Acoustic survey during JR 79

EK60 operations:

- The sampling interval was 1 sec. and the water depth was set to 300 m, which produces 25 MB of data each 23 min
- Parallel to the EK60 raw data, BI500 data were saved
- During the first two transects W1.1 and W1.2 the SSU wasn't set up properly, so lots of interferences are on the echograms
- After the SSU was set up properly the SSU was working very well with the EA500 and the EK60
- There were no operating problems with the EK60 soft or hardware, the system worked very well during the whole time

XBT operations:

- During the first XBT transect W1.2 we have had 3 XBT which failed, so decision was made to cut the XBT cable by ca. 50 cm near the launcher
- After that the XBT worked very well and the other 3 failures were due to birds which came in contact with the wire during operation

CTD operations:

- During the survey the CTD itself worked perfect without any problems and the new bottom detection system is a good improvement
- On the other hand during the survey the Cable monitoring system (CLAM) stated to develop problems, first with the software and ended in a total hard drive failure of the CLAM PC.
- After replacing the hard drive of the CLAM system we tested it on the two remaining CTD stations and it worked well

Eventlog for JR 79

Event No	Event	Transect	Time	Date	comment
1	XBT	W1.1	09:00	10/15/02	
2	XBT	W1.1	10:05	10/15/02	failed
3	XBT	W1.1	10:10	10/15/02	failed
4	XBT	W1.1	11:10	10/15/02	failed
5	CTD	W1.2	19:11	10/15/02	1000 m, no Bottels
6	CTD	W1.2	22:05	10/15/02	1000 m Bottels
7	CTD	W1.2	01:25	10/16/02	1000 m no Bottels
8	CTD	W1.2	04:12	10/16/02	250 m Bottels
9	CTD	W1.2	06:30	10/16/02	250 m no Bottels
10	XBT	W2.1	09:00	10/16/02	
11	XBT	W2.1	10:05	10/16/02	
12	XBT	W2.1	11:10	10/16/02	

13	XBT	W.2.1	12:15	10/16/02	
14	XBT	W2.1	13:20	10/16/02	
15	CTD	W2.2	23:16	10/16/02	250 m no Bottels
16	CTD	W2.2	01:30	10/17/02	250 m Bottels
17	CTD	W2.2	03:22	10/17/02	1000 m no Bottels
18	CTD	W2.2	05:32	10/17/02	1000 m Bottels
19	CTD	W2.2	07:35	10/17/02	1000 m, no Bottels
20	XBT	W3.1	09:30	10/17/02	
21	XBT	W3.1	10:40	10/17/02	
22	XBT	W3.1	11:40	10/17/02	
23	XBT	W3.1	12:50	10/17/02	
24	XBT	W3.1	13:59	10/17/02	
25	CTD	W3.2	19:30	10/17/02	1000 m, no Bottels
26	CTD	W3.2	21:30	10/17/02	1000 m Bottels
27	CTD	W3.2	23:30	10/17/02	1000 m, no Bottels
28	CTD	W3.2	01:30	10/18/02	failed due to cable pc problems
29	CTD	W3.2	03:30	10/18/02	failed due to cable pc problems
30	XBT	W4.1	08:30	10/18/02	
31	XBT	W4.1	09:30	10/18/02	failed
32	XBT	W4.1	09:30	10/18/02	2cond attempt successful
33	XBT	W4.1	10:30	10/18/02	
34	XBT	W4.1	11:30	10/18/02	
35	XBT	W4.1	13:00	10/18/02	
36	XBT	W4.2	13:30	10/18/02	
37	XBT	W4.2	14:40	10/18/02	failed
38	XBT	W4.2	14:45	10/18/02	2cond attempt successful
39	XBT	W4.2	16:00	10/18/02	
40	XBT	W4.2	17:00	10/18/02	
41	XBT	W4.2	18:02	10/18/02	
42	XBT	ER635	21:11	10/18/02	
43	XBT	ER635	22:01	10/18/02	
44	XBT	ER635	22:53	10/18/02	
45	XBT	ER635	23:50	10/18/02	
46	XBT	ER635	00:45	10/19/02	
47	XBT	ER635	01:46	10/19/02	
48	XBT	ER635	02:39	10/19/02	
49	XBT	ER635	03:35	10/19/02	
50	XBT	ER635	04:29	10/19/02	
51	XBT	ER635	05:22	10/19/02	
52	XBT	ER635	06:23	10/19/02	
53	XBT	ER635	07:22	10/19/02	
54	XBT	ER635	08:13	10/19/02	
55	XBT	ER635	09:06	10/19/02	failed
56	XBT	ER635	09:10	10/19/02	
57	XBT	ER635	10:00	10/19/02	
58	XBT	ER635	10:53	10/19/02	
59	XBT	ER635	11:50	10/19/02	
60	CTD	W.3.2	22:30	10/19/02	finaly
61	CTD	W.3.3		10/19/02	finaly

special eventlog for EK60

Event No	Transect	Time	Date	Event
E001	W1.1	11:45	10/15/02	false bottom
E002	W1.2	16:42	10/15/02	false bottom
E003	W1.2	17:20	10/15/02	leaving transect - Iceberg
E004	W2.1	10:51	10/16/02	false bottom
E005	W2.2	17:11	10/16/02	false bottom
E006	W3.1	12:06	10/17/02	false bottom
E007	W3.2	16:49	10/17/02	false bottom
E008	W4.1	10:14	10/18/02	false bottom
E009	W4.1	11:07	10/18/02	false bottom
E010	W4.2	16:35	10/18/02	false bottom

RRS James Clark Ross, Cruise JR79

Notes

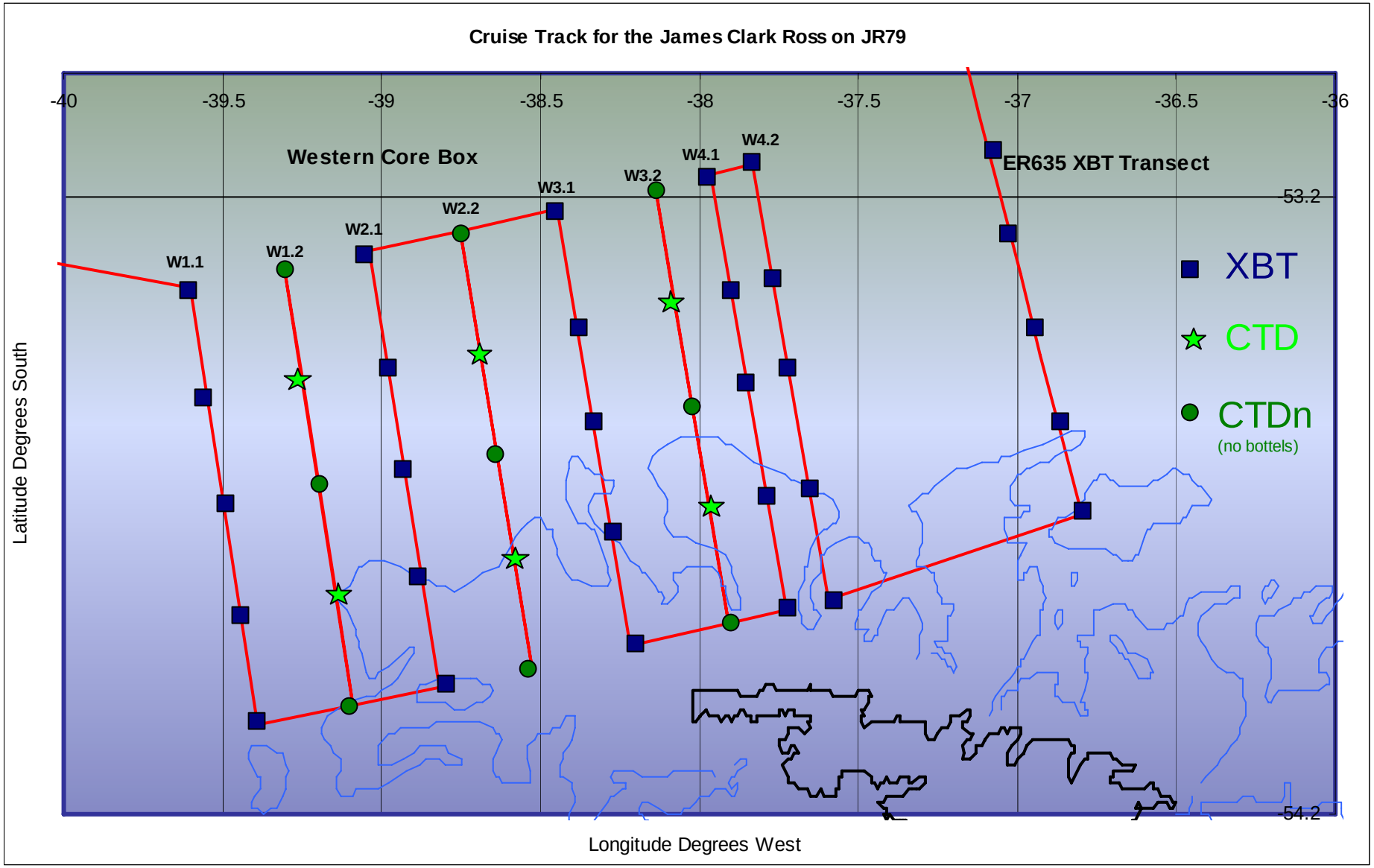
1). This version ends with xbt run away from the Island
2). Acoustic transects need to be completed between 0900 and 2000 hours (Z) - daylight hours (civil twilight)
3). Survey could be run in reverse direction, i.e. starting at W.1.1.N, but it should retain overall west to east direction (counter-current)
4). The swath bathymetry, EK500, EA500 and underway monitoring equipment will be switched on whenever possible, but this is not expected to be possible when running the EK60 during acoustic transects.
5). CTDN stands for additional CTDs without water collection

Cruise Waypoints and Stations

Station Name	Activity	Lat	Lon	Lat	Lat	Lon	Lon	Dist,	Dist,	Speed	Transect	Activity	Completed Z	Local Time	Information
Mobilization		Decimal	Decimal	Degrees	Mins	Degrees	Mins	n.mi.	km		time, h	time, h	12-Oct-02		
Core Box															
Waypoint_W.1.1.N	**Acoustics**	**-53.347**	**-39.602**	-53	20.83	-39	36.14						15/10/2002 09:00	15/10/2002 06:00	Acoustic
Waypoint_W.1.1.S	Acoustics	-54.055	-39.392	-54	3.32	-39	23.51	43.1	79.9	10	4.31	0.00	15/10/2002 13:18	15/10/2002 10:18	
Waypoint_W.1.2.S	Acoustics	-54.023	-39.089	-54	1.40	-39	5.34	10.8	20.1	10	1.08	0.00	15/10/2002 14:23	15/10/2002 11:23	
Waypoint_W.1.2.N	Acoustics	-53.316	-39.304	-53	18.94	-39	18.25	43.1	79.9	9	4.79	0.00	15/10/2002 19:11	15/10/2002 16:11	9 knots due to weather
Waypoint_W.1.2.N	CTDN 1000	-53.316	-39.304	-53	18.94	-39	18.25	0.0	0.0	1	0.00	1.80	15/10/2002 20:59	15/10/2002 17:59	
Station_W.1.2.N		-53.493	-39.251	-53	29.56	-39	15.07	10.8	20.0	10	1.08	0.00	15/10/2002 22:04	15/10/2002 19:04	
Station_W.1.2.N	CTD 1000	-53.493	-39.251	-53	29.56	-39	15.07	0.0	0.0	1	0.00	2.30	16/10/2002 00:22	15/10/2002 21:22	
Station_W.1.2.M		-53.67	-39.197	-53	40.17	-39	12.84	10.8	20.0	7	1.08	0.00	16/10/2002 01:26	15/10/2002 22:26	7 knots due to fog
Station_W.1.2.M	CTDN MID	-53.67	-39.197	-53	40.17	-39	12.84	0.0	0.0	1	0.00	0.60	16/10/2002 02:02	15/10/2002 23:02	
Station_W.1.2.S		-53.846	-39.144	-53	50.78	-39	8.61	10.8	20.0	5	2.16	0.00	16/10/2002 04:12	16/10/2002 01:12	5 knots due to fog
Station_W.1.2.S	CTD 250	-53.846	-39.144	-53	50.78	-39	8.61	0.0	0.0	1	0.00	0.50	16/10/2002 04:42	16/10/2002 01:42	
Waypoint_W.1.2.S		-54.023	-39.089	-54	1.40	-39	5.34	10.8	20.0	6	1.80	0.00	16/10/2002 06:30	16/10/2002 03:30	6 knots due to fog
Waypoint_W.1.2.S	CTDN 250	-54.023	-39.089	-54	1.40	-39	5.34	0.0	0.0	1	0.00	0.50	16/10/2002 07:00	16/10/2002 04:00	
Waypoint_W.2.1.S		-53.994	-38.819	-53	59.64	-38	49.14	9.7	17.9	10	0.97	0.00	16/10/2002 07:58	16/10/2002 04:58	
Waypoint_W.2.1.S	**Acoustics**	**-53.994**	**-38.819**	-53	59.64	-38	49.14						16/10/2002 09:00		
Waypoint_W.2.1.N	Acoustics	-53.287	-39.038	-53	17.22	-39	2.29	43.1	79.9	10	4.31	0.00	16/10/2002 13:18	16/10/2002 10:18	
Waypoint_W.2.2.N	Acoustics	-53.255	-38.751	-53	15.31	-38	45.05	10.5	19.4	10	1.05	0.00	16/10/2002 14:21	16/10/2002 11:21	

Waypoint_W.2.2.S	Acoustics	-53.962	-38.527	-53	57.70	-38	31.61	43.1	79.9	10	4.31	0.00	16/10/2002 18:40	16/10/2002 15:40	after transect personal transfer with BI
Waypoint_W.2.2.S	CTDN 250	-53.962	-38.527	-53	57.70	-38	31.61	0.0	0.0	1	0.00	5.50	17/10/2002 00:10	16/10/2002 21:10	transfer time 4 hours
Station_W.2.2.S		-53.785	-38.584	-53	47.11	-38	35.01	10.8	20.0	10	1.08	0.00	17/10/2002 01:15	16/10/2002 22:15	
Station_W.2.2.S	CTD 250	-53.785	-38.584	-53	47.11	-38	35.01	0.0	0.0	1	0.00	1.10	17/10/2002 02:21	16/10/2002 23:21	problems with the winch control PC
Station_W.2.2.M		-53.608	-38.64	-53	36.45	-38	38.42	10.8	20.1	10	1.08	0.00	17/10/2002 03:26	17/10/2002 00:26	
Station_W.2.2.M	CTDN MID	-53.608	-38.64	-53	37.45	-38	39.42	0.0	0.0	1	0.00	1.00	17/10/2002 04:26	17/10/2002 01:26	
Station_W.2.2.N		-53.432	-38.695	-53	25.91	-38	41.72	10.7	19.9	10	1.07	0.00	17/10/2002 05:30	17/10/2002 02:30	
Station_W.2.2.N	CTD 1000	-53.432	-38.695	-53	25.91	-38	41.72	0.0	0.0	1	0.00	1.00	17/10/2002 06:30	17/10/2002 03:30	
Waypoint_W.2.2.N		-53.255	-38.751	-53	15.31	-38	45.05	10.8	20.0	10	1.08	0.00	17/10/2002 07:35	17/10/2002 04:35	
Waypoint_W.2.2.N	CTDN 1000	-53.255	-38.751	-53	15.31	-38	45.05	0.0	0.0	1	0.00	1.00	17/10/2002 08:35	17/10/2002 05:35	
Waypoint_W.3.1.N		-53.221	-38.449	-53	13.25	-38	26.94	11.0	20.4	10	1.10	0.00	17/10/2002 09:41	17/10/2002 06:41	
Waypoint_W.3.1.N	**Acoustics**	**-53.221**	**-38.449**	-53	13.25	-38	26.94						17/10/2002 09:41		
Waypoint_W.3.1.S	Acoustics	-53.927	-38.22	-53	55.61	-38	13.22	43.1	79.9	10	4.31	0.00	17/10/2002 13:59	17/10/2002 10:59	
Waypoint_W.3.2.S	Acoustics	-53.89	-37.907	-53	53.42	-37	54.40	11.3	20.9	10	1.13	0.00	17/10/2002 15:07	17/10/2002 12:07	
Waypoint_W.3.2.N	Acoustics	-53.185	-38.14	-53	11.11	-38	8.42	43.1	79.9	10	4.31	0.00	17/10/2002 19:26	17/10/2002 16:26	
Waypoint_W.3.2.N	CTDN 1000	-53.185	-38.14	-53	11.11	-38	8.42	0.0	0.0	1	0.00	1.00	17/10/2002 20:26	17/10/2002 17:26	
Station_W.3.2.N		-53.361	-38.083	-53	21.68	-38	4.95	10.8	20.0	10	1.08	0.00	17/10/2002 21:31	17/10/2002 18:31	
Station_W.3.2.N	CTD 1000	-53.361	-38.083	-53	21.68	-38	4.95	0.0	0.0	1	0.00	1.00	17/10/2002 22:31	17/10/2002 19:31	
Station_W.3.2.M		-53.538	-38.024	-53	32.27	-38	1.46	10.8	20.0	10	1.08	0.00	17/10/2002 23:35	17/10/2002 20:35	
Station_W.3.2.M	CTDN MID	-53.538	-38.024	-53	32.27	-38	1.46	0.0	0.0	1	0.00	1.00	18/10/2002 00:35	17/10/2002 21:35	
Station_W.3.2.S		-53.714	-37.966	-53	42.85	-37	57.95	10.8	20.0	10	1.08	0.00	18/10/2002 01:40	17/10/2002 22:40	
Station_W.3.2.S	CTD 250	-53.714	-37.966	-53	42.85	-37	57.95	0.0	0.0	1	0.00	0.50	18/10/2002 02:10	17/10/2002 23:10	no CTD due to winch PC broken
Waypoint_W.3.2.S		-53.89	-37.907	-53	53.42	-37	54.40	10.8	20.0	10	1.08	0.00	18/10/2002 03:15	18/10/2002 00:15	
Waypoint_W.3.2.S	CTDN 250	-53.89	-37.907	-53	53.42	-37	54.40	0.0	0.0	1	0.00	0.50	18/10/2002 03:45	18/10/2002 00:45	no CTD due to winch PC broken
Waypoint_W.4.1.S		-53.869	-37.728	-53	52.15	-37	43.67	6.5	11.9	10	0.65	0.00	18/10/2002 04:23	18/10/2002 01:23	
Waypoint_W.4.1.S	**Acoustics**	**-53.869**	**-37.728**	-53	52.15	-37	43.67						18/10/2002 08:30		
Waypoint_W.4.1.N	Acoustics	-53.164	-37.964	-53	9.85	-37	57.86	43.1	79.9	10	4.31	0.00	18/10/2002 12:48	18/10/2002 09:48	transect 1 m shorter due to iceberg at endpoint
Waypoint_W.4.2.N	Acoustics	-53.148	-37.832	-53	8.90	-37	49.93	4.8	9.0	10	0.48	0.00	18/10/2002 13:17	18/10/2002 10:17	
Waypoint_W.4.2.S	Acoustics	-53.853	-37.594	-53	51.19	-37	35.62	43.1	79.9	10	4.31	0.00	18/10/2002 17:36	18/10/2002 14:36	
Transect															

Waypoint_W.4.2.S	Acoustics	-53.853	-37.594	-53	51.19	-37	35.62						18/10/2002 17:36	18/10/2002 14:36	
ER635	**XBT 17**	**-53.7**	**-36.8**	-53.0	42.8	-36.0	47.8	29.5	54.6	8.5	3.5	0.2	18/10/2002 21:14	18/10/2002 18:14	Transect Start (ER635)
(15 km spacing)	XBT 16	-53.585	-36.861	-53	35.09	-36	51.68	8.1	15.0	12	0.68	0.17	18/10/2002 22:05	18/10/2002 19:05	
start of xbt transect	XBT 15	-53.455	-36.926	-53	27.33	-36	55.59	8.1	15.0	12	0.68	0.17	18/10/2002 22:55	18/10/2002 19:55	
	XBT 14	-53.326	-36.991	-53	19.56	-36	59.47	8.1	15.0	10.5	0.77	0.17	18/10/2002 23:52	18/10/2002 20:52	
	XBT 13	-53.197	-37.056	-53	11.80	-37	3.34	8.1	15.0	10	0.81	0.17	19/10/2002 00:50	18/10/2002 21:50	
	XBT 12	-53.067	-37.12	-53	4.03	-37	7.18	8.1	15.0	12	0.68	0.17	19/10/2002 01:41	18/10/2002 22:41	
	XBT 11	-52.938	-37.184	-52	56.27	-37	11.01	8.1	15.0	10.5	0.77	0.17	19/10/2002 02:37	18/10/2002 23:37	
	XBT 10	-52.808	-37.247	-52	48.50	-37	14.82	8.1	15.0	10.5	0.77	0.17	19/10/2002 03:33	19/10/2002 00:33	
	XBT 9	-52.679	-37.31	-52	40.73	-37	18.60	8.1	15.0	10.5	0.77	0.17	19/10/2002 04:30	19/10/2002 01:30	
	XBT 8	-52.549	-37.373	-52	32.95	-37	22.37	8.1	15.0	12	0.68	0.17	19/10/2002 05:20	19/10/2002 02:20	
	XBT 7	-52.42	-37.435	-52	25.18	-37	26.12	8.1	15.0	9.5	0.85	0.17	19/10/2002 06:22	19/10/2002 03:22	
	XBT 6	-52.29	-37.498	-52	17.40	-37	29.85	8.1	15.0	9.5	0.85	0.17	19/10/2002 07:23	19/10/2002 04:23	
	XBT 5	-52.16	-37.559	-52	9.63	-37	33.57	8.1	15.0	12	0.68	0.17	19/10/2002 08:13	19/10/2002 05:13	
	XBT 4	-52.031	-37.621	-52	1.85	-37	37.26	8.1	15.0	10	0.81	0.17	19/10/2002 09:12	19/10/2002 06:12	
	XBT 3	-51.901	-37.682	-51	54.07	-37	40.94	8.1	15.0	12	0.68	0.17	19/10/2002 10:02	19/10/2002 07:02	
	XBT 2	-51.771	-37.743	-51	46.28	-37	44.60	8.1	15.0	12	0.68	0.17	19/10/2002 10:53	19/10/2002 07:53	
end of xbt transect	XBT 1	-51.642	-37.804	-51	38.50	-37	48.24	8.1	15.0	10	0.81	0.17	19/10/2002 11:52	19/10/2002 08:52	Transect End (ER635)


Cruise Track for the James Clark Ross on JR79
-40
-39.5
-39
-38.5
-38
-37.5
-37
-36.5
-36
Western Core Box
ER635 XBT Transect
W1.1
W1.2
W2.1
W2.2
W3.1
W3.2
W4.1
W4.2
-53.2
-54.2
XBT
CTD
CTDn
(no bottels)
Latitude Degrees South
Longitude Degrees West