2006 Fynmeet Sea Clutter Measurement Trial

Dataset Overview for 04-Aug-2006

Dr PL Herselman

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by Dr PL Herselman

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This document provides an overview for the datasets (or subset thereof) recorded on 04-Aug-2006 as part of the Fynmeet Sea Clutter Measurement Trial conducted at the Overberg Test Range at Arniston, South Africa. The trial was conducted over the period from 18 July to 4 August 2006. These datasets have been stored in structured Mathworks Matlab (*.mat) files and will be made available to research institutes or universities upon request. For more information contact Dr PL Herselman at pherselman@csir.co.za.

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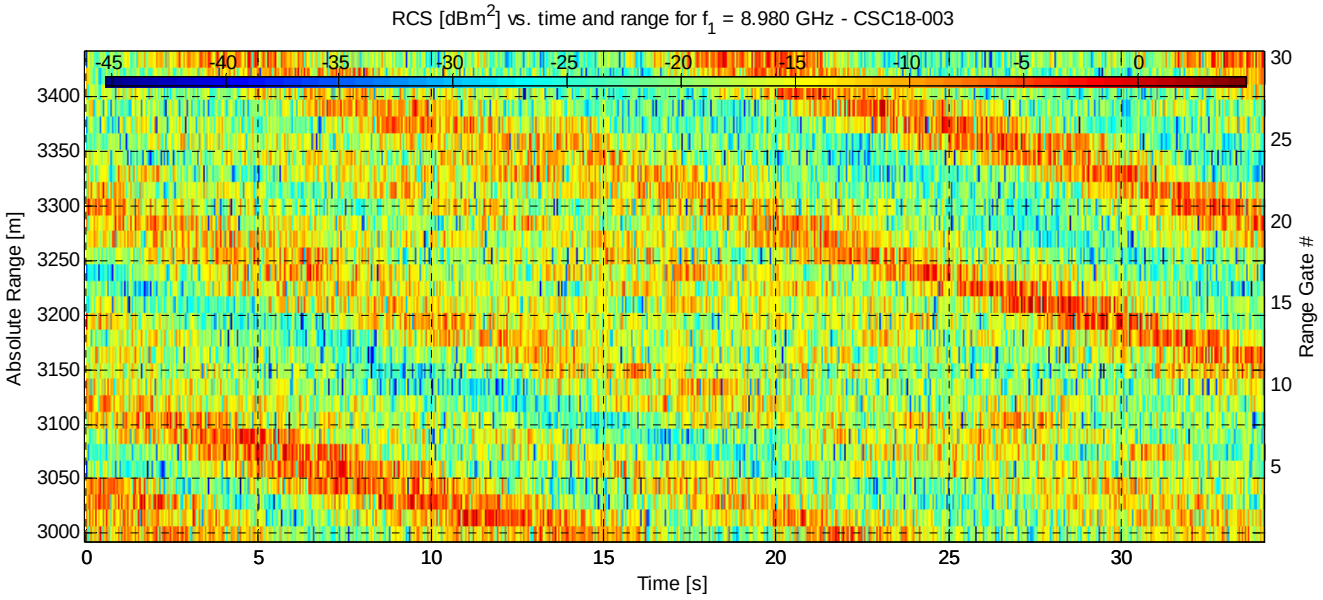
Dataset CSC18-003



Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	10 kHz
Start Time	07:42:53.954	Tracking Range	3000.31 m
Duration	341400 PRI's (34.1399 s)	Range Extend	450 m (30 gates), 15 m res.
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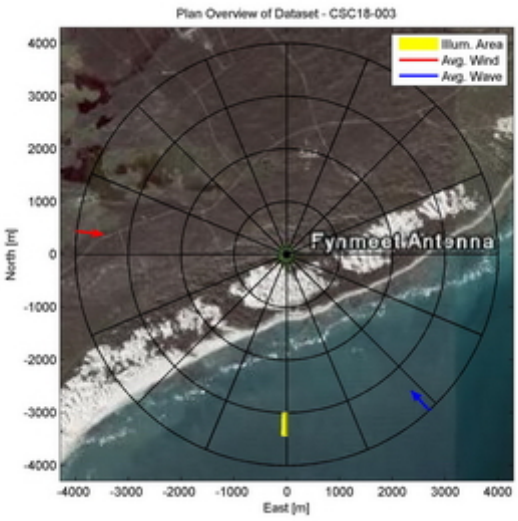
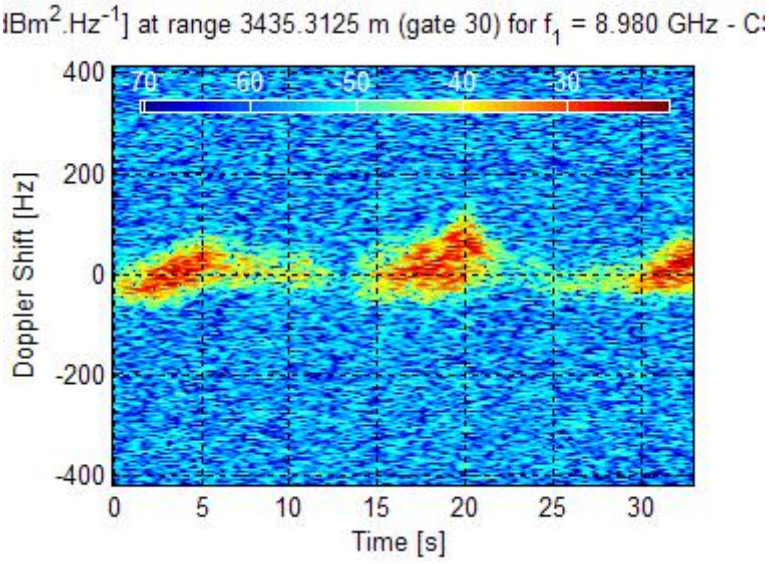
Original Path	\20060804_ifs	Waveform Bandwidth	55 MHz
Processor Version	FMSCP Ver 01.21	Waveform File	SC_SRP_5M10P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	3.82 kts, 275.8 deg. N	Grazing Angle	1.11 - 1.27 deg.	Odd Gates Offset	-3.6994+6.5374i
Wind Gust	8.75 kts, 292.5 deg. N	Antenna Azm.	180.7 deg. N	Even Gates Offset	-4.9404-5.6168i
8hr Avg. Wind	6.42 kts, 281.5 deg. N	Antenna Elv.	-1.208 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.12 m, 137.6 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	191.2 - 193.1 dB





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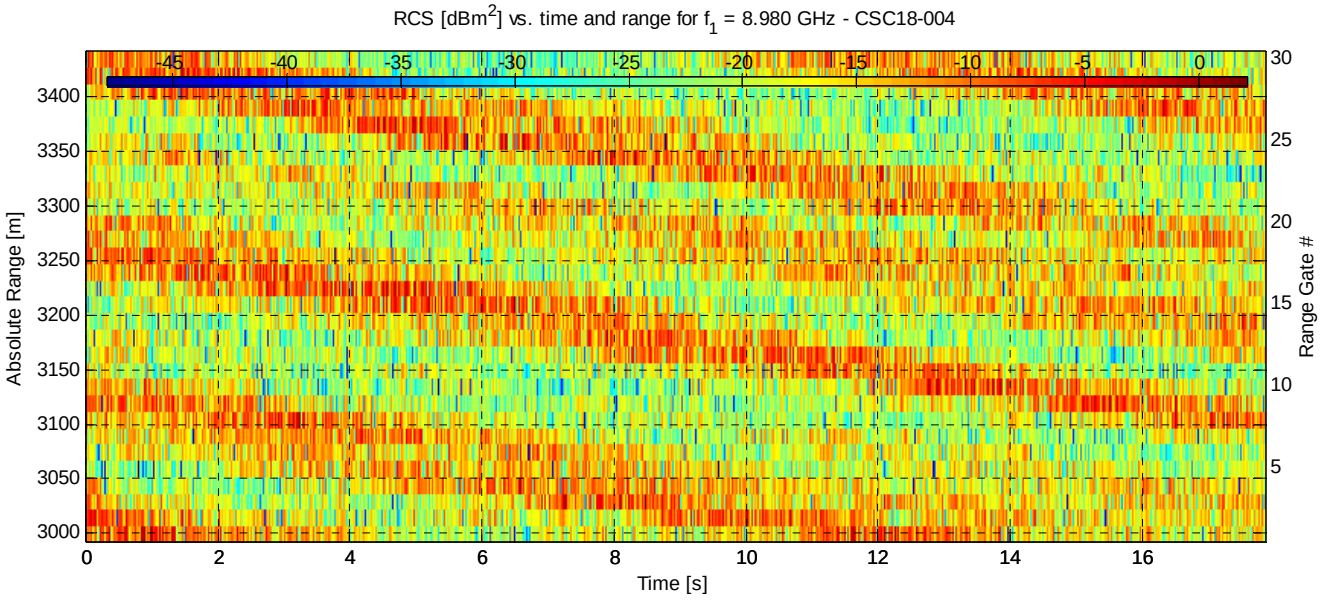
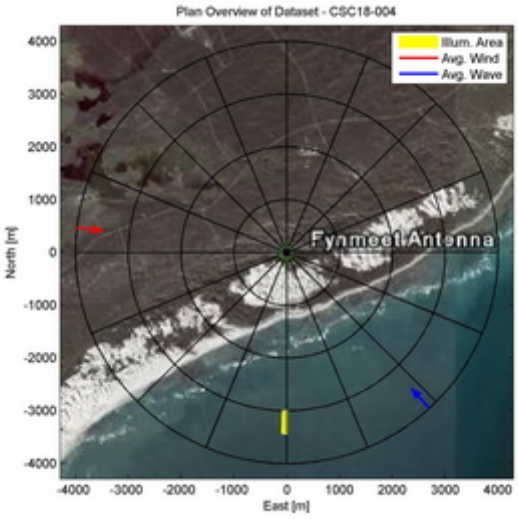
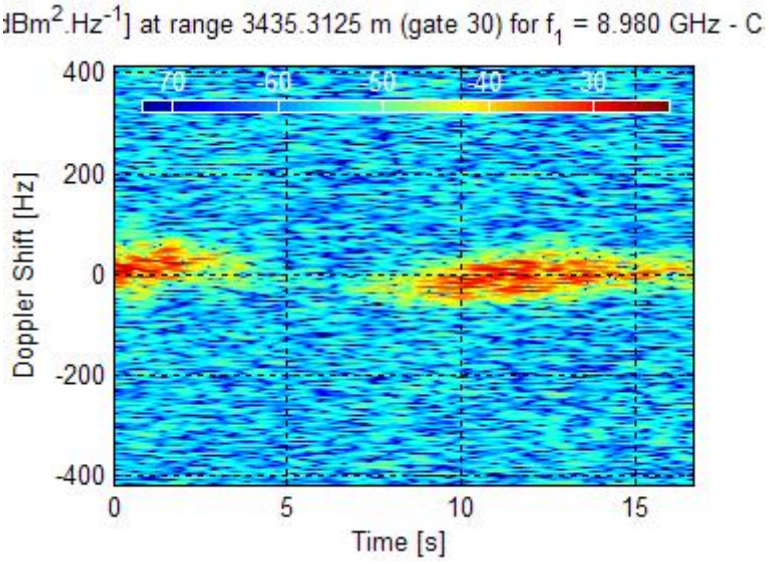


Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	10 kHz
Start Time	07:43:53.782	Tracking Range	3000.31 m
Duration	178548 PRI's (17.8547 s)	Range Extend	450 m (30 gates), 15 m res.
Original File	PF060804.014	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	55 MHz
Processor Version	FMSCP Ver 01.21	Waveform File	SC_SRP_5M10P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	3.84 kts, 276.3 deg. N	Grazing Angle	1.11 - 1.27 deg.	Odd Gates Offset	-3.5845+6.3026i
Wind Gust	8.75 kts, 292.5 deg. N	Antenna Azm.	180.7 deg. N	Even Gates Offset	-4.7999-5.5105i
8hr Avg. Wind	6.42 kts, 281.5 deg. N	Antenna Elv.	-1.208 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.11 m, 137.6 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	191.2 - 193.1 dB





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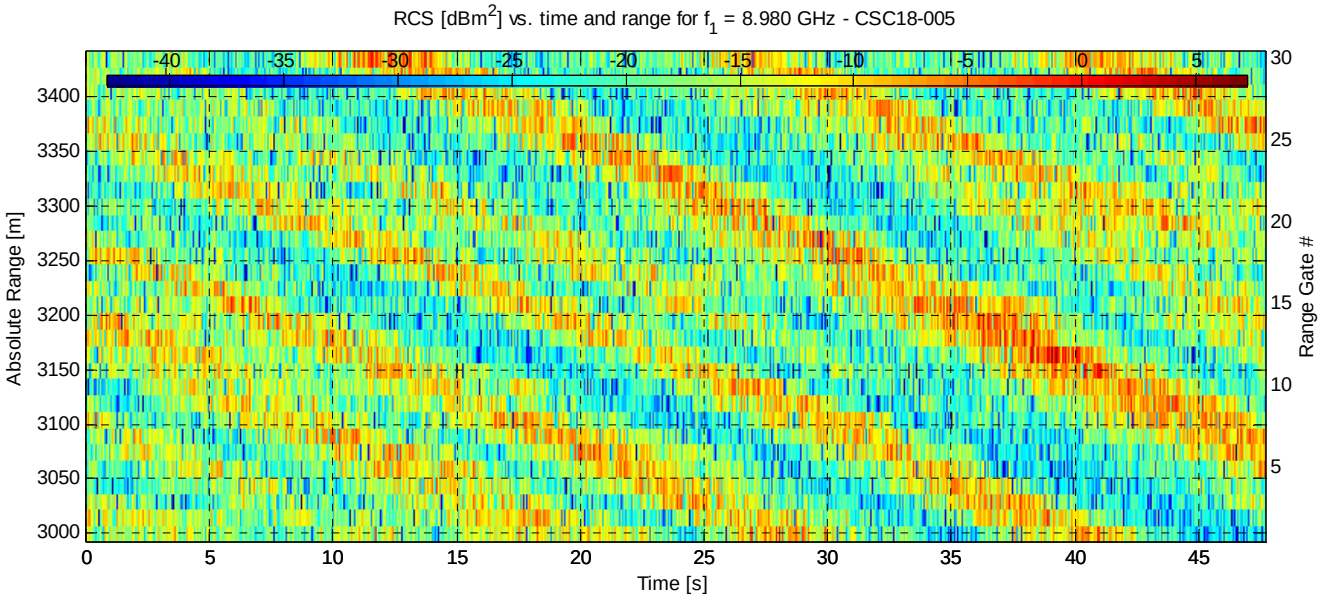

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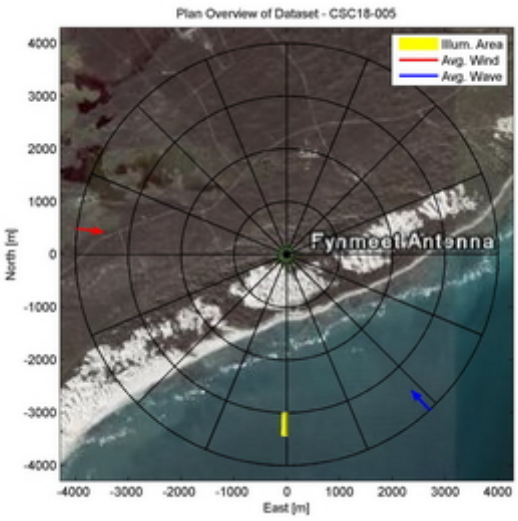
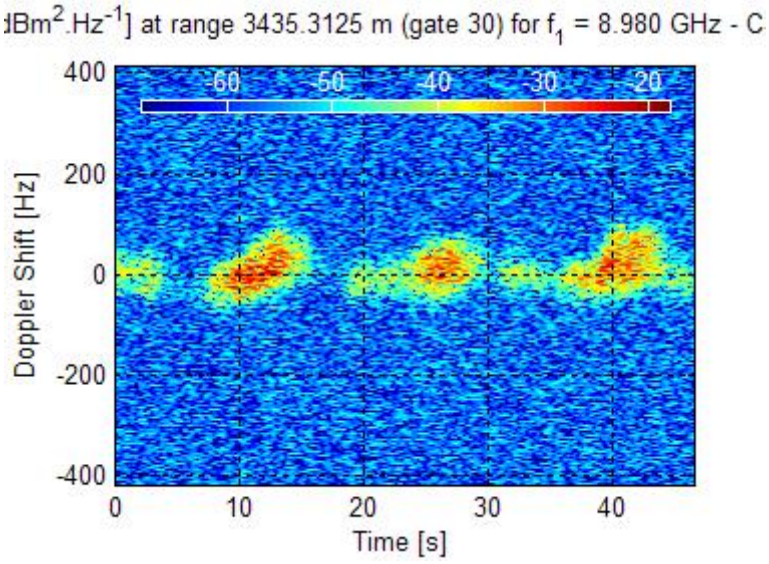
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	10 kHz
Start Time	07:44:11.650	Tracking Range	3000.31 m
Duration	476628 PRI's (47.6627 s)	Range Extend	450 m (30 gates), 15 m res.
Original File	PF060804.014	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	55 MHz
Processor Version	FMSCP Ver 01.21	Waveform File	SC_SRP_5M10P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	3.85 kts, 276.8 deg. N	Grazing Angle	1.11 - 1.27 deg.	Odd Gates Offset	-3.6965+6.5491i
Wind Gust	8.75 kts, 292.5 deg. N	Antenna Azm.	180.7 deg. N	Even Gates Offset	-4.927-5.5502i
8hr Avg. Wind	6.42 kts, 281.5 deg. N	Antenna Elv.	-1.208 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.11 m, 137.5 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	191.2 - 193.1 dB





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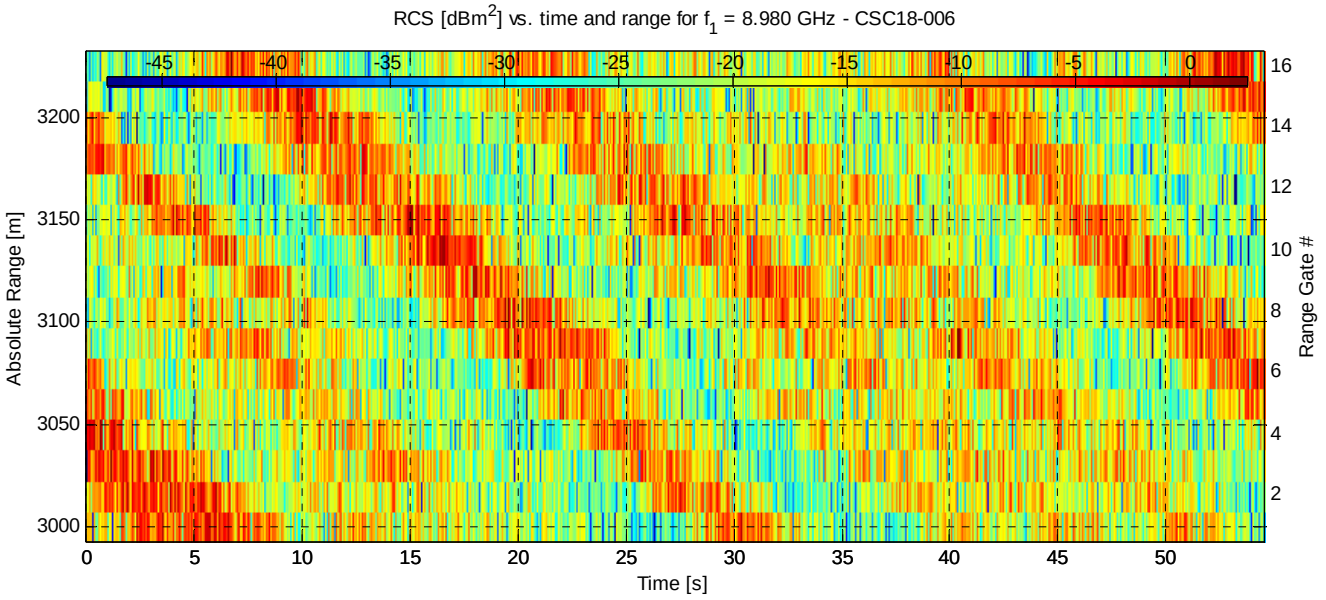

Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	25 kHz
Start Time	07:48:18.460	Tracking Range	3000.31 m
Duration	1364052 PRI's (54.562 s)	Range Extend	240 m (16 gates), 15 m res.
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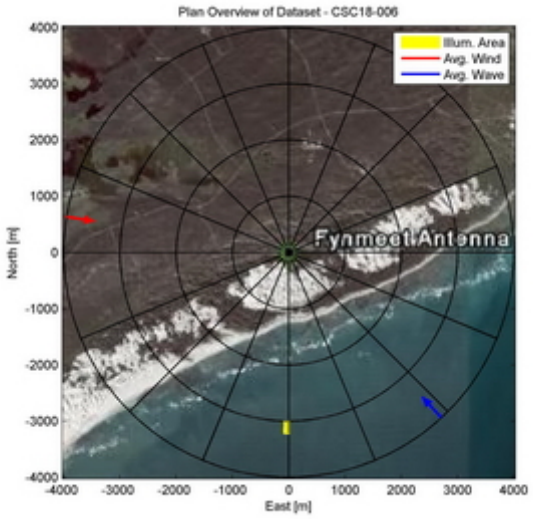
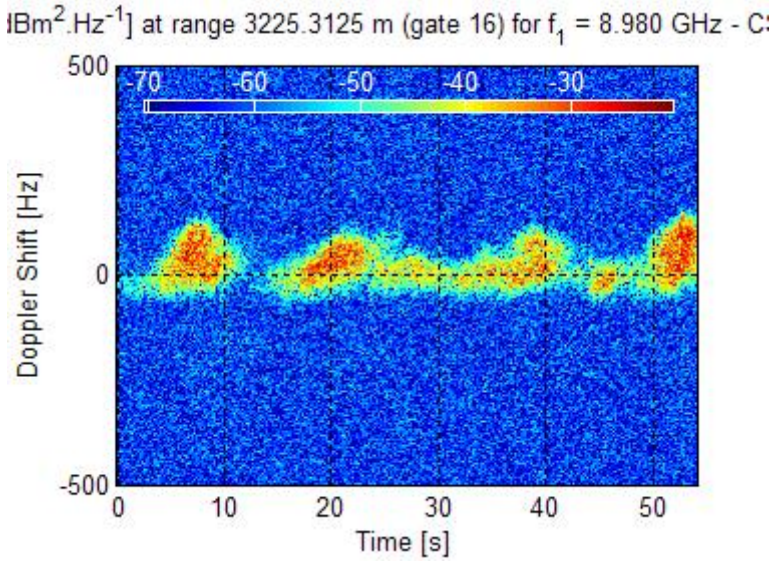
Original Path	\20060804_ifs	Waveform Bandwidth	55 MHz
Processor Version	FMSCP Ver 01.21	Waveform File	SC_SRP_5M10P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	3.92 kts, 278.6 deg. N	Grazing Angle	1.18 - 1.27 deg.	Odd Gates Offset	-3.2637+8.4417i
Wind Gust	8.75 kts, 292.5 deg. N	Antenna Azm.	180.7 deg. N	Even Gates Offset	-4.0254-3.8891i
8hr Avg. Wind	6.4 kts, 281.5 deg. N	Antenna Elv.	-1.208 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.1 m, 137.4 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	191.2 - 193.1 dB





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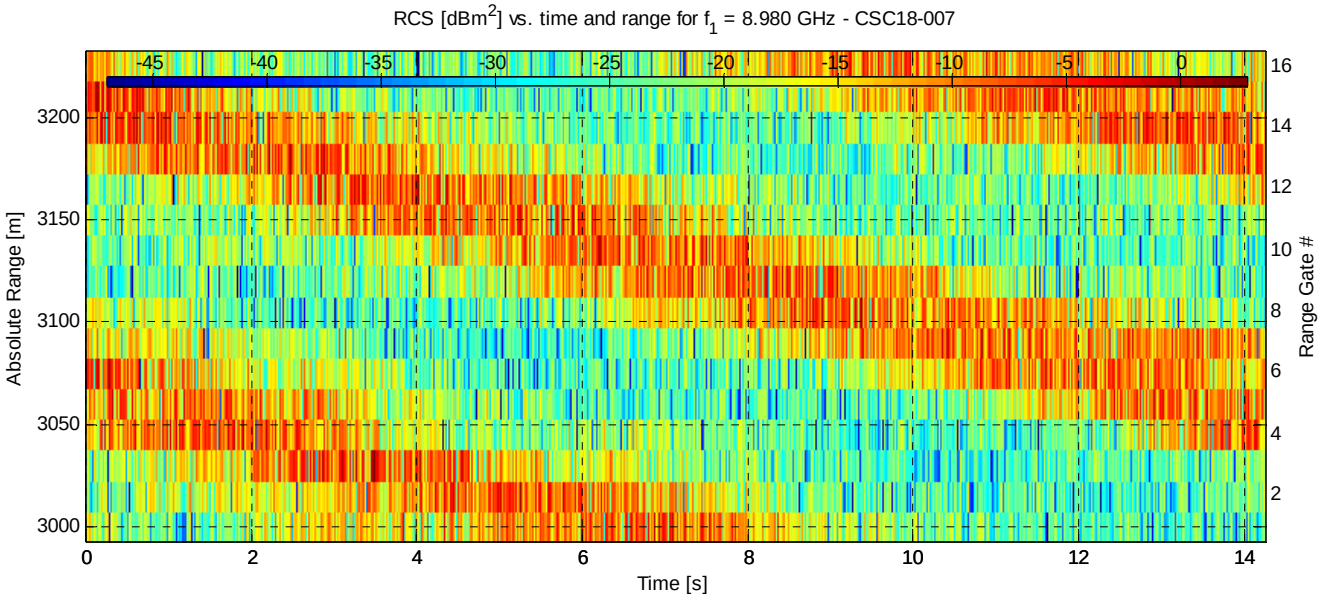
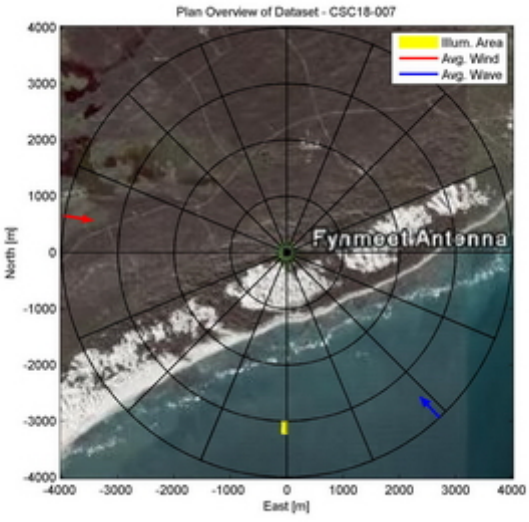
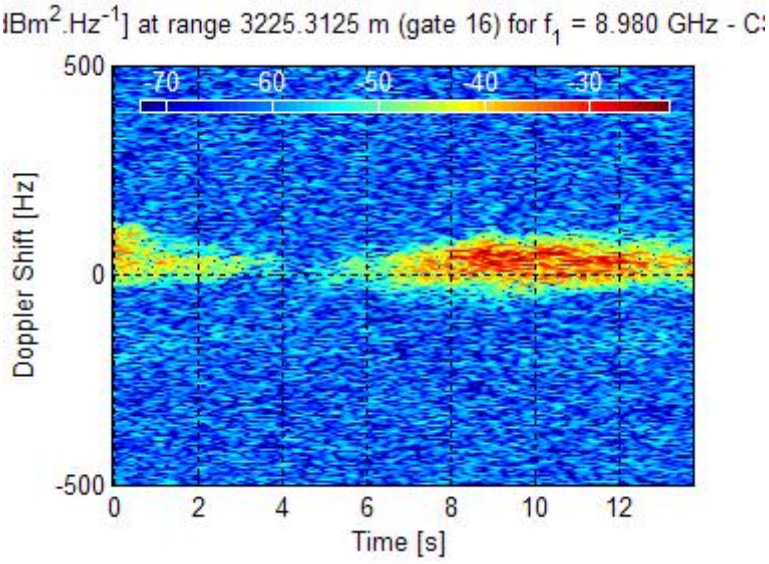


Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	25 kHz
Start Time	07:49:13.031	Tracking Range	3000.31 m
Duration	356088 PRI's (14.2435 s)	Range Extend	240 m (16 gates), 15 m res.
Original File	PF060804.018	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	55 MHz
Processor Version	FMSCP Ver 01.21	Waveform File	SC_SRP_5M10P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	3.94 kts, 279.1 deg. N	Grazing Angle	1.18 - 1.27 deg.	Odd Gates Offset	-3.1329+8.2905i
Wind Gust	8.75 kts, 292.5 deg. N	Antenna Azm.	180.7 deg. N	Even Gates Offset	-4.1838-4.1161i
8hr Avg. Wind	6.4 kts, 281.5 deg. N	Antenna Elv.	-1.208 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.1 m, 137.3 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	191.2 - 193.1 dB





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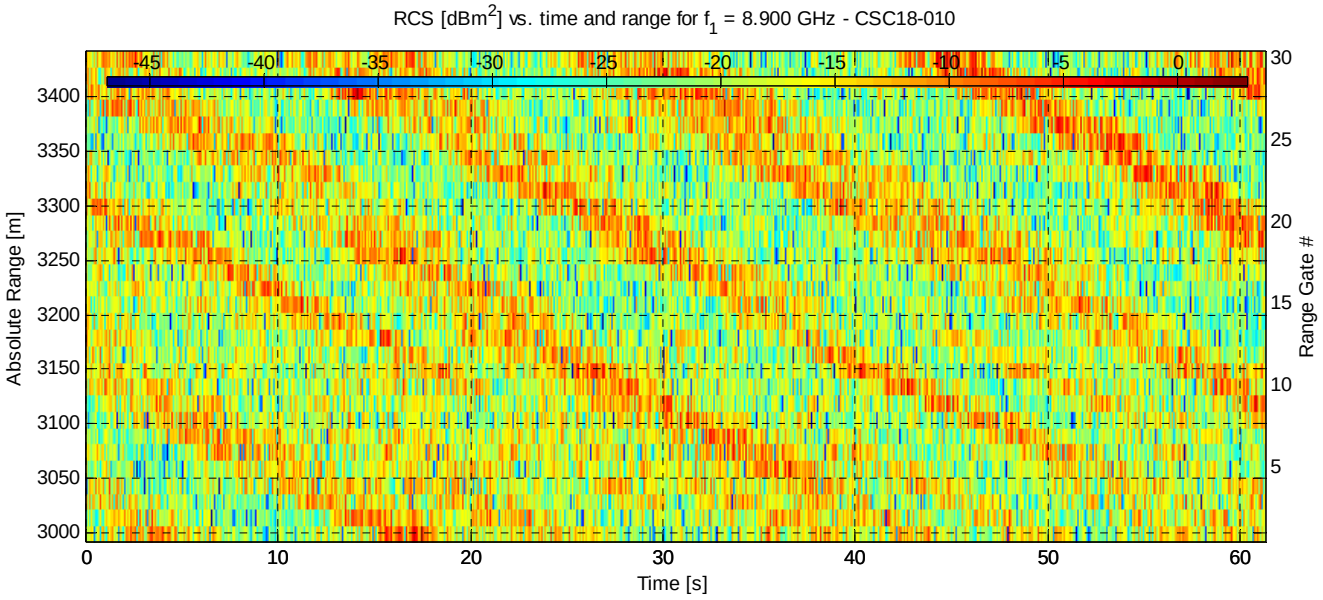
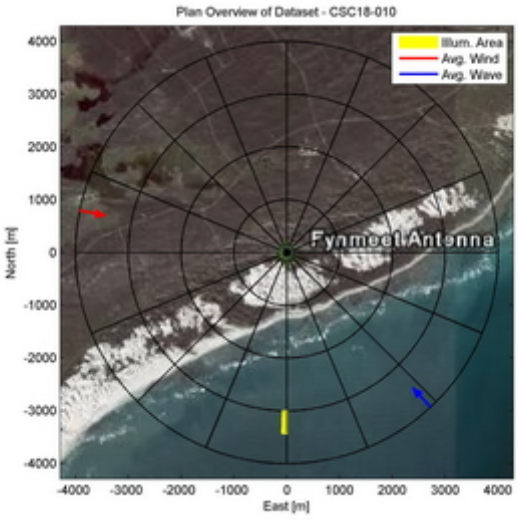
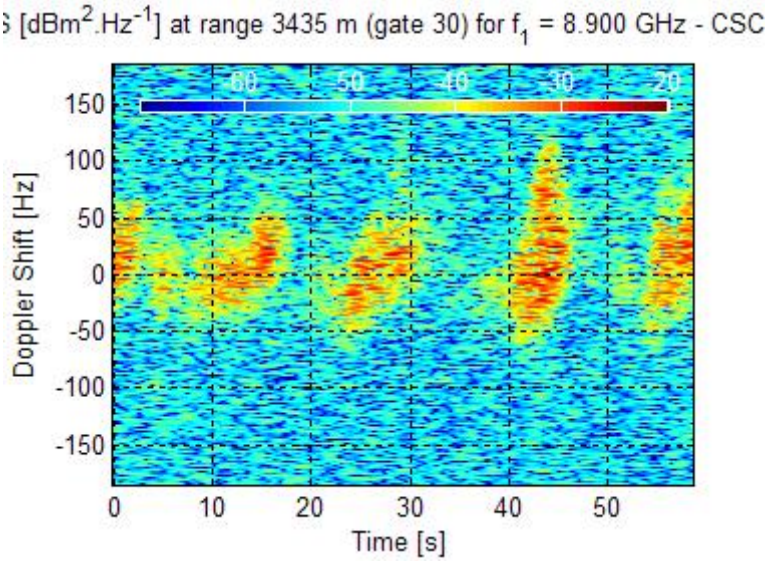


Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	10 kHz
Start Time	07:53:50.782	Tracking Range	3000 m
Duration	612819 PRI's (61.2818 s)	Range Extend	450 m (30 gates), 15 m res.
Original File	PF060804.024	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	135 MHz
Processor Version	FMSCP Ver 01.21	Waveform File	SC_SRP_5M25P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	4 kts, 281 deg. N	Grazing Angle	1.11 - 1.27 deg.	Odd Gates Offset	-3.4789+7.2888i
Wind Gust	8.75 kts, 292.5 deg. N	Antenna Azm.	180.7 deg. N	Even Gates Offset	-4.3313-5.0955i
8hr Avg. Wind	6.39 kts, 281.5 deg. N	Antenna Elv.	-1.208 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.1 m, 137.1 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	188.6 - 192.9 dB





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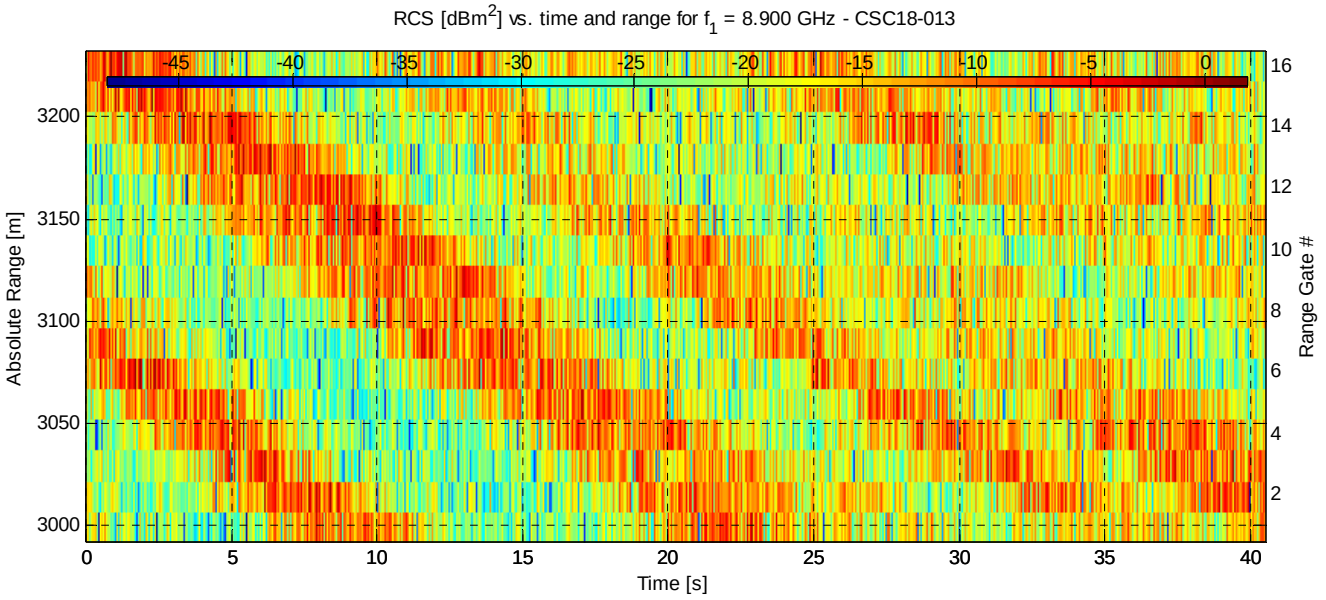
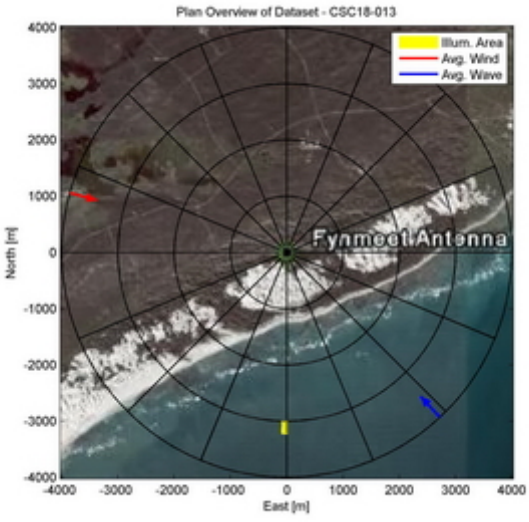
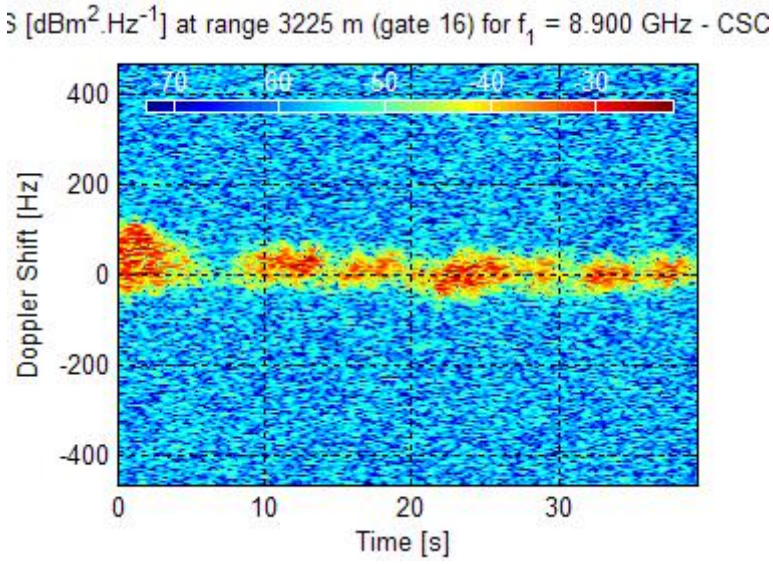


Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	25 kHz
Start Time	08:01:26.296	Tracking Range	3000 m
Duration	1012176 PRI's (40.487 s)	Range Extend	240 m (16 gates), 15 m res.
Original File	PF060804.032	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	135 MHz
Processor Version	FMSCP Ver 01.21	Waveform File	SC_SRP_5M25P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	4.1 kts, 284.8 deg. N	Grazing Angle	1.18 - 1.27 deg.	Odd Gates Offset	-2.9141+7.4641i
Wind Gust	8.75 kts, 315 deg. N	Antenna Azm.	180.7 deg. N	Even Gates Offset	-4.2416-5.4605i
8hr Avg. Wind	6.36 kts, 281.6 deg. N	Antenna Elv.	-1.206 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.09 m, 137 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	188.6 - 192.9 dB





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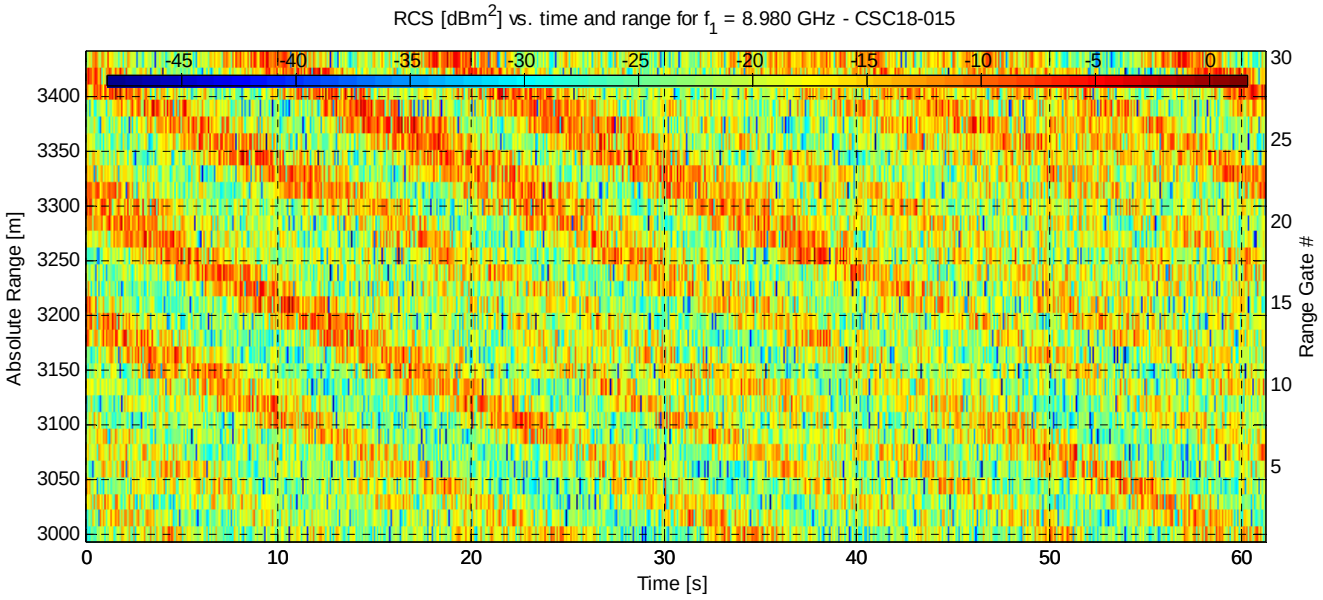
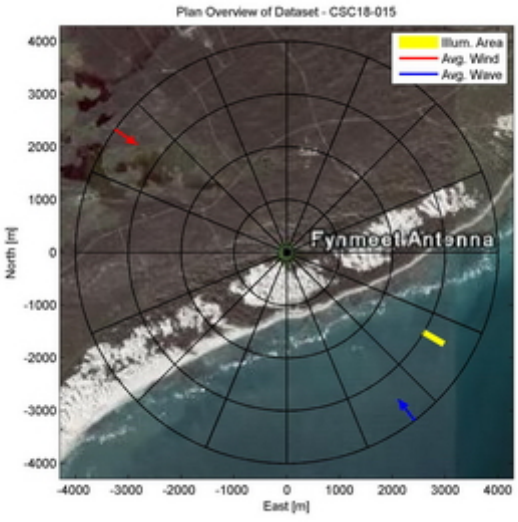
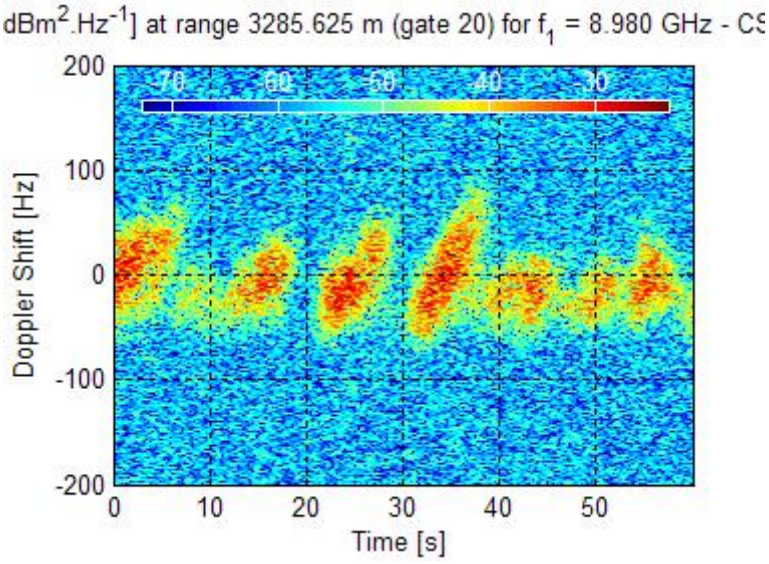


Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	10 kHz
Start Time	08:49:23.890	Tracking Range	3000.63 m
Duration	611748 PRI's (61.1747 s)	Range Extend	450 m (30 gates), 15 m res.
Original File	PF060804.058	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	55 MHz
Processor Version	FMSCP Ver 01.22	Waveform File	SC_SRP_5M10P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	4.51 kts, 305.5 deg. N	Grazing Angle	1.11 - 1.27 deg.	Odd Gates Offset	-4.3124-5.9285i
Wind Gust	8.75 kts, 315 deg. N	Antenna Azm.	120.2 deg. N	Even Gates Offset	-3.9707+7.0863i
8hr Avg. Wind	6.18 kts, 282.6 deg. N	Antenna Elv.	-1.219 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.12 m, 142.9 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	190.9 - 192.9 dB





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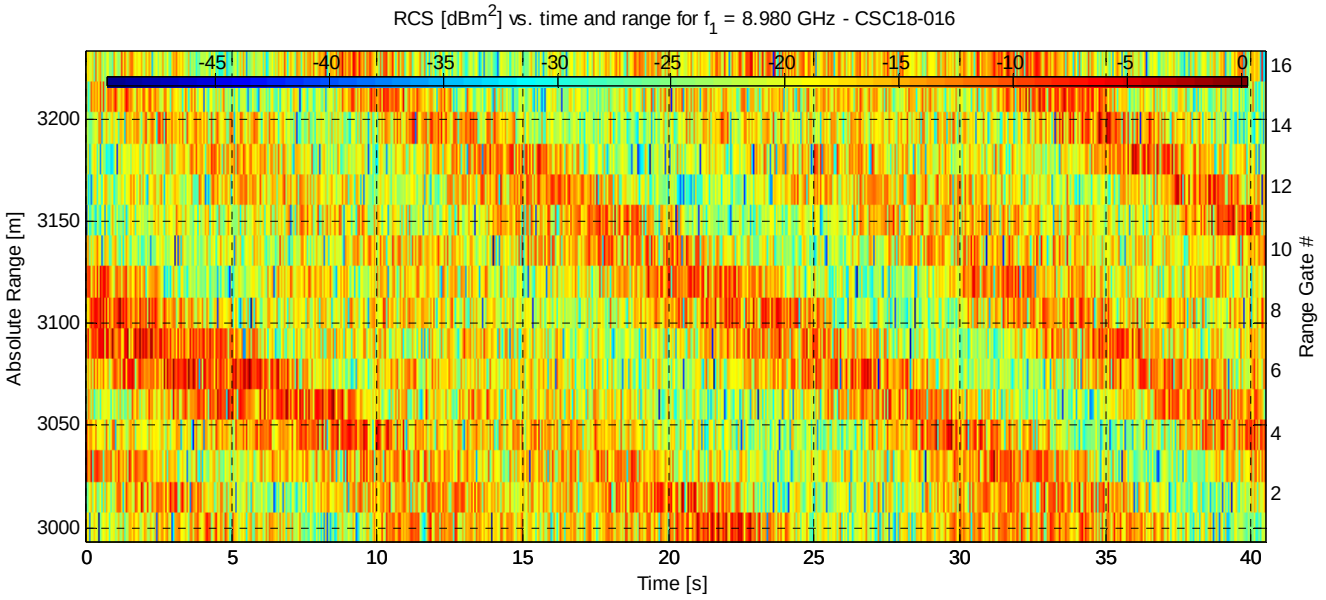
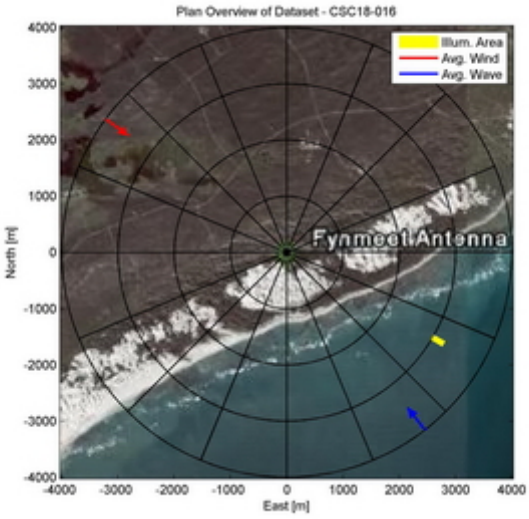
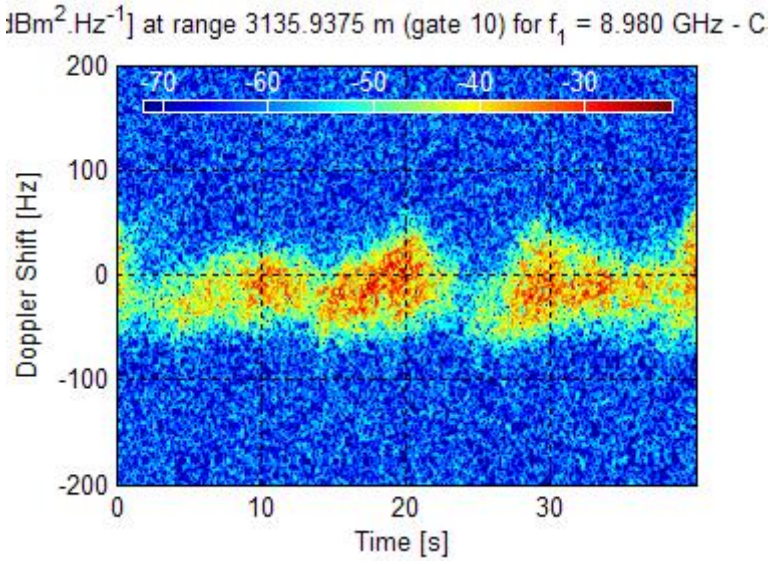


Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	25 kHz
Start Time	08:56:10.984	Tracking Range	3000.94 m
Duration	1011696 PRI's (40.4678 s)	Range Extend	240 m (16 gates), 15 m res.
Original File	PF060804.065	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	55 MHz
Processor Version	FMSCP Ver 01.22	Waveform File	SC_SRP_5M10P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	4.71 kts, 306.4 deg. N	Grazing Angle	1.18 - 1.27 deg.	Odd Gates Offset	-1.5799+7.352i
Wind Gust	8.75 kts, 315 deg. N	Antenna Azm.	120.2 deg. N	Even Gates Offset	-0.92893-3.4003i
8hr Avg. Wind	6.15 kts, 282.7 deg. N	Antenna Elv.	-1.217 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.14 m, 142.1 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	190.9 - 192.9 dB





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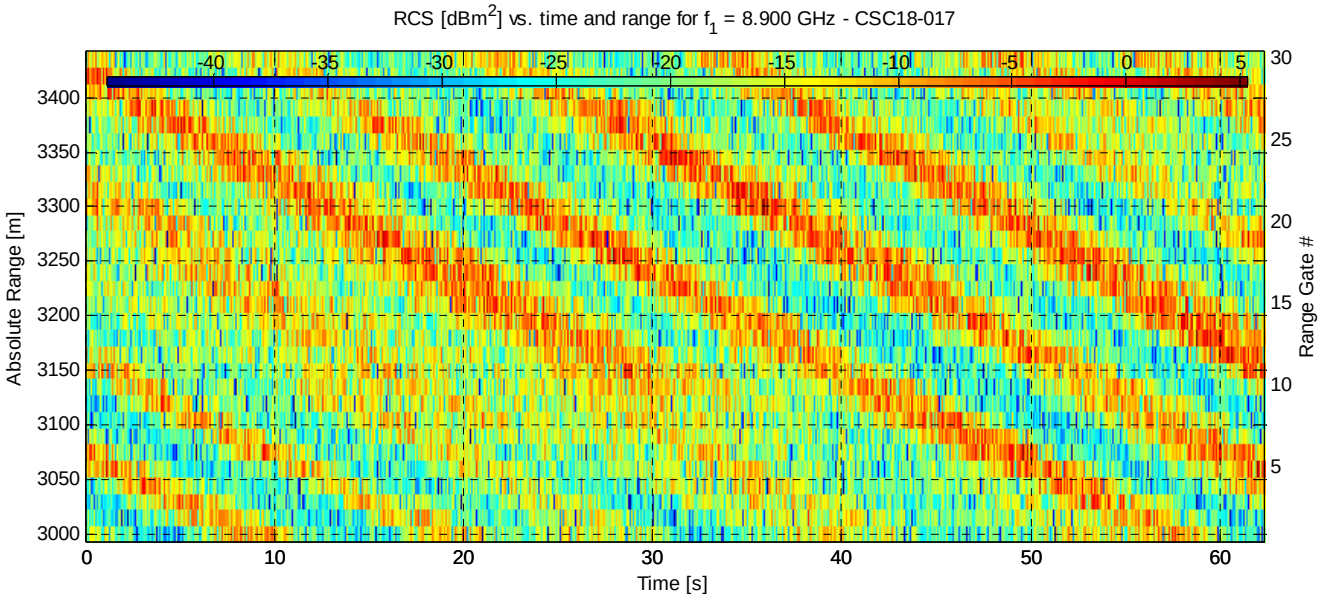
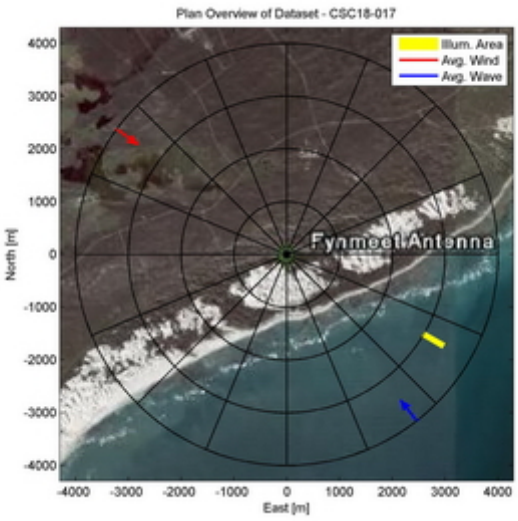
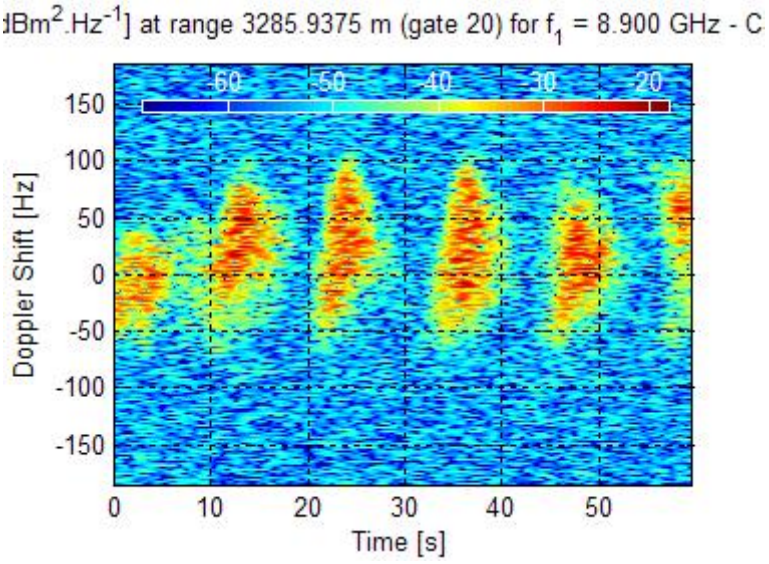


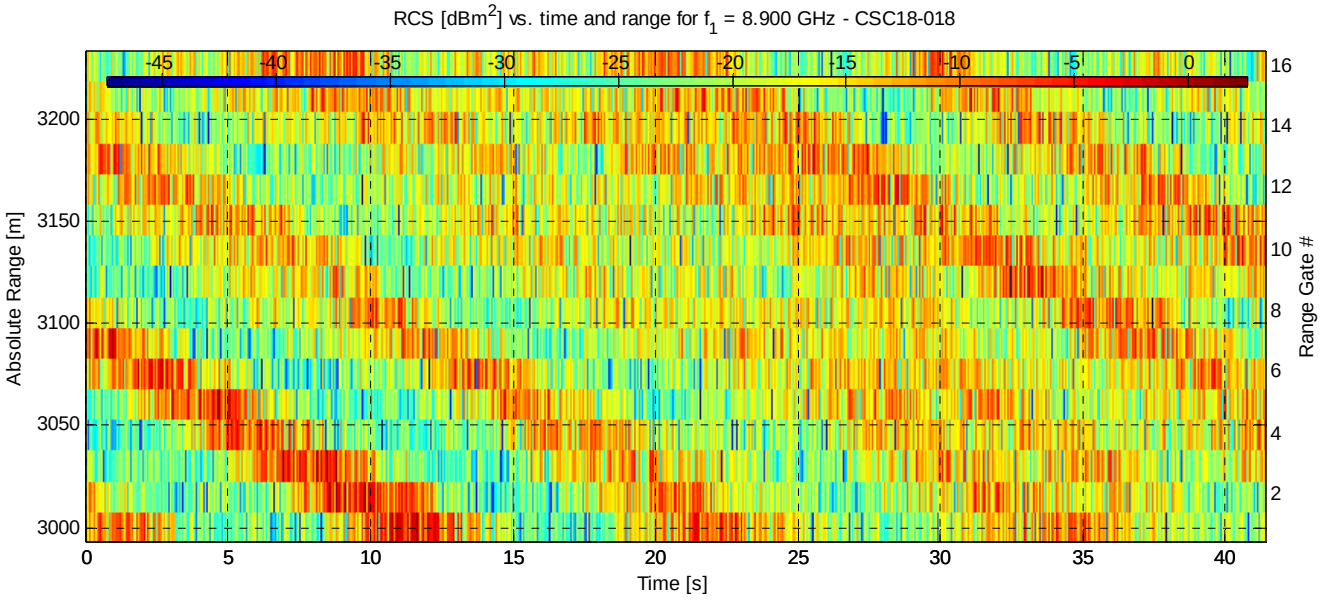
Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	10 kHz
Start Time	08:58:40.392	Tracking Range	3000.94 m
Duration	623727 PRI's (62.3726 s)	Range Extend	450 m (30 gates), 15 m res.
Original File	PF060804.067	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	135 MHz
Processor Version	FMSCP Ver 01.22	Waveform File	SC_SRP_5M25P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	4.77 kts, 306.4 deg. N	Grazing Angle	1.11 - 1.27 deg.	Odd Gates Offset	-1.9549+7.9952i
Wind Gust	8.75 kts, 315 deg. N	Antenna Azm.	120.2 deg. N	Even Gates Offset	-1.1216-2.896i
8hr Avg. Wind	6.15 kts, 282.7 deg. N	Antenna Elv.	-1.217 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.14 m, 142 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	188.6 - 192.9 dB





Dataset CSC18-018



Experiment Summary	Value	Radar Setup	Value
Type	Sea Clutter	Tx Frequency	9 GHz
Date	04-Aug-2006	PRF	25 kHz
Start Time	09:04:57.641	Tracking Range	3000.94 m
Duration	1034559 PRI's (41.3823 s)	Range Extend	240 m (16 gates), 15 m res.
Original File	PF060804.072	Waveform Type	Stepped Frequency
Original Path	\20060804_ifs	Waveform Bandwidth	135 MHz
Processor Version	FMSCP Ver 01.22	Waveform File	SC_SRP_5M25P_with_mrkr.txt

Environment	Value	Geometry	Value	Processing	Value
Inst. Wind	5.01 kts, 306.1 deg. N	Grazing Angle	1.18 - 1.27 deg.	Odd Gates Offset	-1.7894+7.683i
Wind Gust	12.2 kts, 288 deg. N	Antenna Azm.	120.2 deg. N	Even Gates Offset	-1.0585-3.4314i
8hr Avg. Wind	6.12 kts, 282.8 deg. N	Antenna Elv.	-1.219 deg.	I/Q Imbalance	Bypassed
Wave (SWH)	2.13 m, 142.1 deg. N	Antenna BW.	1.8 deg. Az, 1.8 deg. El	Complex Conj.	Applied
		GPS Data	Not applicable	Calibr. Coeff.	188.6 - 192.9 dB