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**Satellite-Tracked Buoy
Data Report VII.
South-West Pacific Ocean
July to December 1978**

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SATELLITE-TRACKED BUOY DATA REPORT VII.
SOUTH-WEST PACIFIC OCEAN JULY TO DECEMBER 1978

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Abstract

Diagrams of the tracks of 16 drogued free drifting buoys in the south-west Pacific Ocean July to December 1978 are presented together with plots of the sea surface temperature and the daily speed of the buoys. These buoys were tracked by the NIMBUS-6 satellite of the National Aeronautics and Space Administration, U.S.A. (NASA).

INTRODUCTION

This report follows on from Satellite-tracked Buoy Data Report IV, South-west Pacific Ocean January-June 1978 (Cresswell and Greig 1979).

The data presented in this report are not as complete as in previous reports because the amount of data received was not enough to continue the plots after mid October 1978 when the NASA computer facilities were devoted to the launching and control of a new satellite. However, where we have sufficient data to present a reasonable picture of the buoy track we have plotted this track (Appendix). Where the data were not sufficient for a plot this has been noted in the text.

THE BUOYS

The buoys are the two types noted in previous reports (e.g. Cresswell and Greig 1979) and in Cresswell 1976, Cresswell *et al.* 1979. The 'torpedo' buoys are indicated by a T added to the buoy number, e.g. 0107T.

0176T was released off Sydney in late November 1978. We have not received sufficient data on its performance to prepare a plot of the buoy track.

0237T was also released in late November off the south coast of N.S.W. Again the quality of data received was not sufficient to prepare a plot.

0415T was carried aboard R.V. 'Sprightly' during a cruise to 53°S, 150°E. After returning from this cruise the buoy was deployed off the southern N.S.W. coast. Unfortunately, after deployment insufficient fixes were received to plot the buoy track.

0423T was deployed off the central N.S.W. coast in the latter part of November 1978. The amount of the data received has been insufficient to prepare a plot of the track.

1234 was redeployed on 20 September after a previous drift in which it went aground in north Queensland. The buoy was released in an eddy off Gabo Island on the N.S.W. south coast after which it was successfully

tracked until 19 October 1978. From October onward the quantity of data received was too small to prepare a plot.

1640 is still aground (16 October 1978) on Bellona Reef (21°49S, 159°56E) after release in April 1977 into eddy C (see Data Report III, Cresswell and Golding 1979).

0107T was released on 20 April 1978 some 400 km south-east of New Zealand. It has continued to drift towards the east. Not enough data have been received to prepare plots after the end of October.

0140T was tracked up to 15 October 1978 after having been released off the central N.S.W. coast early in June of that year. From 15 October onward there is not sufficient information for a plot.

1054 released in an eddy off the N.S.W. coast in 1977 was successfully tracked until late August 1978. The buoy was trapped in eddy A (Nilsson and Cresswell 1981). A large scale diagram of the track followed by this buoy while trapped in the eddy has been included in this report.

1132T followed a convoluted path towards the south-east from its position at the end of June 1978. At the end of August the buoy ran aground on the west coast of the North Island of New Zealand.

1202T did not provide any useful information during the period covered by this report.

1352 continued to provide useful information on position and sea surface temperature in the Tasman Sea up to the end of October 1978.

1570 provided some data during the period July-September 1978. The data indicated a drift to the north-east from a position just north of New Zealand. No further data were received after September 1978.

1631 continued to operate in the area between Lord Howe Island and New Zealand. The reception of useful data ceased about the beginning of October 1978.

1710 had drifted to a position about 100 nautical miles off the central N.S.W. coast by the end of June 1978. From this point it turned to the north-east and continued in this direction until early in August 1978 when contact with the buoy was lost.

1726 ran aground on the west coast of the South Island of New Zealand about the middle of October 1978. Transmission from the buoy was erratic between the end of June and the beginning of September and no plots are presented for this period.

DATA HANDLING

As in previous reports of this nature the data have been edited to the extent that obviously erroneous fixes have been removed. Further editing of the data received from NASA on magnetic tape was done from printed lists of data supplied by that agency. The printed lists of data were more comprehensive than the data on magnetic tape.

DATA PRESENTATION

Figure 1 is a composite chart of all buoy tracks for the period July to December 1978.

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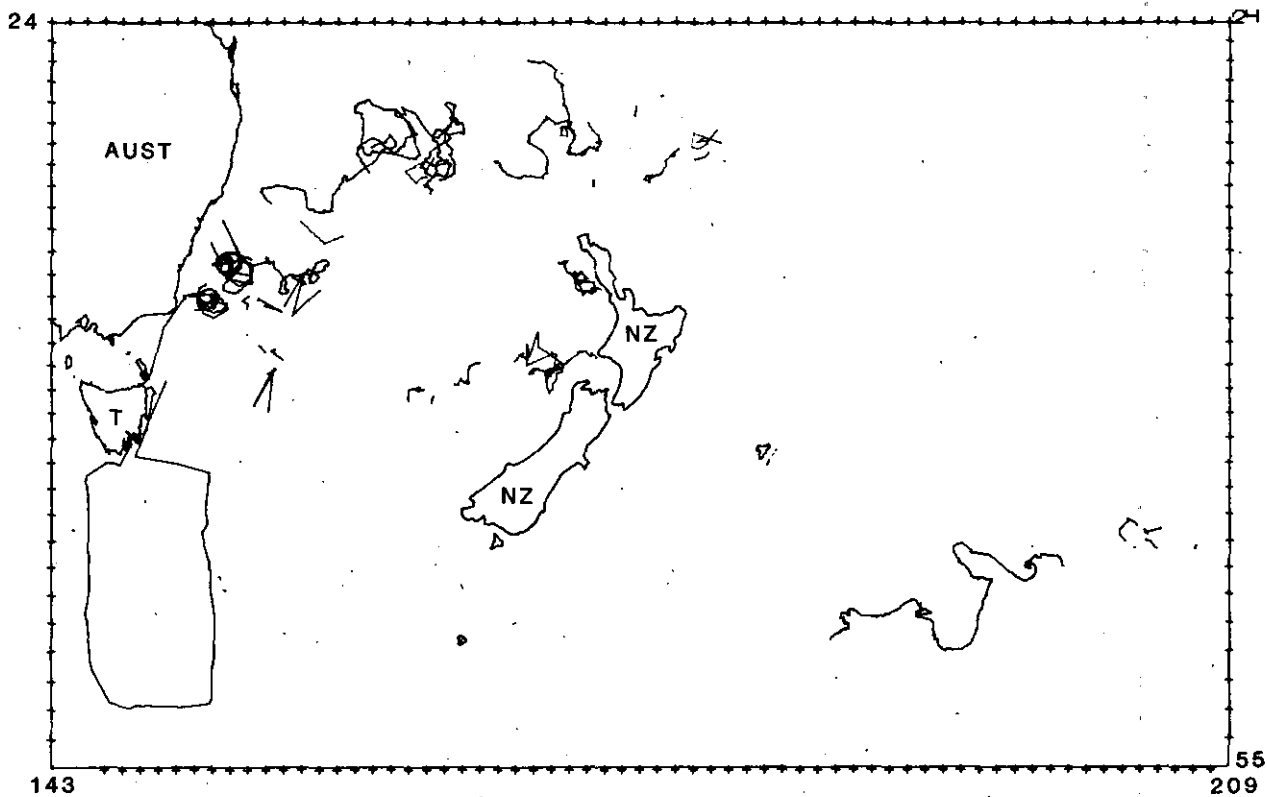
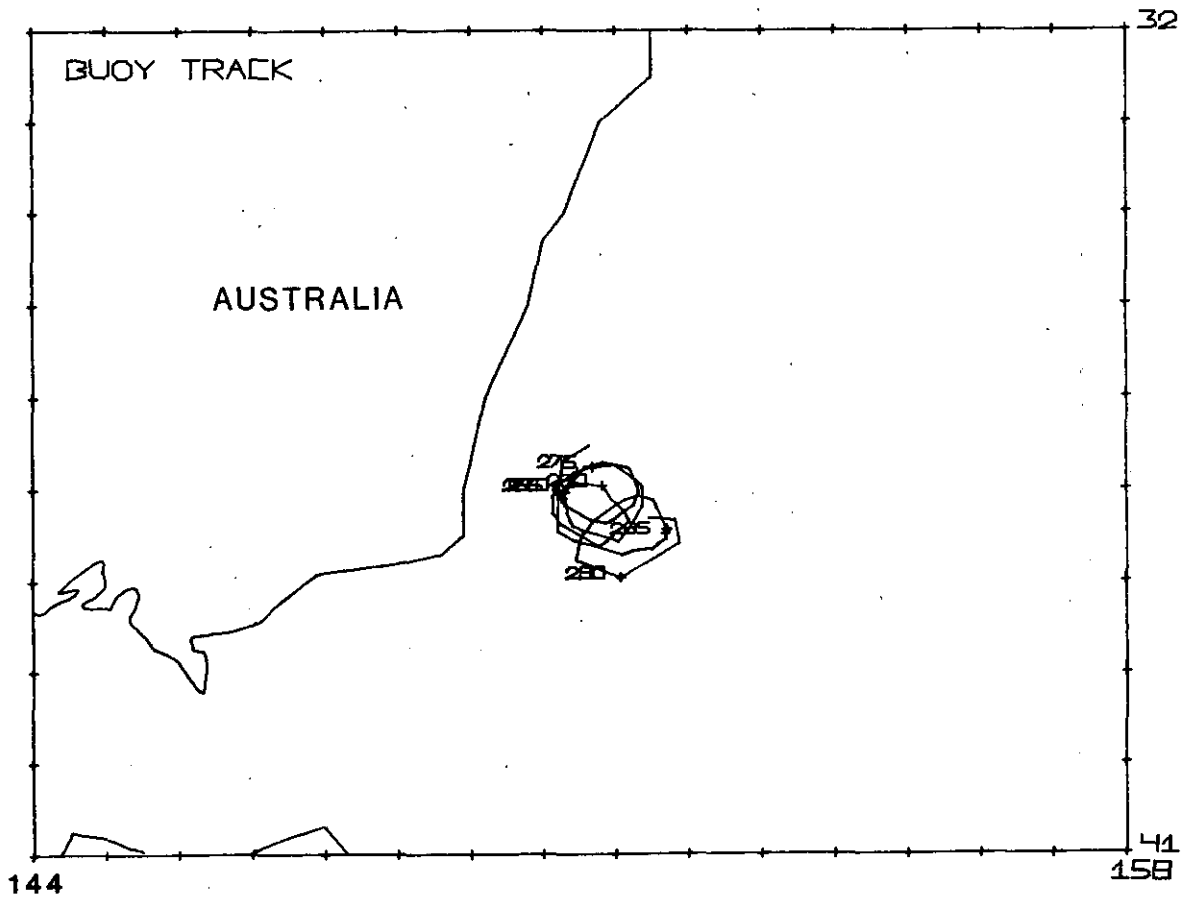
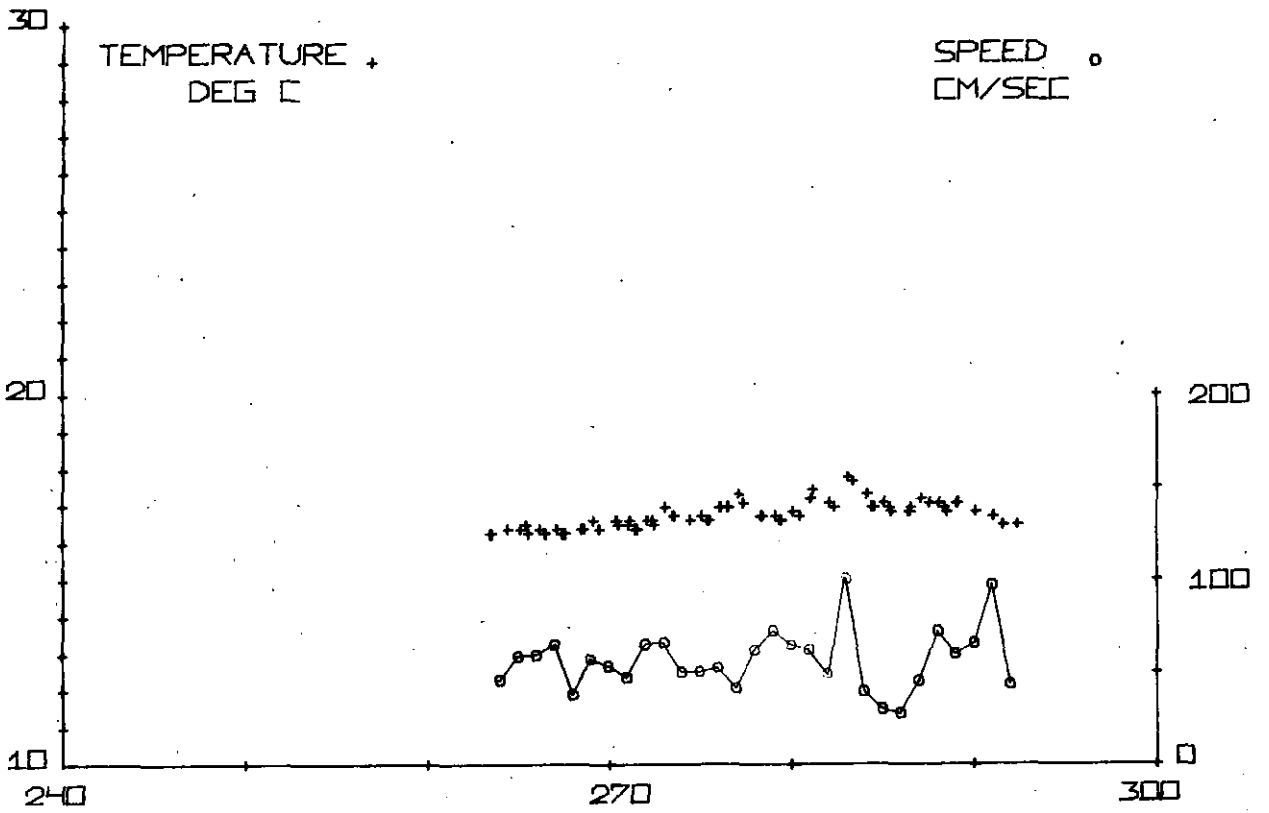


Figure 1. Composite chart of all buoy tracks for the period July to December 1978.

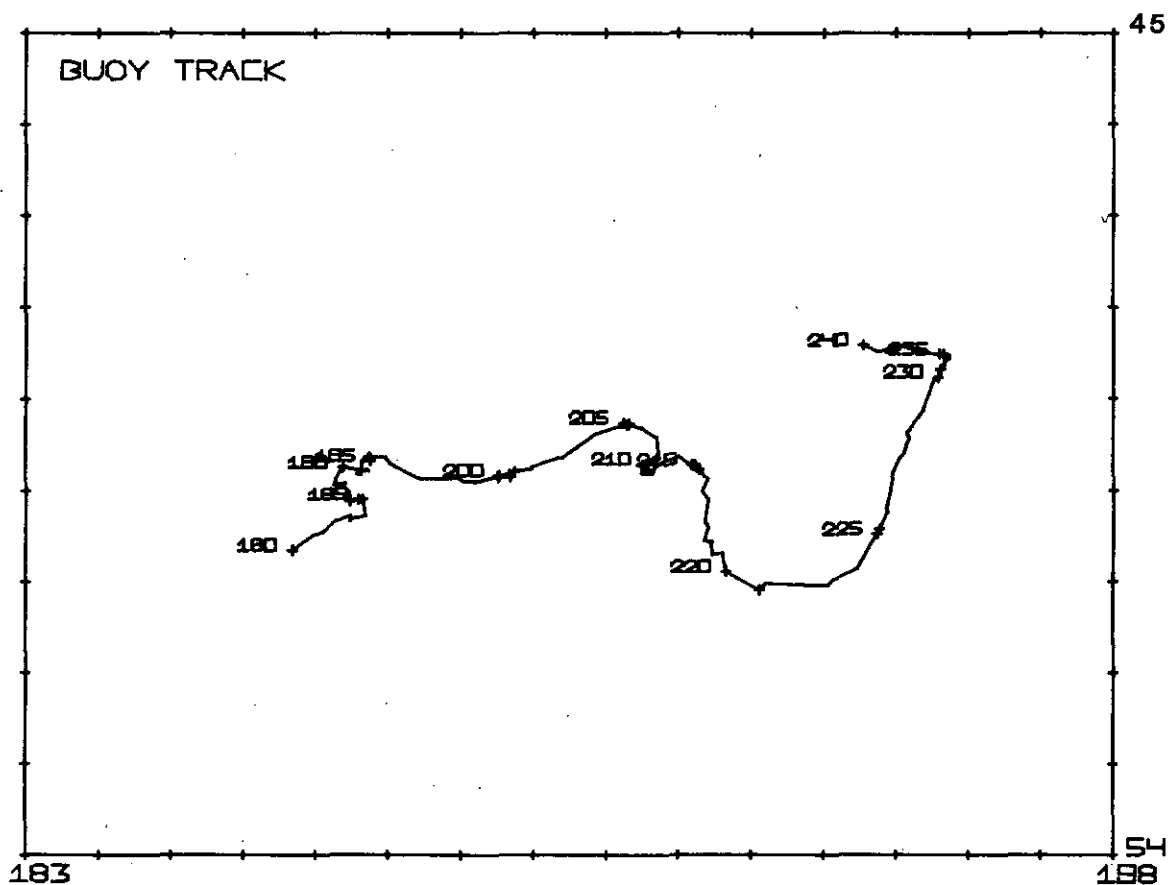
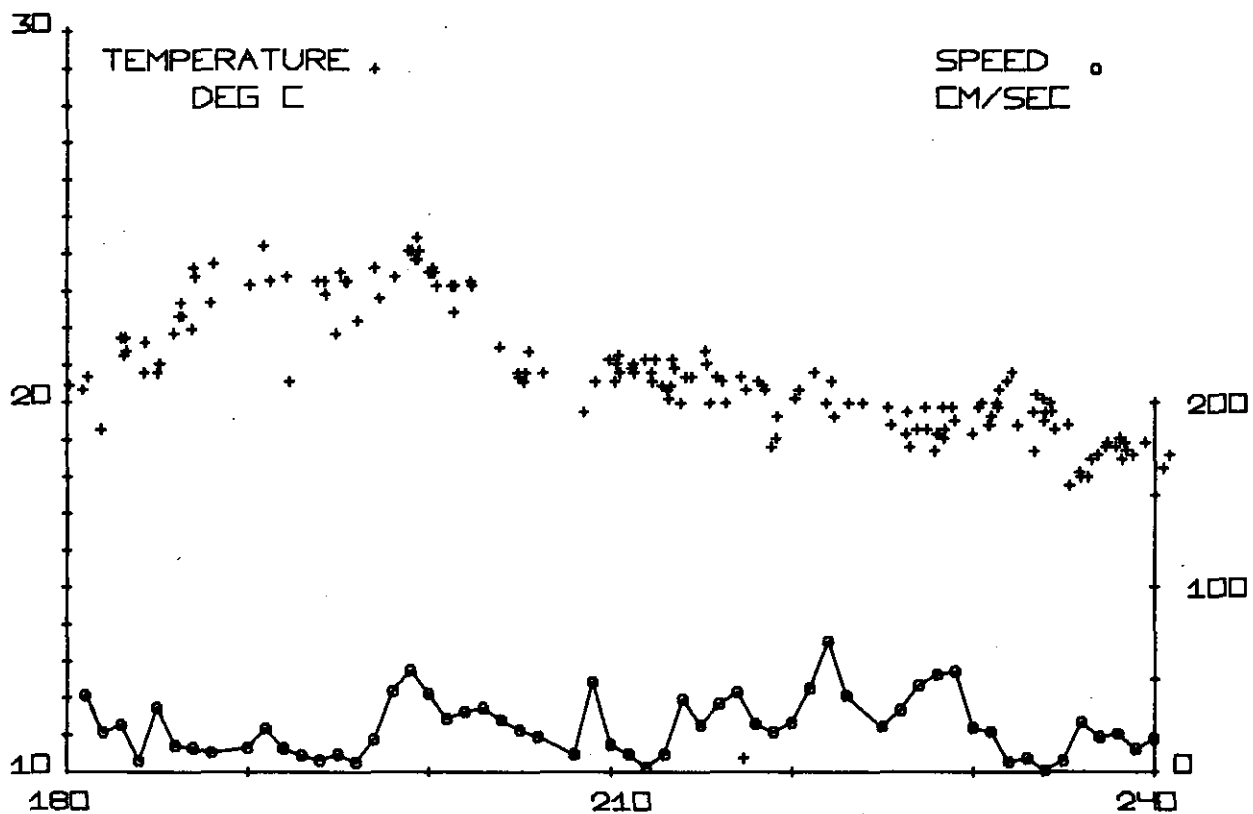
APPENDIX

Plots of the buoy tracks
July to December 1978.
Each chart covers a 60-day period.

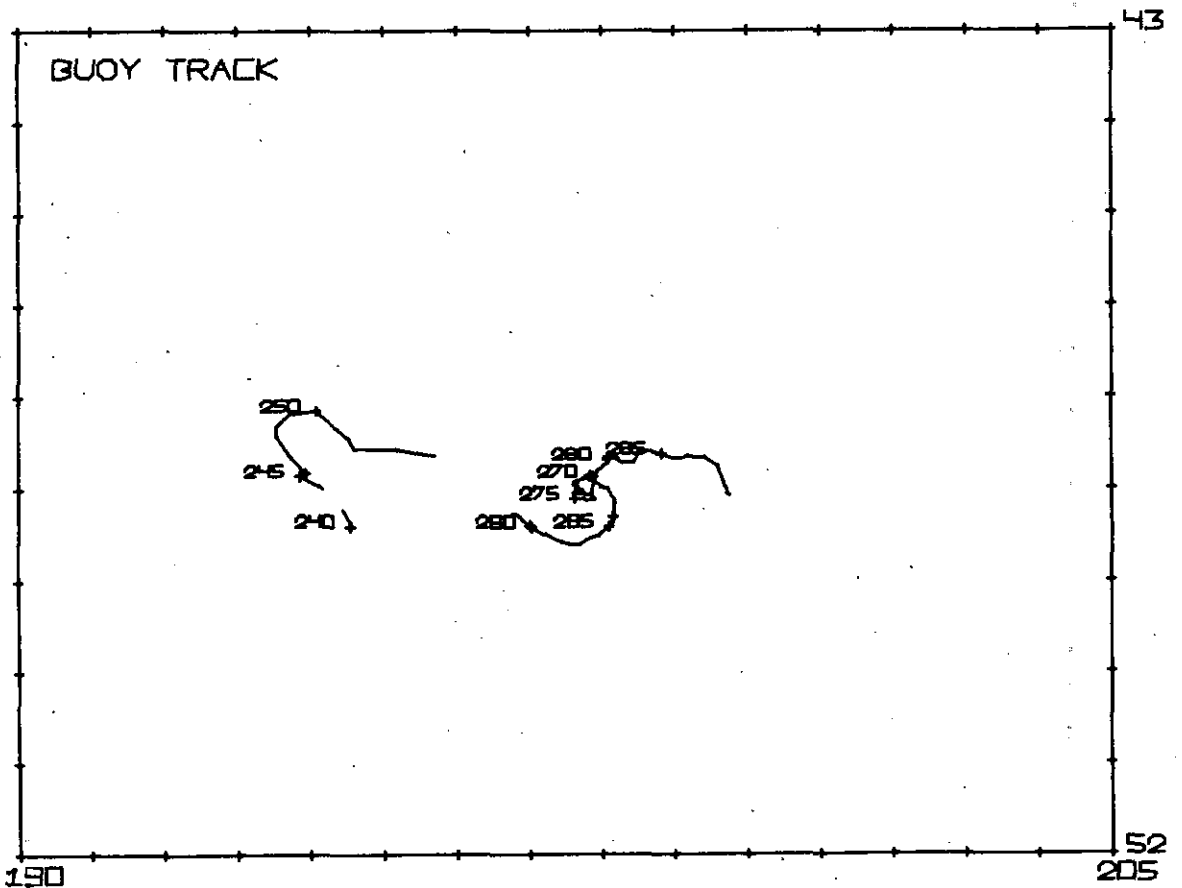
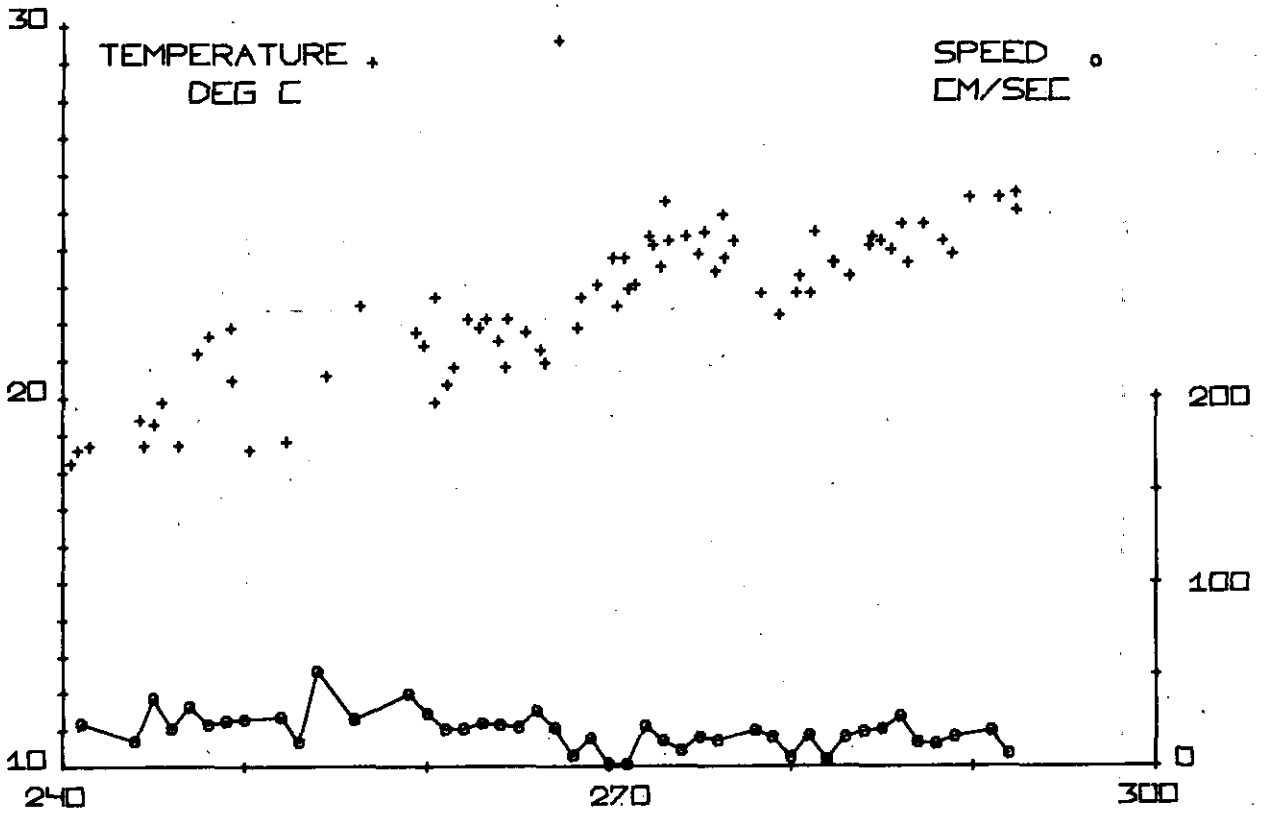
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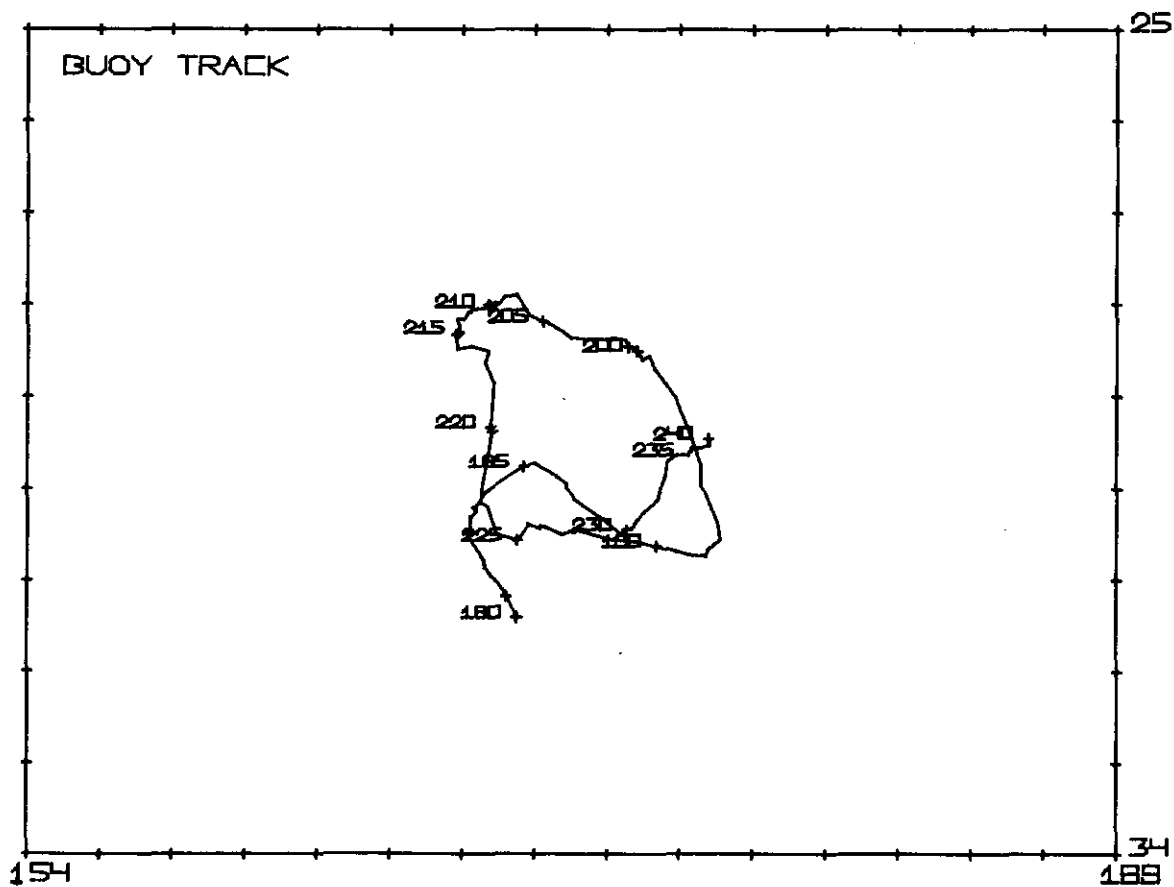
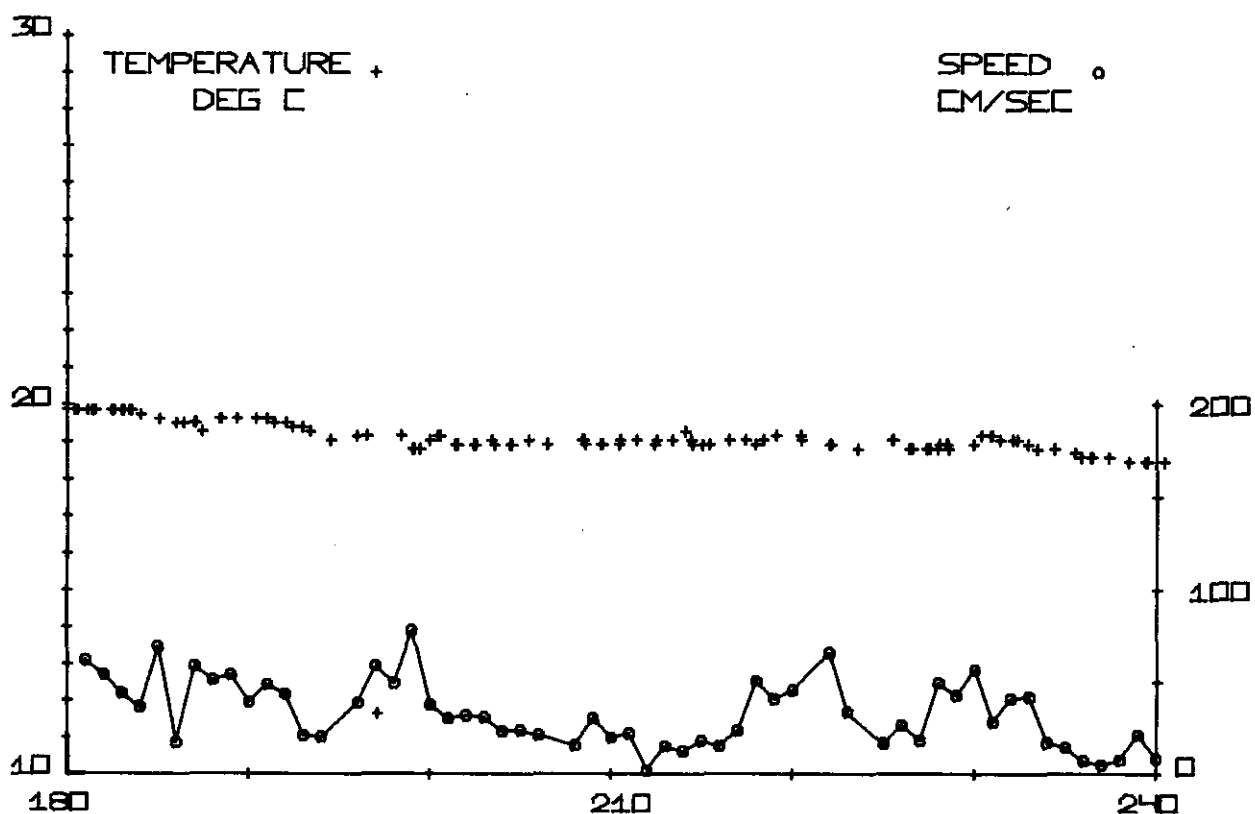
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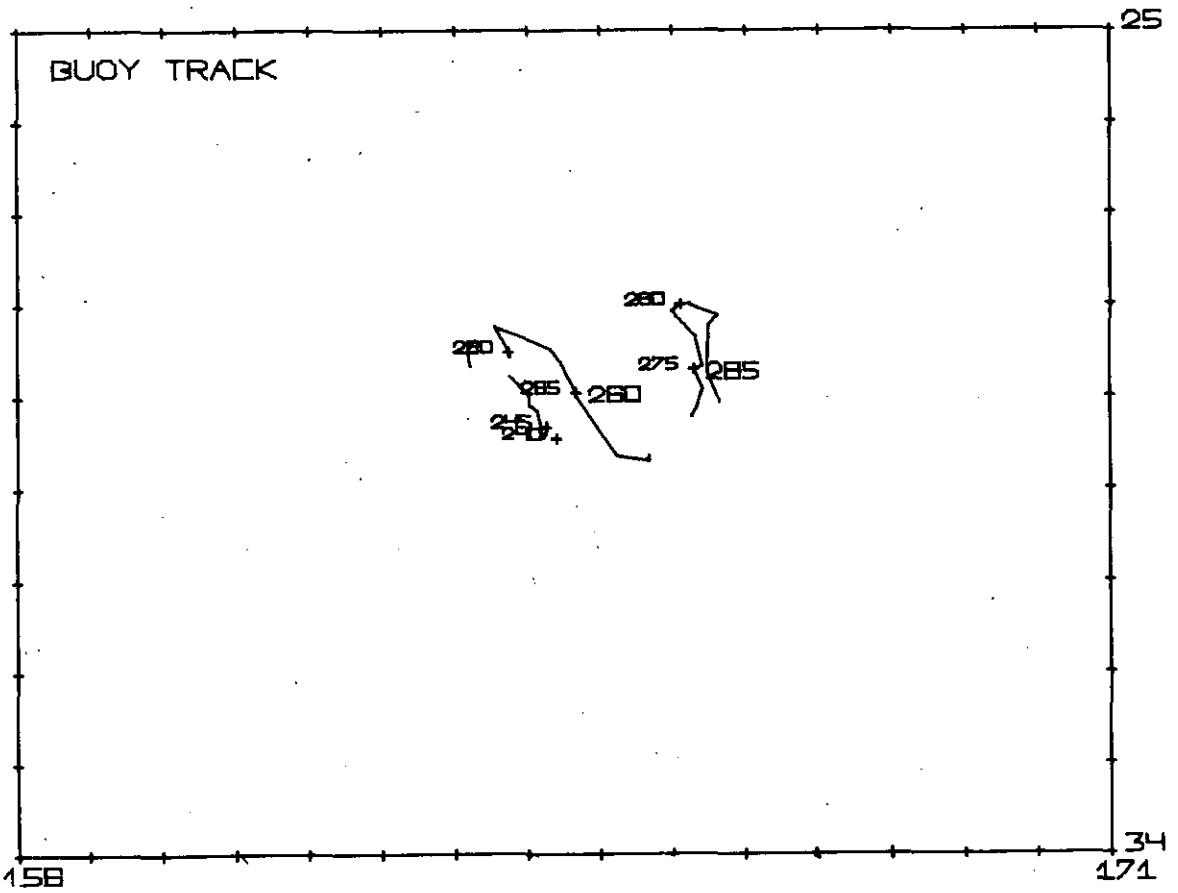
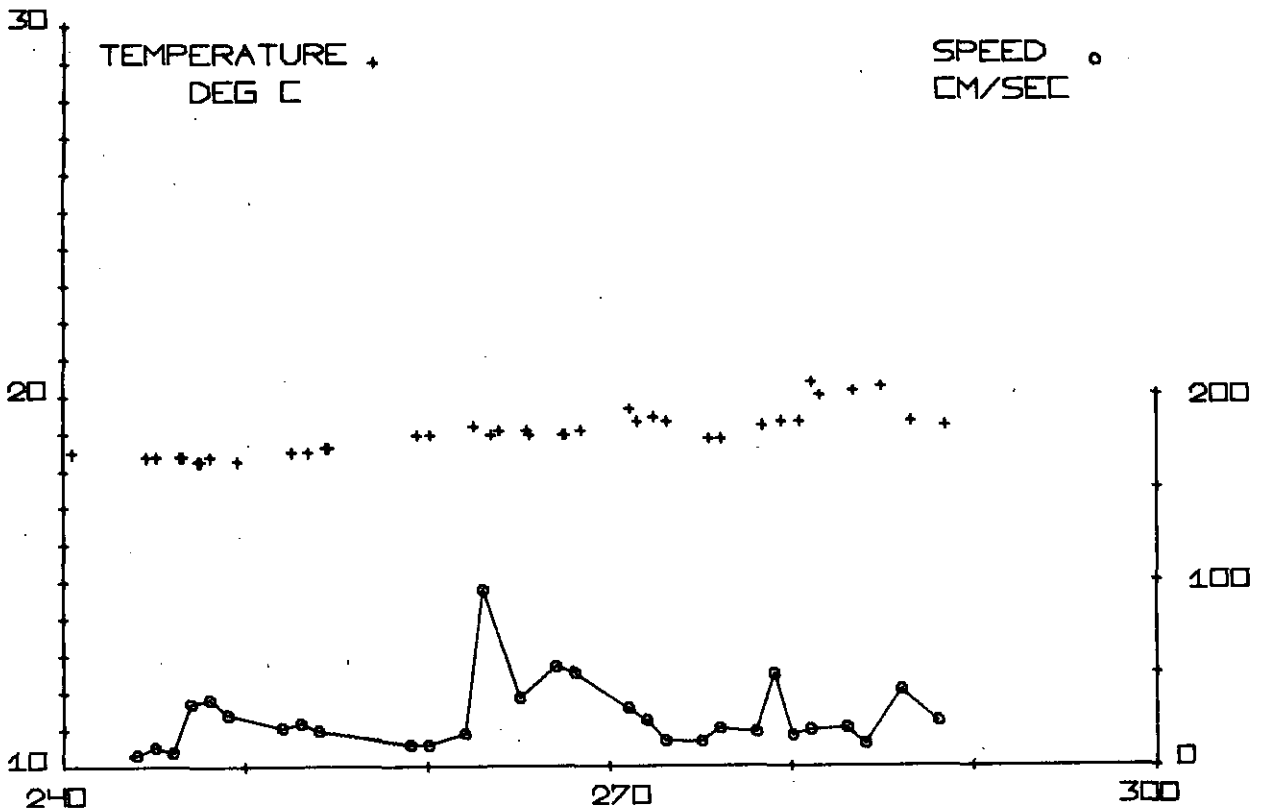
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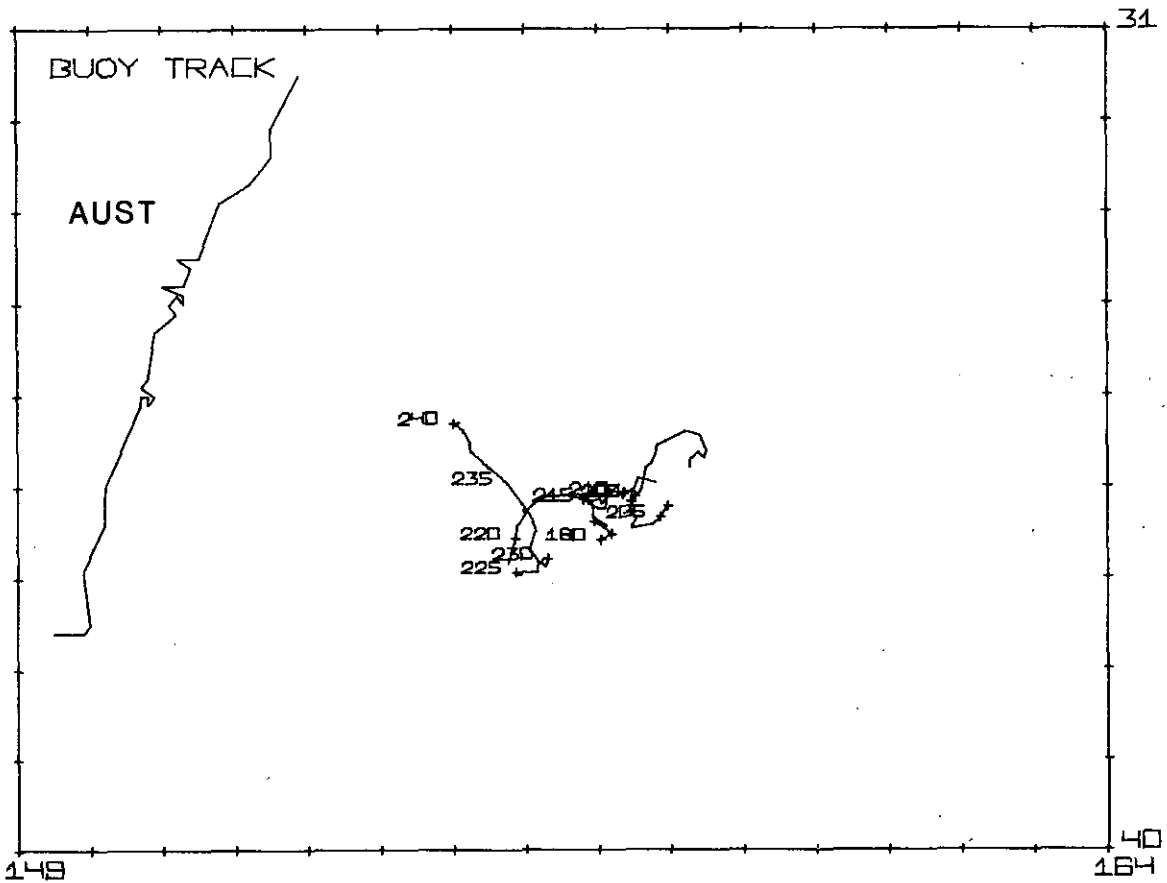
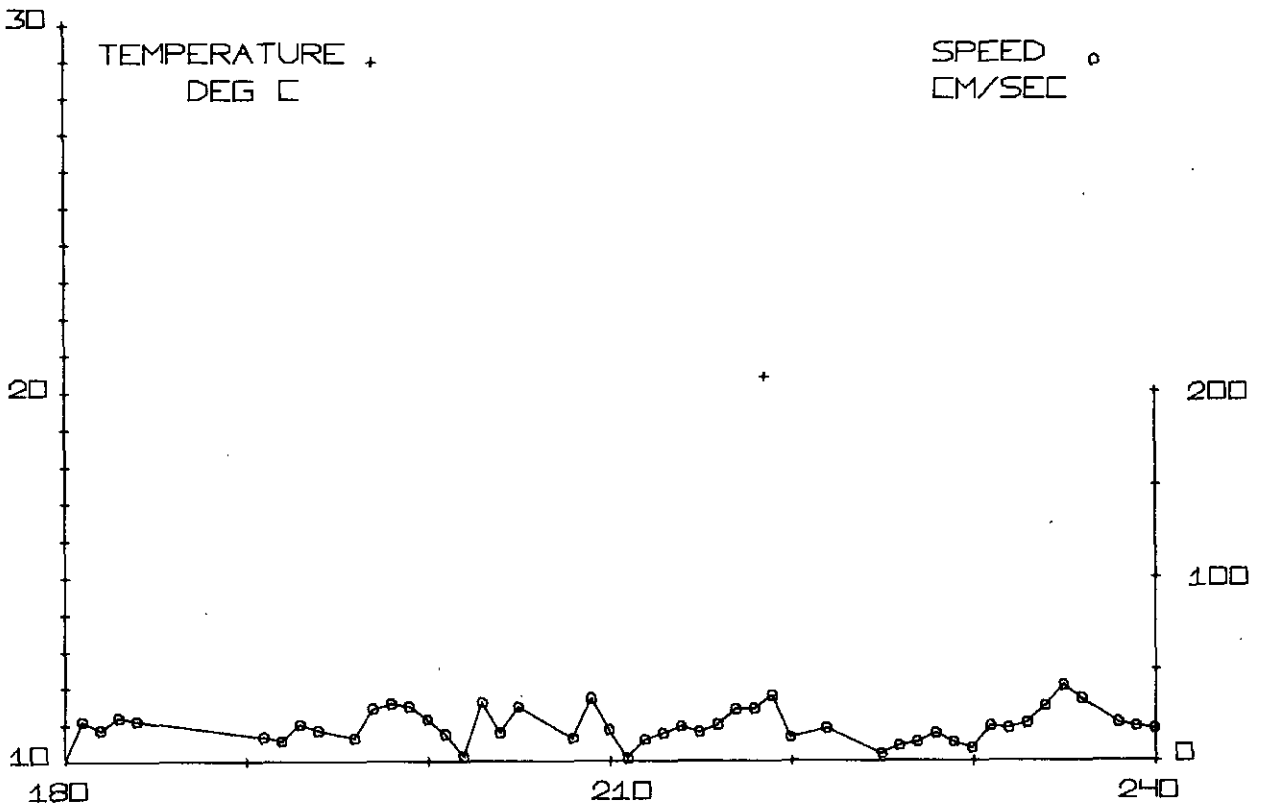
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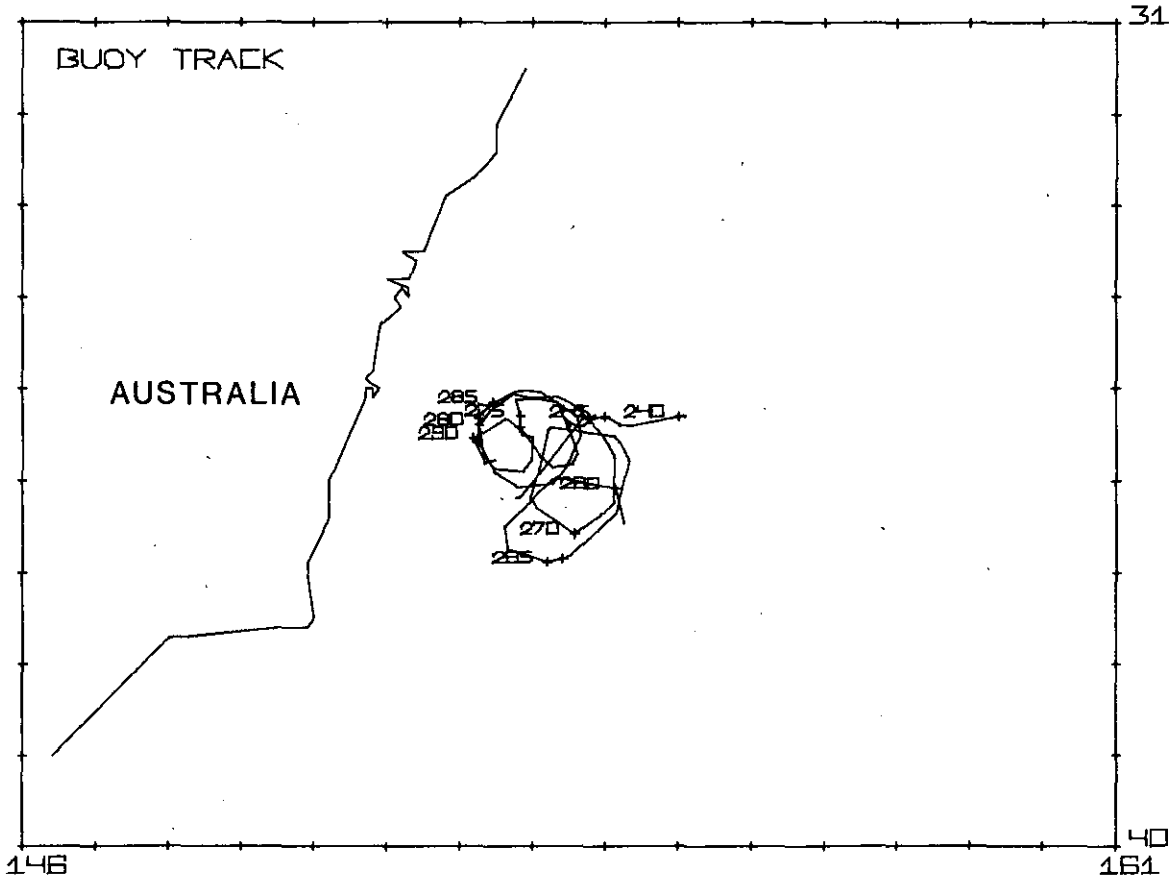
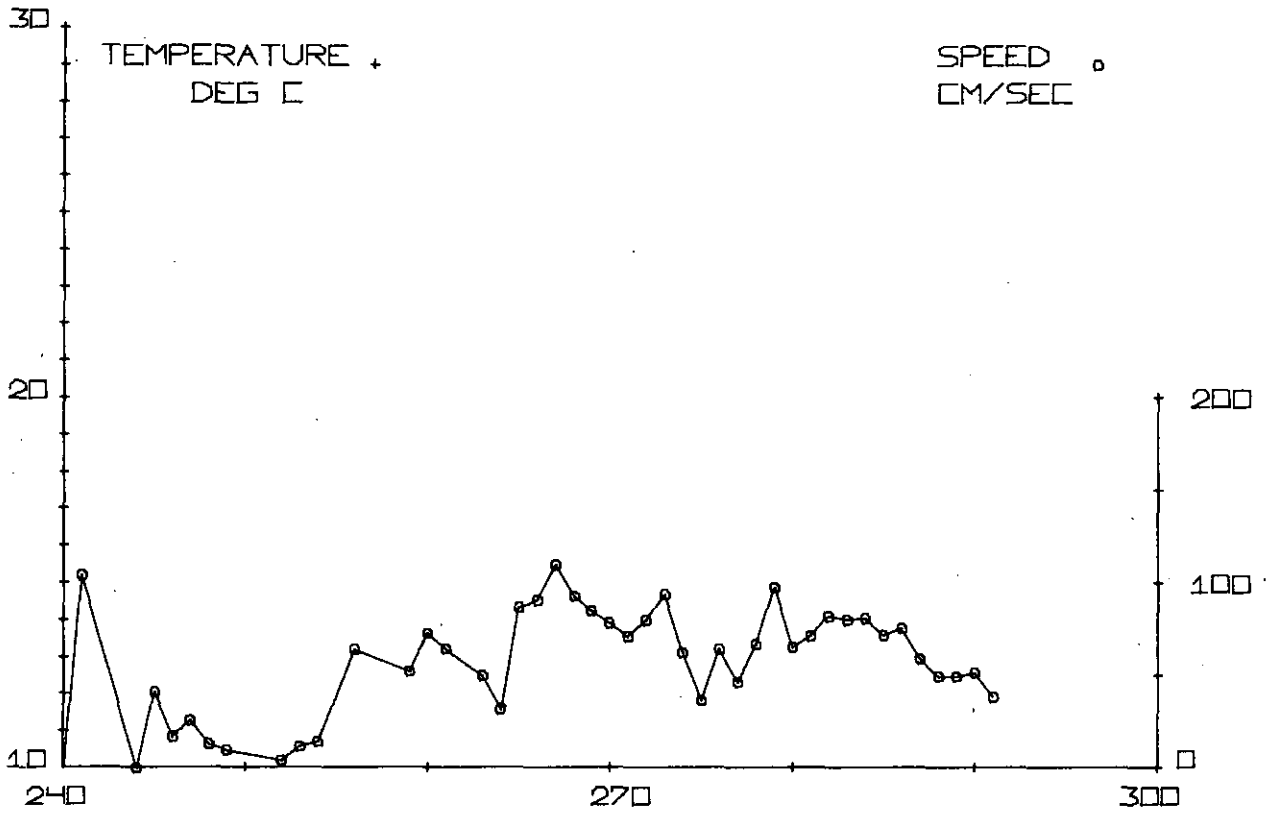
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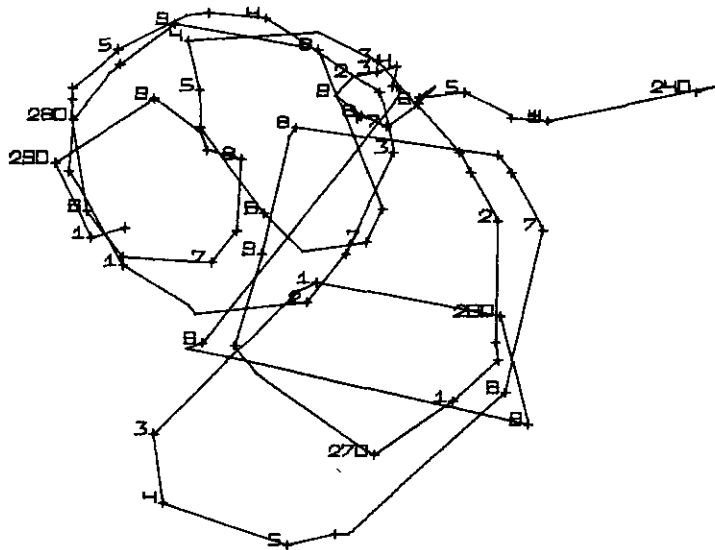
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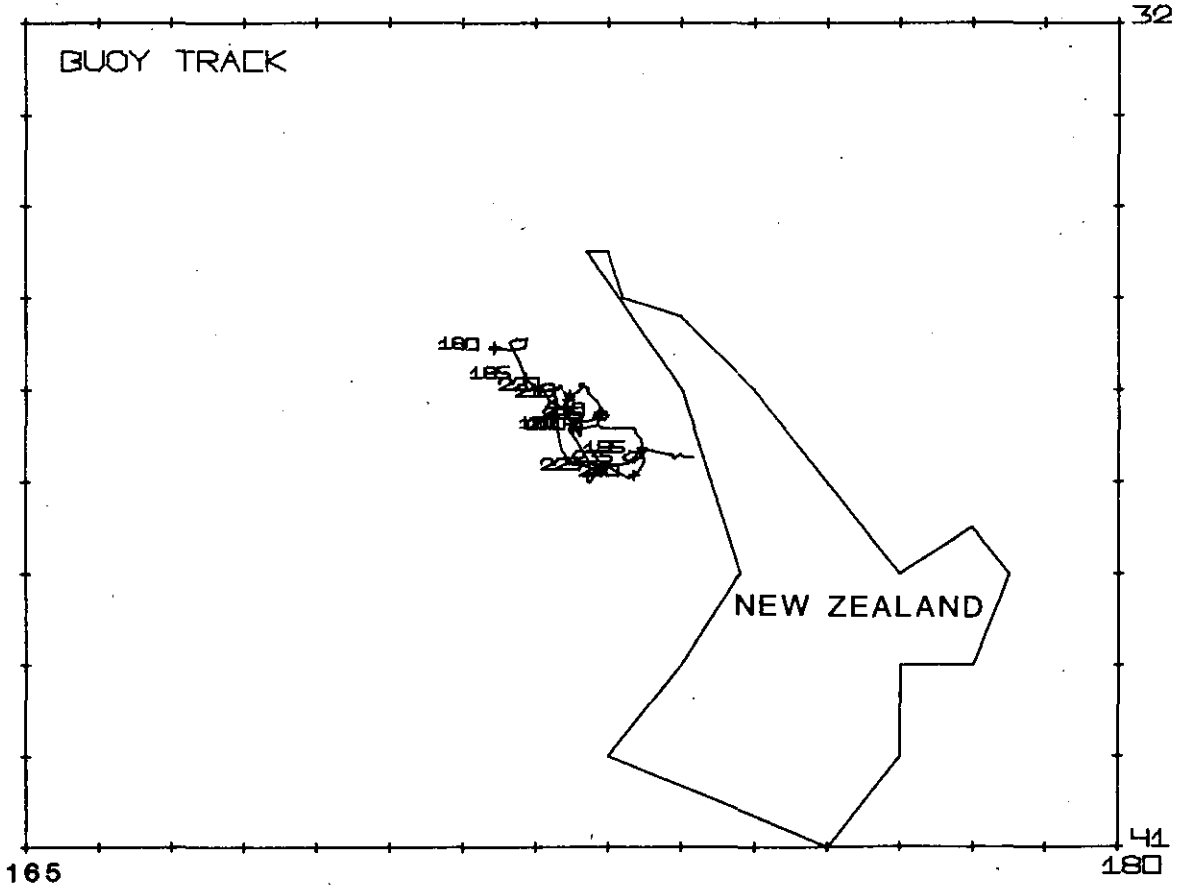
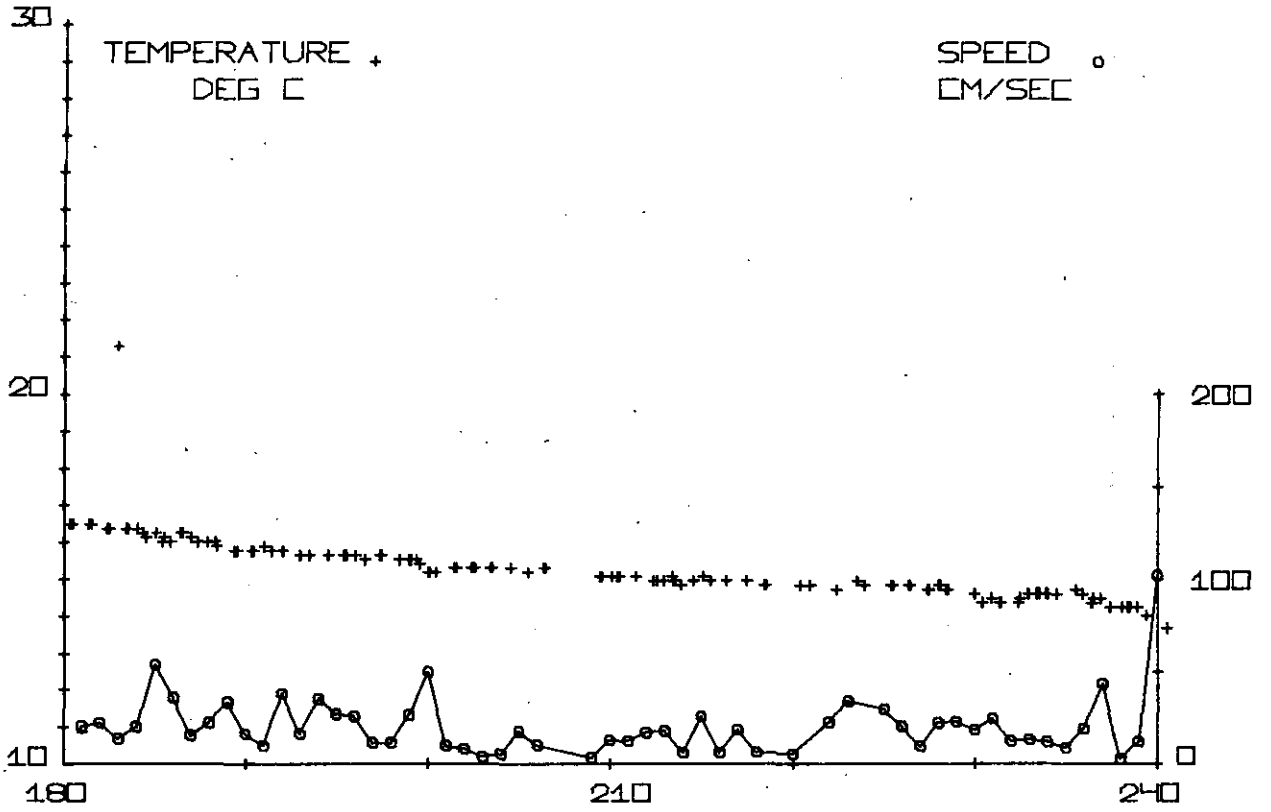
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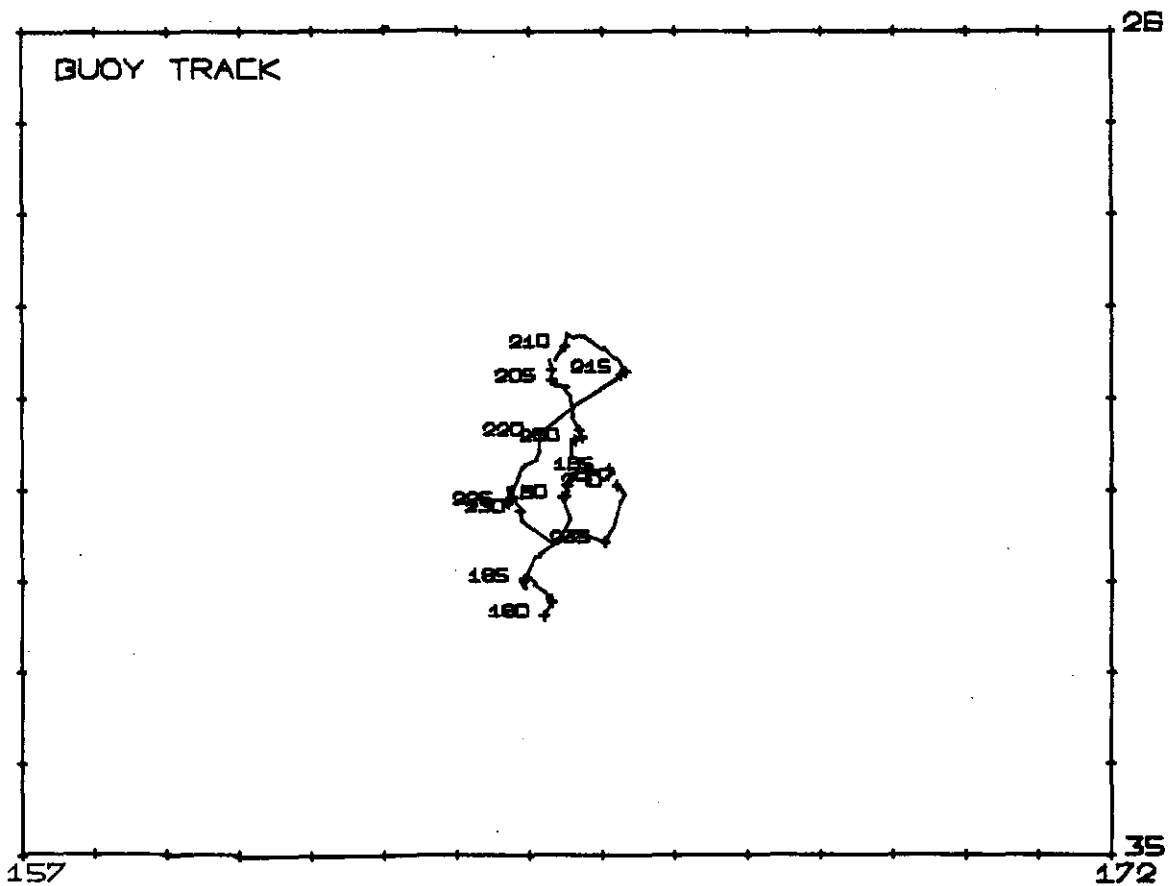
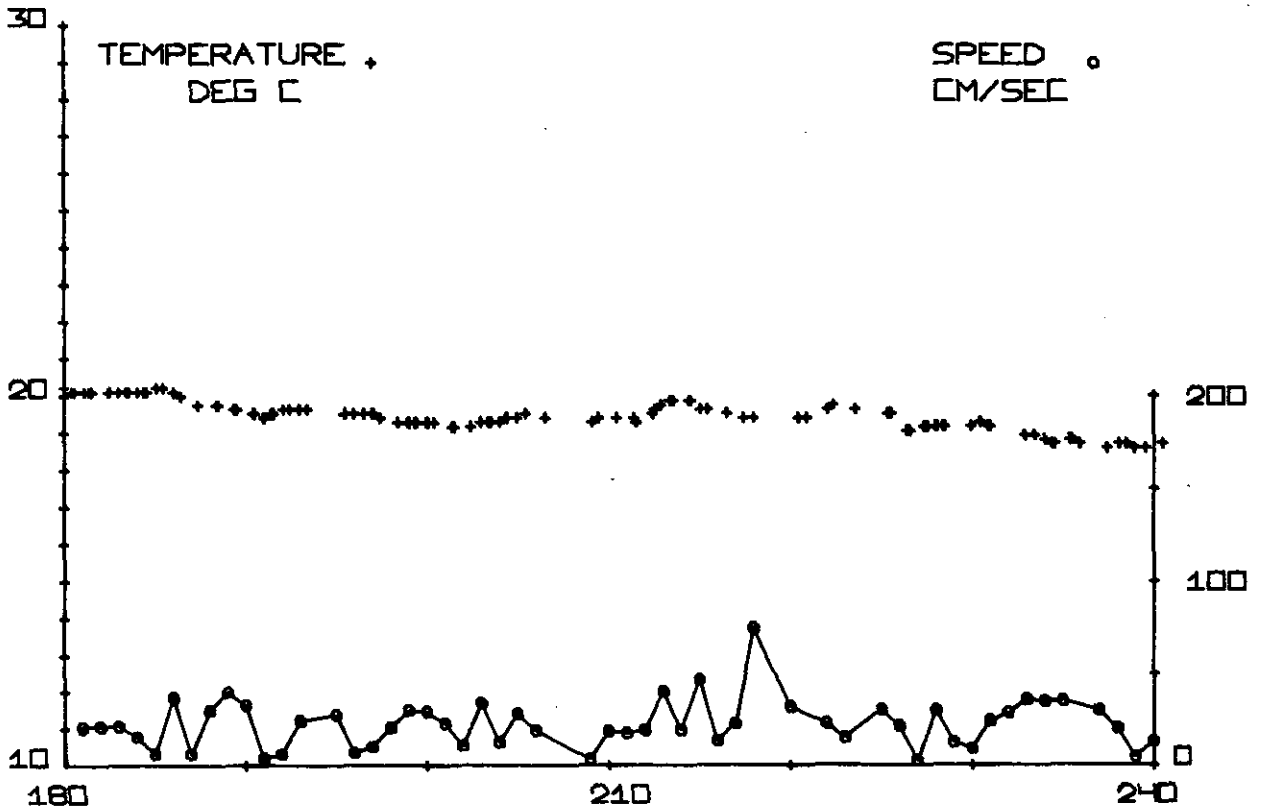
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DAYS 240 - 300



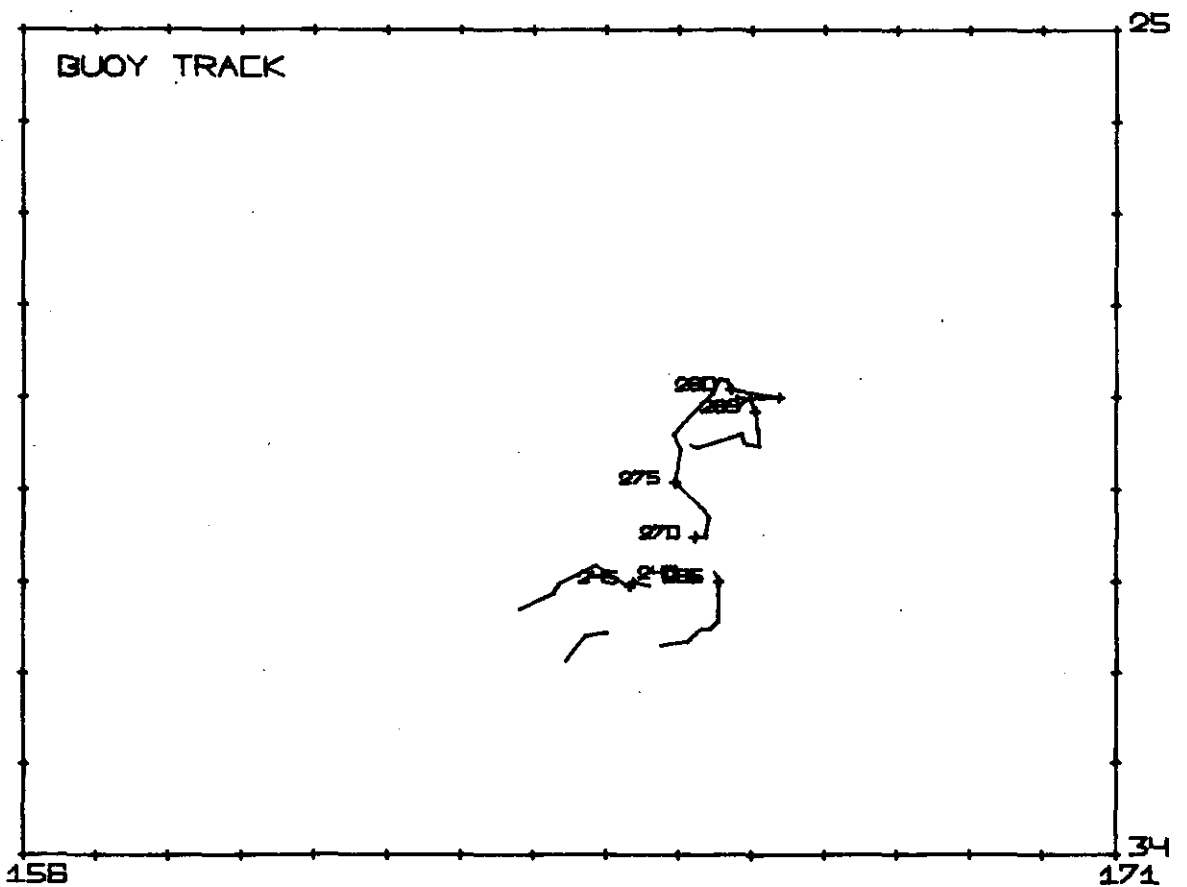
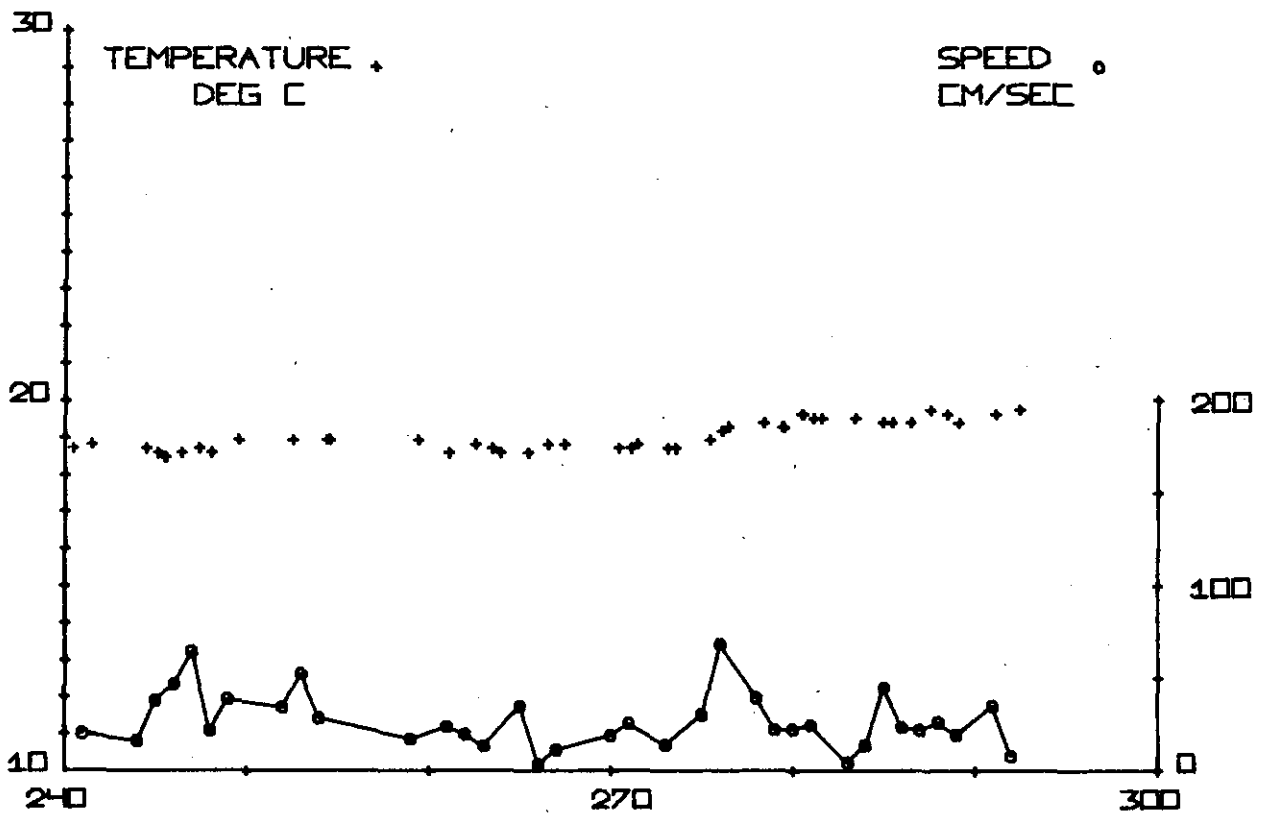
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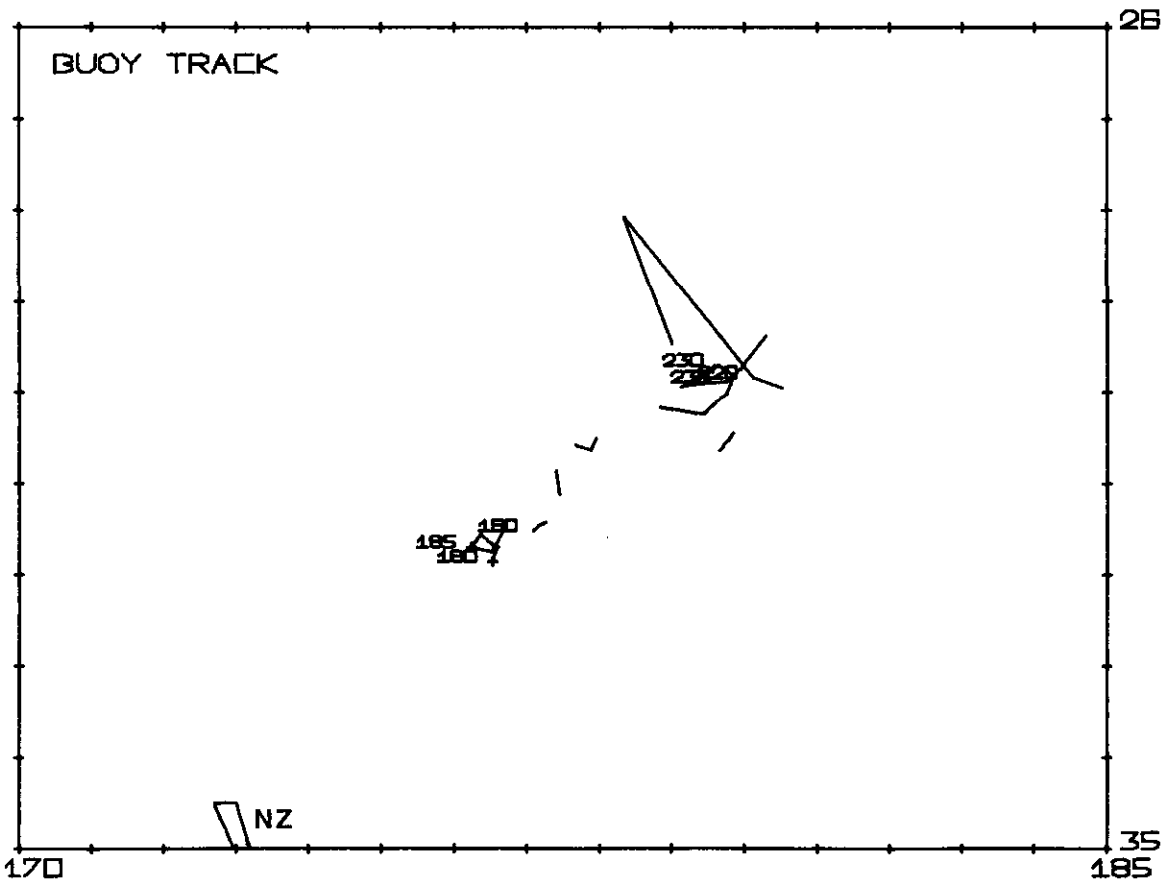
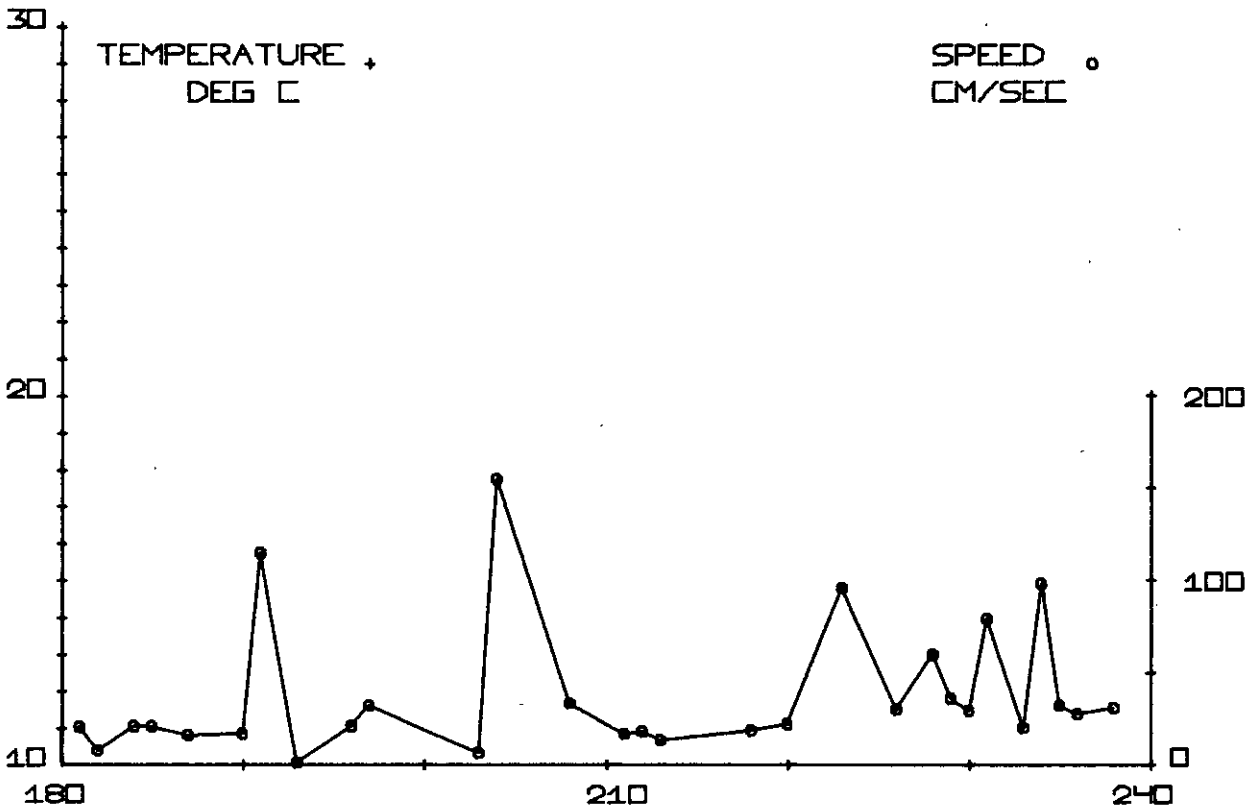
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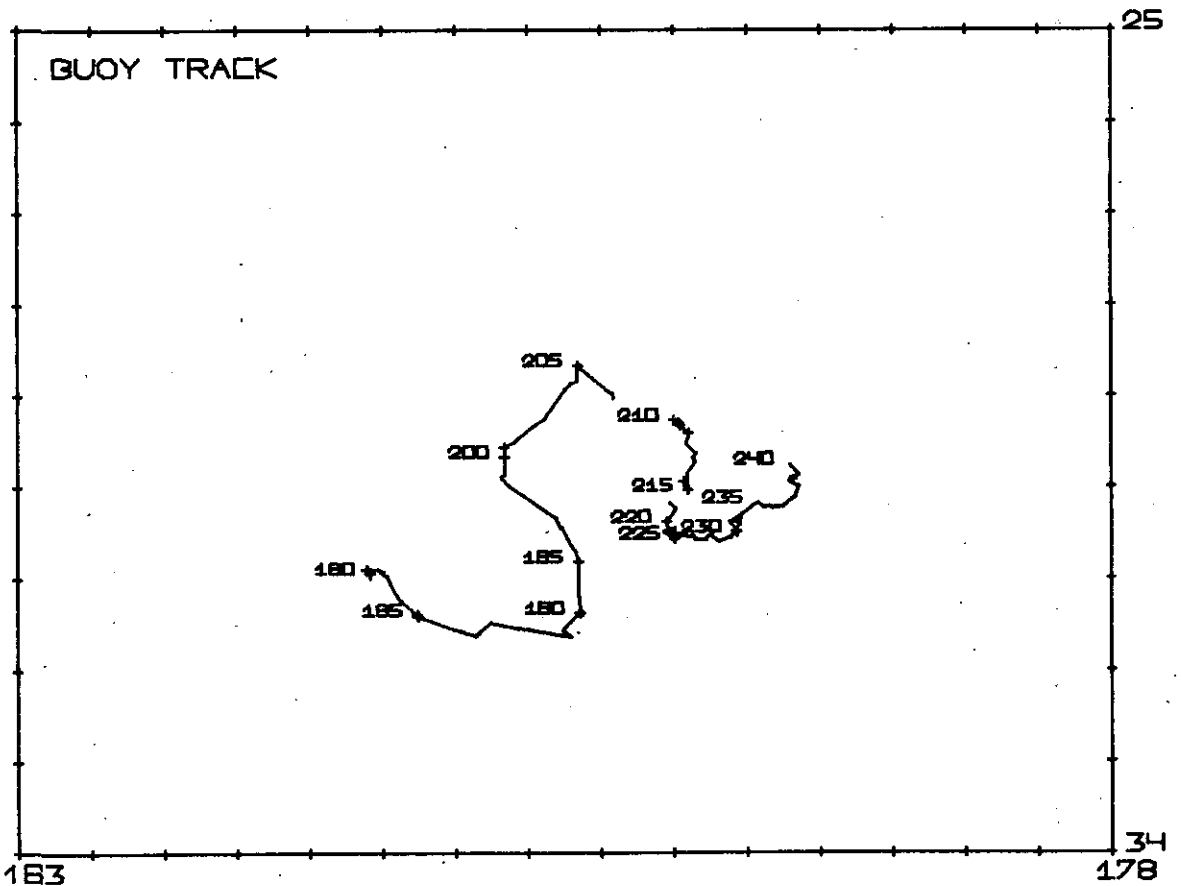
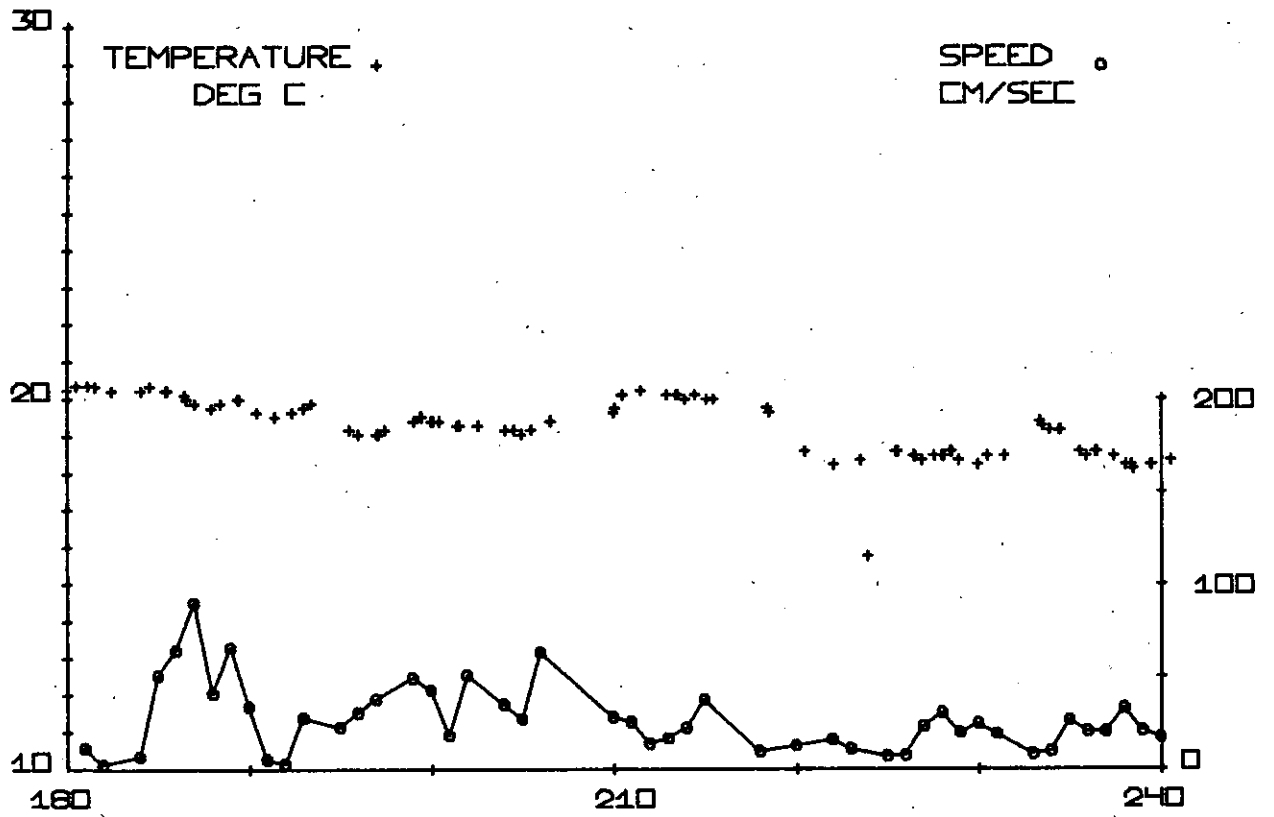
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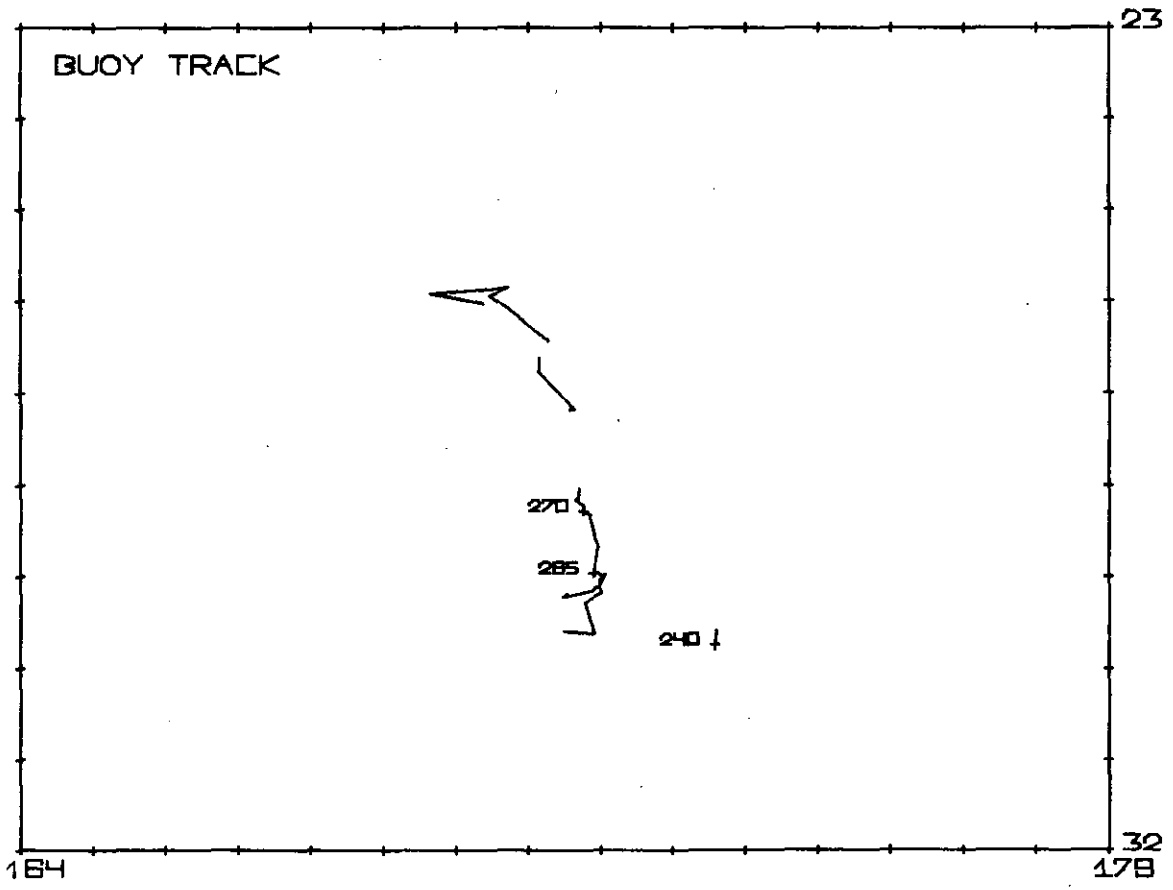
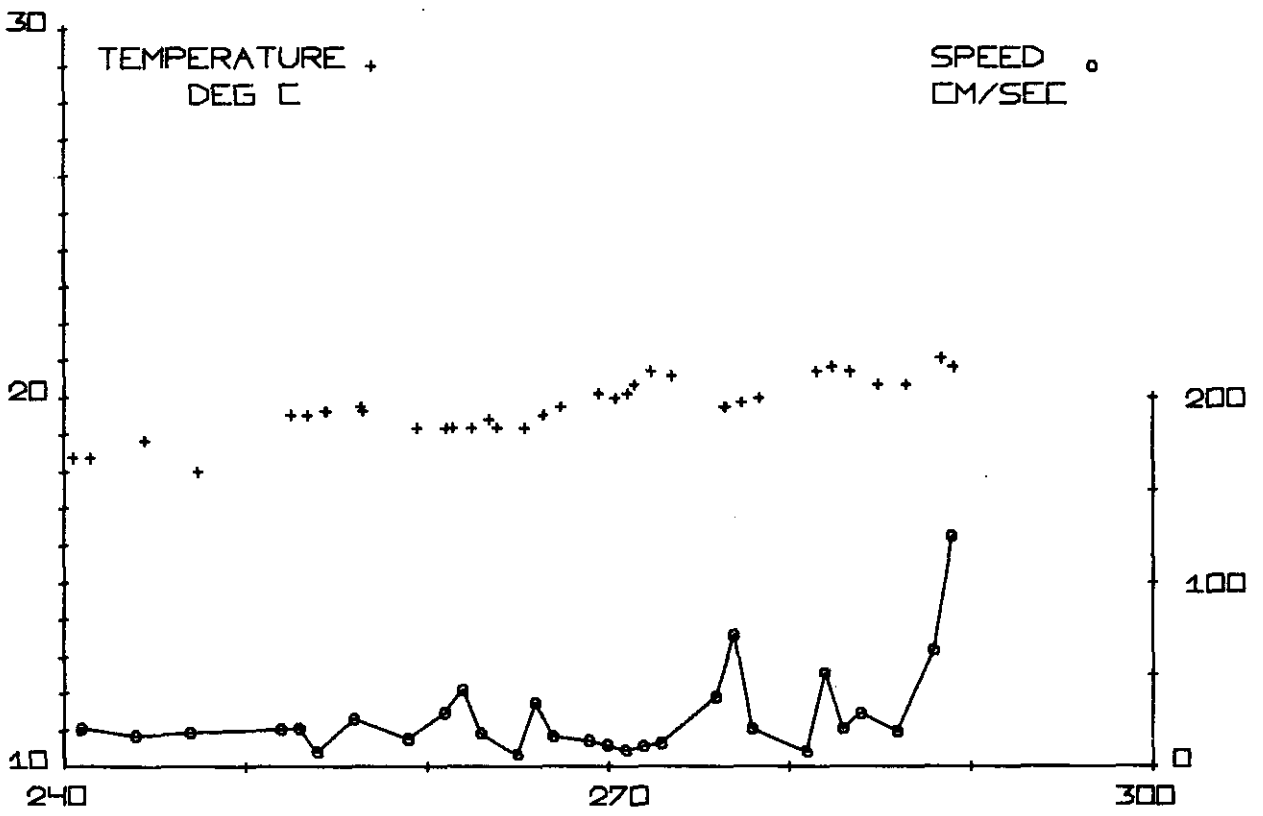
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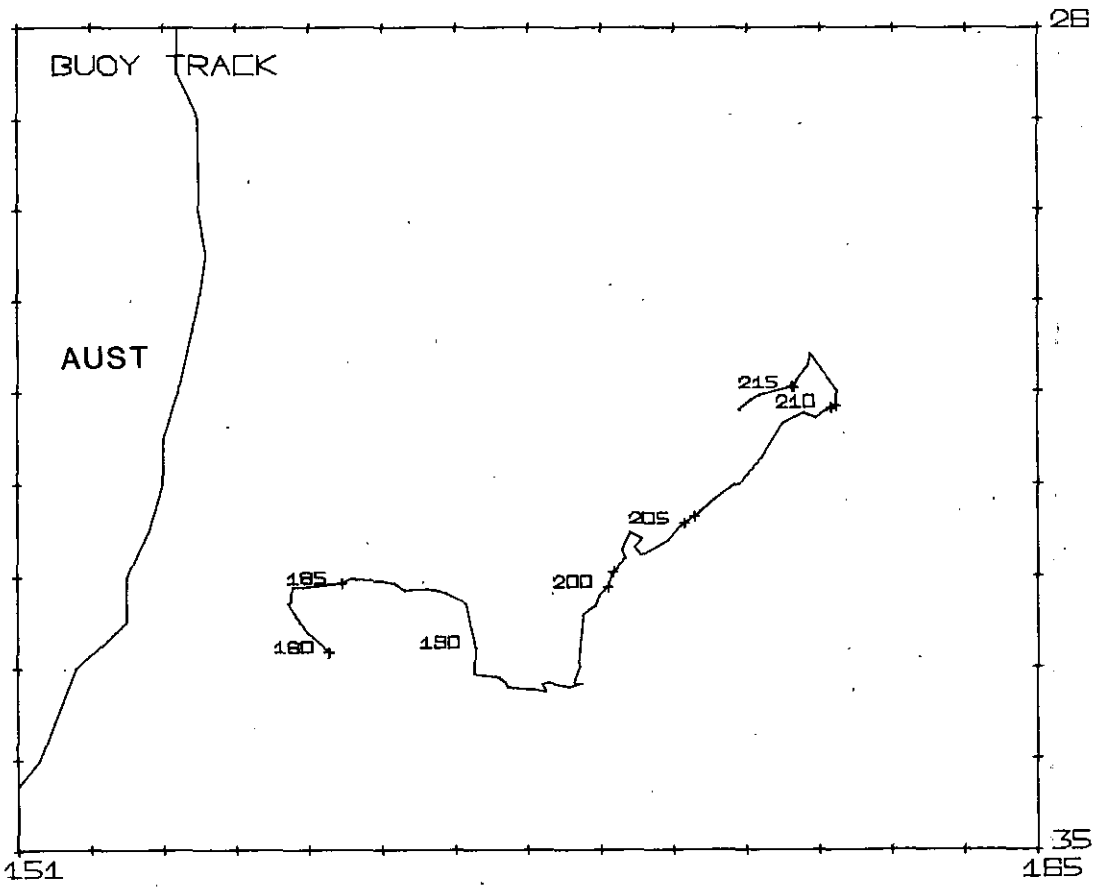
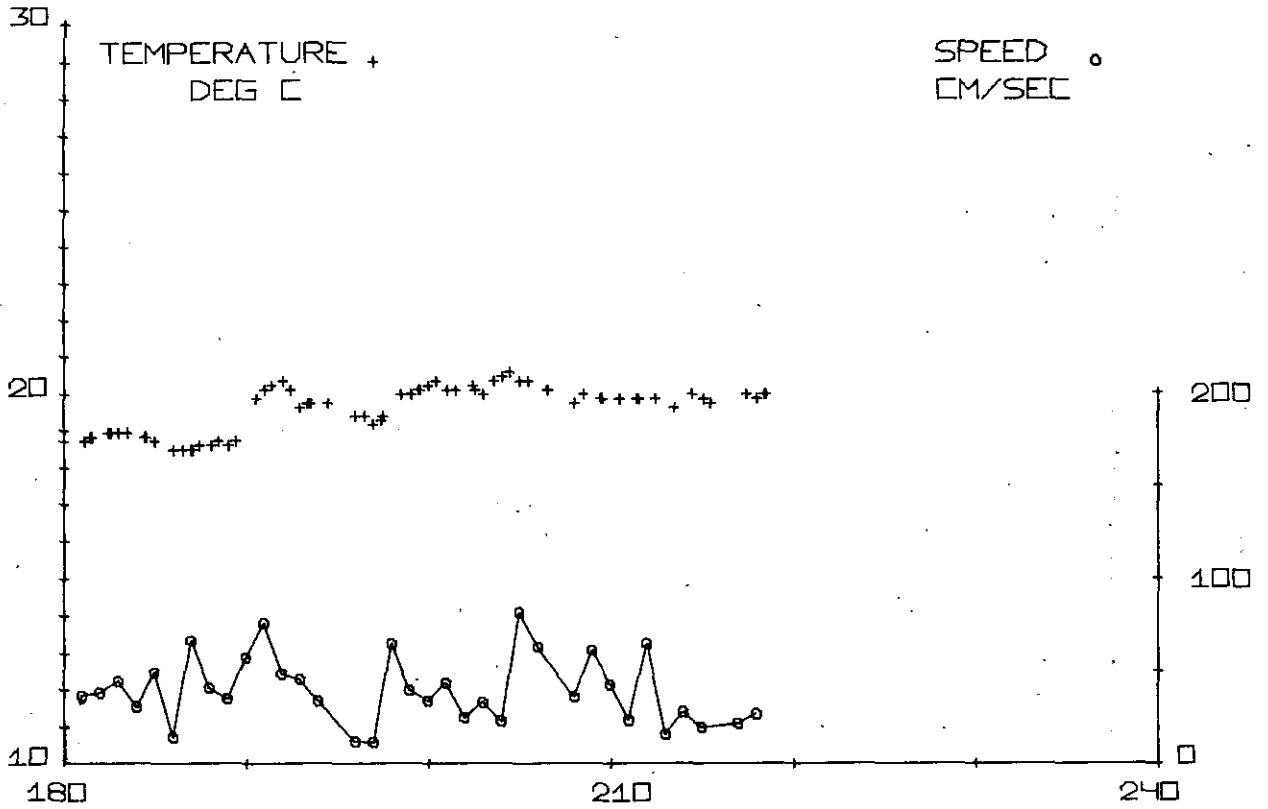
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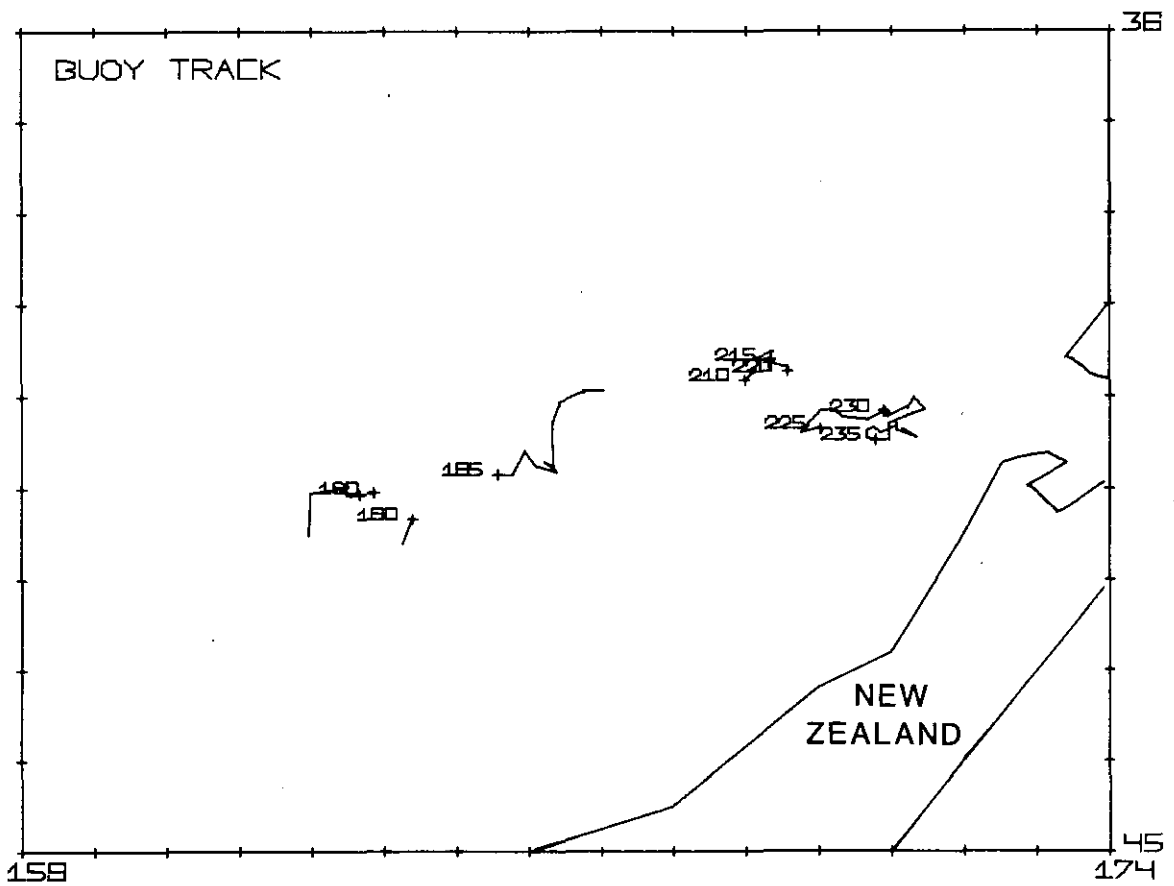
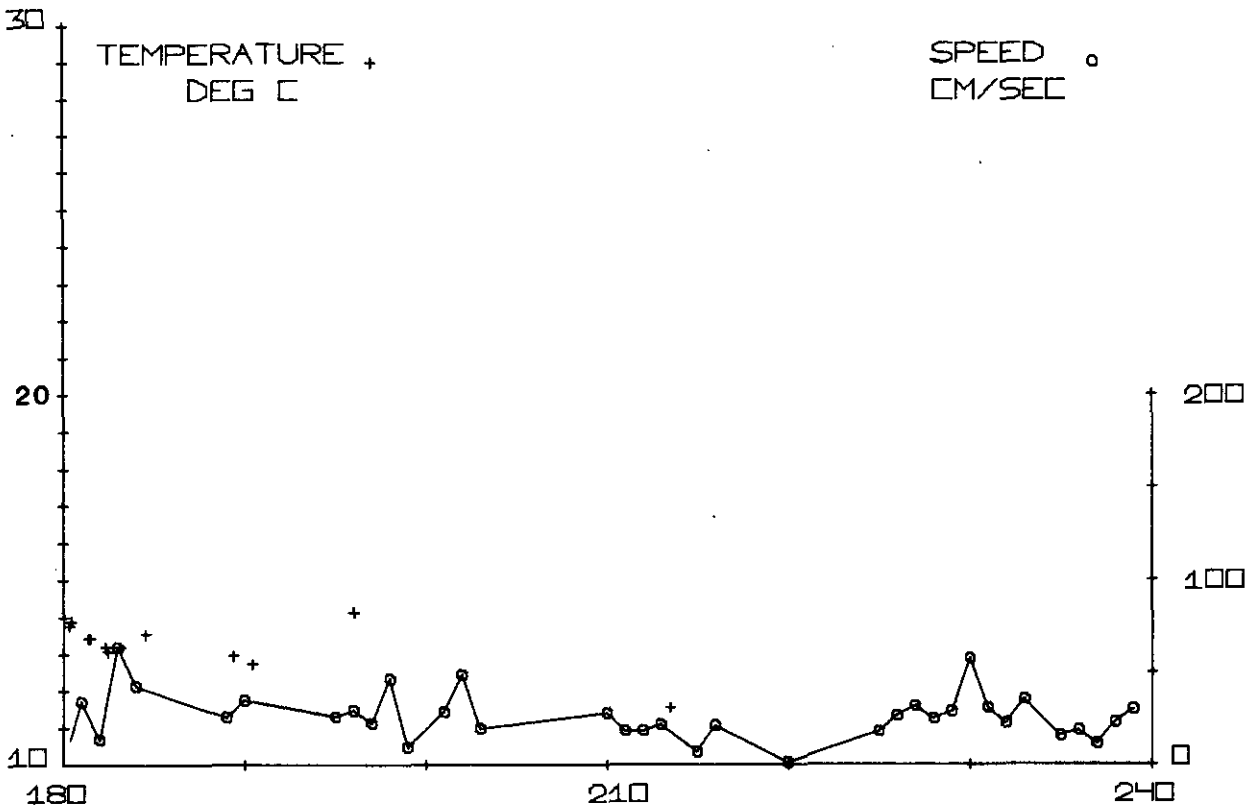
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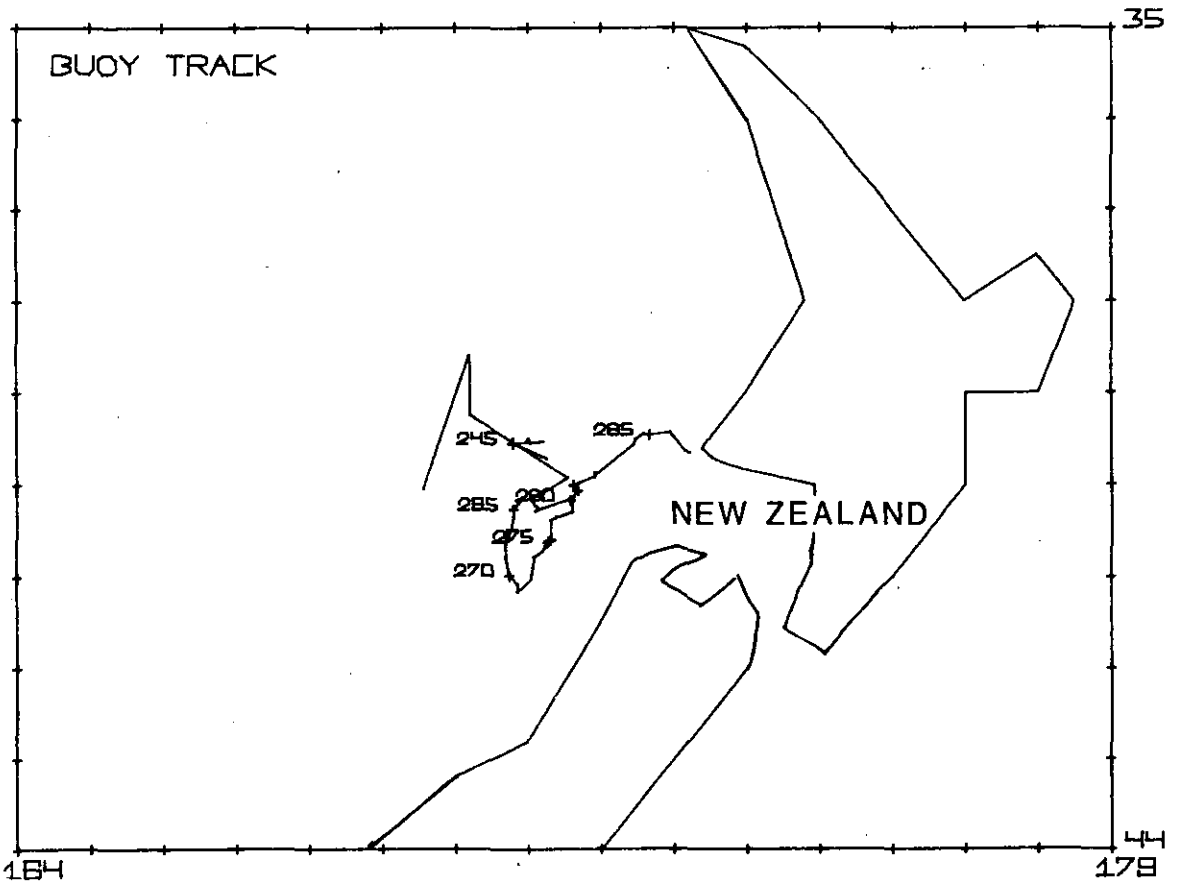
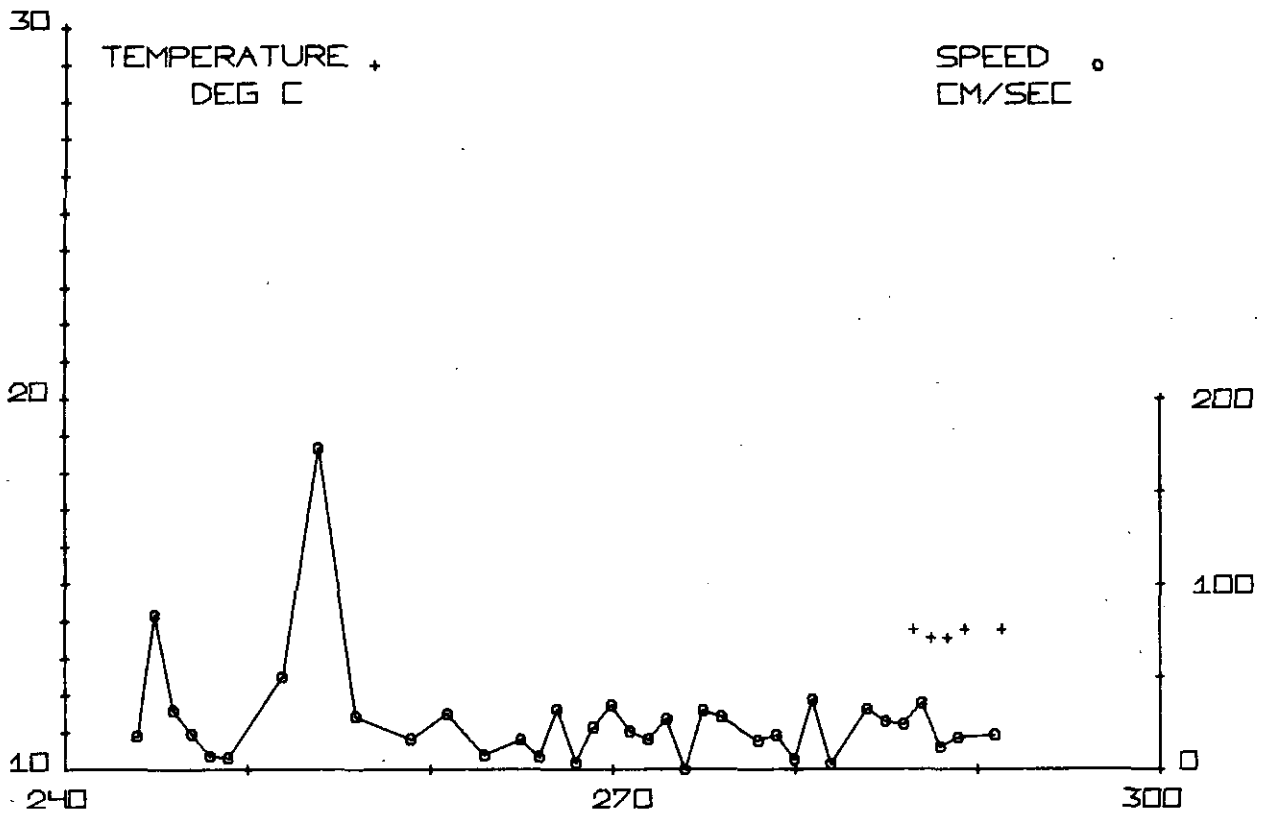
BUOY 1710 DAYS 180-240 78



BUOY 1728 DAYS 180-240 78



BUOY 172B DAYS 240-300 78



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