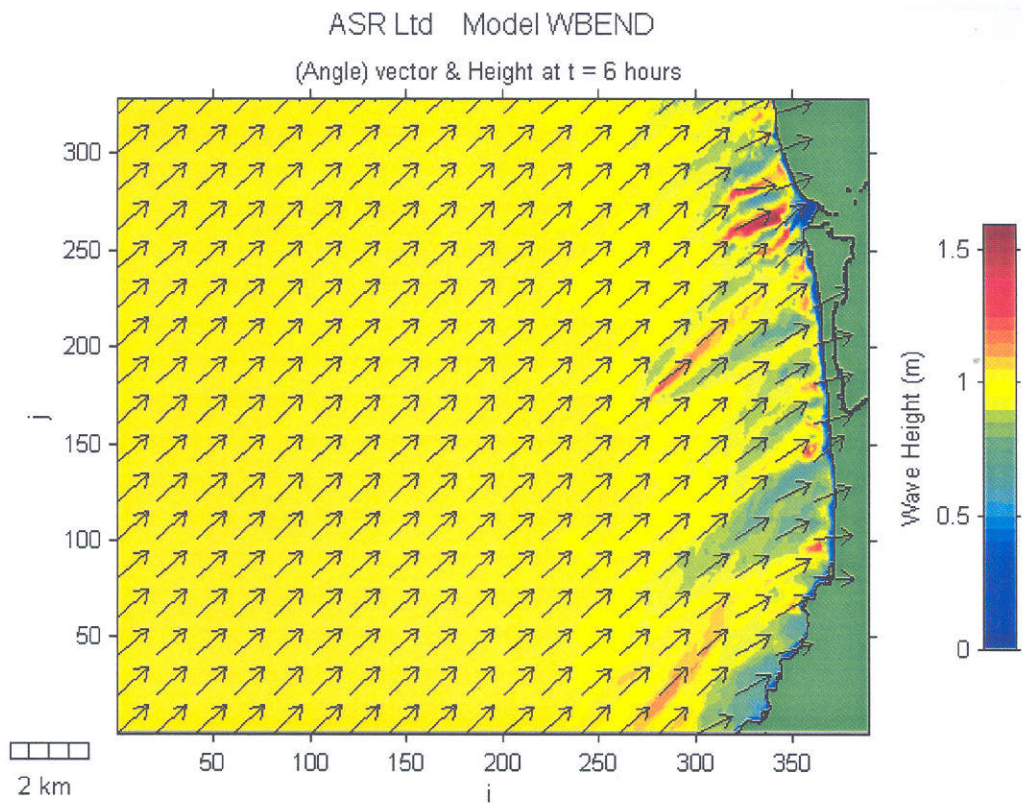
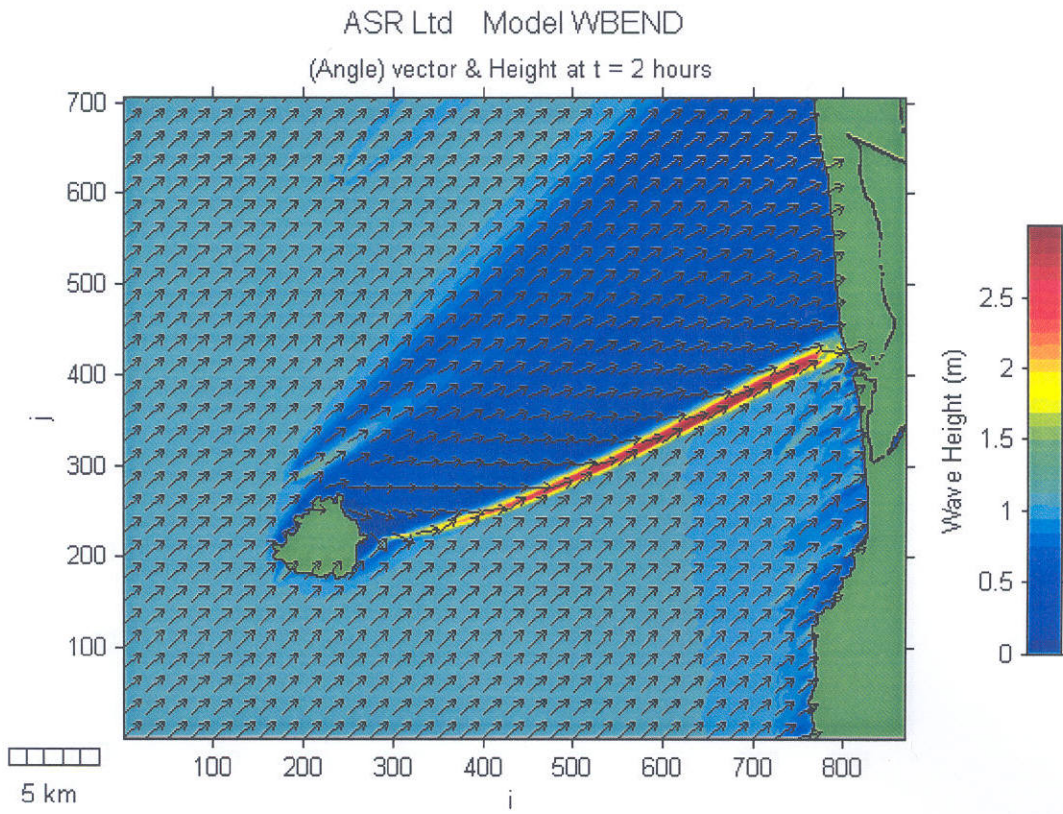
Scenario 2: 1.04 m, 6 s, 22.5°



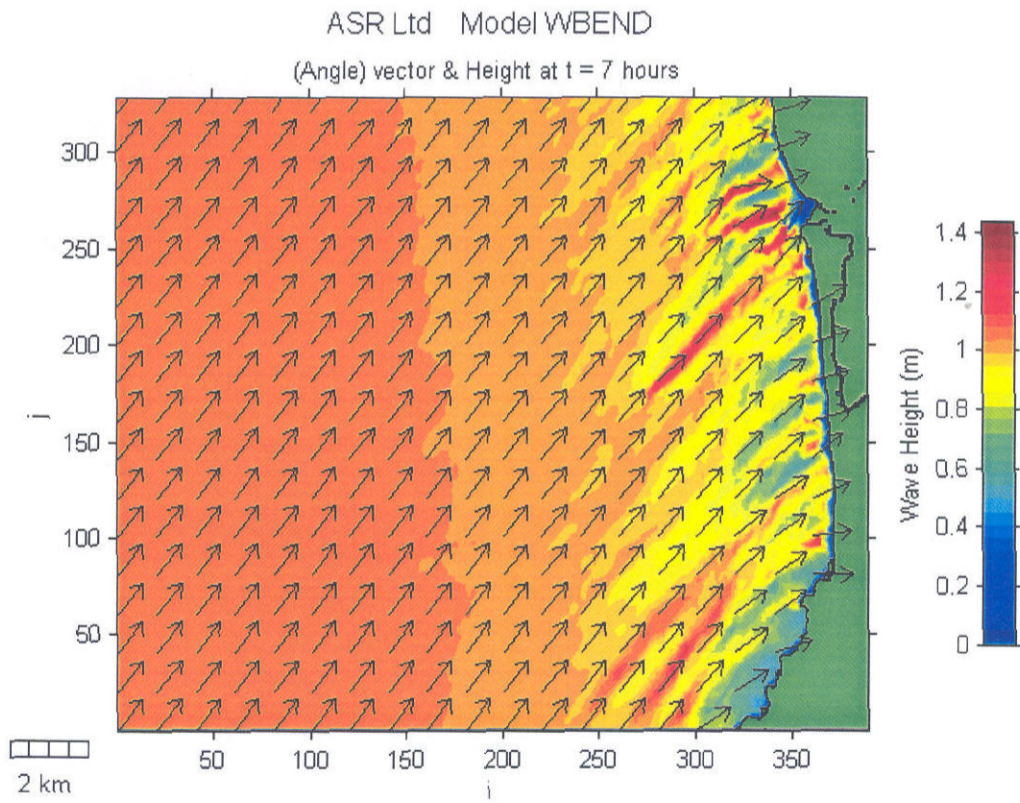
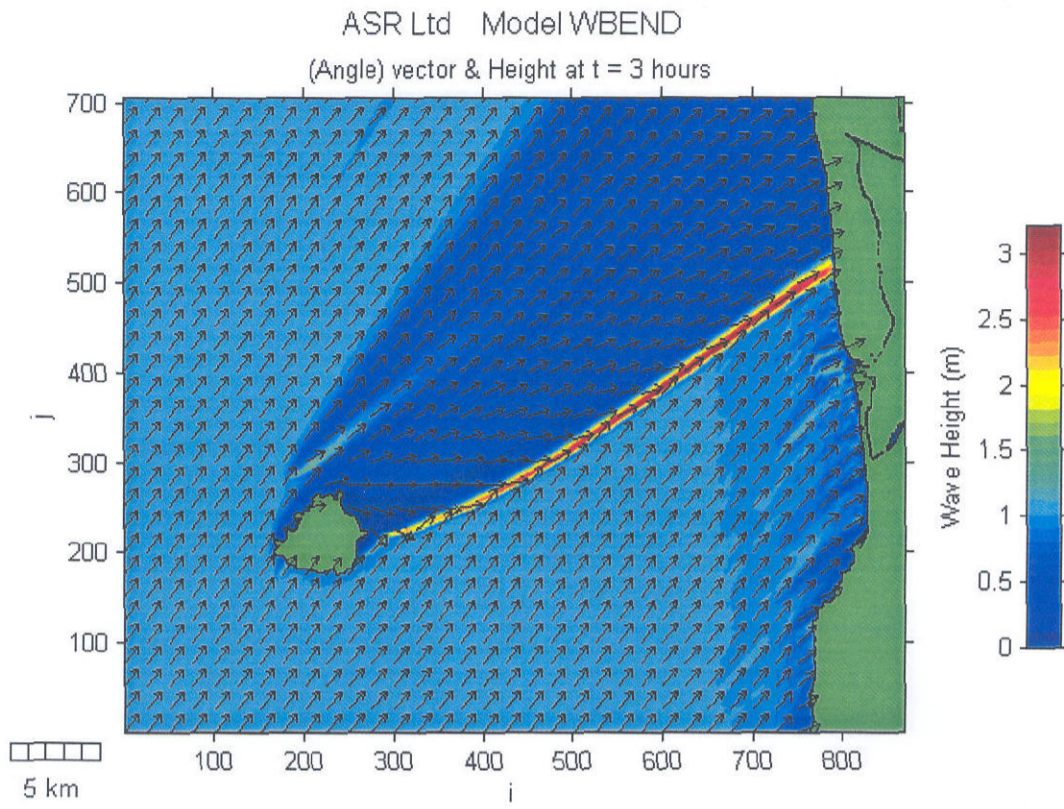
Scenario 3: 1.04 m, 11 s, 22.5°



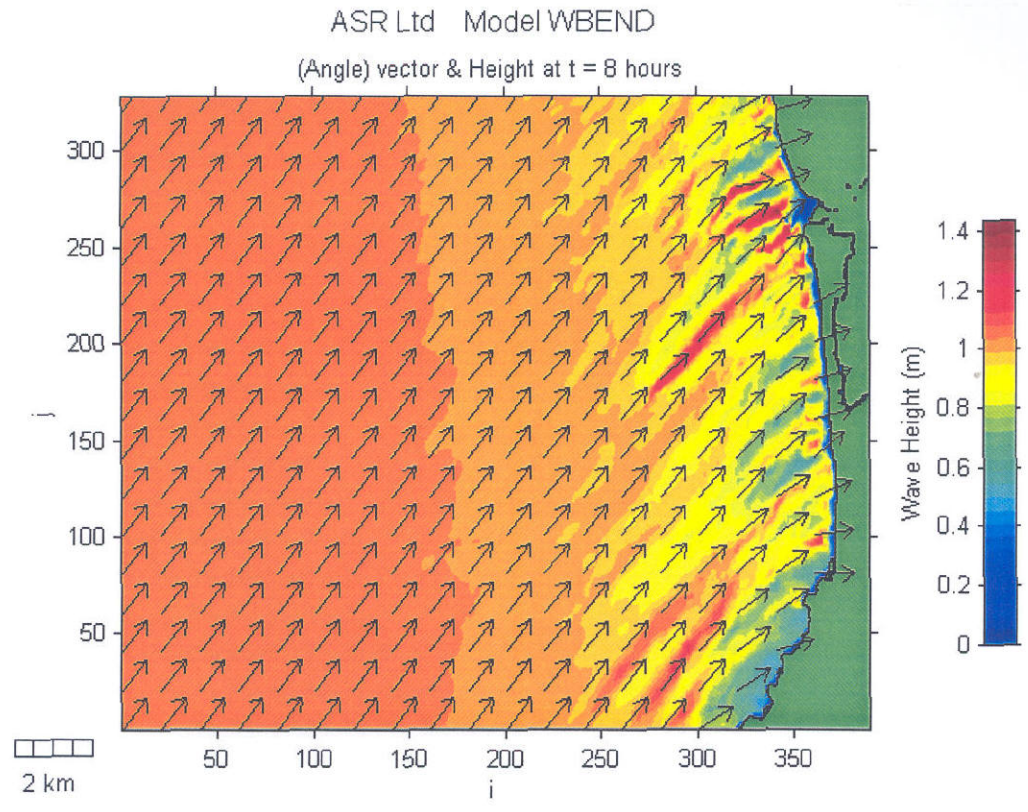
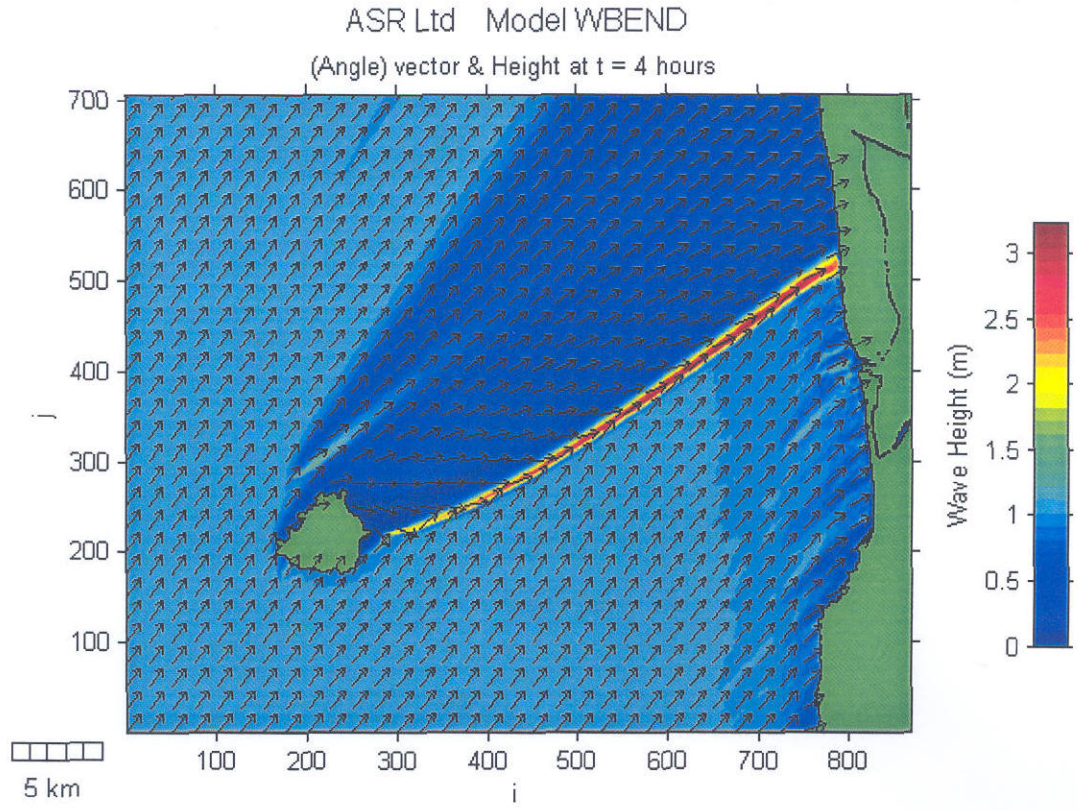
Scenario 4: 1.04 m, 6.99 s, 32.5°



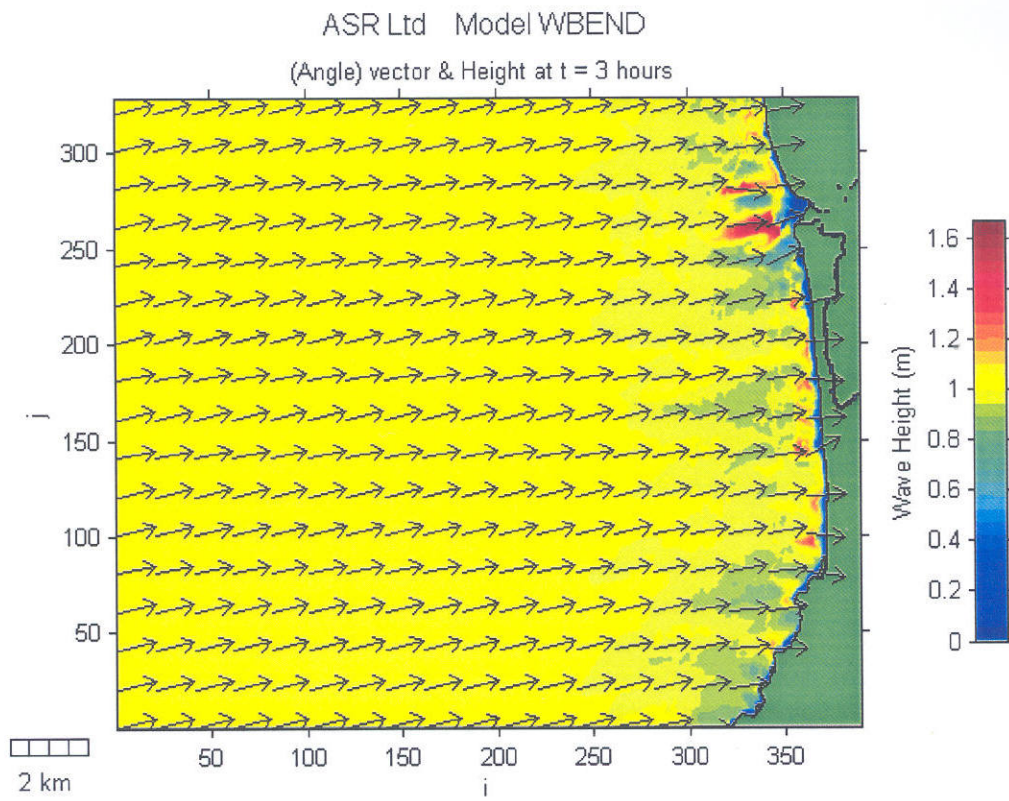
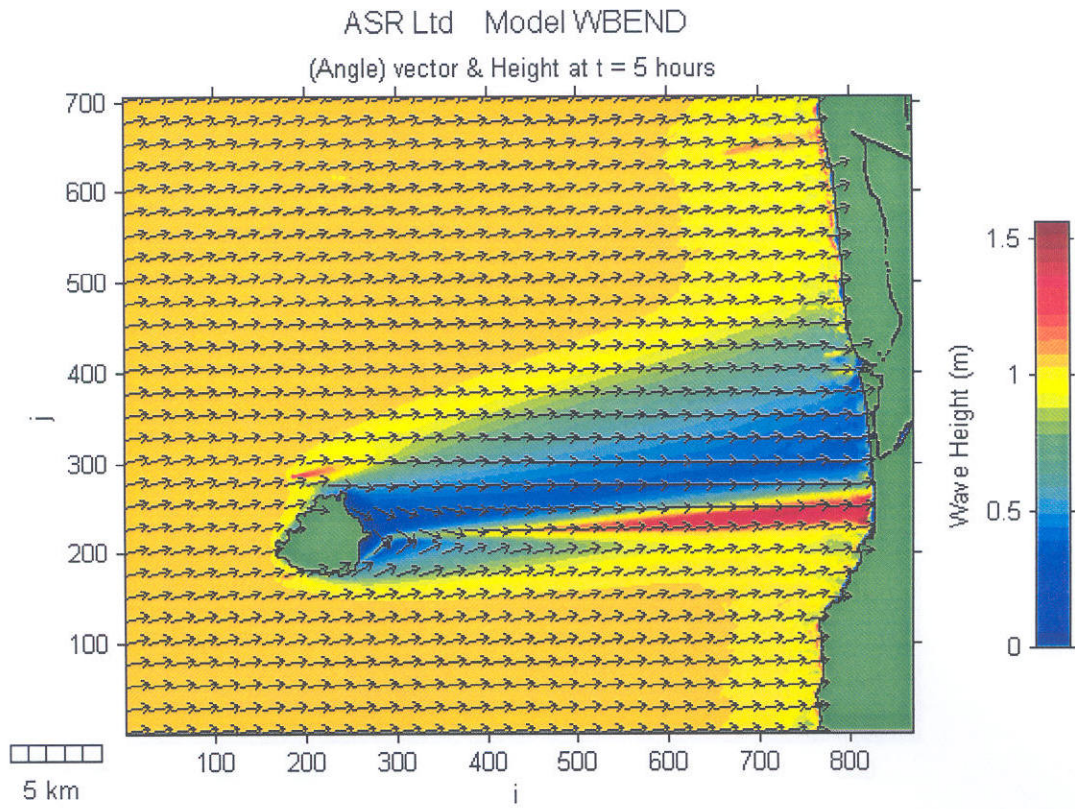
Scenario 5: 1.04 m, 6.99 s, 42.5°



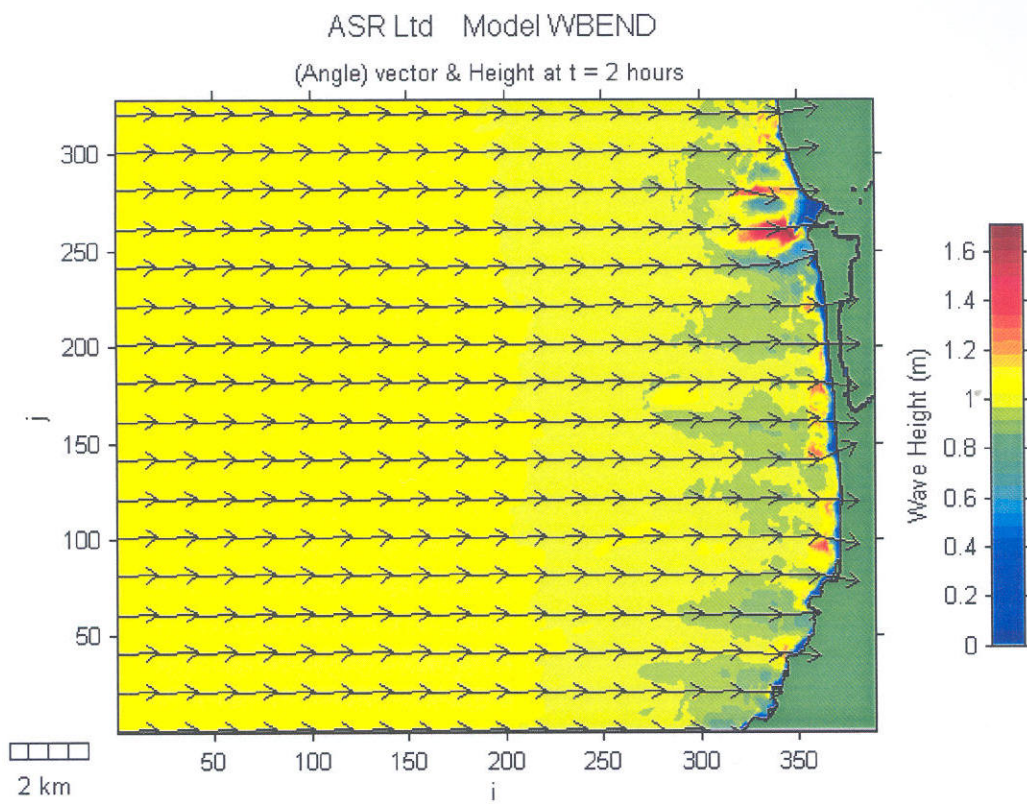
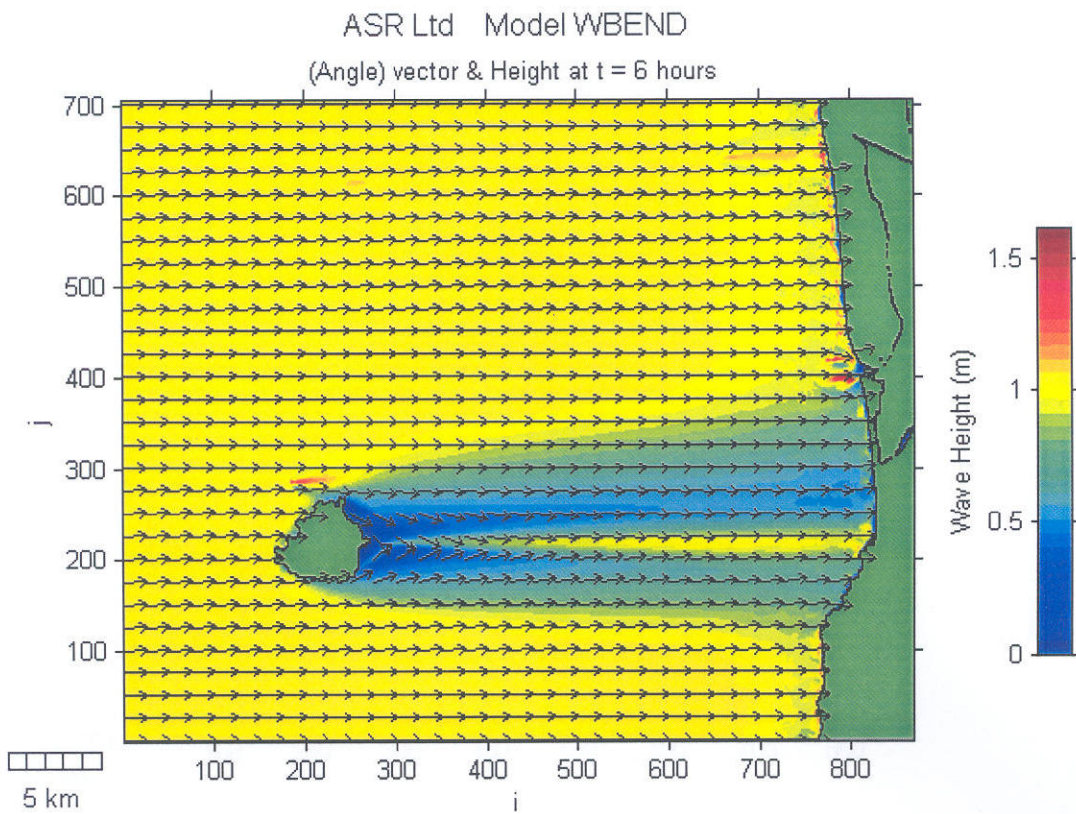
Scenario 6: 1.04 m, 6.99 s, 52.5°



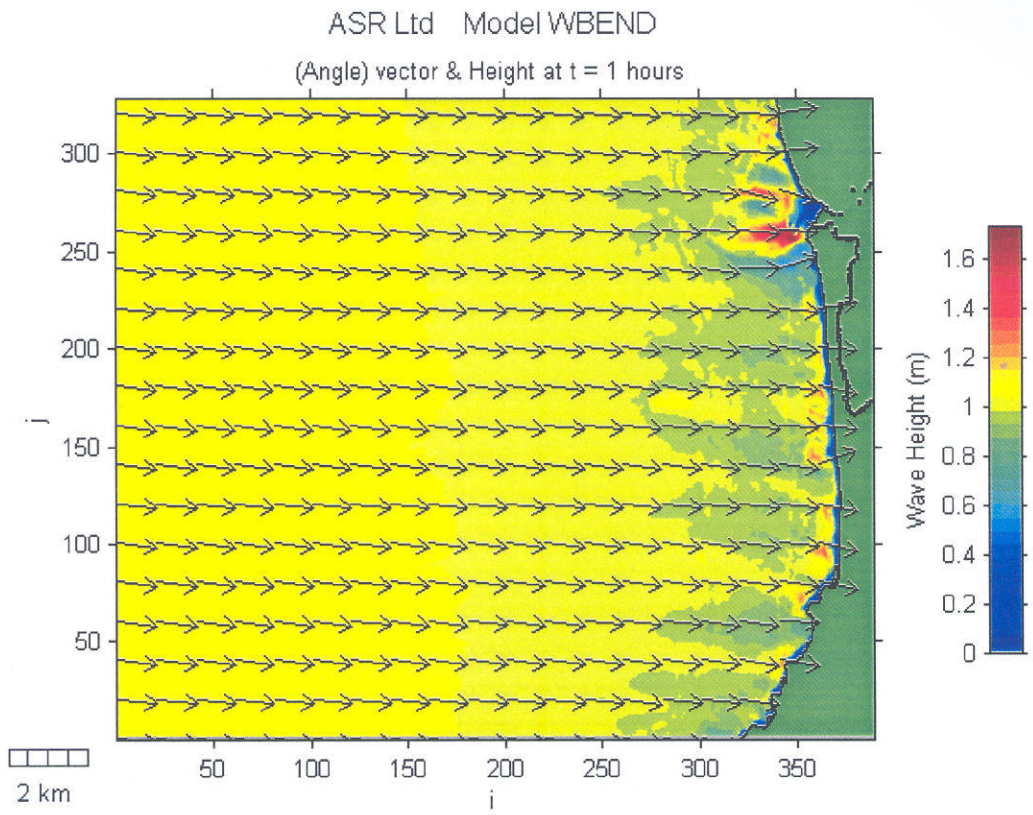
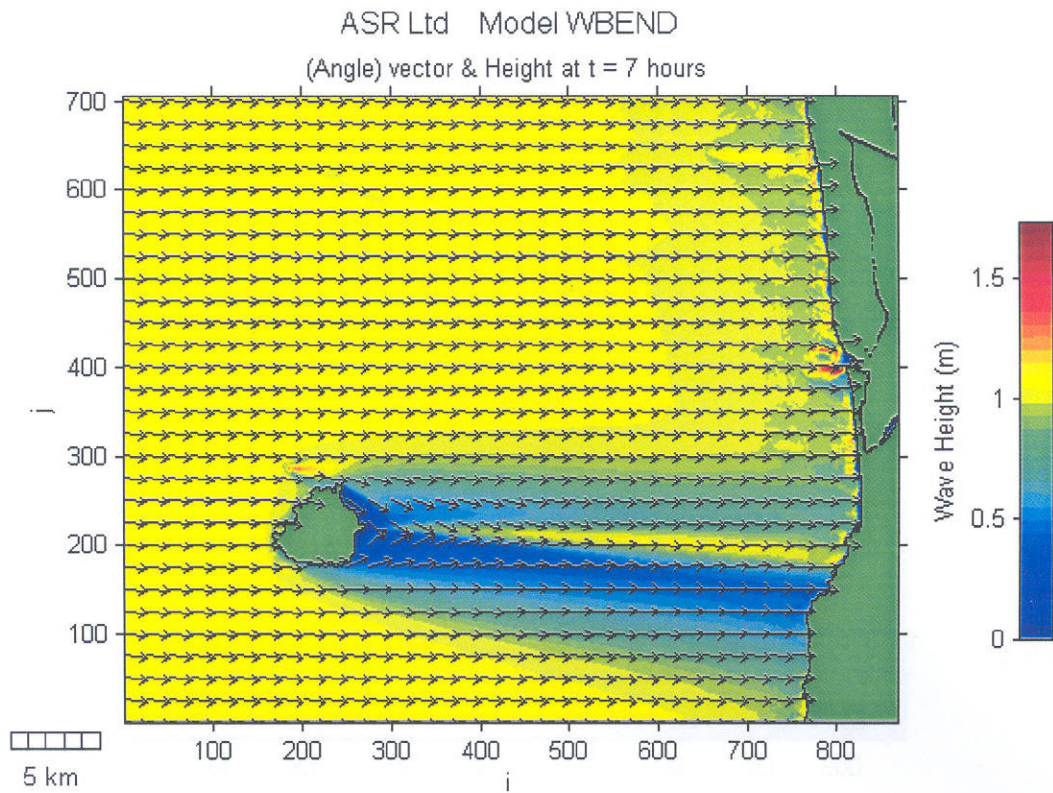
Scenario 7: 1.04 m, 6.99 s, 62.5°



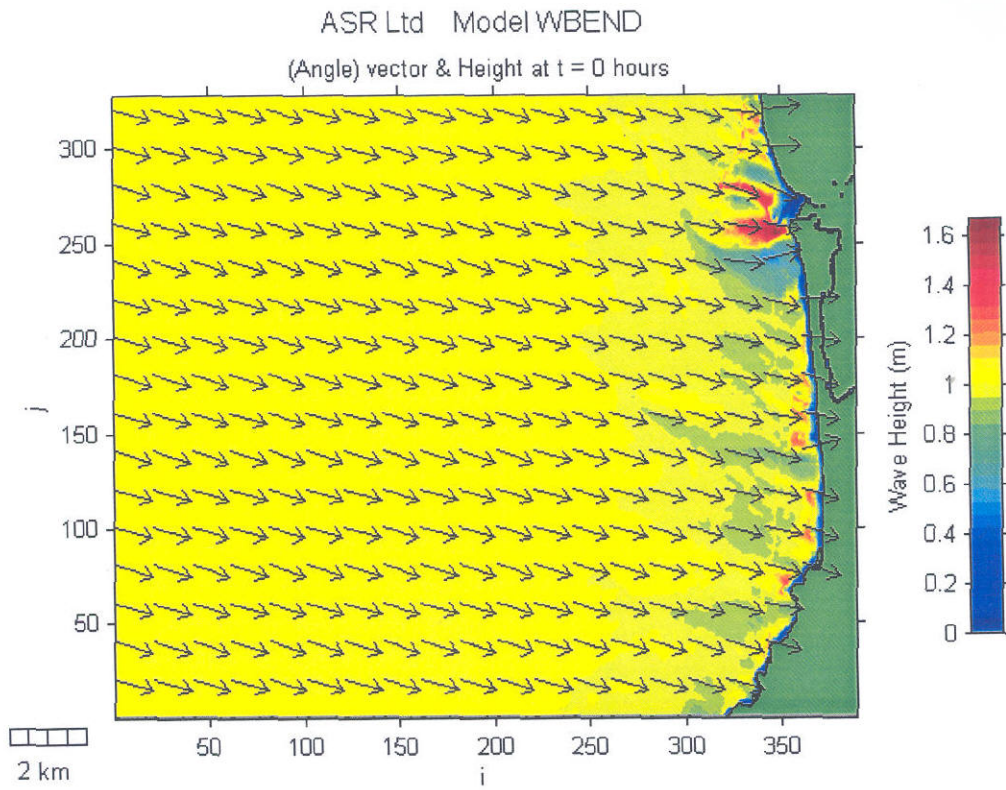
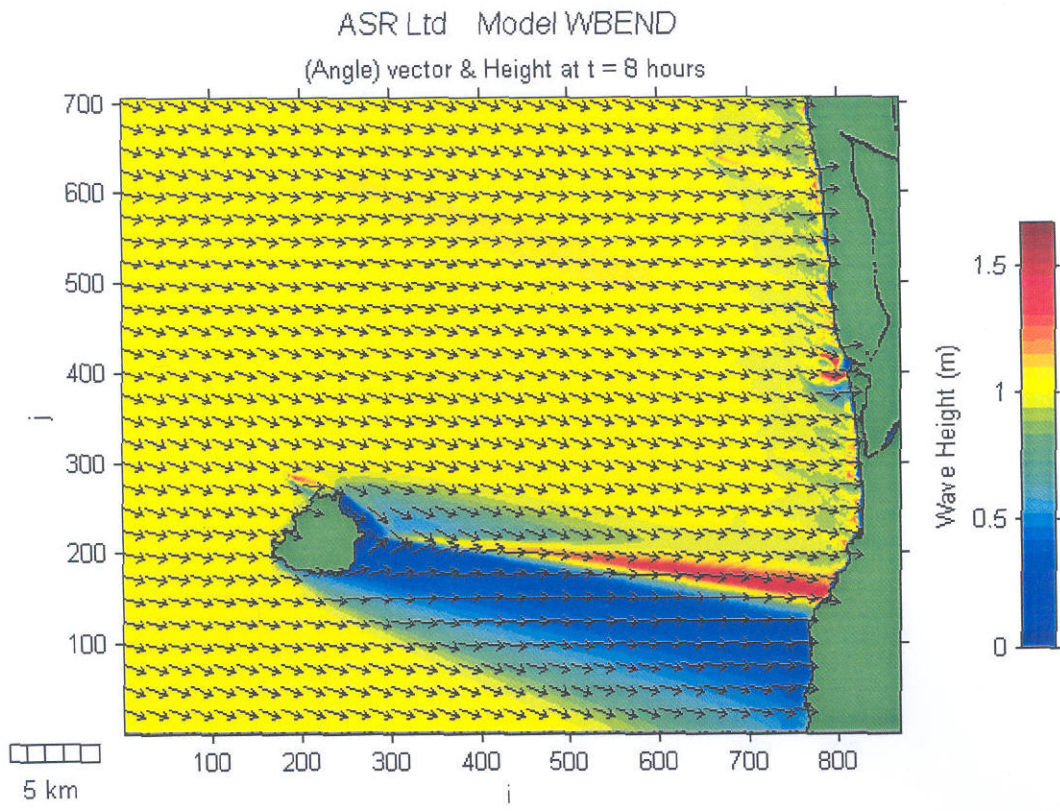
Scenario 8: 1.04 m, 6.99 s, 12.5°



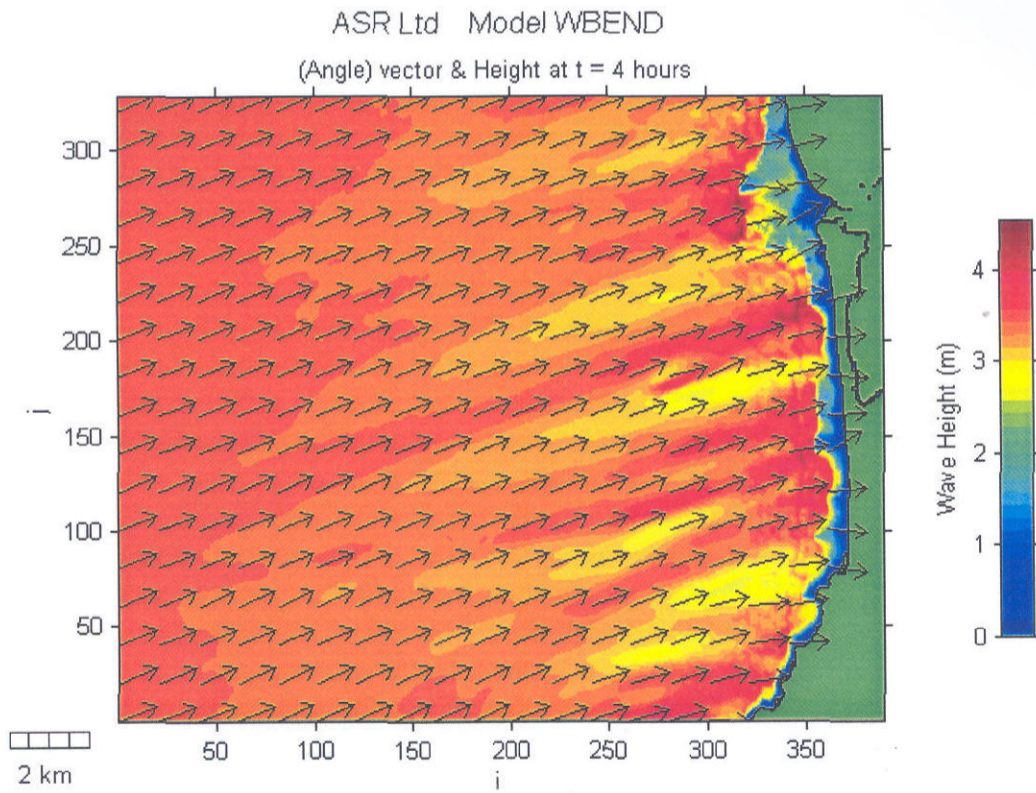
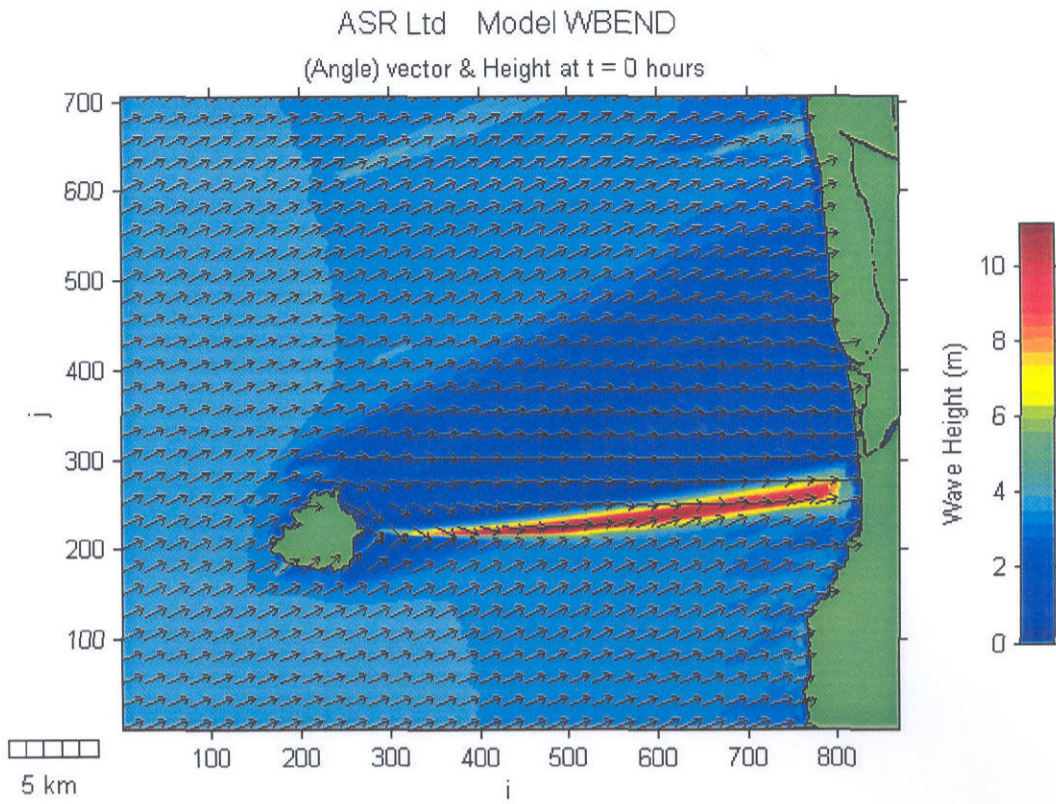
Scenario 9: 1.04 m, 6.99 s, 2.5°



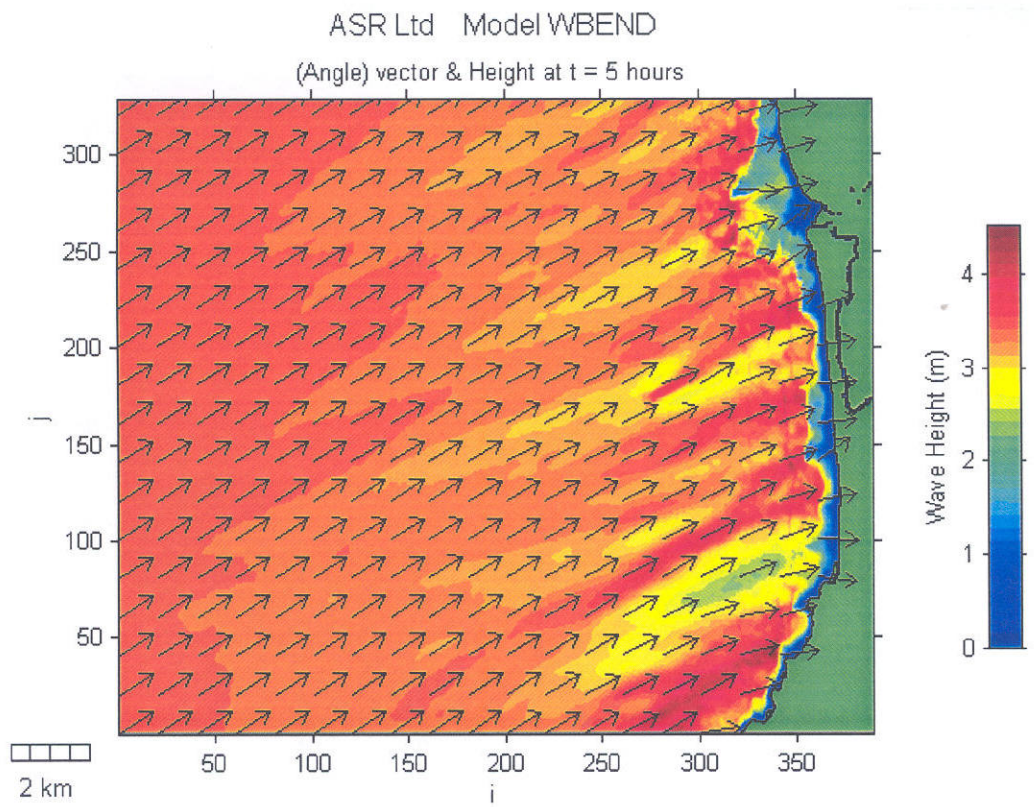
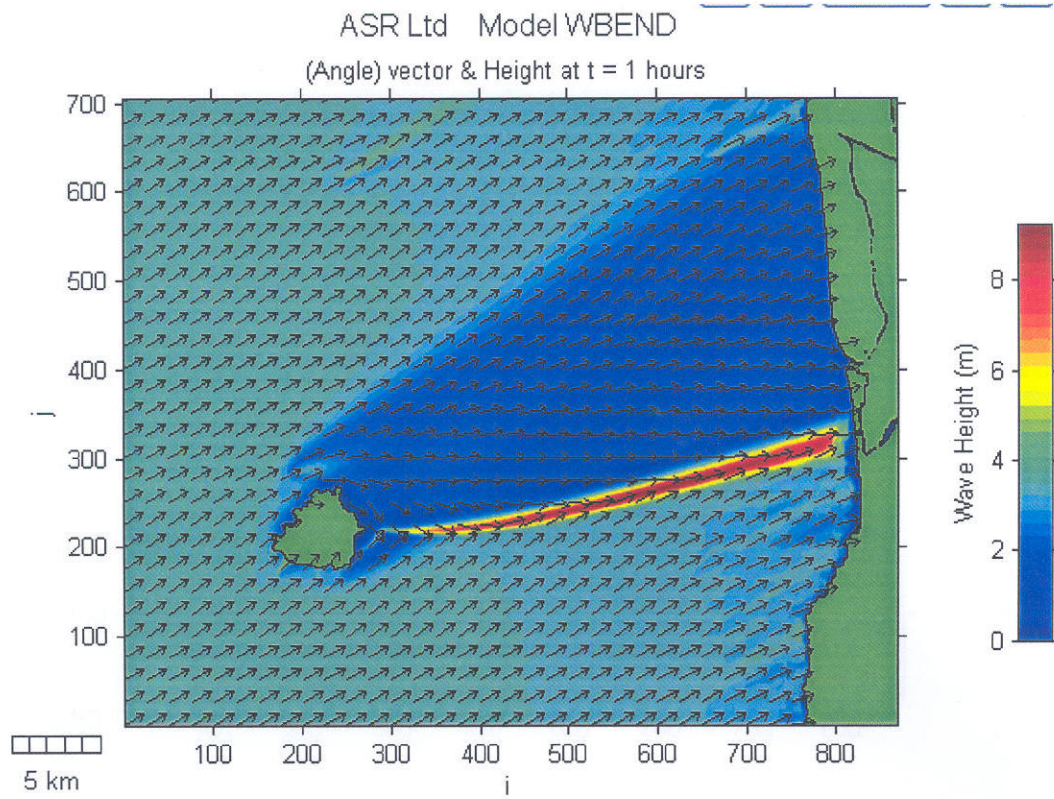
Scenario 10: 1.04 m, 6.99 s, -7.5°



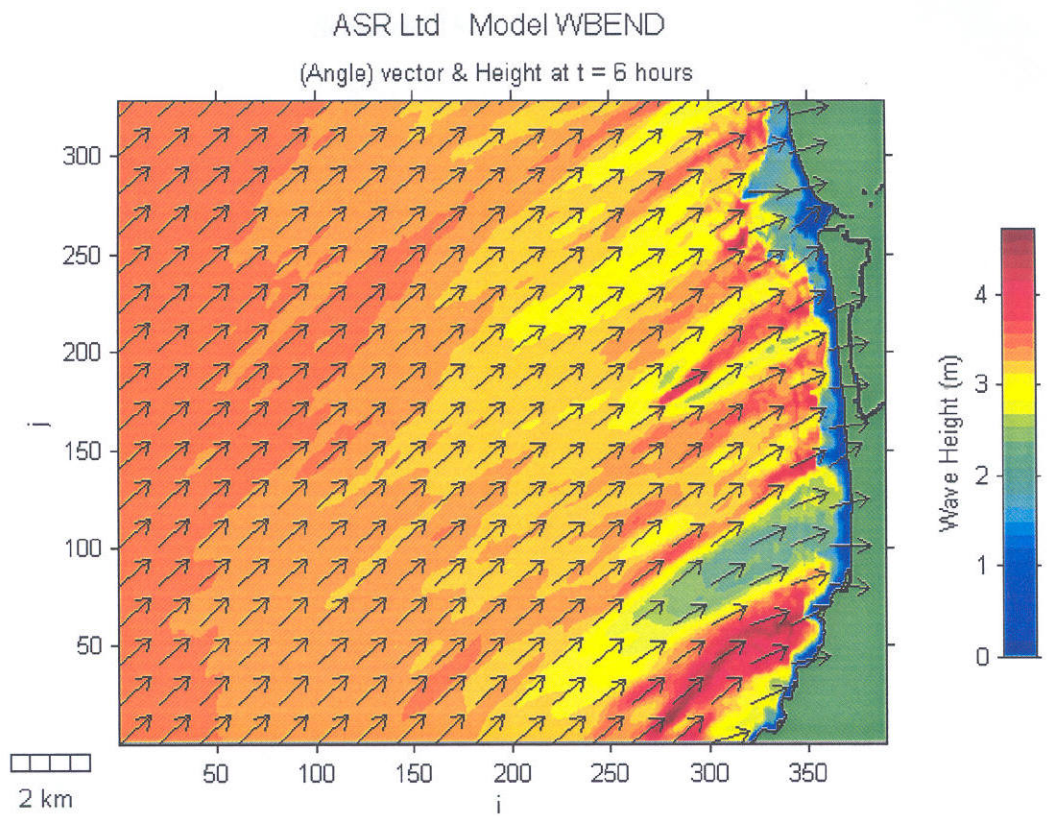
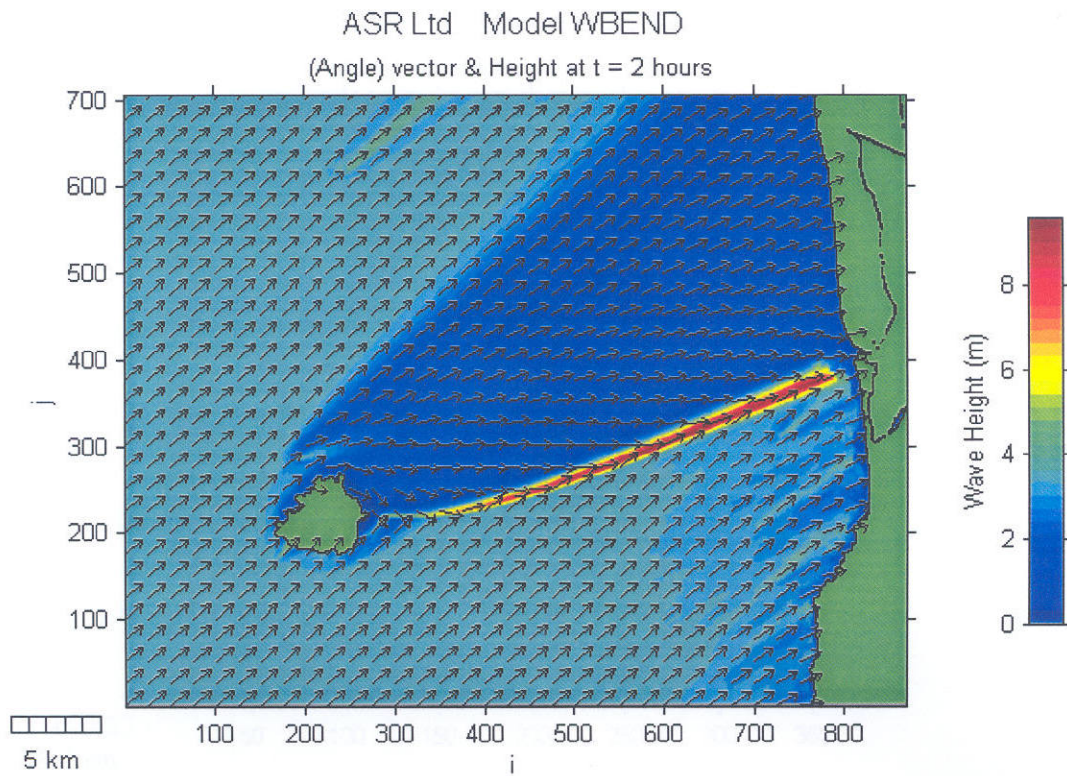
Scenario 11: 1.04 m, 6.99 s, -17.5°



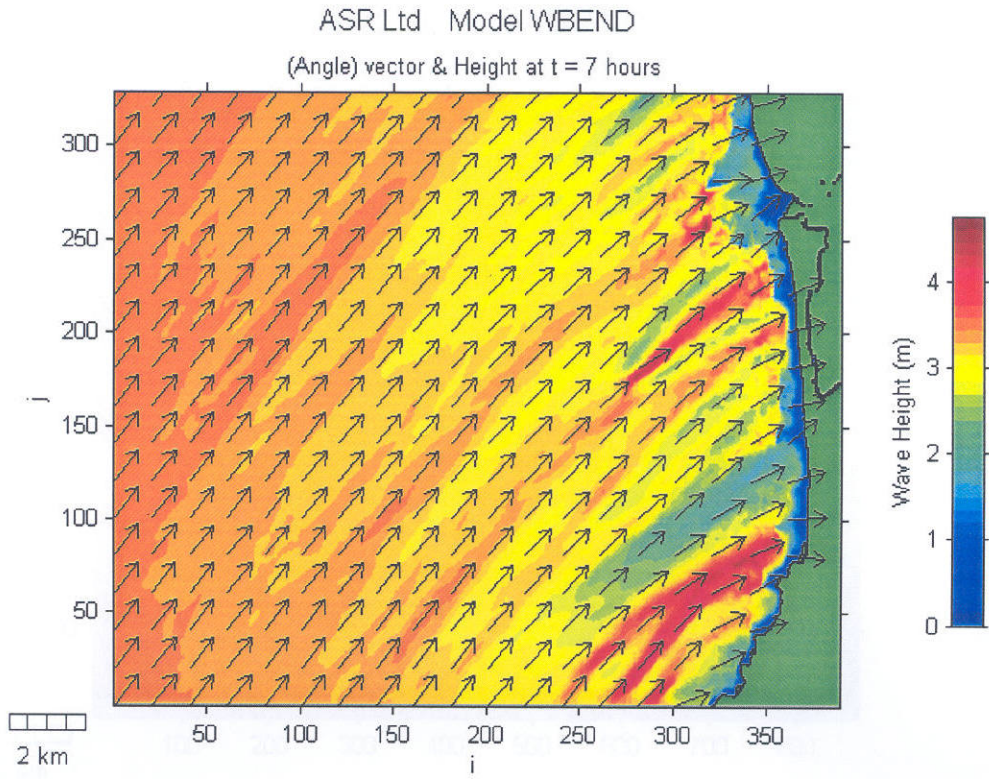
Scenario 12: 3.5 m, 9.37 s, 22.5°



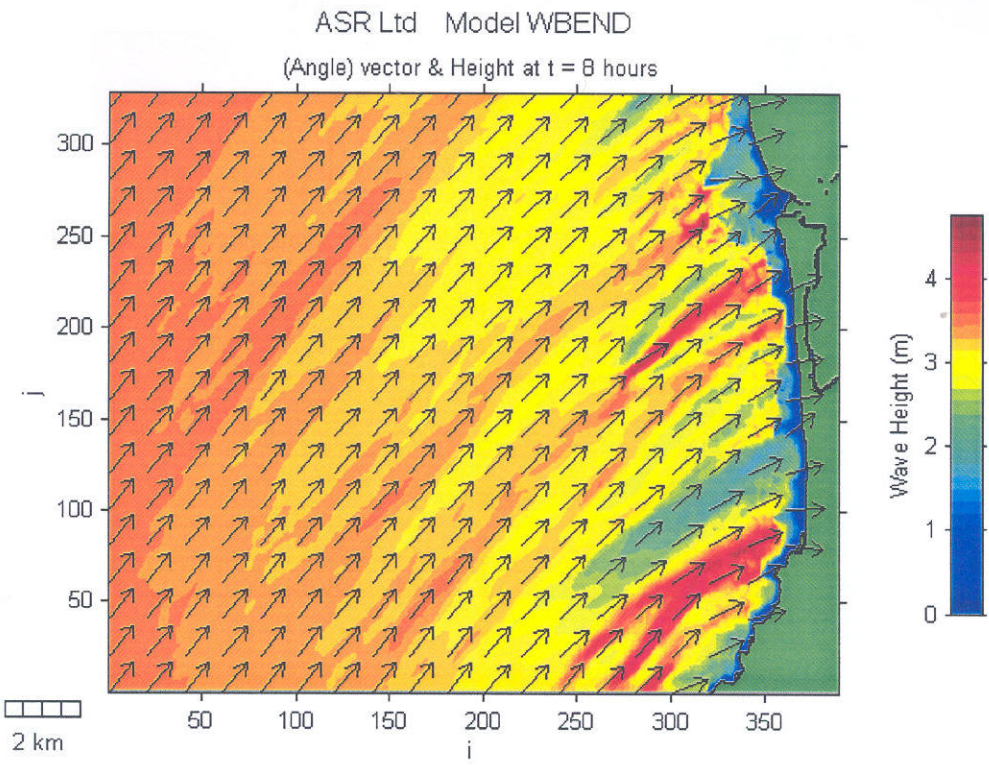
Scenario 13: 3.5 m, 9.37 s, 32.5°



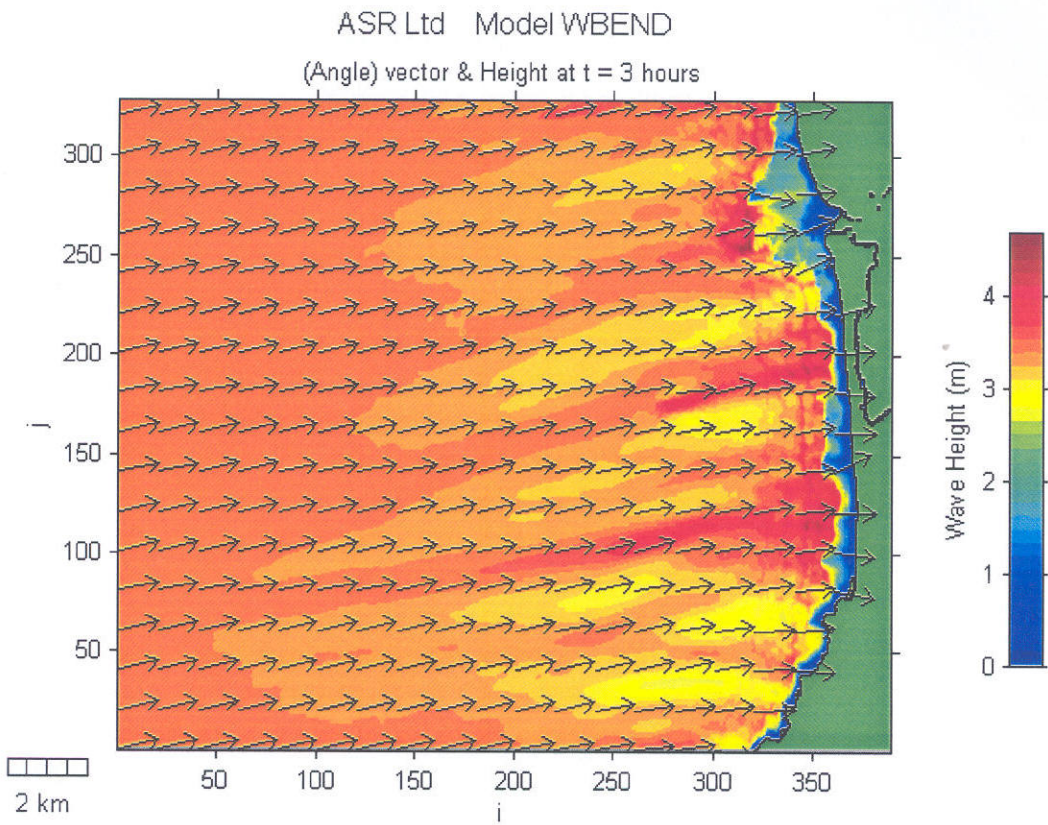
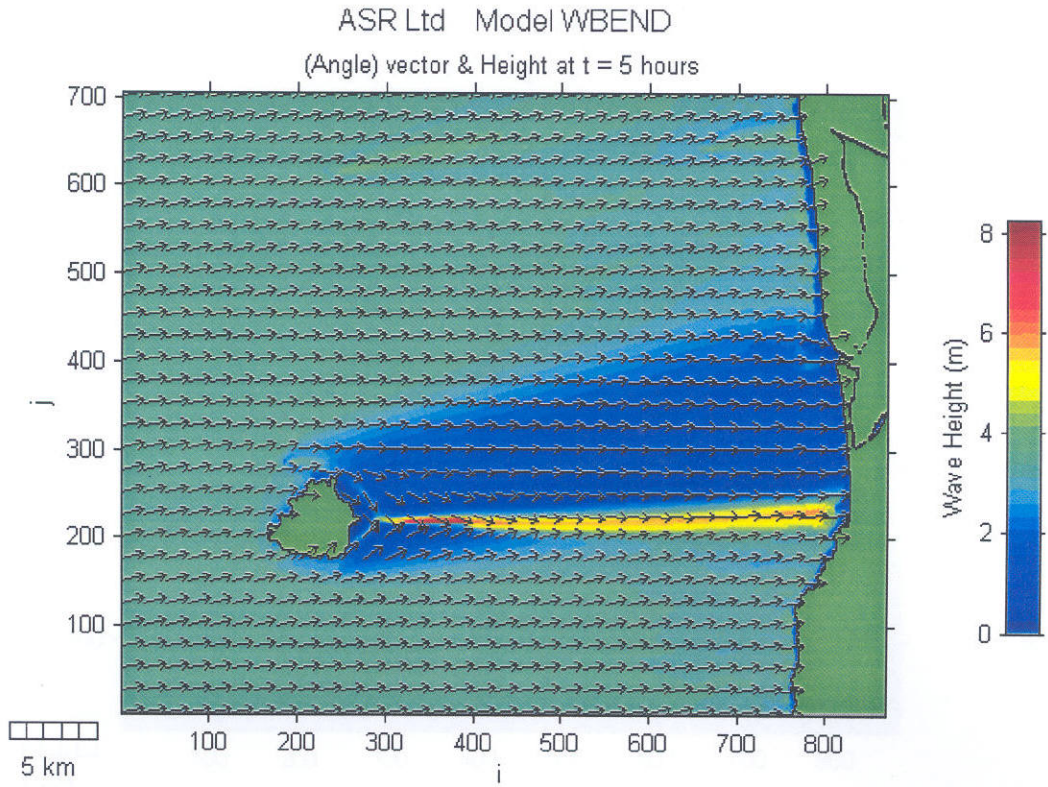
Scenario 14: 3.5 m, 9.37 s, 42.5°



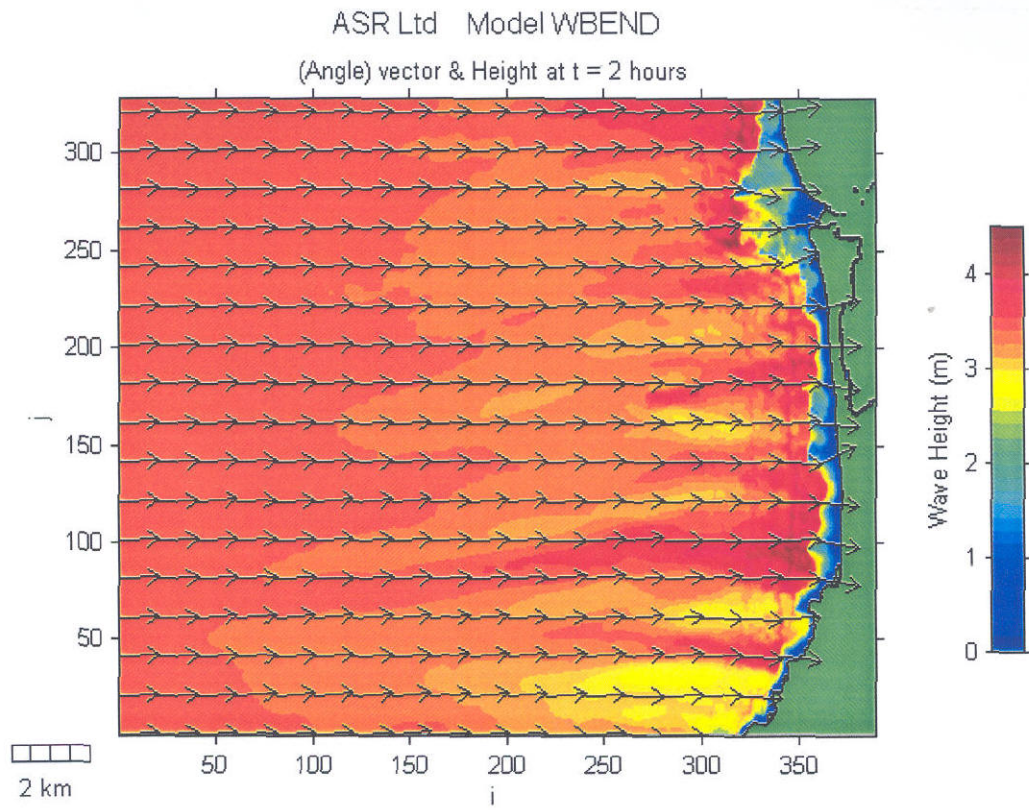
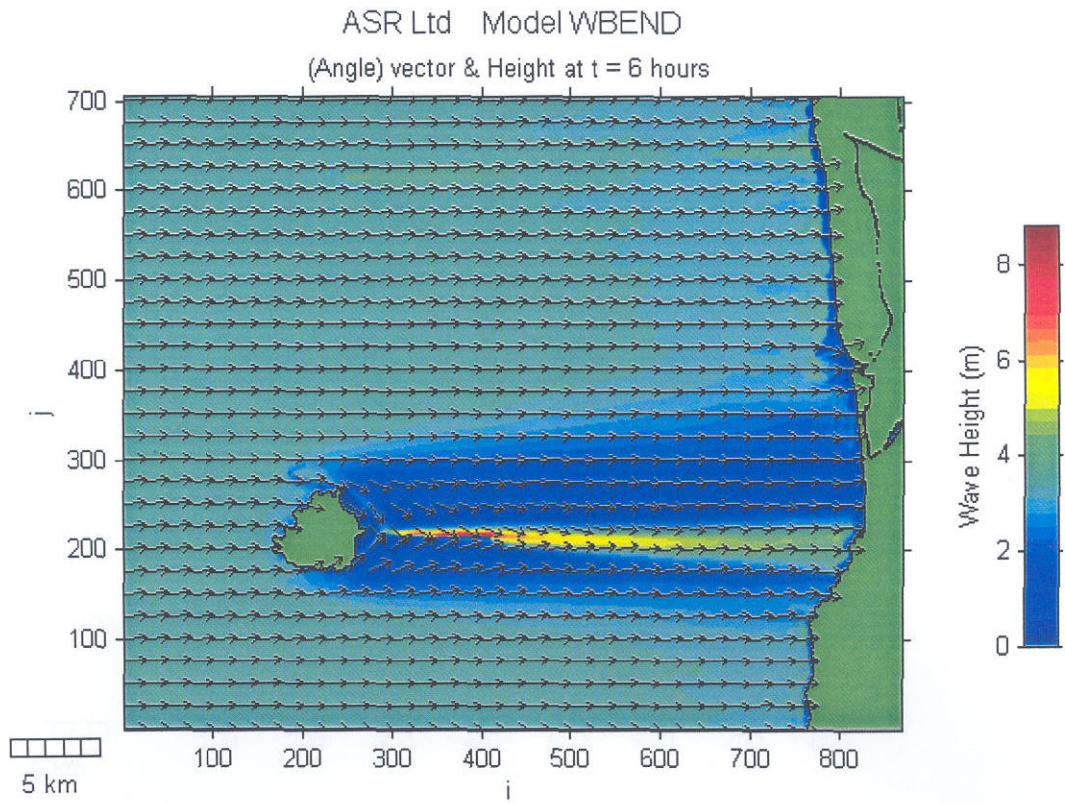
Scenario 15: 3.5 m, 9.37 s, 52.5°



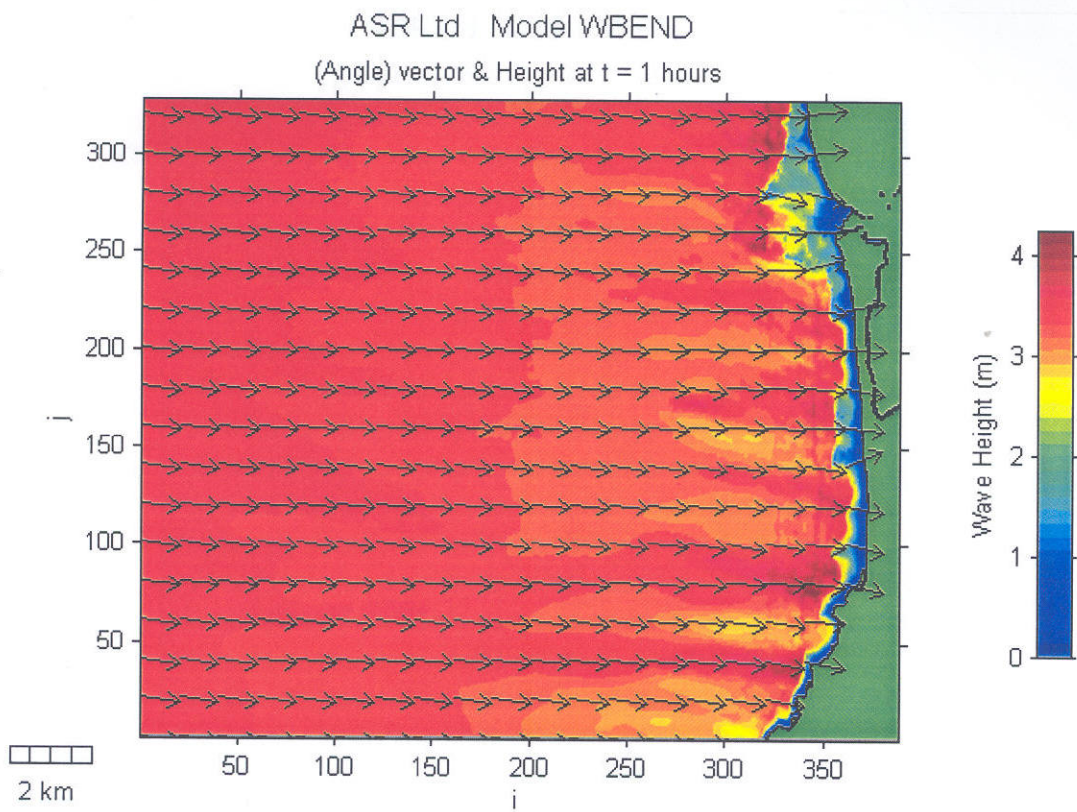
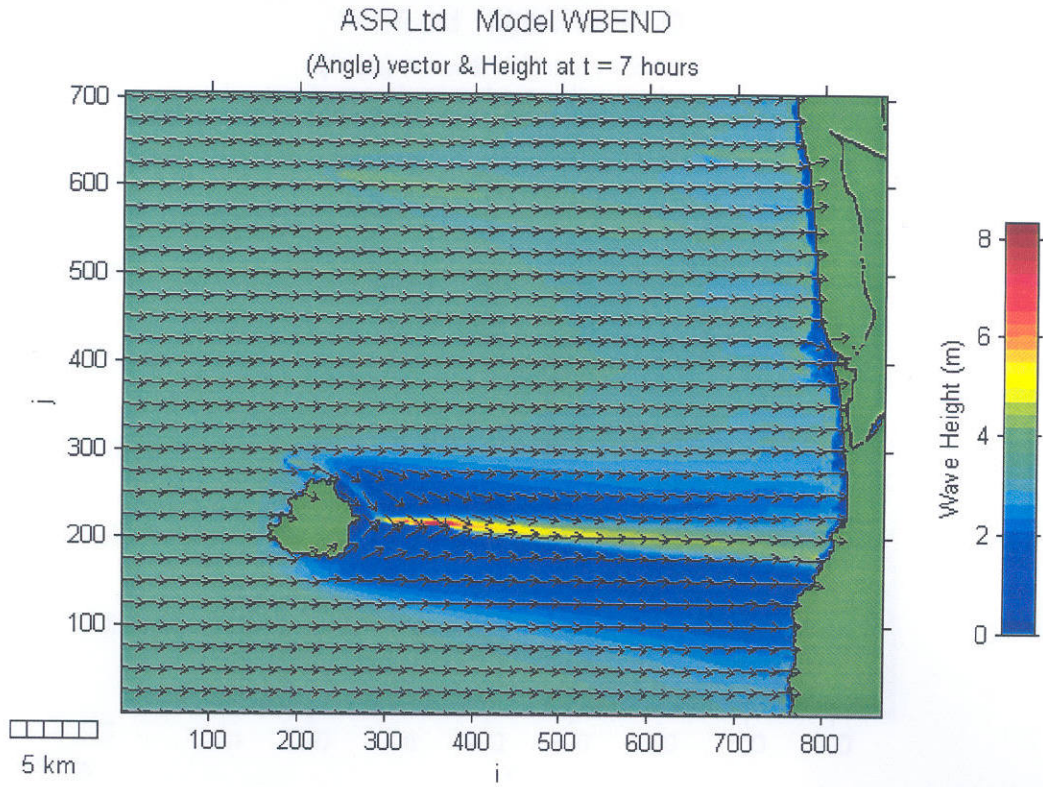
Scenario 16: 3.5 m, 9.37 s, 62.5°



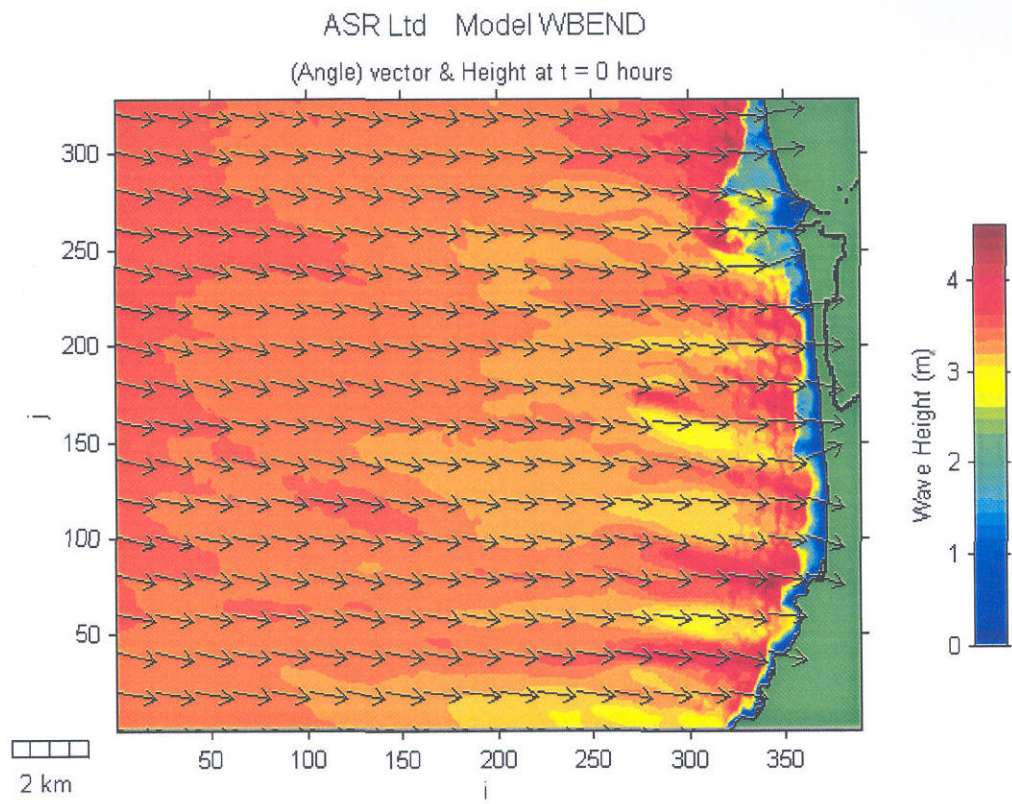
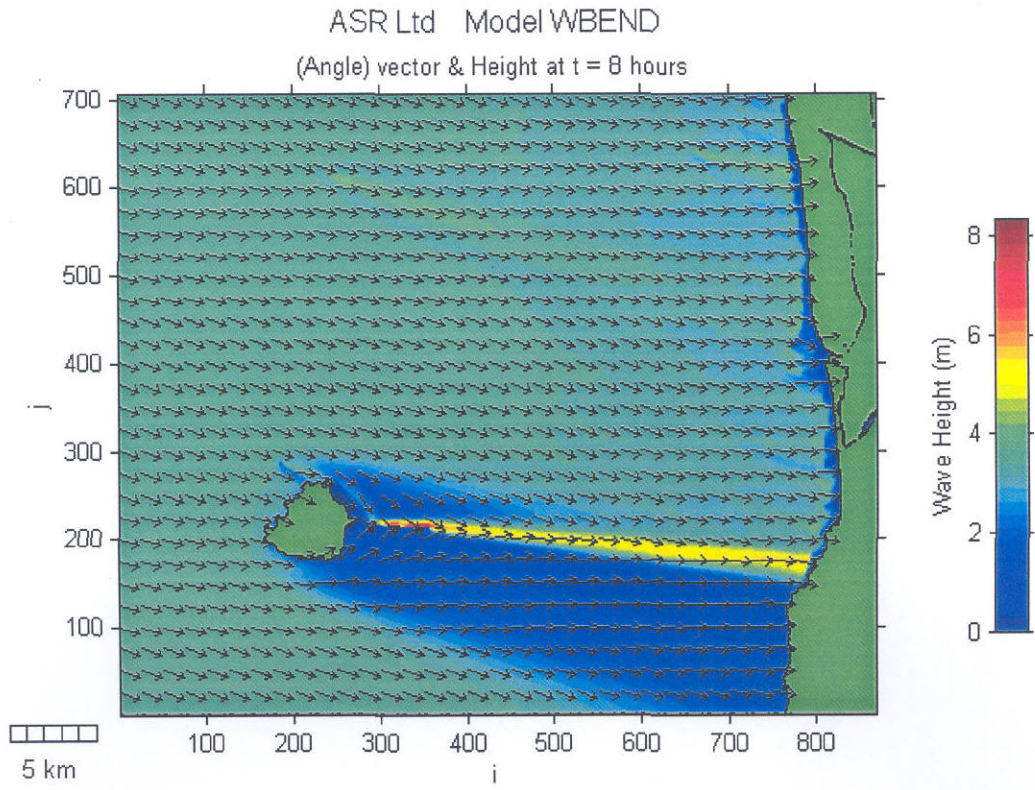
Scenario 17: 3.5 m, 9.37 s, 12.5°



Scenario 18: 3.5 m, 9.37 s, 2.5°



Scenario 19: 3.5 m, 9.37 s, -7.5°



Scenario 20: 3.5 m, 9.37 s, -17.5°

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