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Ship Tracks and Velocities for WCSEX 1991

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Ship tracks and velocities for WCSEX 1991¹

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1 Description of plots

Enclosed in this report are plots of the wave generating ship tracks and velocities for the West Coast Scotland EXperiment (WCSEX) 1991. The navigation data was provided by Wimpol Limited. They provided ASCII data for the Roysterer, Arakan, Blue Rover, Calanus, Cairn, Loch Nevis, and Loch Shiel. A typical data set for the Roysterer looks like:

```
0 103 206079.0 770280.0 203.2 3.0 05-Jul-91 12:58:41
0 104 206055.5 770236.4 190.8 3.1 05-Jul-91 12:59:06
0 105 206047.2 770212.0 199.3 2.3 05-Jul-91 12:59:21
0 106 206027.6 770176.0 204.8 2.6 05-Jul-91 12:59:42
1 107 205996.8 770116.0 210.5 2.7 05-Jul-91 13:00:14
1 108 205964.0 770065.5 210.7 3.4 05-Jul-91 13:00:42
1 109 205937.7 770036.2 218.8 3.3 05-Jul-91 13:00:59
1 110 205900.6 769992.9 221.0 3.2 05-Jul-91 13:01:24
1 111 205855.6 769948.5 219.7 3.1 05-Jul-91 13:01:51
1 112 205818.9 769909.6 222.5 2.8 05-Jul-91 13:02:15
1 113 205784.0 769875.9 220.3 2.6 05-Jul-91 13:02:36
1 114 205765.6 769856.2 224.5 2.7 05-Jul-91 13:02:48
```

The eight columns are:

Column	Contents
1	Run number (0 during non run times)
2	Wimpol fix identifier
3	National Grid easting value
4	National Grid northing value
5	Heading
6	Velocity in m/s
7	Date
8	GMT time

In Section 1 I have plotted the wake making ship's track using the easting and northing grid coordinates for each run and day. The plots are at a 1:50000 scale, ie 2mm = 1km. I have overlayed with circles the position of the Cairn and the Calanus so that the instrumentation area is easily found. I have also overlayed time stamps for the data. The first digit of the stamp is the coordinate for that time. The data is supplied sampled at, what appears to me, almost random times, averaging a little over 20 seconds. I put the time stamps on at somewhat nice intervals (5, 10, or 15 minutes) so there are many points plotted between time marks.

In Section 2 I have plotted the wake making ship's velocity as a function of down-track distance. I have also overlayed the same time stamps used in plotting the ship's track position.

There are a few runs where there must have been instrumentation failure, for there is a long stretch of missing data. In this case, I did a linear fit to the existing data. The missing data is:

Date	Run	Missing time
8-Jul-91	3	15 min
19-Jul-91	2	20 min

If you would like the navigational data itself contact:

Shari Turner
(510) 422-6975
LLNL
L-495
P.O. Box 808
Livermore, CA 94550

Ship Tracks

Roysterer 05-Jul-91 Run 1

Arakan 5-Jul-91 Run 3

Roysterer 05-Jul-91 Run 4

Roysterer 06-Jul-91 Run 1

Arakan 6-Jul-91 Run 2

Arakan 6-Jul-91 Run 3

Roysterer 06-Jul-91 Run 4

Roysterer 07-Jul-91 Run 1

Arakan 7-Jul-91 Run 3

Roysterer 08-Jul-91 Run 1

Arakan 8-Jul-91 Run 2

Arakan 8-Jul-91 Run 3

Roysterer 08-Jul-91 Run 4

Roysterer 09-Jul-91 Run 1

Arakan 9-Jul-91 Run 2

Arakan 9-Jul-91 Run 3

Roysterer 09-Jul-91 Run 4

Arakan 10-Jul-91 Run 1

Arakan 10-Jul-91 Run 3

Arakan 11-Jul-91 Run 1

Roysterer 11-Jul-91 Run 2

Arakan 11-Jul-91 Run 3

Roysterer 11-Jul-91 Run 4

Arakan 12-Jul-91 Run 1

Roysterer 12-Jul-91 Run 2

Arakan 12-Jul-91 Run 3

Roysterer 12-Jul-91 Run 4

Roysterer 19-Jul-91 Run 1

Blue Rover 19-Jul-91 Run 3

Blue Rover 21-Jul-91 Run 1

Roysterer 21-Jul-91 Run 2

Roysterer 21-Jul-91 Run 3

Blue Rover 21-Jul-91 Run 4

Ship Velocities

Roysterer 05-Jul-91 Run 1

Arakan 5-Jul-91 Run 2

Arakan 5-Jul-91 Run 3

Roysterer 05-Jul-91 Run 4

Roysterer 06-Jul-91 Run 1

Arakan 6-Jul-91 Run 2

Arakan 6-Jul-91 Run 3

Roysterer 06-Jul-91 Run 4

Roysterer 07-Jul-91 Run 1

Arakan 7-Jul-91 Run 2

Arakan 7-Jul-91 Run 3

Roysterer 07-Jul-91 Run 4

Roysterer 08-Jul-91 Run 1

Arakan 8-Jul-91 Run 2

Arakan 8-Jul-91 Run 3

Roysterer 08-Jul-91 Run 4

Roysterer 09-Jul-91 Run 1

Arakan 9-Jul-91 Run 2

Arakan 9-Jul-91 Run 3

Roysterer 09-Jul-91 Run 4

Arakan 10-Jul-91 Run 1

Roysterer 10-Jul-91 Run 2

Arakan 10-Jul-91 Run 3

Roysterer 10-Jul-91 Run 4

Arakan 11-Jul-91 Run 1

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Arakan 11-Jul-91 Run 3

Roysterer 11-Jul-91 Run 4

Arakan 12-Jul-91 Run 1

Roysterer 12-Jul-91 Run 2

Arakan 12-Jul-91 Run 3

Roysterer 12-Jul-91 Run 4

Blue Rover 19-Jul-91 Run 2

Roysterer 19-Jul-91 Run 4

Roysterer 19-Jul-91 Run 1

Blue Rover 19-Jul-91 Run 3

Blue Rover 20-Jul-91 Run 2

Roysterer 20-Jul-91 Run 4

Roysterer 20-Jul-91 Run 1

Blue Rover 20-Jul-91 Run 3

Blue Rover 21-Jul-91 Run 1

Roysterer 21-Jul-91 Run 2

Roysterer 21-Jul-91 Run 3

Blue Rover 21-Jul-91 Run 4

Roysterer 22-Jul-91 Run 1

Roysterer 22-Jul-91 Run 2

Roysterer 22-Jul-91 Run 3

Roysterer 22-Jul-91 Run 4

END

**DATE
FILMED**

12/30/91