

INSTITUTE OF APPLIED SCIENCES
THE UNIVERSITY OF THE SOUTH PACIFIC

REPORT ON THE CURRENT
MONITORING IN NADI BAY

IAS TECHNICAL REPORT NO. 94/01

by

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January, 1994

Report on the Current Monitoring in Nadi Bay

An Aanderaa recording current meter RCM7 was placed in Nadi Bay for one month to record the water temperature and the current speed and direction. The meter was located at position SRM (see attached map) (GPS position $17^{\circ} 44.705'$ South, $177^{\circ} 25.068'$ East). The meter was moored by the standard technique as shown in the attached figure with a 4mm line extending from the second weight to the nearest navigation beacon 500m landward. This line was to aid in recovery, as the water visibility in the vicinity was very poor. The depth of water at the sampling point was 5.5m meters (mid tide) and the meter was positioned 2 meters above the sea floor.

The Aandera meter has a current speed accuracy of 1 cm/ second with a starting velocity of 2 cm/seconds. The current direction data was read using an inbuilt magnetic compass with an accuracy of ± 7.5 degrees and a resolution of 0.35 degrees. Temperature was also recorded with an accuracy of ± 0.5 degrees centigrade. The meter was set to record at 5 minute intervals into a solid state memory pack. The meter was put into the water at 2:23 pm on thursday 23 of December 1993 and retrieved at 2:45 pm on monday the 24th of January 1994. An earlier effort at collecting data in November 1993 failed due to the solid state memory pack being faulty.

The average current speed for the 32 day period was 4.17 cm/second with an sample variance of 6.92 cm/second and a standard deviation of 2.63 cm/second. during the monitoring period a total of 9249, 5 minute readings were logged. The maximum current recorded was 15.31 cm/second.

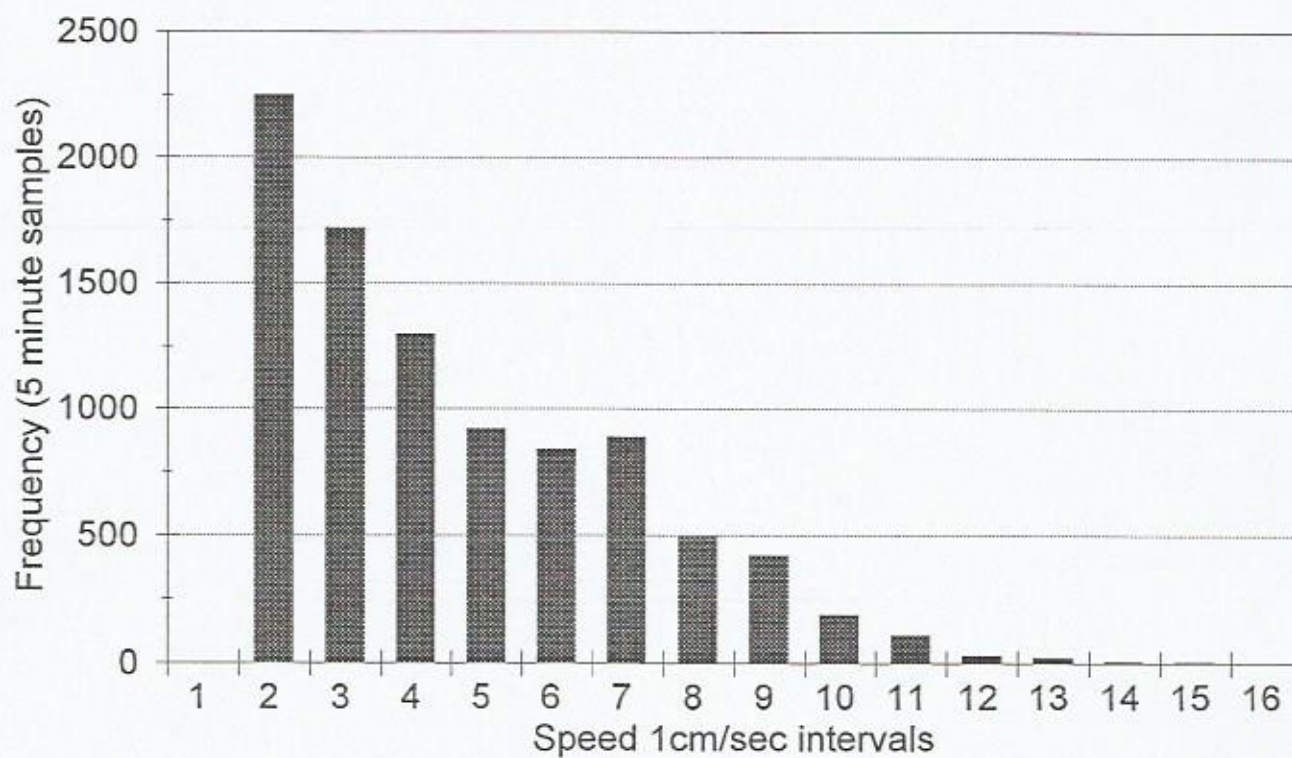
C.R. Lloyd



27 th January 1994.

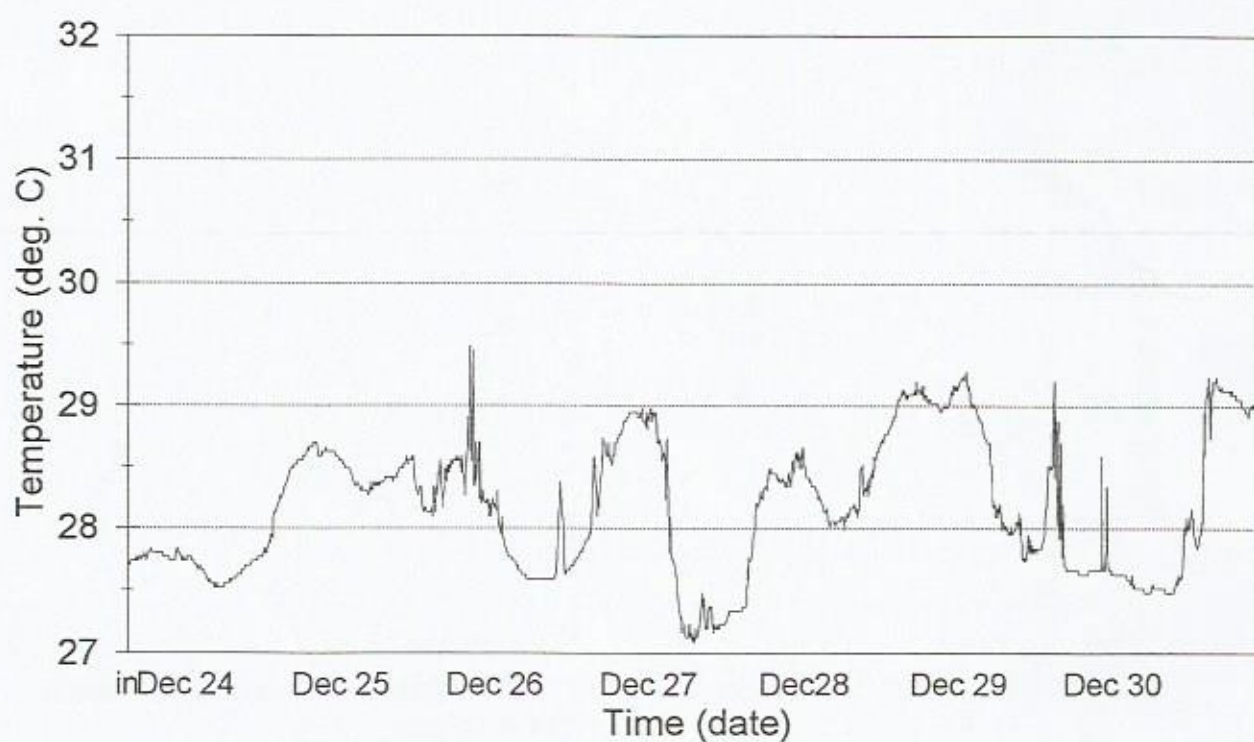
Nadi Bay 23rd Dec-24th Jan 1994

Current Speed Distribution



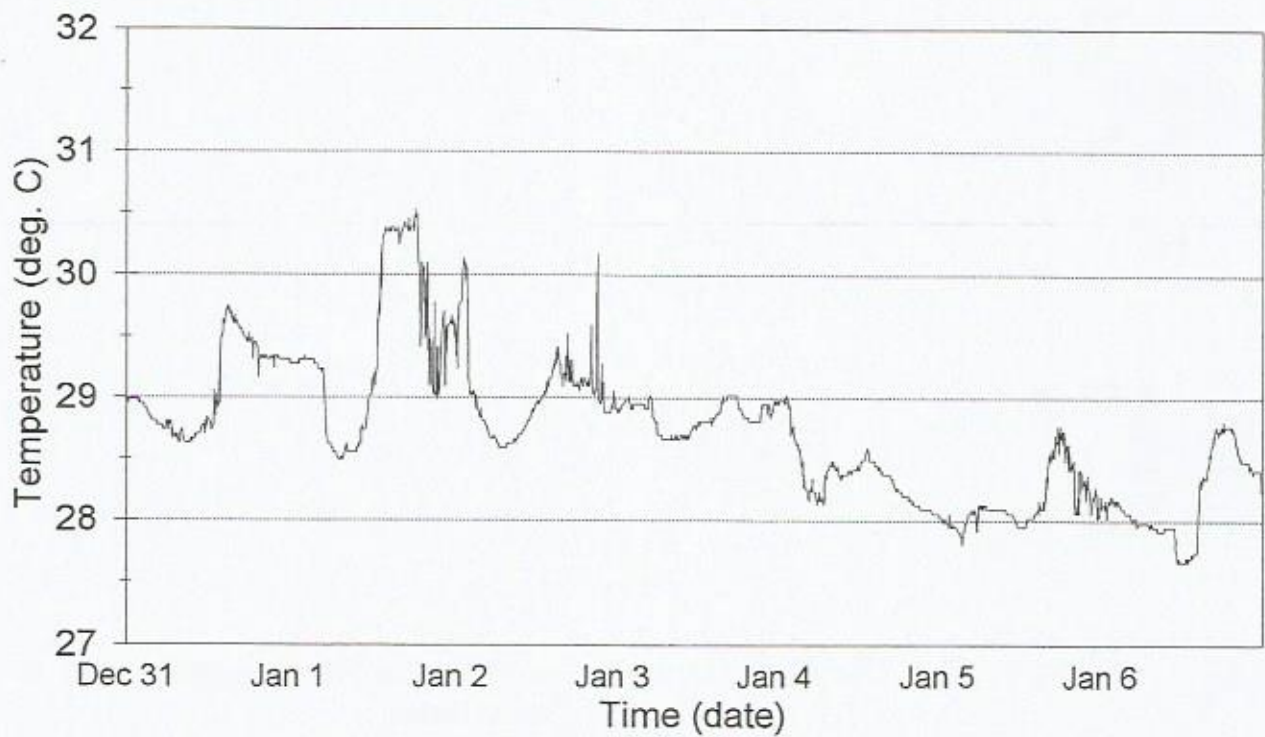
Nadi Bay 23rd-30th Dec 1993

Temperature measurements



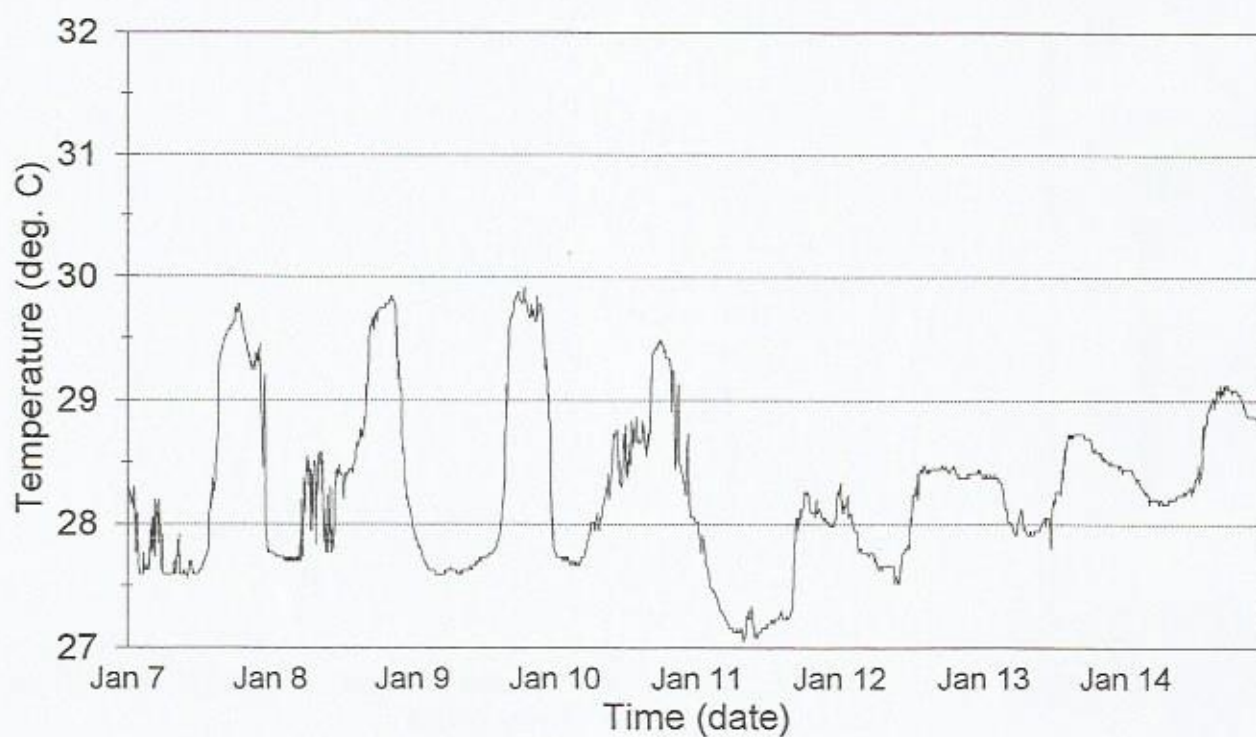
Nadi Bay 31st Dec- 6th Jan 1994

Temperature measurements



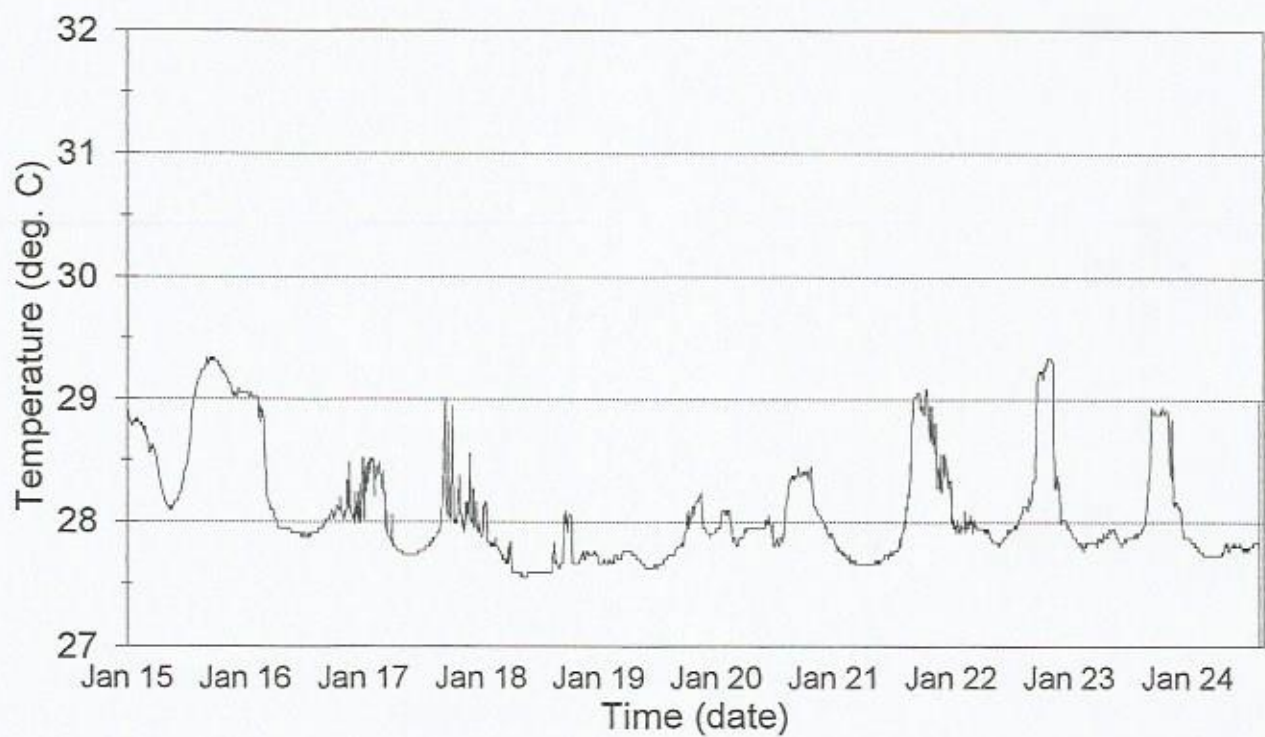
Nadi Bay 7th Jan- 14 th Jan 1994

Temperature measurements



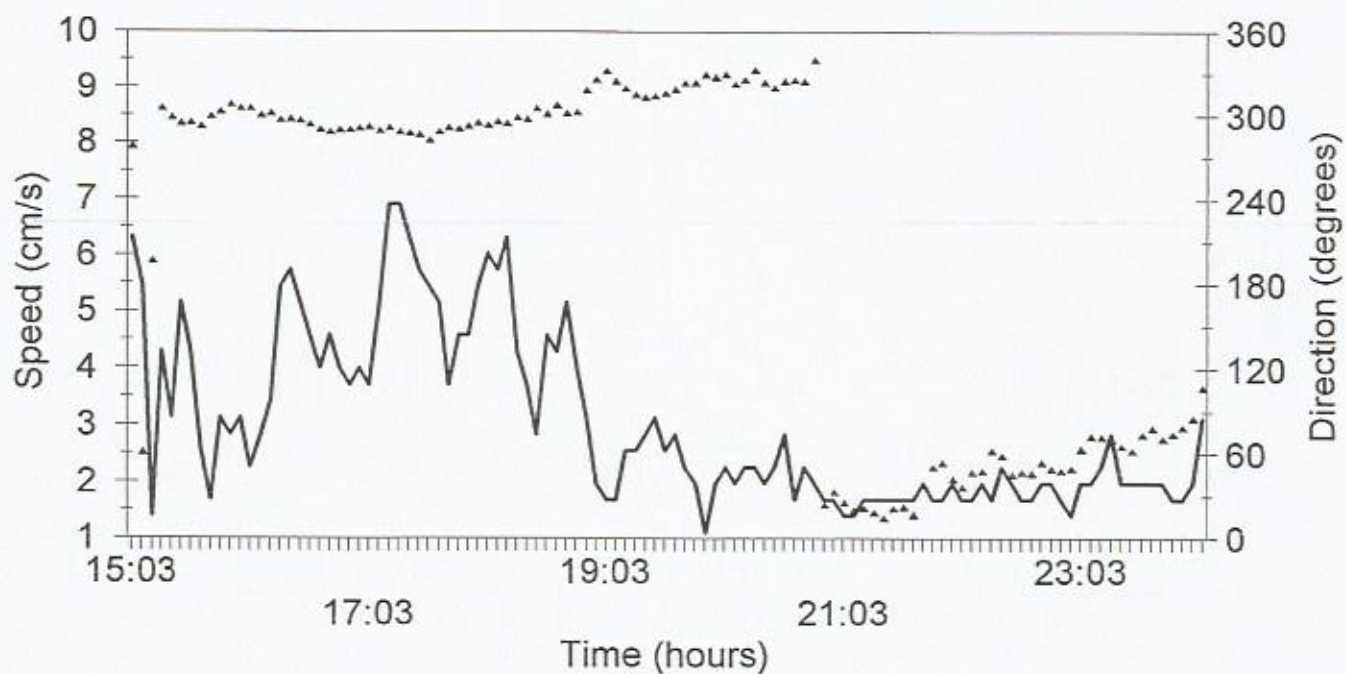
Nadi Bay 15th Jan- 24 th Jan 1994

Temperature measurements



Nadi Bay 23 rd Dec. 1993

Current Measurements

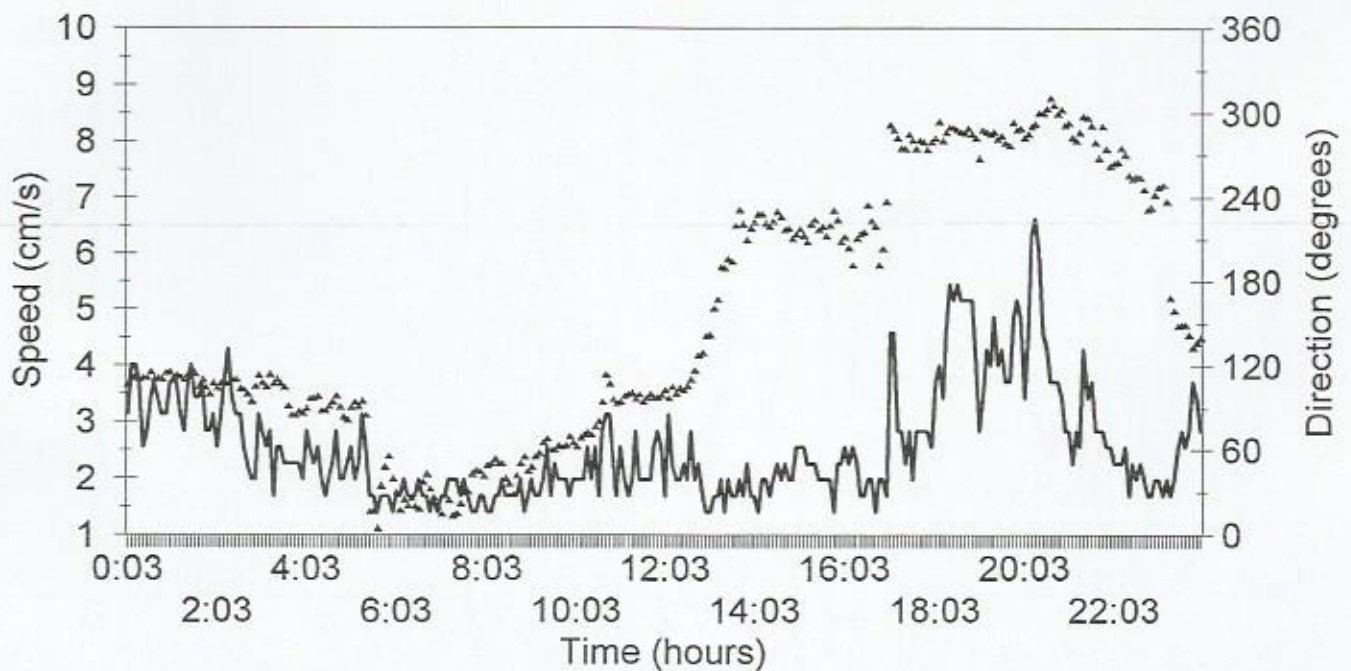


• Direction

— Current Speed (cm/s)

Nadi Bay 24 th Dec. 1993

Current Measurements

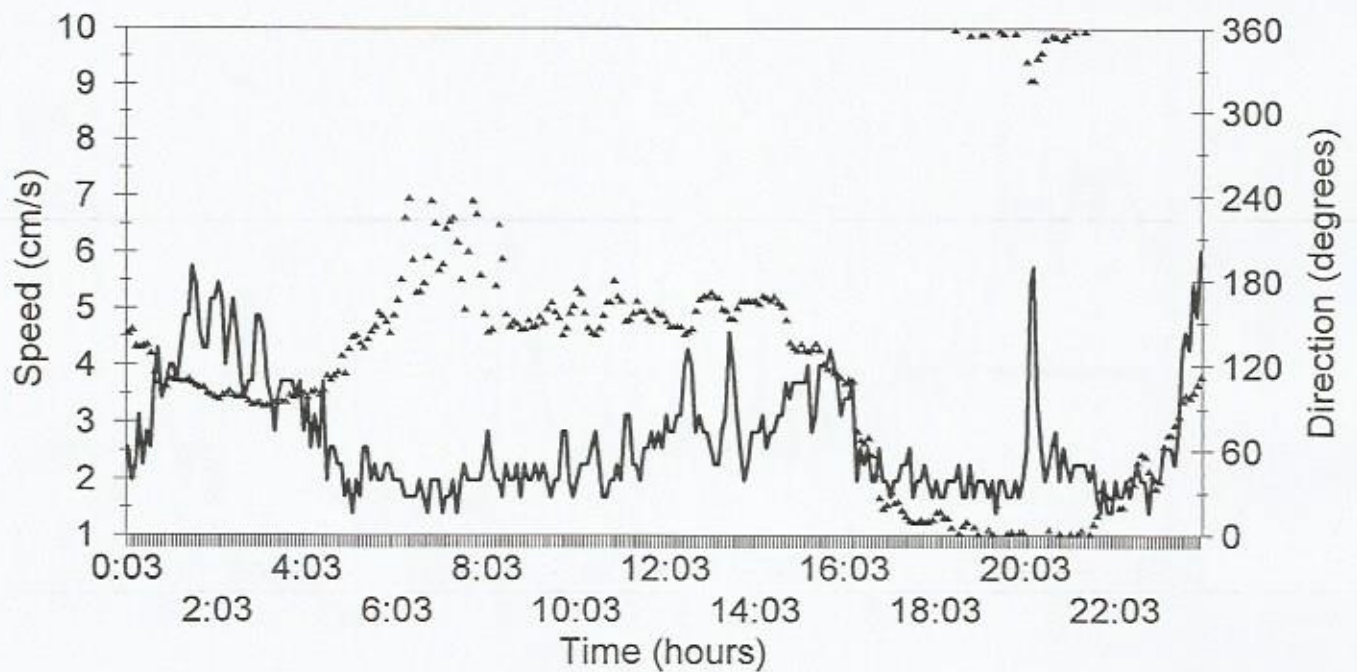


△ Direction

— Current Speed (cm/s)

Nadi Bay 25 th Dec. 1993

Current Measurements

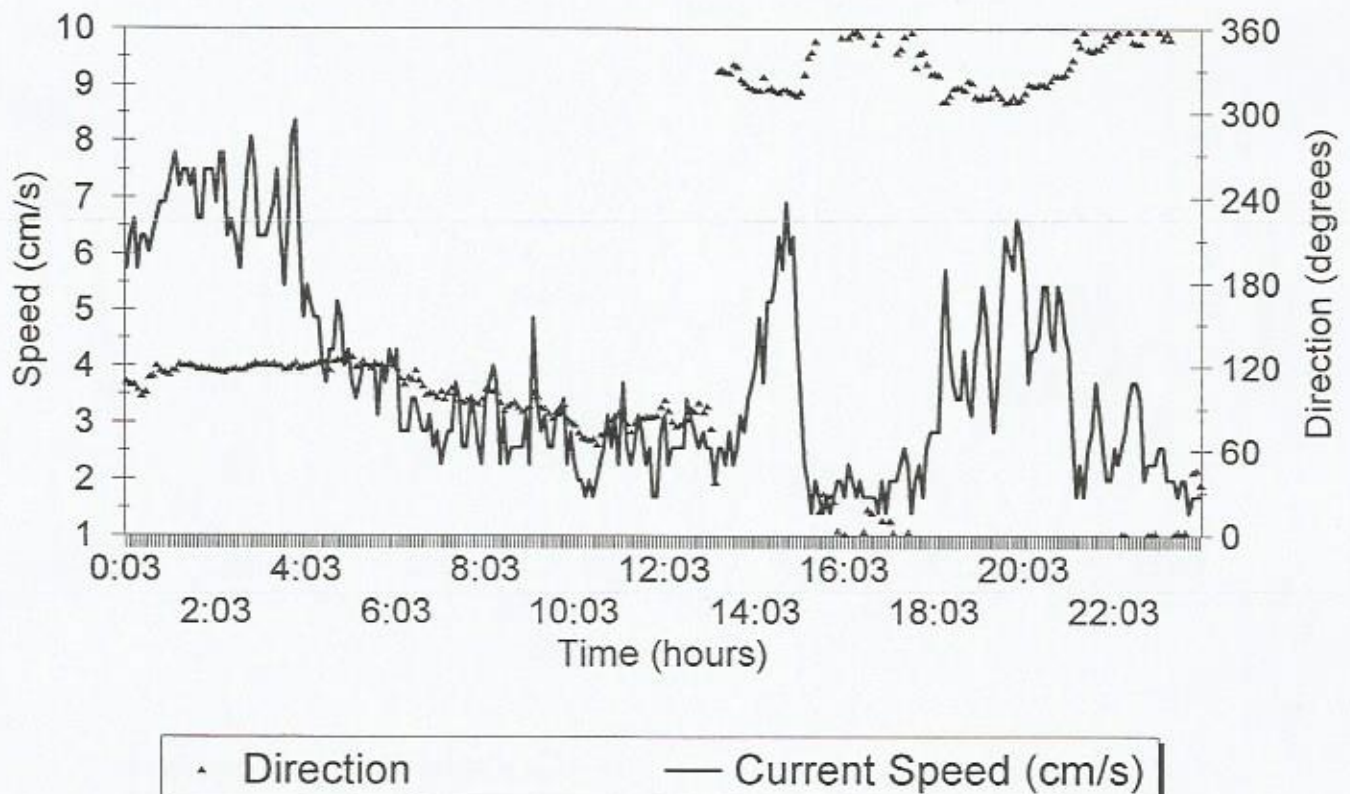


• Direction

— Current Speed (cm/s)

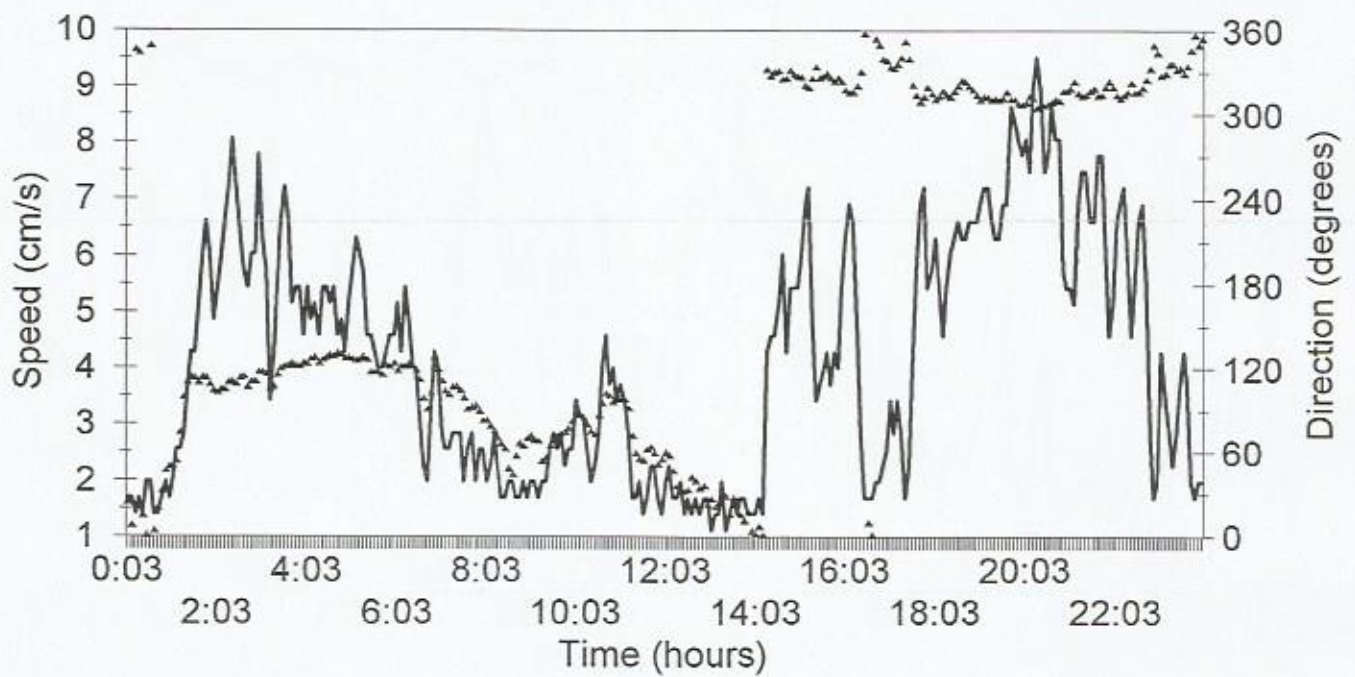
Nadi Bay 26 th Dec. 1993

Current Measurements



Nadi Bay 27 th Dec. 1993

Current Measurements

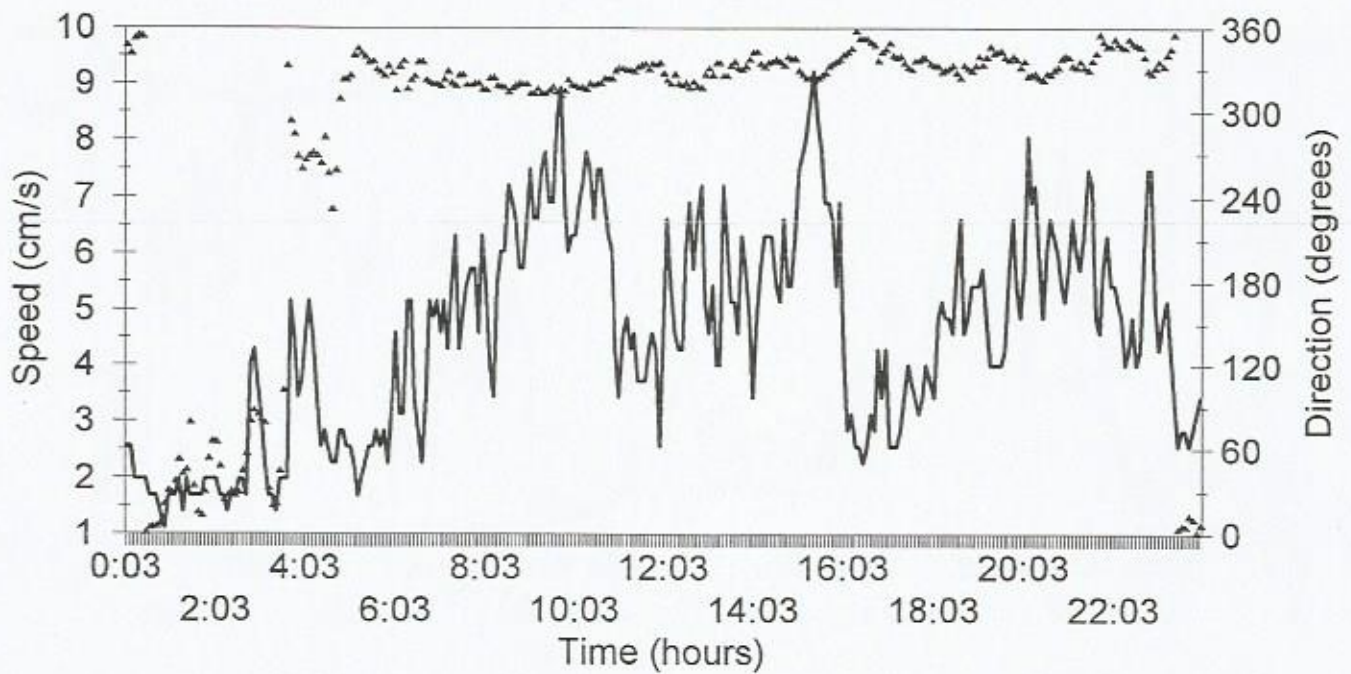


▲ Direction

— Current Speed (cm/s)

Nadi Bay 28 th Dec. 1993

Current Measurements

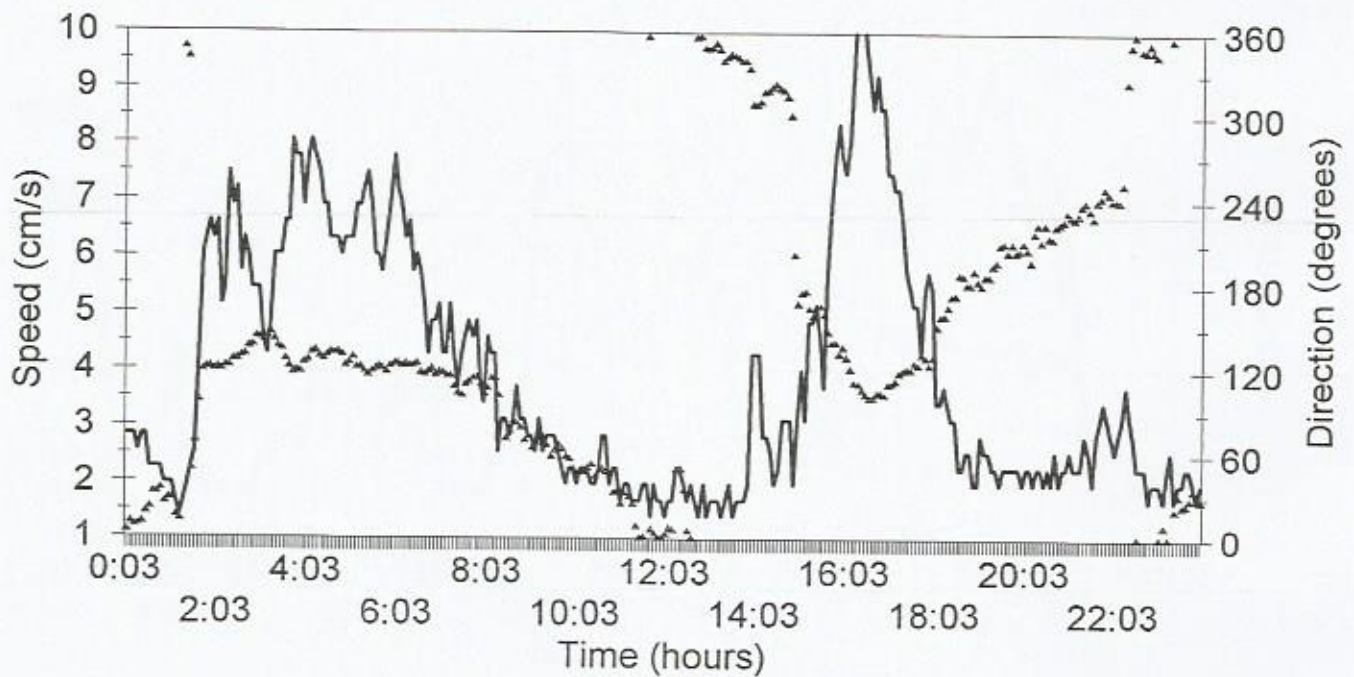


• Direction

— Current Speed (cm/s)

Nadi Bay 29 th Dec. 1993

Current Measurements

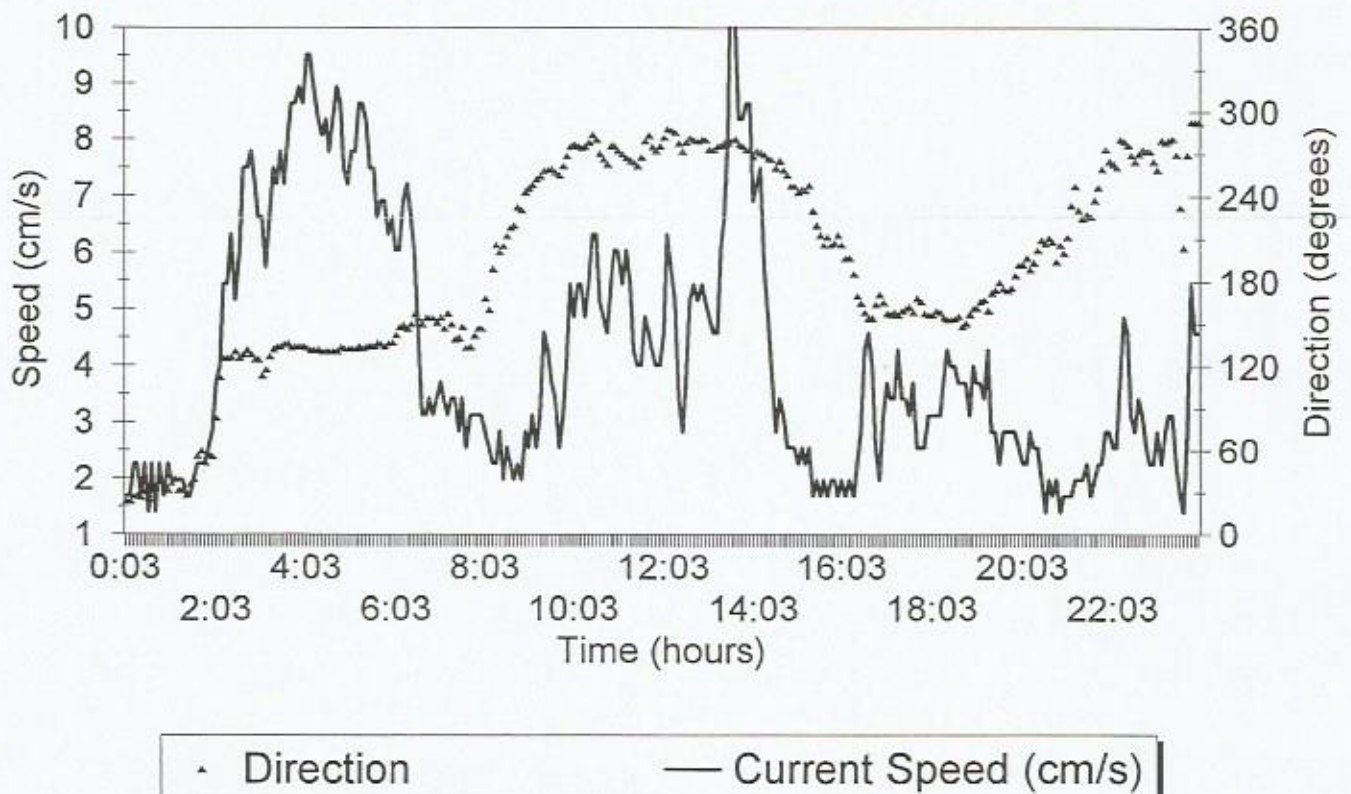


△ Direction

— Current Speed (cm/s)

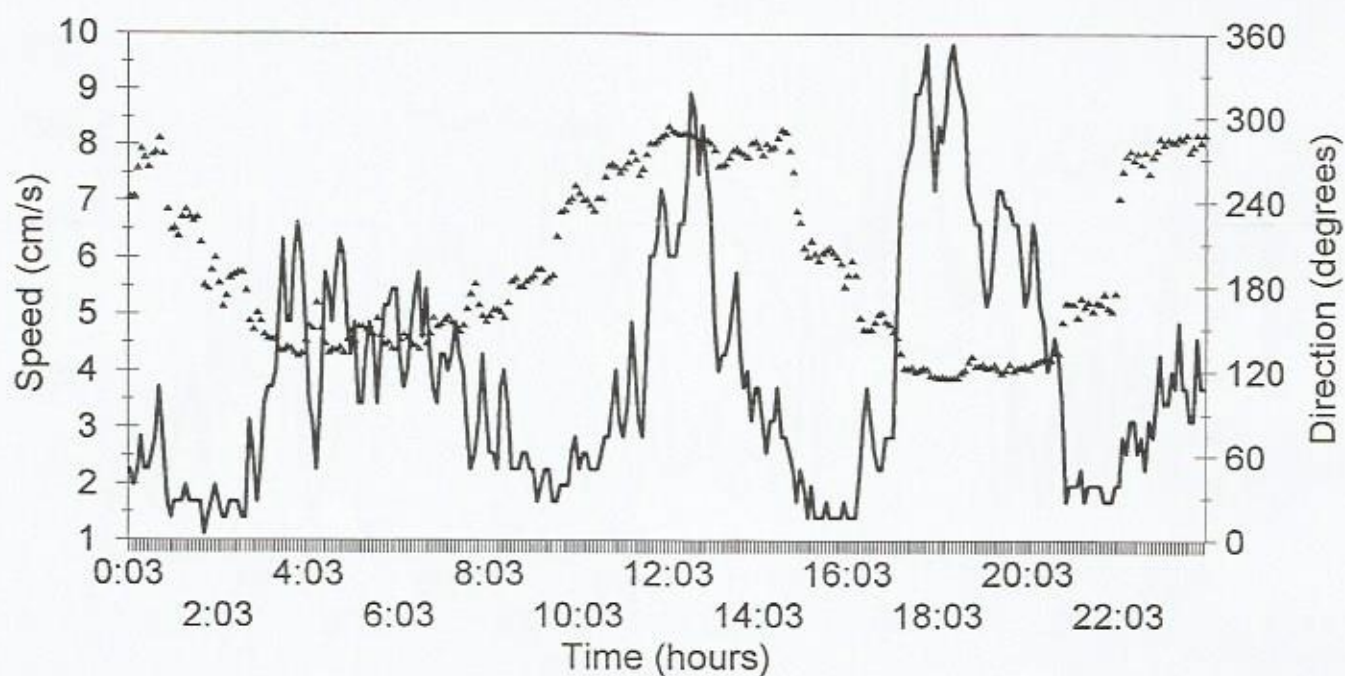
Nadi Bay 30 th Dec. 1993

Current Measurements



Nadi Bay 31 th Dec. 1993

Current Measurements

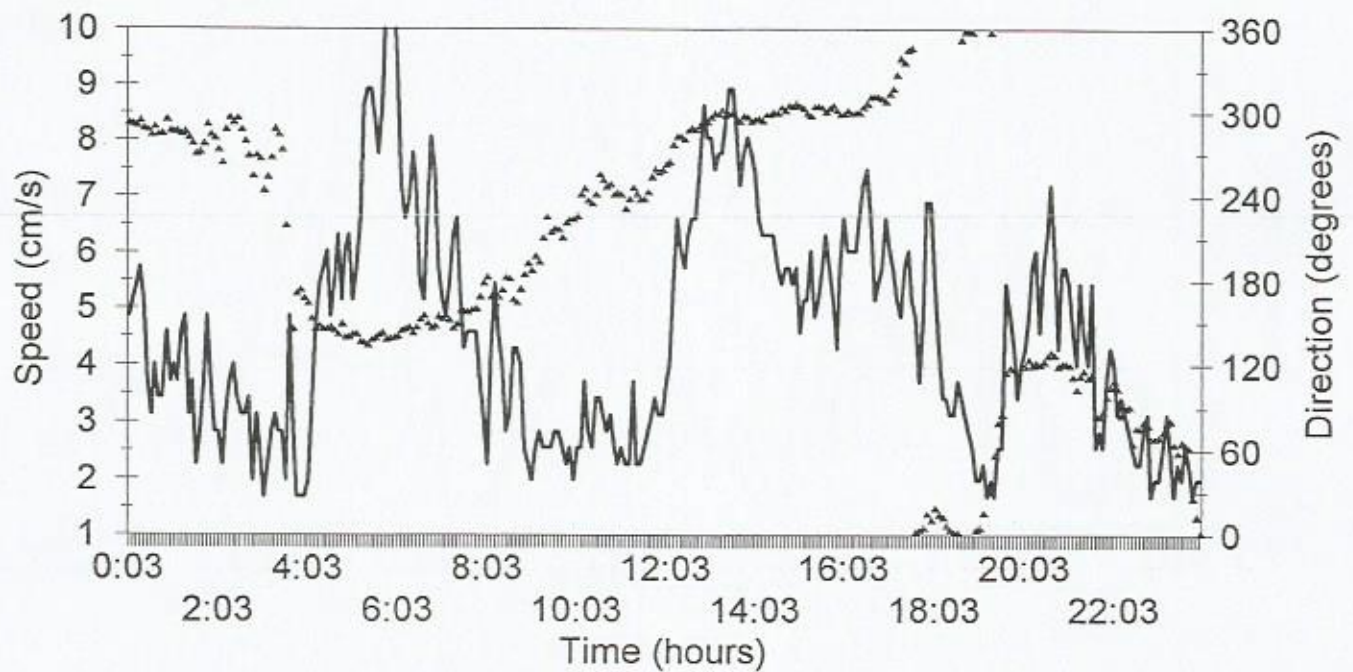


△ Direction

— Current Speed (cm/s)

Nadi Bay 1 st Jan, 1994

Current Measurements

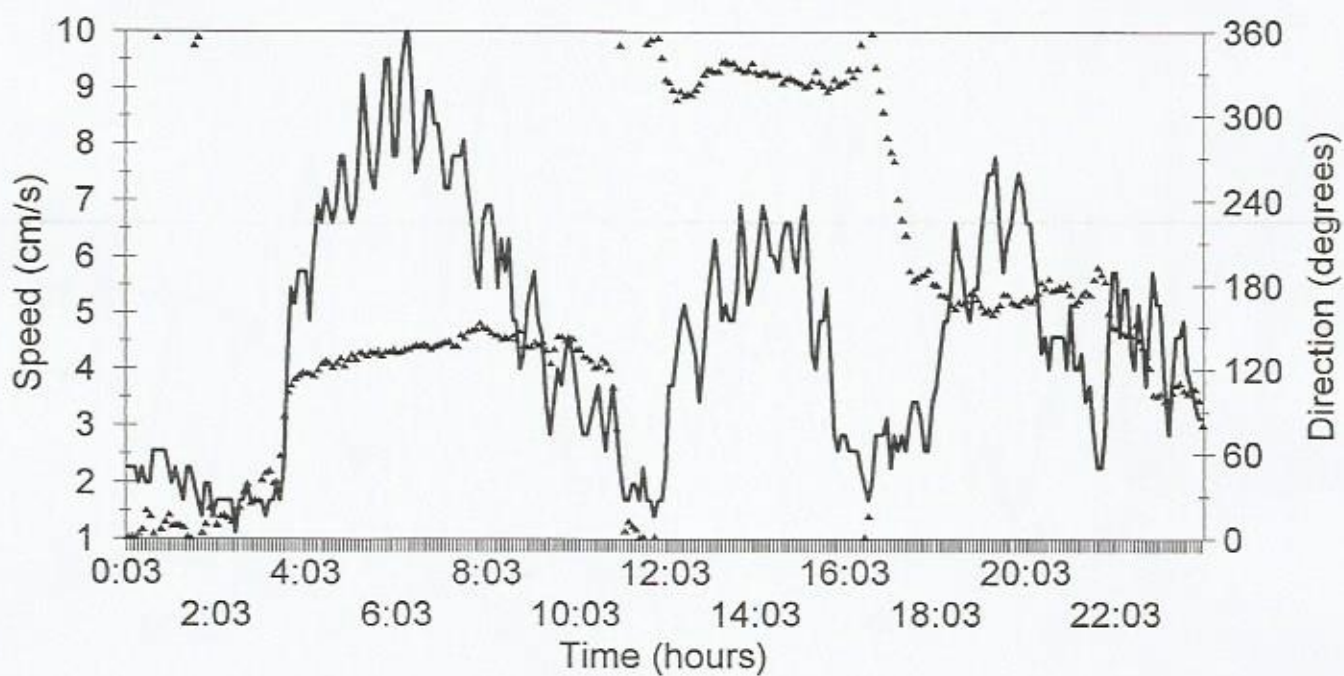


△ Direction

— Current Speed (cm/s)

Nadi Bay 2 nd Jan, 1994

Current Measurements

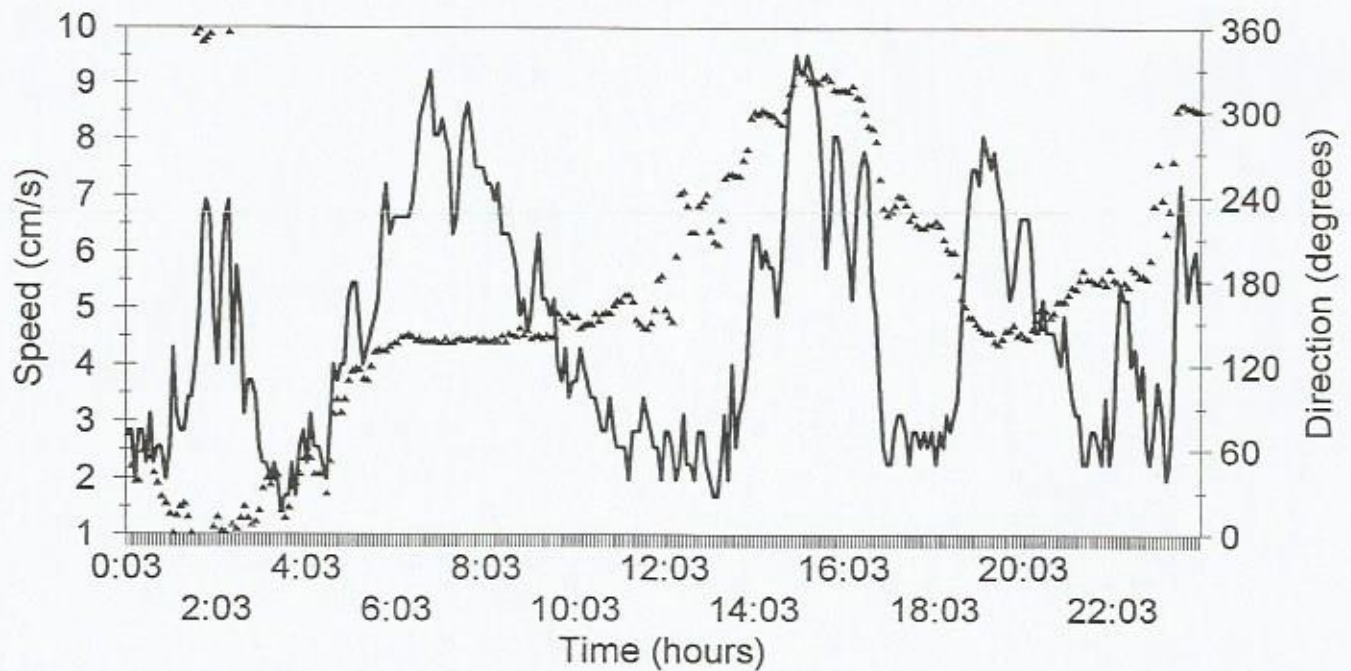


△ Direction

— Current Speed (cm/s)

Nadi Bay 3 rd Jan, 1994

Current Measurements

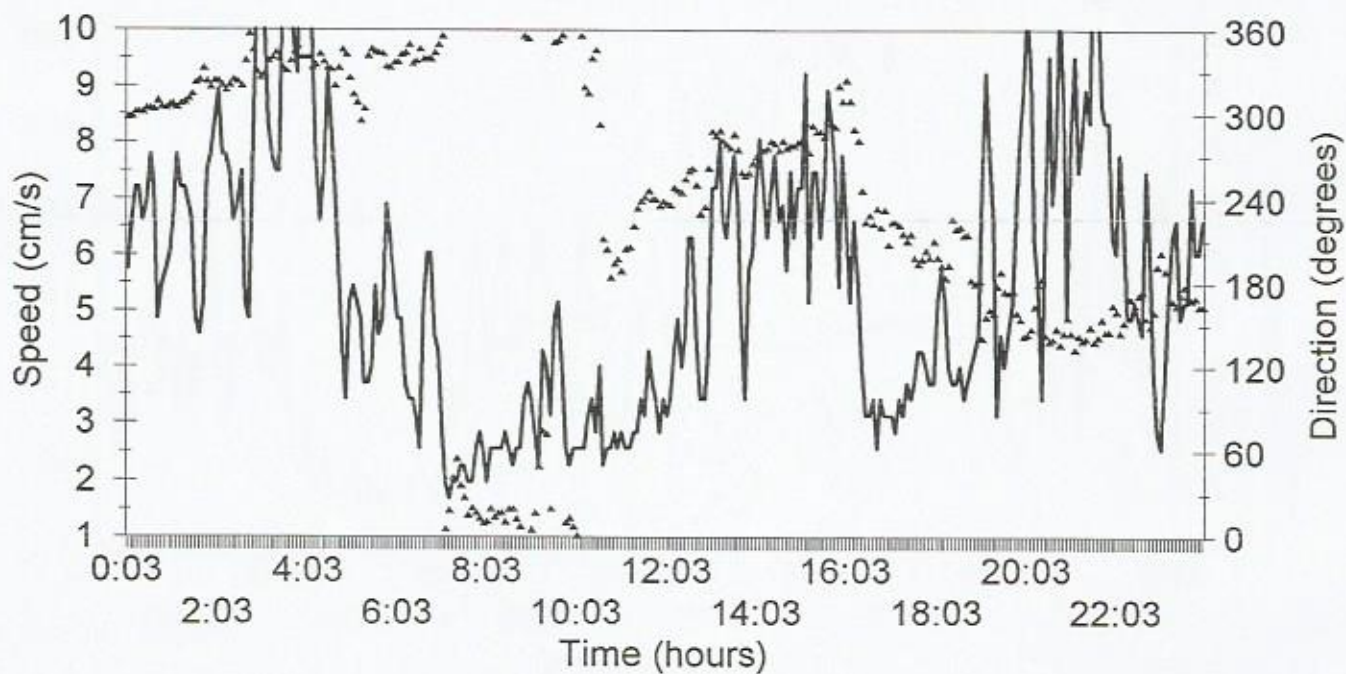


△ Direction

— Current Speed (cm/s)

Nadi Bay 4 th Jan, 1994

Current Measurements

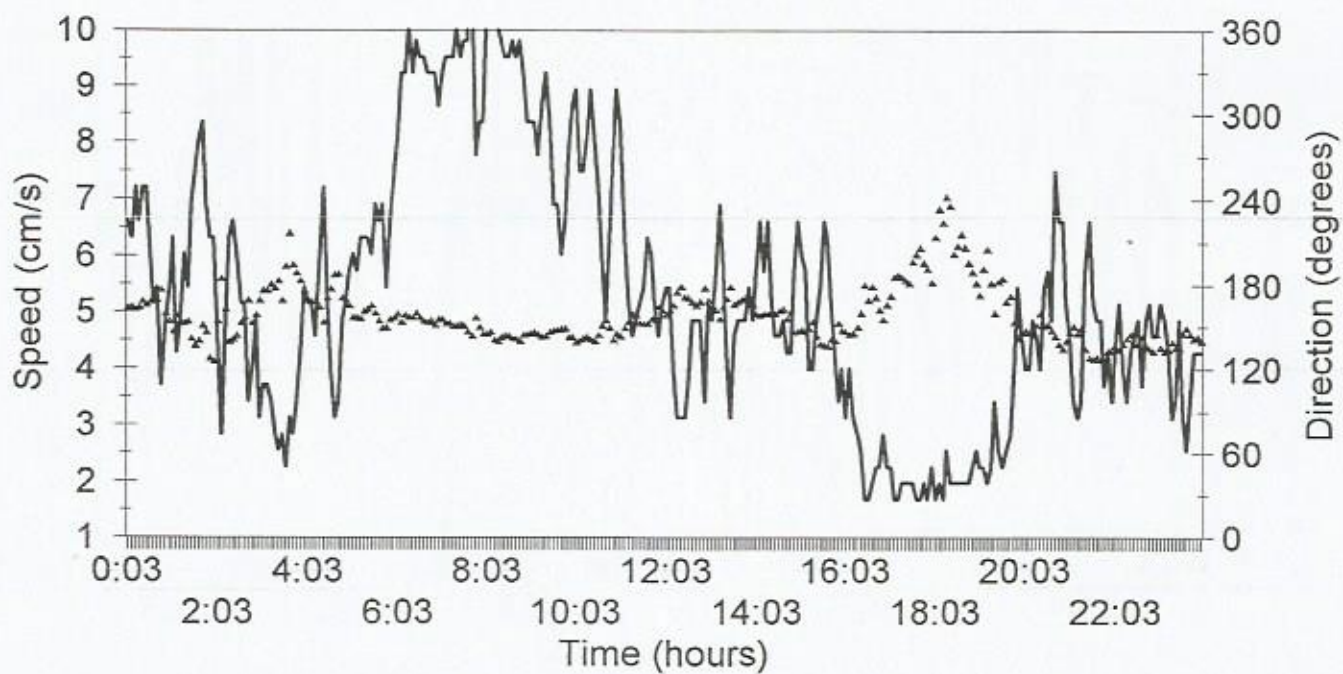


△ Direction

— Current Speed (cm/s)

Nadi Bay 5 th Jan, 1994

Current Measurements

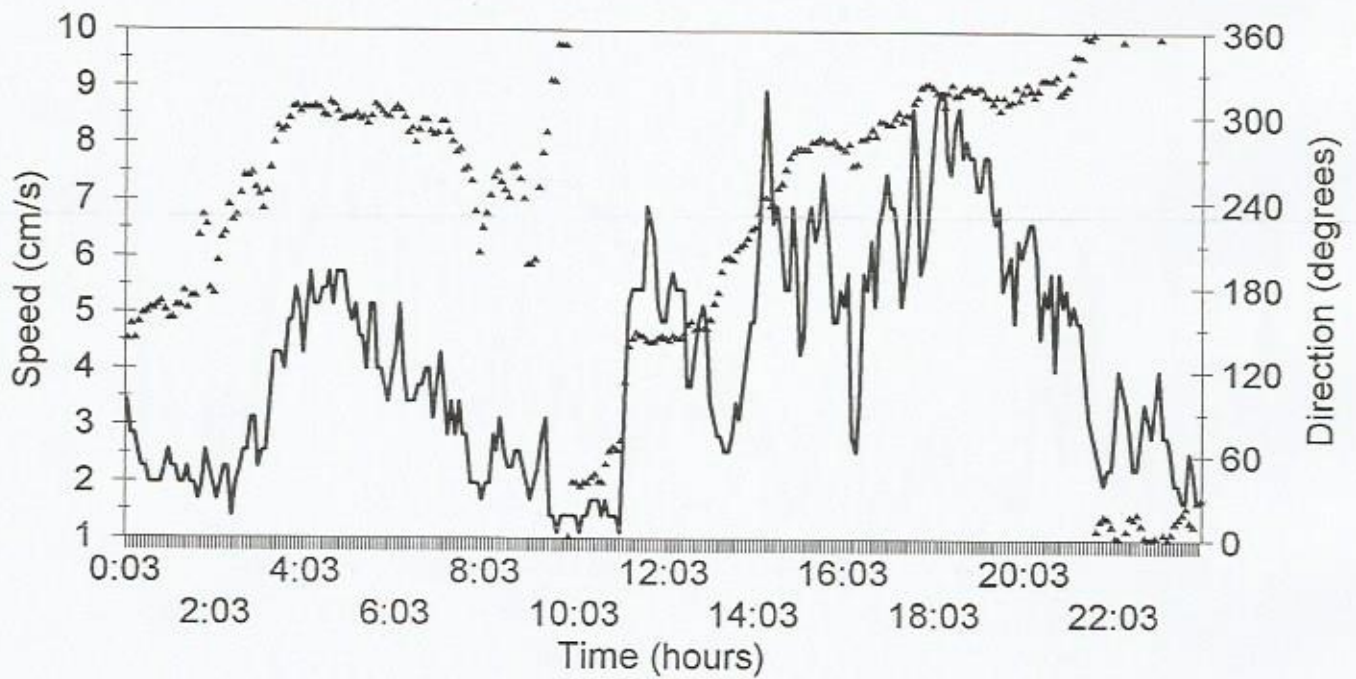


△ Direction

— Current Speed (cm/s)

Nadi Bay 6 th Jan, 1994

Current Measurements

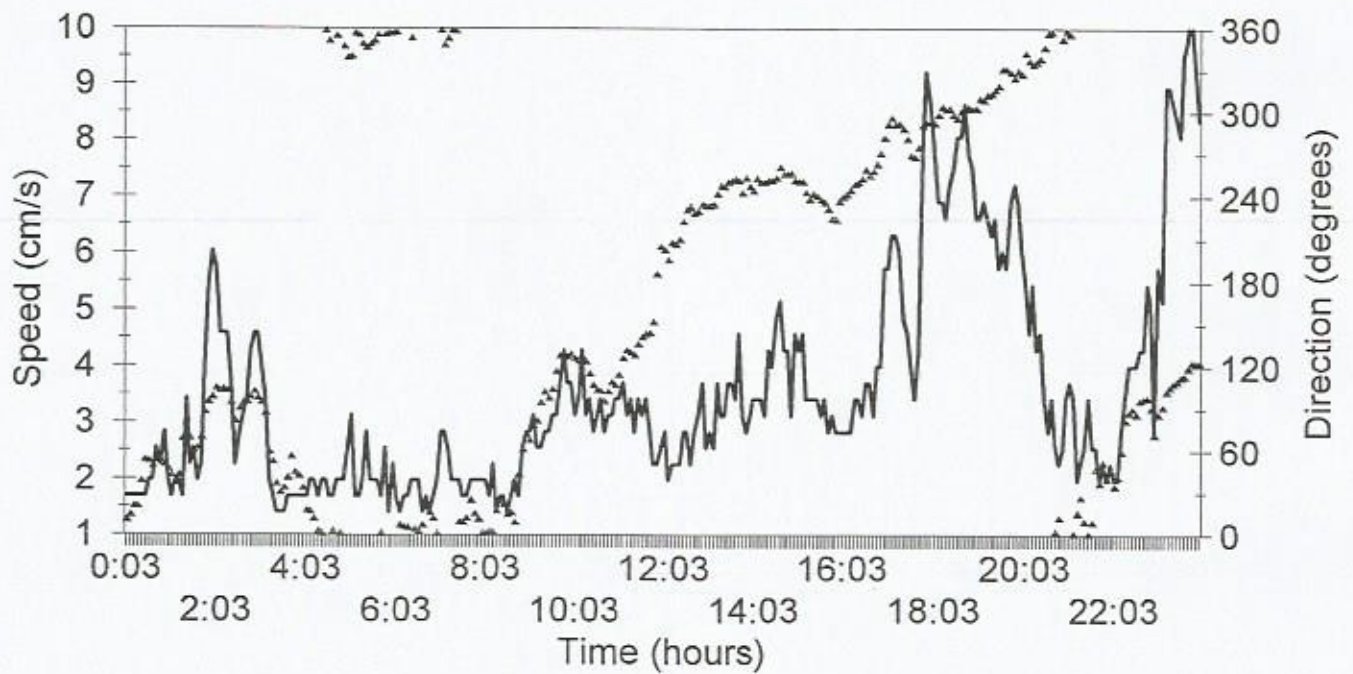


△ Direction

— Current Speed (cm/s)

Nadi Bay 7 th Jan, 1994

Current Measurements

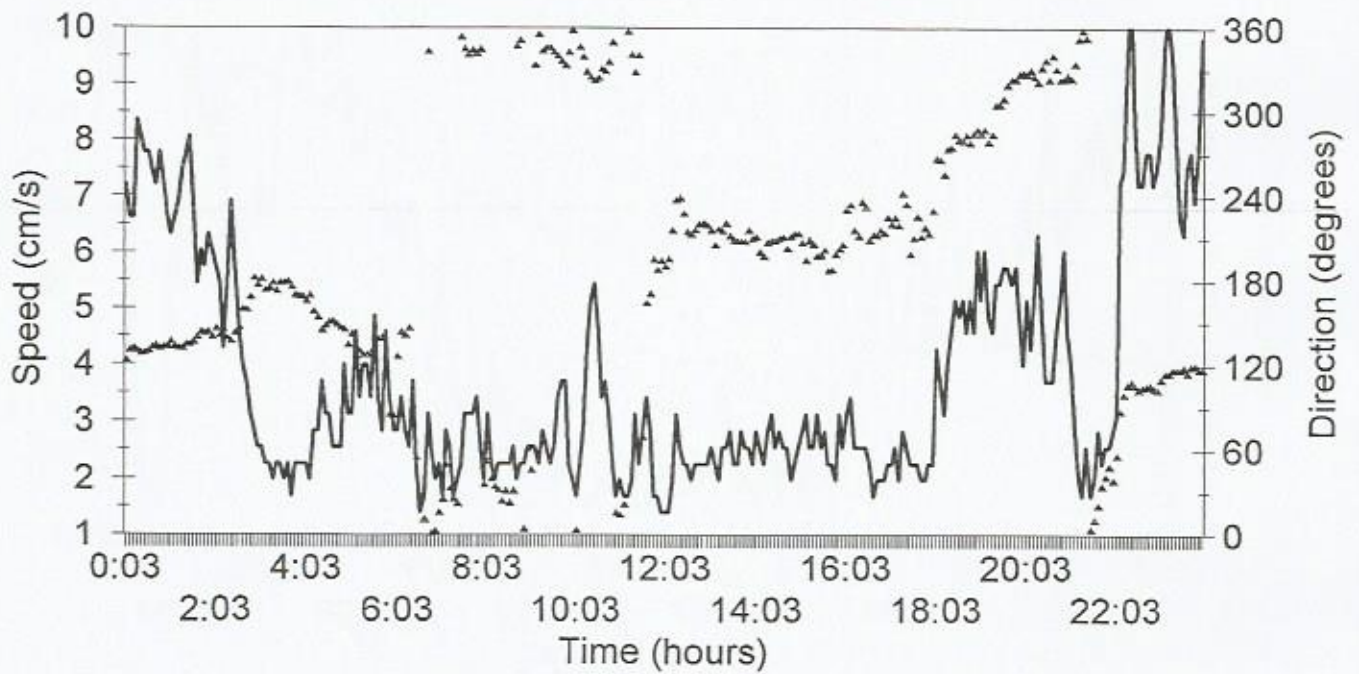


△ Direction

— Current Speed (cm/s)

Nadi Bay 8 th Jan, 1994

Current Measurements

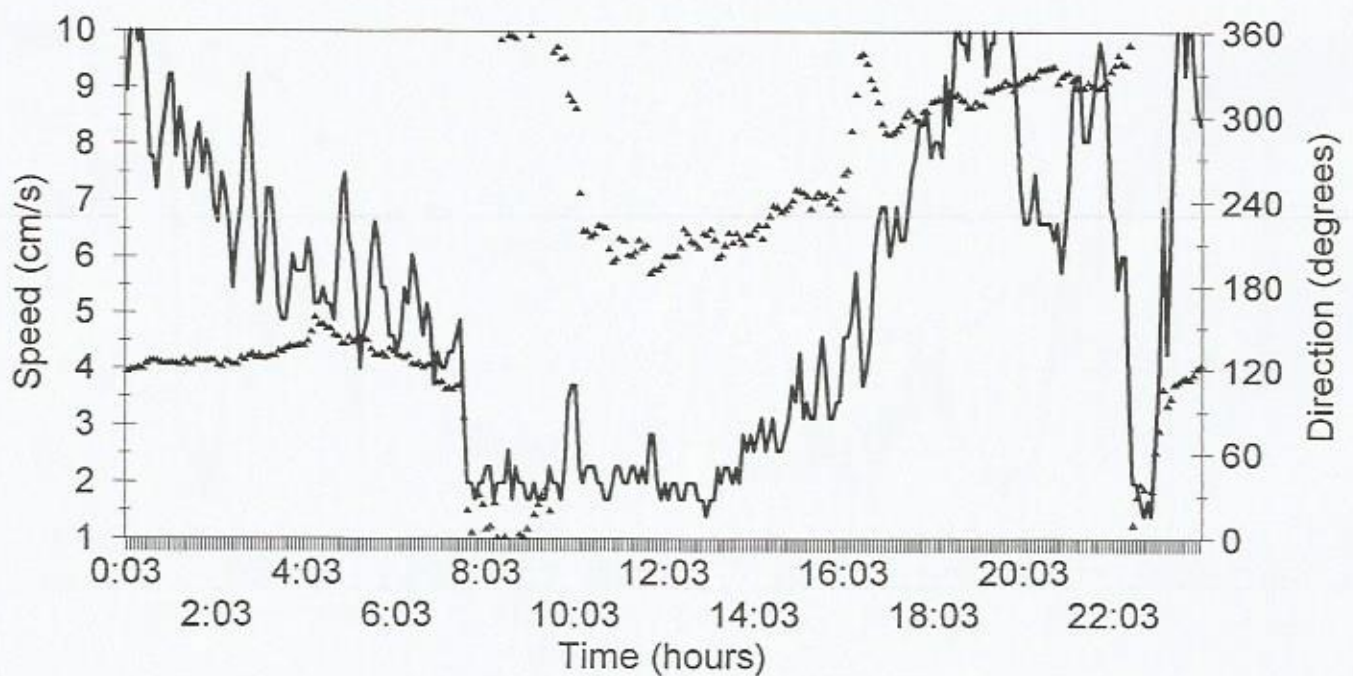


△ Direction

— Current Speed (cm/s)

Nadi Bay 9 th Jan, 1994

Current Measurements

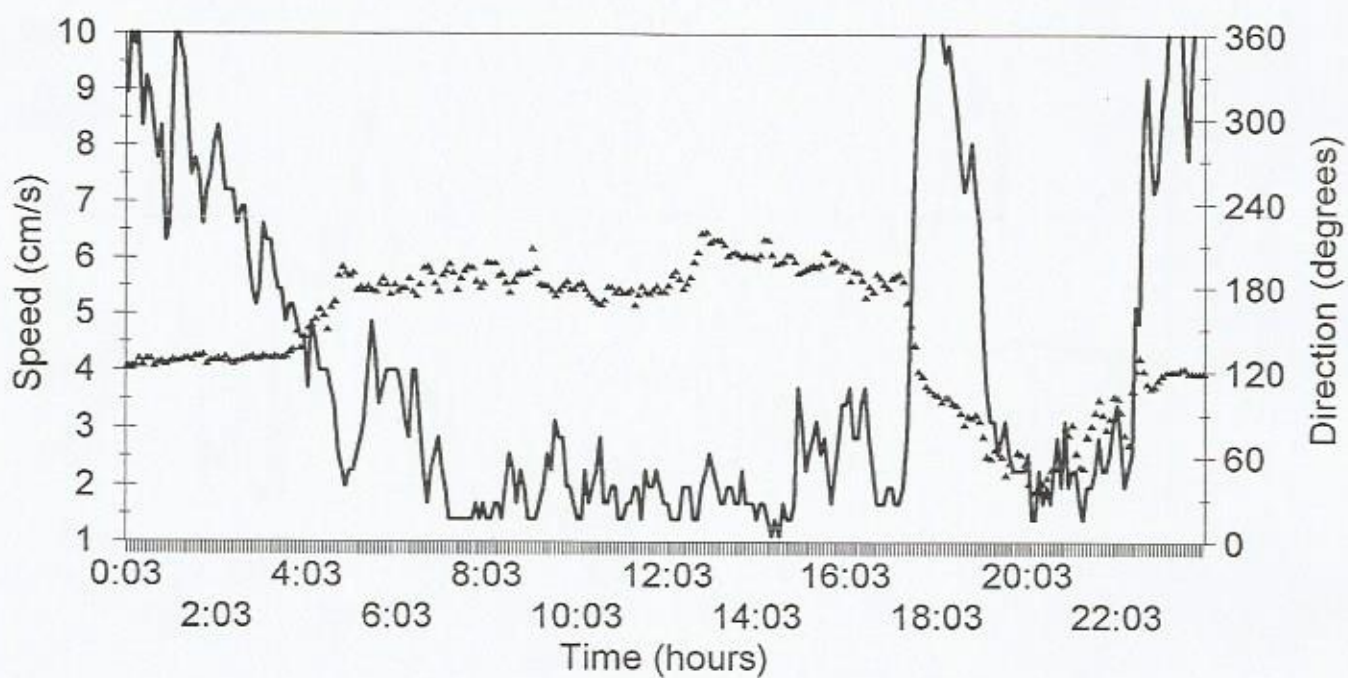


• Direction

— Current Speed (cm/s)

Nadi Bay 10 th Jan, 1994

Current Measurements

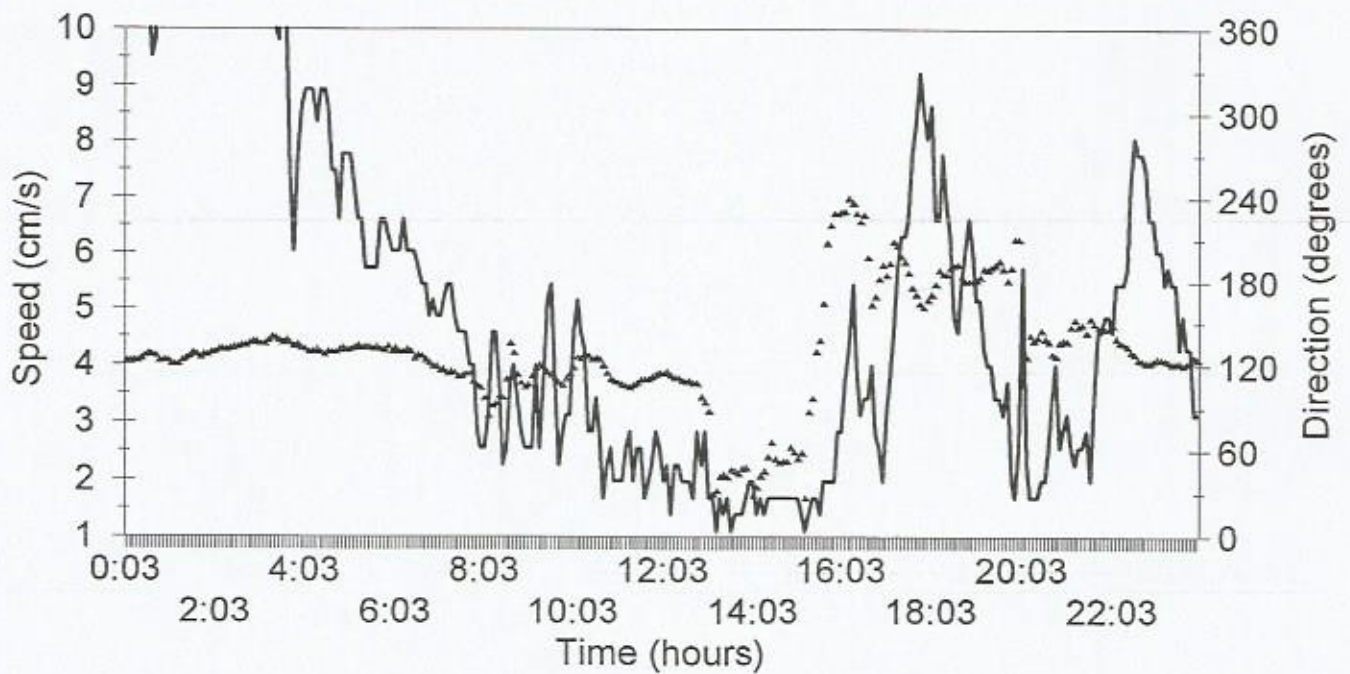


• Direction

— Current Speed (cm/s)

Nadi Bay 11th Jan, 1994

Current Measurements

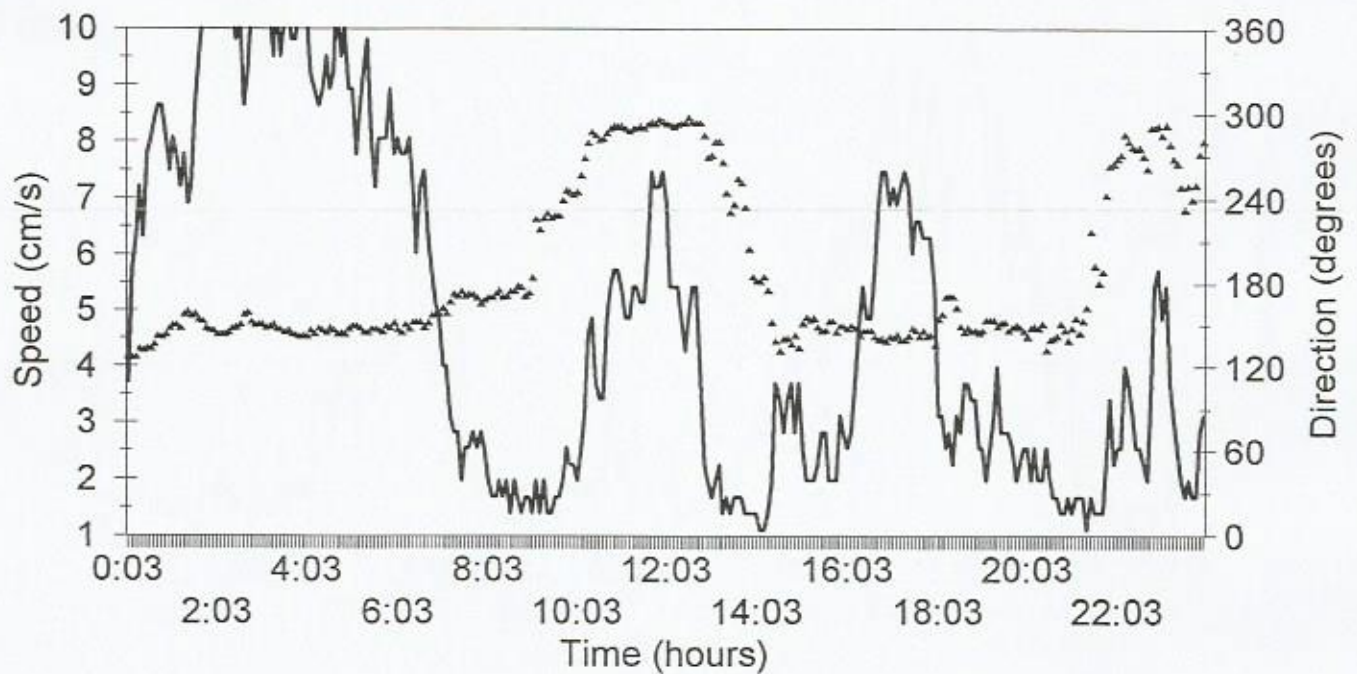


△ Direction

— Current Speed (cm/s)

Nadi Bay 12th Jan, 1994

Current Measurements

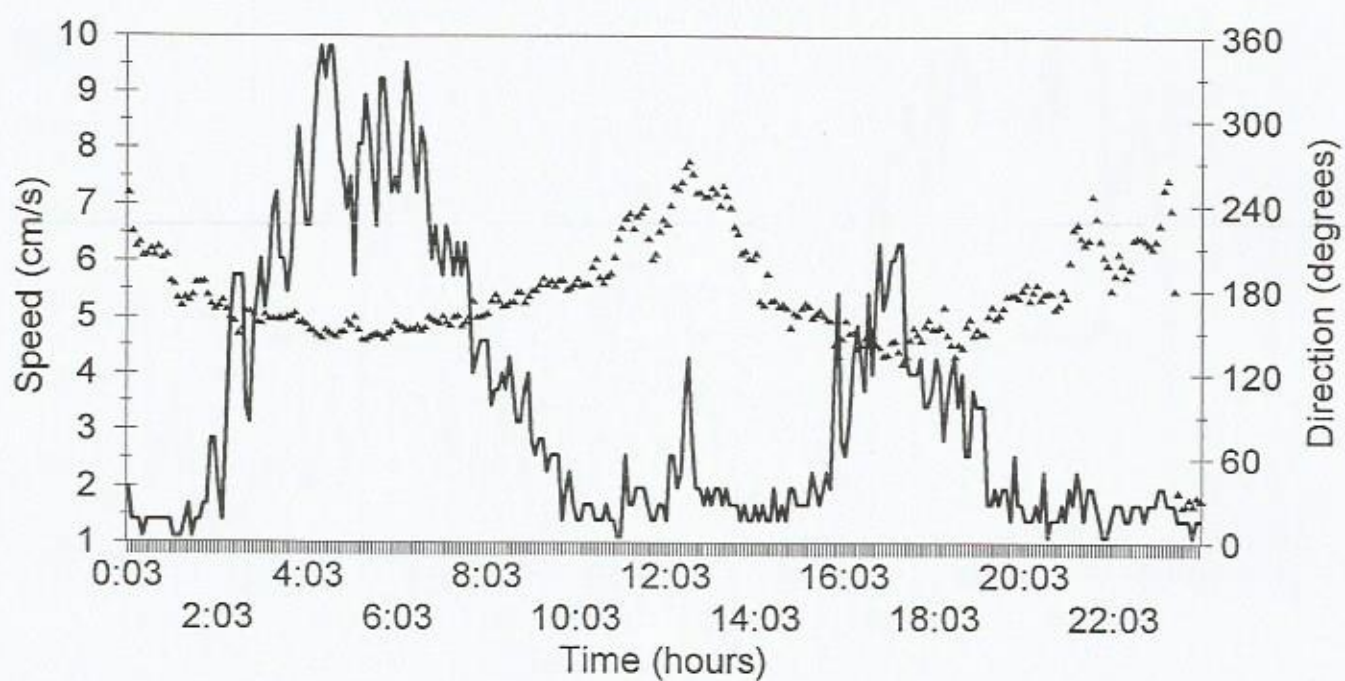


• Direction

— Current Speed (cm/s)

Nadi Bay 13th Jan, 1994

Current Measurements

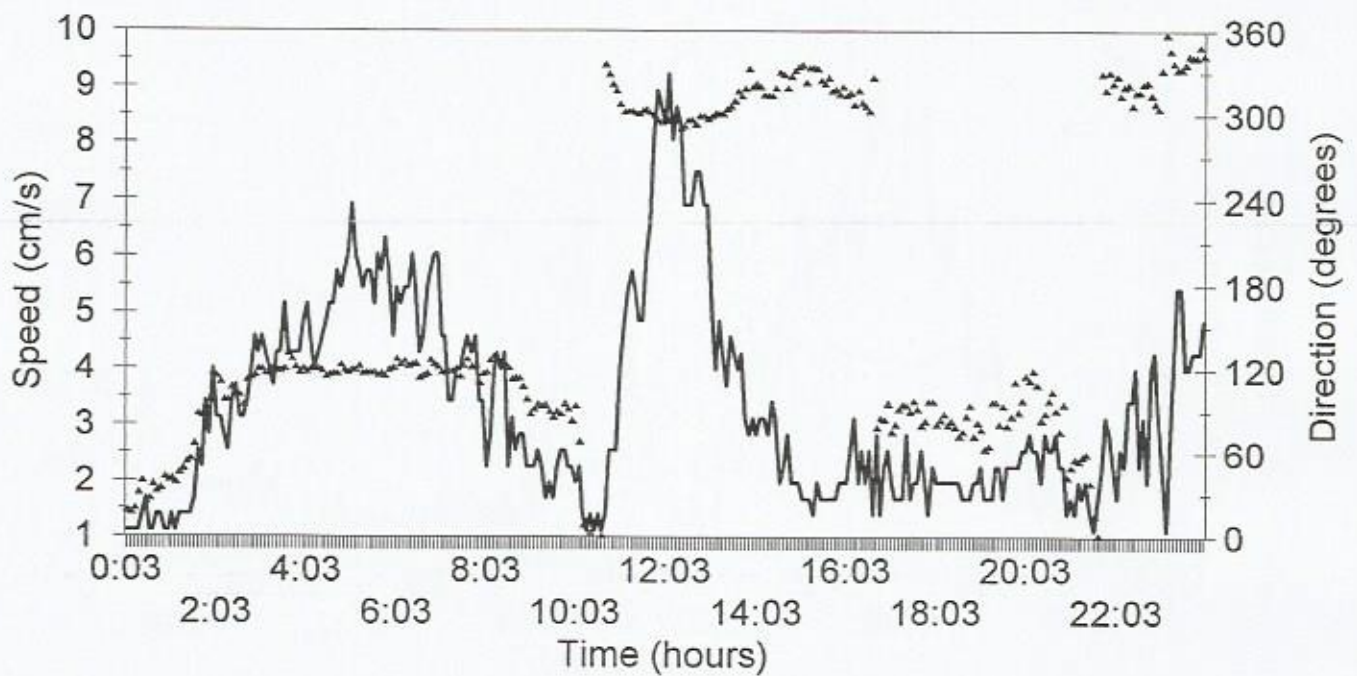


• Direction

— Current Speed (cm/s)

Nadi Bay 14th Jan, 1994

Current Measurements

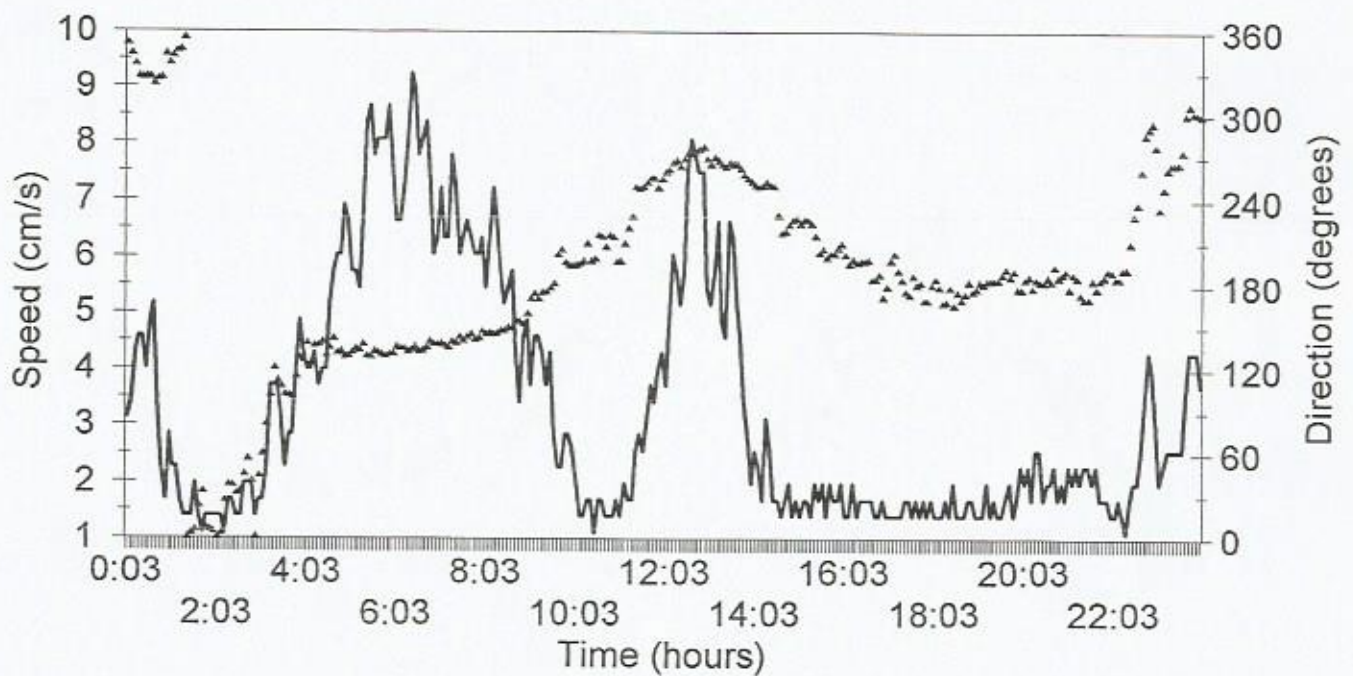


△ Direction

— Current Speed (cm/s)

Nadi Bay 15th Jan, 1994

Current Measurements

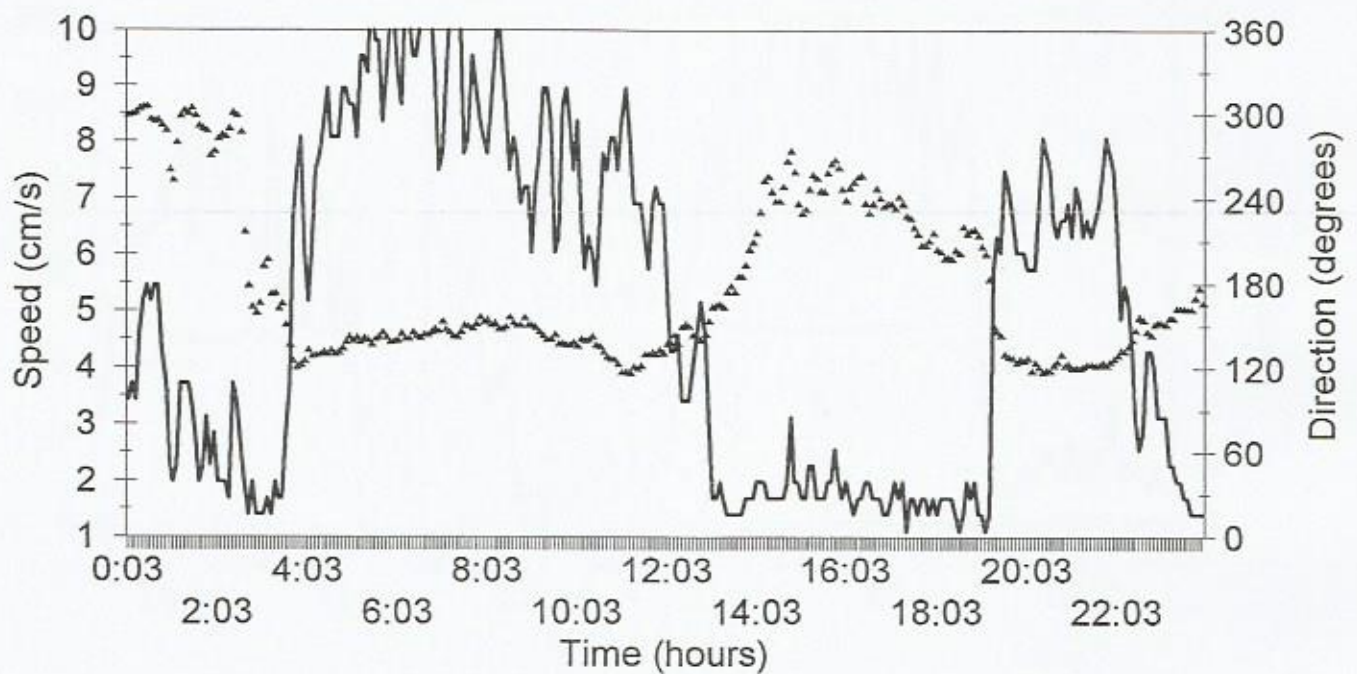


△ Direction

— Current Speed (cm/s)

Nadi Bay 16th Jan, 1994

Current Measurements

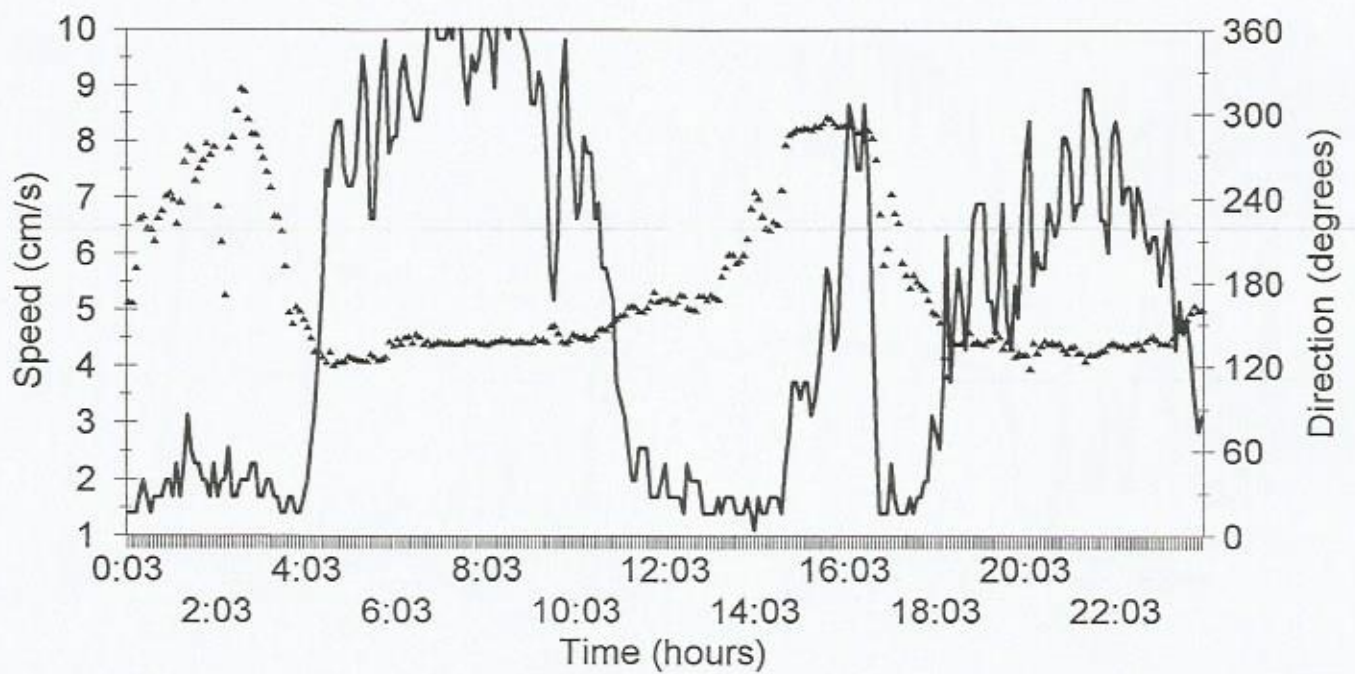


• Direction

— Current Speed (cm/s)

Nadi Bay 17th Jan, 1994

Current Measurements

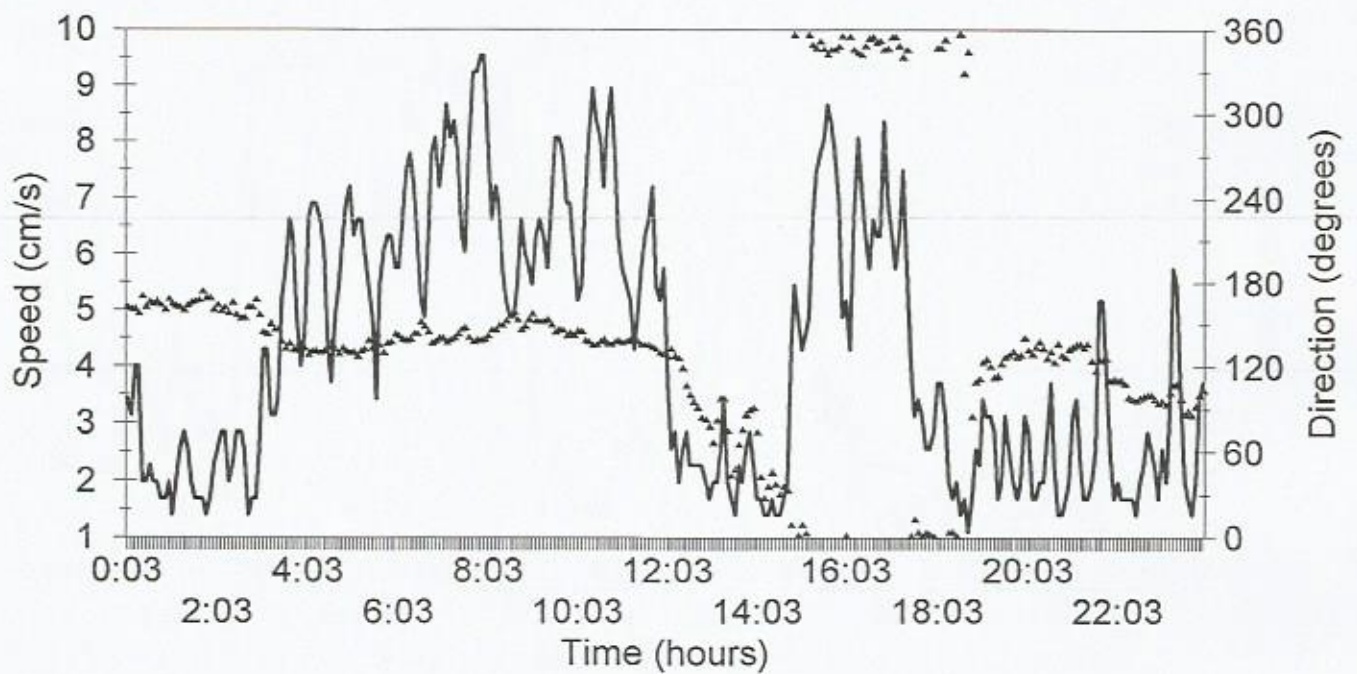


• Direction

— Current Speed (cm/s)

Nadi Bay 18th Jan, 1994

Current Measurements

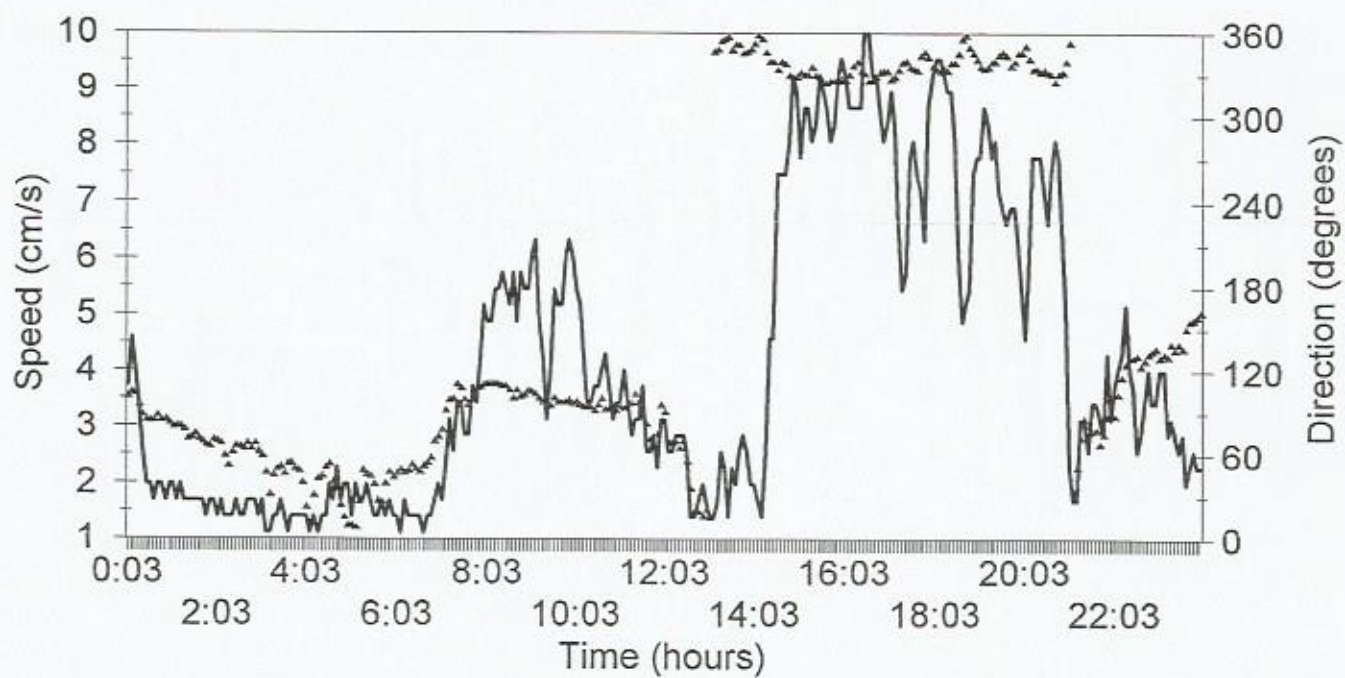


△ Direction

— Current Speed (cm/s)

Nadi Bay 19th Jan, 1994

Current Measurements

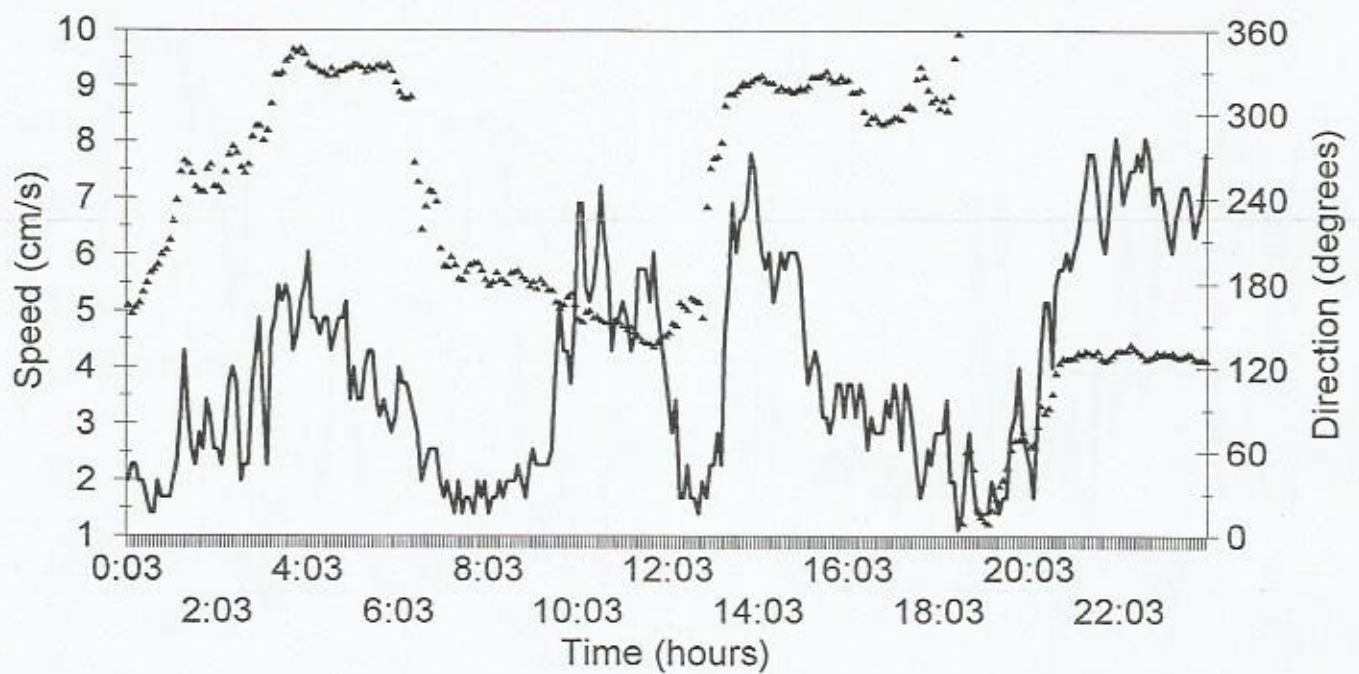


△ Direction

— Current Speed (cm/s)

Nadi Bay 20th Jan, 1994

Current Measurements

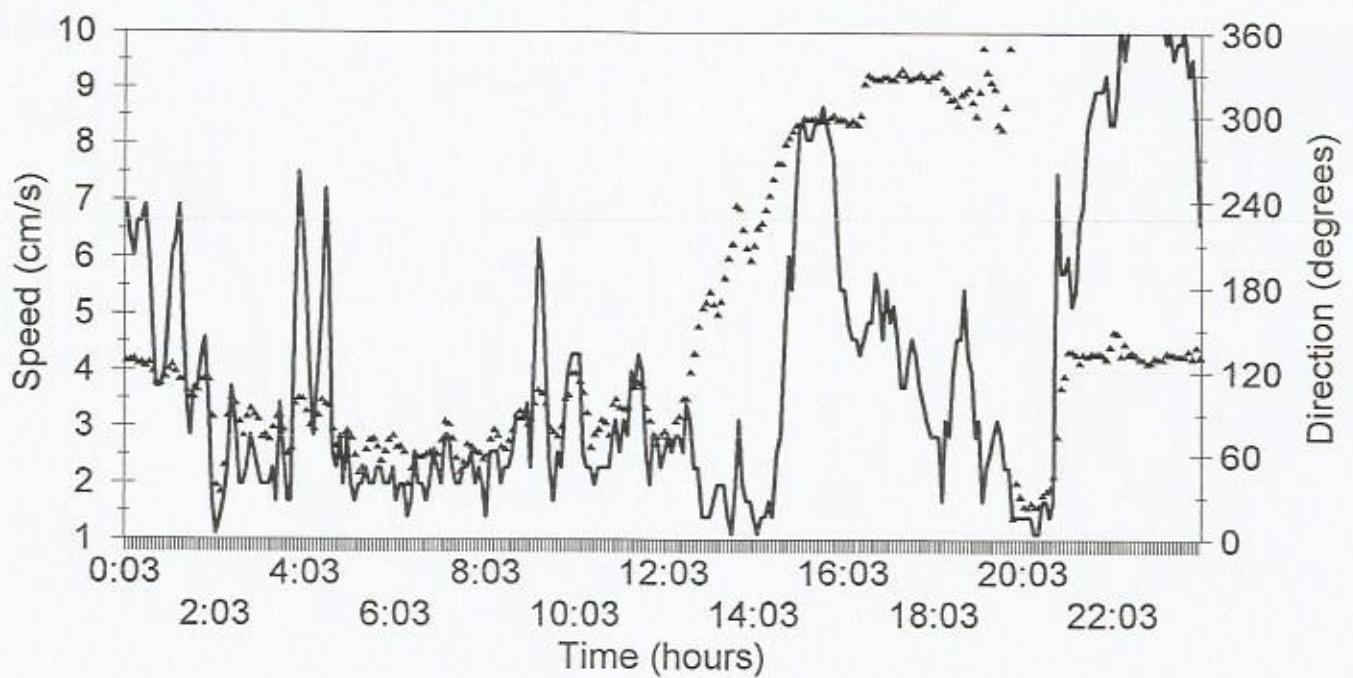


• Direction

— Current Speed (cm/s)

Nadi Bay 21st Jan, 1994

Current Measurements

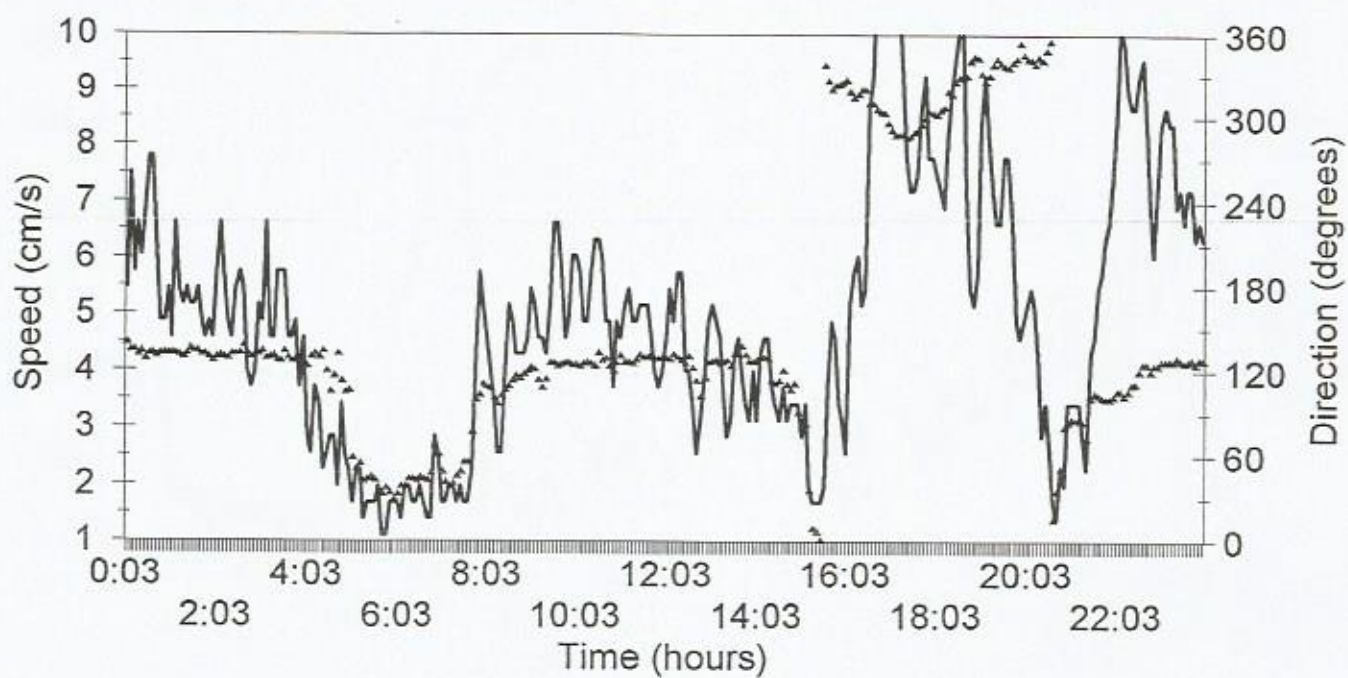


• Direction

— Current Speed (cm/s)

Nadi Bay 22nd Jan, 1994

Current Measurements

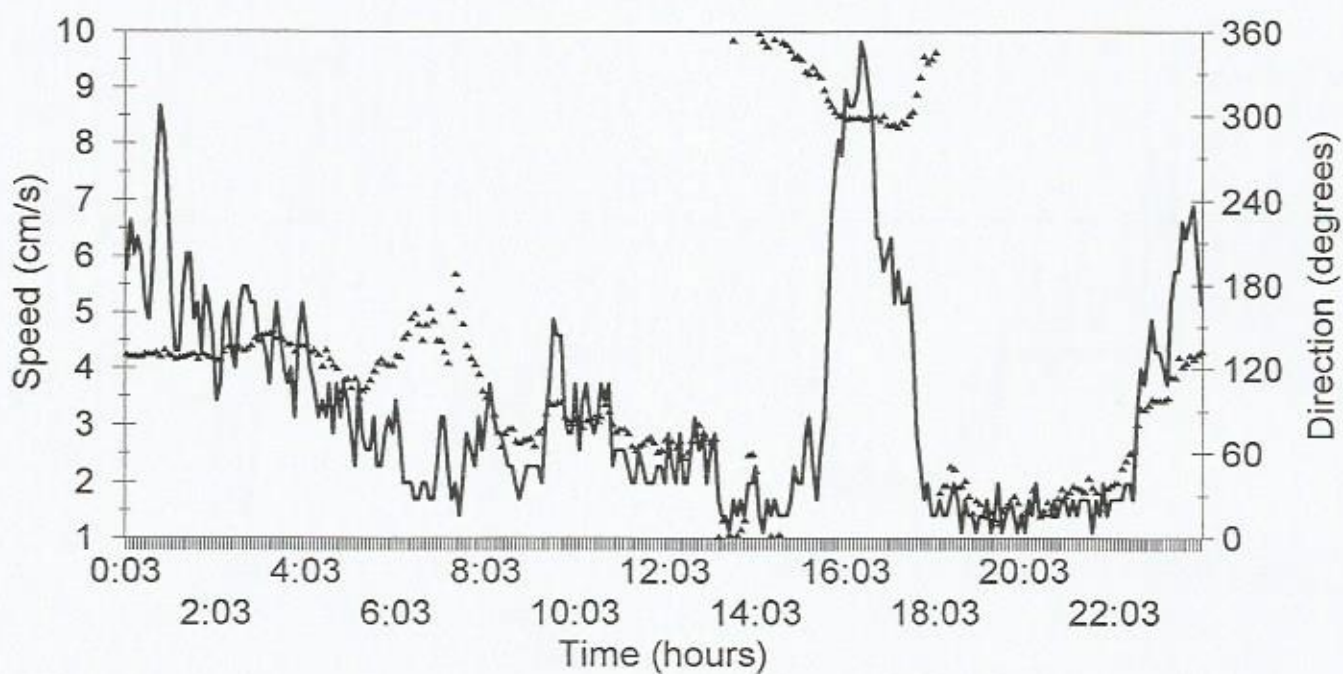


• Direction

— Current Speed (cm/s)

Nadi Bay 23rd Jan, 1994

Current Measurements

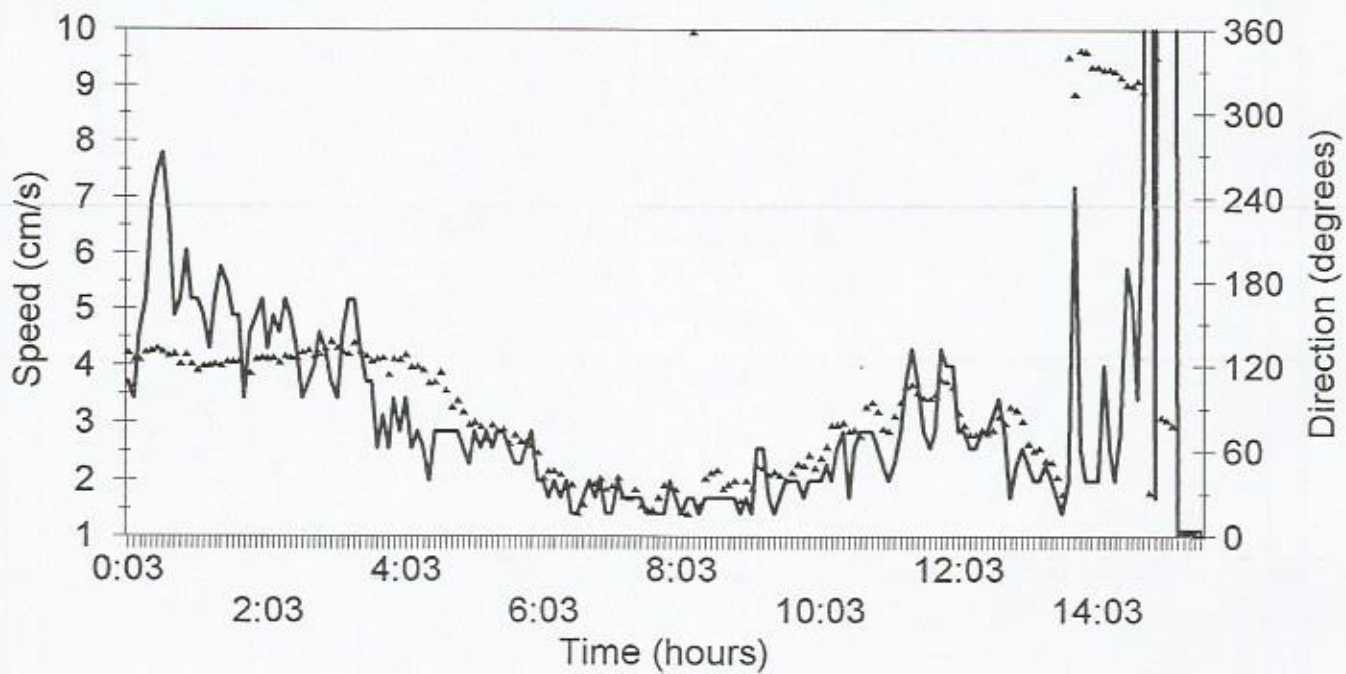


• Direction

— Current Speed (cm/s)

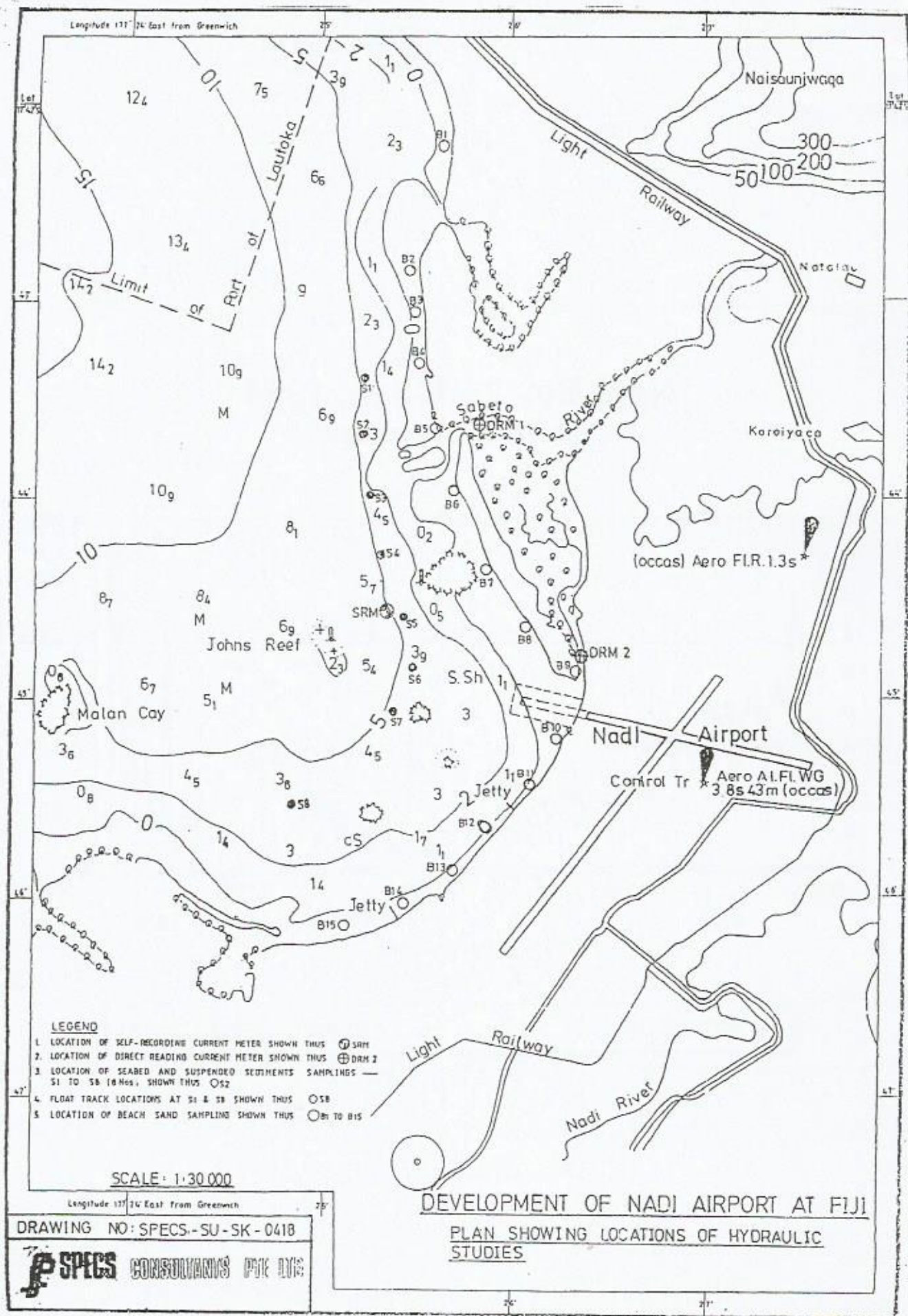
Nadi Bay 24th Jan, 1994

Current Measurements

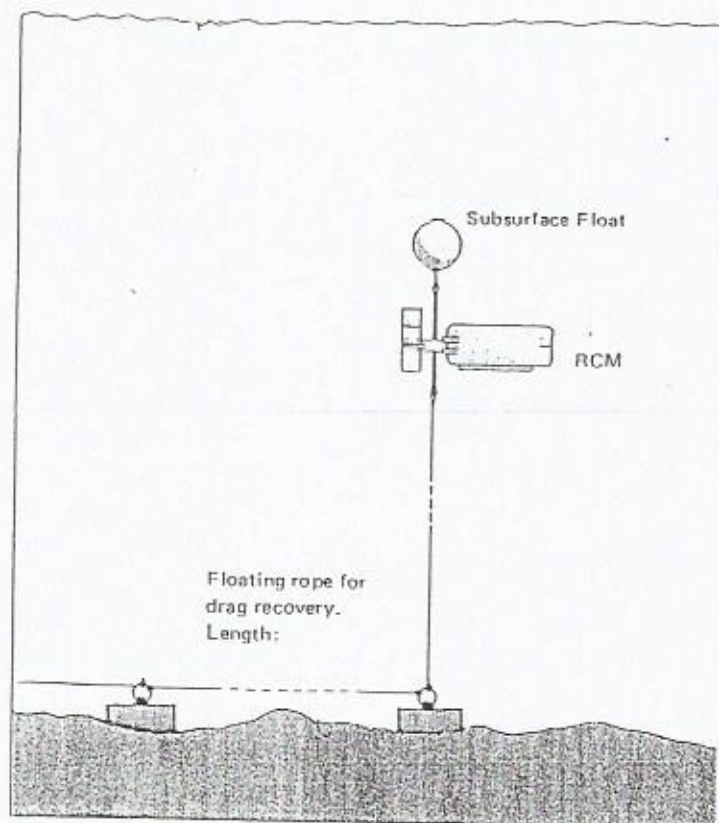


• Direction

— Current Speed (cm/s)



MOORING



U - Mooring