

**Cruise report RV PRINCE MADOG 24/04
FLADEN GROUND CRUISE LEG 1**

**School of Ocean Sciences, University of Wales BANGOR, Menai Bridge,
Gwynedd, LL59 5AB, United Kingdom**

Duration: 15/06-24/06/2004

Locality: Northern North Sea

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Abstract

Benthic fauna was sampled at 15 stations over a range of trawling intensities on the Fladen Ground, Northern North Sea, to evaluate the impact of chronic trawling on biomass and production of benthic communities in muddy sediments. Stations were sampled for epifauna with a 2m-beamtrawl. Infauna was sampled with a boxcore and daygrab. Additionally, a still-camera was towed at 3 stations. Only one station was side-scanned for trawl marks.

Scientific objectives

Assessing the impact of different fishing intensities on the biomass and production of benthic communities on the Fladen Ground.

Cruise overview

Areas of different fishing intensities were sampled for infauna using **box corers** and **day grabs**. A **2-m beam trawl** was used to sample epifauna and habitat features. Each box will be **side scanned** to monitor trawl marks on the sea floor which can give an indication of recent fishing events.

Table 1. Station table positions in degrees and minutes. The position marks the northwest corner of the 0.5 km * 0.5 km sampling areas..

Box	Longitude		Latitude	
A	0	26.94 E	58	16.26 N
B	0	31.20 E	58	13.80 N
C	0	43.14 E	58	13.86 N
D	0	46.14 E	58	15.42 N
E	0	53.94 E	58	15.54 N
F	0	50.10 E	58	6.54 N
G	0	23.10 E	58	4.98 N
H	0	26.94 E	58	6.12 N
I	0	33.90 E	58	5.28 N
J	0	37.08 E	58	10.56 N
K	0	30.66 E	58	10.32 N
L	0	25.3 E	57	59.1 N
M	0	43.7 E	58	4.9 N
N	0	37.1 E	58	1.1 N
O	0	48.9 E	58	10.4 N

Operations

2m-beamtrawl, with 10x10 mm net and 2x2 mm liner

PI: Dr JG Hiddink. J.Hiddink@bangor.ac.uk. The beamtrawl was used to sample epifaunal animals. The beamtrawl was fished at 1.5-2.5 knots for 5 min with a 3:1 warp. Positions were logged when stopping paying out and stopping hauling. At each station, 3 beamtrawl samples were taken. A photo was taken of each sample before sorting. Samples were sorted to species on board, identified, and all individual animals were weighed on a motion compensated balance. Trawl I2 had a very small catch, while the trawling distance was very long. This suggests that the trawl had not properly touched the bottom due to too high a trawling speed. All data was entered on the cruise and the data set is complete now. 14 stations were sampled with the 2m-beamtrawl.

Day-grab

PI: Dr JG Hiddink. J.Hiddink@bangor.ac.uk. Five 0.1 m² daygrab samples were taken at each station to sample infaunal benthic invertebrates. From each daygrab sample, a small sediment core for particle size analysis (frozen) and meiofauna (4% formalin) was taken. These subsamples from the 5 grabs per stations were pooled. The rest of each sample was sieved over a 1 mm sieve using a benthic washing machine, and pickled in 4% formalin. Samples will be sorted in the lab, and the dataset completed, before November 2004. 15 stations were sampled with the Day-grab. Sample J5 was lost after it dropped.

Boxcore

PI: Dr JG Hiddink. J.Hiddink@bangor.ac.uk.

Two 0.1m² Jonasson Olauson Boxcore samples were taken at 2 stations to sample infaunal benthic invertebrates in top and bottom layers. The core surface was photographed, and the top 9 cm was sieved separately from the bottom layer, over a 1 mm sieve using the benthic washing machine and both were pickled in 4% formalin. Samples will be sorted in the lab, and the dataset completed, before November 2004. 2 stations were sampled with the Boxcore.

Still camera sledge

PI: Dr JG Hiddink. J.Hiddink@bangor.ac.uk. Ivor Rees. oss058@bangor.ac.uk. 3 stations were sampled with the Camera sledge to get an idea of the appearance of the seabed. A Photo-Sea 1000 still camera took one photo every 42 seconds from 70 cm above the seabed, while being towed at 0.2 knots over the seabed. The first tow, on station K, was probably not successful. Photos will be use for general reference and the data set is ready after processing.

Side-scan sonar

PI: Dr JG Hiddink. J.Hiddink@bangor.ac.uk. Ray Wilton. r.j.wilton@bangor.ac.uk. Side scanning was done to check whether trawling does occur, and to validate trawling intensity figures from counting trawling marks. Station A was side-scanned with the C-max side scan sonar, but broke down when to whole wire was unrolled from the winch-drum. Only 1 station was sampled with the SSS.

Staff involved:

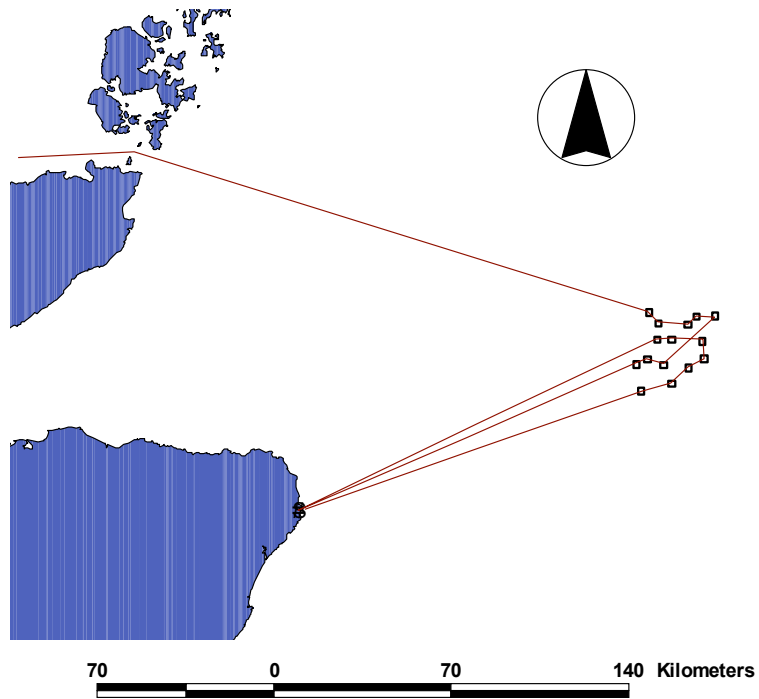
1. Jan Geert Hiddink (SOS)
 2. Hilmar Hinz (SOS)
 3. Marika Galanidi (SOS)
 4. Ivor Rees (SOS)
 5. Jo Gascoigne (SOS)
 6. Heidi Tillin (SOS)
 7. Kathryn Barker (SOS)
 8. Femke van Gent (SOS)
 9. Ray Wilton (SOS)
- responsible for side scan sonar

Length of Participation

entire cruise	SIC
entire cruise	
entire cruise	
entire cruise	
entire cruise	
entire cruise	
entire cruise	
entire cruise	
15/6-21/6	Technician,

Cruise track chart

Cruise track RV Prince Madog Fladen Ground leg 1



Narrative

RV Prince Madog sailed on 15/6 at 9:30 and arrived on the first station at the Fladen ground only 3 h behind schedule due to strong winds on the North Sea at 20:00 on 17/6. Box A was sampled with the 2m-beamtrawl (3) and daygrab (5). Trawling was carried out with the wind. The swell did not allow use of the boxcore. Side scanning of box A commenced at 23:00 and was completed for box A. After this the side-scan sonar did not give a signal anymore, probably because the whole wire (350 m) had been paid out to come close to the bottom (150 m). There was no possibility of a quick fix and sampling was stopped for the night. On 18/6 box B, C, and D were sampled with the beamtrawl and daygrab. After 4 misfires at station B, new bungees were fitted to the daygrab to prevent misfiring in the heavy swell. On 19/6, the wind had been strong in the night (up to F7), but as the weather improved during the day, stations E, G, H and I were sampled. As the wind decreased during the day, beamtrawl could be carried out both with and against the wind later during the day, considerably speeding up the sampling. Some delay was caused by the presence of a vessel towing 6800 m cables over one of the boxes. At 20:00 sampling was finished, and the ship steamed overnight to Peterhead to arrive at 6:30. The deteriorating weather meant that the steam to Peterhead would take 12 h and no sampling time would be available on 20/6. It became clear that it would not be possible to repair the side scan sonar, and Ray Wilton, who had not been feeling well since 17/6, left the ship on 21/6. We left Peterhead on 21/6 after lunch and arrived on site at 21:15 h. As gales were predicted for 23/6, we decided to make samples through the night, and sampled box K, J, F, M, N and O with the beamtrawl and daygrab. At station M, N and L seabed photos were taken with a still camera on a sledge. At station M and N two boxcore samples were taken. On station L only daygrab samples, but no beamtrawl samples, were taken as gales were predicted soon at 18:00, and the captain decided we had to leave immediately to make it back to Peterhead harbour before a NE gale would prevent entering the harbour. We arrived in Peterhead on 1:30 on 23/6.

In total 14 stations were sampled with the beamtrawl, 15 with the daygrab, 2 with the boxcore, 3 with the still camera and 1 with the side scan sonar.

Station/activities log

PI	Cruise	Date	Gear	Data type	Station	Replicate	Time deployed	Latitude deployed D North	Latitude deployed M	Longitude deployed D East	Longitude deployed M	Time retrieved	Latitude retrieved D North	Latitude retrieved M	Longitude retrieved D East	Longitude retrieved M
Dr JG Hiddink	FG	17/6/04	2m-beamtrawl	B18/B19/B20/B21	A	1	18:54	58	15.883	0	27.368	18:59	58	15.718	0	27.499
Dr JG Hiddink	FG	17/6/04	2m-beamtrawl	B18/B19/B20/B21	A	2	19:32	58	15.989	0	26.977	19:37	58	15.811	0	27.097
Dr JG Hiddink	FG	17/6/04	2m-beamtrawl	B18/B19/B20/B21	A	3	20:45	58	15.972	0	27.038	20:50	58	15.734	0	27.243
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	B	1	7:27	58	13.766	0	31.37	7:33	58	13.54	0	31.202
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	B	2	8:05	58	13.652	0	31.145	8:10	58	13.477	0	30.972
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	B	3	8:40	58	13.619	0	31.566	8:45	58	13.834	0	31.608
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	C	1	12:40	58	13.659	0	43.313	12:46	58	13.418	0	43.352
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	C	2	13:31	58	13.614	0	43.482	13:36	58	13.359	0	43.529
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	C	3	14:17	58	13.712	0	43.41	14:22	58	13.475	0	43.448
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	D	1	15:37	58	15.206	0	46.52	15:42	58	14.991	0	46.477
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	D	2	16:25	58	15.428	0	46.182	16:30	58	15.206	0	46.194
Dr JG Hiddink	FG	18/6/04	2m-beamtrawl	B18/B19/B20/B21	D	3	17:33	58	15.882	0	47.156	17:38	58	15.742	0	47.125
Dr JG Hiddink	FG	19/6/04	2m-beamtrawl	B18/B19/B20/B21	E	1	8:01	58	15.775	0	54.194	8:06	58	15.963	0	54.121
Dr JG Hiddink	FG	19/6/04	2m-beamtrawl	B18/B19/B20/B21	E	2	8:26	58	15.932	0	54.104	8:31	58	15.745	0	54.19
Dr JG Hiddink	FG	19/6/04	2m-beamtrawl	B18/B19/B20/B21	E	3	9:18	58	15.613	0	54.178	9:23	58	15.414	0	54.292
Dr JG Hiddink	FG	22/6/04	2m-beamtrawl	B18/B19/B20/B21	F	1	4:55	58	6.484	0	50.413	5:00	58	6.333	0	50.476
Dr JG Hiddink	FG	22/6/04	2m-beamtrawl	B18/B19/B20/B21	F	2	5:27	58	6.603	0	50.412	5:32	58	6.439	0	50.435
Dr JG Hiddink	FG	22/6/04	2m-beamtrawl	B18/B19/B20/B21	F	3	5:57	58	6.502	0	50.197	6:03	58	6.363	0	50.234
Dr JG Hiddink	FG	19/6/04	2m-beamtrawl	B18/B19/B20/B21	G	1	17:21	58	4.561	0	23.448	17:26	58	4.394	0	23.481
Dr JG Hiddink	FG	19/6/04	2m-beamtrawl	B18/B19/B20/B21	G	2	17:44	58	4.587	0	23.275	17:49	58	4.782	0	23.201
Dr JG Hiddink	FG	19/6/04	2m-beamtrawl	B18/B19/B20/B21	G	3	18:08	58	4.755	0	23.282	18:13	58	4.607	0	23.358
Dr JG Hiddink	FG	19/6/04	2m-beamtrawl	B18/B19/B20/B21	H	1	15:32	58	5.976	0	27.28	15:37	58	6.13	0	27.228

Dr JG			2m-													
Hiddink	FG	19/6/04	beamtrawl	B18/B19/B20/B21	H	2	15:57	58	5.868	0	27.278	16:02	58	5.679	0	27.354
Dr JG			2m-													
Hiddink	FG	19/6/04	beamtrawl	B18/B19/B20/B21	H	3	16:25	58	5.676	0	27.537	16:30	58	5.828	0	27.517
Dr JG			2m-													
Hiddink	FG	19/6/04	beamtrawl	B18/B19/B20/B21	I	1	11:56	58	4.698	0	33.967	12:01	58	4.519	0	33.94
Dr JG			2m-													
Hiddink	FG	19/6/04	beamtrawl	B18/B19/B20/B21	I	2	12:24	58	4.478	0	34.225	12:31	58	4.966	0	34.245
Dr JG			2m-													
Hiddink	FG	19/6/04	beamtrawl	B18/B19/B20/B21	I	3	12:47	58	4.766	0	34.188	12:52	58	4.557	0	34.183
Dr JG			2m-													
Hiddink	FG	21/6/04	beamtrawl	B18/B19/B20/B21	J	1	23:29	58	10.297	0	37.466	23:34	58	10.157	0	37.549
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	J	2	0:07	58	10.478	0	37.332	0:12	58	10.3	0	37.382
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	J	3	0:44	58	10.454	0	37.378	0:49	58	10.271	0	37.417
Dr JG			2m-													
Hiddink	FG	21/6/04	beamtrawl	B18/B19/B20/B21	K	1	20:55	58	10.347	0	31.043		58	10.216	0	31.107
Dr JG			2m-													
Hiddink	FG	21/6/04	beamtrawl	B18/B19/B20/B21	K	2	21:42	58	10.274	0	31.372	21:47	58	10.111	0	31.392
Dr JG			2m-													
Hiddink	FG	21/6/04	beamtrawl	B18/B19/B20/B21	K	3	22:33	58	10.143	0	31.216	22:38	58	9.939	0	31.181
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	M	1		58	4.559	0	44.166		58	4.395	0	44.229
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	M	2		58	4.303	0	44.099		58	4.112	0	44.172
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	M	3		58	4.404	0	44.079	10:07	58	4.291	0	44.121
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	N	1	13:11	58	0.937	0	37.321	13:16	58	0.788	0	37.387
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	N	2	13:40	58	1.067	0	37.564	13:45	58	0.991	0	37.559
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	N	3	14:09	58	1.038	0	37.434	14:14	58	0.89	0	37.446
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	O	1	3:05	58	10.262	0	49.235	3:10	58	10.108	0	49.285
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	O	2	3:35	58	10.367	0	49.262	3:40	58	10.203	0	49.288
Dr JG			2m-													
Hiddink	FG	22/6/04	beamtrawl	B18/B19/B20/B21	O	3	4:07	58	10.41	0	49.199	4:12	58	10.247	0	49.253
Dr JG																
Hiddink	FG	22/6/04	Boxcore	B18/B20/B21	M	1	8:27	58	4.586	0	44.197					
Dr JG																
Hiddink	FG	22/6/04	Boxcore	B18/B20/B21	M	2	8:36	58	4.648	0	44.336					
Dr JG																
Hiddink	FG	22/6/04	Boxcore	B18/B20/B21	N	1	12:36	58	1.064	0	37.371					
Dr JG																
Hiddink	FG	22/6/04	Boxcore	B18/B20/B21	N	2	12:49	58	1.063	0	37.543					
Dr JG			Camera													
Hiddink	FG	22/6/04	sledge	G08	L	1	16:25	57	59.293	0	25.495	16:42	57	59.012	0	25.439
Dr JG																
Hiddink	FG	22/6/04	Camera	G08	M	1	7:39	58	4.539	0	44.175		58	4.452	0	44.255

Hiddink			sledge														
Dr JG			Camera														
Hiddink	FG	22/6/04	sledge	G08	N	1	11:55	58	0.787	0	37.748	12:10	58	0.653	0	37.93	
Dr JG																	
Hiddink	FG	17/6/04	Daygrab	B18/B20/B21	A	1	21:10	58	15.947	0	27.18						
Dr JG																	
Hiddink	FG	17/6/04	Daygrab	B18/B20/B21	A	2	21:19	58	15.772	0	27.224						
Dr JG																	
Hiddink	FG	17/6/04	Daygrab	B18/B20/B21	A	3	21:31	58	15.894	0	27.4						
Dr JG																	
Hiddink	FG	17/6/04	Daygrab	B18/B20/B21	A	4	21:38	58	15.62	0	27.455						
Dr JG																	
Hiddink	FG	17/6/04	Daygrab	B18/B20/B21	A	5	22:02	58	15.977	0	27.205						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	B	1	9:55	58	13.515	0	31.442						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	B	2	10:02	58	13.39	0	31.44						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	B	3	10:07	58	13.28	0	31.457						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	B	4	10:23	58	13.525	0	31.136						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	B	5	10:29	58	13.409	0	31.156						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	C	1	11:33	58	13.732	0	43.253						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	C	2	11:38	58	13.599	0	43.304						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	C	3	11:52	58	13.726	0	43.409						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	C	4	11:57	58	13.601	0	43.448						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	C	5	12:09	58	13.67	0	43.592						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	D	1	17:53	58	15.407	0	47.003						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	D	2	18:00	58	15.323	0	47						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	D	3	18:05	58	15.257	0	47.01						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	D	4	18:11	58	15.184	0	47.003						
Dr JG																	
Hiddink	FG	18/6/04	Daygrab	B18/B20/B21	D	5	18:16	58	15.113	0	47.009						
Dr JG																	
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	E	1	7:23	58	15.625	0	54.209						
Dr JG																	
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	E	2	7:29	58	15.588	0	54.275						
Dr JG																	
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	E	3	7:33	58	15.55	0	54.315						
Dr JG																	
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	E	4	7:38	58	15.511	0	54.351						

Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	E	5	7:43	58	15.472	0	54.398
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	F	1	6:21	58	6.527	0	50.332
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	F	2		58	6.553	0	50.406
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	F	3	6:32	58	6.582	0	50.485
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	F	4	6:38	58	6.614	0	50.57
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	F	5	6:45	58	6.642	0	50.667
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	G	1	18:33	58	4.973	0	23.226
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	G	2	18:38	58	4.953	0	23.217
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	G	3	18:43	58	4.929	0	23.233
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	G	4	18:48	58	4.902	0	23.299
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	G	5	18:53	58	4.877	0	23.225
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	H	1	14:57	58	6.009	0	27.168
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	H	2	15:02	58	5.932	0	27.21
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	H	3	15:07	58	5.86	0	27.26
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	H	4	15:12	58	5.79	0	27.383
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	H	5	15:17	58	5.726	0	27.311
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	I	1	13:17	58	5.221	0	34.194
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	I	2	13:24	58	5.076	0	34.201
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	I	3	13:29	58	4.974	0	34.194
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	I	4	13:35	58	4.865	0	34.209
Dr JG											
Hiddink	FG	19/6/04	Daygrab	B18/B20/B21	I	5	13:40	58	4.764	0	34.235
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	J	1	1:11	58	10.466	0	37.286
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	J	2	1:17	58	10.418	0	37.359
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	J	3	1:22	58	10.368	0	37.425
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	J	4	1:28	58	10.318	0	37.49
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	J	5	1:33	58	10.263	0	37.549

Hiddink

Dr JG											
Hiddink	FG	21/6/04	Daygrab	B18/B20/B21	K	1	20:10	58	10.286	0	30.9
Dr JG											
Hiddink	FG	21/6/04	Daygrab	B18/B20/B21	K	2	20:20	58	10.279	0	31.043
Dr JG											
Hiddink	FG	21/6/04	Daygrab	B18/B20/B21	K	3	20:26	58	10.258	0	31.181
Dr JG											
Hiddink	FG	21/6/04	Daygrab	B18/B20/B21	K	4	20:32	58	10.259	0	31.388
Dr JG											
Hiddink	FG	21/6/04	Daygrab	B18/B20/B21	K	5	20:38	58	10.281	0	31.427
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	L	1	15:37	57	58.966	0	25.579
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	L	2	15:42	57	58.979	0	25.543
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	L	3	15:47	57	58.989	0	25.49
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	L	4	15:52	57	59.001	0	25.437
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	L	5	15:57	57	59.01	0	25.388
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	M	1	10:24	58	4.58	0	44.107
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	M	2	10:28	58	4.629	0	44.228
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	M	3	10:34	58	4.645	0	44.285
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	M	4	10:41	58	4.673	0	44.399
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	M	5	10:44	58	4.682	0	44.462
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	N	1	14:30	58	1.013	0	37.302
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	N	2	14:34	58	1.01	0	37.32
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	N	3	14:40	58	1.006	0	37.327
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	N	4	14:45	58	1.001	0	37.376
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	N	5	14:50	58	0.999	0	37.322
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	O	1	2:19	58	10.24	0	49.048
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	O	2		58	10.181	0	49.101
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	O	3	2:29	58	10.12	0	49.147
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	O	4		58	10.057	0	49.185
Dr JG											
Hiddink	FG	22/6/04	Daygrab	B18/B20/B21	O	5		58	9.997	0	49.223

