NOAA Data Report ERL AOML-7

DRIFTING BUOY DATA FROM THE EQUATORIAL PACIFIC OCEAN FOR THE PERIOD NOVEMBER 1, 1981 THROUGH DECEMBER 31, 1983

Mayra C. Pazos

Carmen E. Acero
Cooperative Institute for Marine and Atmospheric Studies
University of Miami
Miami, Florida

Atlantic Oceanic and Meteorological Laboratory
Miami, Florida
November 1985

UNITED STATES
DEPARTMENT OF COMMERCE

Malcolm Baldrige,
Secretary

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

Anthony J. Calio,
Administrator

Environmental Research
Laboratories

Vernon E. Derr,
Director

NOTICE

Mention of a commercial company or product does not constitute an endorsement by NOAA Environmental Research Laboratories. Use for publicity or advertising purposes of information from this publication concerning proprietary products or the tests of such products is not authorized.

CONTENTS

DRIFTING BUOY DATA FROM THE EQUATORIAL PACIFIC FOR THE PERIOD NOVEMBER 1, 1981 THROUGH DECEMBER 31, 1983

INTRODUCTION

Since February 1979, AOML has regularly deployed satellite-tracked drifting buoys in the eastern tropical Pacific as part of the EPOCS program. This data report contains data collected during the period of November 1, 1981 through December 31, 1983. Table 1 details the deployment times and locations of these buoys.

BUOY HARDWARE

All of the buoys used in this project were of similar design although there were some variations in the type of environmental sensors carried. The buoys were designed and constructed by the Polar Research Laboratory, Inc., in cooperation with the NOAA Data Buoy Office. The basic buoy consists of a cylindrical spar buoy with a conical flotation collar and a ballasted 2 m by 10 m windowshade drogue attached to the surface float by a 10 m or 30 m nylon tether. A variety of environmental sensors have been used, including water temperature, wind speed, drogue tension, and battery voltage (see Table 1).

The data collection and buoy location were performed by Service ARGOS. With the ARGOS System, a data message is transmitted by each buoy approximately every 51.4 seconds. Whenever a satellite (one of the TIROS-N or NOAA-6 series) is within receiving range, the data message and the Doppler signals from which the position coordinates of the buoy are calculated are recorded. This information is relayed through a ground station to Service ARGOS in Toulouse, France, where preliminary processing is done. The data are compiled and then made available to the system users in a computer compatible magnetic tape format. Further data processing was performed at AOML.

DESCRIPTION OF SENSORS

(1) Water Temperature. Water temperature was measured by a thermistor which was embedded in the buoy hull at a depth of about 1 m. The buoy electronics convert the resistance of the thermistor to an eight-bit digital word (0-255 decimal) giving a least count resolution of about 0.156°C. Calibrations provided by PRL give a stated minimum accuracy of 1°C (0.3°C rms).

(2) Drogue Sensors. The type of sensor used provides an "on-off" signal depending on whether the tether tension exceeds some threshold.

(3) Wind Speed Sensors. The wind speed sensors vary from buoy to buoy but all involve a rotor mounted on the top of the buoy which activates a counter each revolution of the rotor. These counts are scaled and stored for subsequent transmission. The transmission to the satellite includes both the current instantaneous wind speed counts and the output of a buffer which contains a running, weighted average of the past 512

instantaneous wind speed counts. This results in a wind speed record that has essentially undergone a low-pass filter with a 1/e time constant of 7.3 hours. The wind speeds shown are the low-pass filtered winds.

DATA PROCESSING AND DISPLAY

The raw data on the tapes supplied by Service ARGOS are translated and converted to engineering units (for those buoys for which Service ARGOS has not already applied the correct calibration equations) and sorted by buoy identification number, then stored as disk files ("B" files) on our computer system. The position data are then edited to remove spurious points which imply an average speed between two fixes of greater than 3 knots, and then further smoothing and interpolation to uniform six-hour intervals is performed. The smoothed position data are also used to compute north-component and east-component velocities for each six-hour interval. These velocities are then sorted by Marsden squares and archived for further analysis.

The data editing procedures used in processing the data presented in this and previous reports do not cope effectively with some of the errors that occur in the data. In consequence, "spiking" occurs occasionally in some of the velocity component time series. An example occurs at about JD 1230 in the data from buoy #2199. Procedures have subsequently been devised for editing such data more effectively, but it was judged of insufficient importance for the report to recompute all of the data.

The sensor data can be plotted directly from the "B" files in one of three ways: (1) raw data; (2) data smoothed by a three-point triangular filter; or (3) data block-averaged over one-day intervals.

The basic data from the drifting buoys are displayed here in several forms: trajectory plots, time series plots, and monthly composites.

The trajectory plots are simply the sequence of smoothed six-hourly positions. In addition to the actual trajectory, we have indicated the actual deployment position, which sometimes occurred a few days before regular position reports were received.

The time series plots include the north-component and east-component of buoy velocity, the near-surface water temperature, and wind speed. The buoy velocity components have been further smoothed by passing through a three-point triangular running average. The temperature data have been block-averaged over daily intervals and out of range points have been eliminated. wind speed sensors, in most cases, went bad after a short period of time.

The monthly composite plots consist of one vector for each buoy representing the dislacement for that buoy during the indicated month. The associated speed scale applies only to those buoys which transmitted data for the entire month.

Several areas of complicated motion have been analyzed for greater clarity. Deployment location for each buoy is indicated on the charts by a star; crosses along the trajectories denote subsequent 10 day intervals; closed circles indicate the day the drogue was lost; open circles show that

the buoy ended transmission without indicating lost of drogue; closed triangles mean that the trajectory has been cut off for the purpose of this report but buoy continues transmitting with no drogue; open triangles, same as above but buoy has not reported loss of drogue as of the last day covered by this report.

ACKNOWLEDGMENTS

The authors would like to acknowledge Ms. Gail Derr for doing all the typing and producing all tables. Recognition is also due to the graphics and photography staff for their work on the illustrations.

Table 1: Drift Buoy History.

Buoy #	Deployment Day (1)	Deployment Latitude	Deployment Longitude	Drogue Lost Day (1)	Last Message Day (1)
2162	1059	10.56S	81.99W	1183 (2)	1665
2163	1425	8.04S	85.02W	1508 (3)	1509
2166	899	3.50S	84.97W	959 (3) (4)	1450
2171	900	2.45S	85.00W	981 (3) (4)	1338
2172	1182	2.02S	82.47W	1395 (3)	1569
2174	900	1.50S	85.00W	982 (3) (4)	1455
2175	1665	1.49S	85.07W	1708 (3)	1746
2176	1162	5.12S	81.47W	1230 (3)	1255
2177	1351	12.04S	77.14W	1467 (3) (5)	1944
2178	1180	11.63S	77.80W	1314 (3)	1635
2179	901	0.50S	84.97W	1057 (3) (4)	1424
2180	1384	12.44S	77.92W	1489 (3) (5)	1962
2181	1062	6.60S	84.99W	1246 (2)	1644
2182	1428	17.44S	74.77W	1493 (3)	1804
2183	1061	9.97S	85.00W	1184 (2)	1389
2184	1780	1.03N	82.54W	1926 (3) (5)	1926
2185	1660	10.50S	80.94W	1910 (3) (5)	2192
2186	1663	5.04S	81.78W	1764 (3) (5)	1944
2187	1069	0.29S	85.01W	1278 (3)	1466
2188	1056	10.59S	78.67W	1311 (3)	1530
2190	1182	2.01S	82.45W	1296 (3)	1678
2191	1069	2.77S	85.09W	1706 (3)	1706
2192	1423	10.49S	80.50W	1480 (3) (5)	1920
2197	1171	10.42S	80.93W	1392 (3) (6)	1434
2198	1164	5.03S	82.11W	1241 (3)	1672
2199	1058	10.52S	80.06W	1561 (3)	1561
2200	1172	10.30S	79.50W	1271 (3)	1789
4400	1414	3.76S	82.81W	1557 (3) (5)	2115
4401	1426	5.55S	84.95W	1659 (3)	1761
4402	1433	0.003S	85.07W	1457 (3)	1457
4403	1768	2.183S	81.07W	1836 (3) (5)	2096
4404	1407	2.174N	92.92W	1778 (3) (5)	1955
4405	1413	0.087N	85.00W	1629 (3) (5)	1871
4406	1634	14.97S	78.48W	1750 (3) (5)	2096
4407	1571	0.039N	99.14W	1632 (3)	1632
4408	1556	10.514S	82.46W	1686 (3) (5)	1857
4409	1603	0.015N	84.662W	1631 (3)	1631
4411	1543	5.686N	82.447W	1607 (3)	1607
4413	1547	0.018S	82.354W	1597 (3)	1597
4414	1552	5.025S	82.603W	1732 (3) (5)	2048
4415	1600	2.497N	85.028W	1949 (3) (5)	2048
4416	1544	4.50N	85.28W	1844 (3) (5)	2126
4417	1548	0.618N	87.920W	1559 (3)	1559

(1) Base year for all buoys is January 1, 1979. Table 2 shows conversion from Julian day to: day, month and year.

(2) These buoys had drogue tethers 30 meters long.

(3) These buoys had drogue tethers 10 meters long.

(4) These buoys were discussed in NOAA Technical Memorandum ERL AOML-60, therefore, we only cover here that last stage not covered then.

(5) Buoy cut off at day 1826 for the purpose of this report, but they were still transmitting.

(6) Shows a data gap from days 1392-1406.

Table 2. Julian Day Conversion

1027	23 OCT 81	1084	19 DEC 81	1141	14 FEB 82
1028	24 OCT 81	1085	20 DEC 81	1142	15 FEB 82
1029	25 OCT 81	1086	21 DEC 81	1143	16 FEB 82
1030	26 OCT 81	1087	22 DEC 81	1144	17 FEB 82
1031	27 OCT 81	1088	23 DEC 81	1145	18 FEB 82
1032	28 OCT 81	1089	24 DEC 81	1146	19 FEB 82
1033	29 OCT 81	1090	25 DEC 81	1147	20 FEB 82
1034	30 OCT 81	1091	26 DEC 81	1148	21 FEB 82
1035	31 OCT 81	1092	27 DEC 81	1149	22 FEB 82
1036	1 NOV 81	1093	28 DEC 81	1150	23 FEB 82
1037	2 NOV 81	1094	29 DEC 81	1151	24 FEB 82
1038	3 NOV 81	1095	30 DEC 81	1152	25 FEB 82
1039	4 NOV 81	1096	31 DEC 81	1153	26 FEB 82
1040	5 NOV 81	1097	1 JAN 82	1154	27 FEB 82
1041	6 NOV 81	1098	2 JAN 82	1155	28 FEB 82
1042	7 NOV 81	1099	3 JAN 82	1156	1 MAR 82
1043	8 NOV 81	1100	4 JAN 82	1157	2 MAR 82
1044	9 NOV 81	1101	5 JAN 82	1158	3 MAR 82
1045	10 NOV 81	1102	6 JAN 82	1159	4 MAR 82
1046	11 NOV 81	1103	7 JAN 82	1160	5 MAR 82
1047	12 NOV 81	1104	8 JAN 82	1161	6 MAR 82
1048	13 NOV 81	1105	9 JAN 82	1162	7 MAR 82
1049	14 NOV 81	1106	10 JAN 82	1163	8 MAR 82
1050	15 NOV 81	1107	11 JAN 82	1164	9 MAR 82
1051	16 NOV 81	1108	12 JAN 82	1165	10 MAR 82
1052	17 NOV 81	1109	13 JAN 82	1166	11 MAR 82
1053	18 NOV 81	1110	14 JAN 82	1167	12 MAR 82
1054	19 NOV 81	1111	15 JAN 82	1168	13 MAR 82
1055	20 NOV 81	1112	16 JAN 82	1169	14 MAR 82
1056	21 NOV 81	1113	17 JAN 82	1170	15 MAR 82
1057	22 NOV 81	1114	18 JAN 82	1171	16 MAR 82
1058	23 NOV 81	1115	19 JAN 82	1172	17 MAR 82
1059	24 NOV 81	1116	20 JAN 82	1173	18 MAR 82
1060	25 NOV 81	1117	21 JAN 82	1174	19 MAR 82
1061	26 NOV 81	1118	22 JAN 82	1175	20 MAR 82
1062	27 NOV 81	1119	23 JAN 82	1176	21 MAR 82
1063	28 NOV 81	1120	24 JAN 82	1177	22 MAR 82
1064	29 NOV 81	1121	25 JAN 82	1178	23 MAR 82
1065	30 NOV 81	1122	26 JAN 82	1179	24 MAR 82
1066	1 DEC 81	1123	27 JAN 82	1180	25 MAR 82
1067	2 DEC 81	1124	28 JAN 82	1181	26 MAR 82
1068	3 DEC 81	1125	29 JAN 82	1182	27 MAR 82
1069	4 DEC 81	1126	30 JAN 82	1183	28 MAR 82
1070	5 DEC 81	1127	31 JAN 82	1184	29 MAR 82
1071	6 DEC 81	1128	1 FEB 82	1185	30 MAR 82
1072	7 DEC 81	1129	2 FEB 82	1186	31 MAR 82
1073	8 DEC 81	1130	3 FEB 82	1187	1 APR 82
1074	9 DEC 81	1131	4 FEB 82	1188	2 APR 82
1075	10 DEC 81	1132	5 FEB 82	1189	3 APR 82
1076	11 DEC 81	1133	6 FEB 82	1190	4 APR 82
1077	12 DEC 81	1134	7 FEB 82	1191	5 APR 82
1078	13 DEC 81	1135	8 FEB 82	1192	6 APR 82
1079	14 DEC 81	1136	9 FEB 82	1193	7 APR 82
1080	15 DEC 81	1137	10 FEB 82	1194	8 APR 82
1081	16 DEC 81	1138	11 FEB 82	1195	9 APR 82
1082	17 DEC 81	1139	12 FEB 82	1196	10 APR 82
1083	18 DEC 81	1140	13 FEB 82	1197	11 APR 82

Table 2. (continued)

1198	12 APR 82	1255	8 JUN 82	1312	4 AUG 82
1199	13 APR 82	1256	9 JUN 82	1313	5 AUG 82
1200	14 APR 82	1257	10 JUN 82	1314	6 AUG 82
1201	15 APR 82	1258	11 JUN 82	1315	7 AUG 82
1202	16 APR 82	1259	12 JUN 82	1316	8 AUG 82
1203	17 APR 82	1260	13 JUN 82	1317	9 AUG 82
1204	18 APR 82	1261	14 JUN 82	1318	10 AUG 82
1205	19 APR 82	1262	15 JUN 82	1319	11 AUG 82
1206	20 APR 82	1263	16 JUN 82	1320	12 AUG 82
1207	21 APR 82	1264	17 JUN 82	1321	13 AUG 82
1208	22 APR 82	1265	18 JUN 82	1322	14 AUG 82
1209	23 APR 82	1266	19 JUN 82	1323	15 AUG 82
1210	24 APR 82	1267	20 JUN 82	1324	16 AUG 82
1211	25 APR 82	1268	21 JUN 82	1325	17 AUG 82
1212	26 APR 82	1269	22 JUN 82	1326	18 AUG 82
1213	27 APR 82	1270	23 JUN 82	1327	19 AUG 82
1214	28 APR 82	1271	24 JUN 82	1328	20 AUG 82
1215	29 APR 82	1272	25 JUN 82	1329	21 AUG 82
1216	30 APR 82	1273	26 JUN 82	1330	22 AUG 82
1217	1 MAY 82	1274	27 JUN 82	1331	23 AUG 82
1218	2 MAY 82	1275	28 JUN 82	1332	24 AUG 82
1219	3 MAY 82	1276	29 JUN 82	1333	25 AUG 82
1220	4 MAY 82	1277	30 JUN 82	1334	26 AUG 82
1221	5 MAY 82	1278	1 JUL 82	1335	27 AUG 82
1222	6 MAY 82	1279	2 JUL 82	1336	28 AUG 82
1223	7 MAY 82	1280	3 JUL 82	1337	29 AUG 82
1224	8 MAY 82	1281	4 JUL 82	1338	30 AUG 82
1225	9 MAY 82	1282	5 JUL 82	1339	31 AUG 82
1226	10 MAY 82	1283	6 JUL 82	1340	1 SEP 82
1227	11 MAY 82	1284	7 JUL 82	1341	2 SEP 82
1228	12 MAY 82	1285	8 JUL 82	1342	3 SEP 82
1229	13 MAY 82	1286	9 JUL 82	1343	4 SEP 82
1230	14 MAY 82	1287	10 JUL 82	1344	5 SEP 82
1231	15 MAY 82	1288	11 JUL 82	1345	6 SEP 82
1232	16 MAY 82	1289	12 JUL 82	1346	7 SEP 82
1233	17 MAY 82	1290	13 JUL 82	1347	8 SEP 82
1234	18 MAY 82	1291	14 JUL 82	1348	9 SEP 82
1235	19 MAY 82	1292	15 JUL 82	1349	10 SEP 82
1236	20 MAY 82	1293	16 JUL 82	1350	11 SEP 82
1237	21 MAY 82	1294	17 JUL 82	1351	12 SEP 82
1238	22 MAY 82	1295	18 JUL 82	1352	13 SEP 82
1239	23 MAY 82	1296	19 JUL 82	1353	14 SEP 82
1240	24 MAY 82	1297	20 JUL 82	1354	15 SEP 82
1241	25 MAY 82	1298	21 JUL 82	1355	16 SEP 82
1242	26 MAY 82	1299	22 JUL 82	1356	17 SEP 82
1243	27 MAY 82	1300	23 JUL 82	1357	18 SEP 82
1244	28 MAY 82	1301	24 JUL 82	1358	19 SEP 82
1245	29 MAY 82	1302	25 JUL 82	1359	20 SEP 82
1246	30 MAY 82	1303	26 JUL 82	1360	21 SEP 82
1247	31 MAY 82	1304	27 JUL 82	1361	22 SEP 82
1248	1 JUN 82	1305	28 JUL 82	1362	23 SEP 82
1249	2 JUN 82	1306	29 JUL 82	1363	24 SEP 82
1250	3 JUN 82	1307	30 JUL 82	1364	25 SEP 82
1251	4 JUN 82	1308	31 JUL 82	1365	26 SEP 82
1252	5 JUN 82	1309	1 AUG 82	1366	27 SEP 82
1253	6 JUN 82	1310	2 AUG 82	1367	28 SEP 82
1254	7 JUN 82	1311	3 AUG 82	1368	29 SEP 82

Table 2. (continued)

1369	30 SEP 82	1426	26 NOV 82	1483	22 JAN 83
1370	1 OCT 82	1427	27 NOV 82	1484	23 JAN 83
1371	2 OCT 82	1428	28 NOV 82	1485	24 JAN 83
1372	3 OCT 82	1429	29 NOV 82	1486	25 JAN 83
1373	4 OCT 82	1430	30 NOV 82	1487	26 JAN 83
1374	5 OCT 82	1431	1 DEC 82	1488	27 JAN 83
1375	6 OCT 82	1432	2 DEC 82	1489	28 JAN 83
1376	7 OCT 82	1433	3 DEC 82	1490	29 JAN 83
1377	8 OCT 82	1434	4 DEC 82	1491	30 JAN 83
1378	9 OCT 82	1435	5 DEC 82	1492	31 JAN 83
1379	10 OCT 82	1436	6 DEC 82	1493	1 FEB 83
1380	11 OCT 82	1437	7 DEC 82	1494	2 FEB 83
1381	12 OCT 82	1438	8 DEC 82	1495	3 FEB 83
1382	13 OCT 82	1439	9 DEC 82	1496	4 FEB 83
1383	14 OCT 82	1440	10 DEC 82	1497	5 FEB 83
1384	15 OCT 82	1441	11 DEC 82	1498	6 FEB 83
1385	16 OCT 82	1442	12 DEC 82	1499	7 FEB 83
1386	17 OCT 82	1443	13 DEC 82	1500	8 FEB 83
1387	18 OCT 82	1444	14 DEC 82	1501	9 FEB 83
1388	19 OCT 82	1445	15 DEC 82	1502	10 FEB 83
1389	20 OCT 82	1446	16 DEC 82	1503	11 FEB 83
1390	21 OCT 82	1447	17 DEC 82	1504	12 FEB 83
1391	22 OCT 82	1448	18 DEC 82	1505	13 FEB 83
1392	23 OCT 82	1449	19 DEC 82	1506	14 FEB 83
1393	24 OCT 82	1450	20 DEC 82	1507	15 FEB 83
1394	25 OCT 82	1451	21 DEC 82	1508	16 FEB 83
1395	26 OCT 82	1452	22 DEC 82	1509	17 FEB 83
1396	27 OCT 82	1453	23 DEC 82	1510	18 FEB 83
1397	28 OCT 82	1454	24 DEC 82	1511	19 FEB 83
1398	29 OCT 82	1455	25 DEC 82	1512	20 FEB 83
1399	30 OCT 82	1456	26 DEC 82	1513	21 FEB 83
1400	31 OCT 82	1457	27 DEC 82	1514	22 FEB 83
1401	1 NOV 82	1458	28 DEC 82	1515	23 FEB 83
1402	2 NOV 82	1459	29 DEC 82	1516	24 FEB 83
1403	3 NOV 82	1460	30 DEC 82	1517	25 FEB 83
1404	4 NOV 82	1461	31 DEC 82	1518	26 FEB 83
1405	5 NOV 82	1462	1 JAN 83	1519	27 FEB 83
1406	6 NOV 82	1463	2 JAN 83	1520	28 FEB 83
1407	7 NOV 82	1464	3 JAN 83	1521	1 MAR 83
1408	8 NOV 82	1465	4 JAN 83	1522	2 MAR 83
1409	9 NOV 82	1466	5 JAN 83	1523	3 MAR 83
1410	10 NOV 82	1467	6 JAN 83	1524	4 MAR 83
1411	11 NOV 82	1468	7 JAN 83	1525	5 MAR 83
1412	12 NOV 82	1469	8 JAN 83	1526	6 MAR 83
1413	13 NOV 82	1470	9 JAN 83	1527	7 MAR 83
1414	14 NOV 82	1471	10 JAN 83	1528	8 MAR 83
1415	15 NOV 82	1472	11 JAN 83	1529	9 MAR 83
1416	16 NOV 82	1473	12 JAN 83	1530	10 MAR 83
1417	17 NOV 82	1474	13 JAN 83	1531	11 MAR 83
1418	18 NOV 82	1475	14 JAN 83	1532	12 MAR 83
1419	19 NOV 82	1476	15 JAN 83	1533	13 MAR 83
1420	20 NOV 82	1477	16 JAN 83	1534	14 MAR 83
1421	21 NOV 82	1478	17 JAN 83	1535	15 MAR 83
1422	22 NOV 82	1479	18 JAN 83	1536	16 MAR 83
1423	23 NOV 82	1480	19 JAN 83	1537	17 MAR 83
1424	24 NOV 82	1481	20 JAN 83	1538	18 MAR 83
1425	25 NOV 82	1482	21 JAN 83	1539	19 MAR 83

Table 2. (continued)

1540	20 MAR 83	1597	16 MAY 83	1654	12 JUL 83
1541	21 MAR 83	1598	17 MAY 83	1655	13 JUL 83
1542	22 MAR 83	1599	18 MAY 83	1656	14 JUL 83
1543	23 MAR 83	1600	19 MAY 83	1657	15 JUL 83
1544	24 MAR 83	1601	20 MAY 83	1658	16 JUL 83
1545	25 MAR 83	1602	21 MAY 83	1659	17 JUL 83
1546	26 MAR 83	1603	22 MAY 83	1660	18 JUL 83
1547	27 MAR 83	1604	23 MAY 83	1661	19 JUL 83
1548	28 MAR 83	1605	24 MAY 83	1662	20 JUL 83
1549	29 MAR 83	1606	25 MAY 83	1663	21 JUL 83
1550	30 MAR 83	1607	26 MAY 83	1664	22 JUL 83
1551	31 MAR 83	1608	27 MAY 83	1665	23 JUL 83
1552	1 APR 83	1609	28 MAY 83	1666	24 JUL 83
1553	2 APR 83	1610	29 MAY 83	1667	25 JUL 83
1554	3 APR 83	1611	30 MAY 83	1668	26 JUL 83
1555	4 APR 83	1612	31 MAY 83	1669	27 JUL 83
1556	5 APR 83	1613	1 JUN 83	1670	28 JUL 83
1557	6 APR 83	1614	2 JUN 83	1671	29 JUL 83
1558	7 APR 83	1615	3 JUN 83	1672	30 JUL 83
1559	8 APR 83	1616	4 JUN 83	1673	31 JUL 83
1560	9 APR 83	1617	5 JUN 83	1674	1 AUG 83
1561	10 APR 83	1618	6 JUN 83	1675	2 AUG 83
1562	11 APR 83	1619	7 JUN 83	1676	3 AUG 83
1563	12 APR 83	1620	8 JUN 83	1677	4 AUG 83
1564	13 APR 83	1621	9 JUN 83	1678	5 AUG 83
1565	14 APR 83	1622	10 JUN 83	1679	6 AUG 83
1566	15 APR 83	1623	11 JUN 83	1680	7 AUG 83
1567	16 APR 83	1624	12 JUN 83	1681	8 AUG 83
1568	17 APR 83	1625	13 JUN 83	1682	9 AUG 83
1569	18 APR 83	1626	14 JUN 83	1683	10 AUG 83
1570	19 APR 83	1627	15 JUN 83	1684	11 AUG 83
1571	20 APR 83	1628	16 JUN 83	1685	12 AUG 83
1572	21 APR 83	1629	17 JUN 83	1686	13 AUG 83
1573	22 APR 83	1630	18 JUN 83	1687	14 AUG 83
1574	23 APR 83	1631	19 JUN 83	1688	15 AUG 83
1575	24 APR 83	1632	20 JUN 83	1689	16 AUG 83
1576	25 APR 83	1633	21 JUN 83	1690	17 AUG 83
1577	26 APR 83	1634	22 JUN 83	1691	18 AUG 83
1578	27 APR 83	1635	23 JUN 83	1692	19 AUG 83
1579	28 APR 83	1636	24 JUN 83	1693	20 AUG 83
1580	29 APR 83	1637	25 JUN 83	1694	21 AUG 83
1581	30 APR 83	1638	26 JUN 83	1695	22 AUG 83
1582	1 MAY 83	1639	27 JUN 83	1696	23 AUG 83
1583	2 MAY 83	1640	28 JUN 83	1697	24 AUG 83
1584	3 MAY 83	1641	29 JUN 83	1698	25 AUG 83
1585	4 MAY 83	1642	30 JUN 83	1699	26 AUG 83
1586	5 MAY 83	1643	1 JUL 83	1700	27 AUG 83
1587	6 MAY 83	1644	2 JUL 83	1701	28 AUG 83
1588	7 MAY 83	1645	3 JUL 83	1702	29 AUG 83
1589	8 MAY 83	1646	4 JUL 83	1703	30 AUG 83
1590	9 MAY 83	1647	5 JUL 83	1704	31 AUG 83
1591	10 MAY 83	1648	6 JUL 83	1705	1 SEP 83
1592	11 MAY 83	1649	7 JUL 83	1706	2 SEP 83
1593	12 MAY 83	1650	8 JUL 83	1707	3 SEP 83
1594	13 MAY 83	1651	9 JUL 83	1708	4 SEP 83
1595	14 MAY 83	1652	10 JUL 83	1709	5 SEP 83
1596	15 MAY 83	1653	11 JUL 83	1710	6 SEP 83

Table 2. (continued)

1711	7	SEP 83	1768	3	NOV 83	1825	30	DEC 83
1712	8	SEP 83	1769	4	NOV 83	1826	31	DEC 83
1713	9	SEP 83	1770	5	NOV 83	1827	1	JAN 84
1714	10	SEP 83	1771	6	NOV 83	1828	2	JAN 84
1715	11	SEP 83	1772	7	NOV 83	1829	3	JAN 84
1716	12	SEP 83	1773	8	NOV 83	1830	4	JAN 84
1717	13	SEP 83	1774	9	NOV 83	1831	5	JAN 84
1718	14	SEP 83	1775	10	NOV 83	1832	6	JAN 84
1719	15	SEP 83	1776	11	NOV 83	1833	7	JAN 84
1720	16	SEP 83	1777	12	NOV 83	1834	8	JAN 84
1721	17	SEP 83	1778	13	NOV 83	1835	9	JAN 84
1722	18	SEP 83	1779	14	NOV 83	1836	10	JAN 84
1723	19	SEP 83	1780	15	NOV 83	1837	11	JAN 84
1724	20	SEP 83	1781	16	NOV 83	1838	12	JAN 84
1725	21	SEP 83	1782	17	NOV 83	1839	13	JAN 84
1726	22	SEP 83	1783	18	NOV 83	1840	14	JAN 84
1727	23	SEP 83	1784	19	NOV 83	1841	15	JAN 84
1728	24	SEP 83	1785	20	NOV 83	1842	16	JAN 84
1729	25	SEP 83	1786	21	NOV 83	1843	17	JAN 84
1730	26	SEP 83	1787	22	NOV 83	1844	18	JAN 84
1731	27	SEP 83	1788	23	NOV 83	1845	19	JAN 84
1732	28	SEP 83	1789	24	NOV 83	1846	20	JAN 84
1733	29	SEP 83	1790	25	NOV 83	1847	21	JAN 84
1734	30	SEP 83	1791	26	NOV 83	1848	22	JAN 84
1735	1	OCT 83	1792	27	NOV 83	1849	23	JAN 84
1736	2	OCT 83	1793	28	NOV 83	1850	24	JAN 84
1737	3	OCT 83	1794	29	NOV 83	1851	25	JAN 84
1738	4	OCT 83	1795	30	NOV 83	1852	26	JAN 84
1739	5	OCT 83	1796	1	DEC 83	1853	27	JAN 84
1740	6	OCT 83	1797	2	DEC 83	1854	28	JAN 84
1741	7	OCT 83	1798	3	DEC 83	1855	29	JAN 84
1742	8	OCT 83	1799	4	DEC 83	1856	30	JAN 84
1743	9	OCT 83	1800	5	DEC 83	1857	31	JAN 84
1744	10	OCT 83	1801	6	DEC 83	1858	1	FEB 84
1745	11	OCT 83	1802	7	DEC 83	1859	2	FEB 84
1746	12	OCT 83	1803	8	DEC 83	1860	3	FEB 84
1747	13	OCT 83	1804	9	DEC 83	1861	4	FEB 84
1748	14	OCT 83	1805	10	DEC 83	1862	5	FEB 84
1749	15	OCT 83	1806	11	DEC 83	1863	6	FEB 84
1750	16	OCT 83	1807	12	DEC 83	1864	7	FEB 84
1751	17	OCT 83	1808	13	DEC 83	1865	8	FEB 84
1752	18	OCT 83	1809	14	DEC 83	1866	9	FEB 84
1753	19	OCT 83	1810	15	DEC 83	1867	10	FEB 84
1754	20	OCT 83	1811	16	DEC 83	1868	11	FEB 84
1755	21	OCT 83	1812	17	DEC 83	1869	12	FEB 84
1756	22	OCT 83	1813	18	DEC 83	1870	13	FEB 84
1757	23	OCT 83	1814	19	DEC 83	1871	14	FEB 84
1758	24	OCT 83	1815	20	DEC 83	1872	15	FEB 84
1759	25	OCT 83	1816	21	DEC 83	1873	16	FEB 84
1760	26	OCT 83	1817	22	DEC 83	1874	17	FEB 84
1761	27	OCT 83	1818	23	DEC 83	1875	18	FEB 84
1762	28	OCT 83	1819	24	DEC 83	1876	19	FEB 84
1763	29	OCT 83	1820	25	DEC 83	1877	20	FEB 84
1764	30	OCT 83	1821	26	DEC 83	1878	21	FEB 84
1765	31	OCT 83	1822	27	DEC 83	1879	22	FEB 84
1766	1	NOV 83	1823	28	DEC 83	1880	23	FEB 84
1767	2	NOV 83	1824	29	DEC 83	1881	24	FEB 84

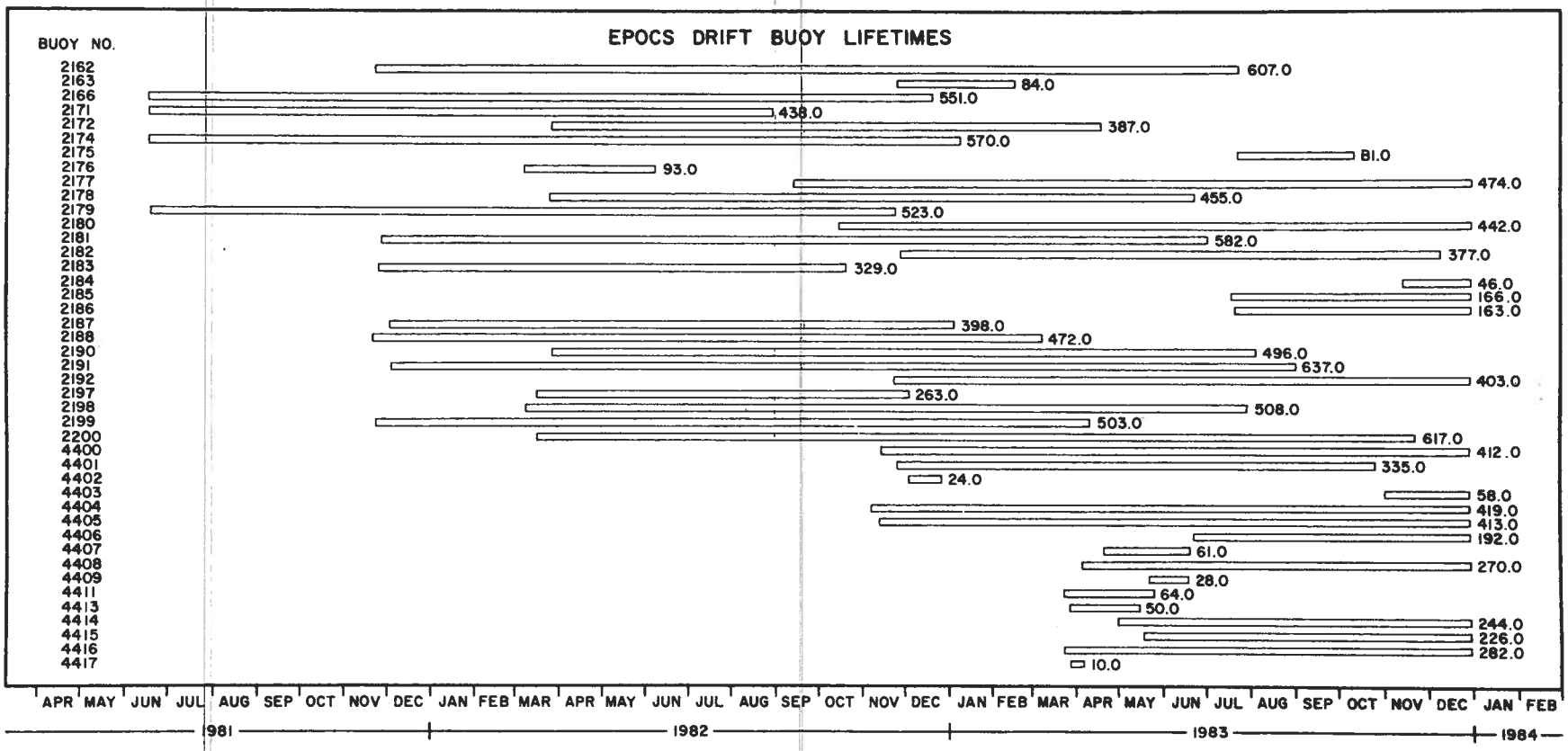


Figure 1. Time span of data from drifting buoys included in this report.

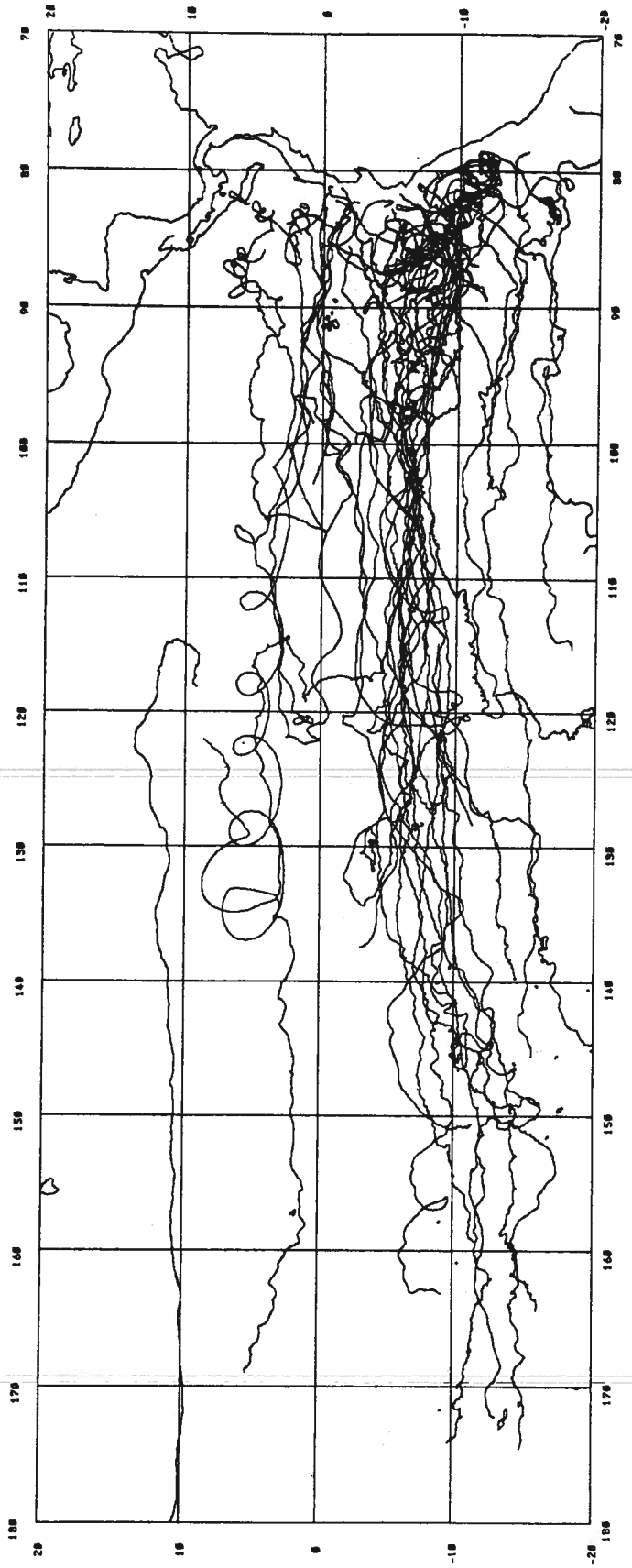
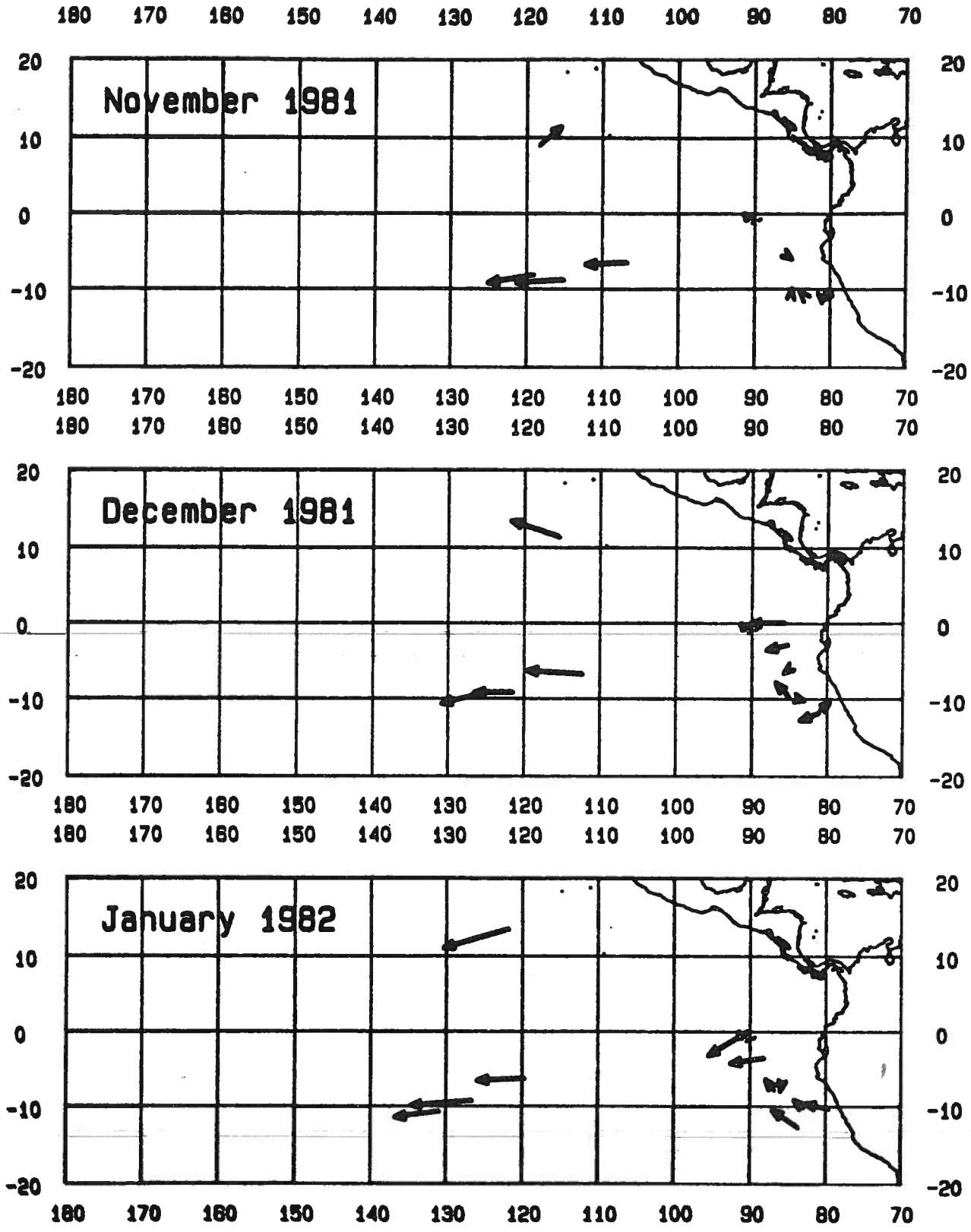
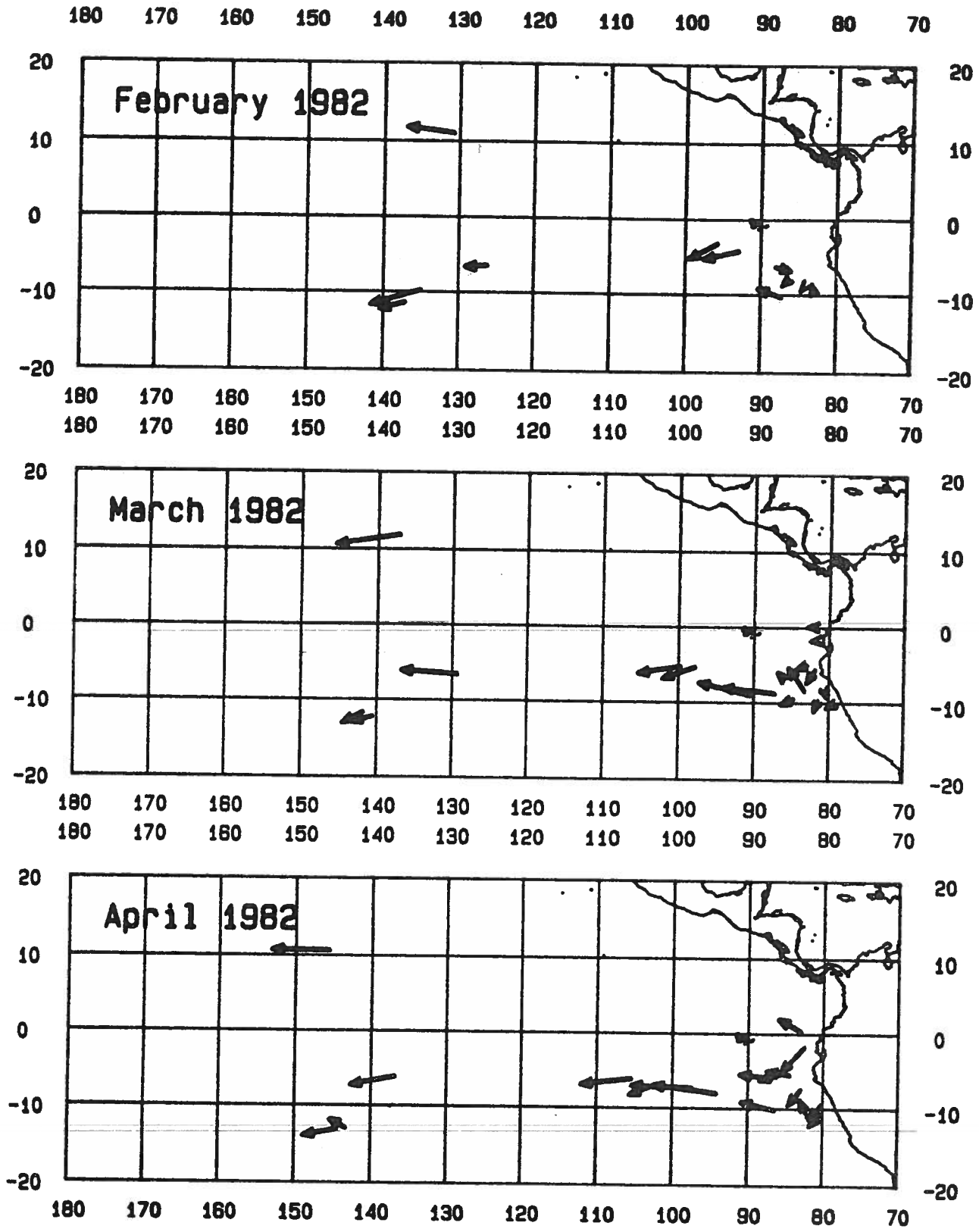


Figure 2. Composite plot of all drifting buoy trajectories from November 1, 1981 through December 31, 1983.



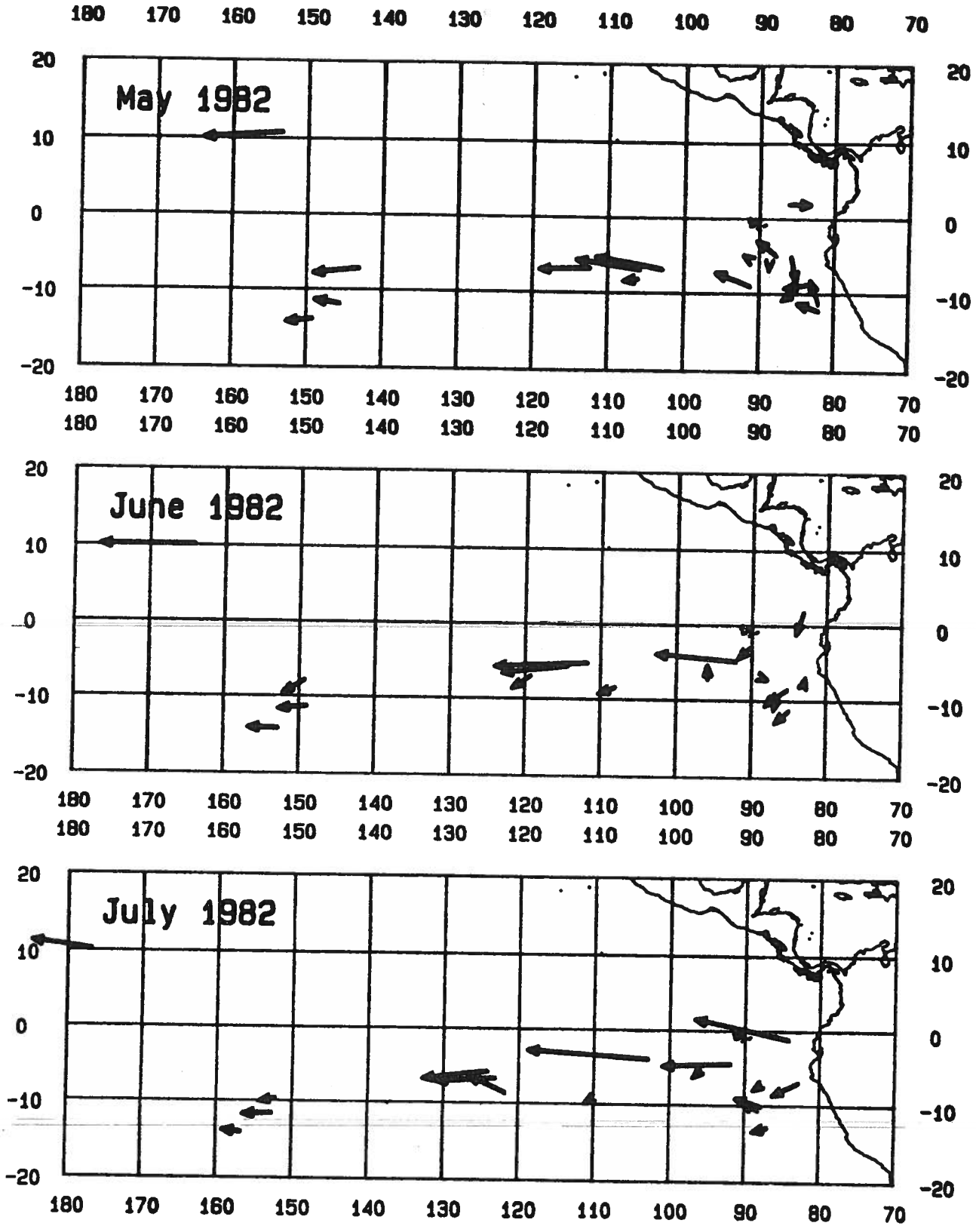
Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 3.



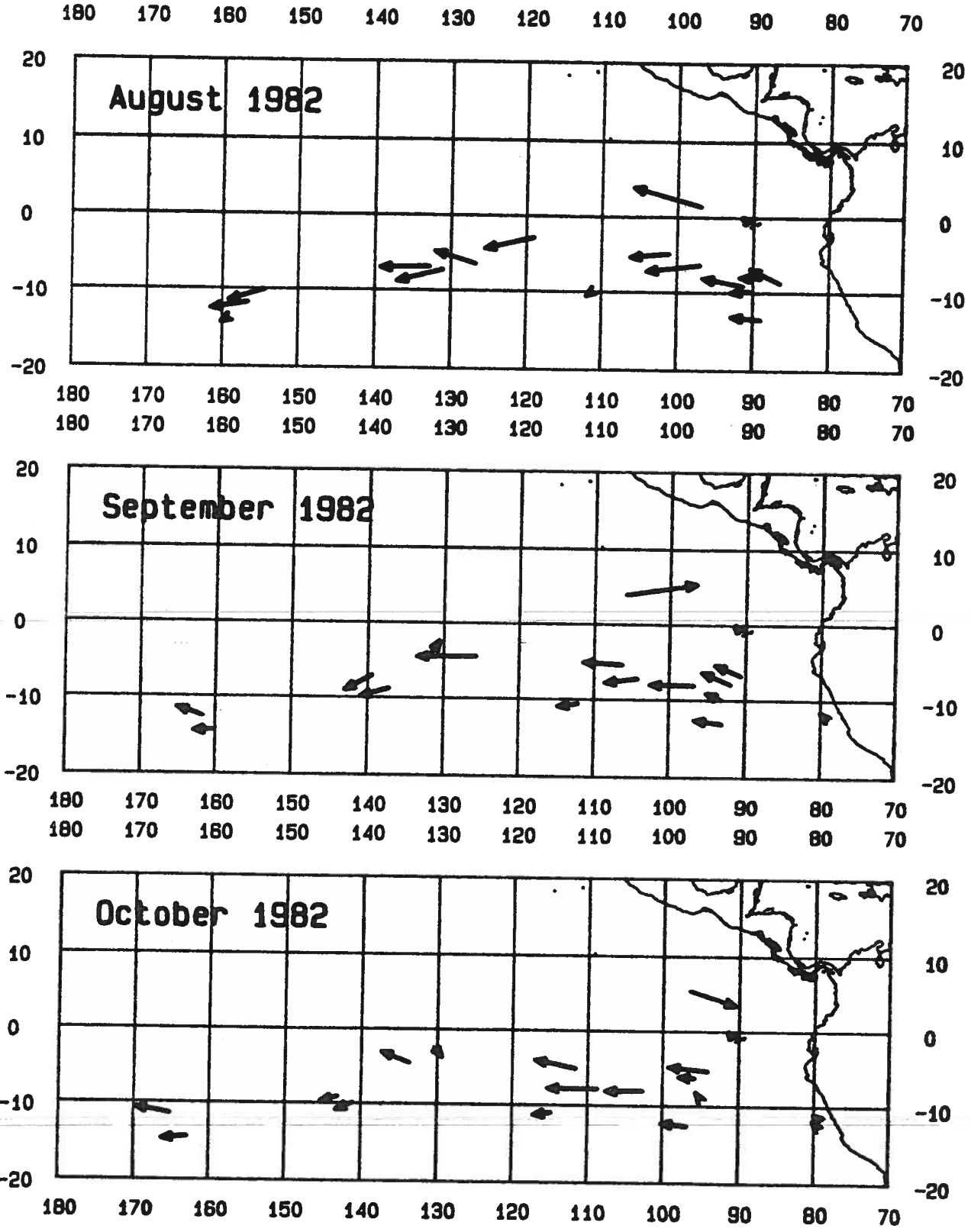
Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 4.



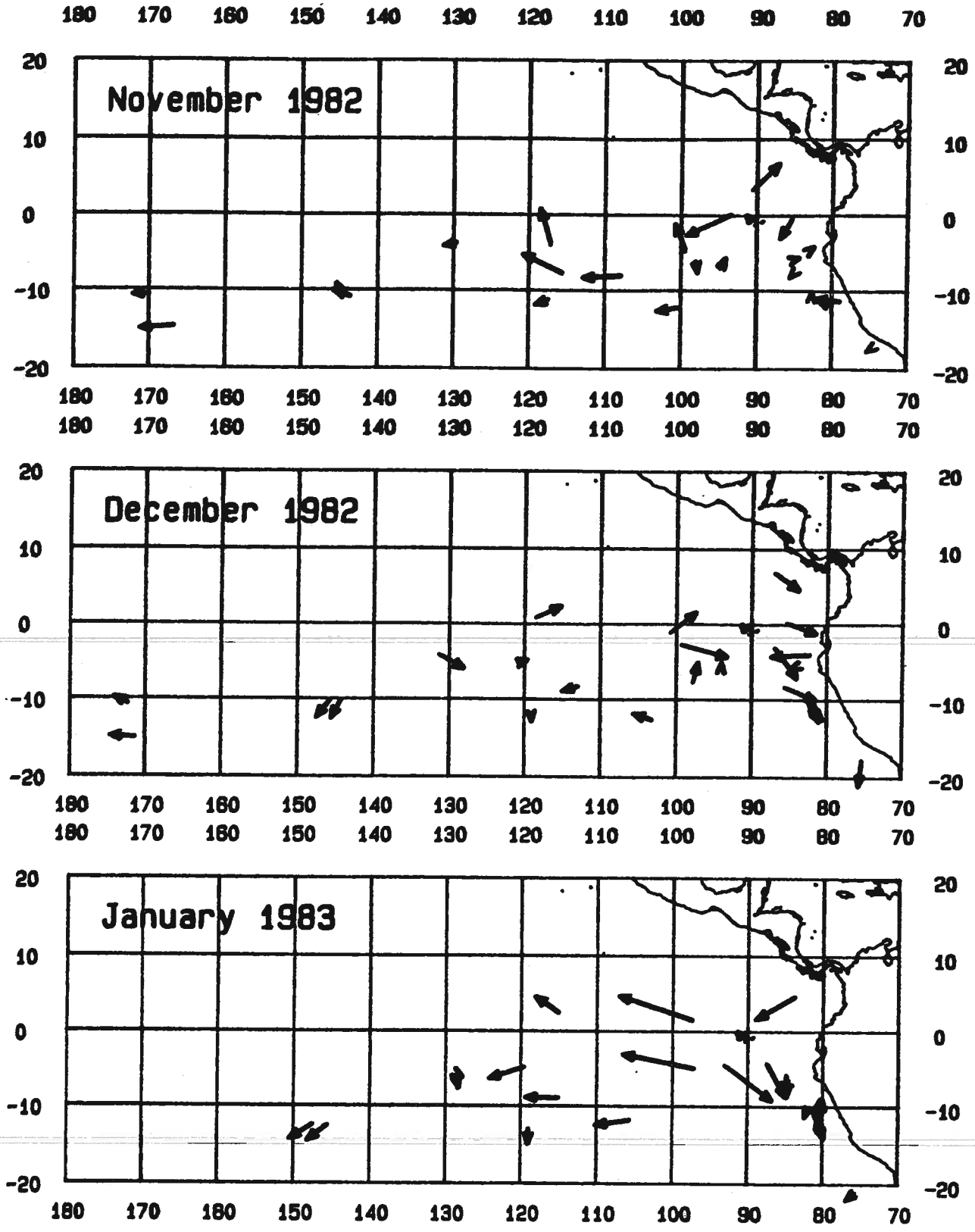
Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 5.



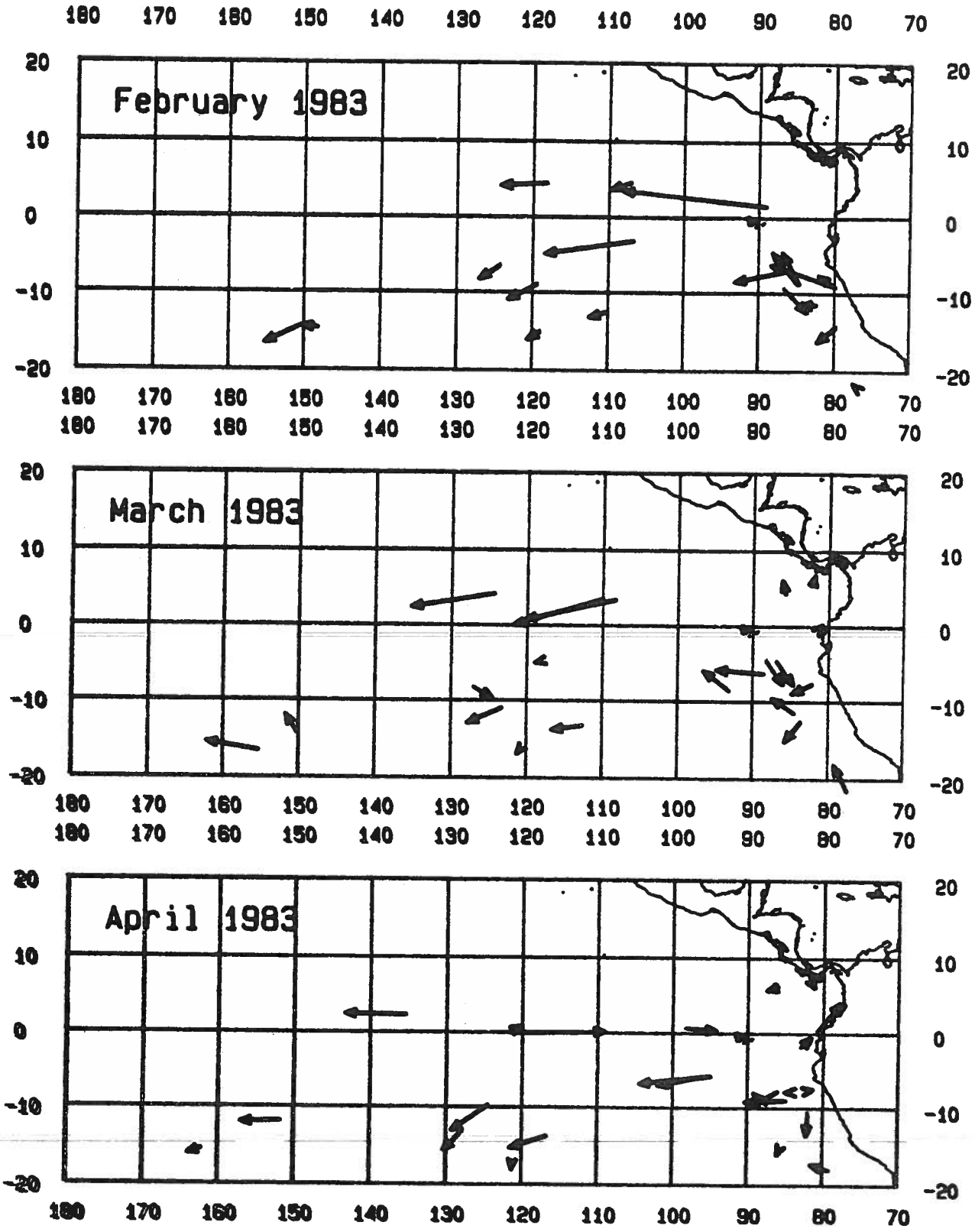
Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 6.



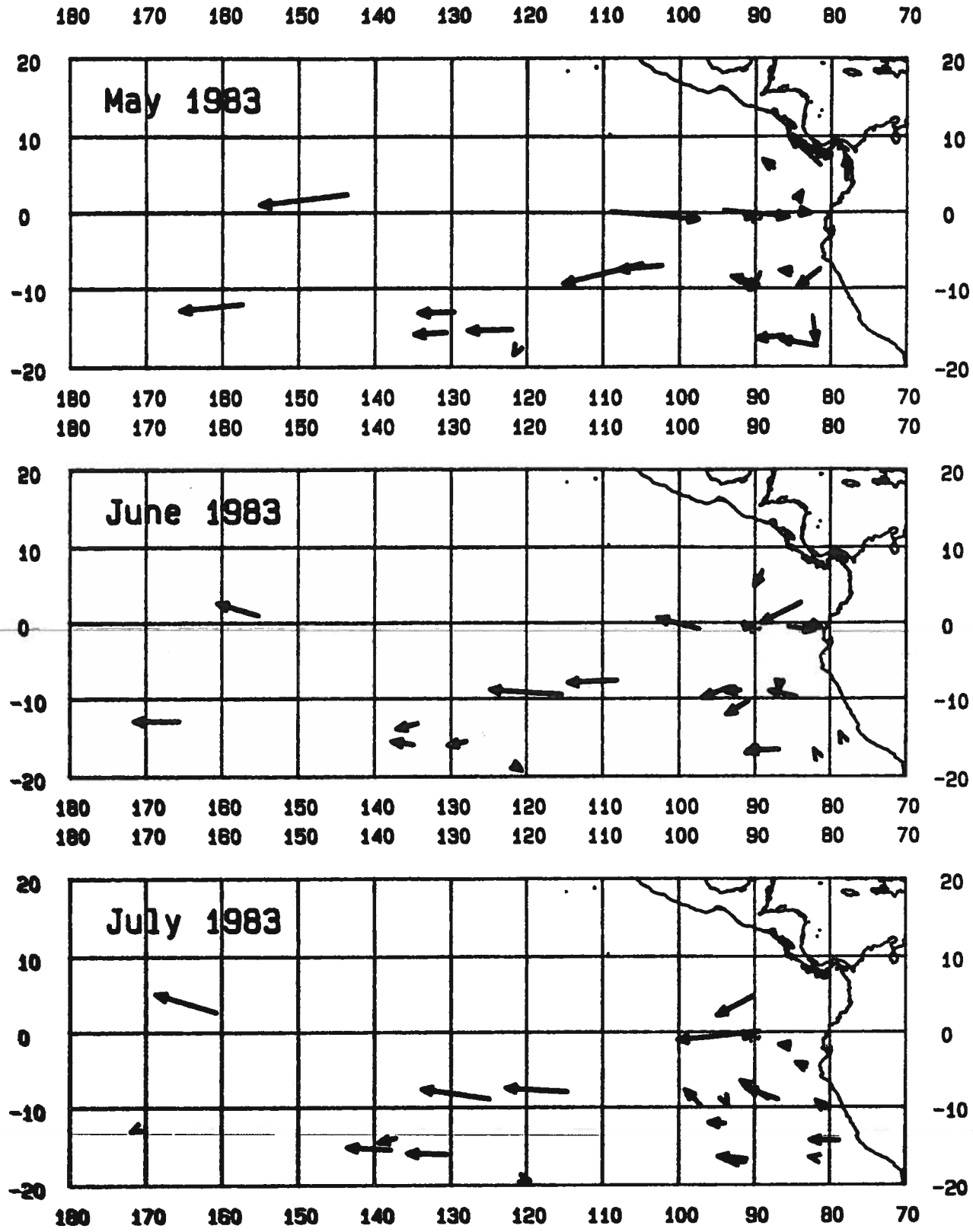
Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 7.



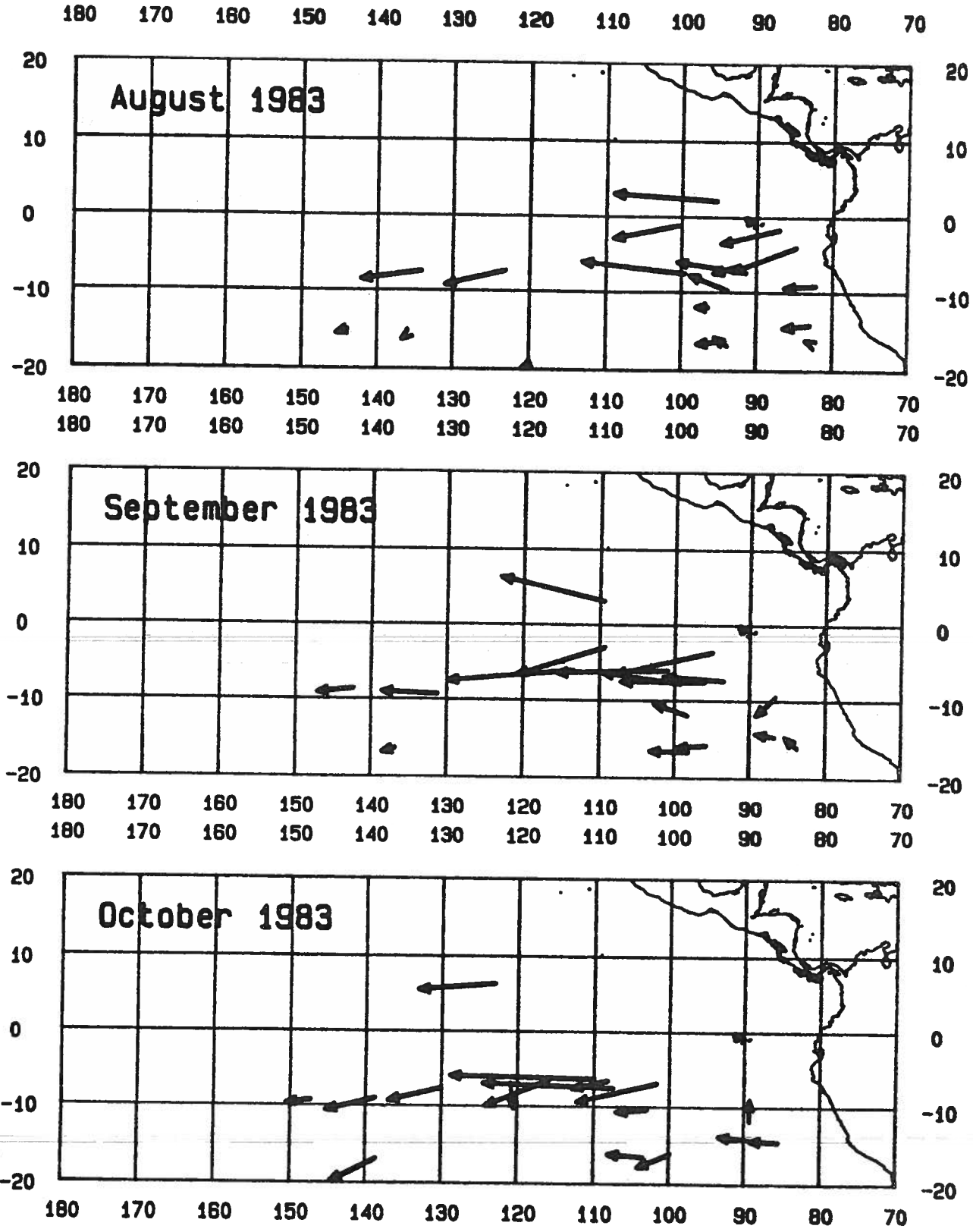
Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 8.



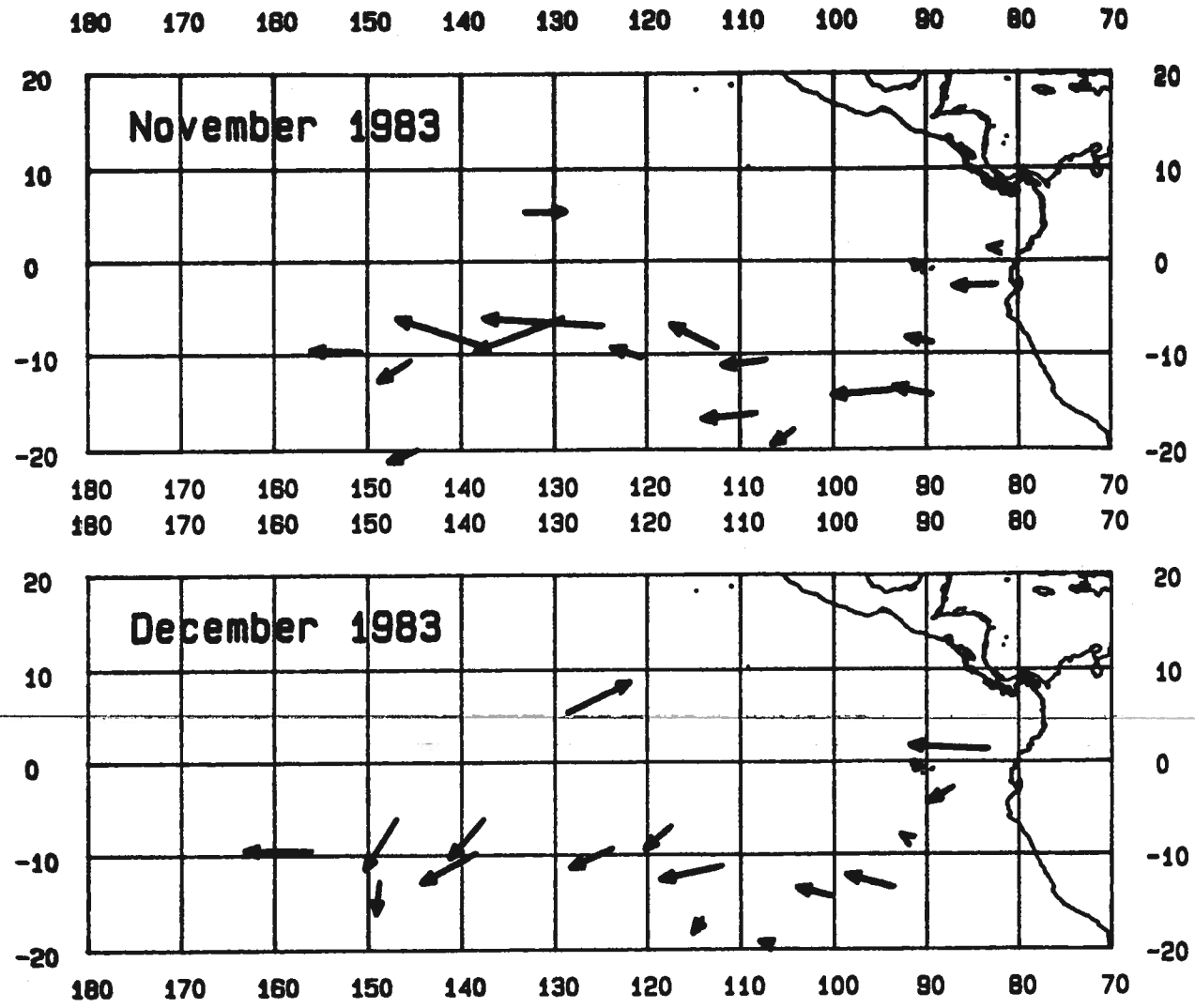
Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 9.



Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 10.



Arrows indicate position of buoy at beginning and end of month and direction of travel.

Figure 11.

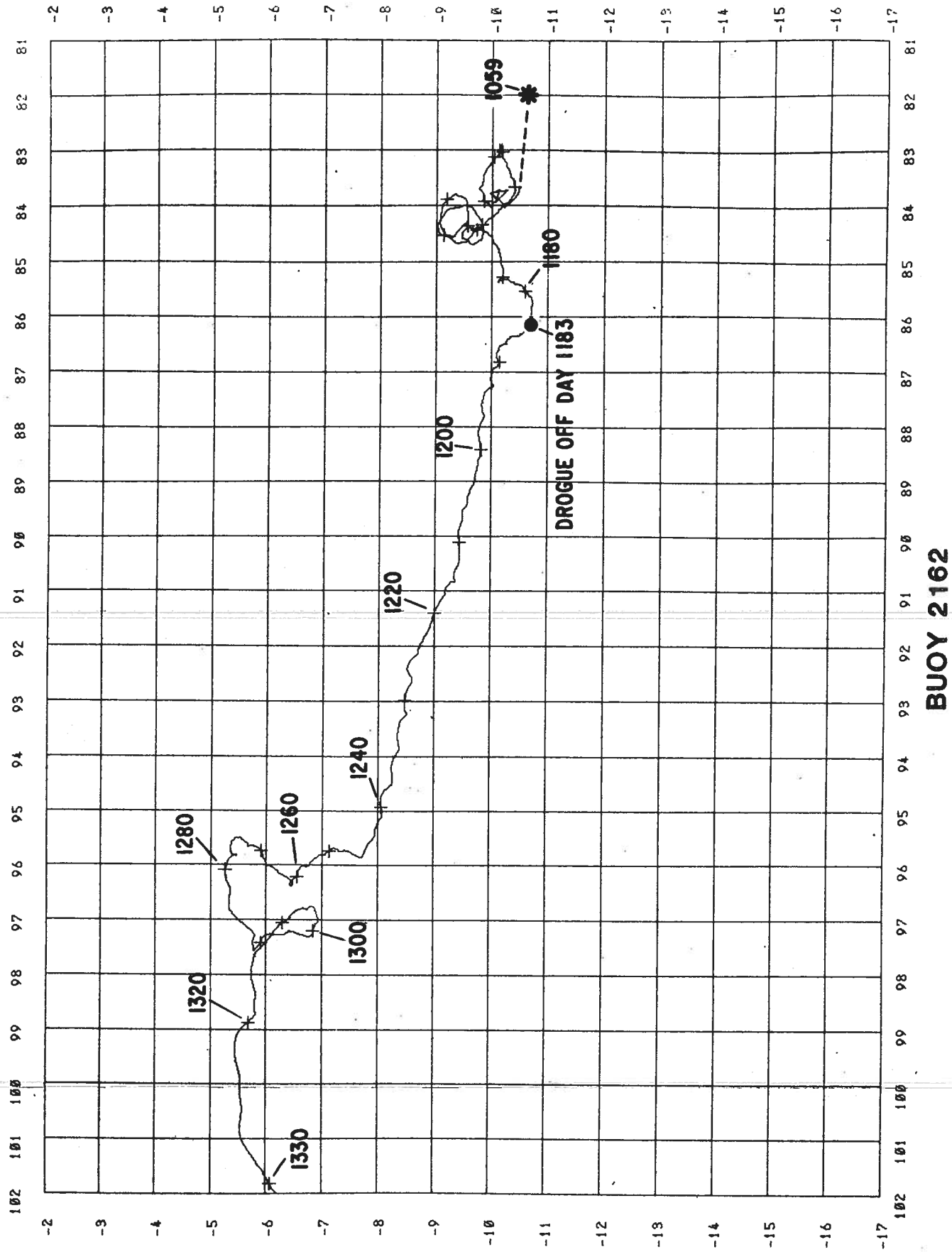


Figure 12. Drifting buoy trajectory.

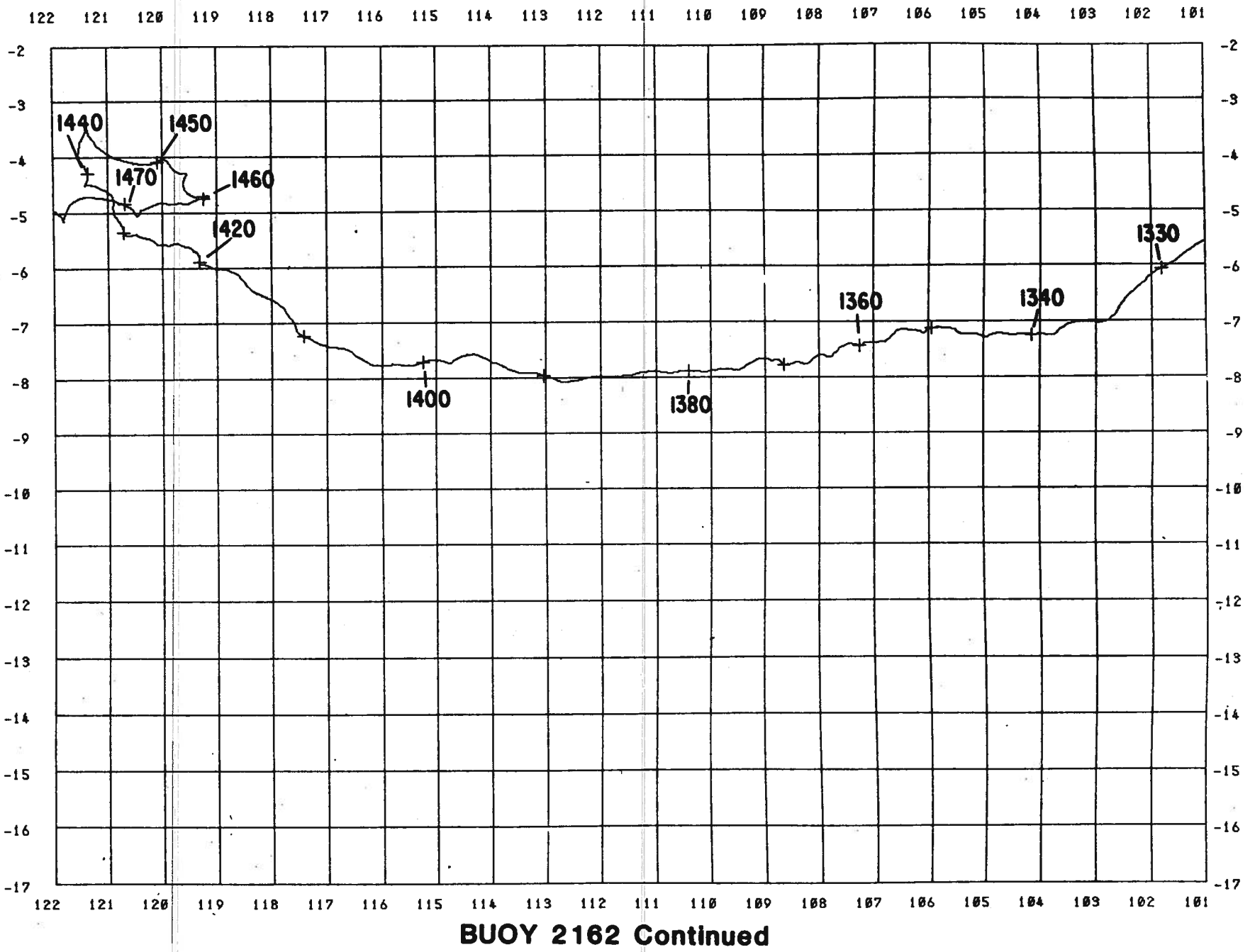


Figure 12. (continued)

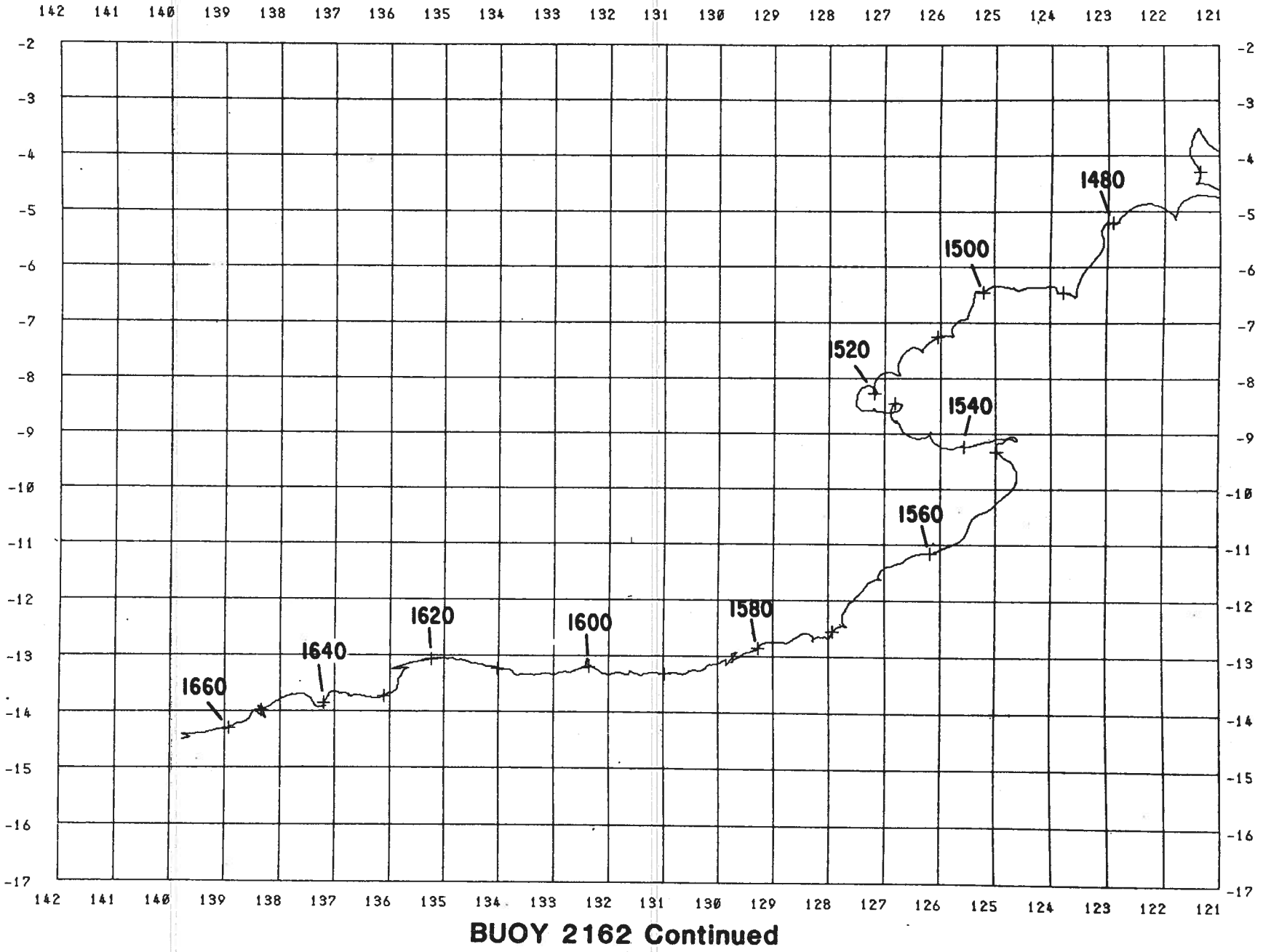


Figure 12. (continued)

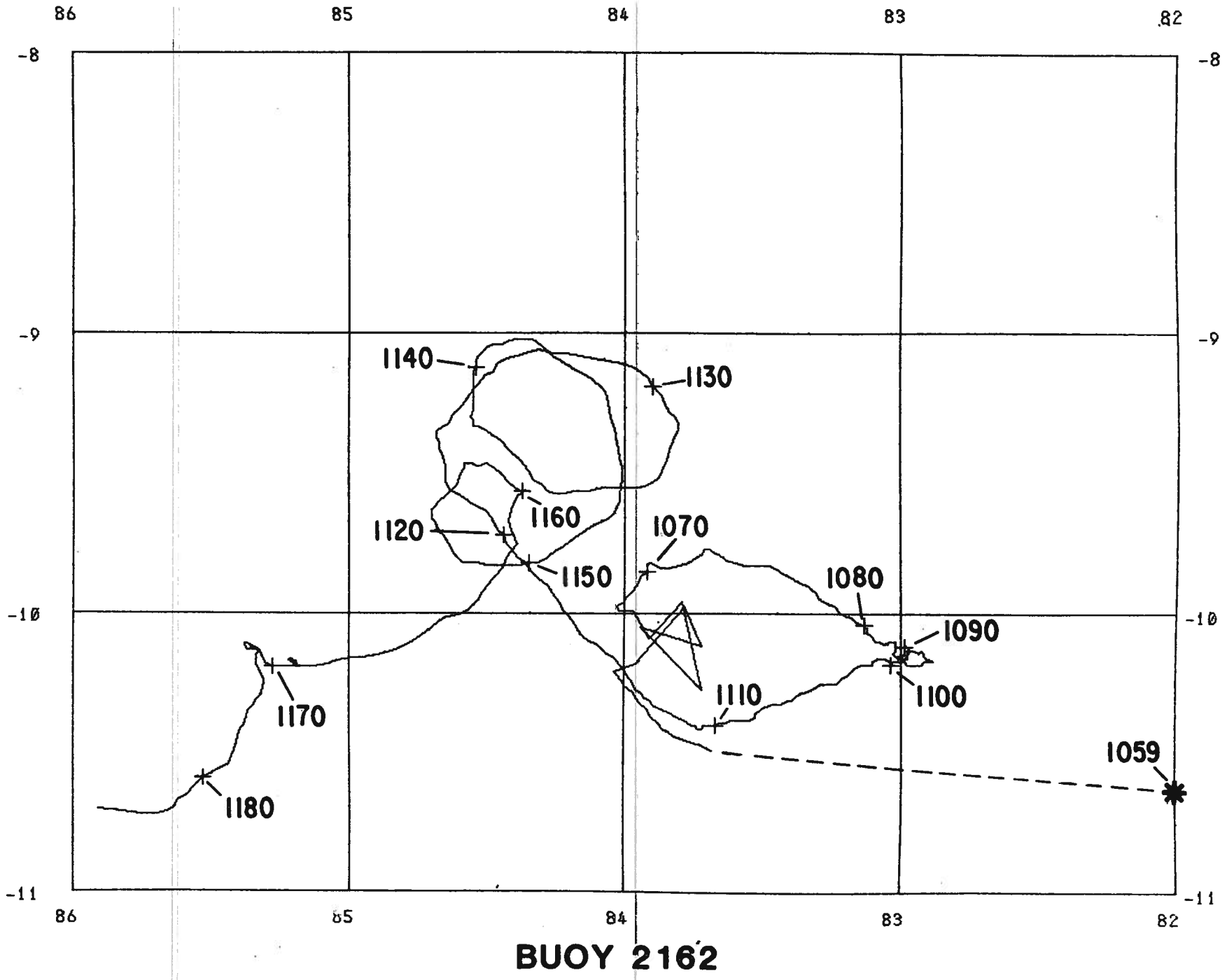


Figure 13. Drifting buoy trajectory detail.

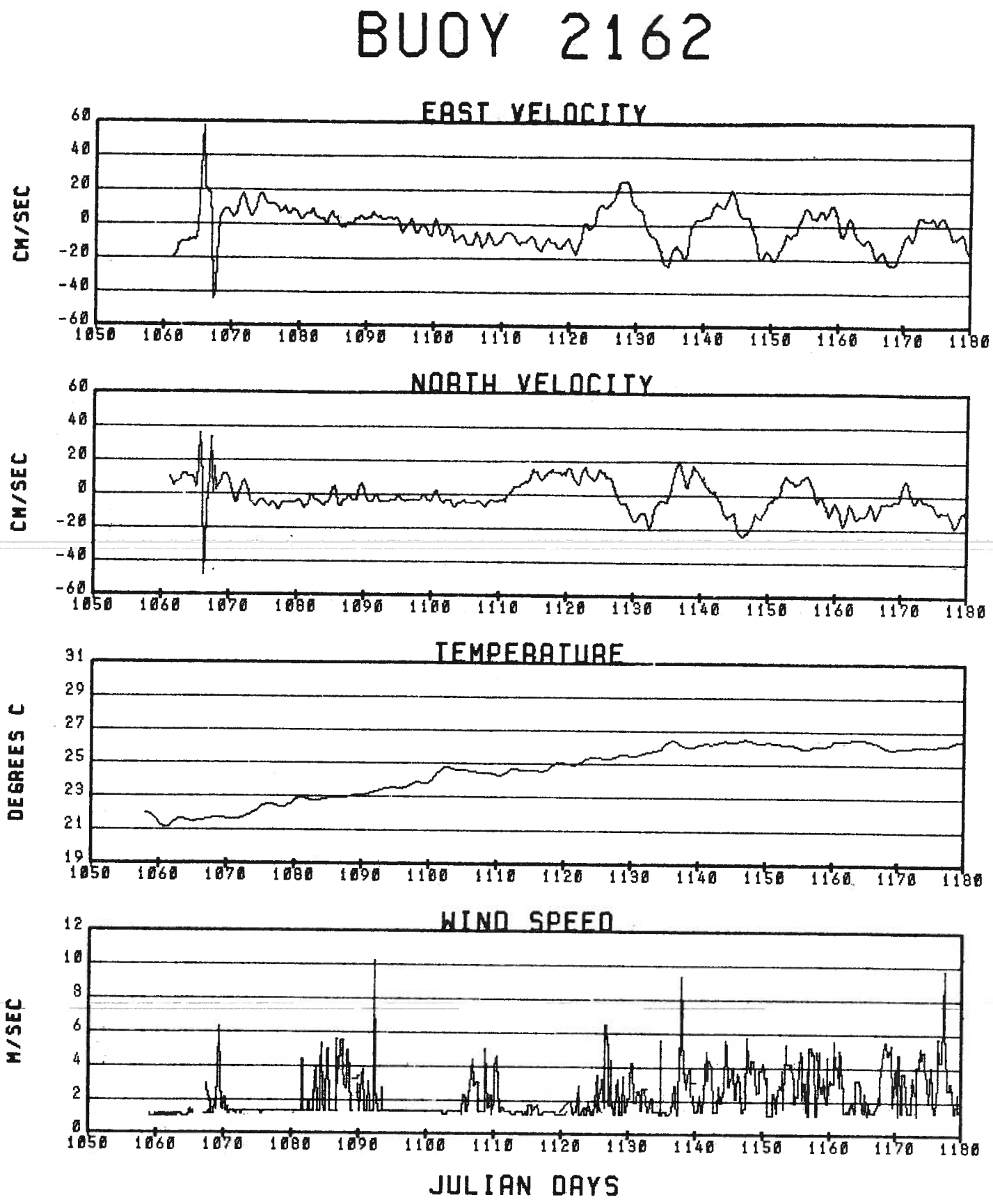


Figure 14. Time series of velocity and sensor data.

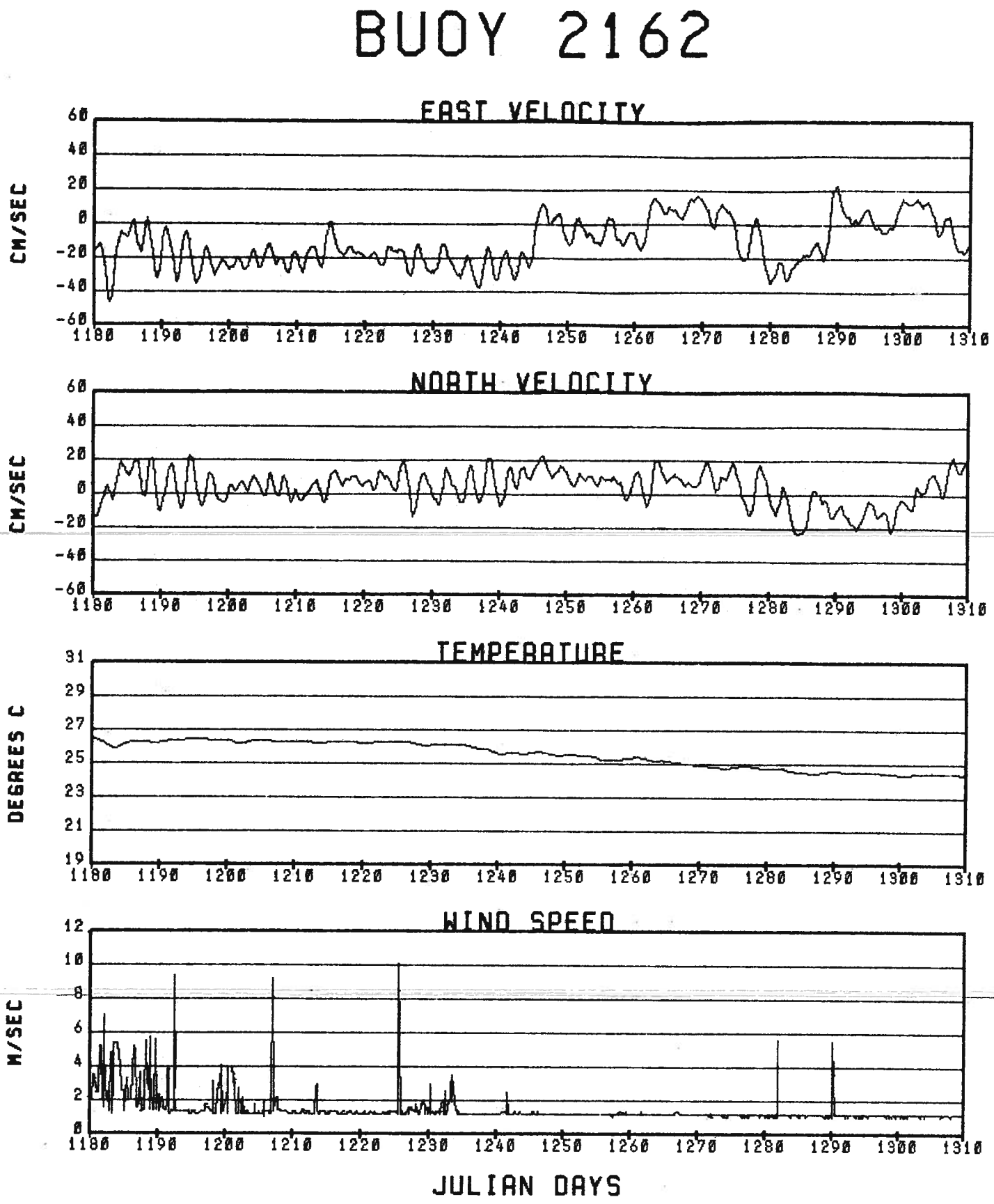


Figure 14. (continued)

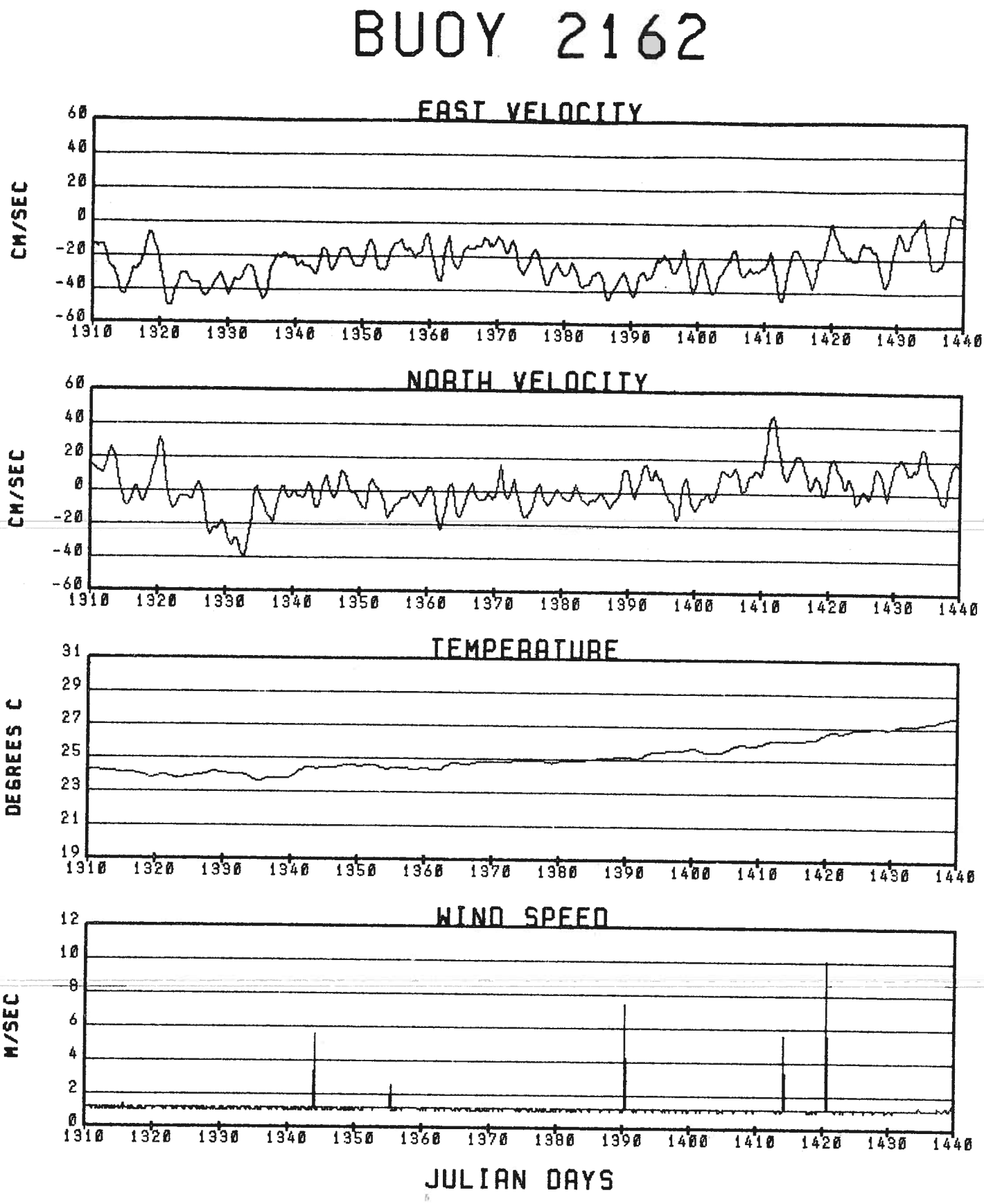


Figure 14. (continued)

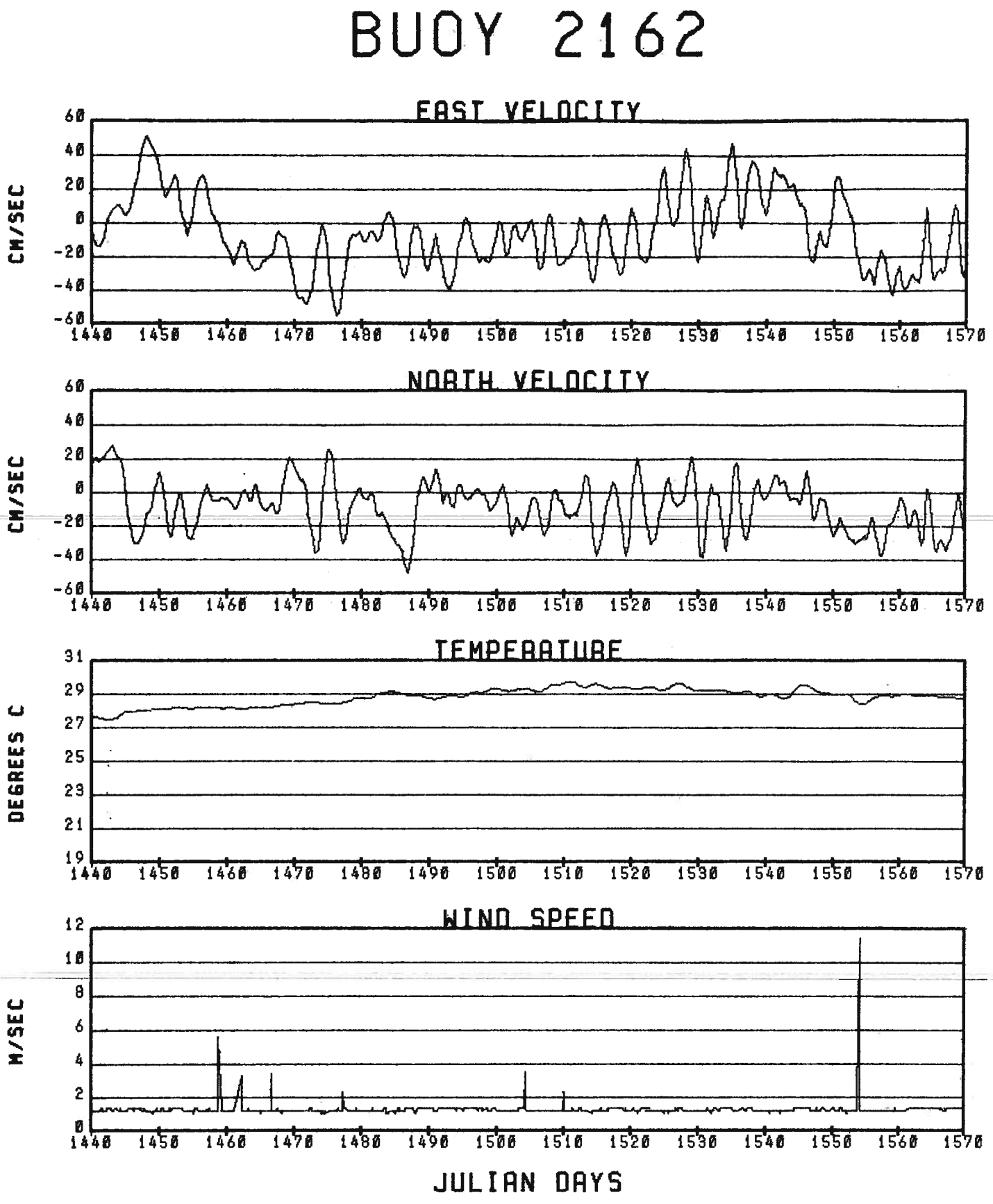


Figure 14. (continued)

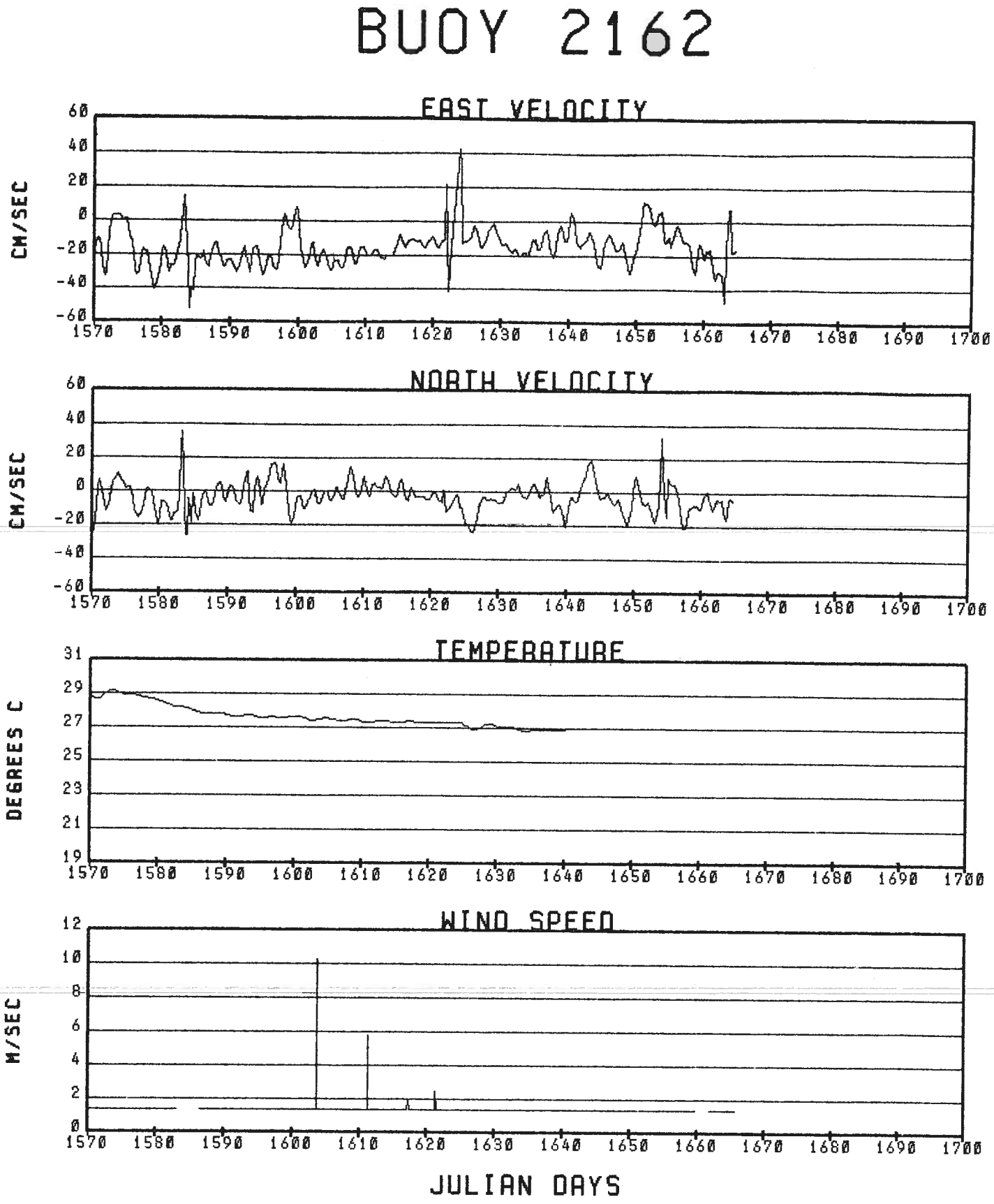


Figure 14. (continued)

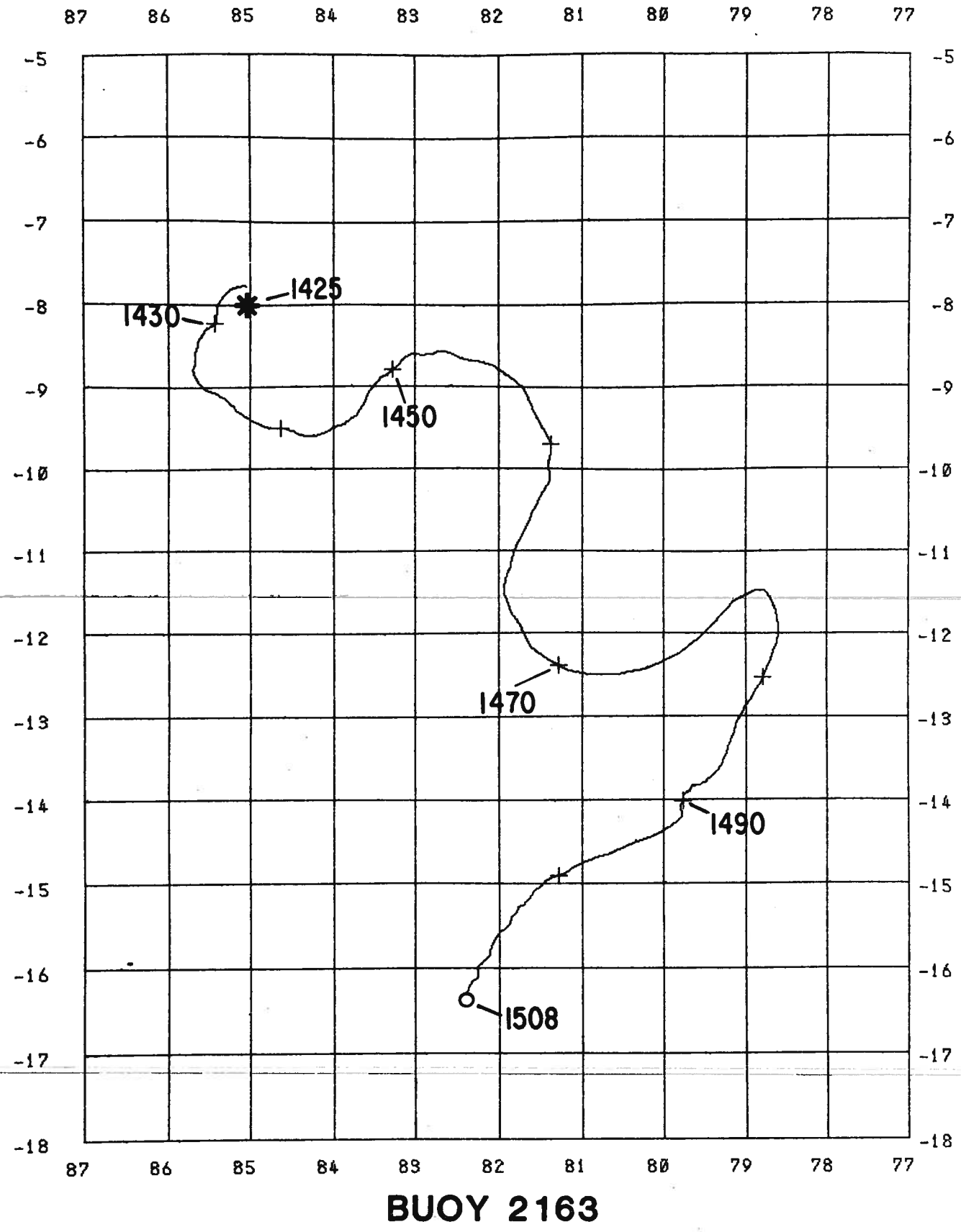


Figure 15. Drifting buoy trajectory.

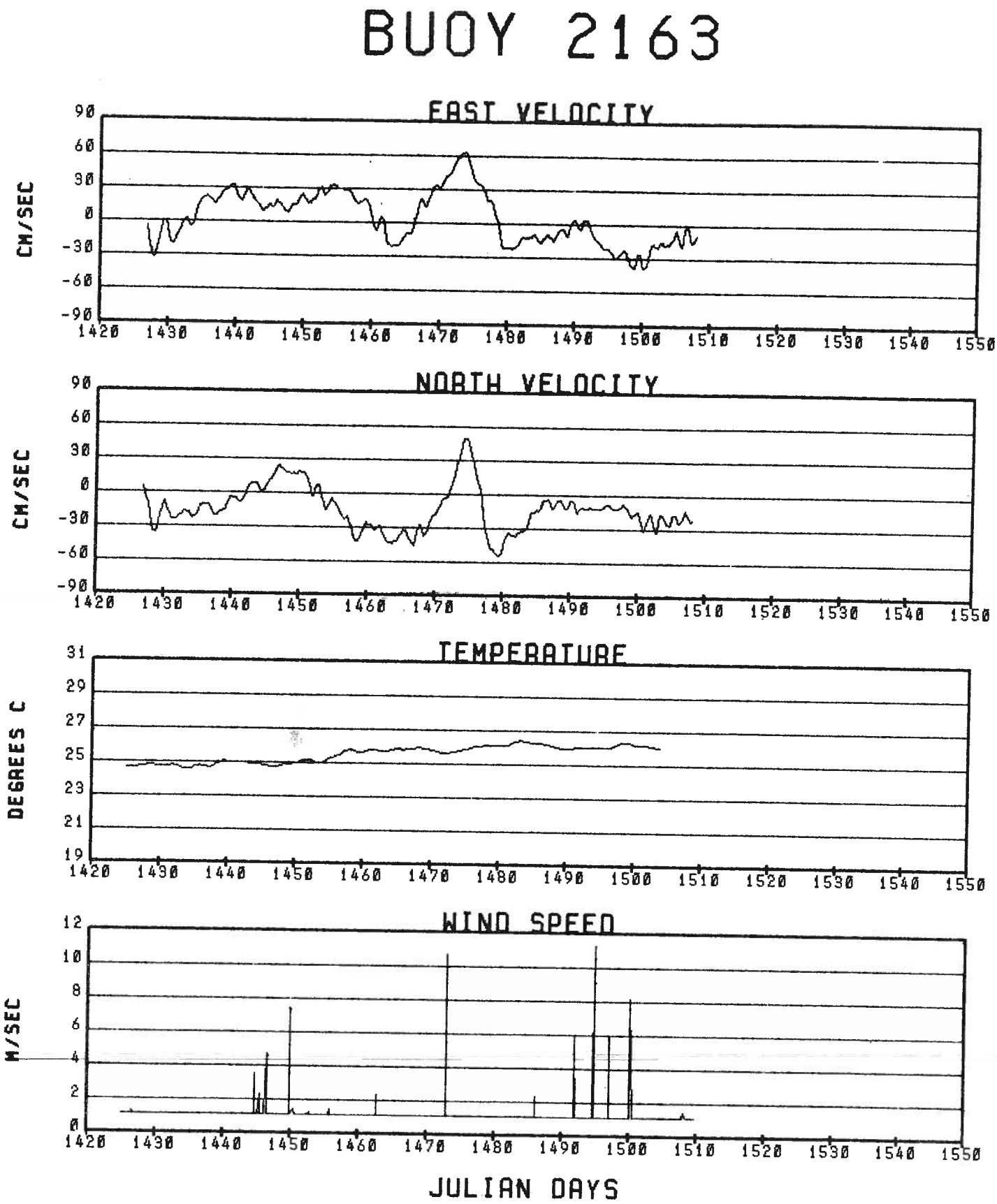


Figure 16. Time series of velocity and sensor data.

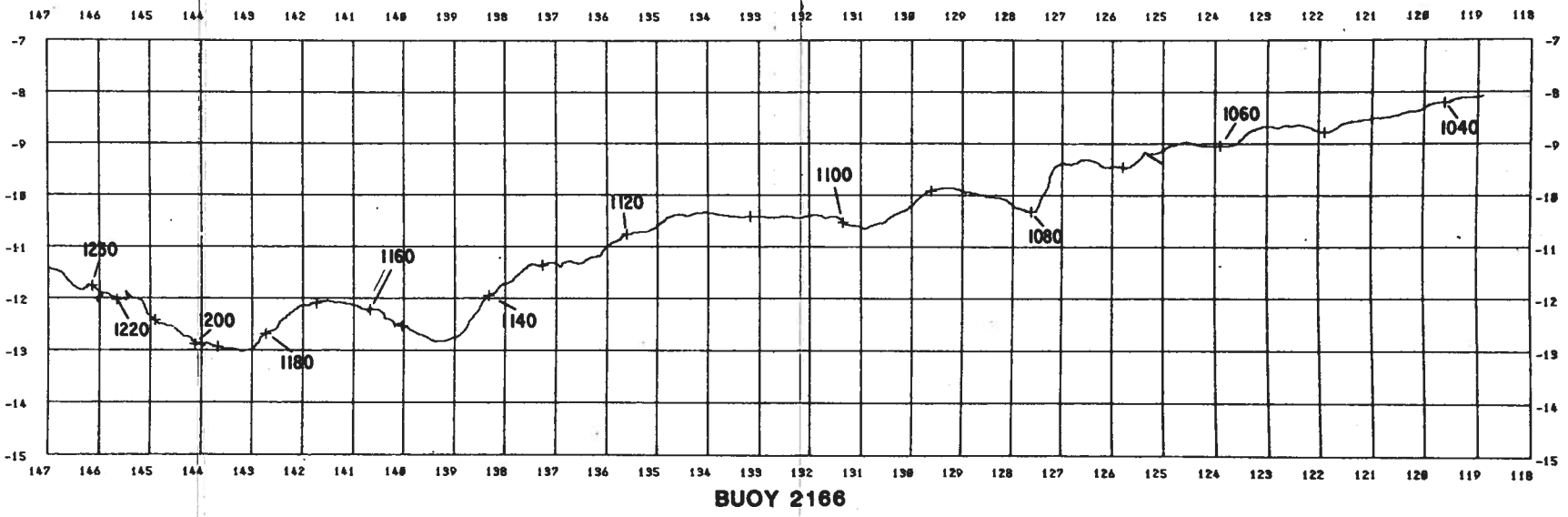


Figure 17. Drifting buoy trajectory.

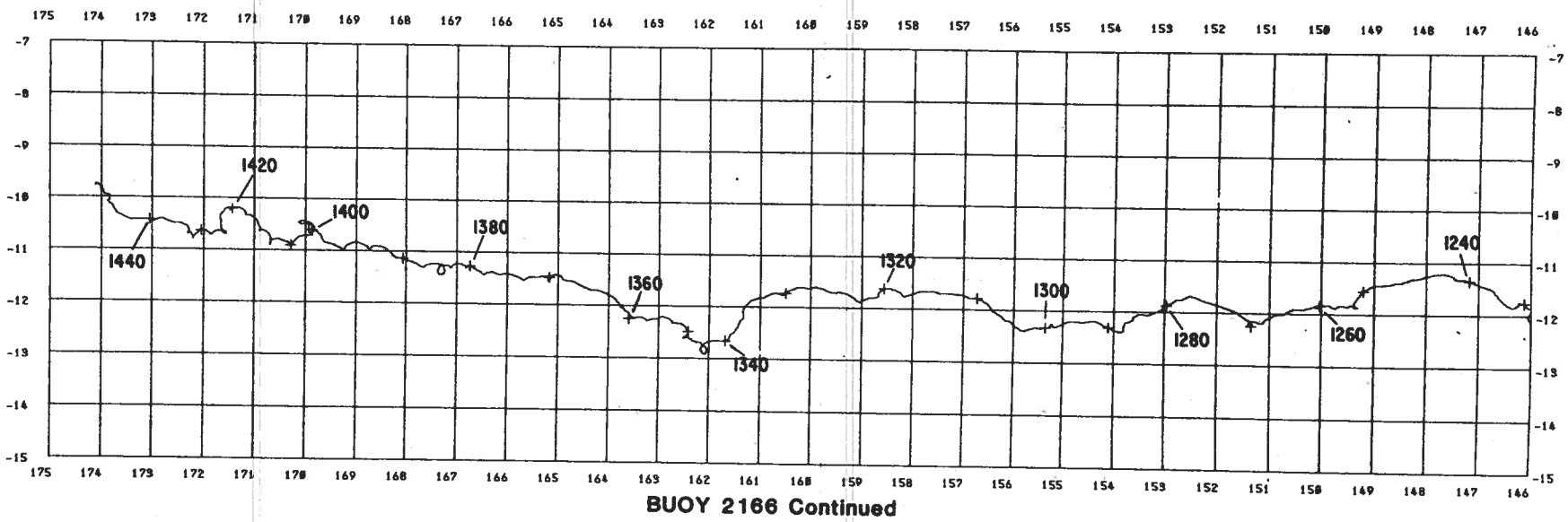


Figure 17. (continued)

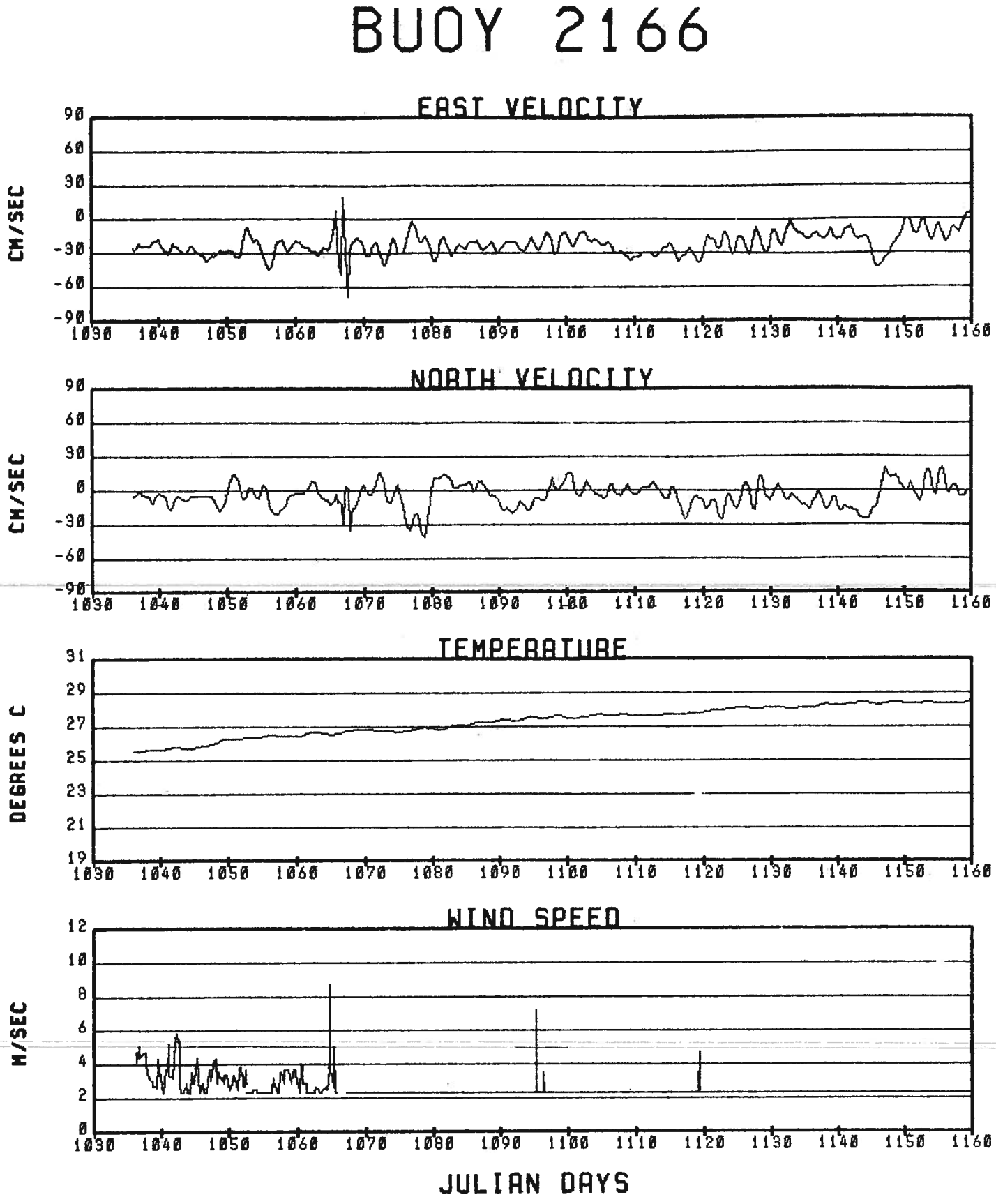


Figure 18. Time series of velocity and sensor data.

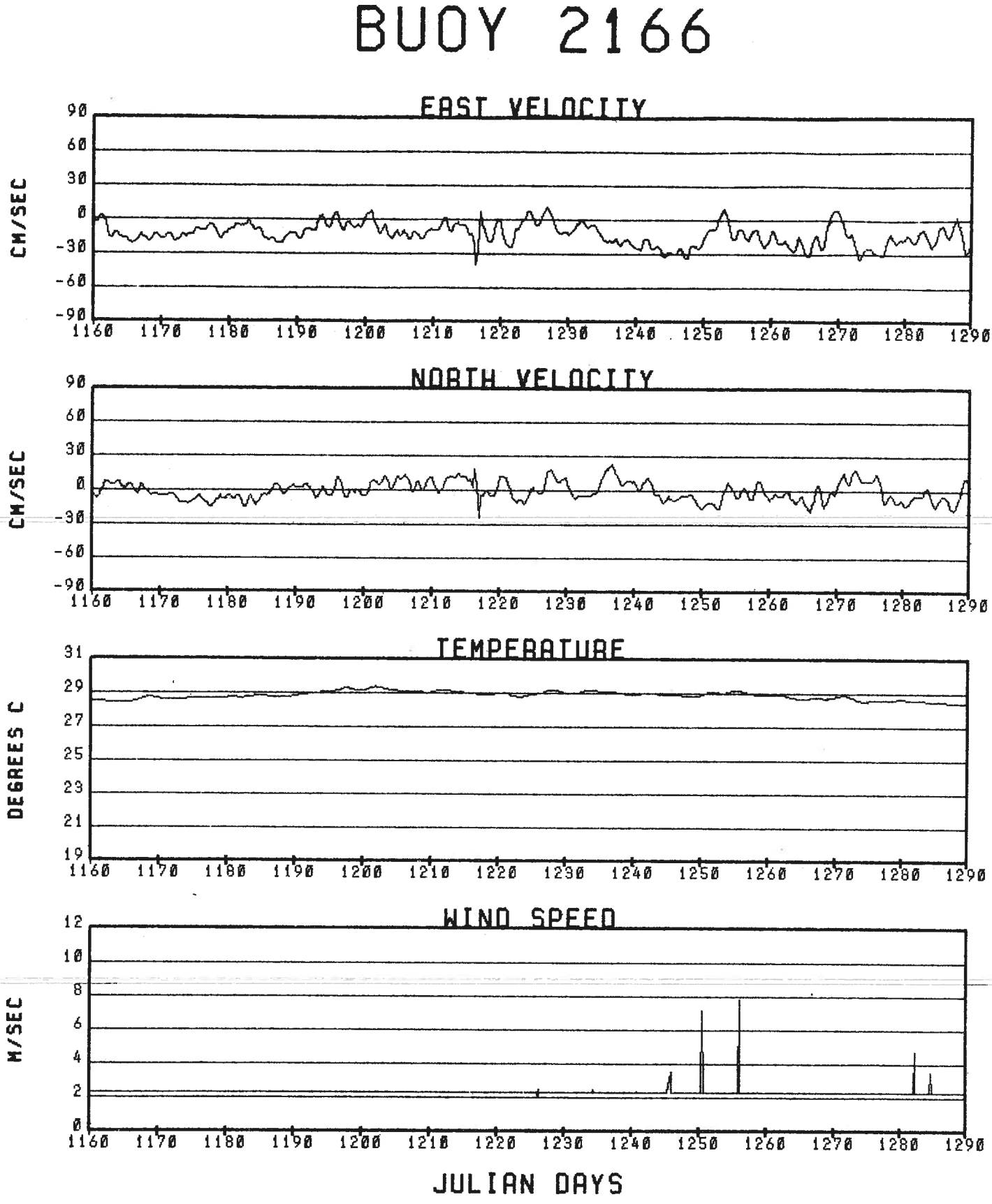


Figure 18. (continued)

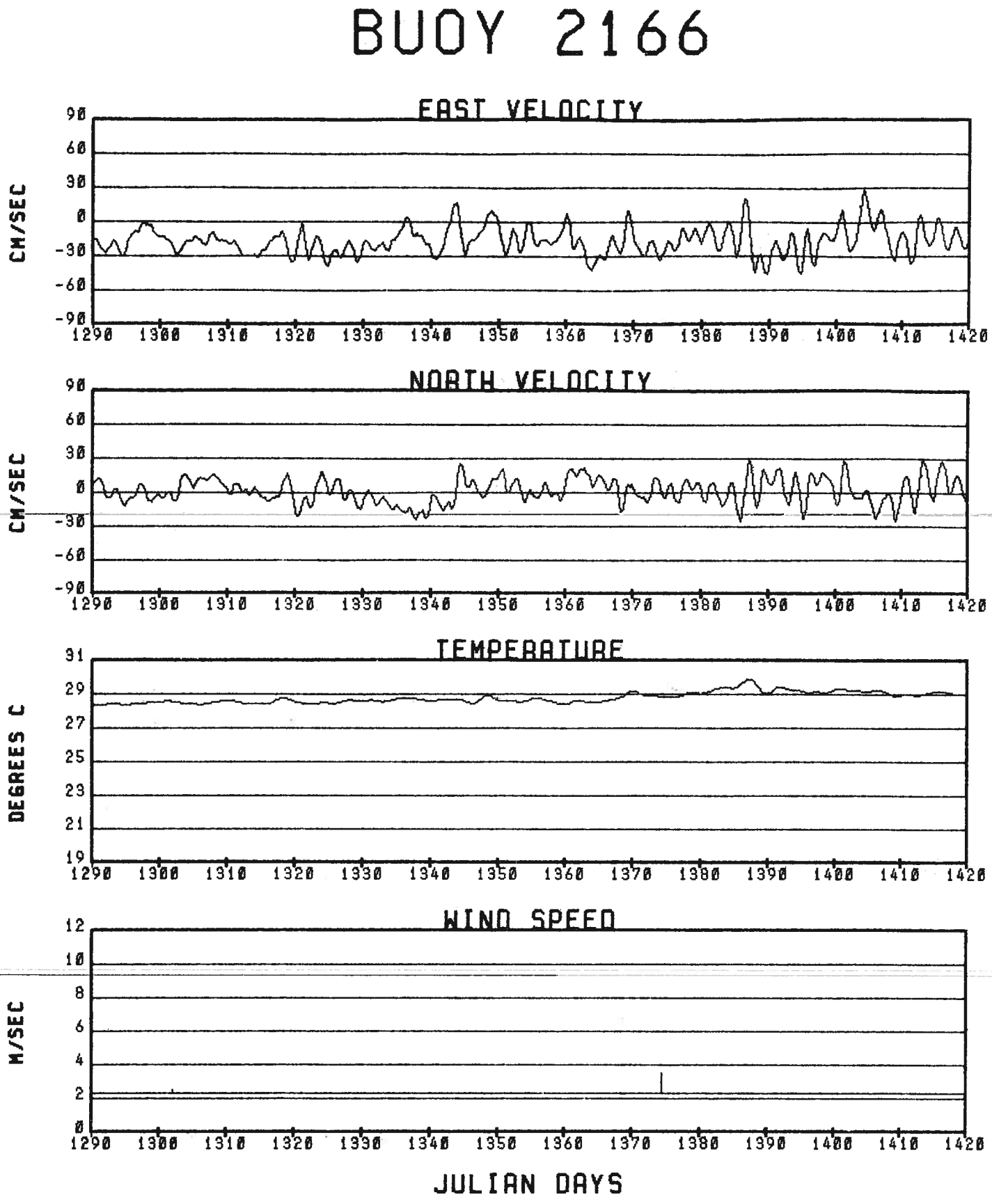


Figure 18. (continued)

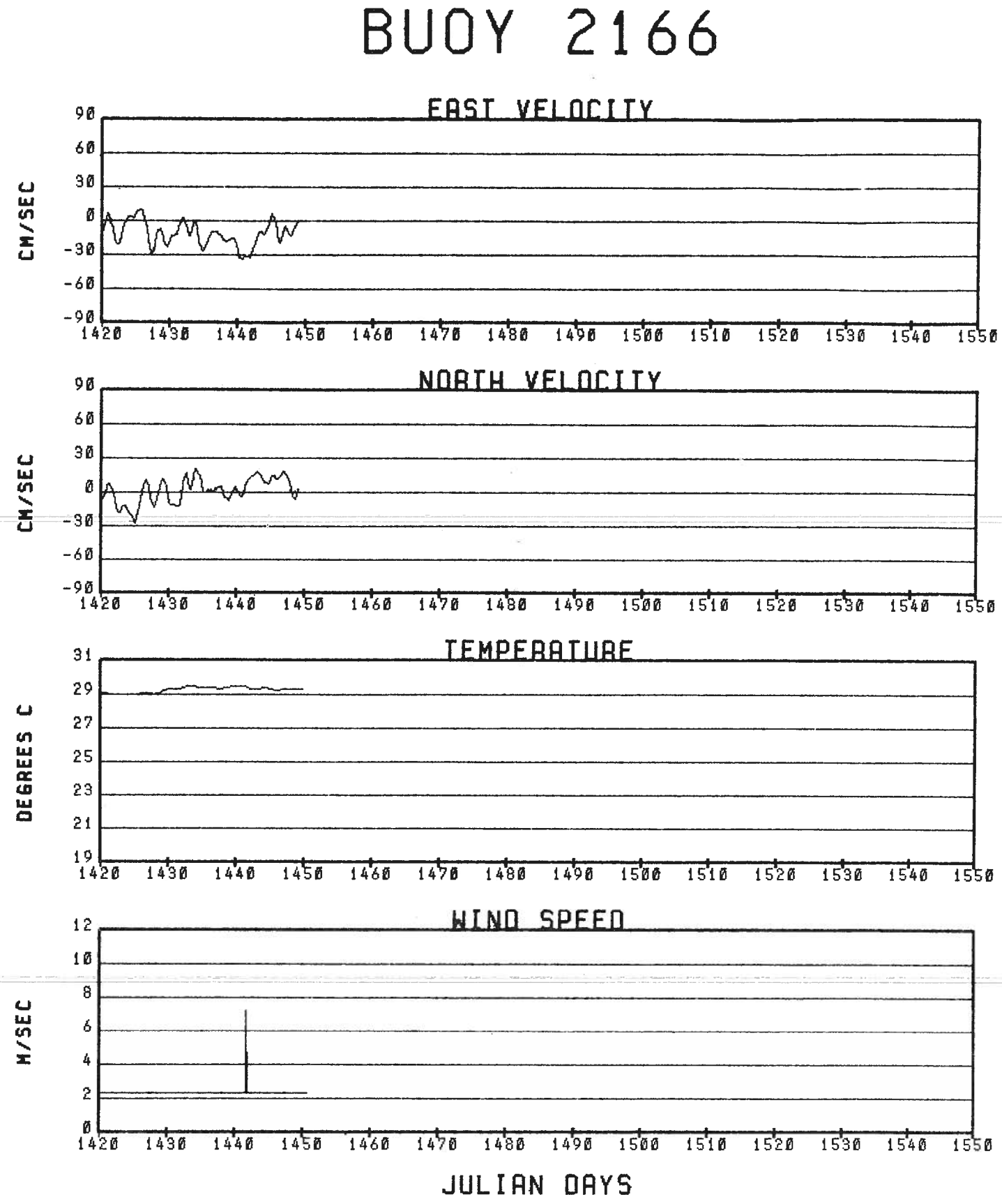


Figure 18. (continued)

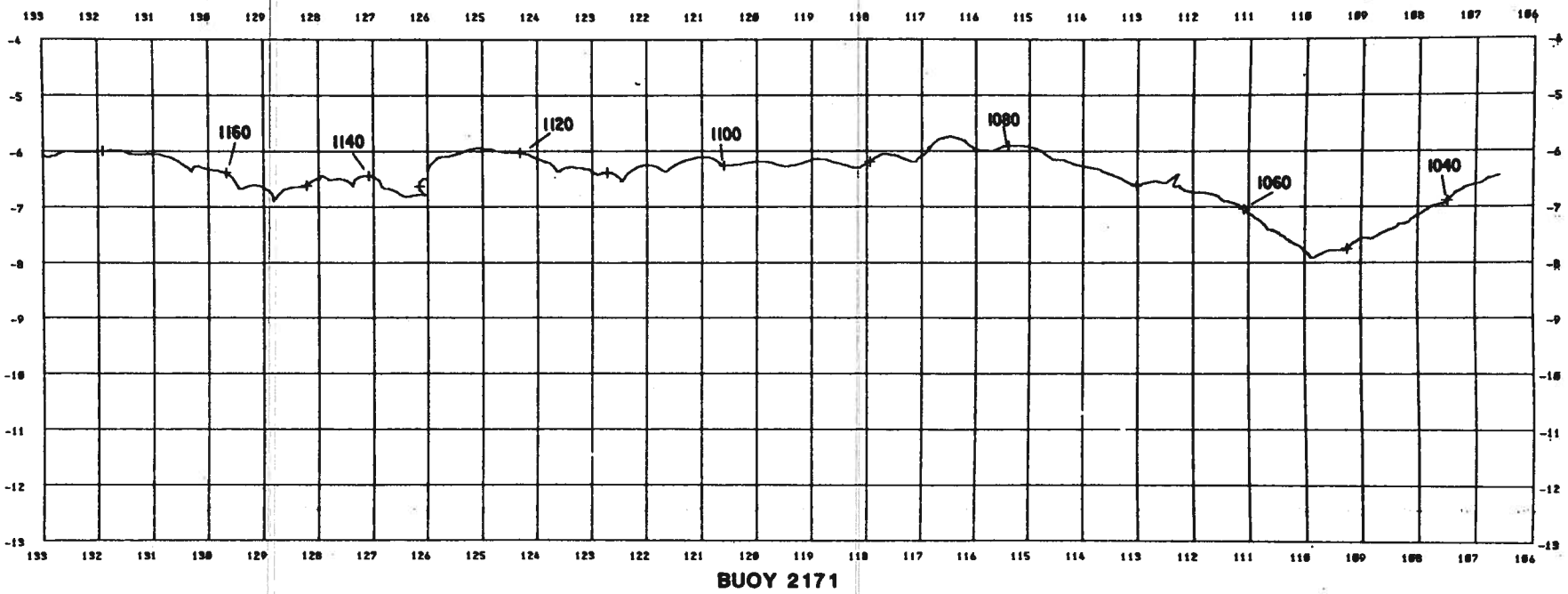


Figure 19. Drifting buoy trajectory.

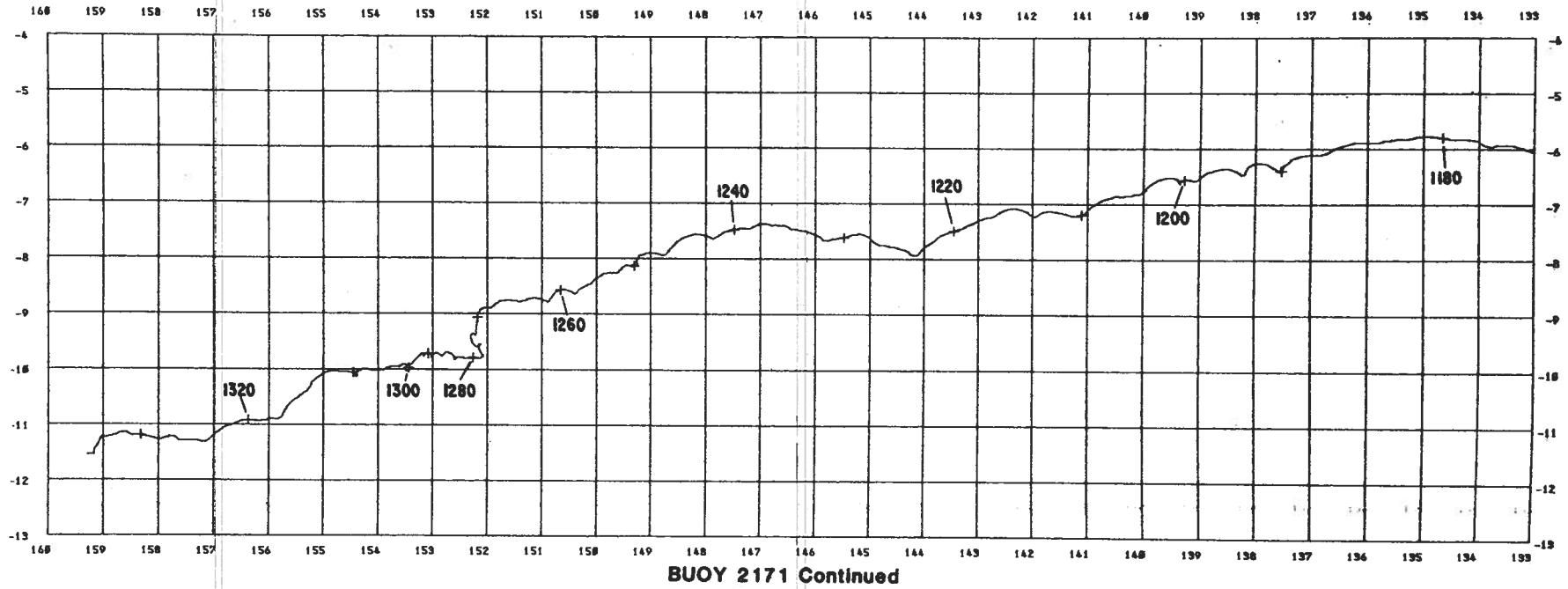


Figure 19. (continued)

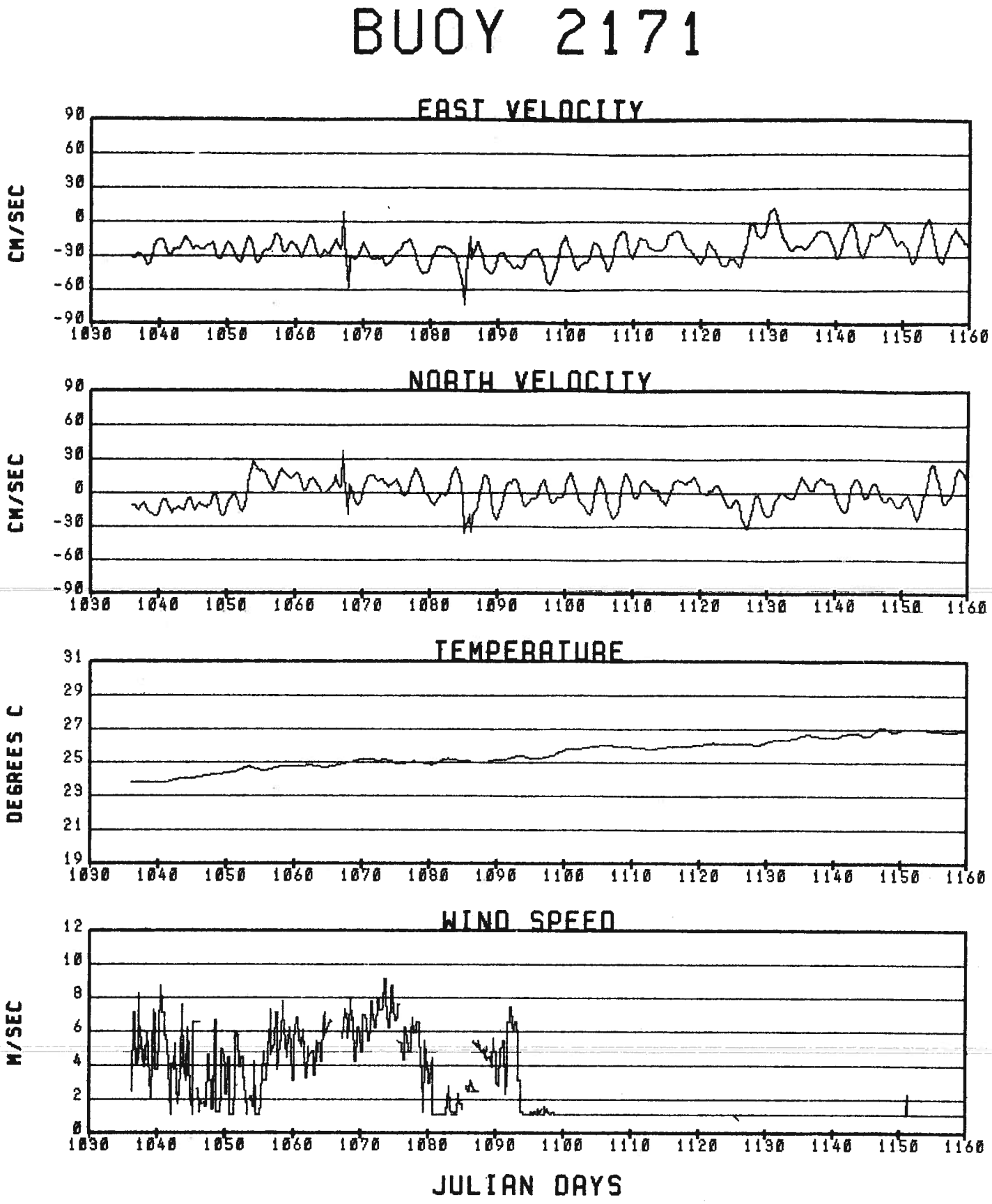


Figure 20. Time series of velocity and sensor data.

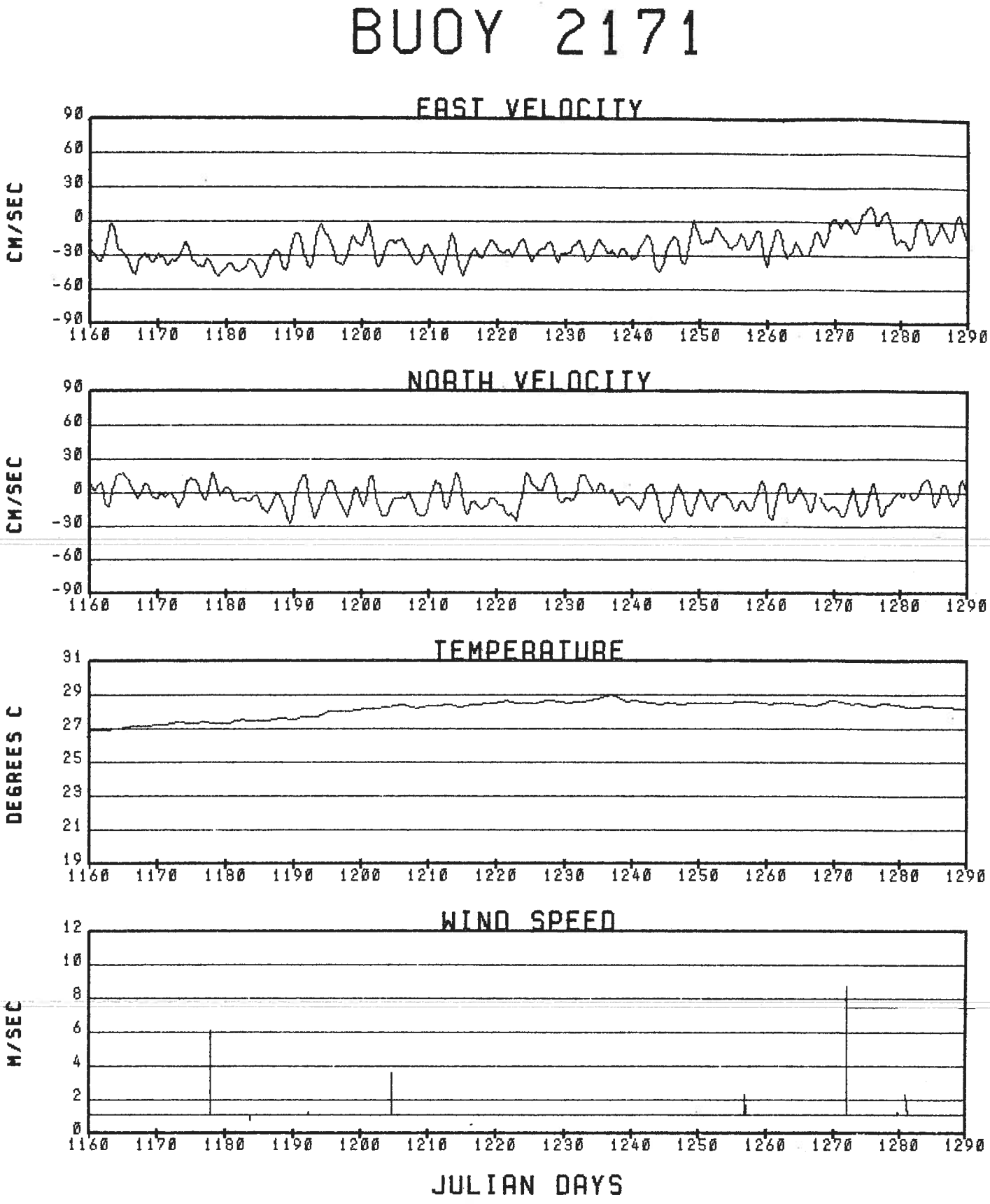


Figure 20. (continued)

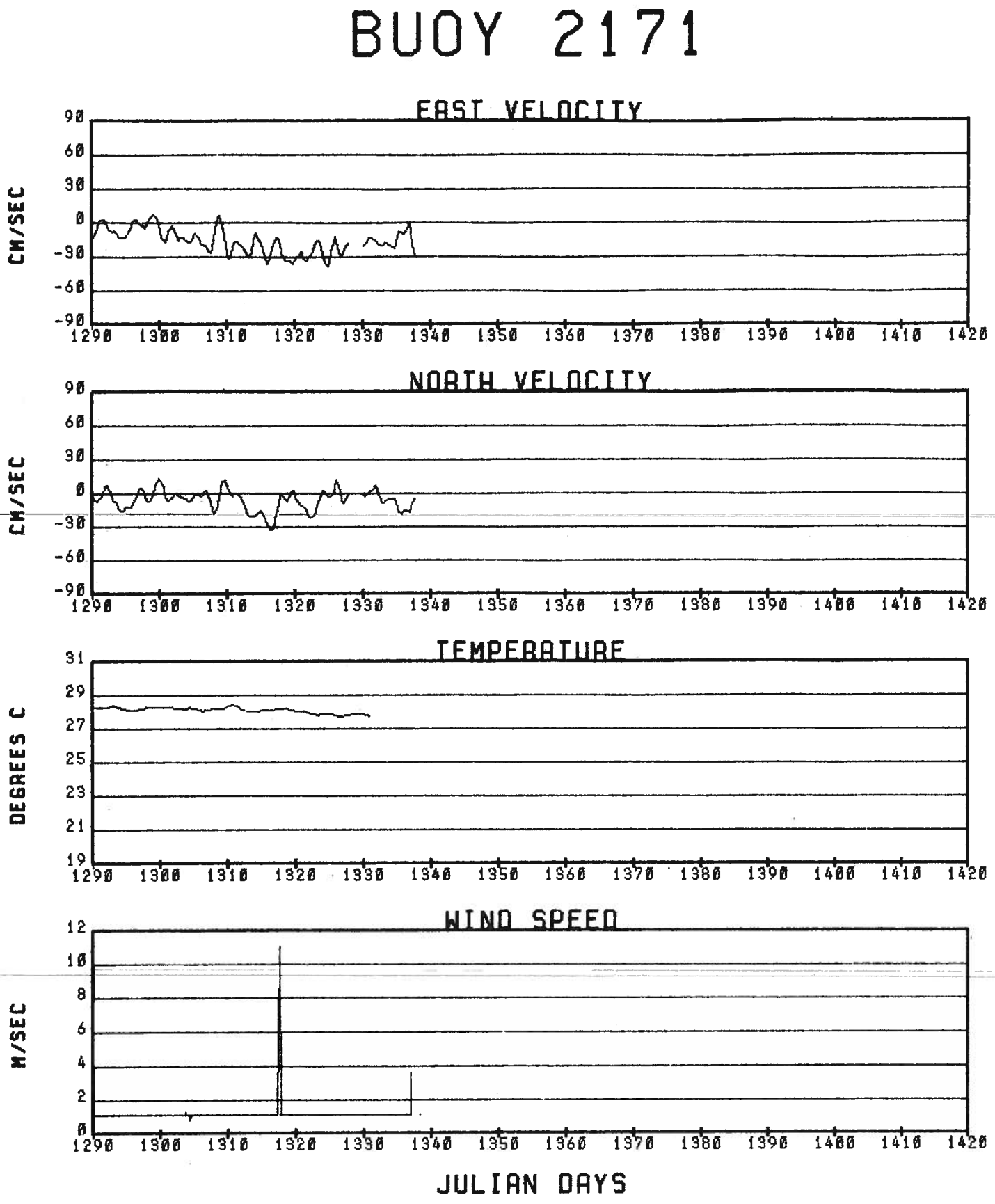


Figure 20. (continued)

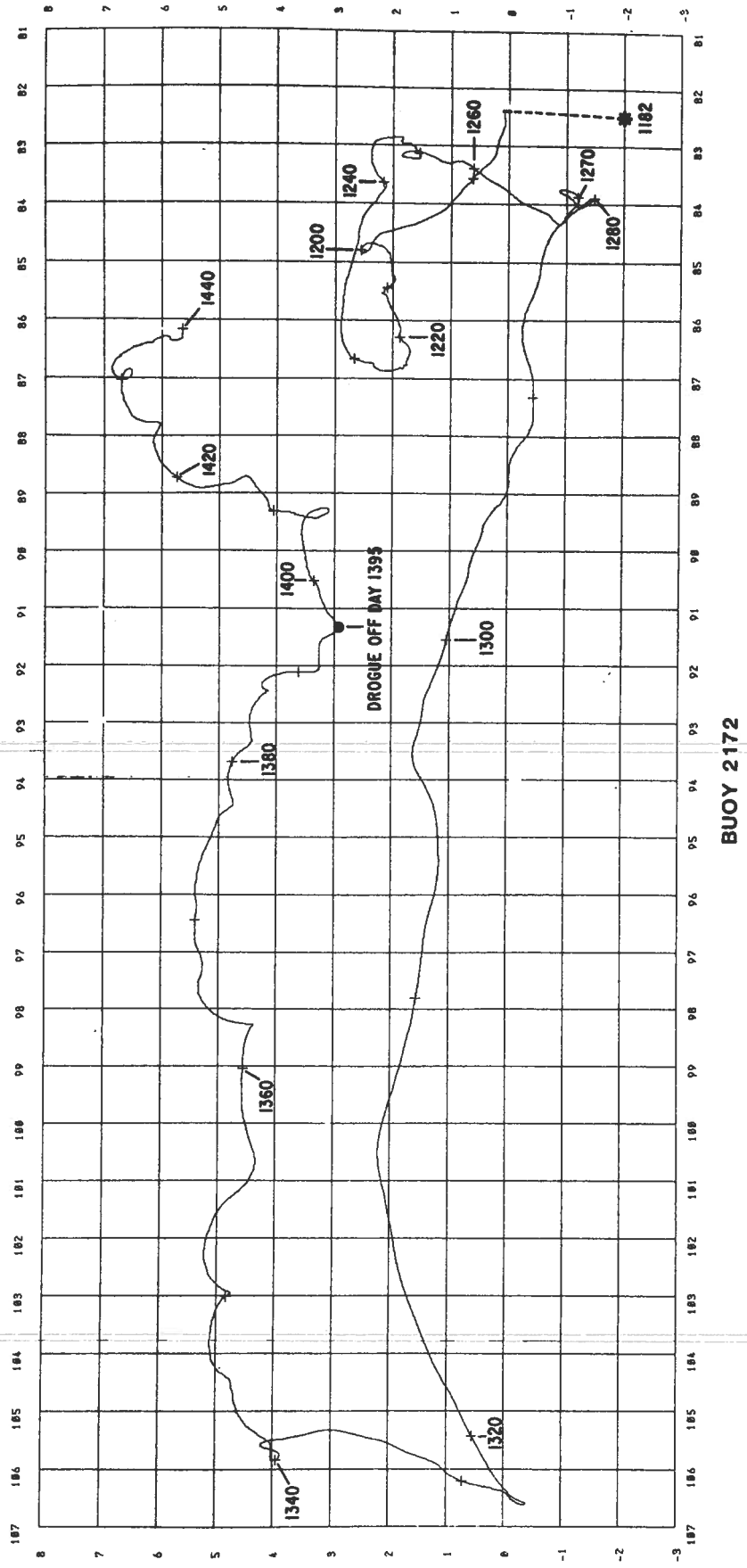


Figure 21. Drifting buoy trajectory.

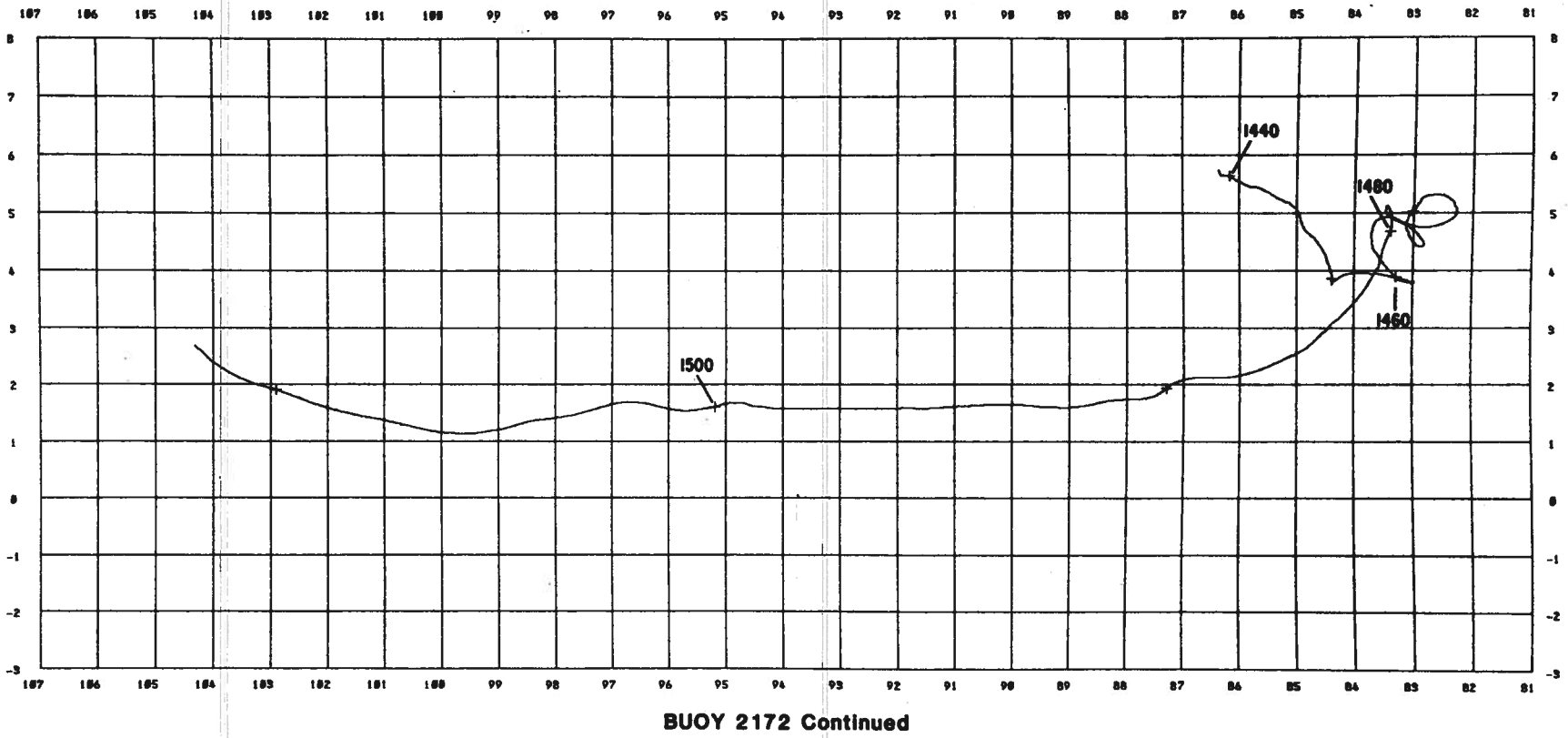


Figure 21. (continued)

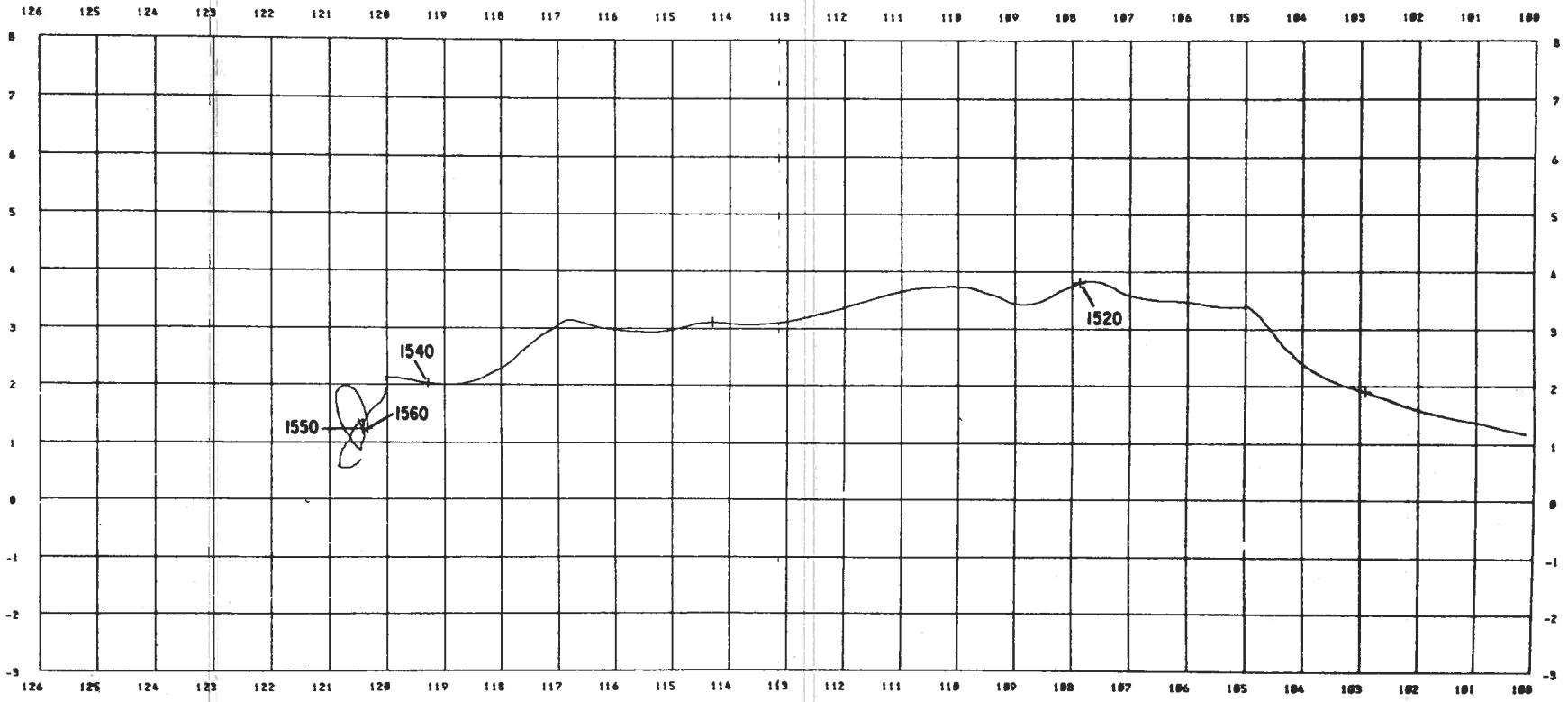


Figure 21. (continued)

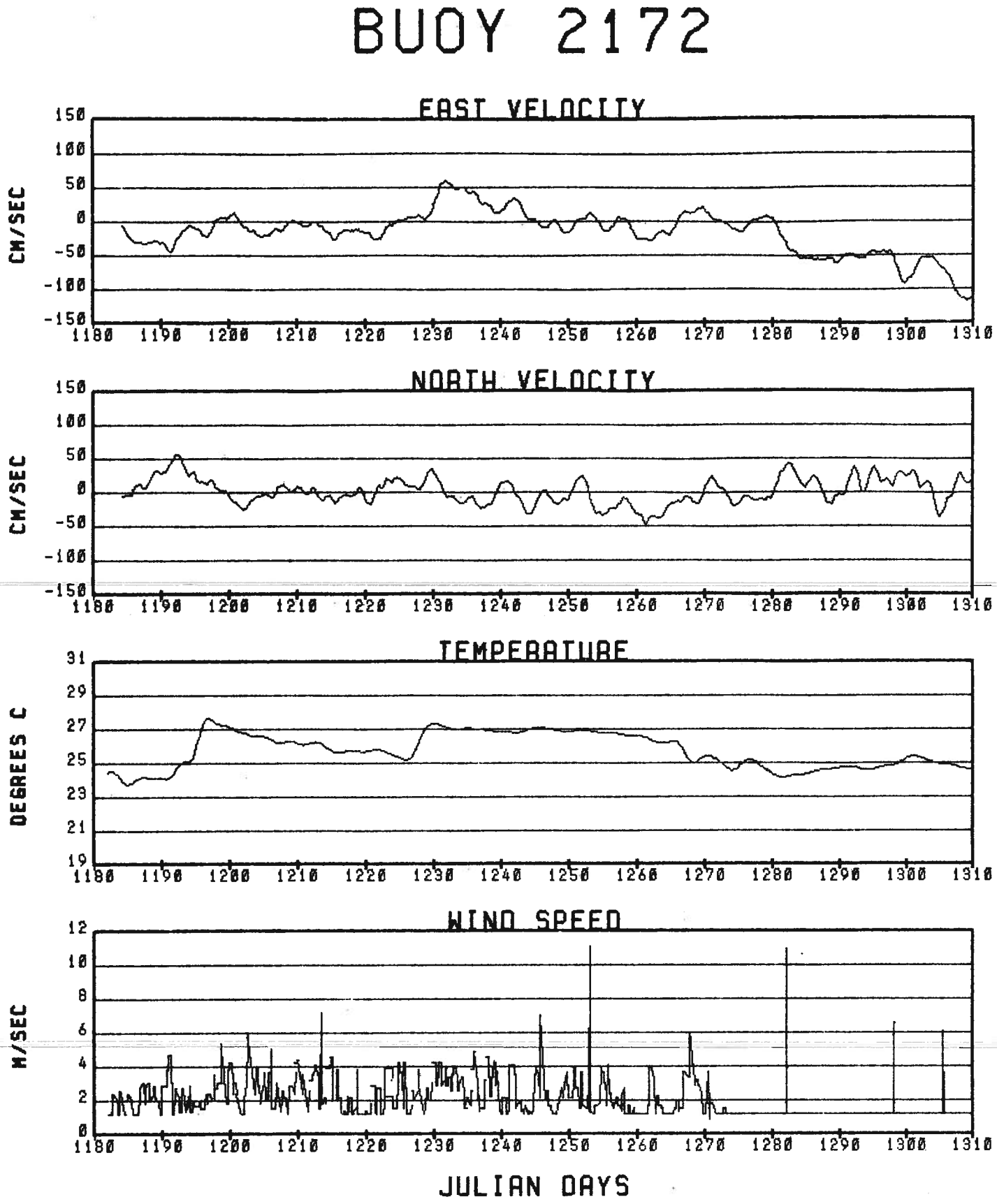


Figure 22. Time series of velocity and sensor data.

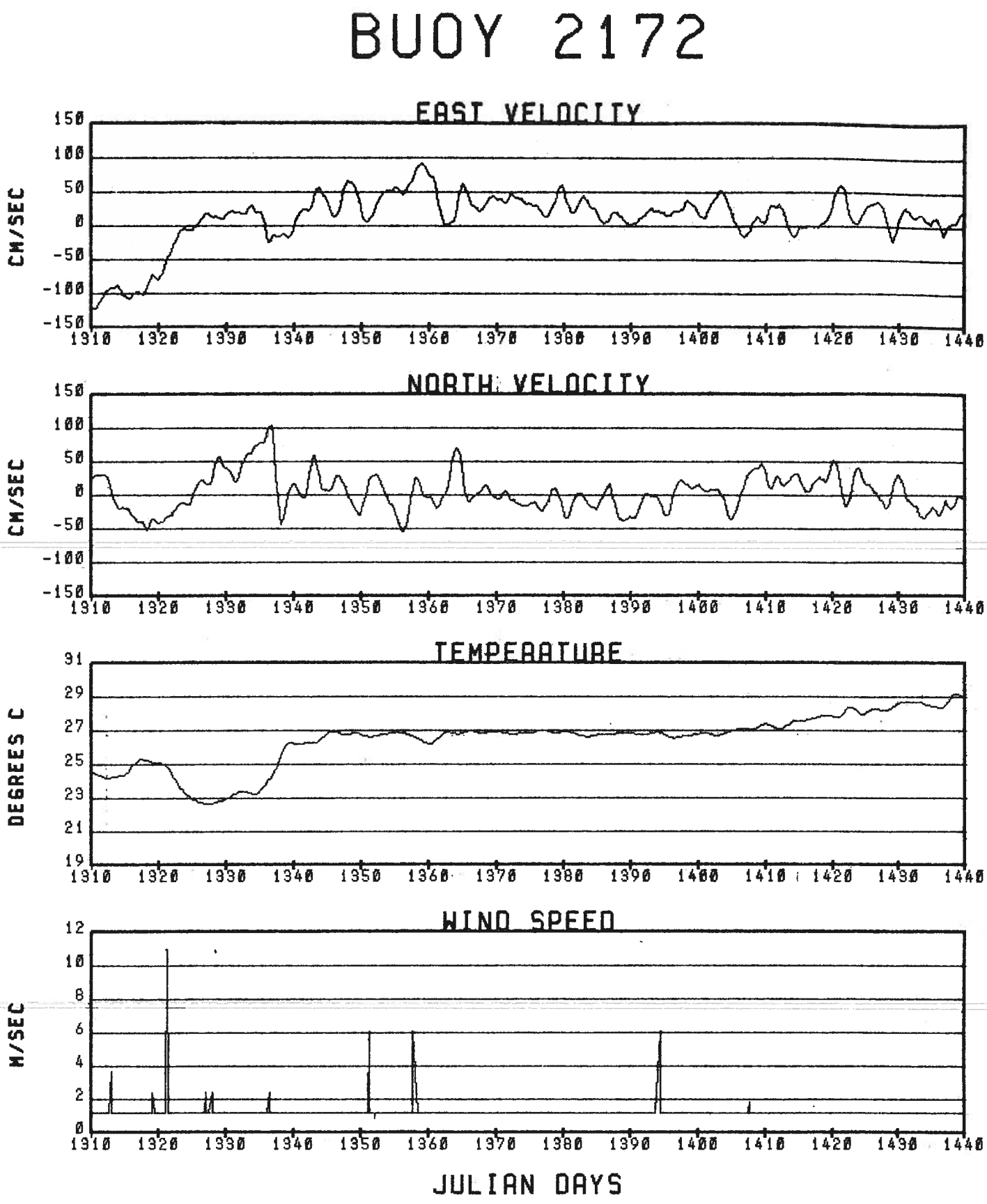


Figure 22. (continued)

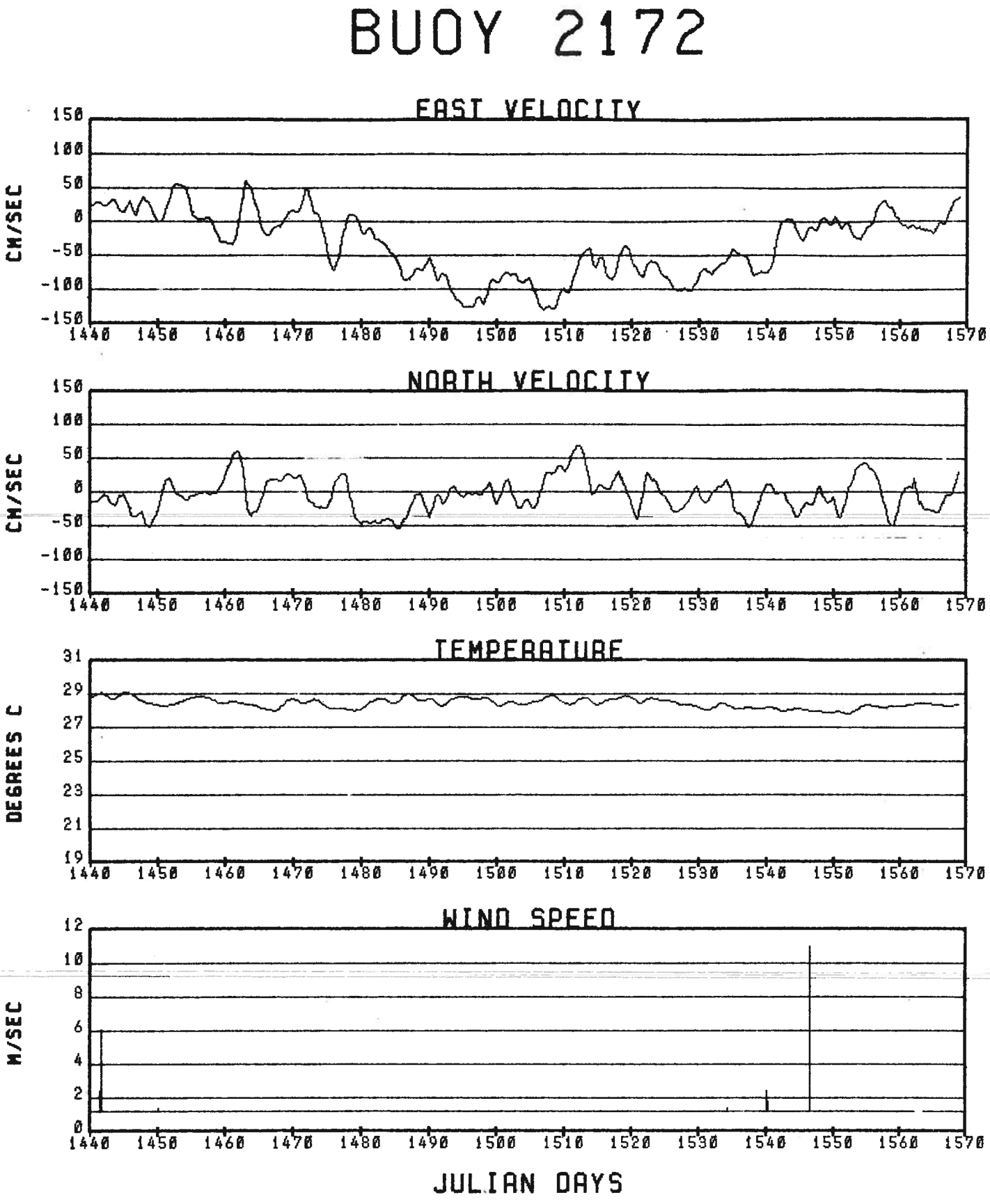


Figure 22. (continued)

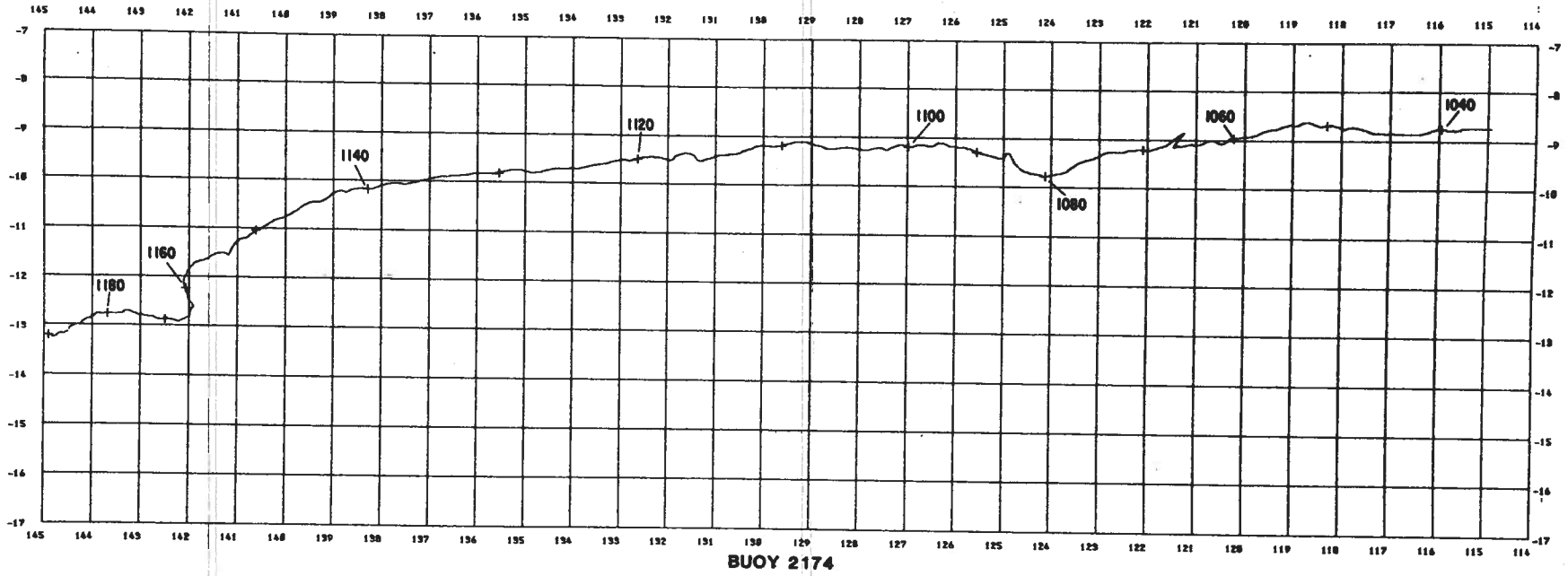


Figure 23. Drifting buoy trajectory.

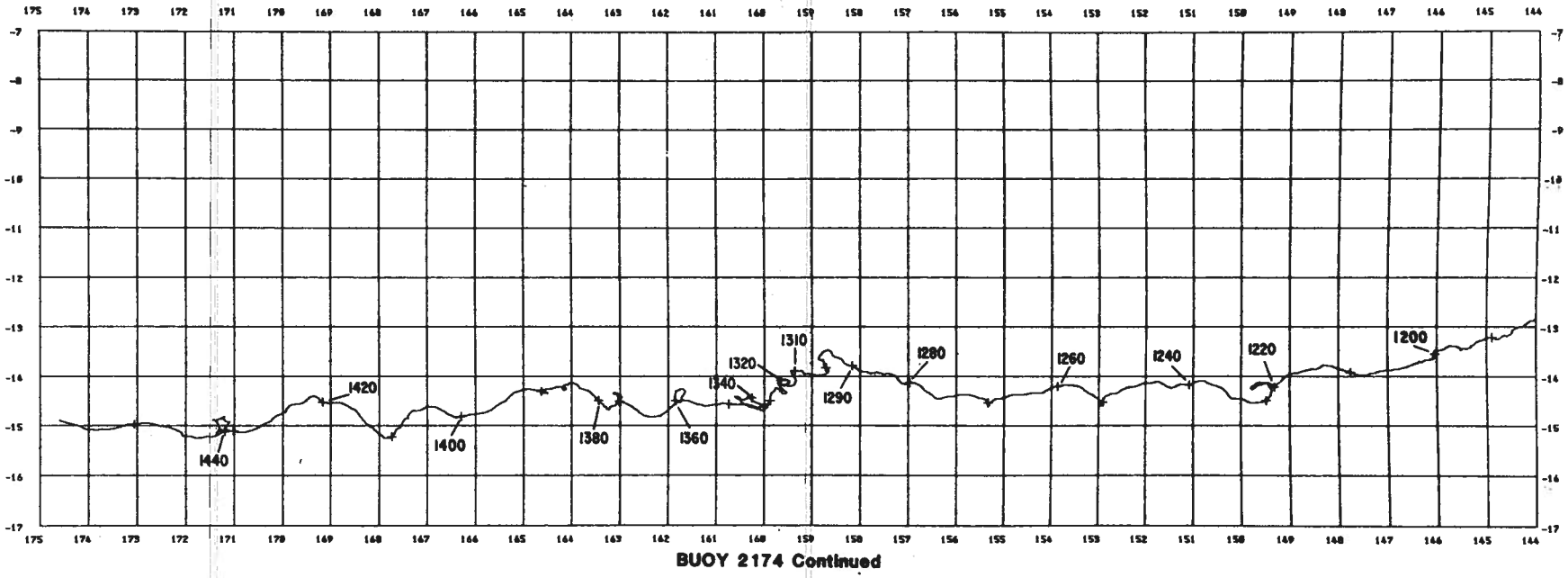


Figure 23. (continued)

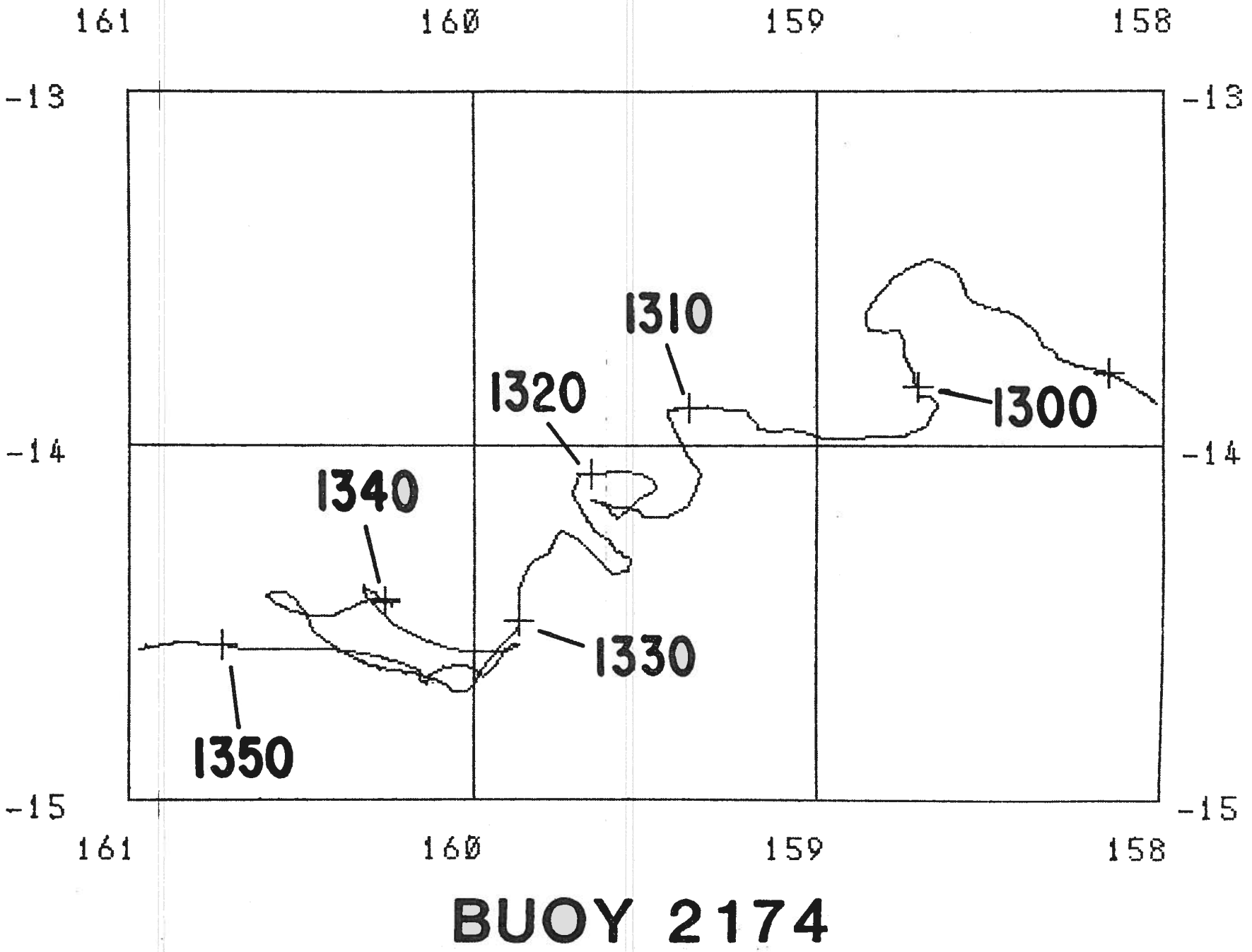


Figure 24. Drifting buoy trajectory detail.

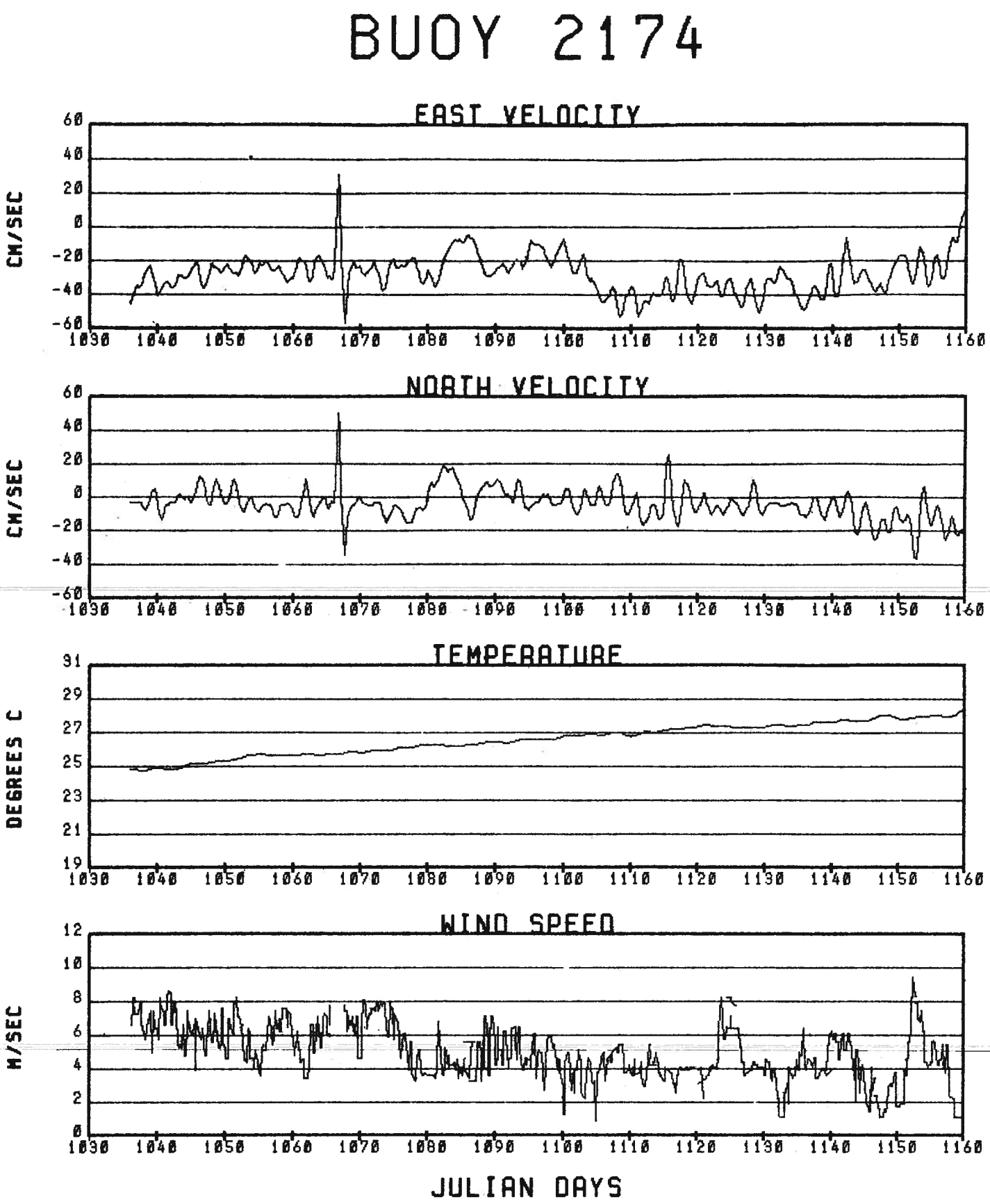


Figure 25. Time series of velocity and sensor data.

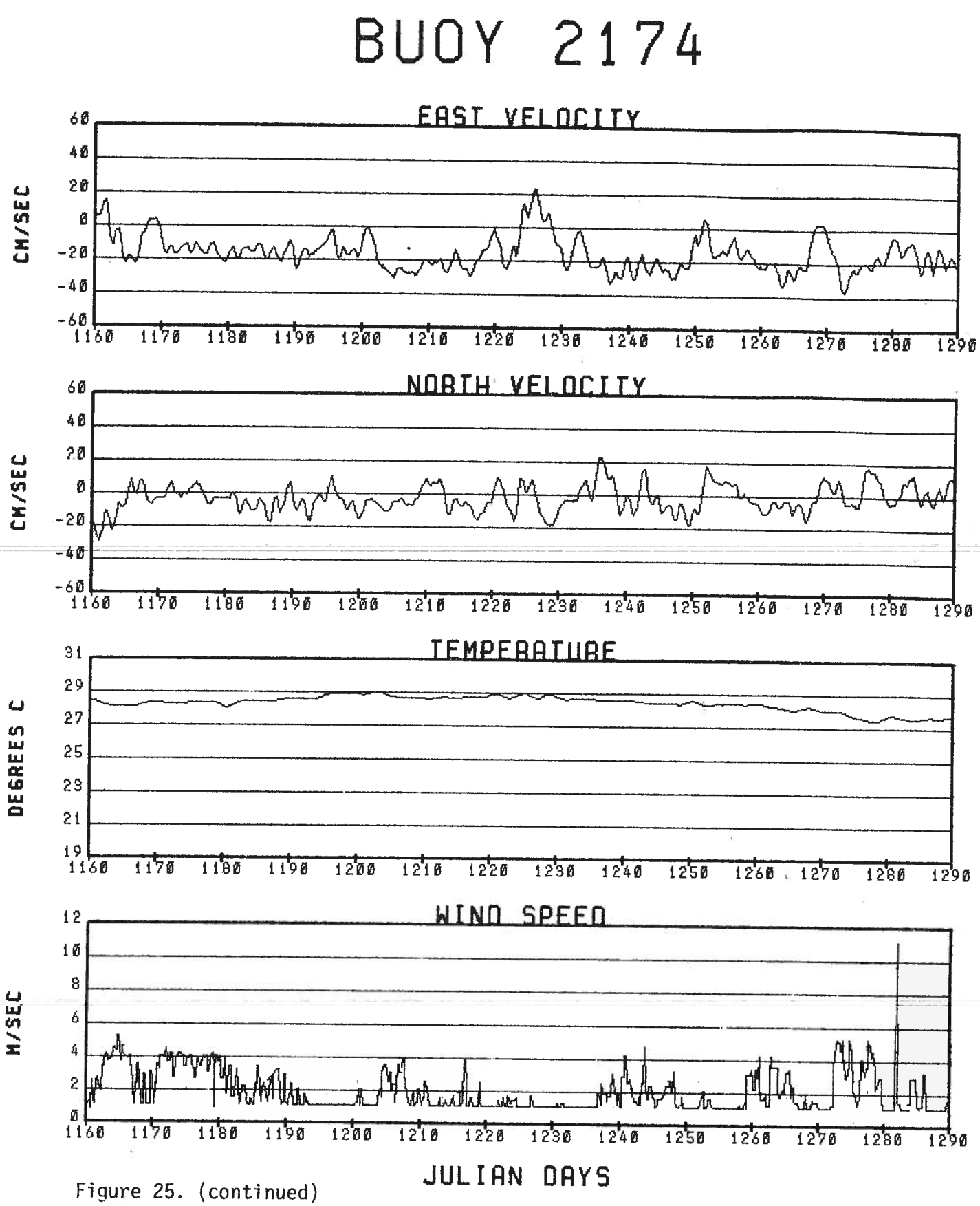


Figure 25. (continued)

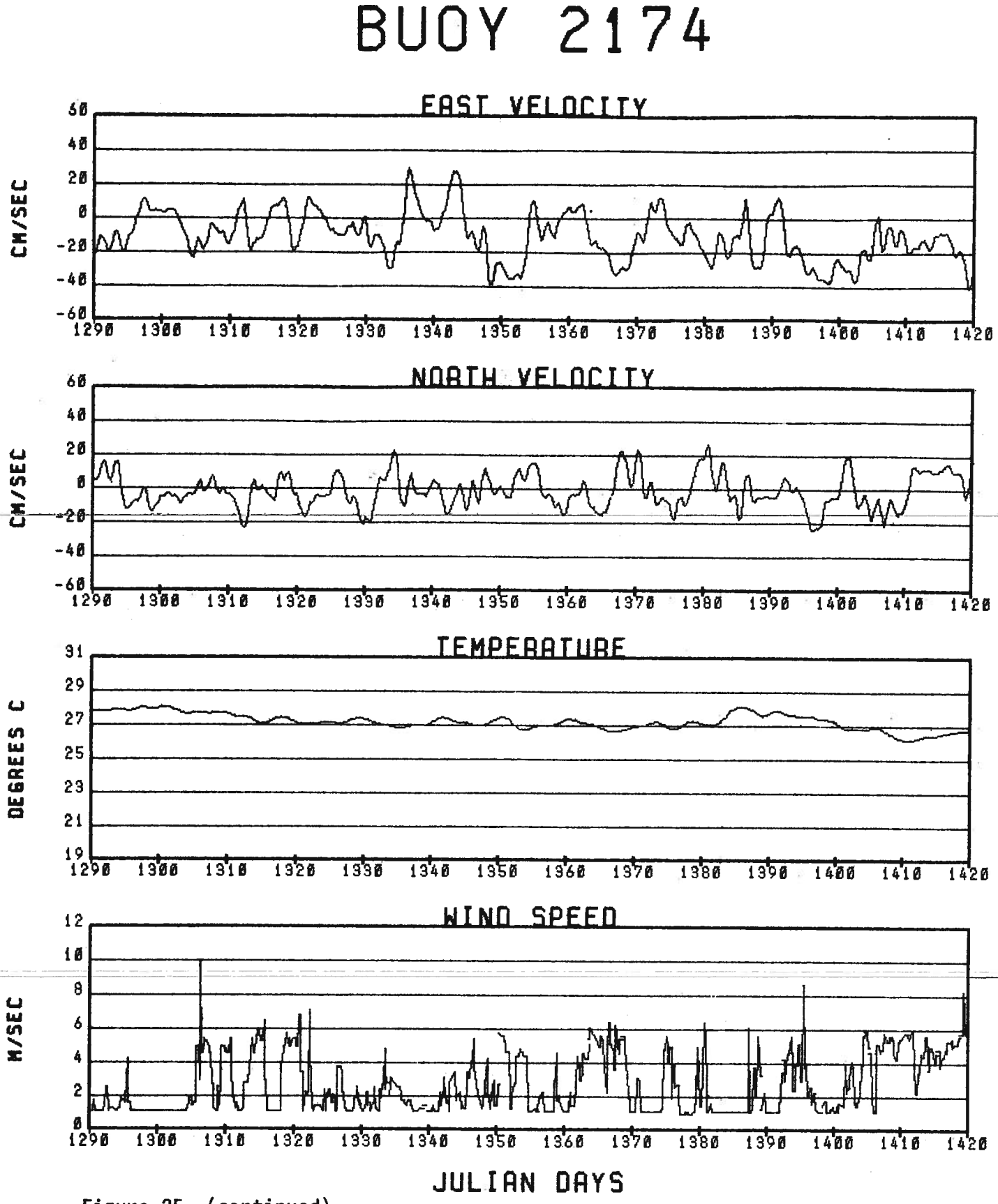


Figure 25. (continued)

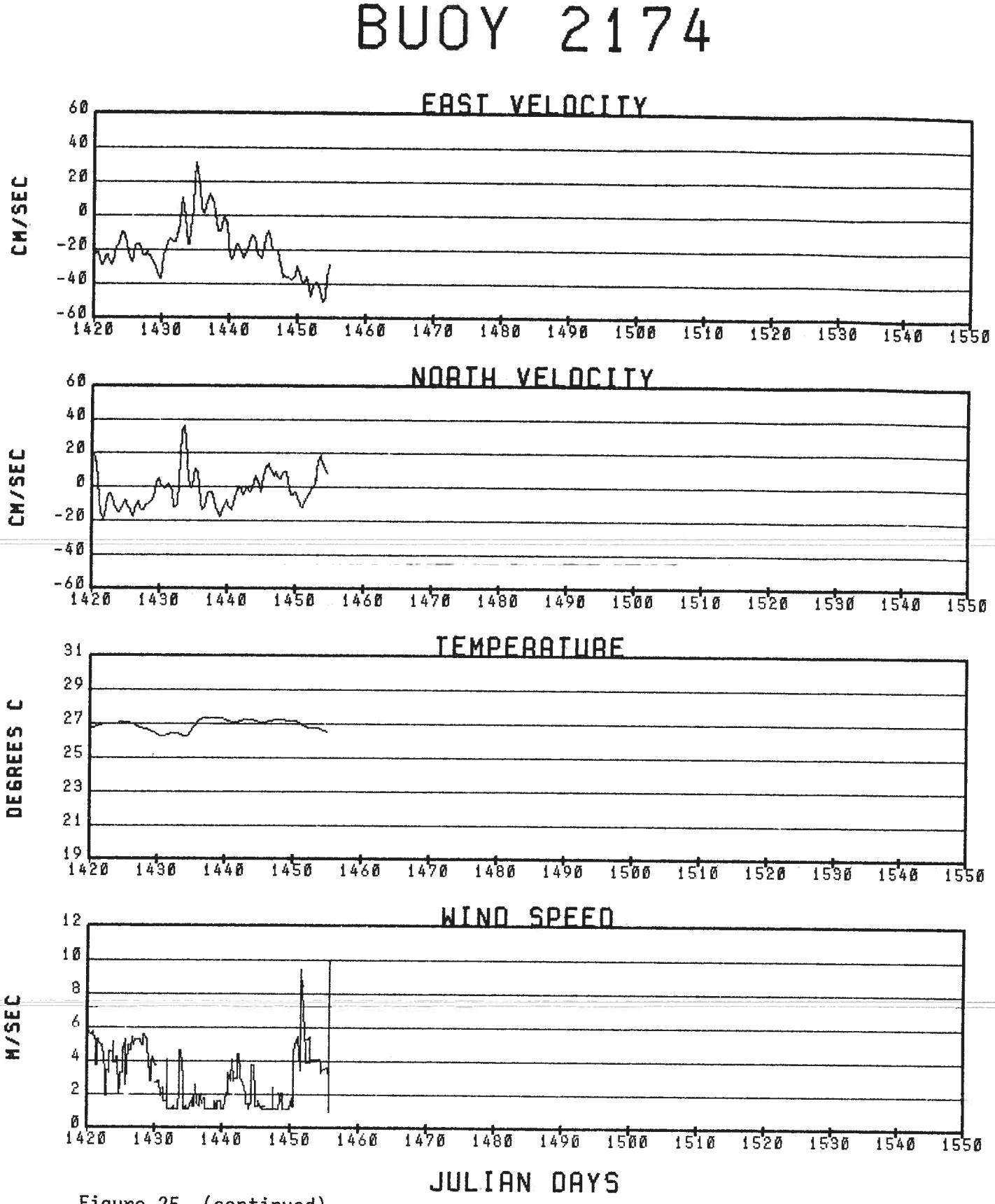


Figure 25. (continued)

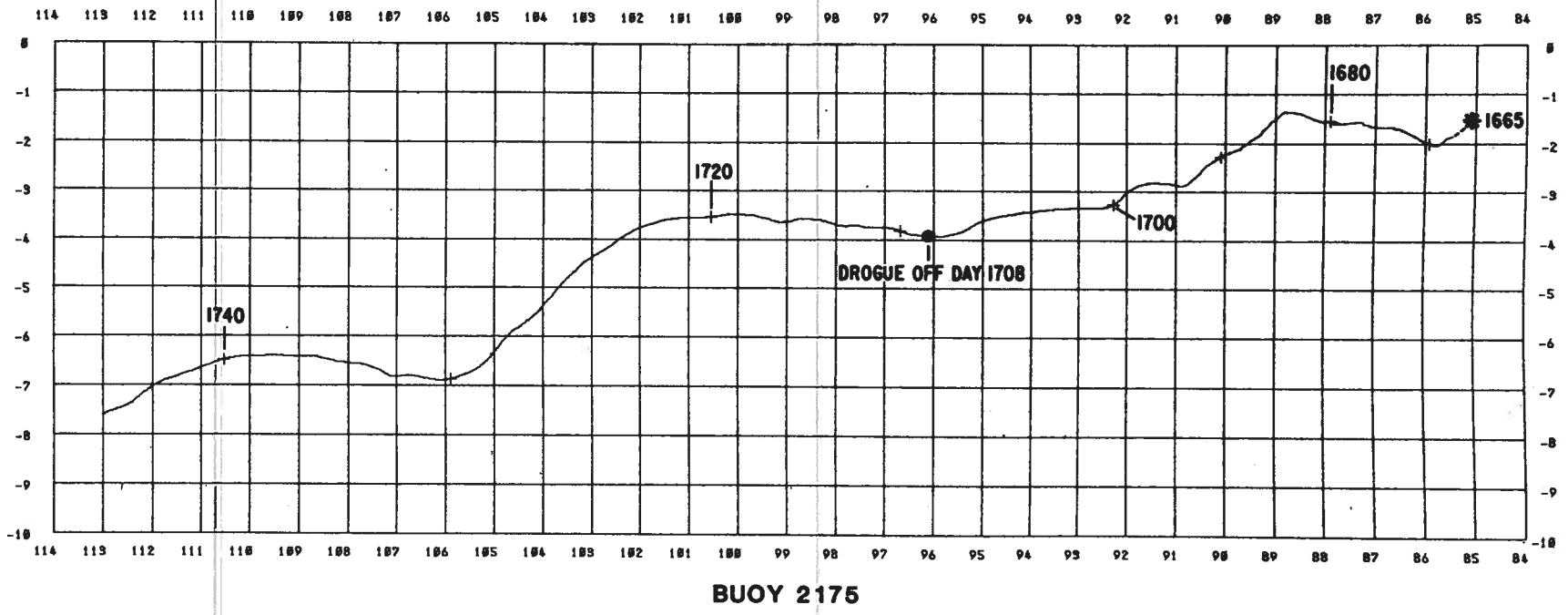


Figure 26. Drifting buoy trajectory.

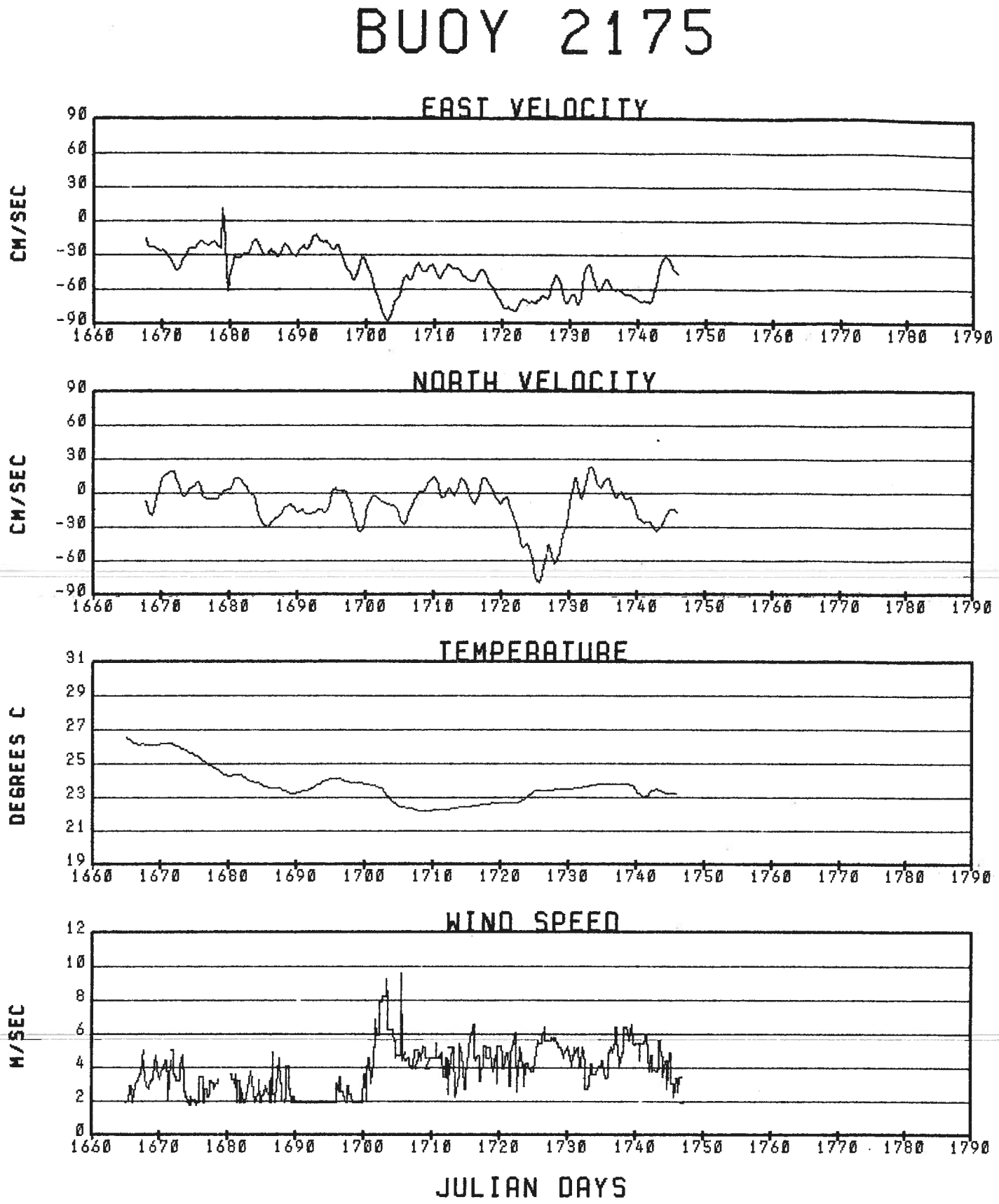


Figure 27. Time series of velocity and sensor data.

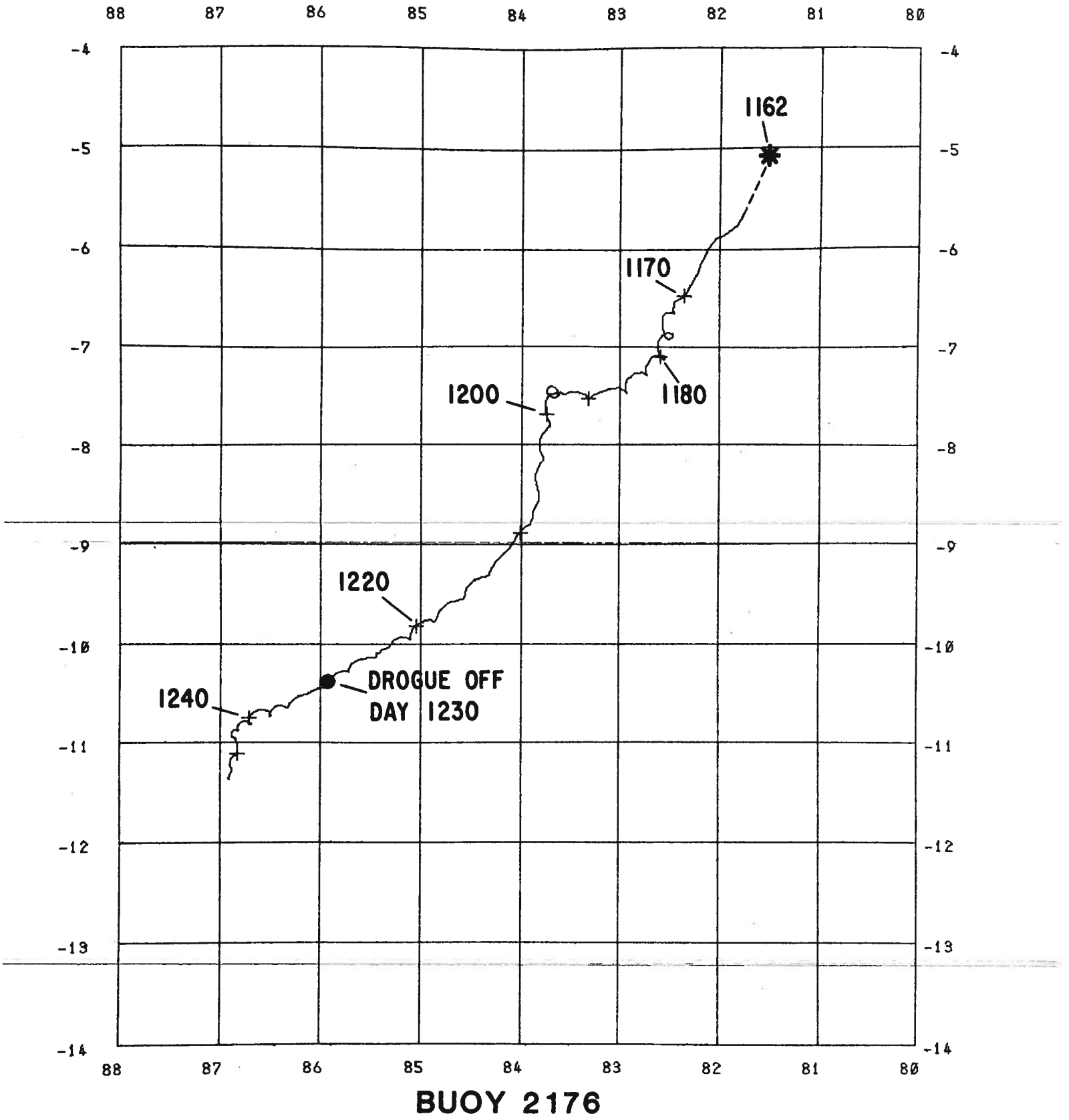


Figure 28. Drifting buoy trajectory.

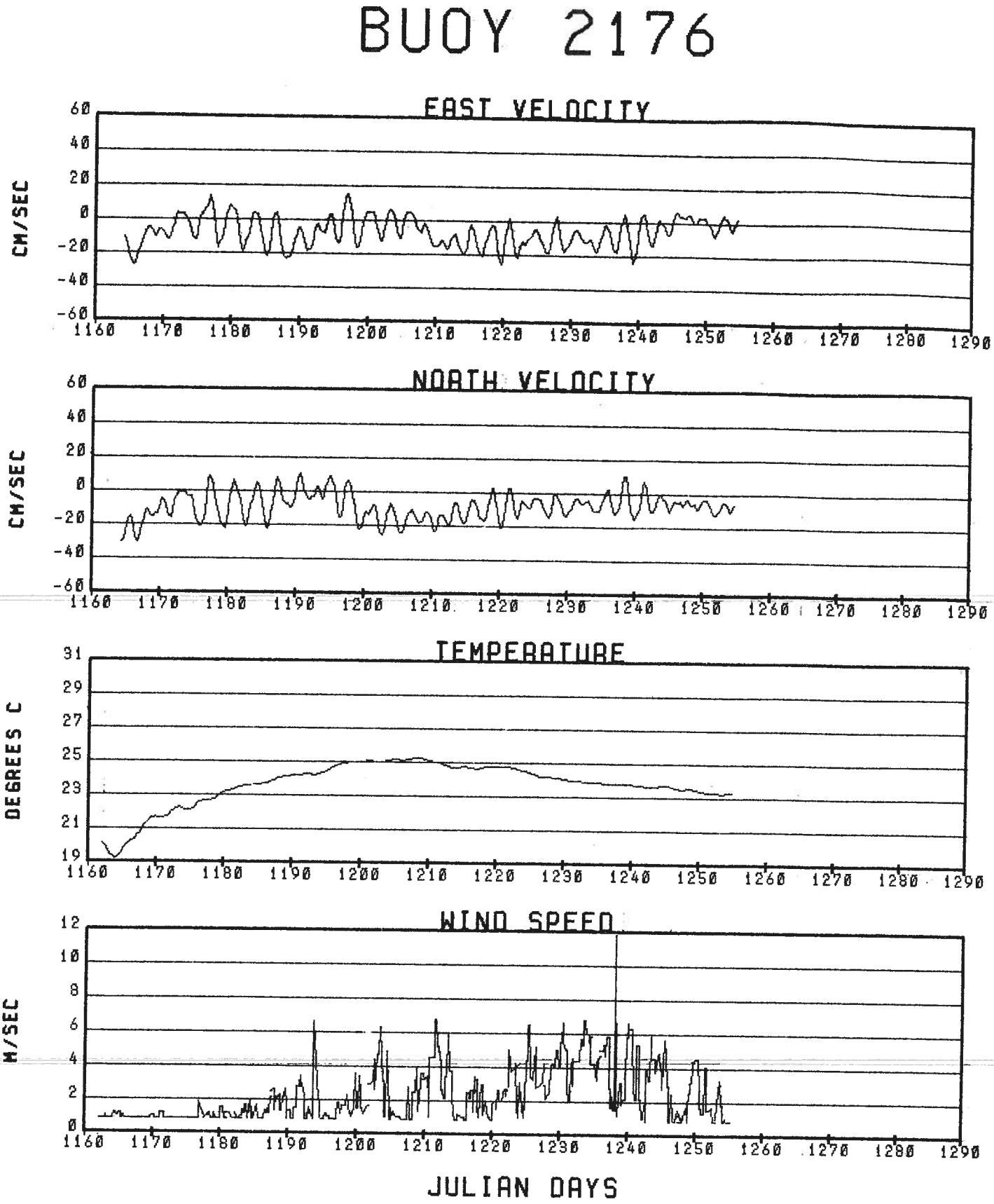


Figure 29. Time series of velocity and sensor data.

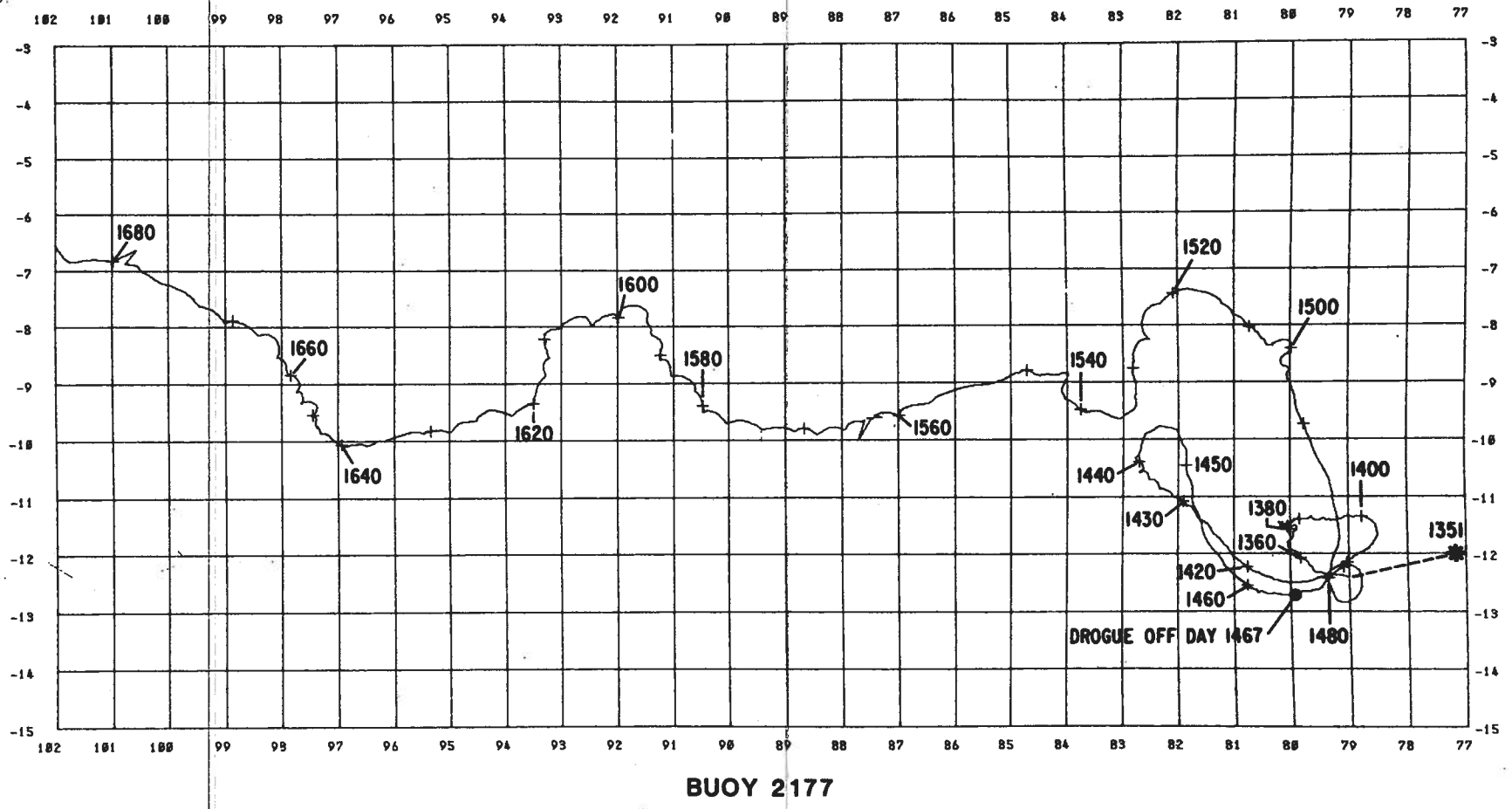
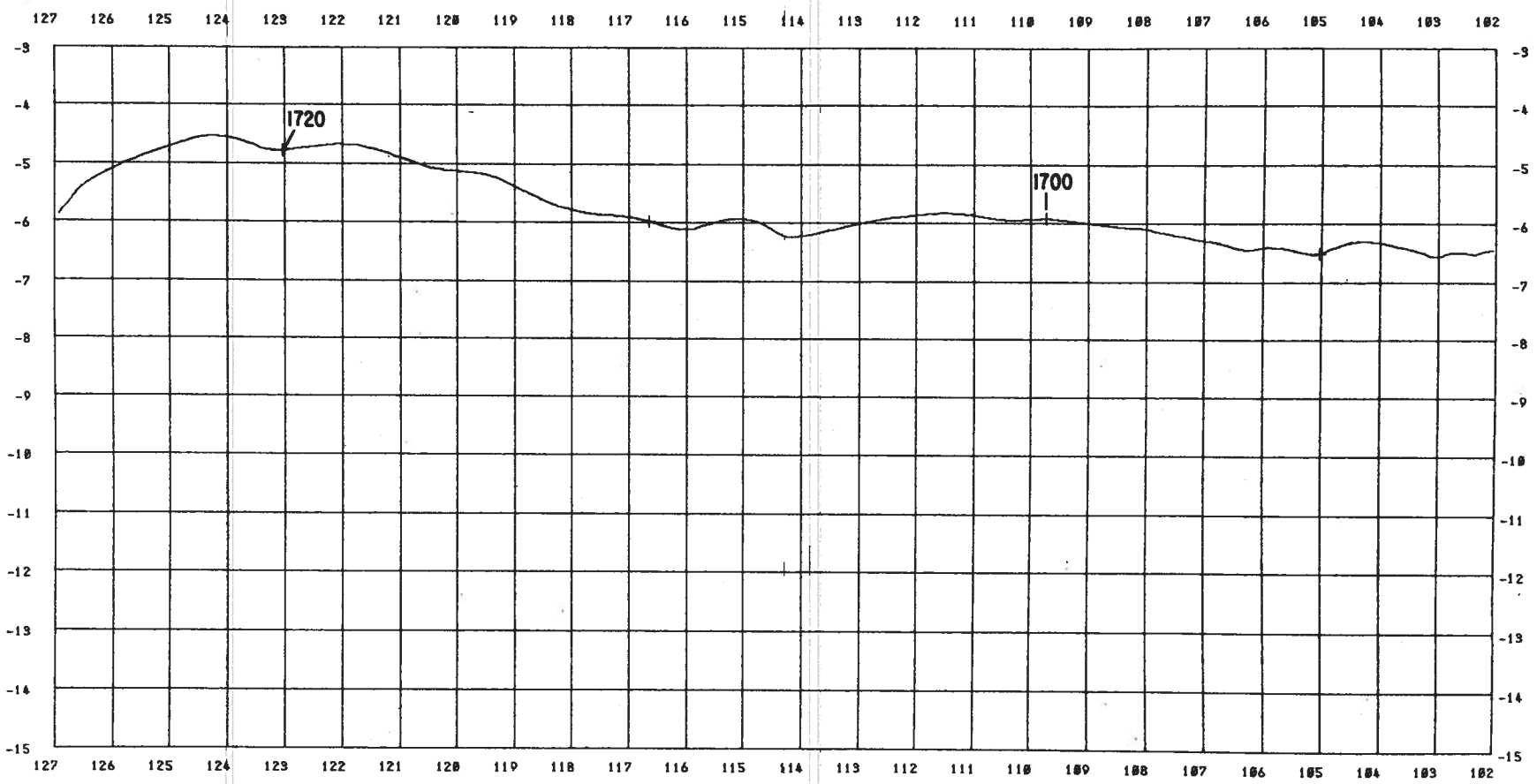
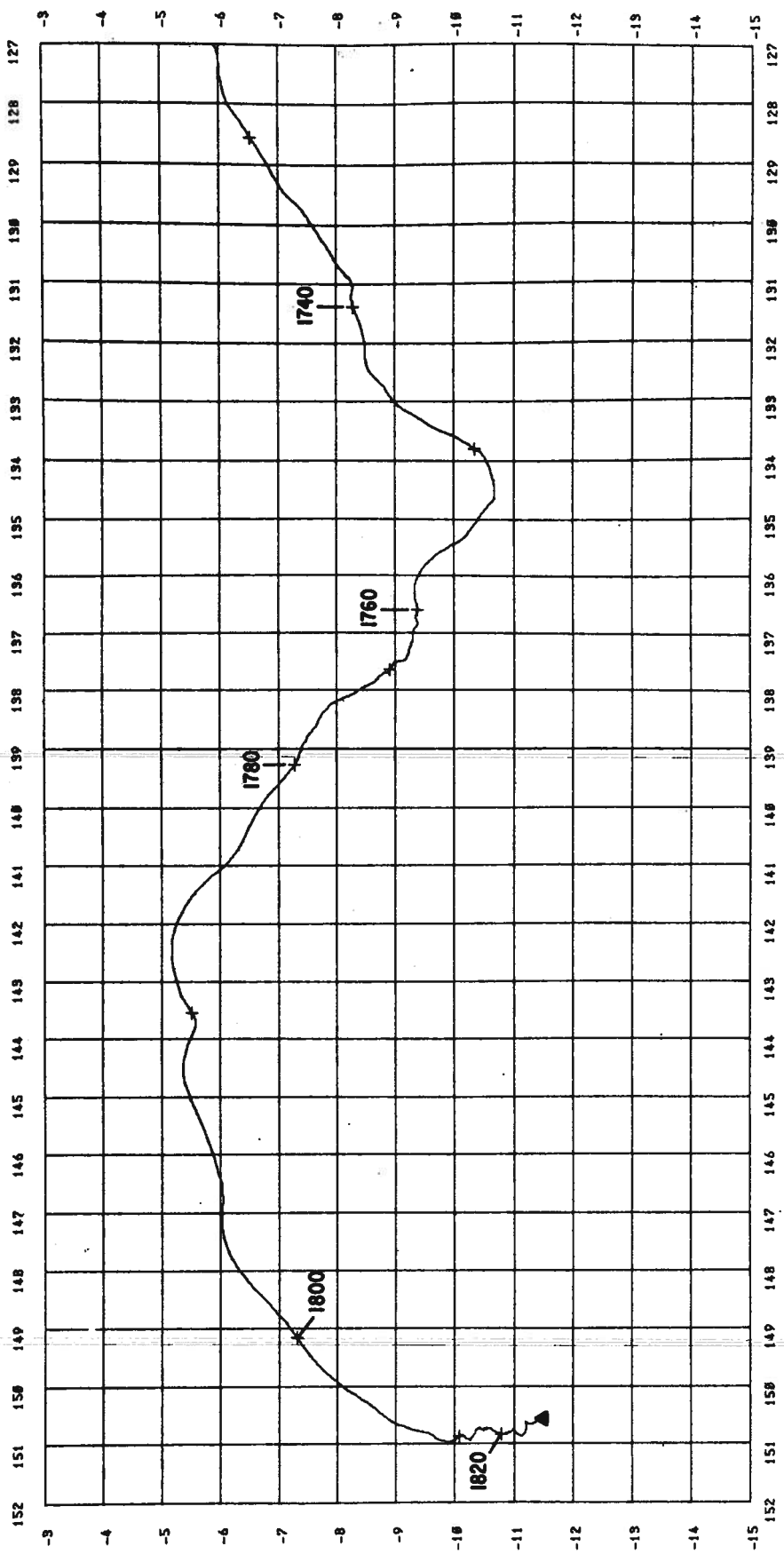


Figure 30. Drifting buoy trajectory.



BUOY 2177 Continued

Figure 30. (continued)



BUOY 2177 Continued

Figure 30. (continued)

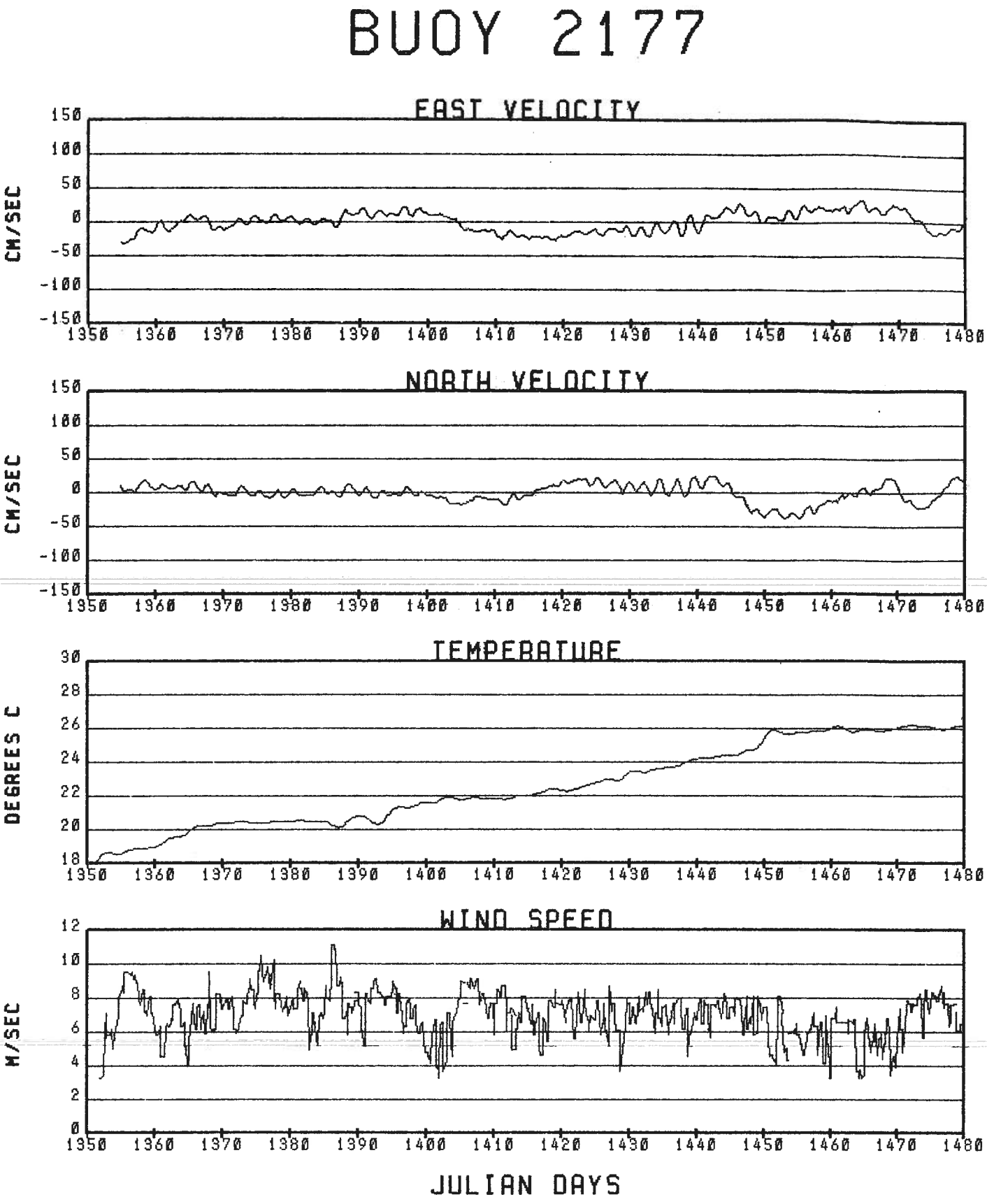


Figure 31. Time series of velocity and sensor data.

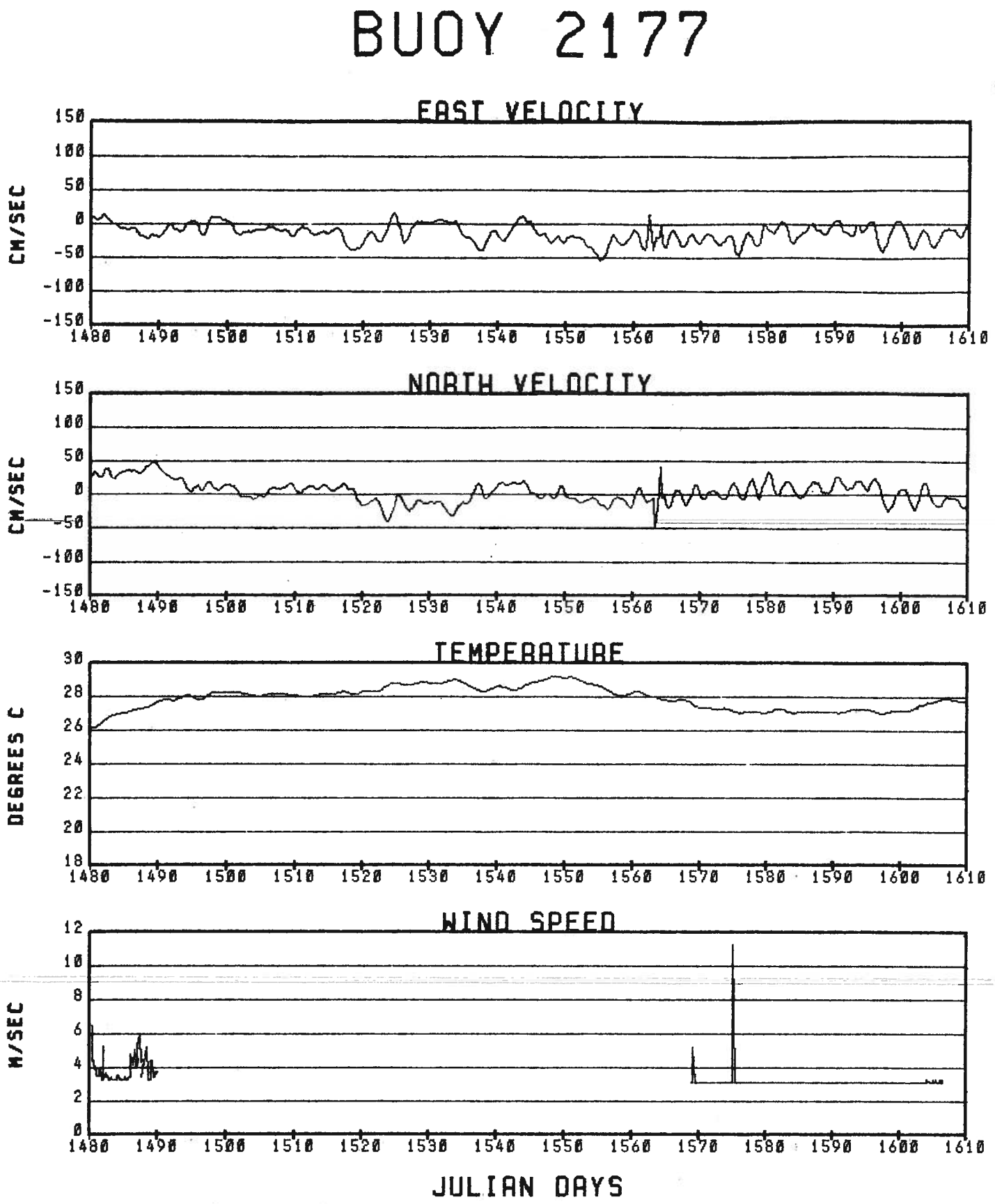


Figure 31. (continued)

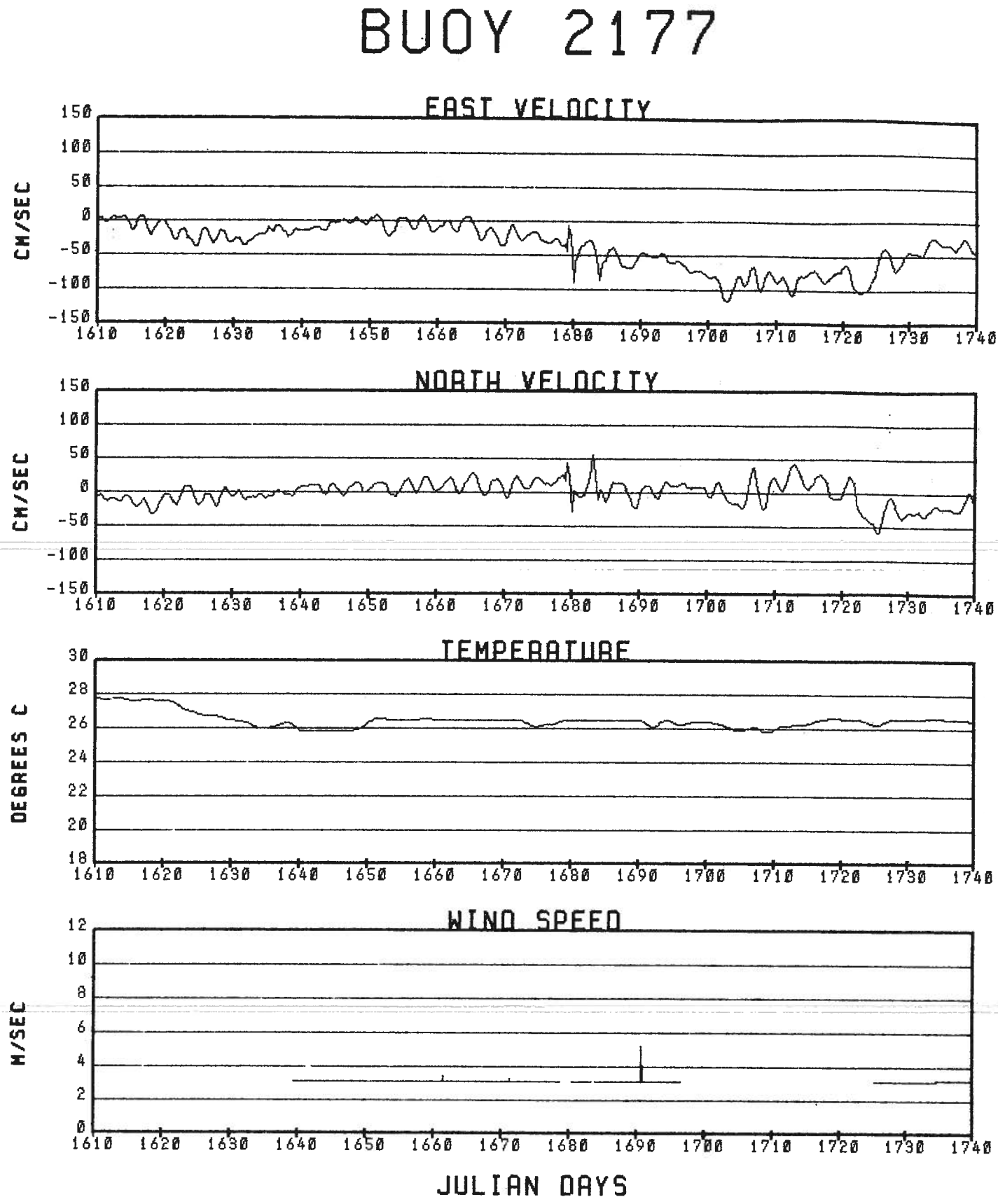


Figure 31. (continued)

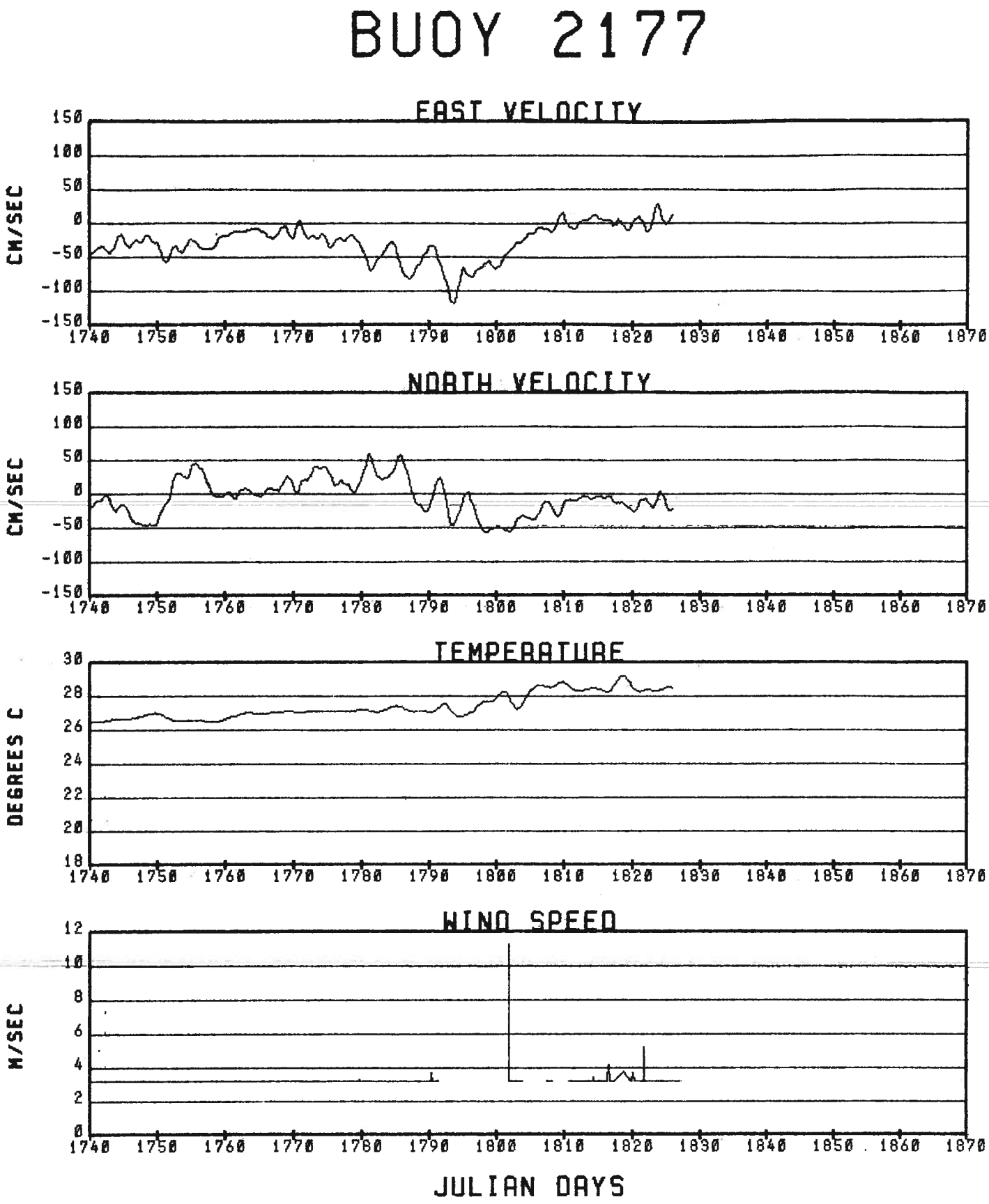


Figure 31. (continued)

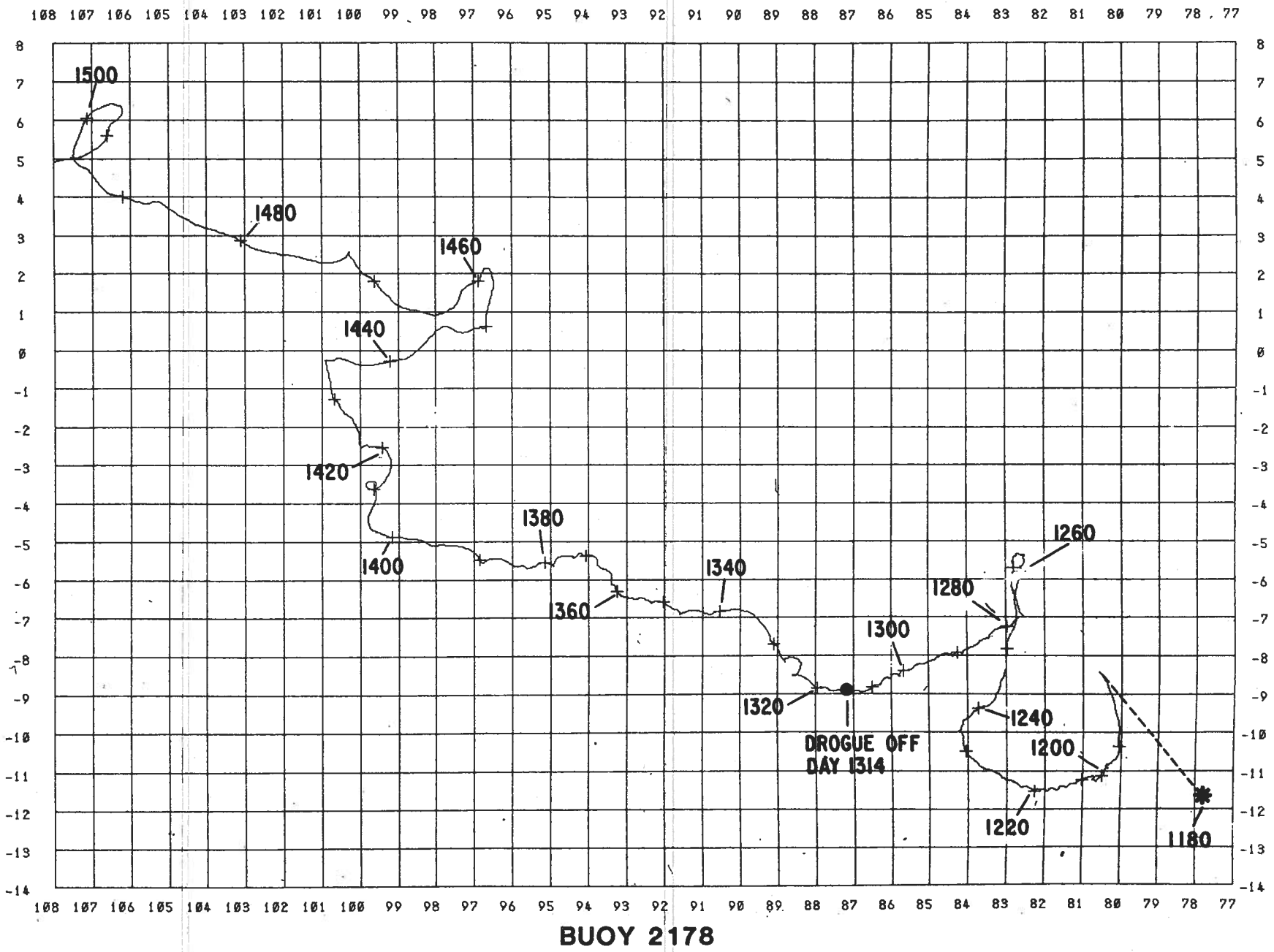


Figure 32. Drifting buoy trajectory.

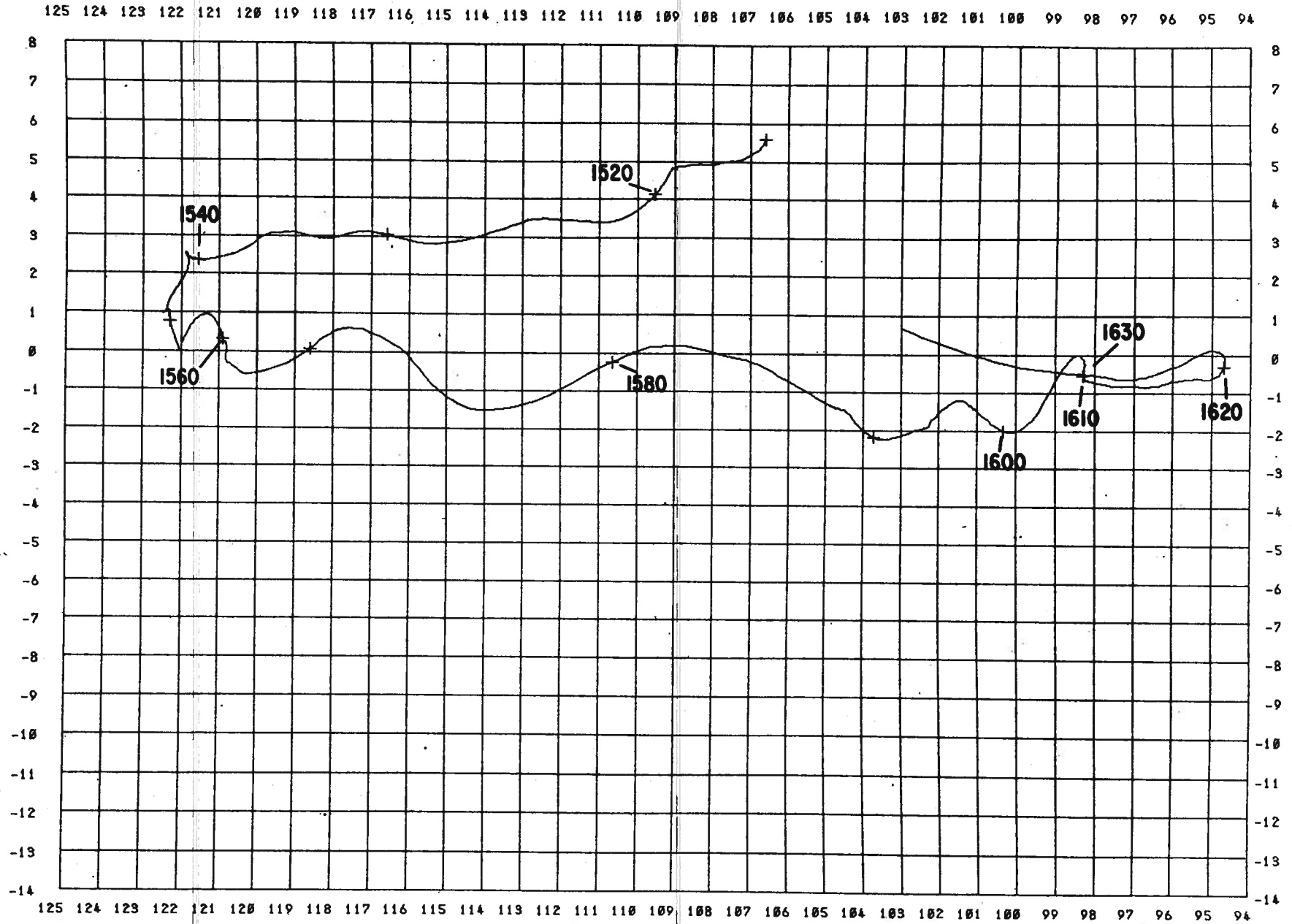


Figure 32. (continued)

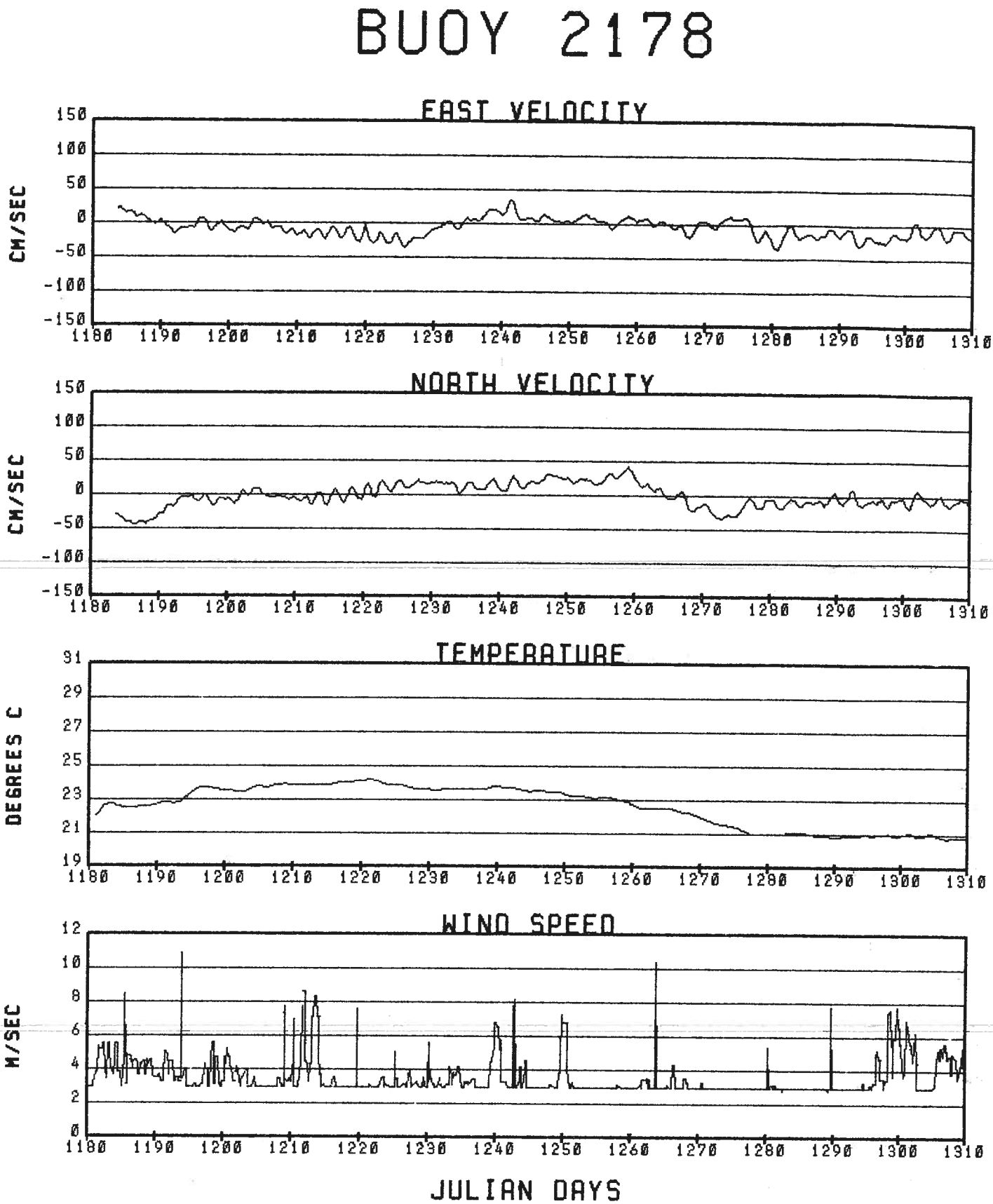


Figure 33. Time series of velocity and sensor data.

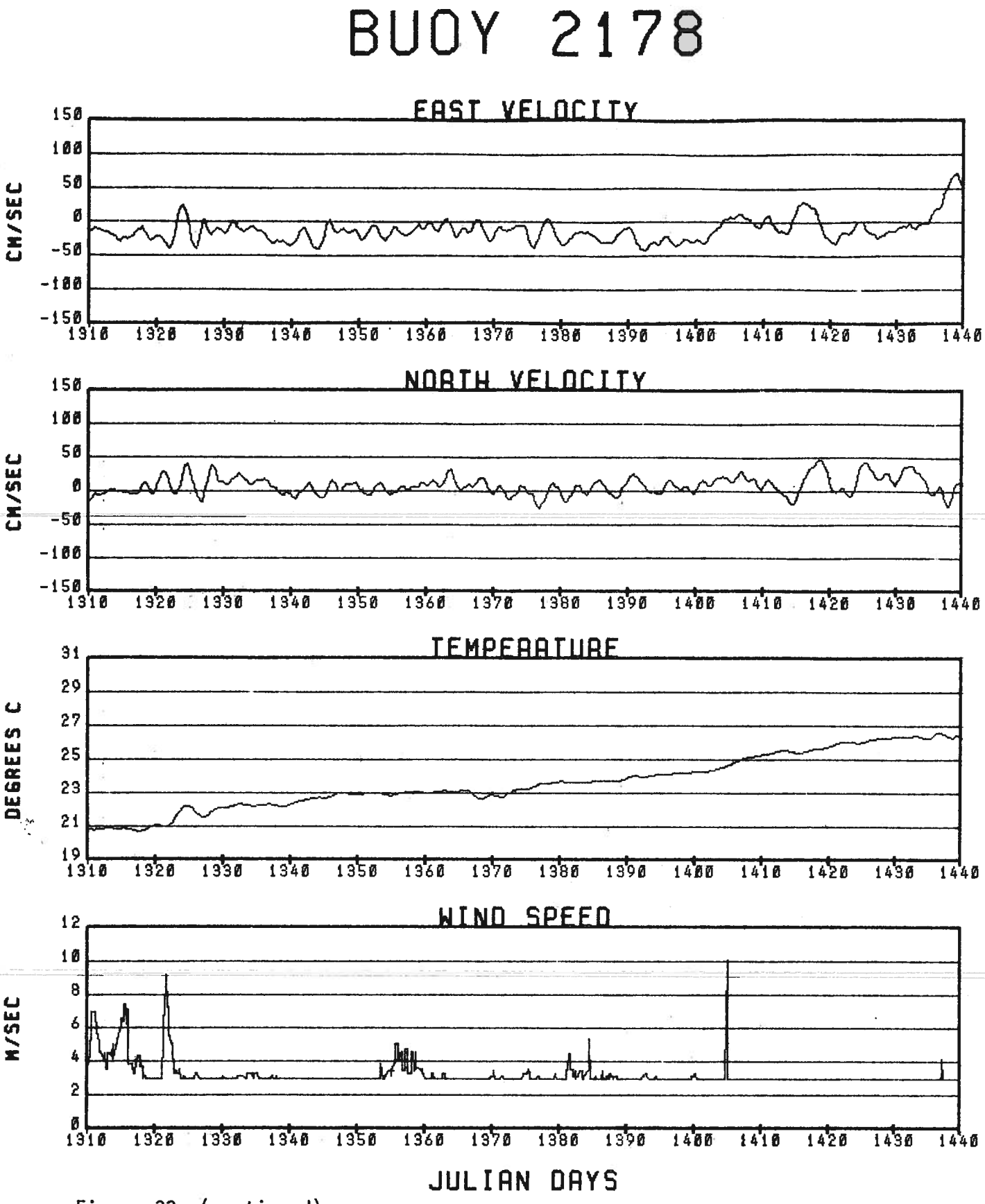


Figure 33. (continued)

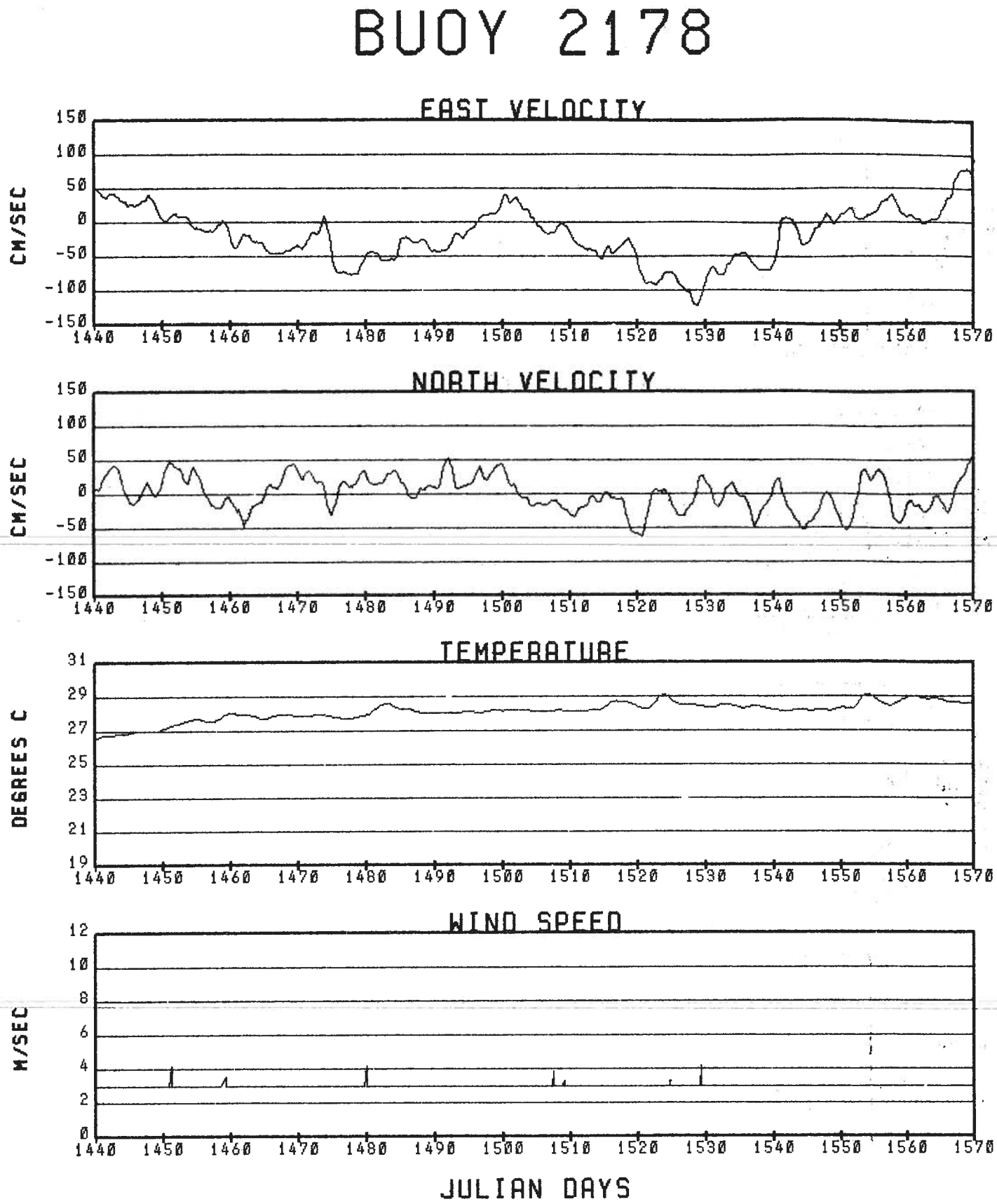


Figure 33. (continued)

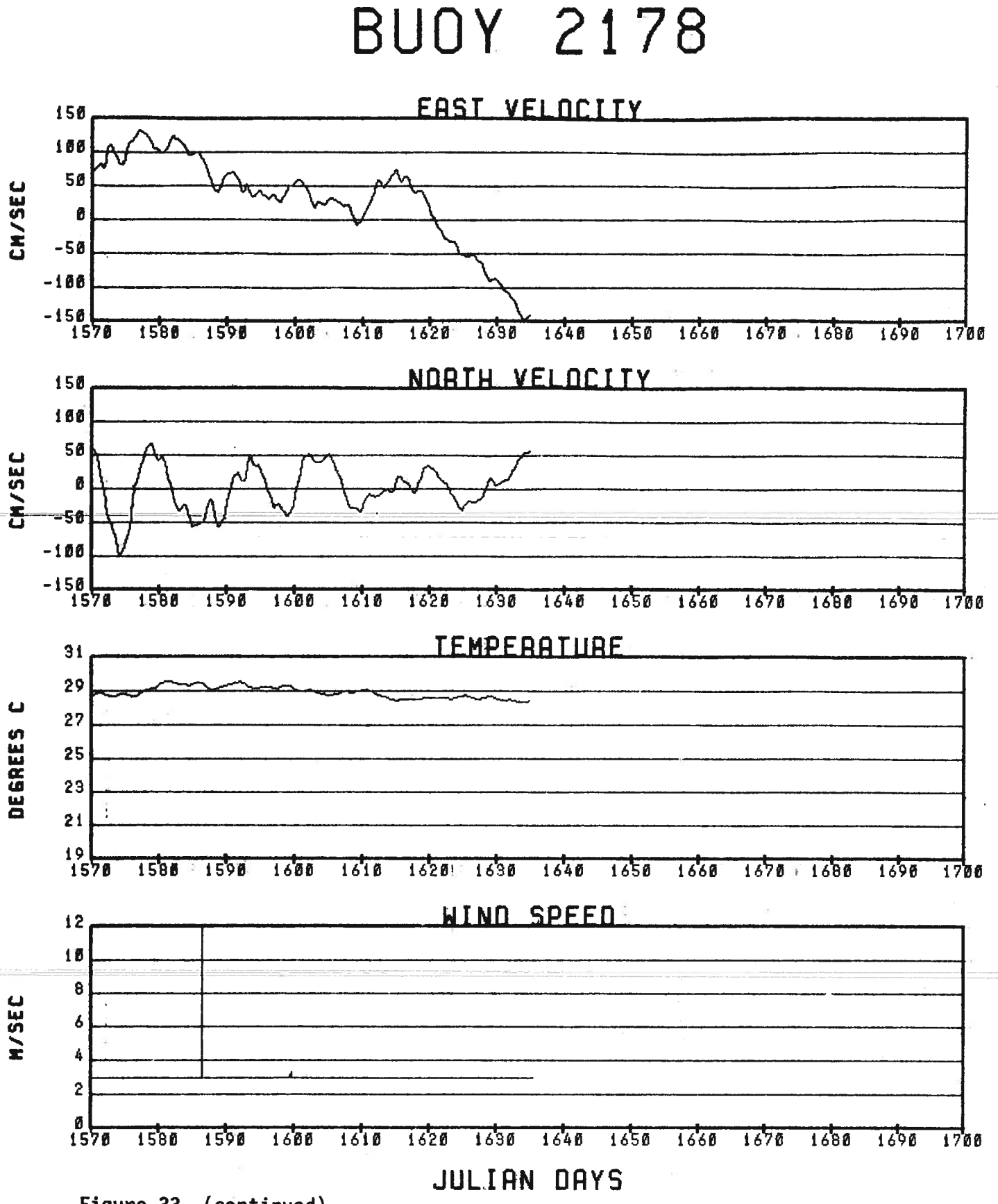


Figure 33. (continued)

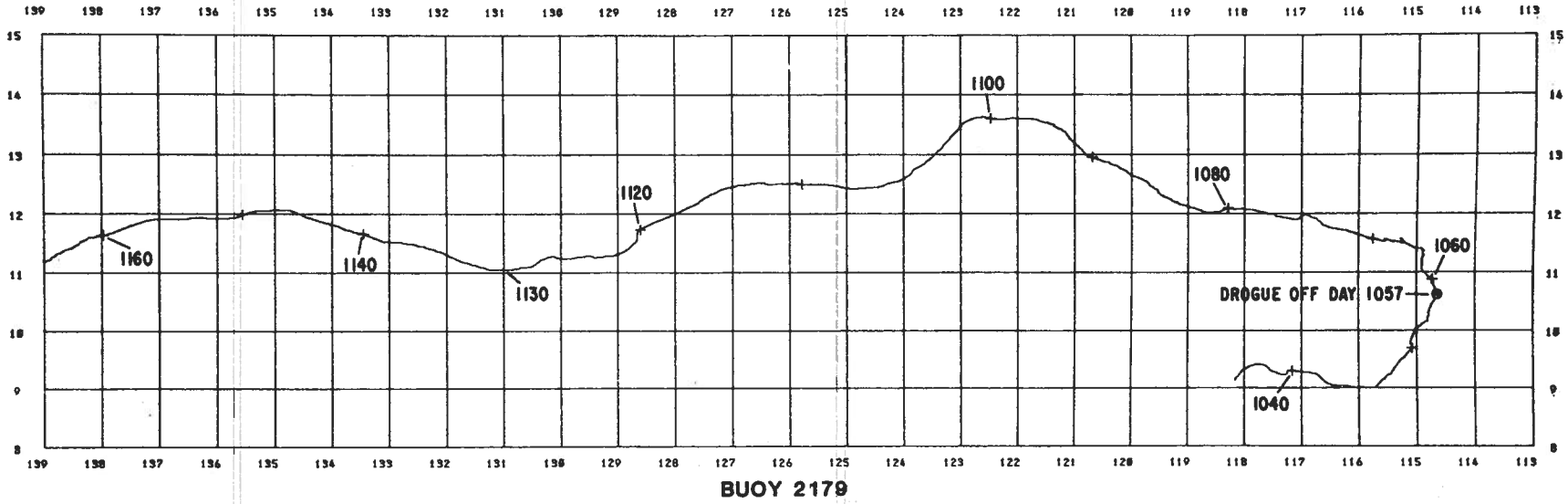


Figure 34. Drifting buoy trajectory.

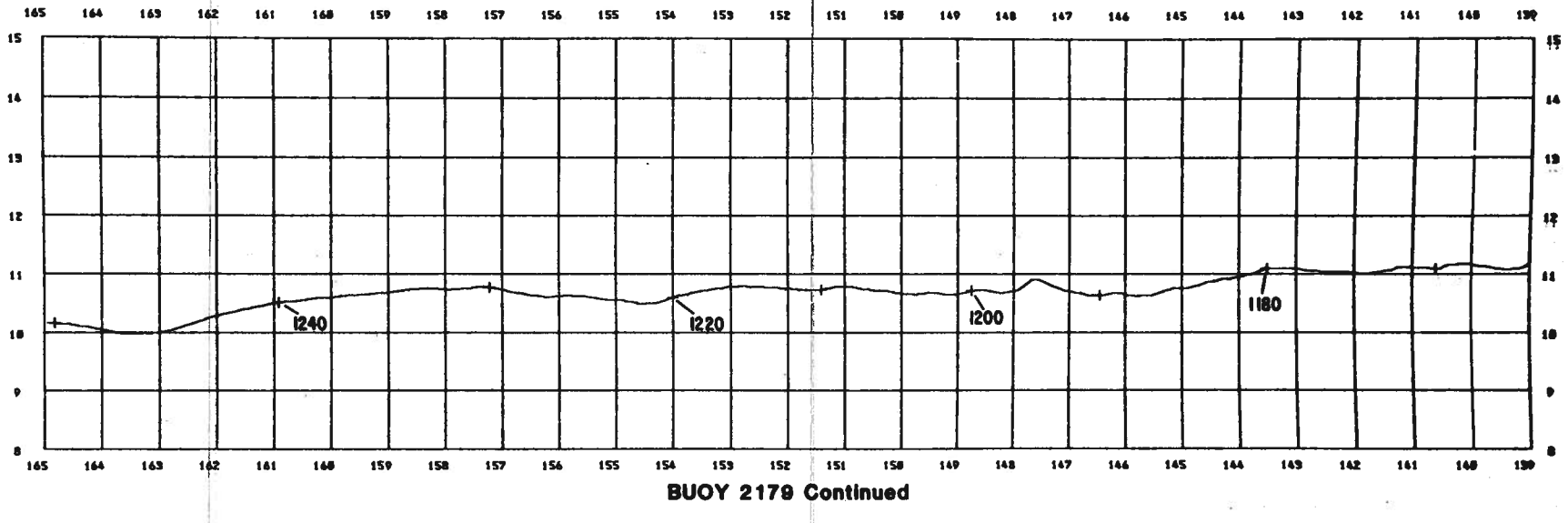


Figure 34. (continued)

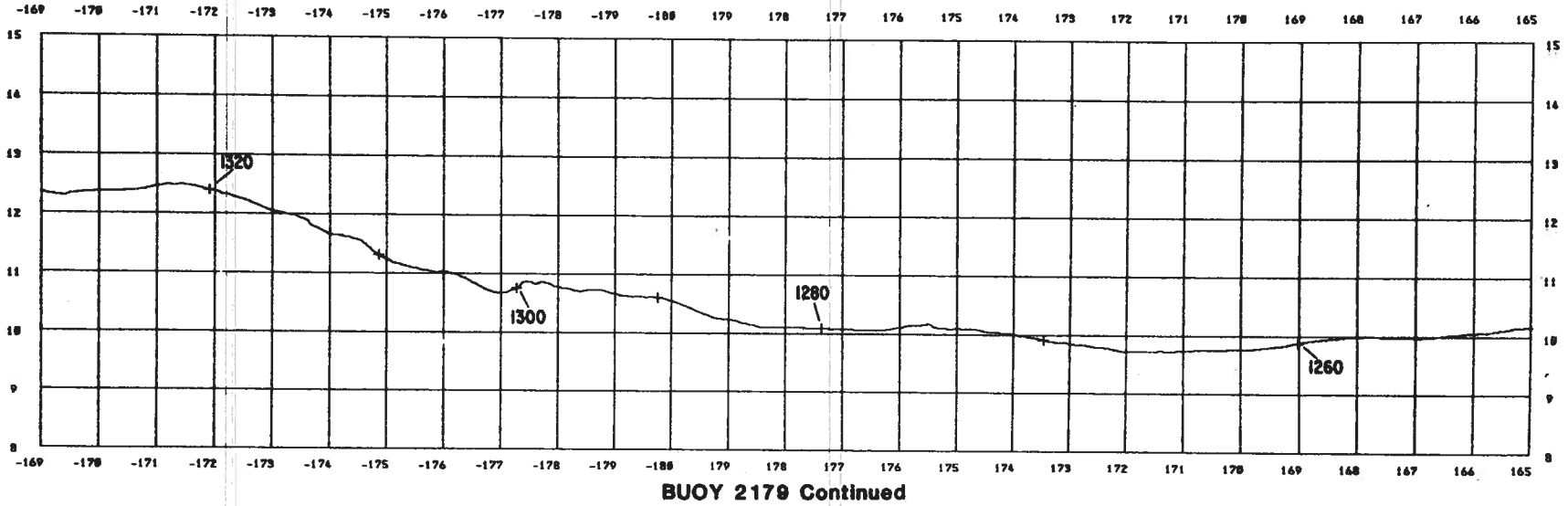


Figure 34. (continued)

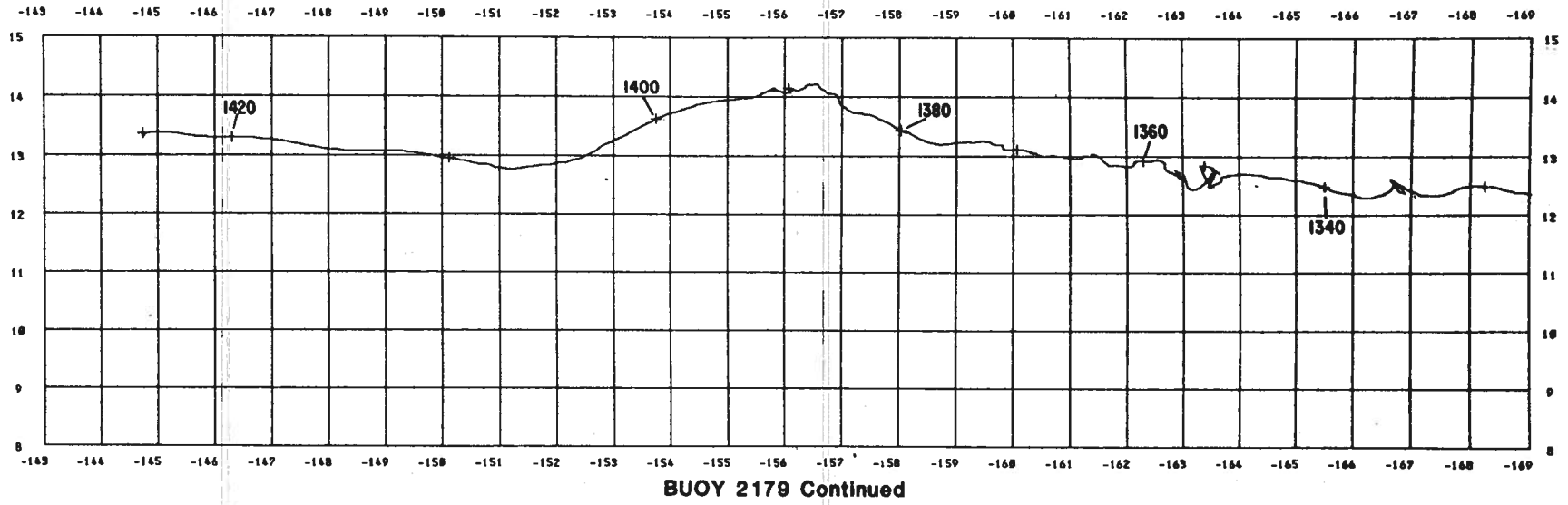


Figure 34. (continued)

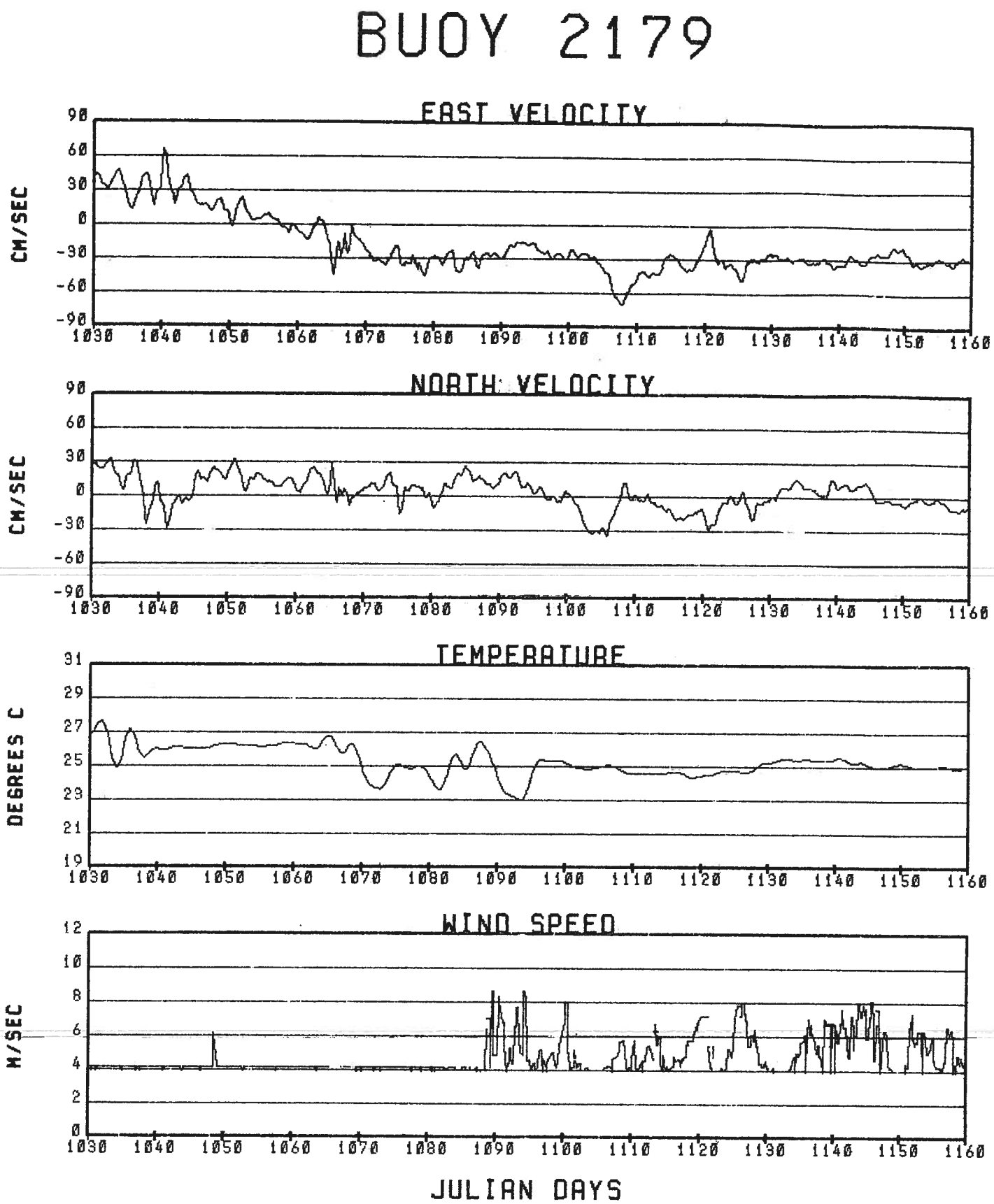


Figure 35. Time series of velocity and sensor data.

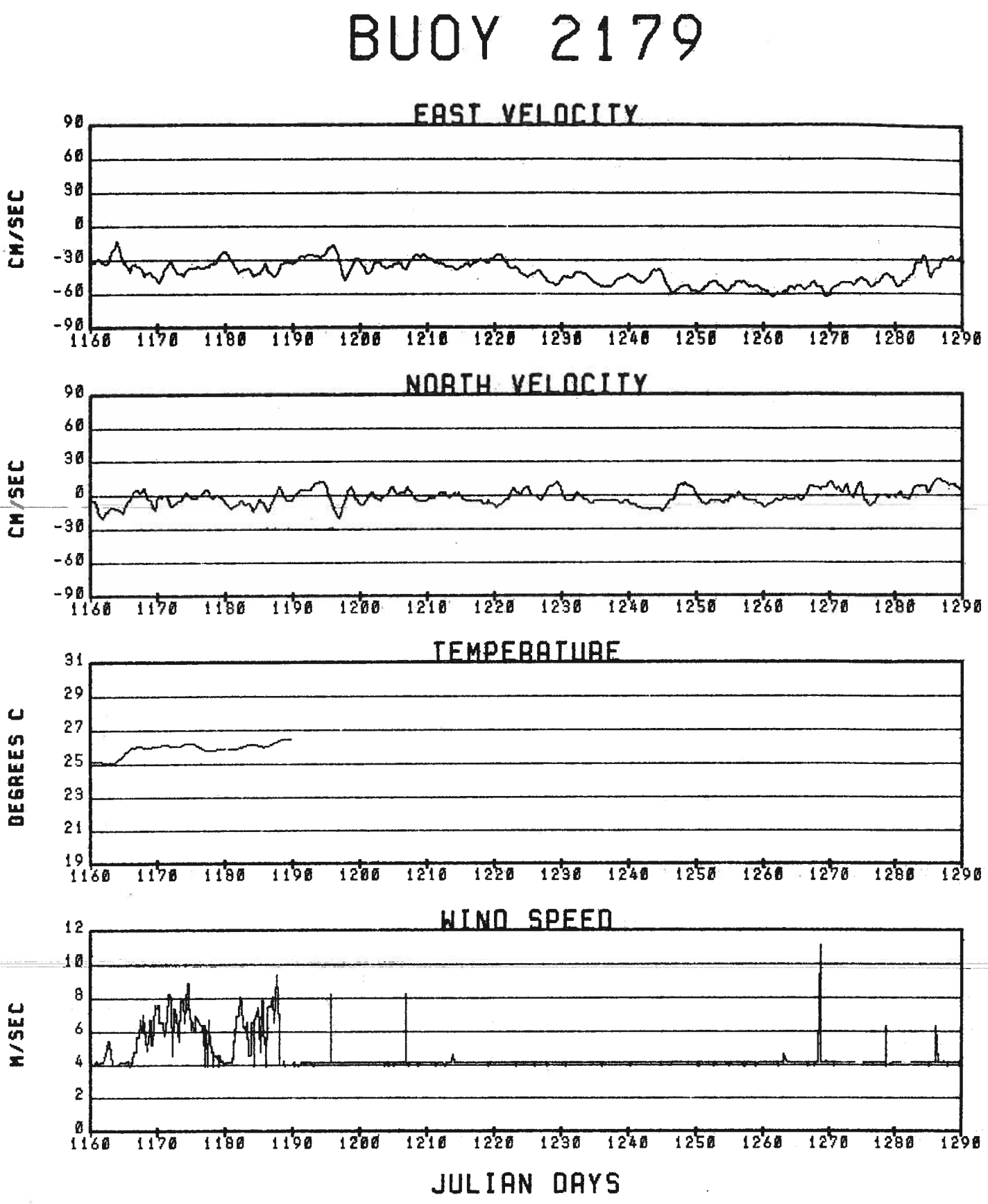


Figure 35. (continued)

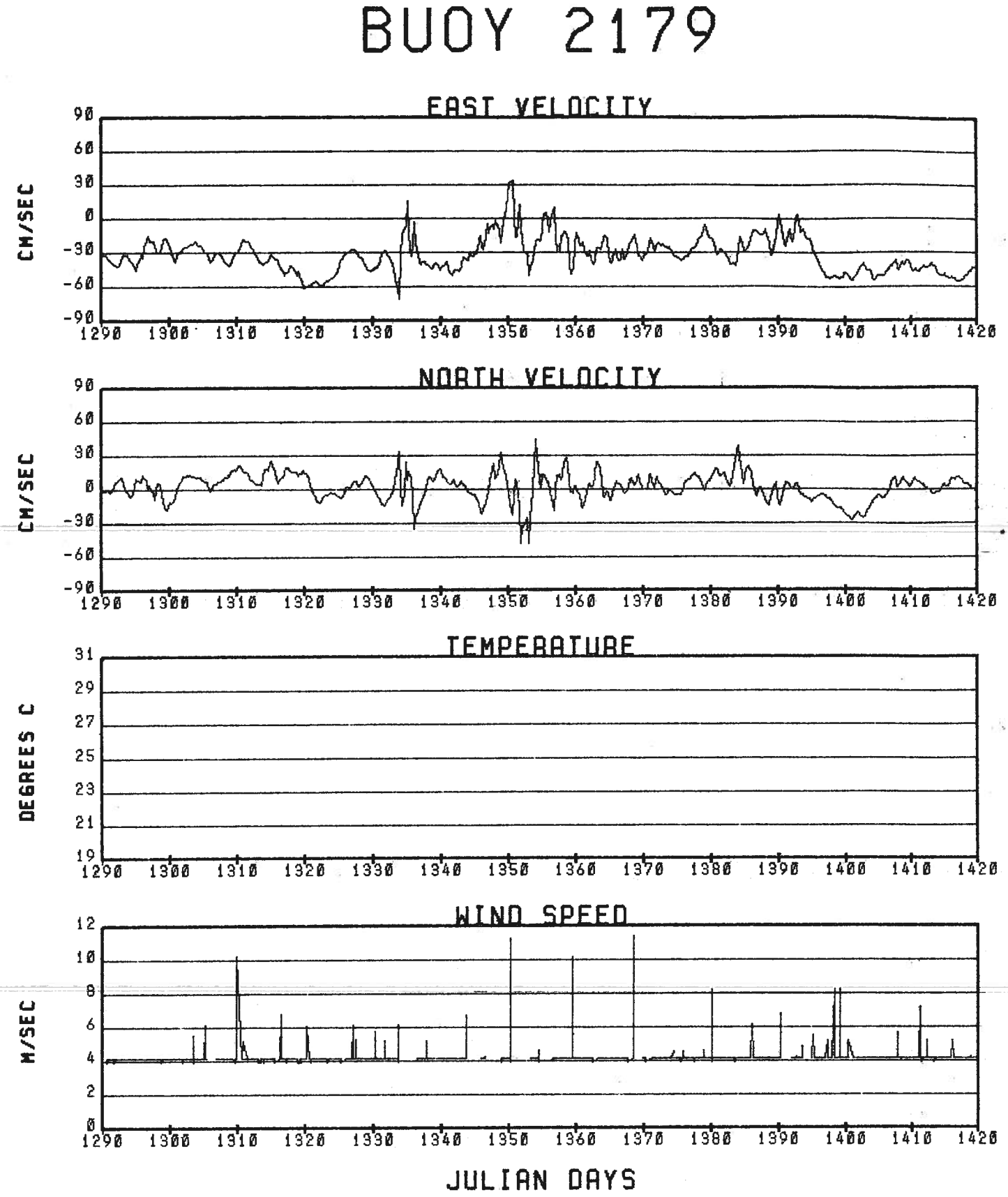


Figure 35. (continued)

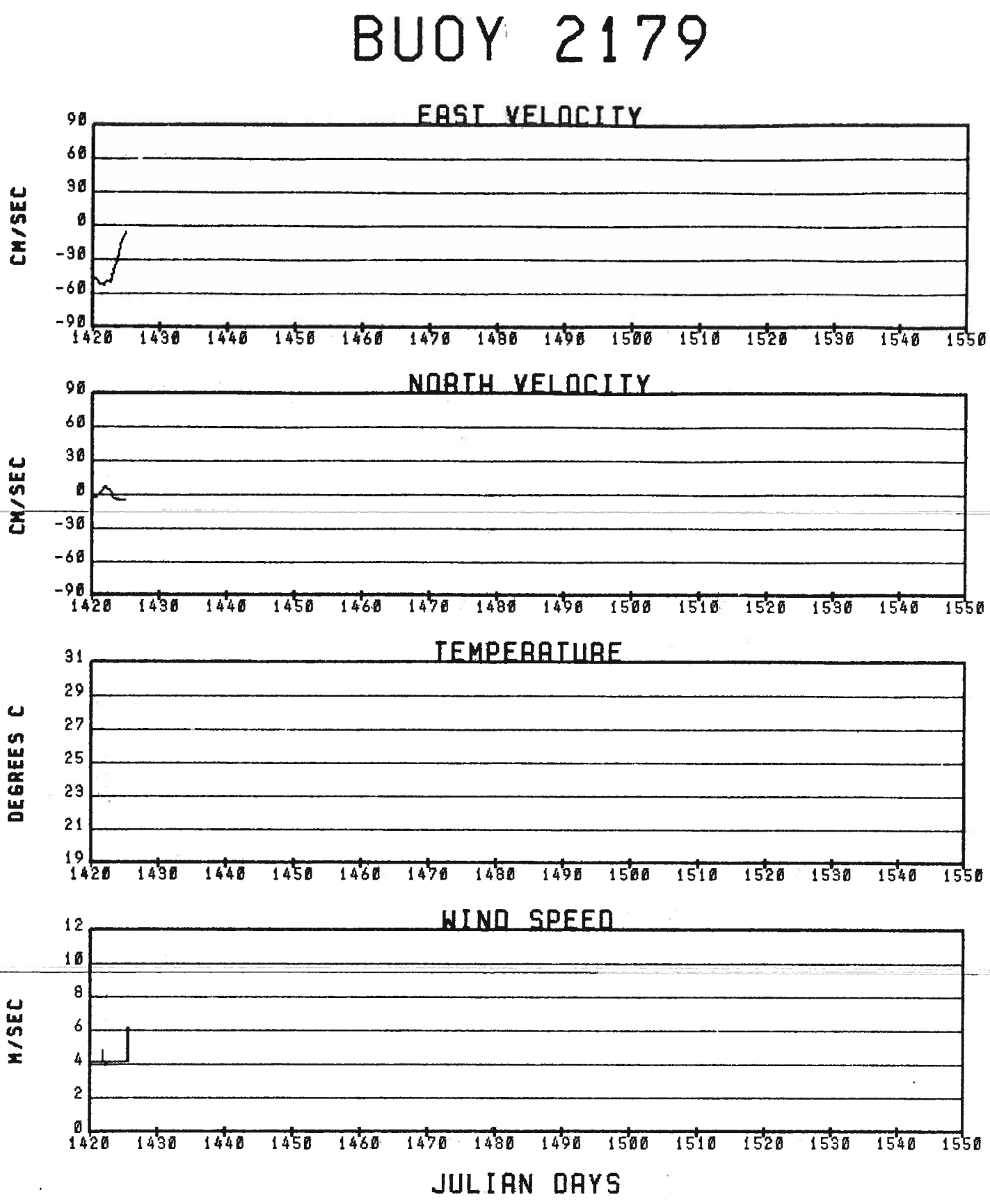


Figure 35. (continued)

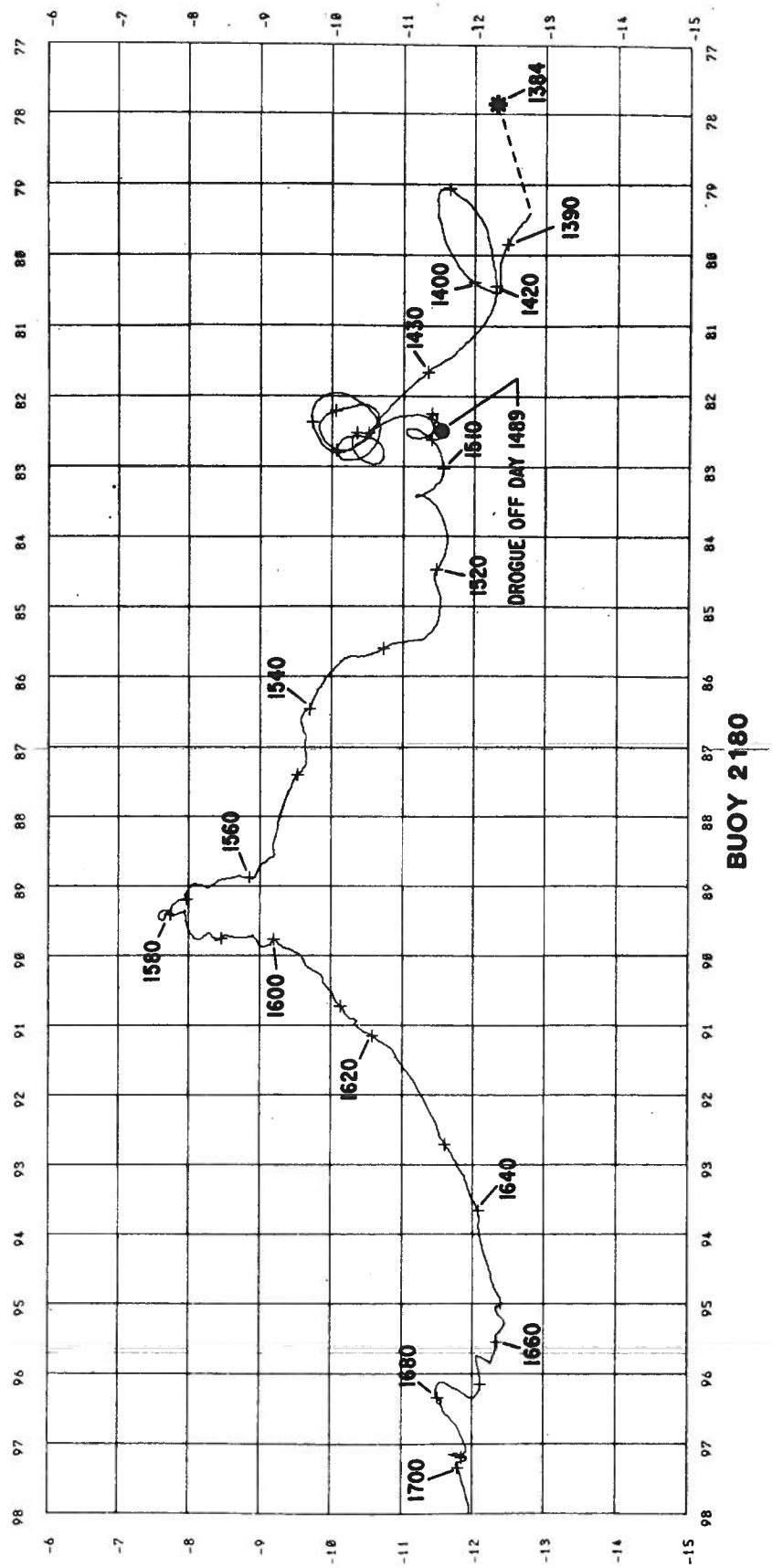


Figure 36. Drifting buoy trajectory.

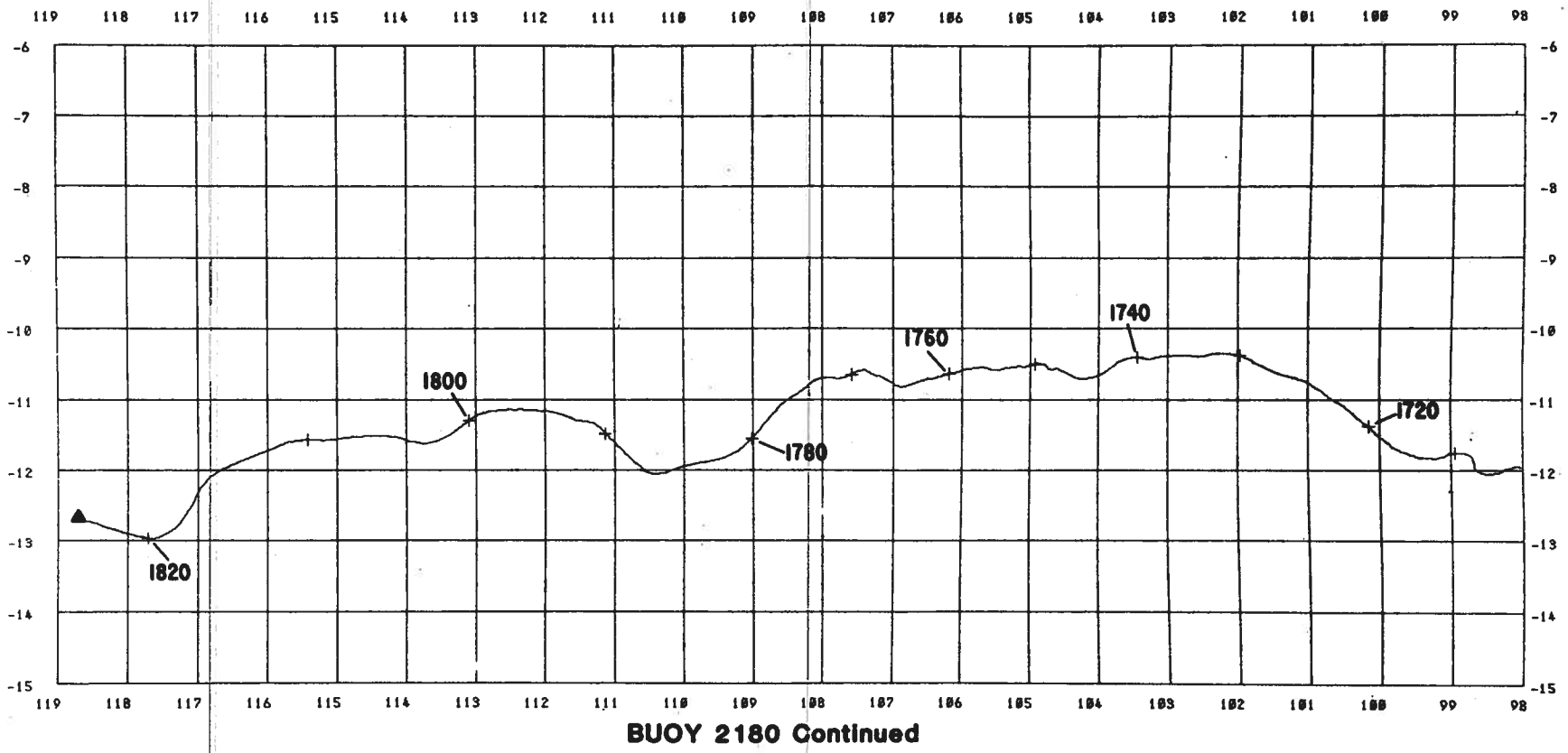


Figure 36. (continued)

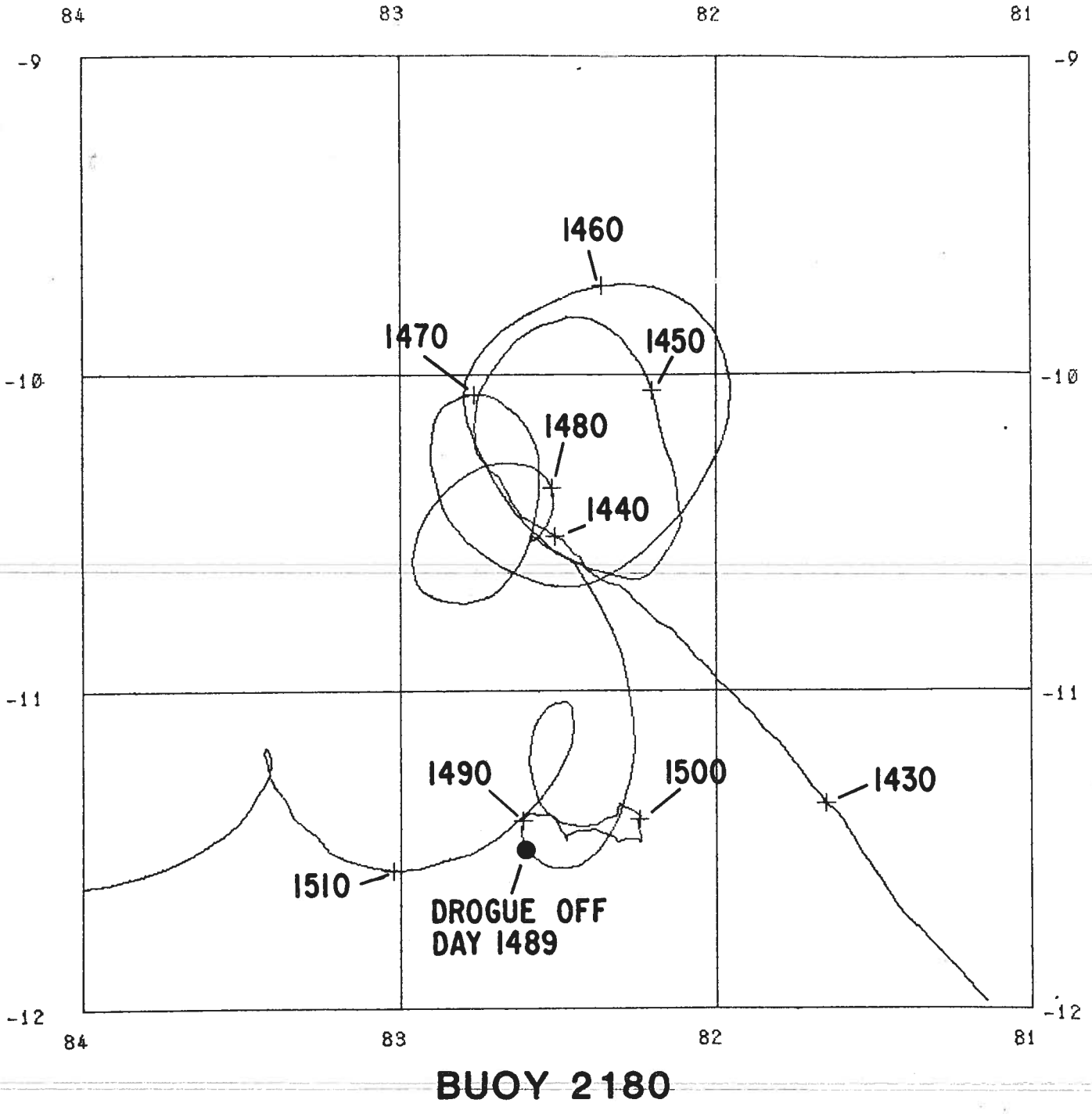


Figure 37. Drifting buoy trajectory detail.

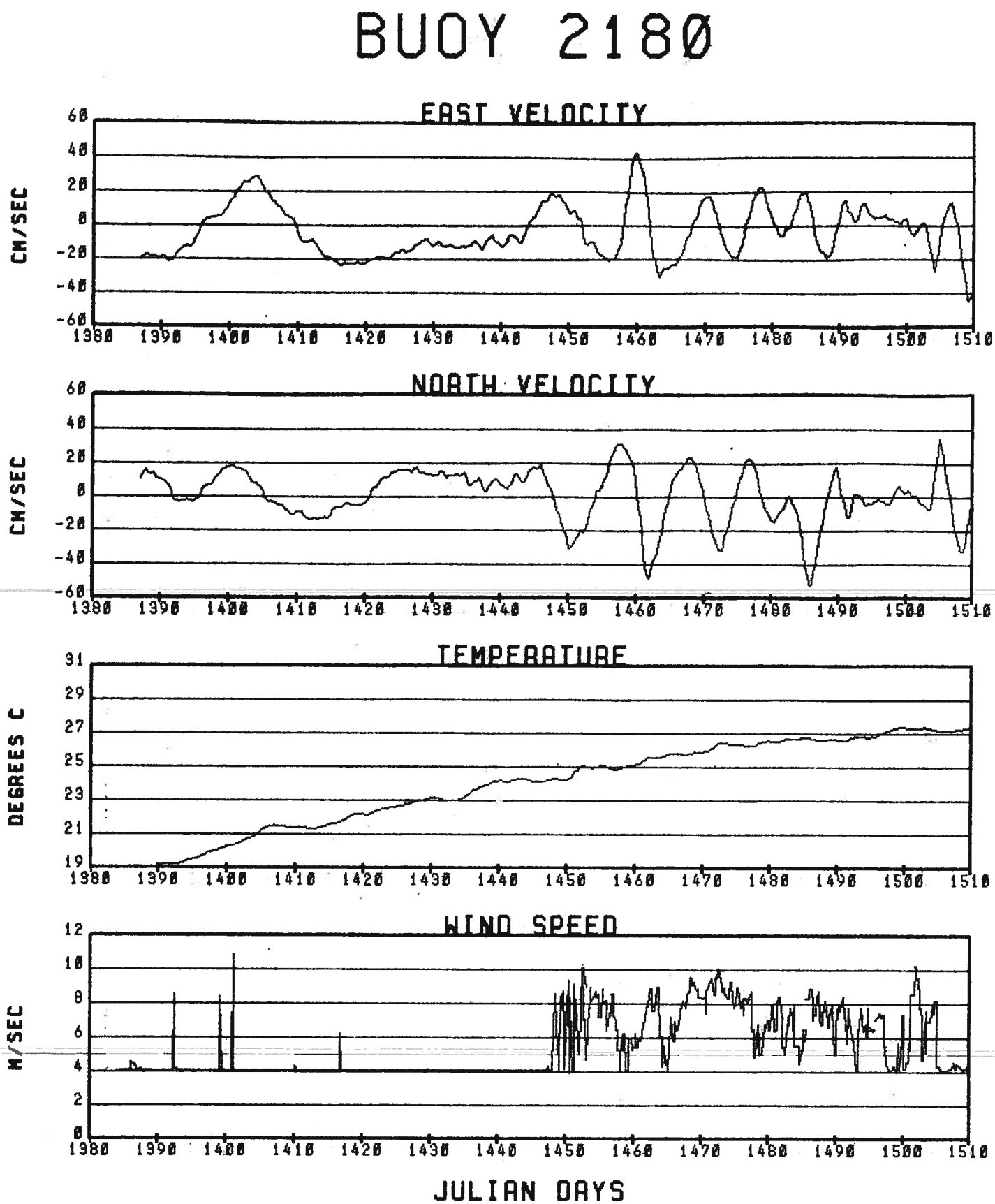


Figure 38. Time series of velocity and sensor data.

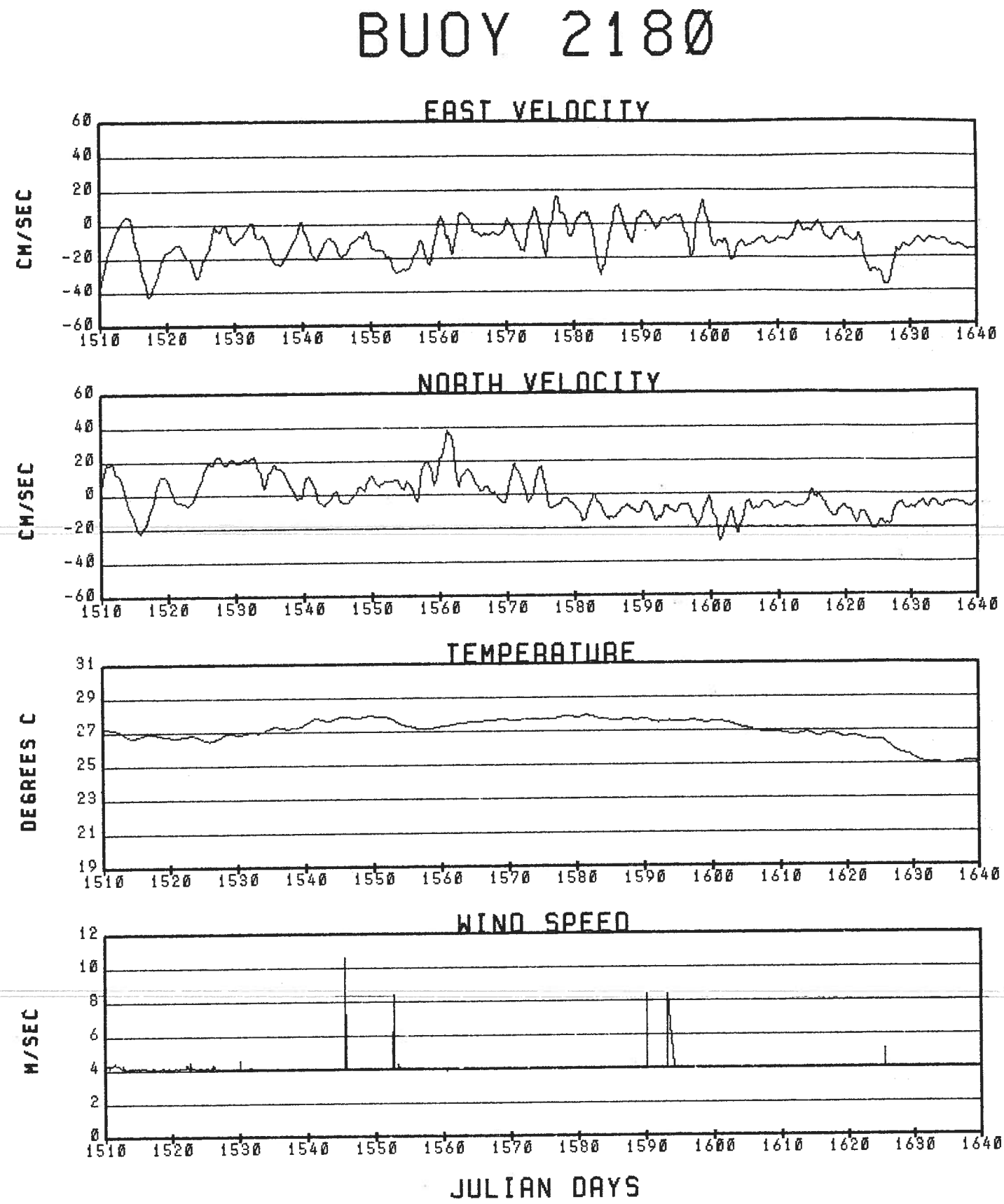


Figure 38. (continued)

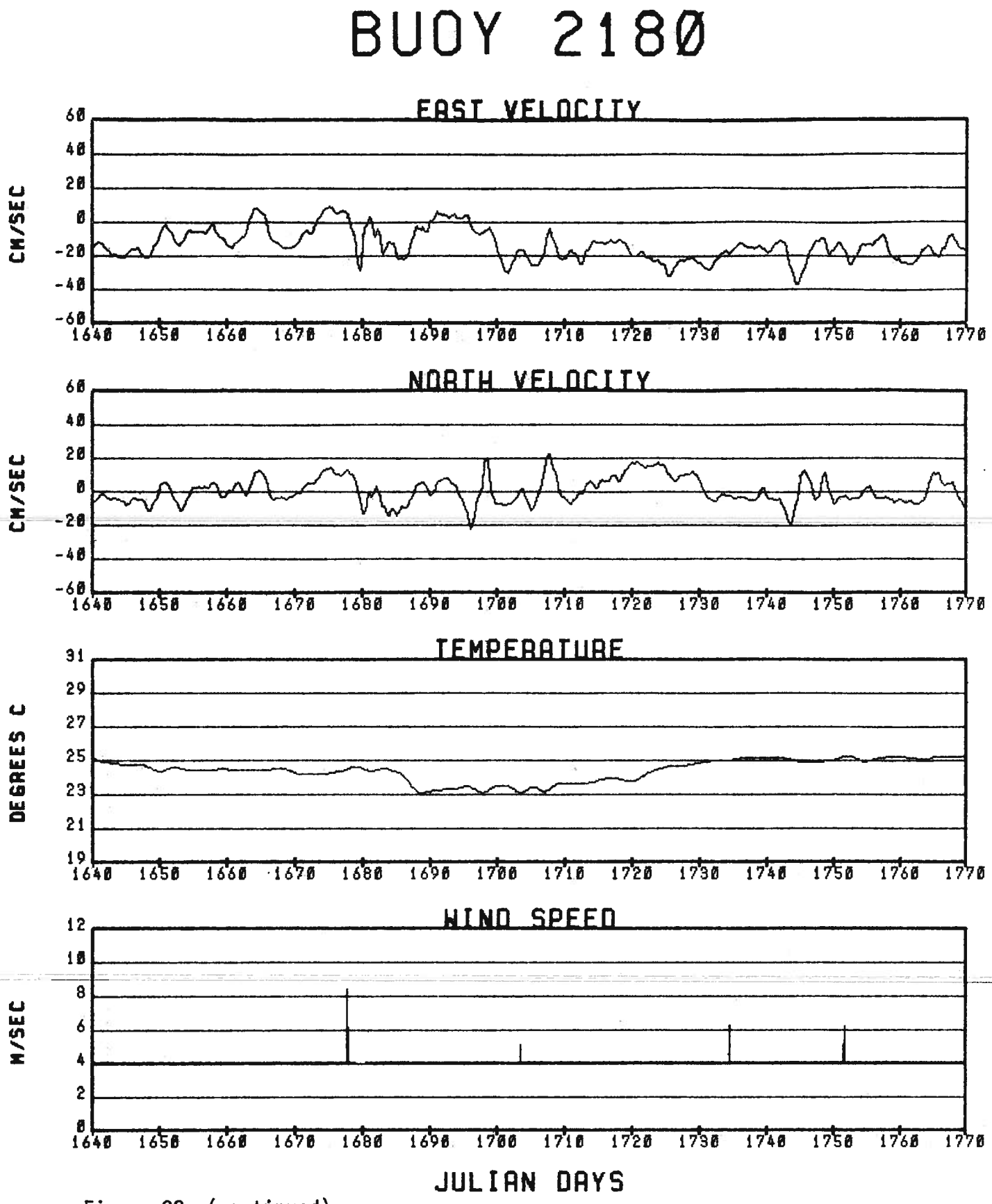


Figure 38. (continued)

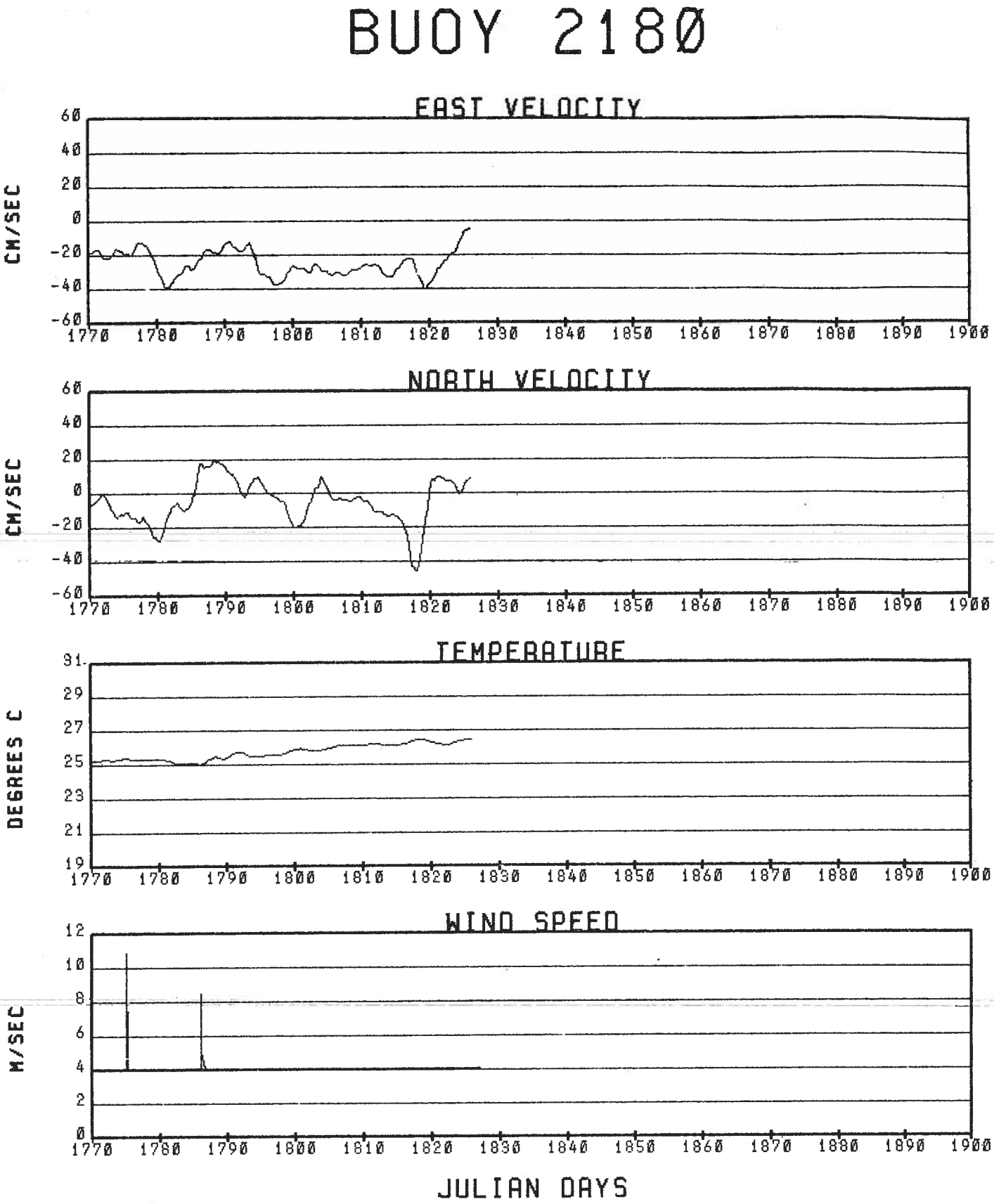


Figure 38. (continued)

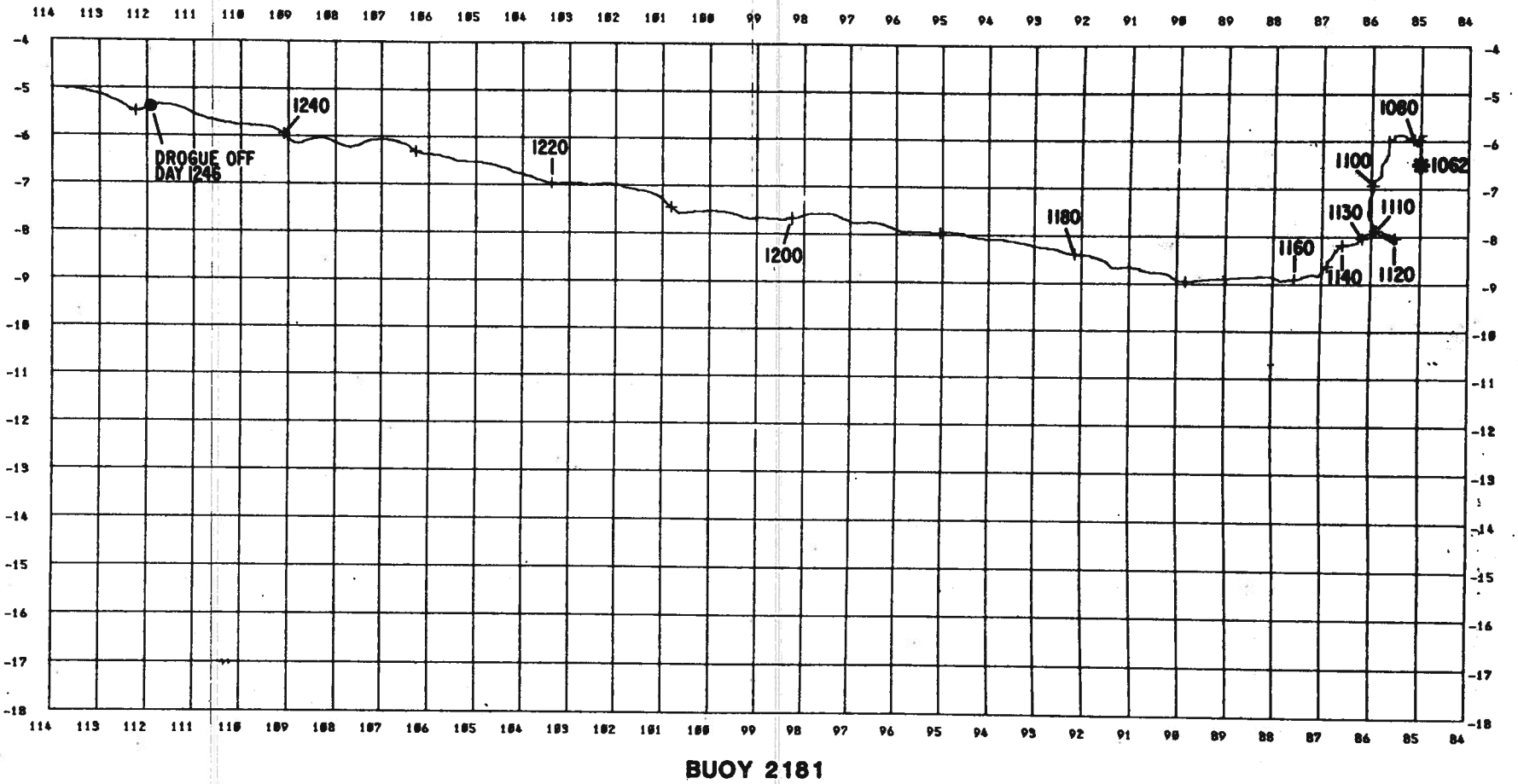


Figure 39. Drifting buoy trajectory.

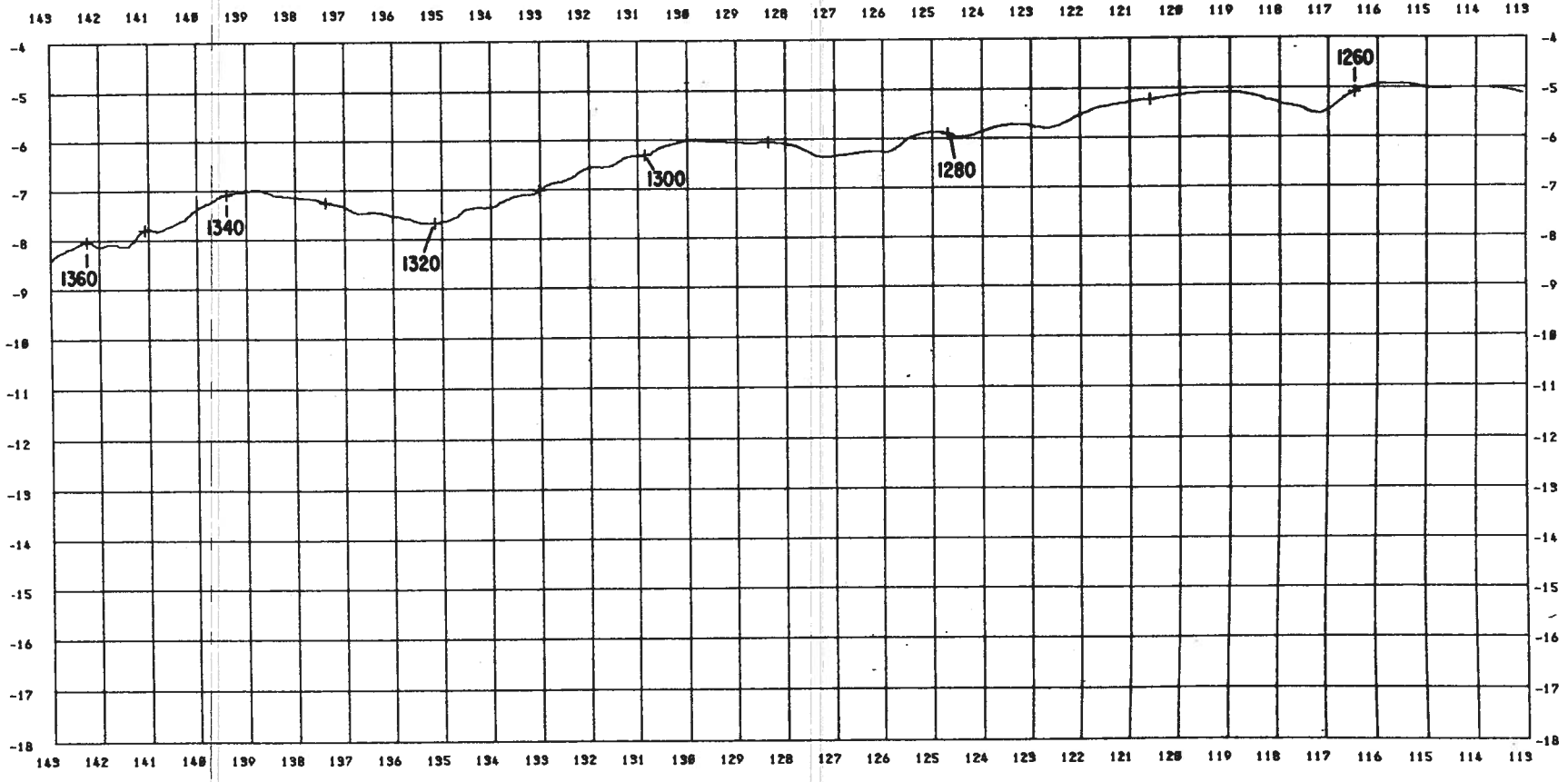
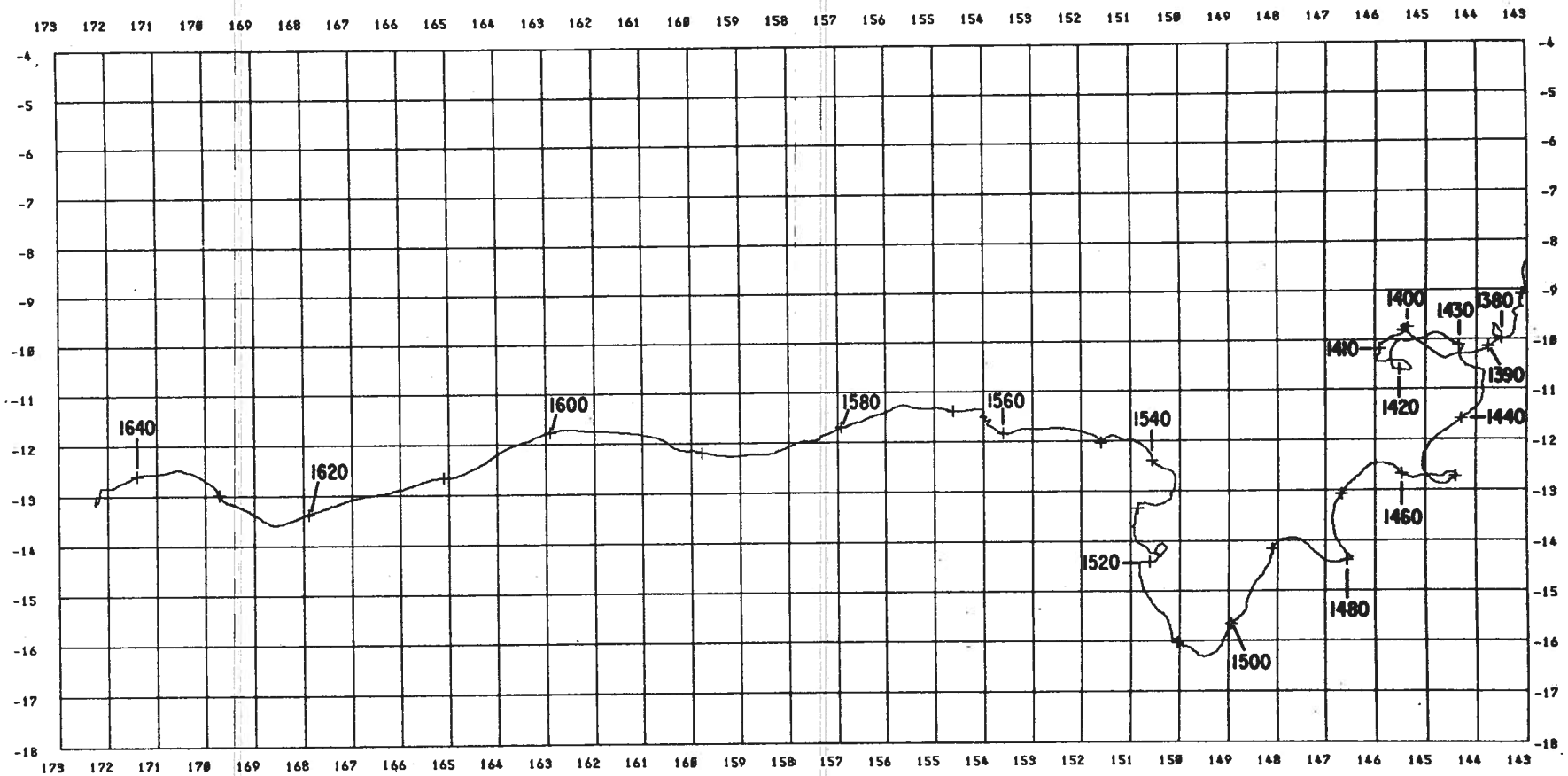


Figure 39. (continued)



BUOY 2181 Continued

Figure 39. (continued)

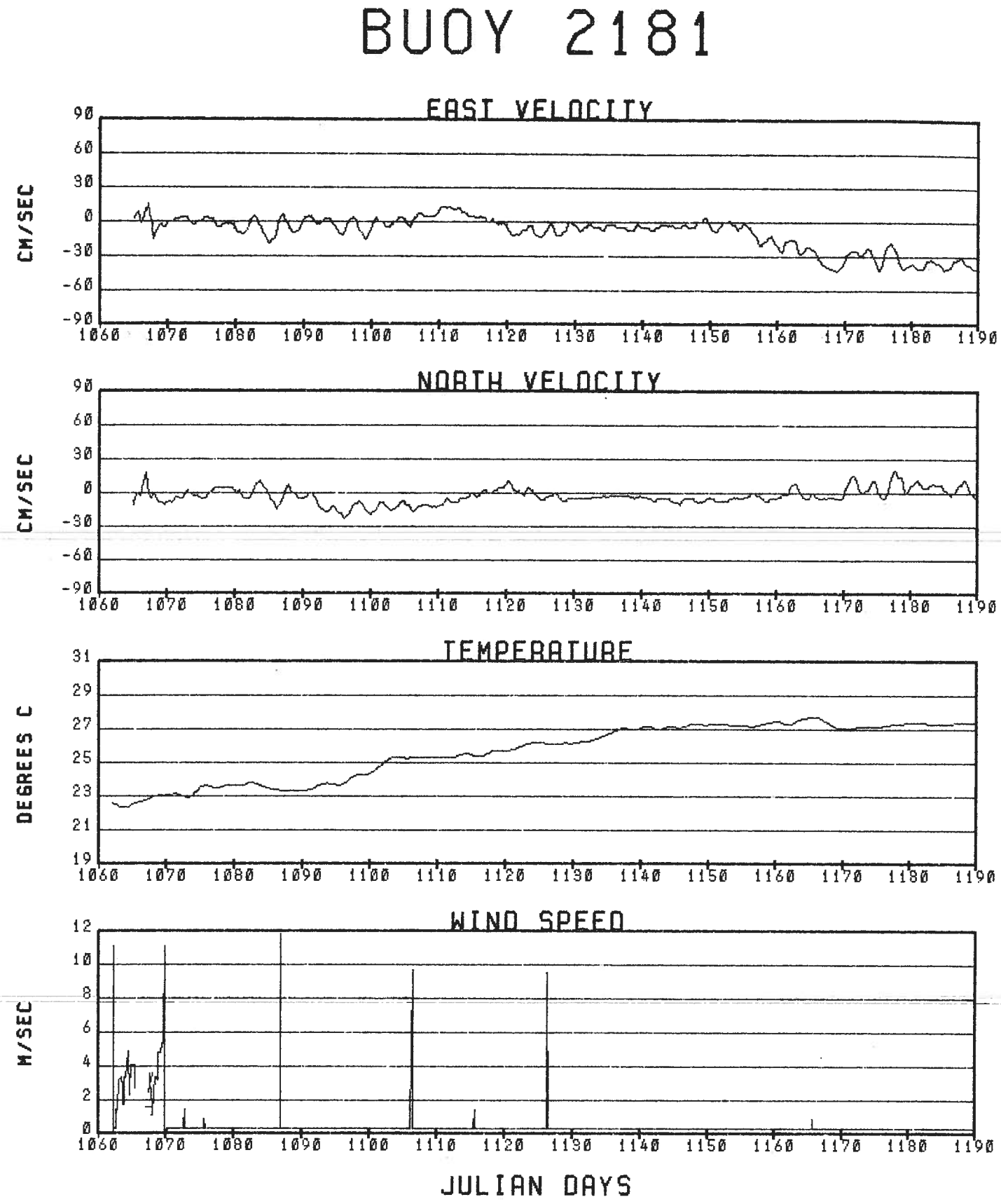


Figure 40. Time series of velocity and sensor data.

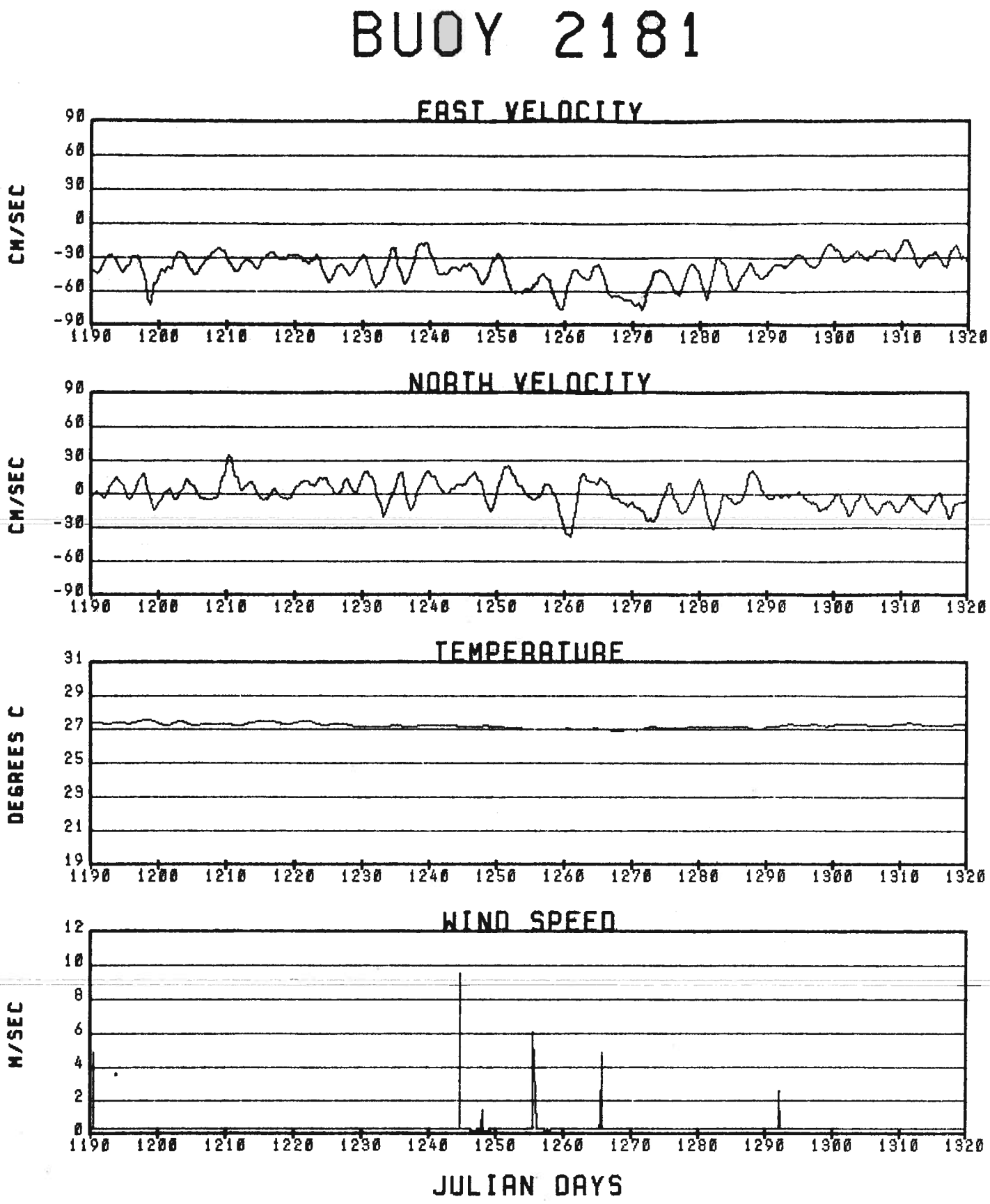


Figure 40. (continued)

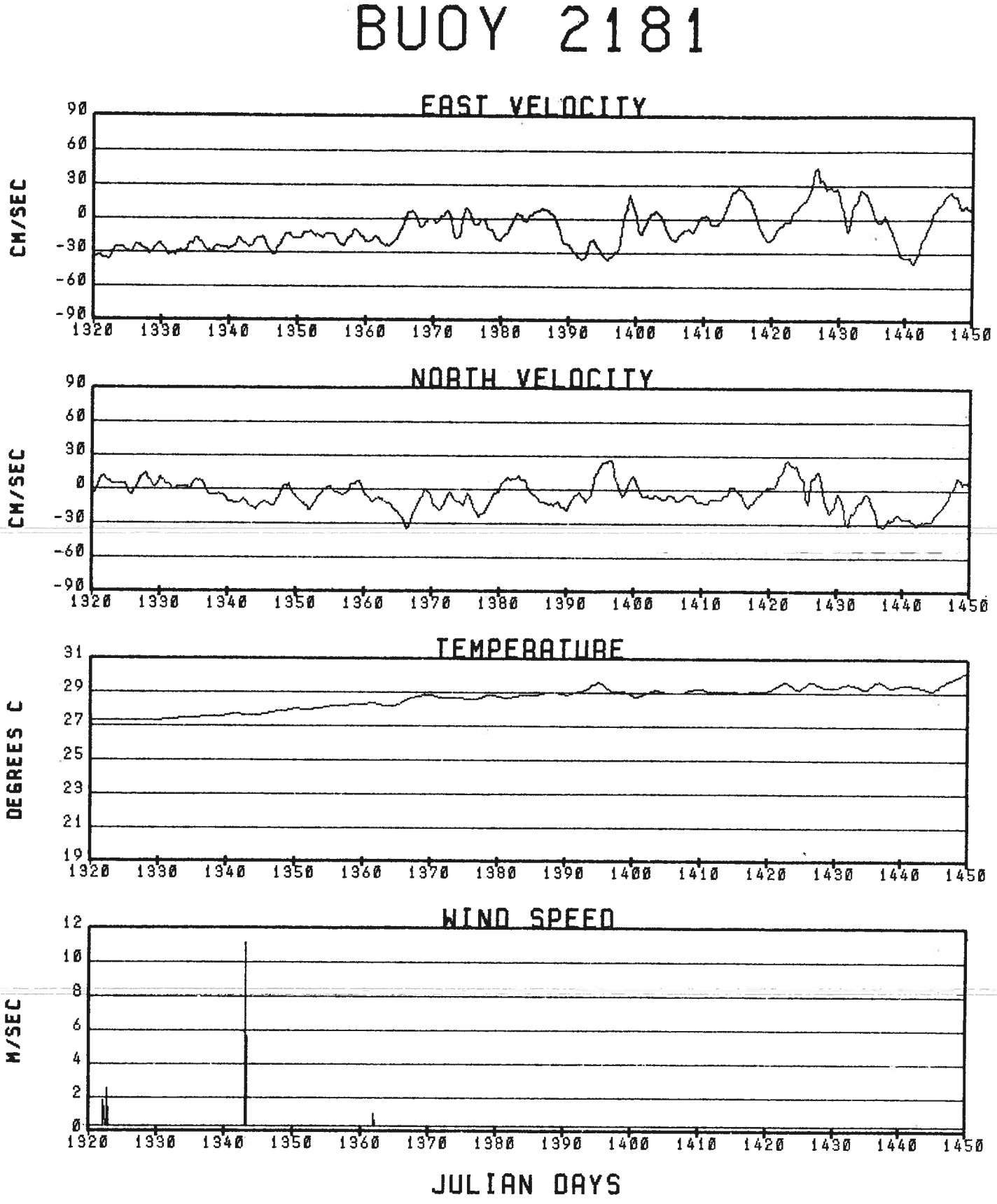


Figure 40. (continued)

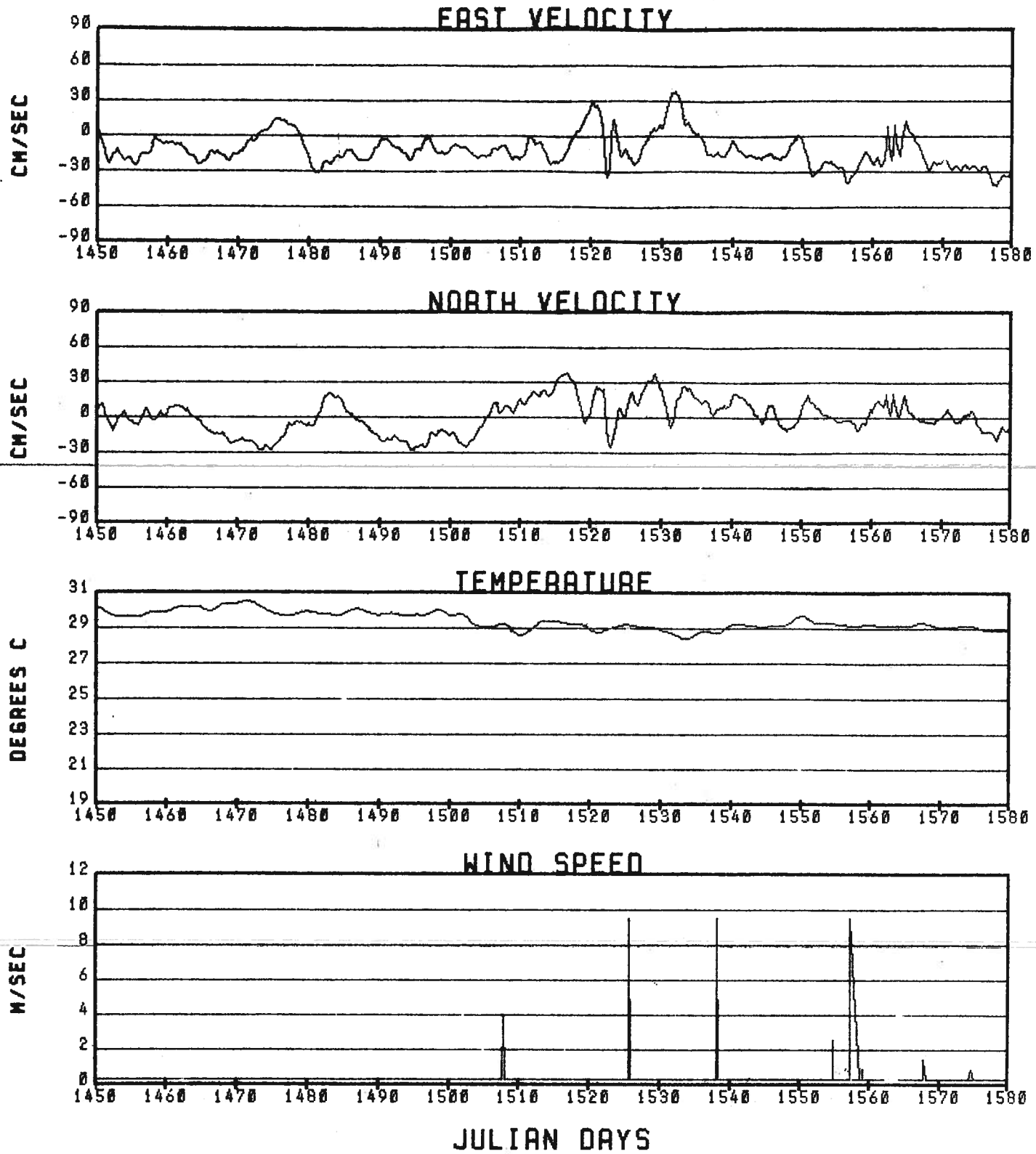


Figure 40. (continued)

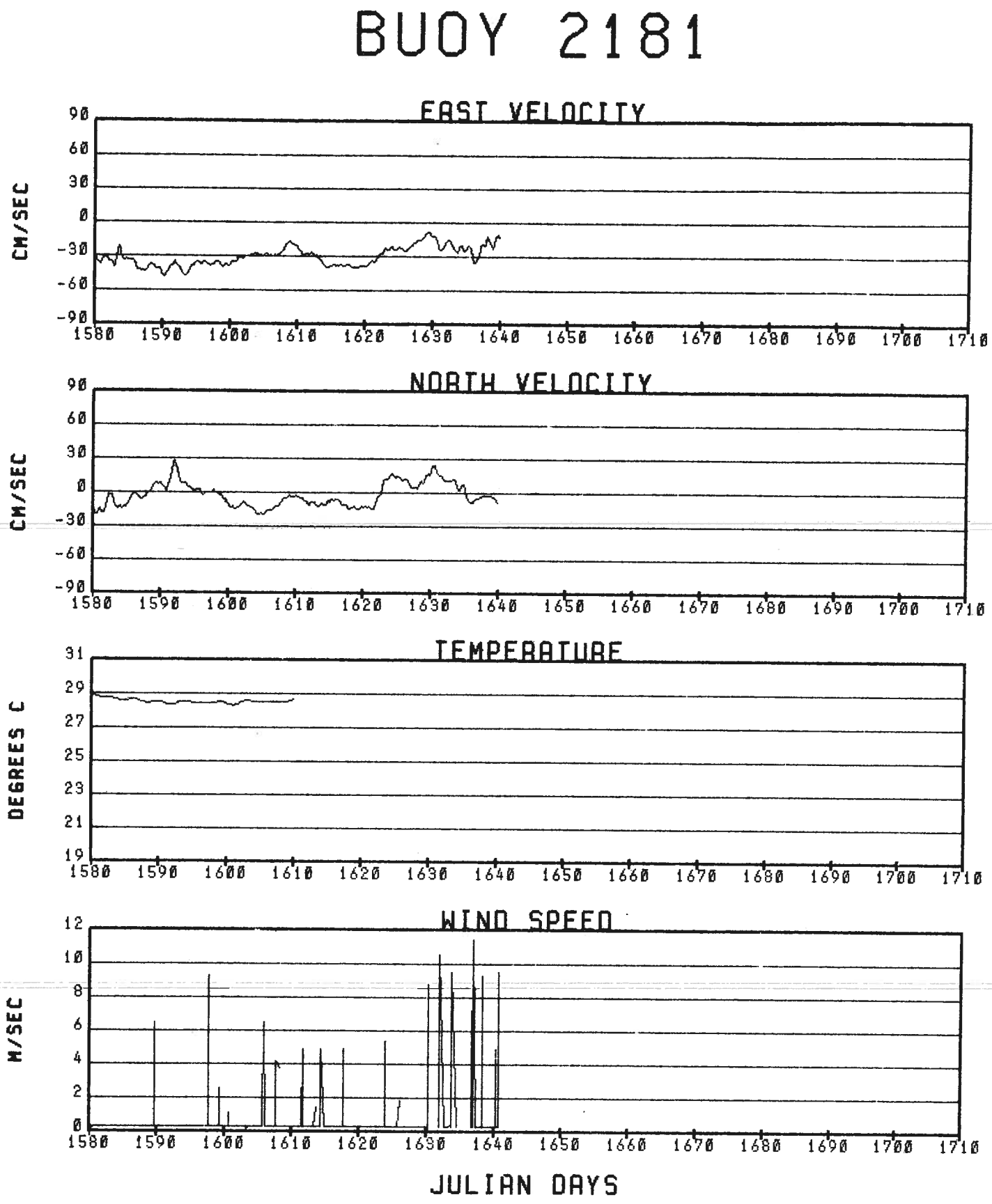


Figure 40. (continued)

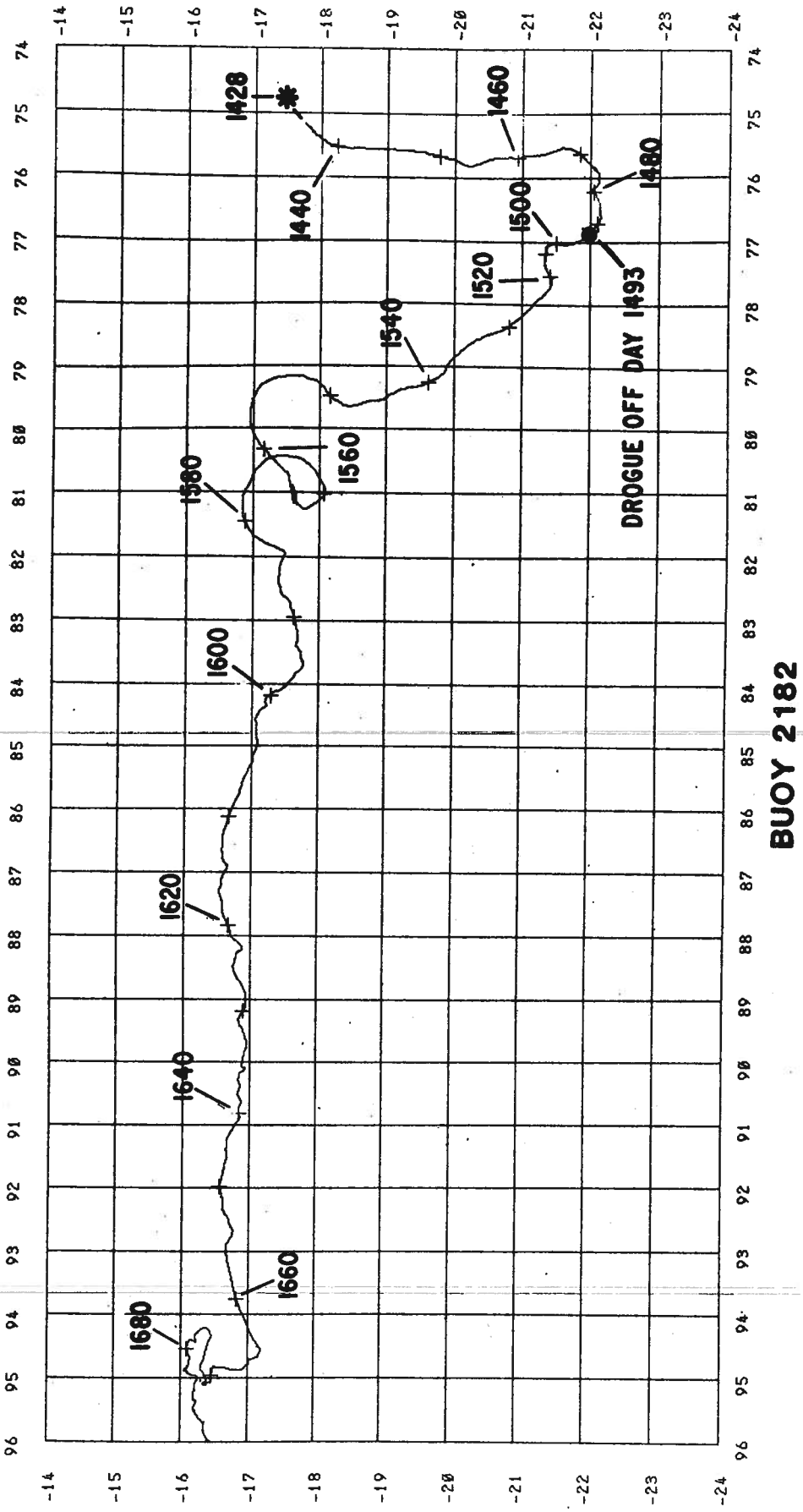


Figure 41. Drifting buoy trajectory.

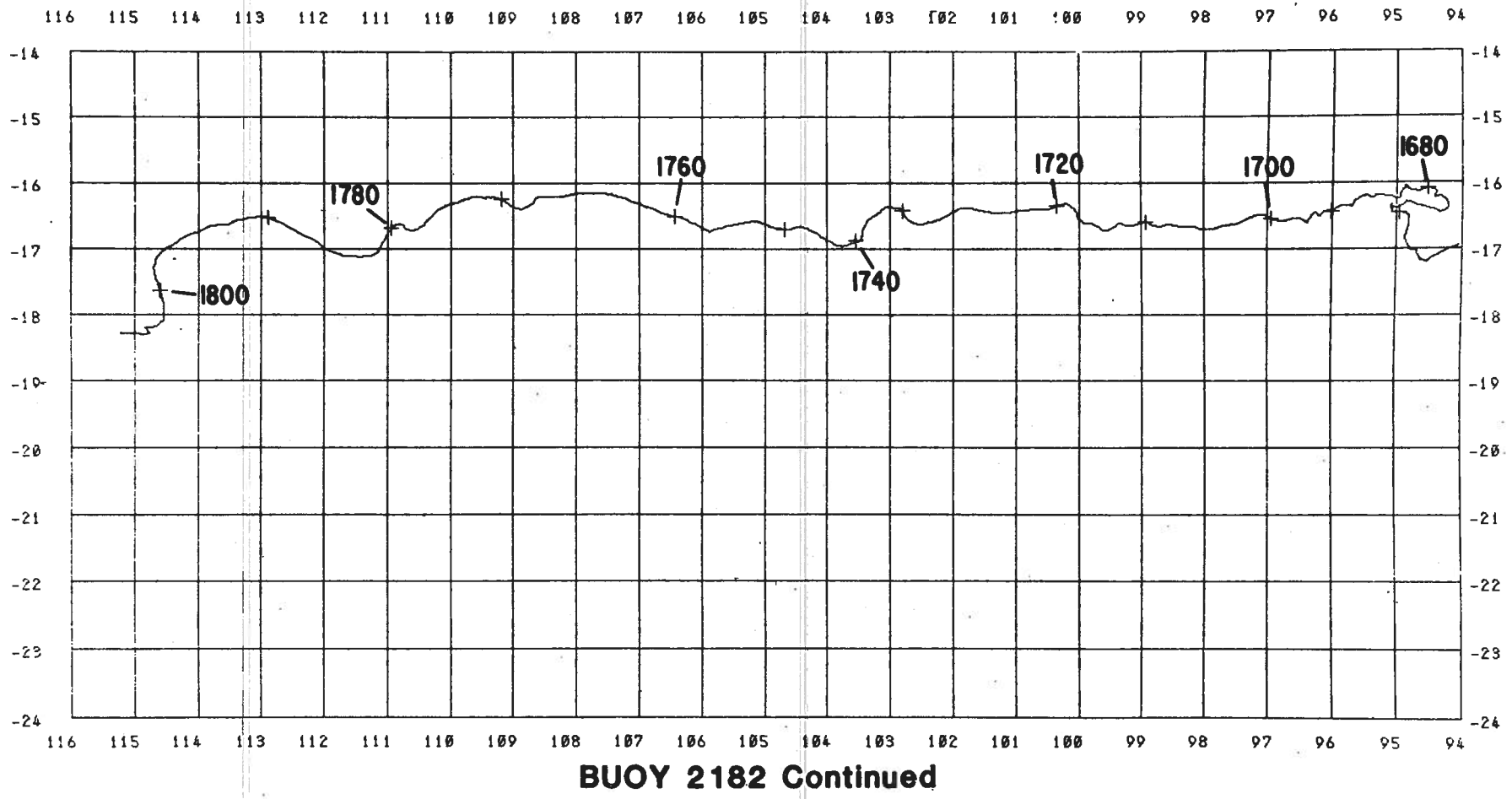


Figure 41. (continued)

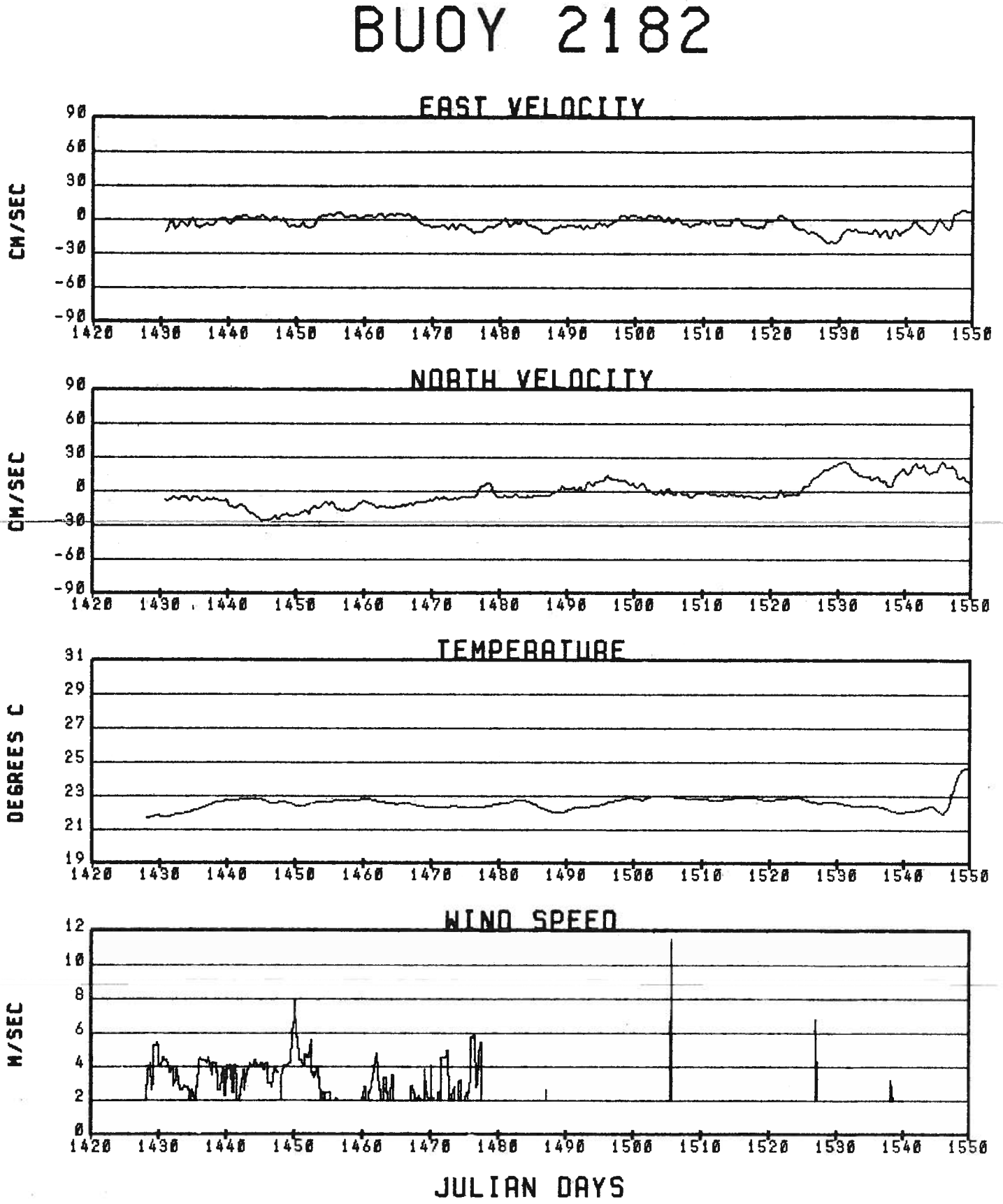


Figure 42. Time series of velocity and sensor data.

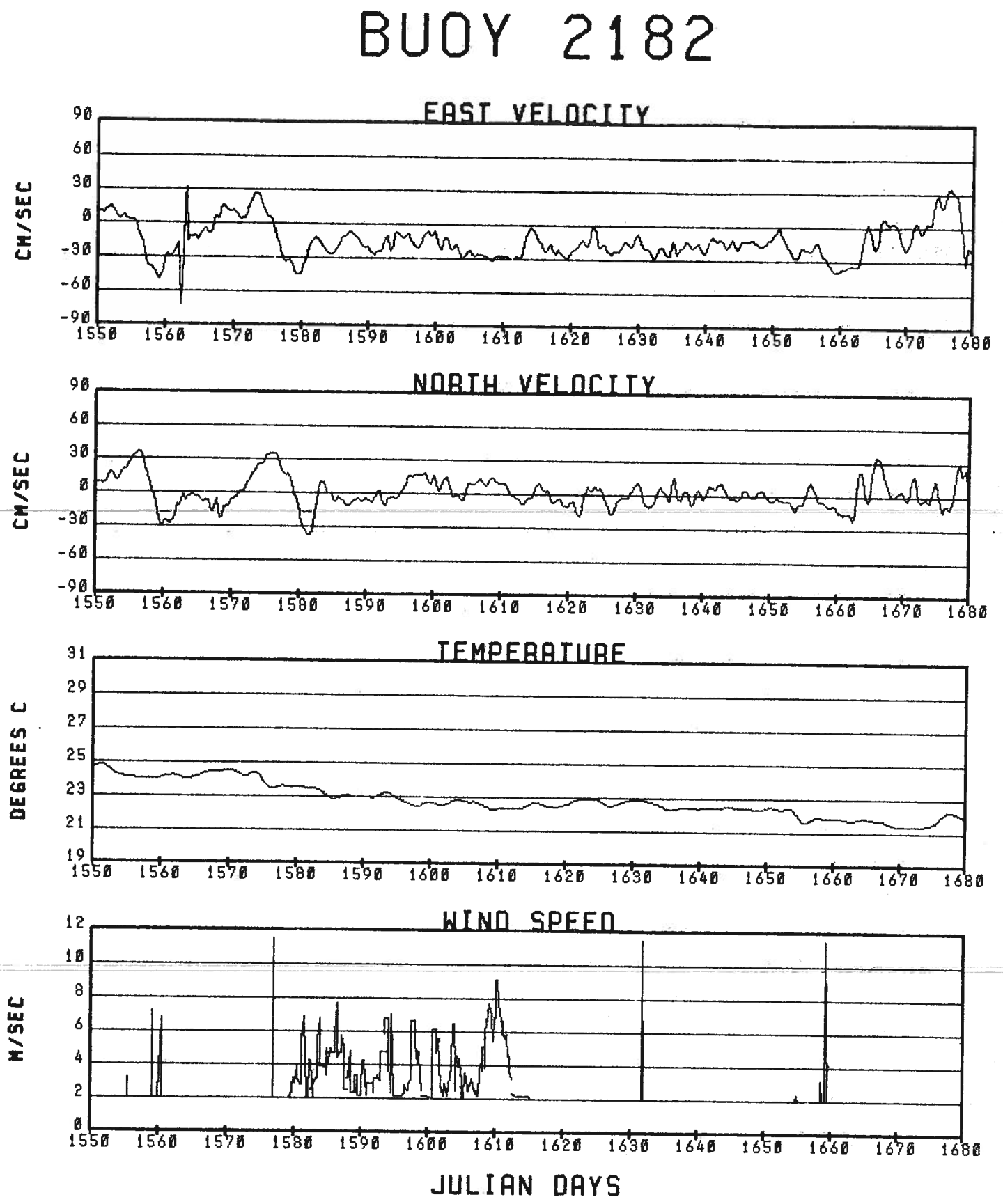


Figure 42. (continued)

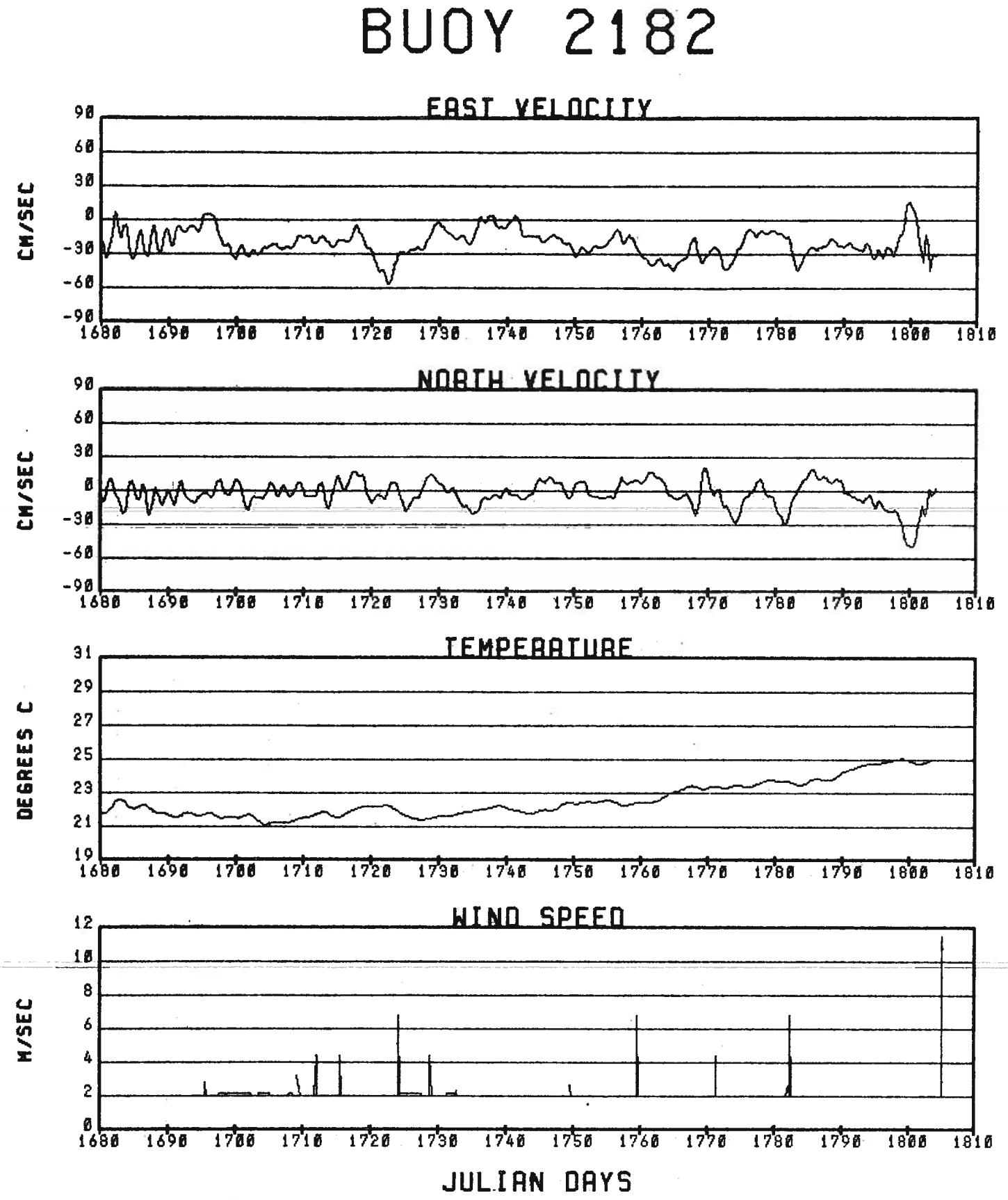


Figure 42. (continued)

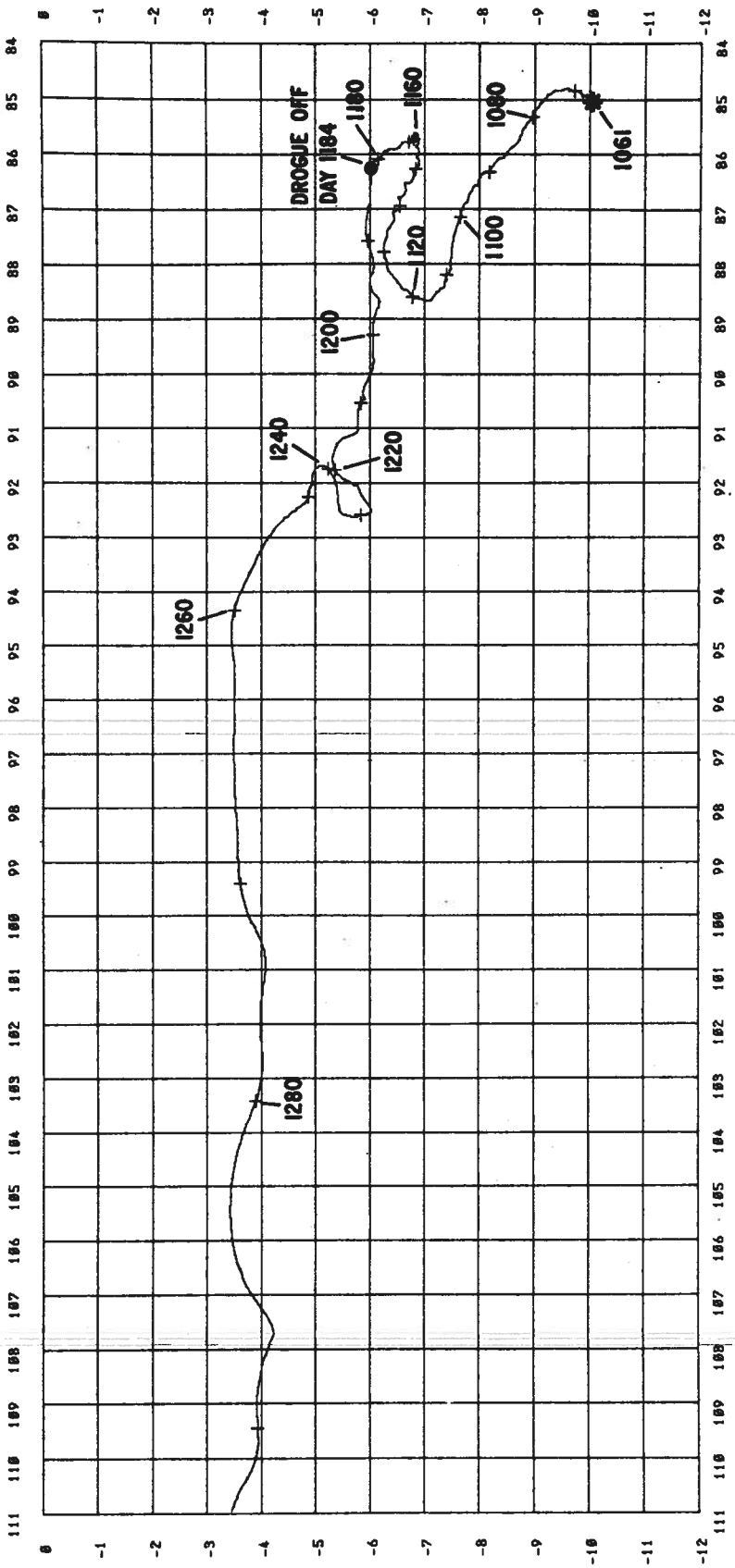


Figure 43. Drifting buoy trajectory.

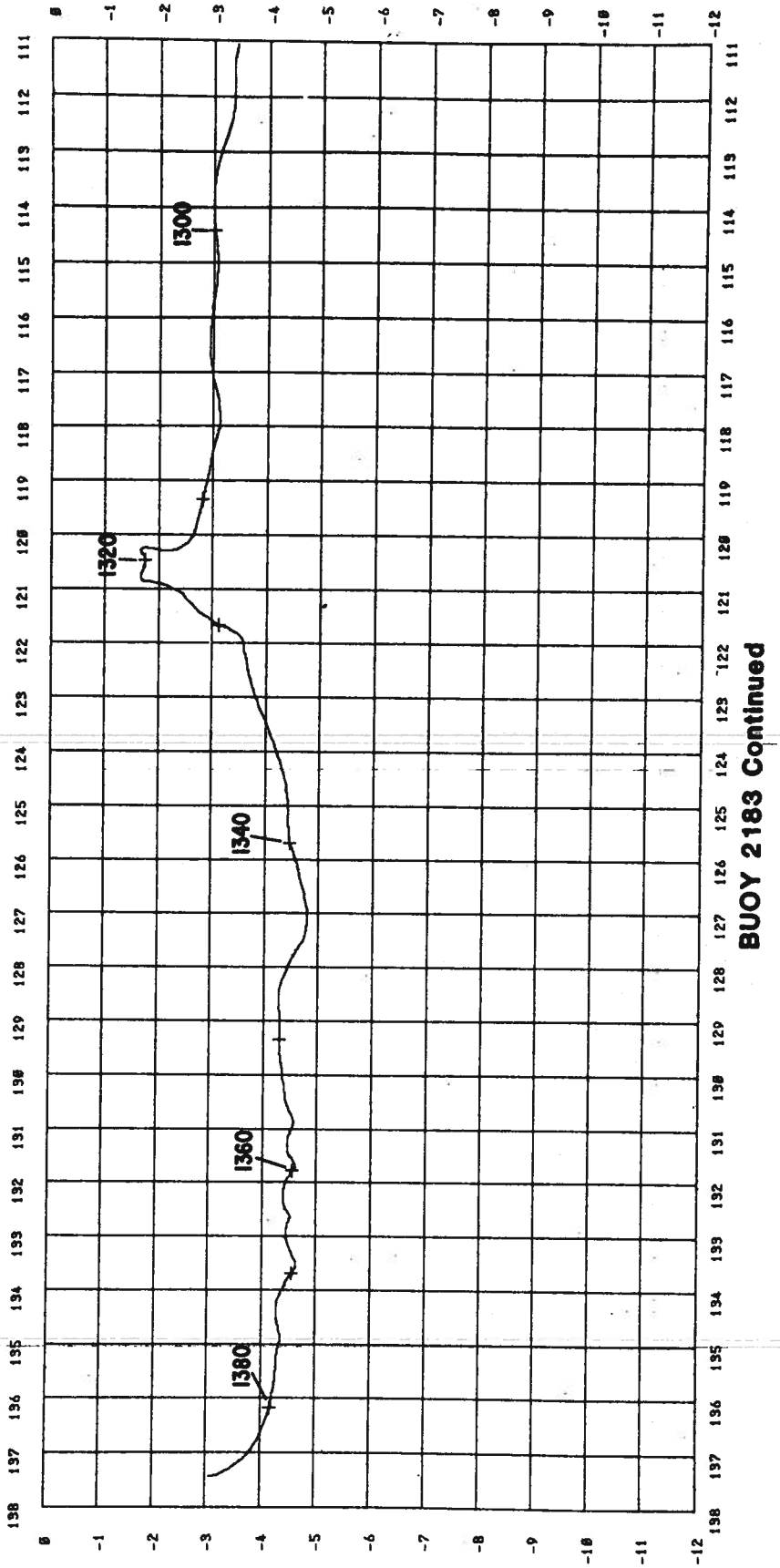


Figure 43. (continued)

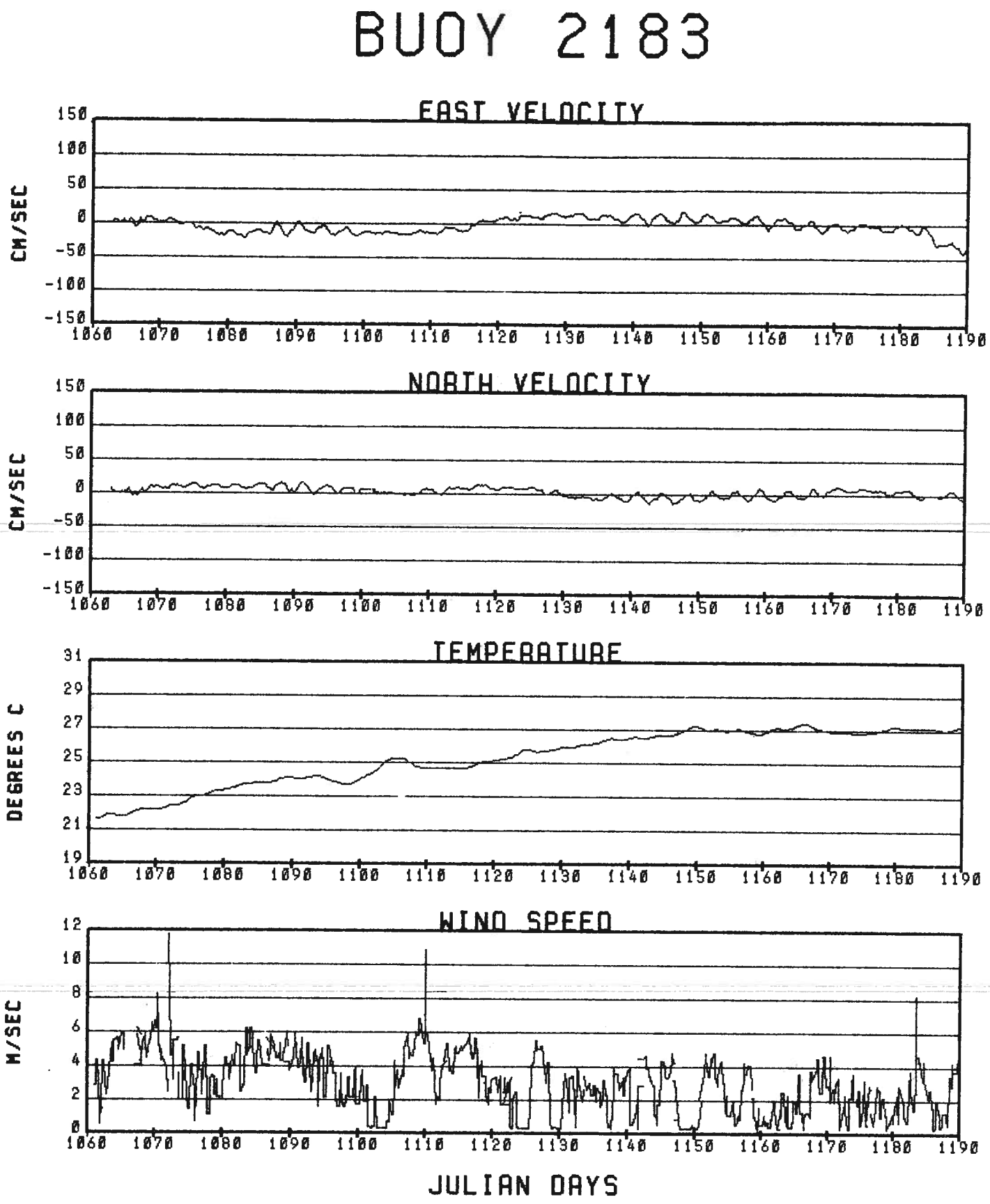


Figure 44. Time series of velocity and sensor data.

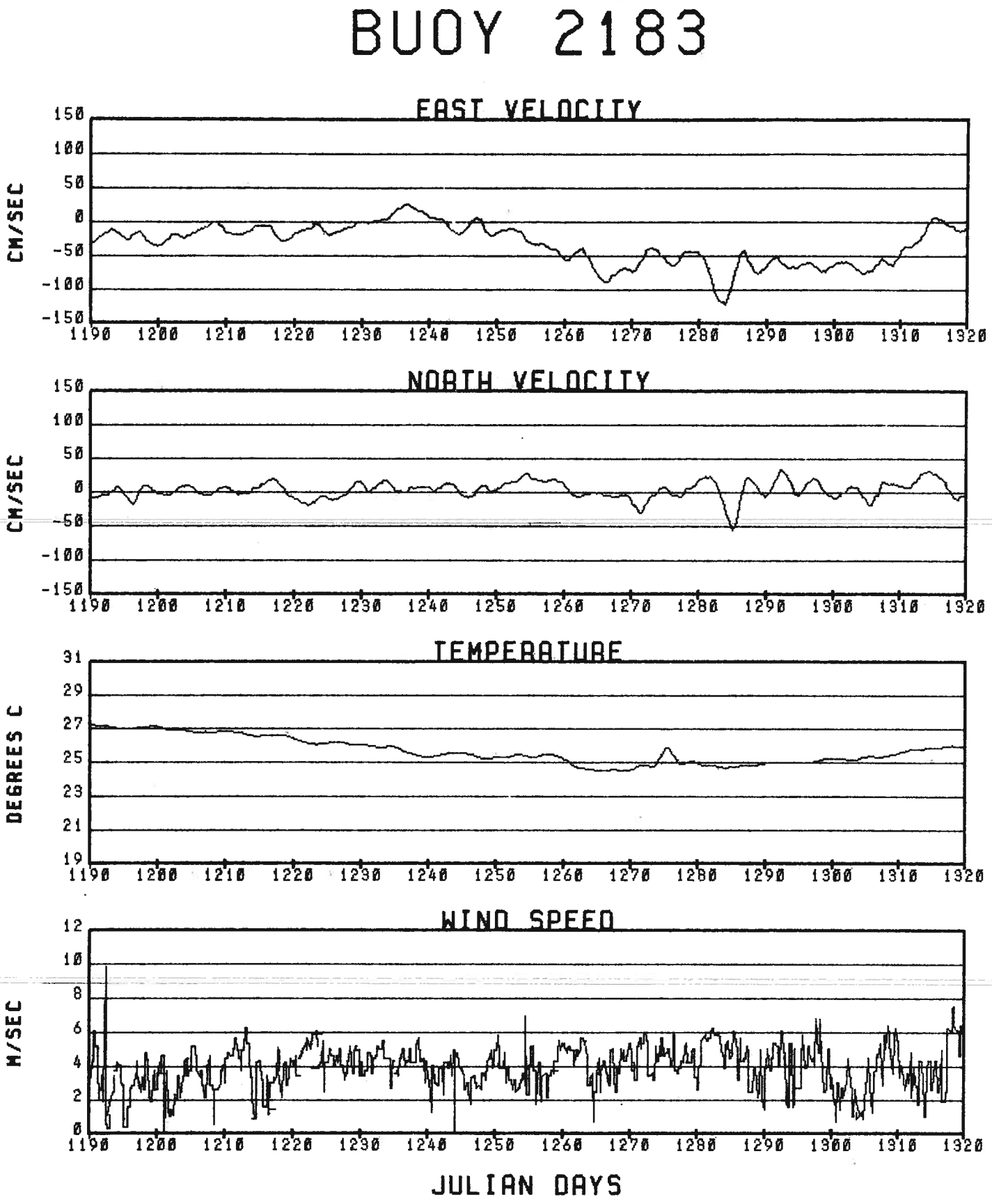


Figure 44. (continued)

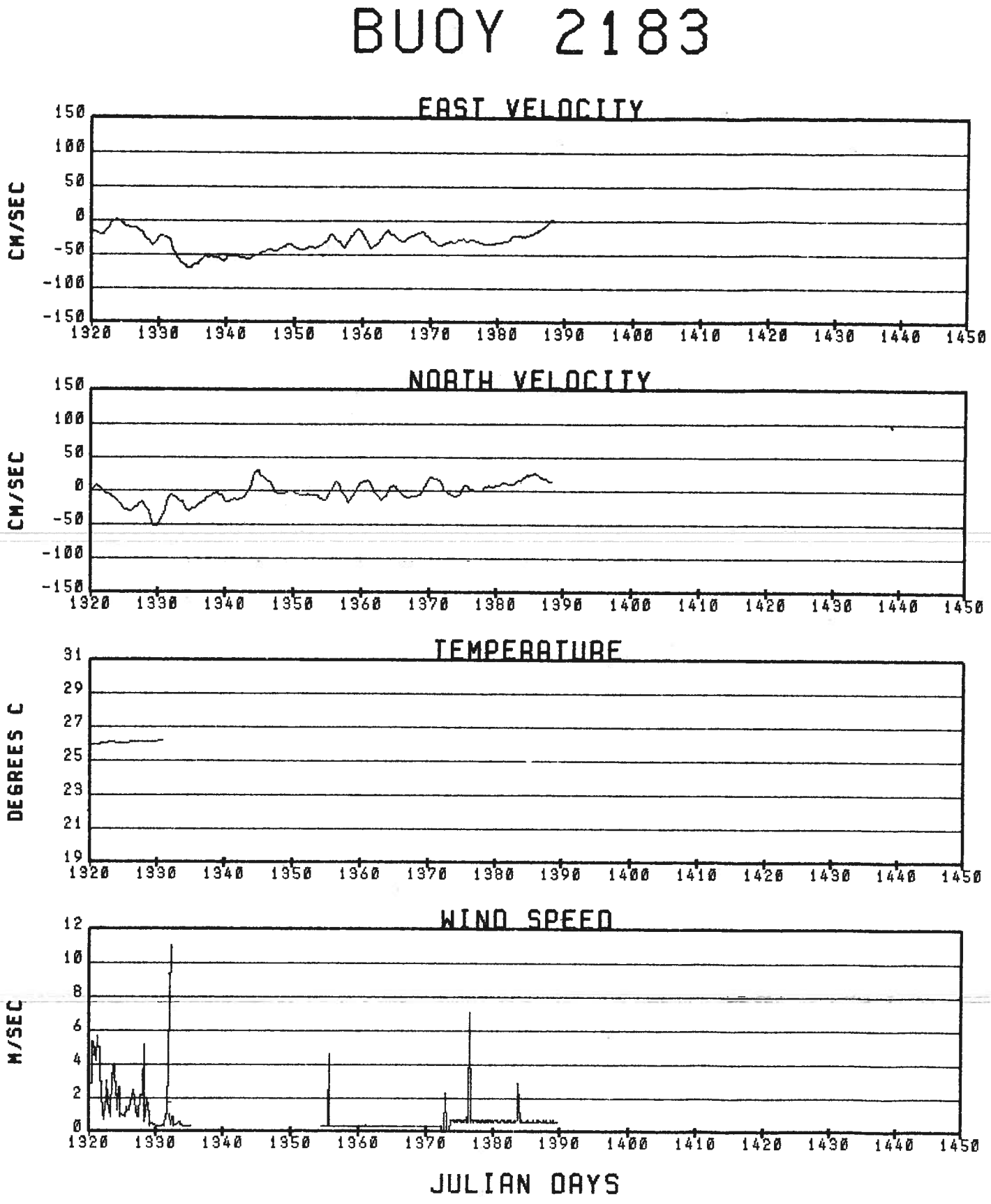


Figure 44. (continued)

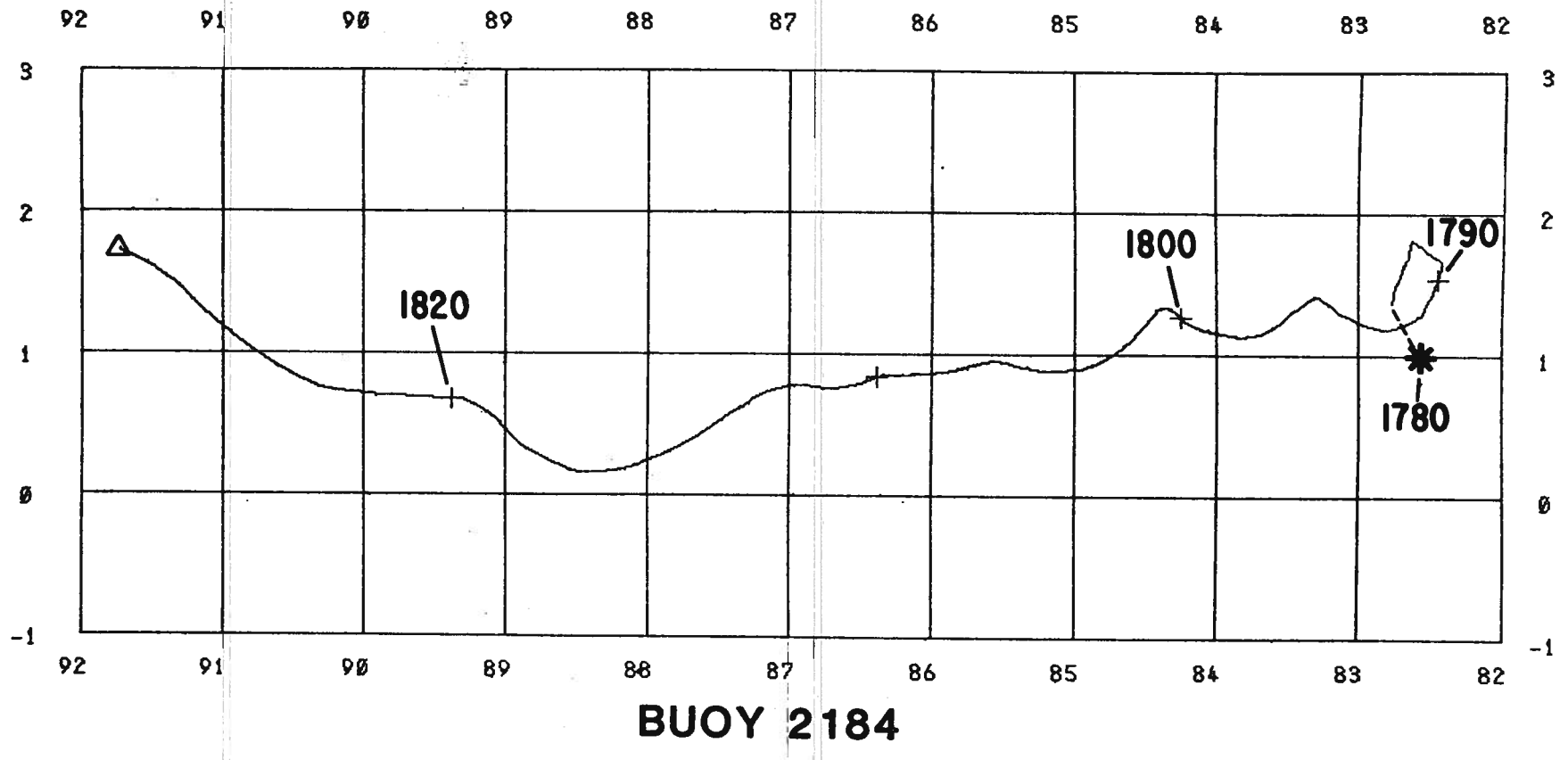


Figure 45. Drifting buoy trajectory.

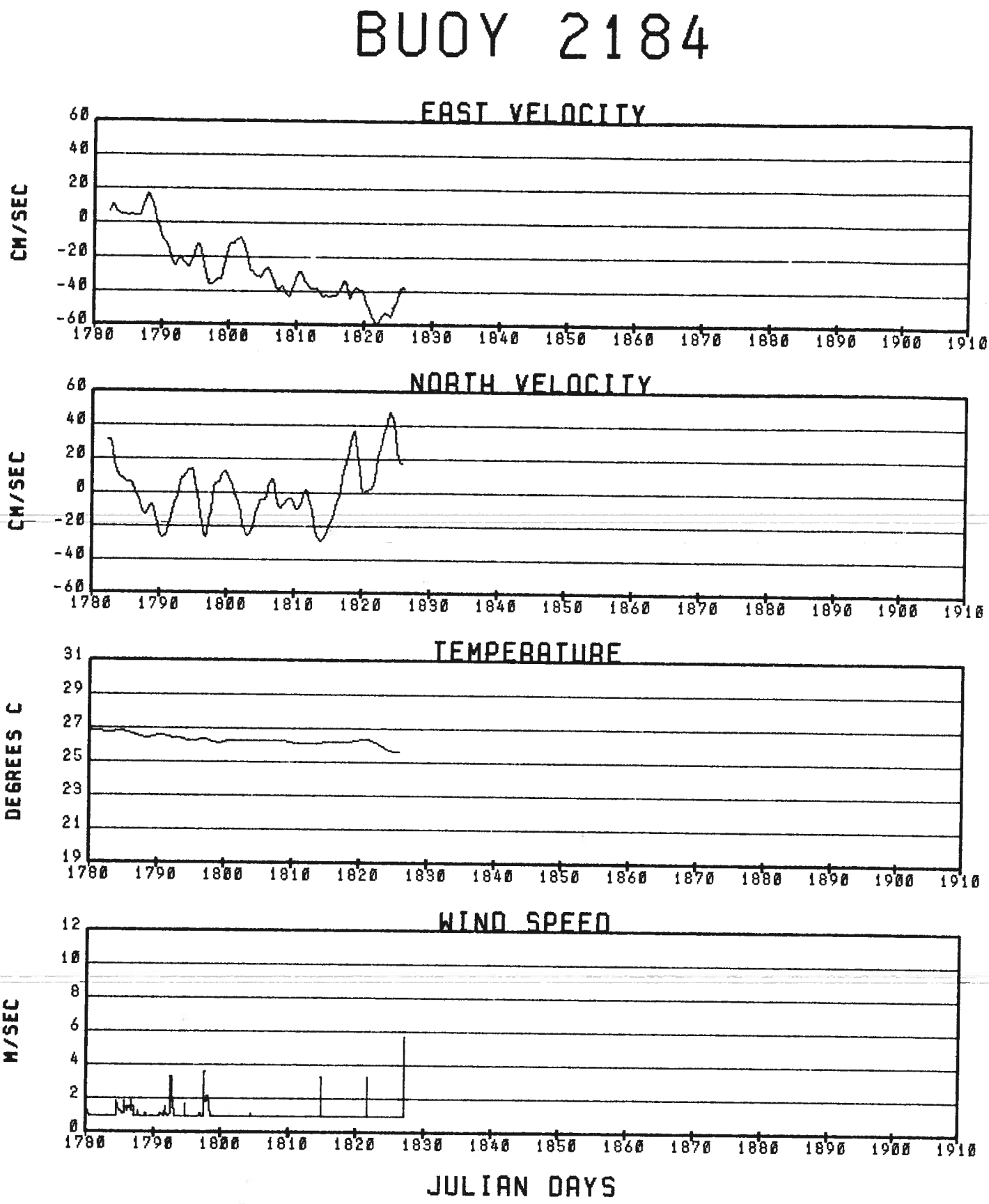


Figure 46. Time series of velocity and sensor data.

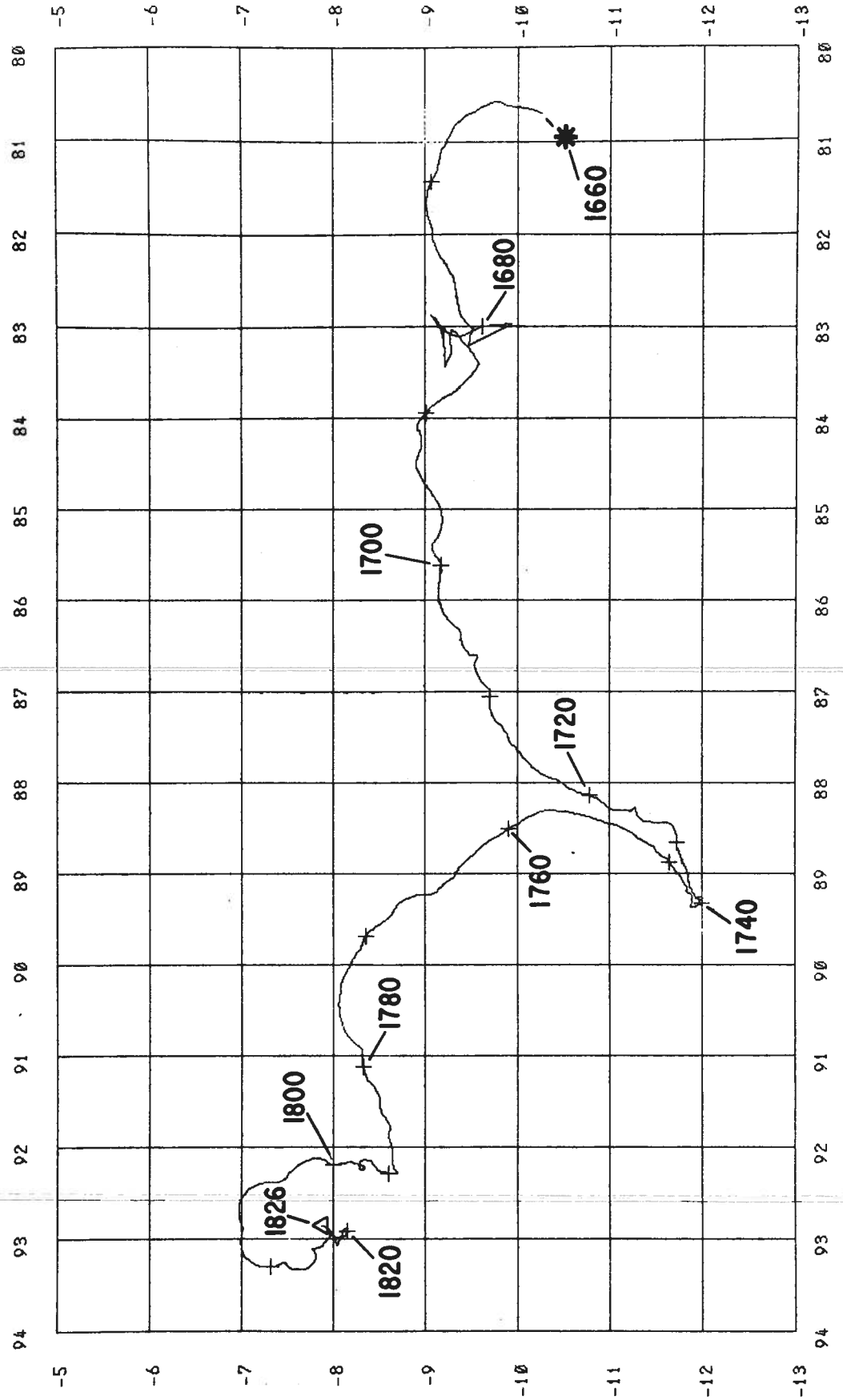


Figure 47. Drifting buoy trajectory.

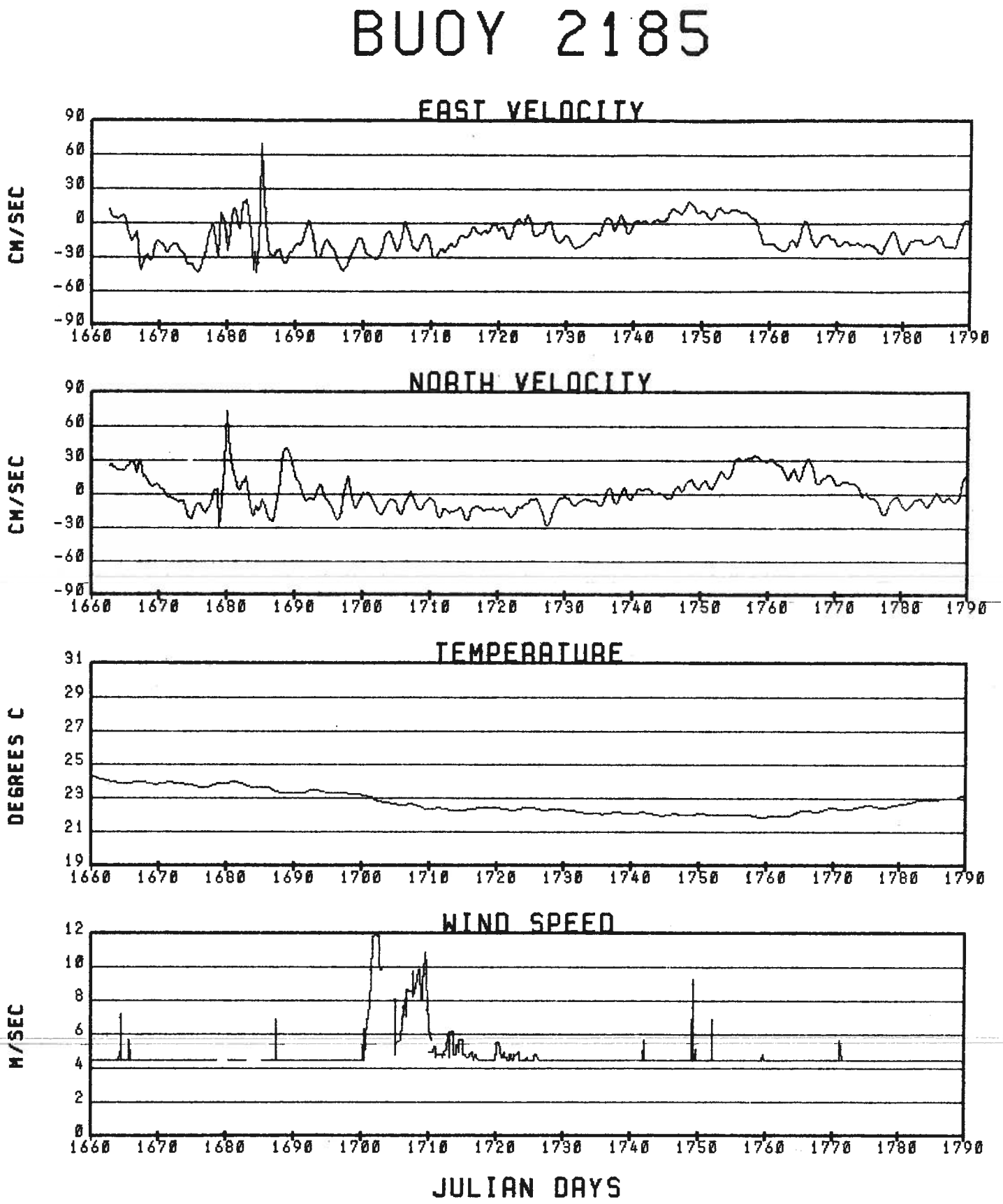


Figure 48. Time series of velocity and sensor data.

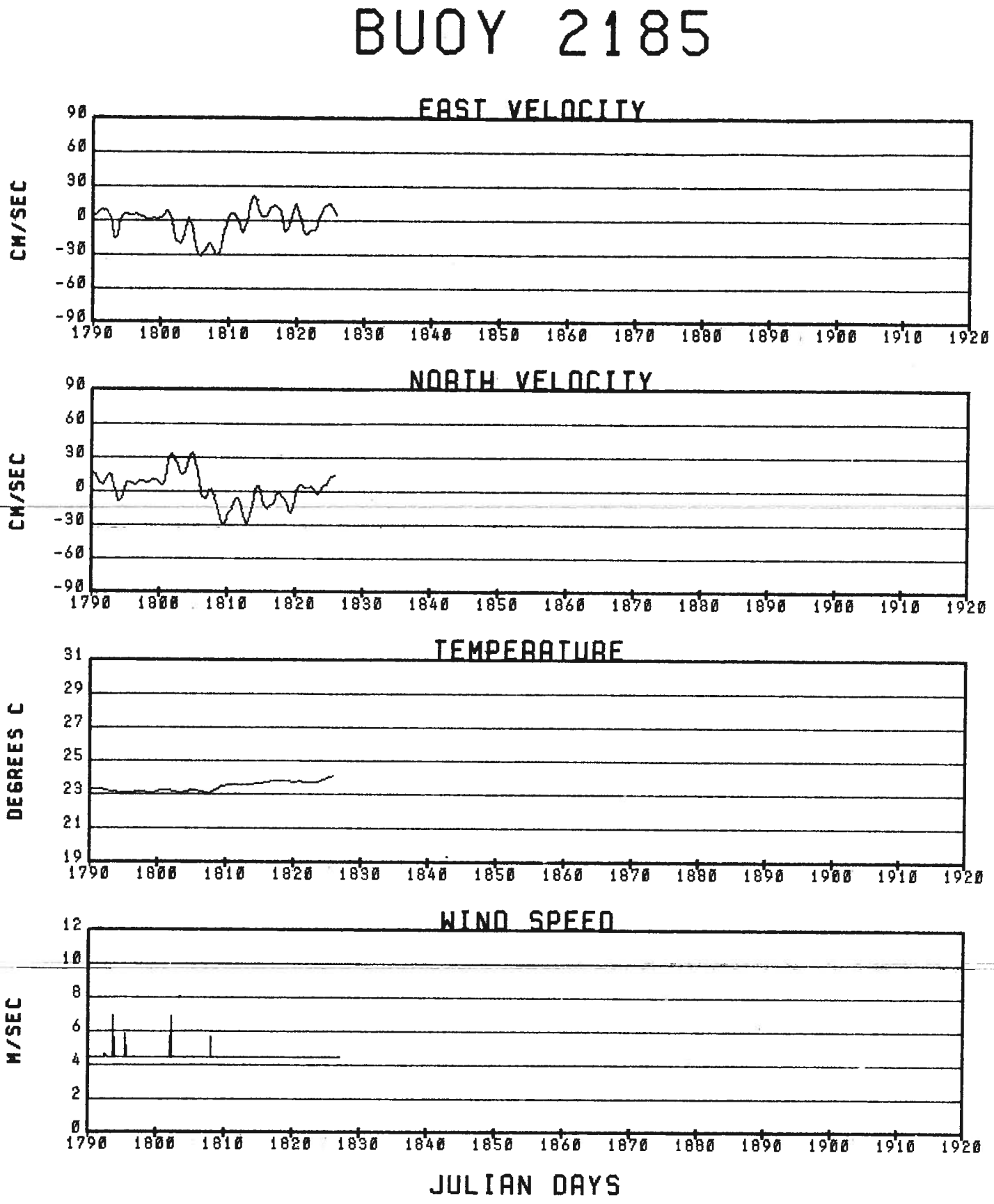


Figure 48. (continued)

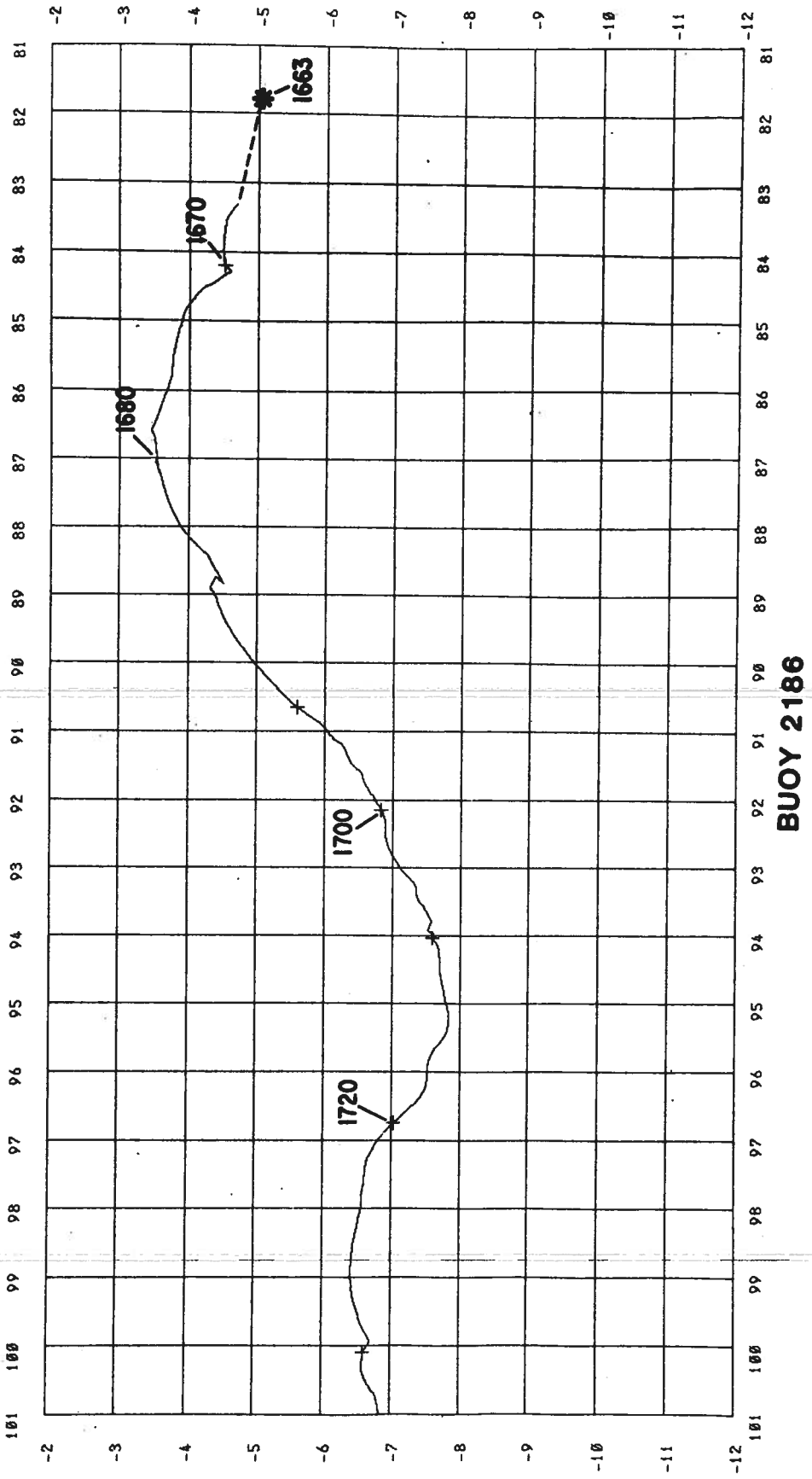


Figure 49. Drifting buoy trajectory.

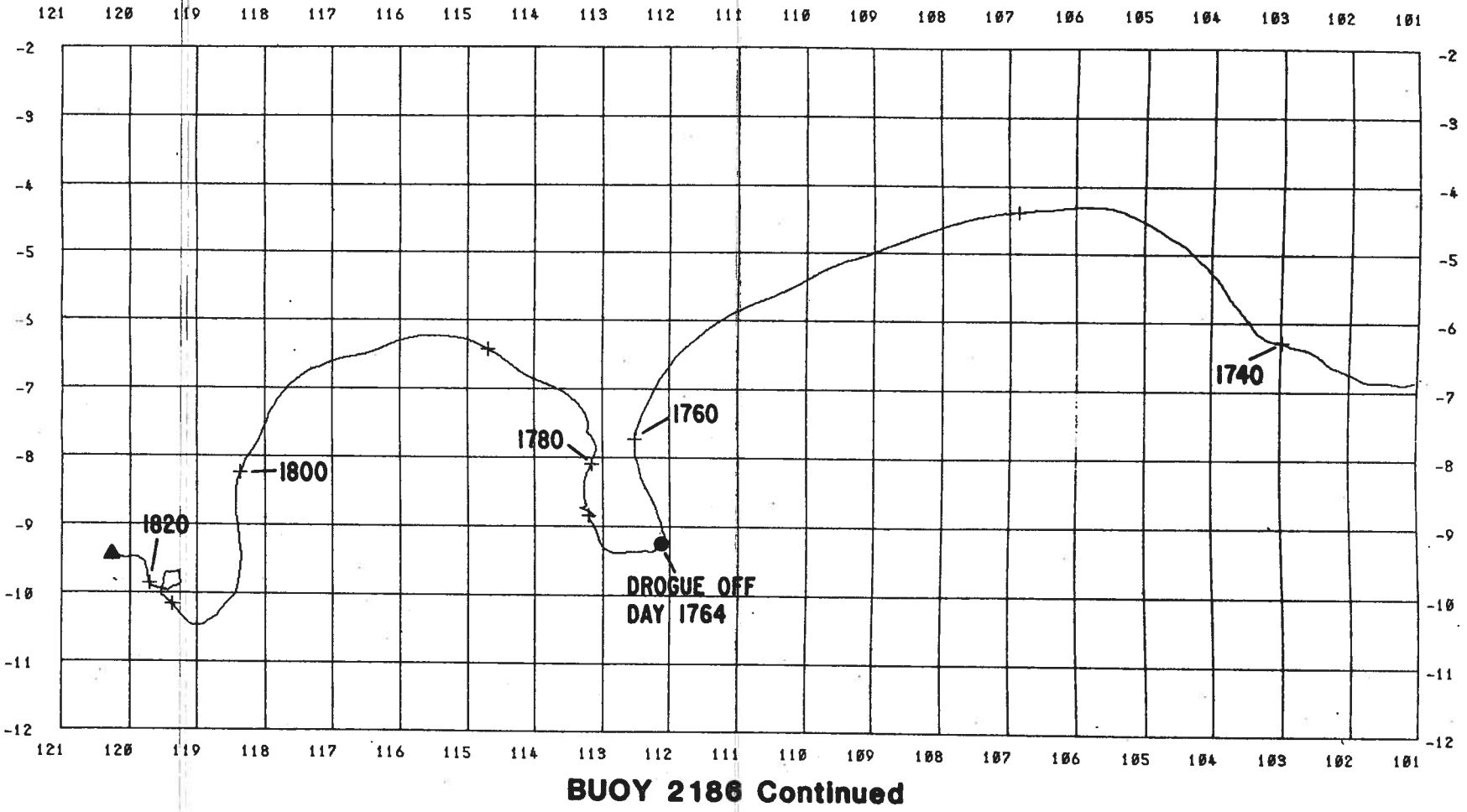


Figure 49. (continued)

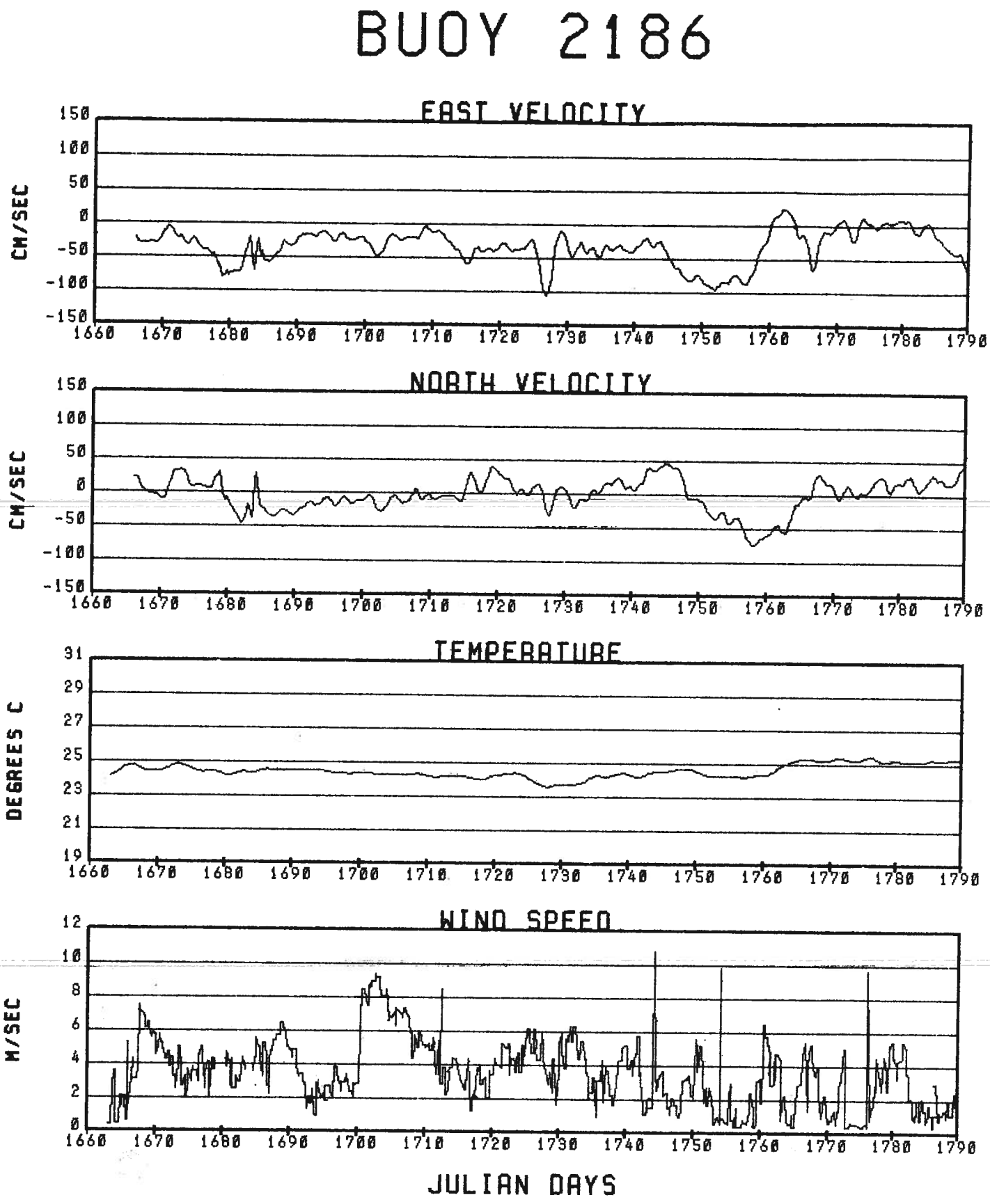


Figure 50. Time series of velocity and sensor data.

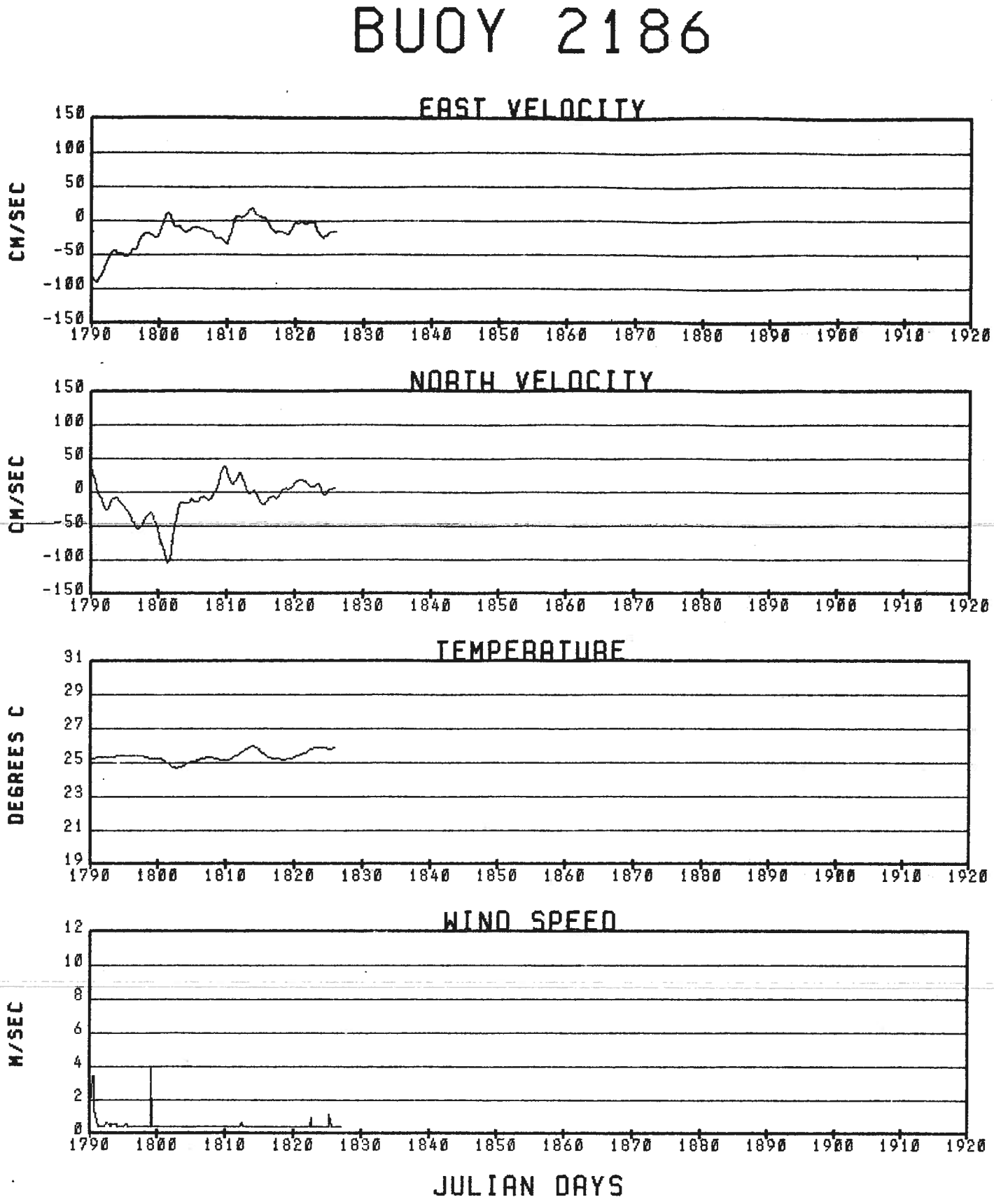


Figure 50. (continued)

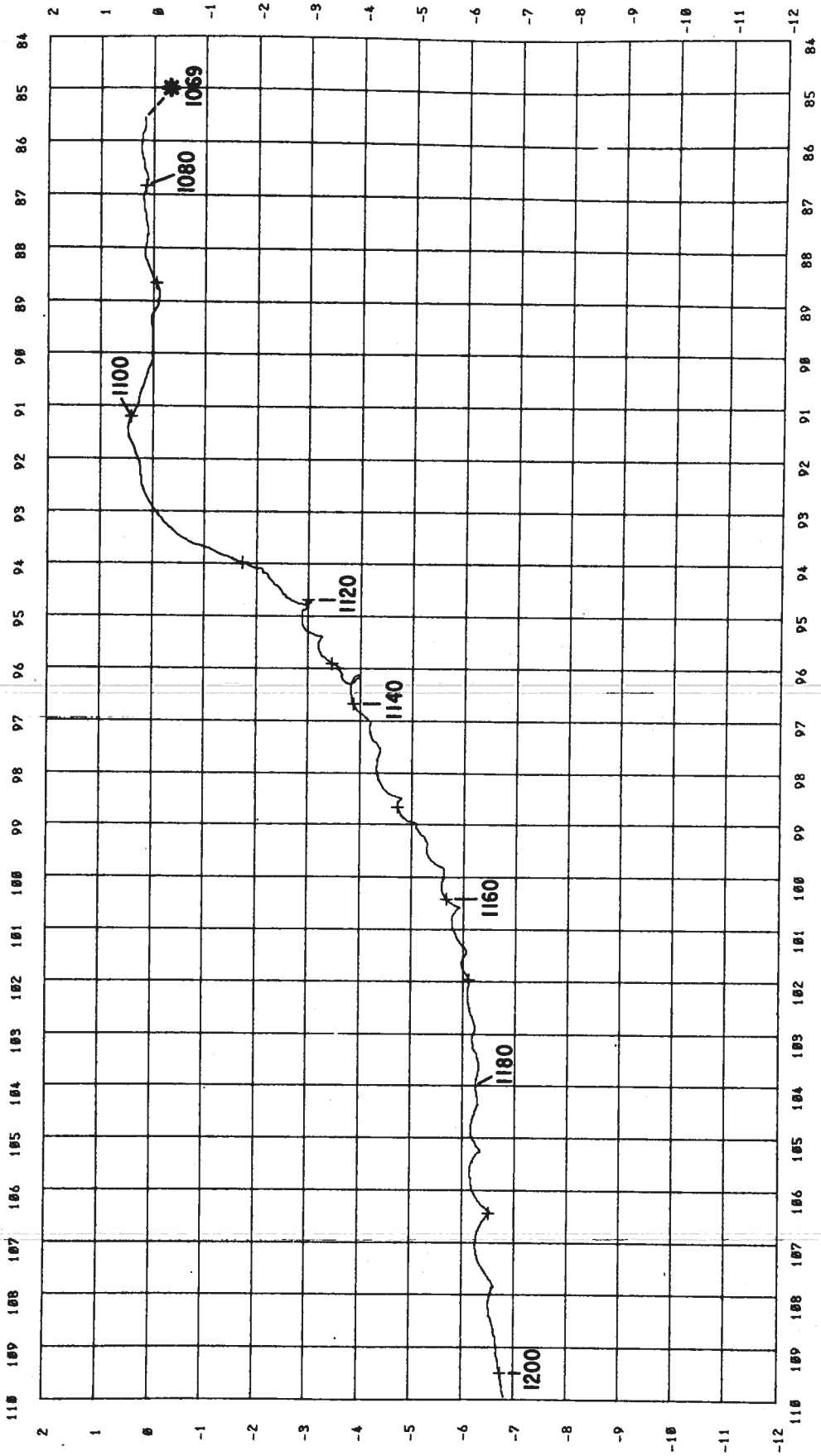


Figure 51. Drifting buoy trajectory.

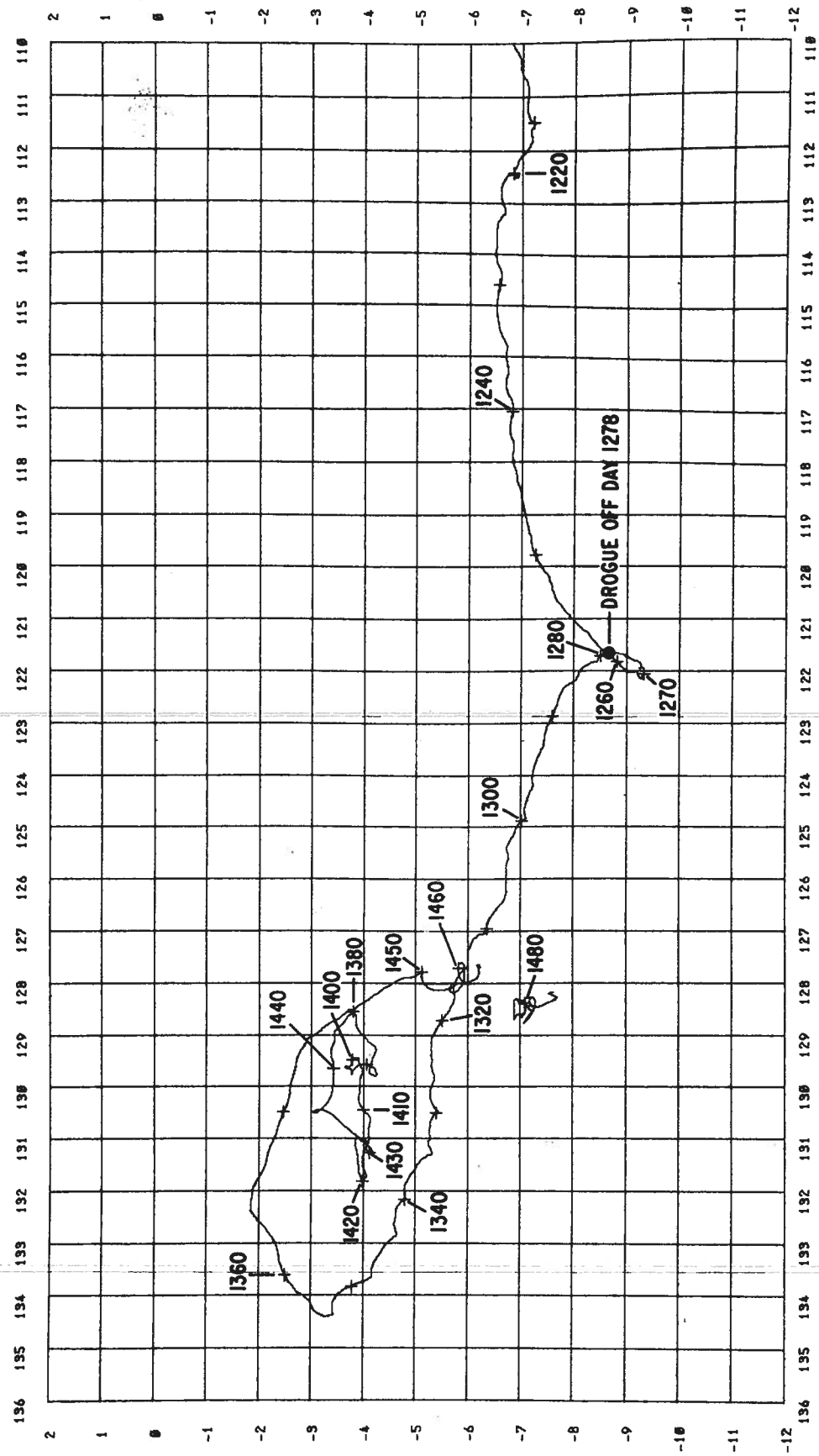
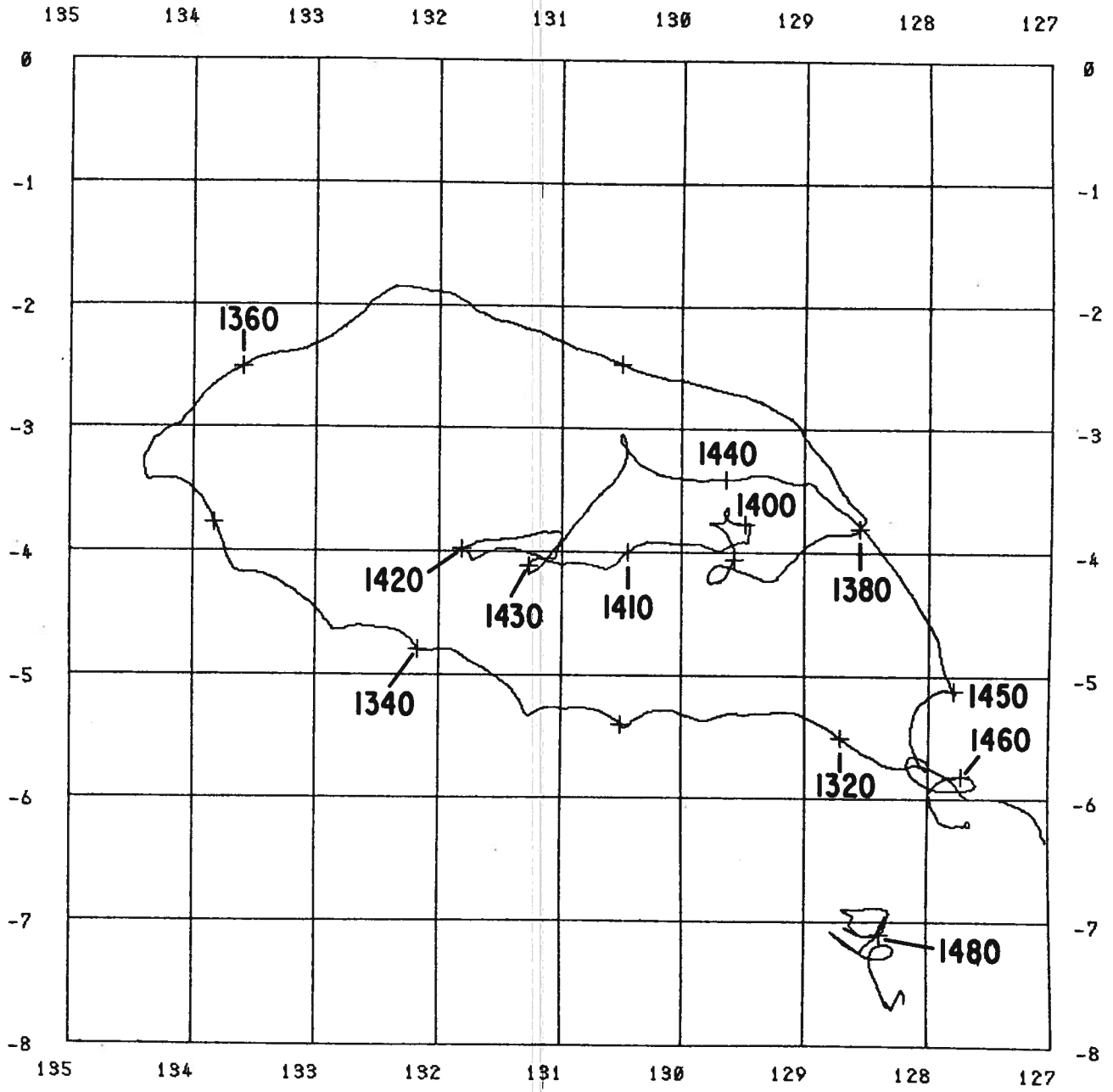


Figure 51. (continued)



BUOY 2187

Figure 52. Drifting buoy trajectory detail.

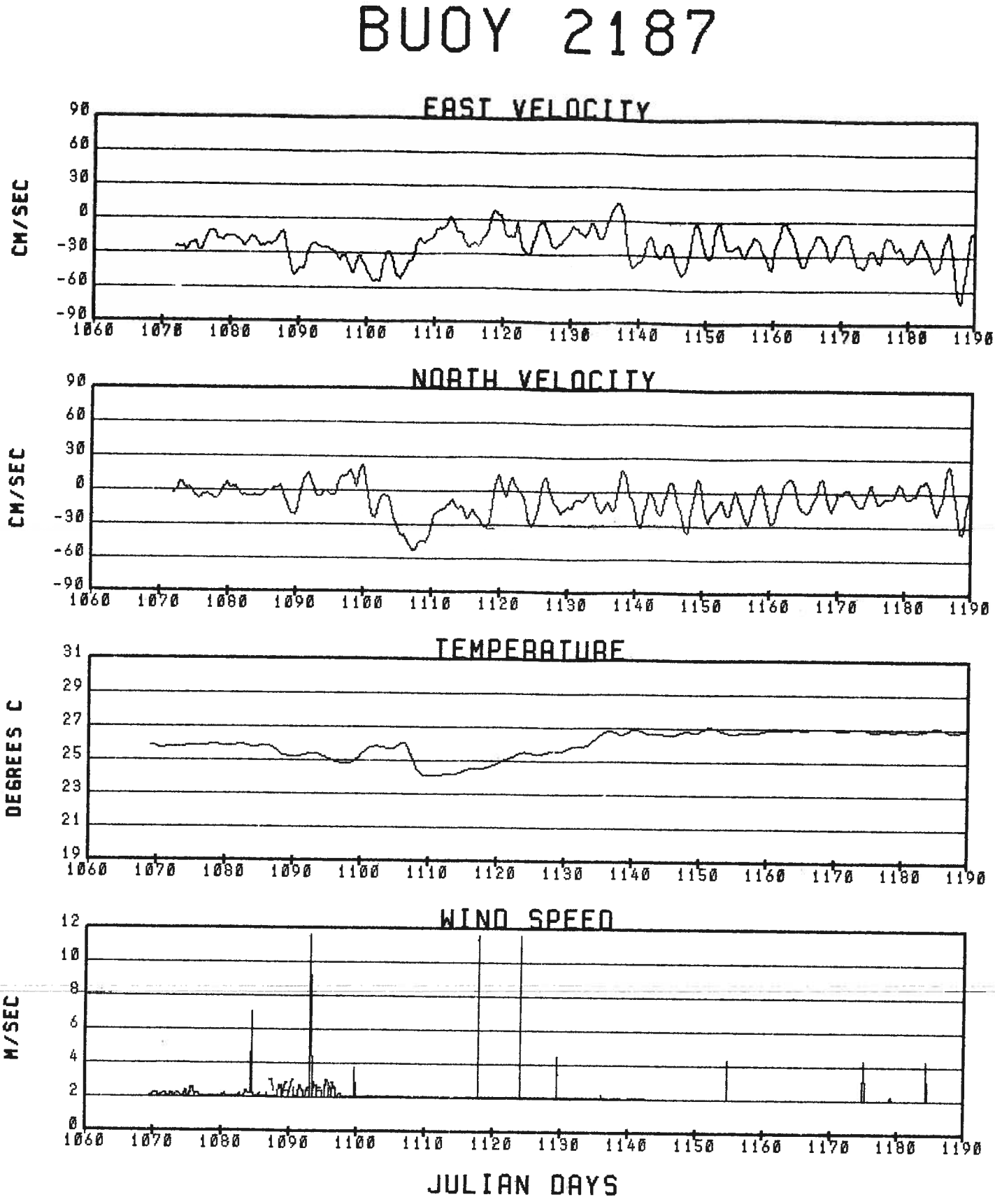


Figure 53. Time series of velocity and sensor data.

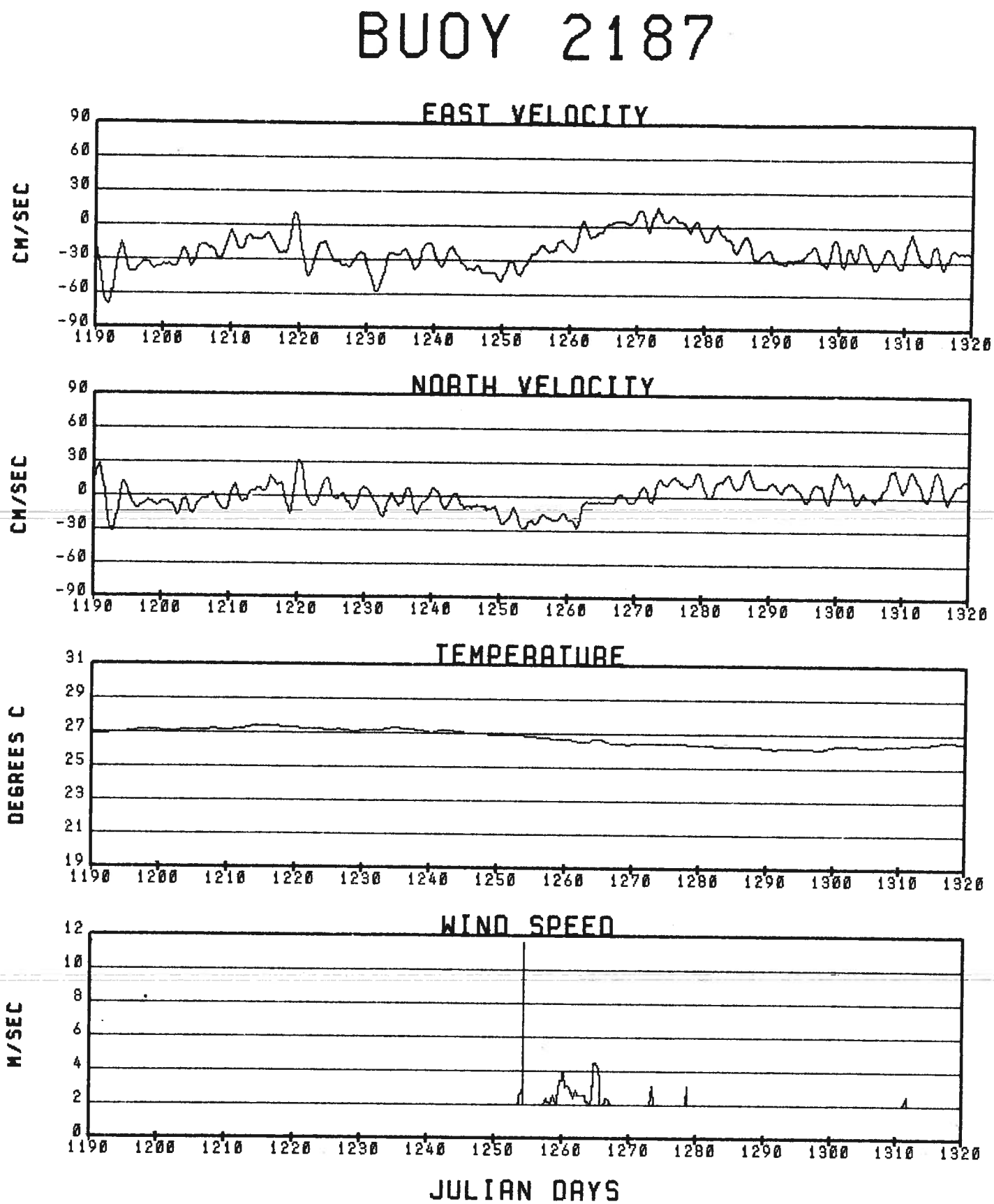


Figure 53. (continued)

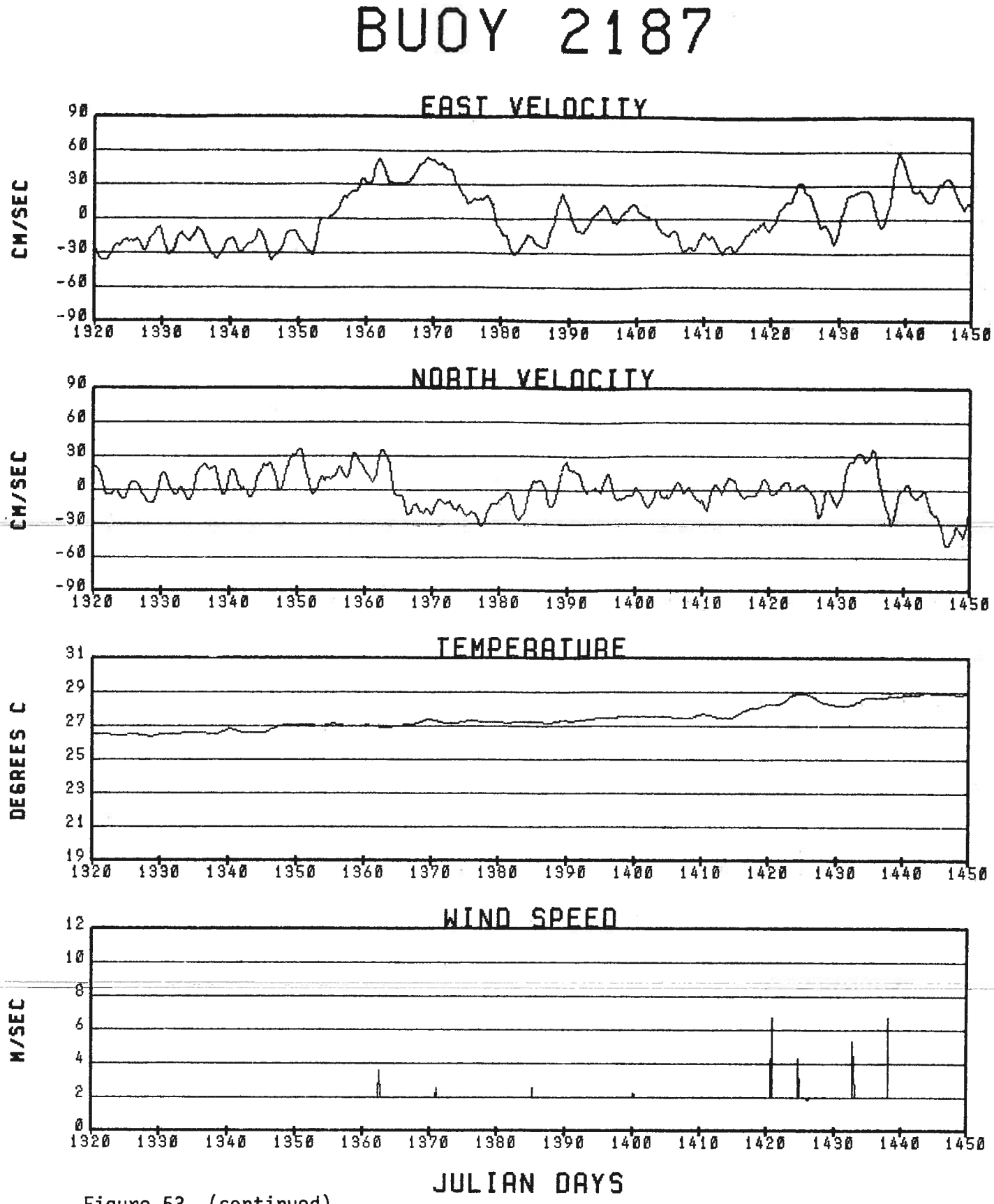


Figure 53. (continued)

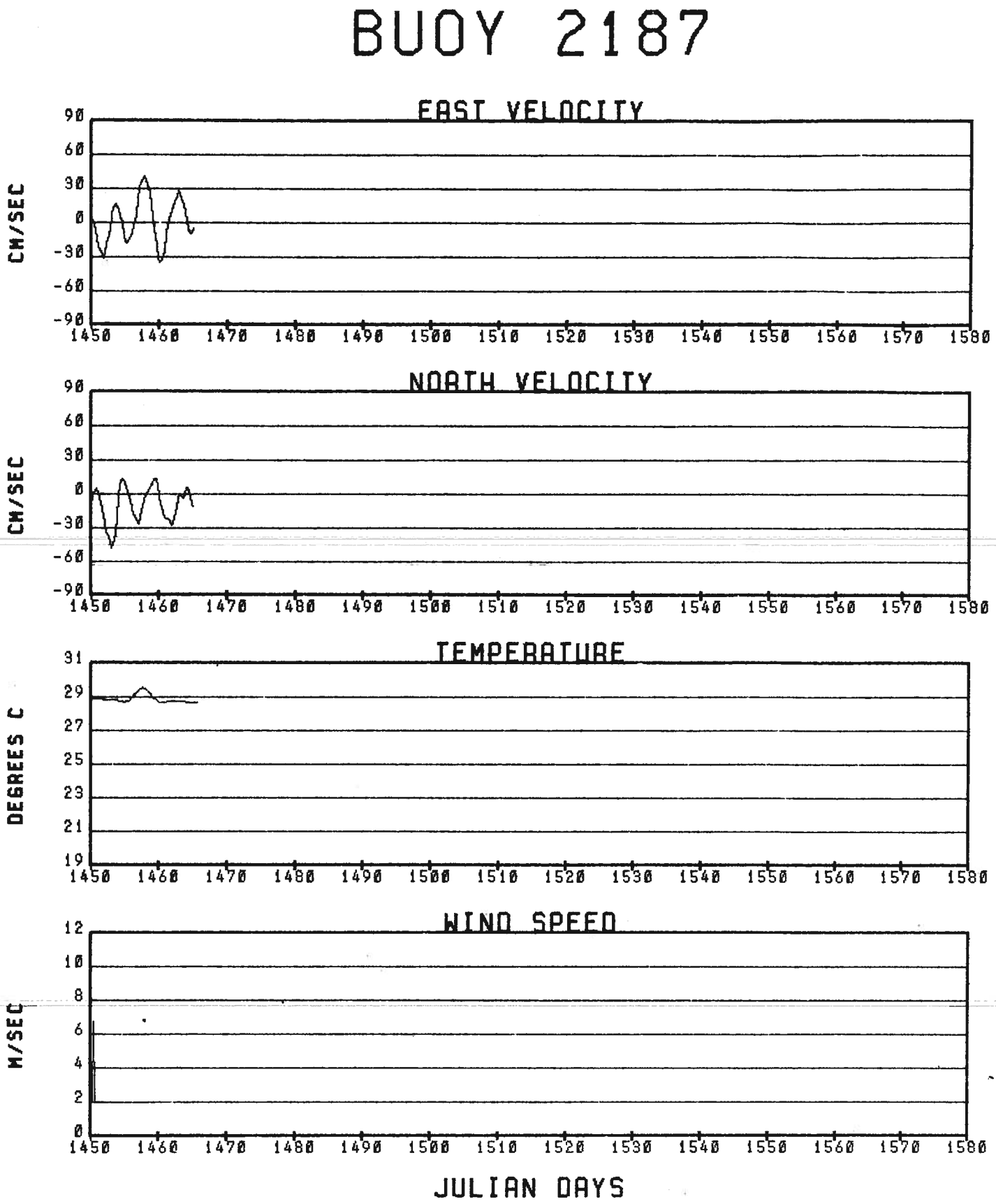


Figure 53. (continued)

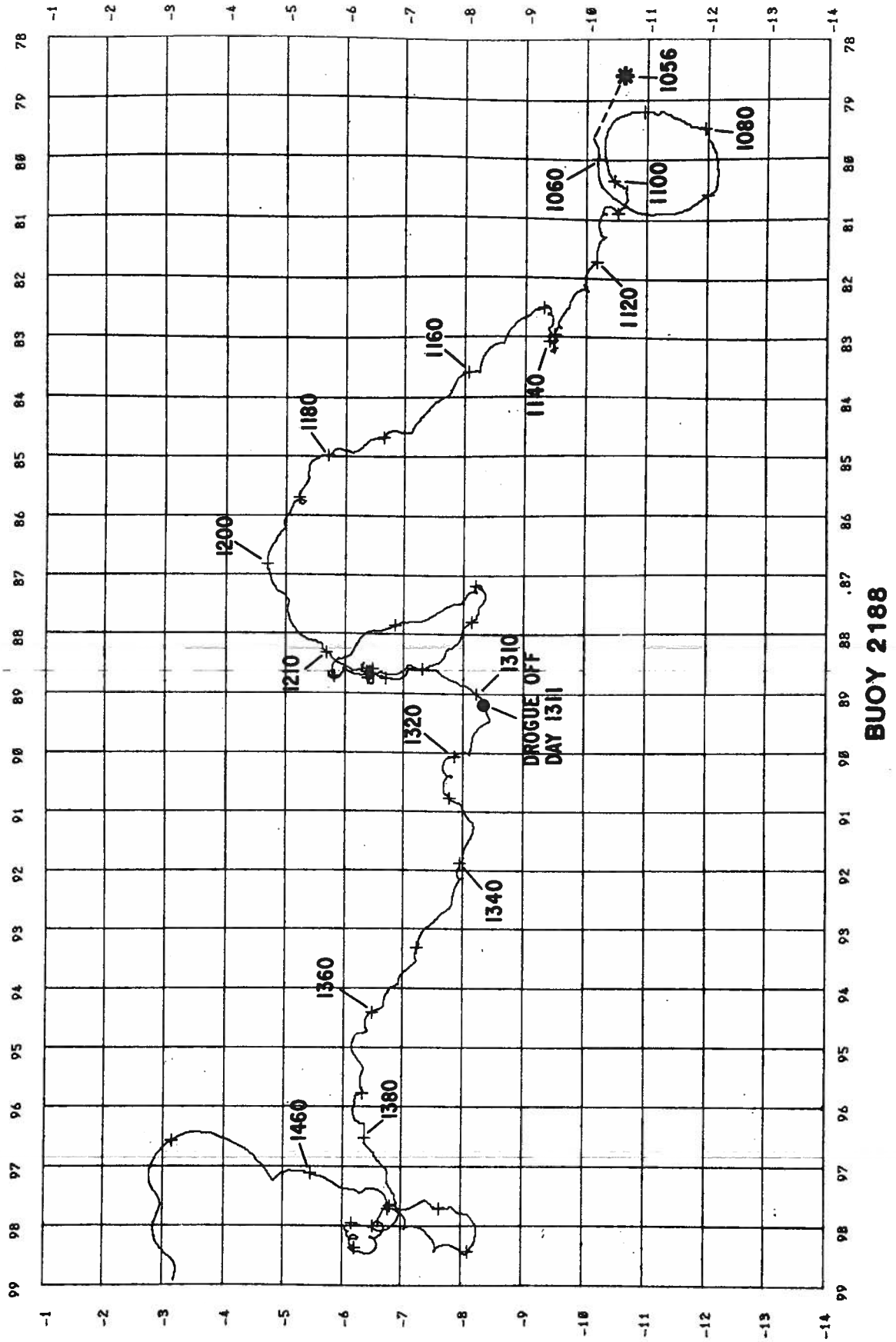


Figure 54. Drifting buoy trajectory.

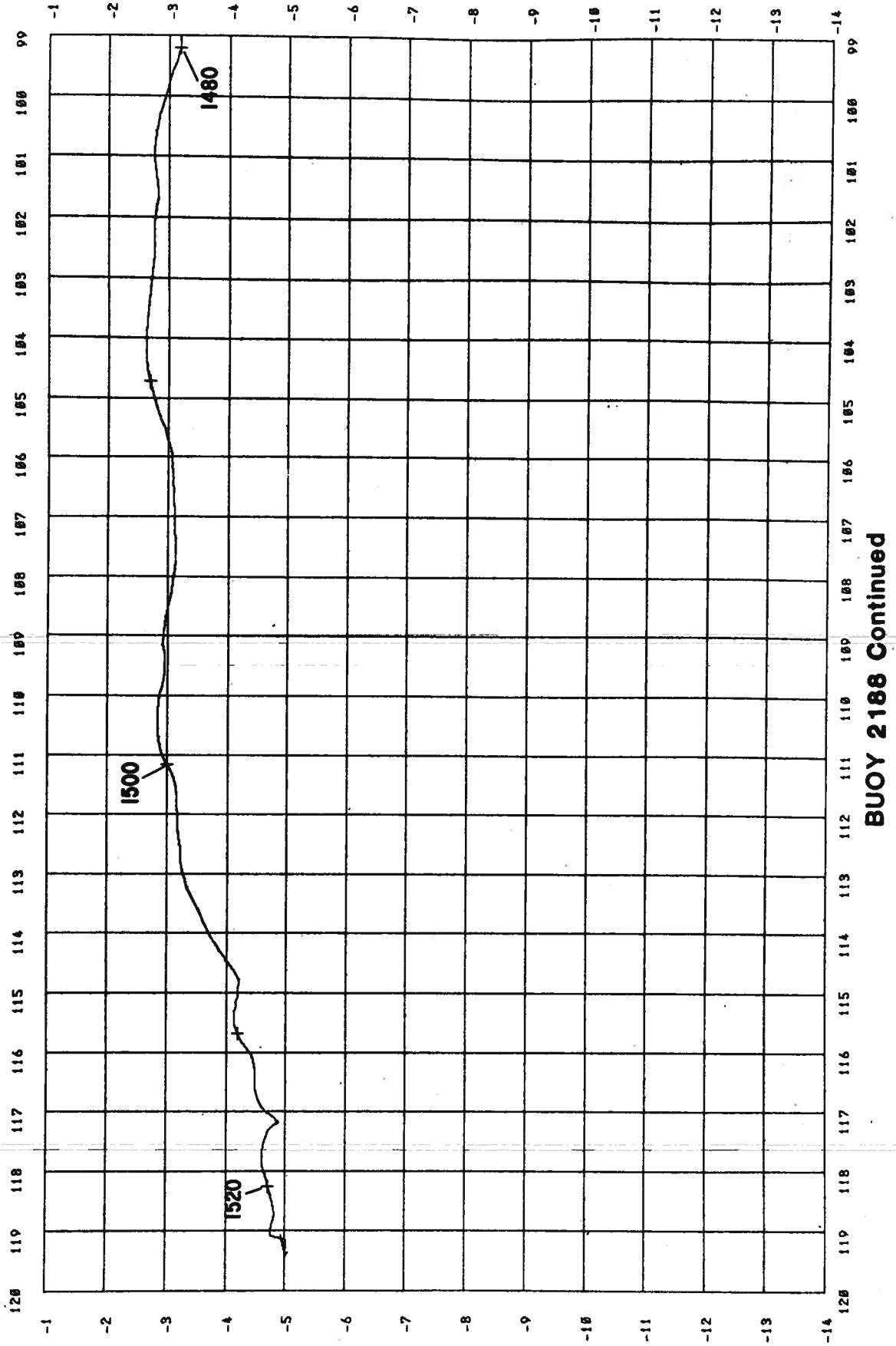


Figure 54. (continued)

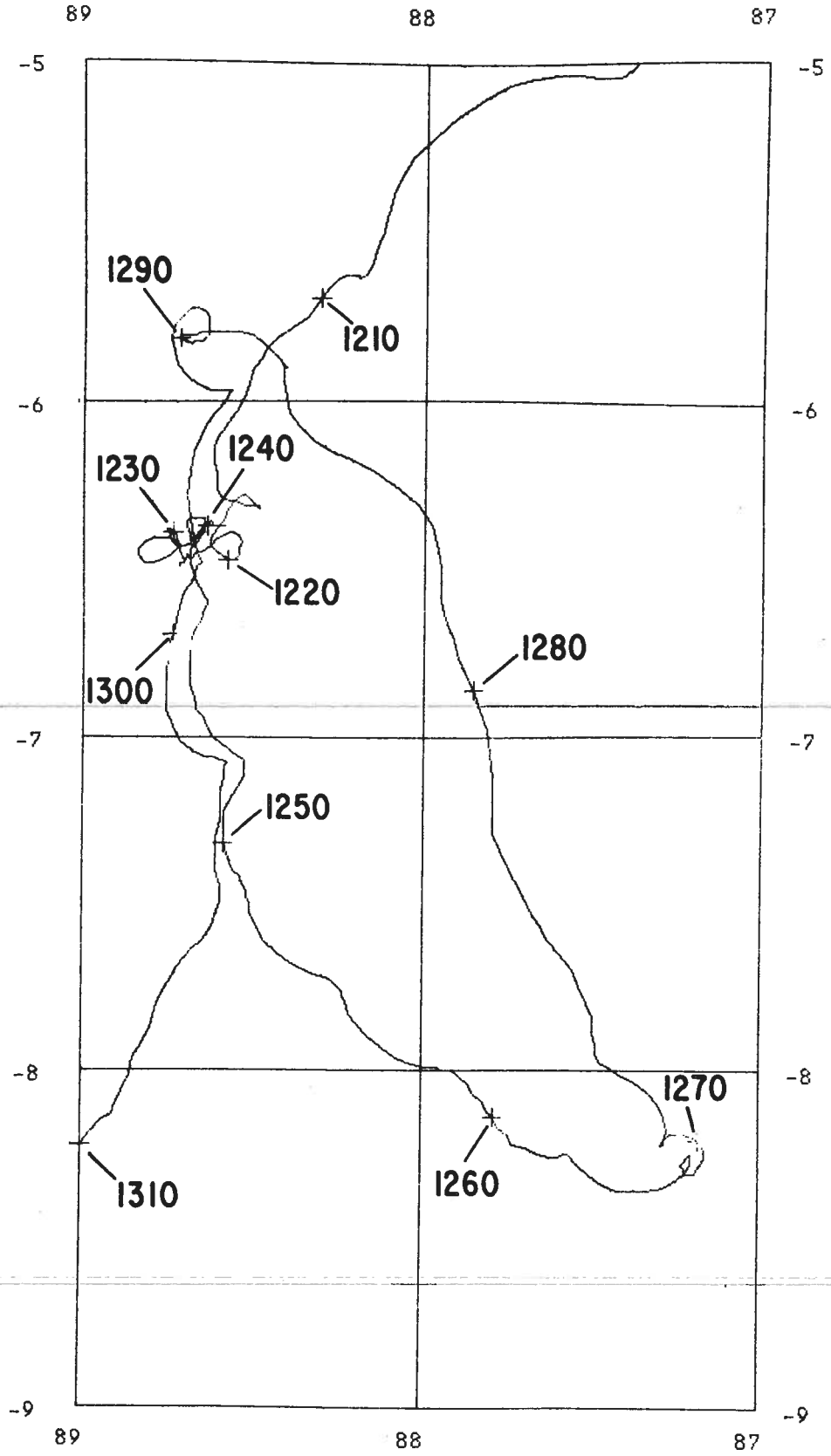


Figure 55. Drifting buoy trajectory detail.

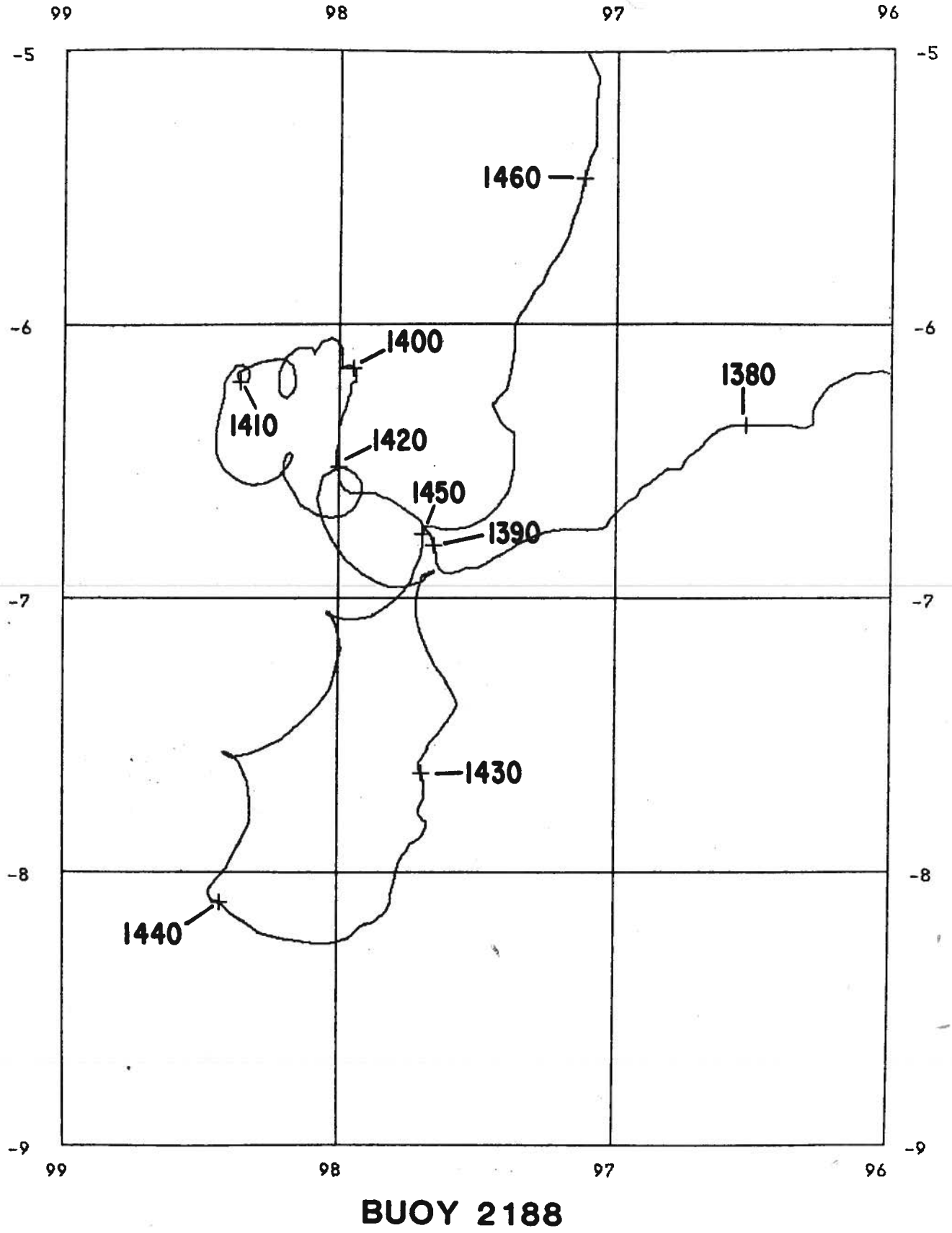


Figure 56. Drifting buoy trajectory detail.

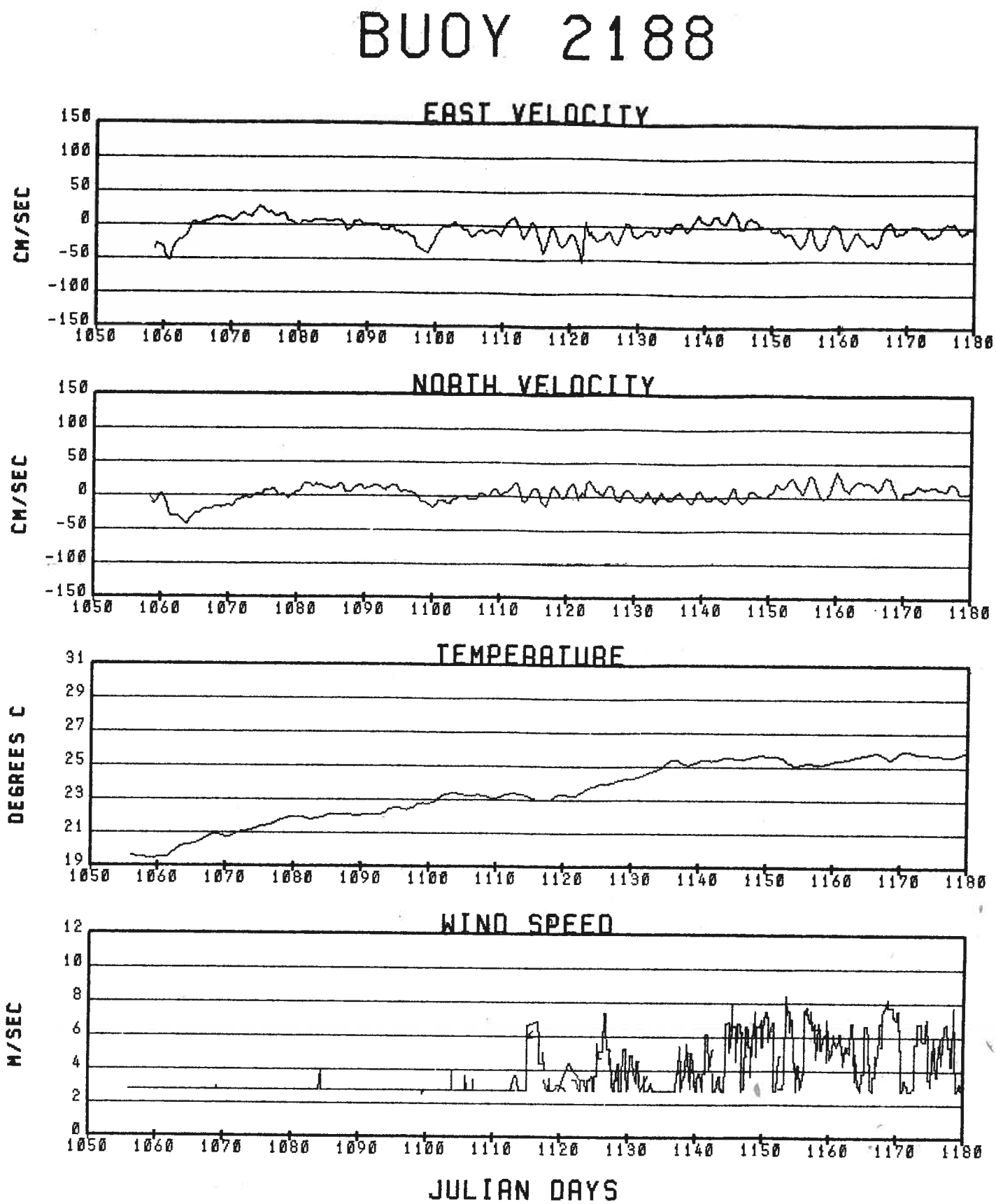


Figure 57. Time series of velocity and sensor data.

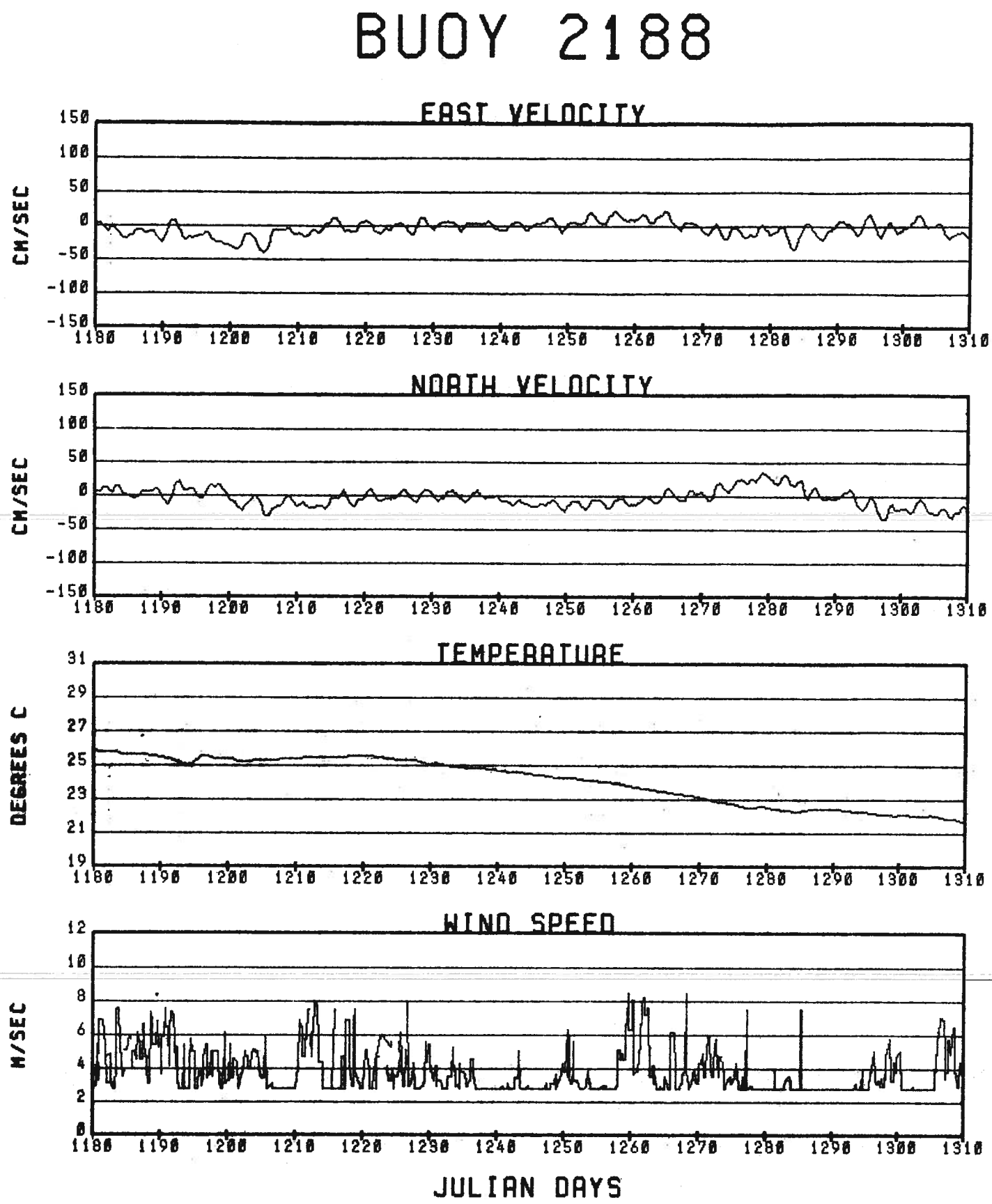


Figure 57. (continued)

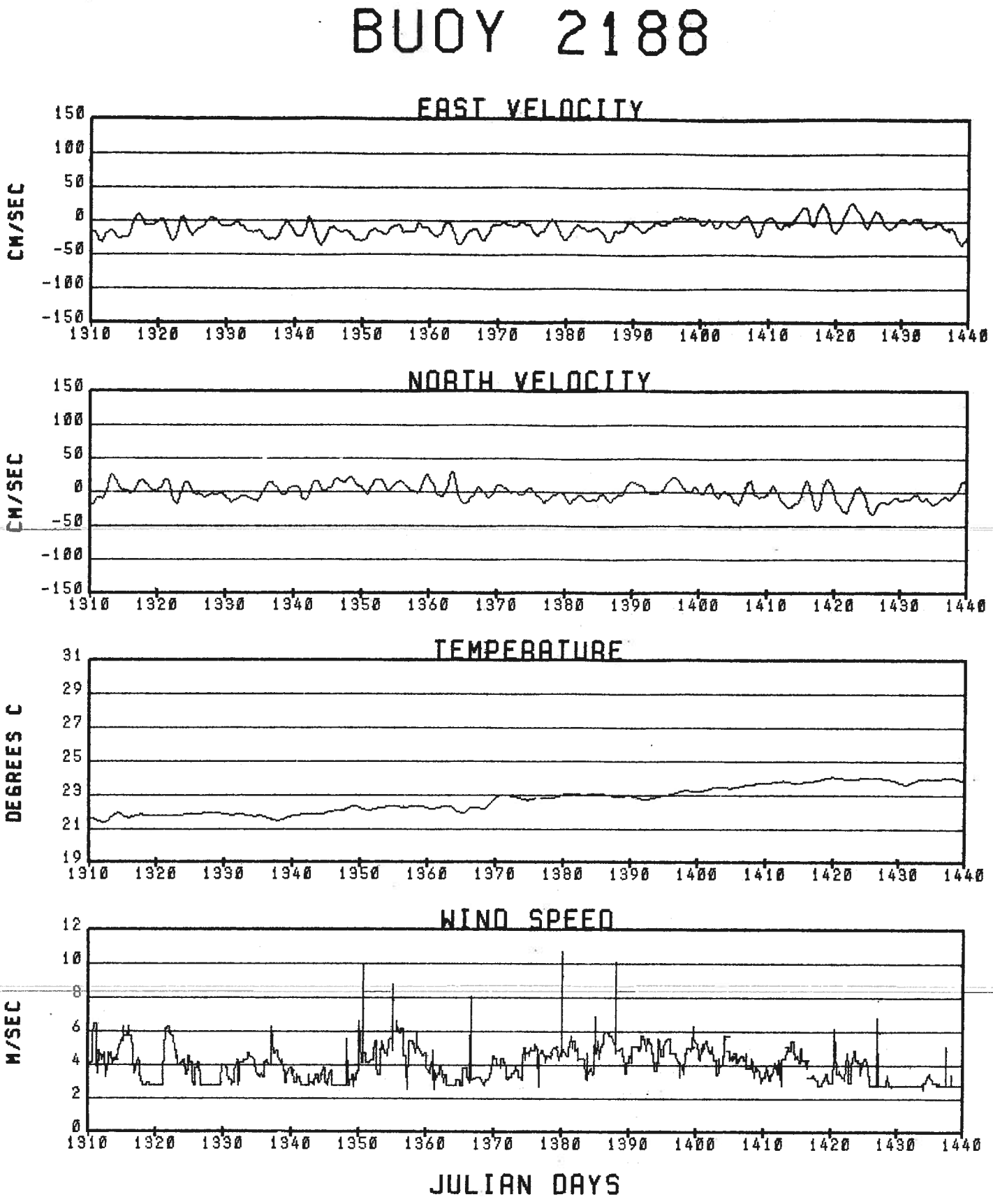


Figure 57. (continued)

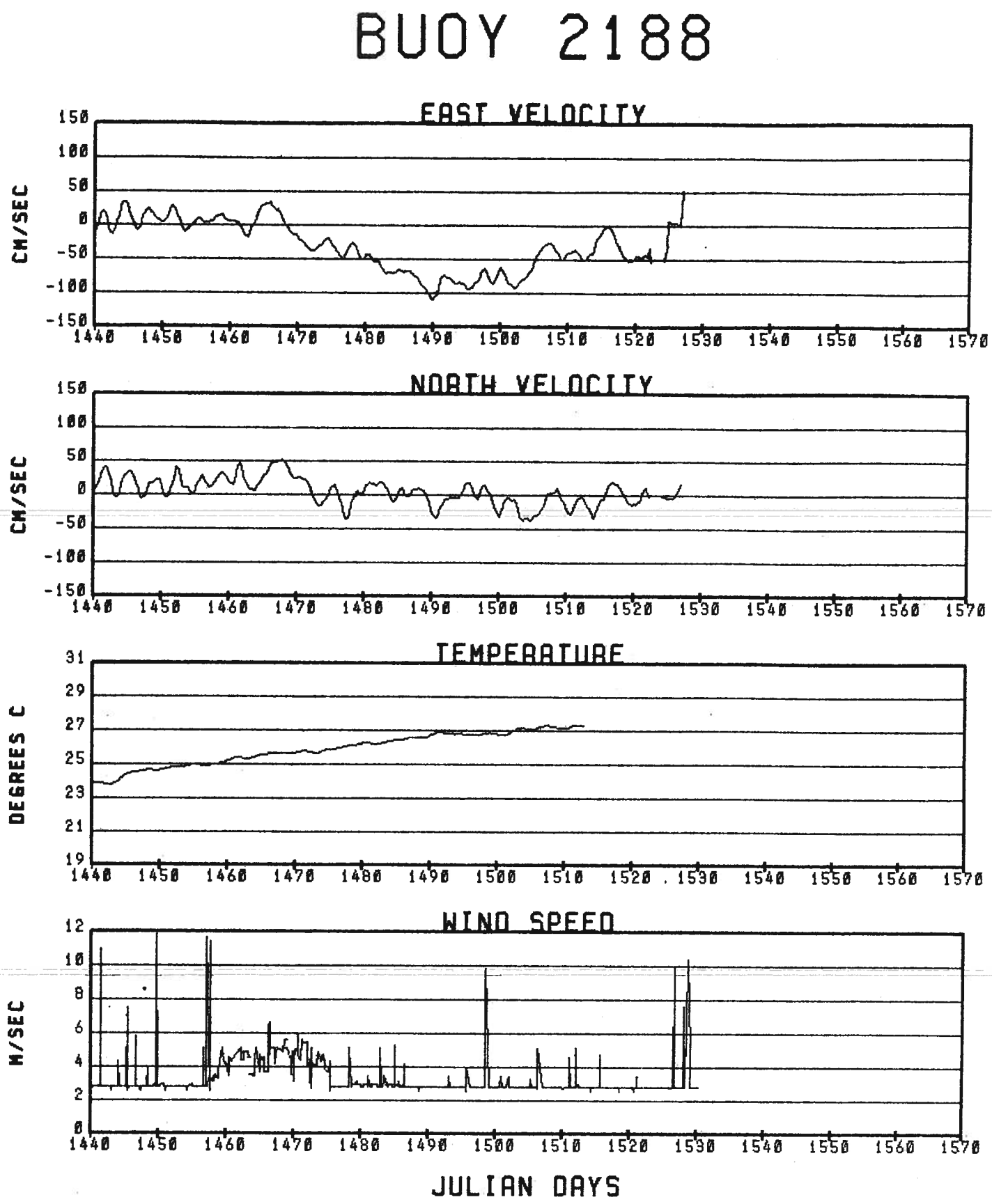


Figure 57. (continued)

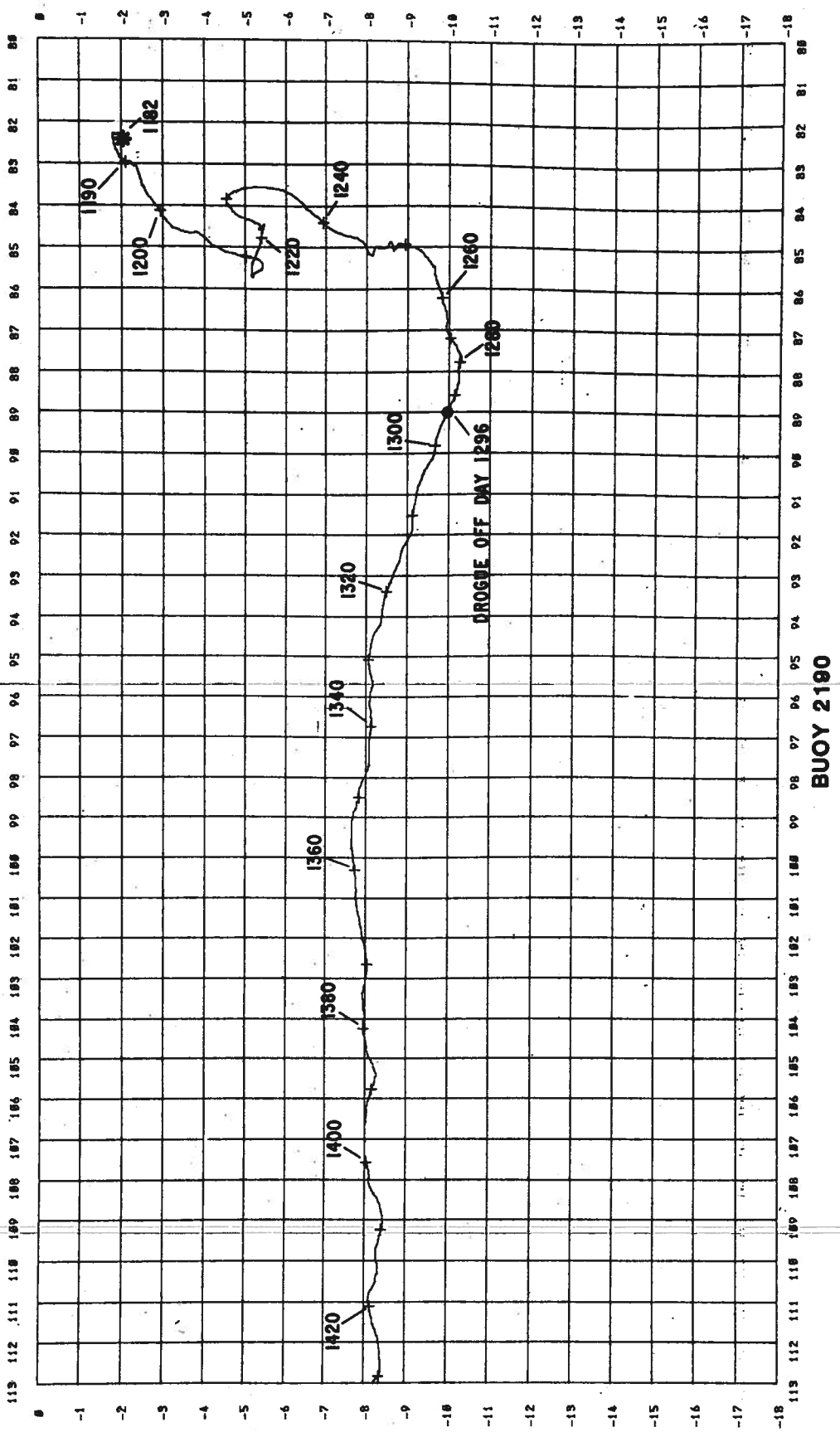


Figure 58. Drifting buoy trajectory.

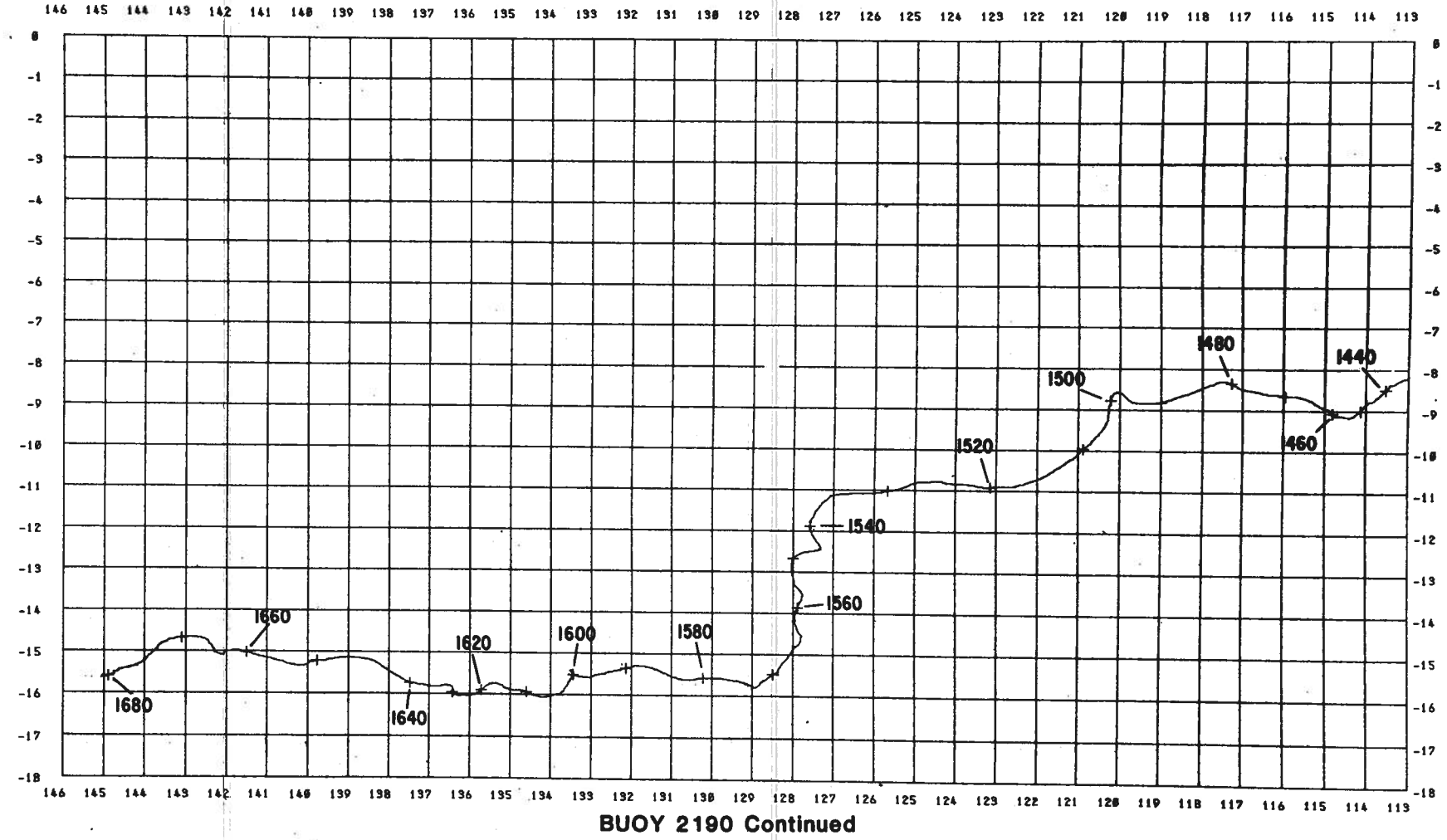


Figure 58. (continued)

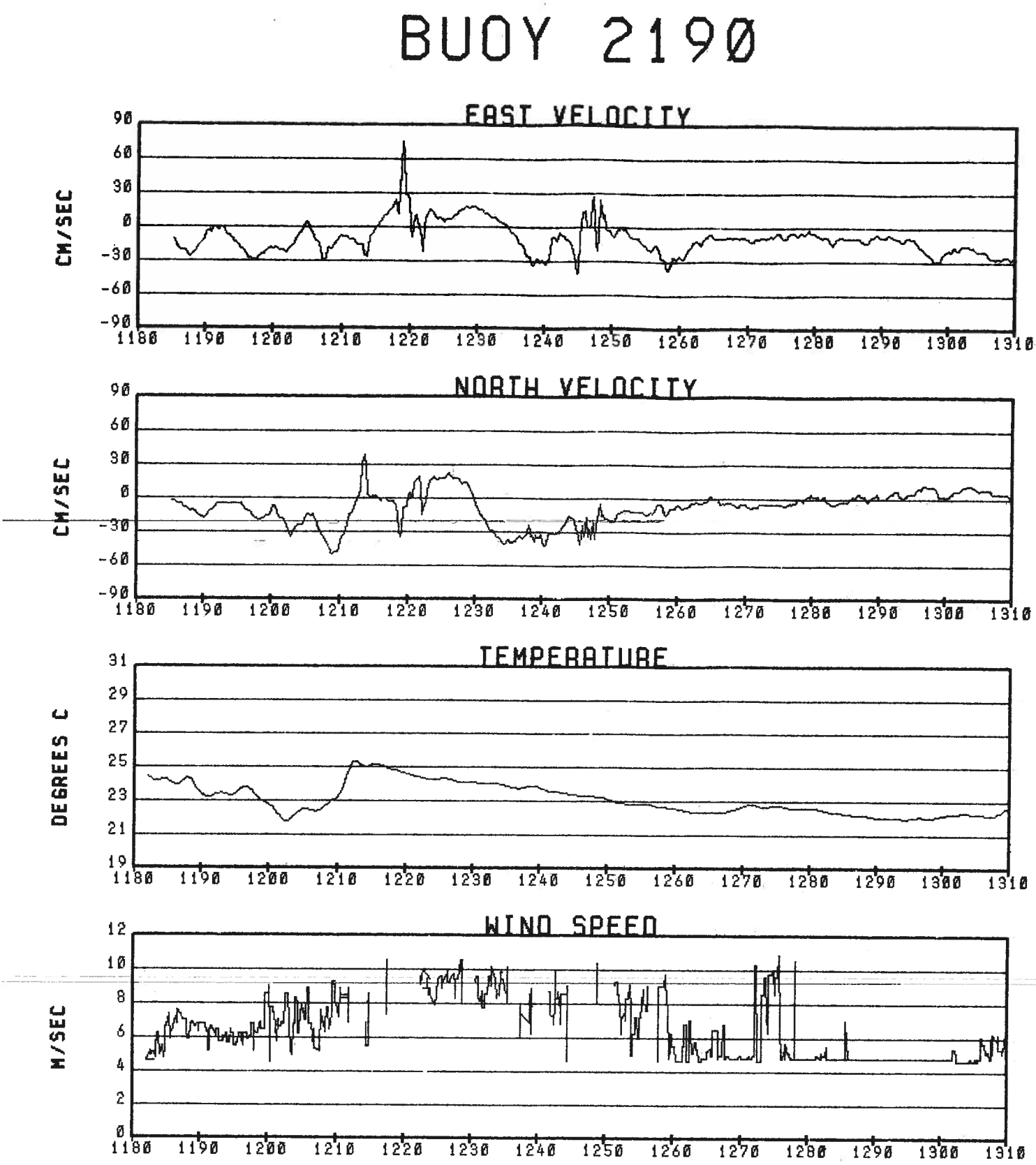


Figure 59. Time series of velocity and sensor data.

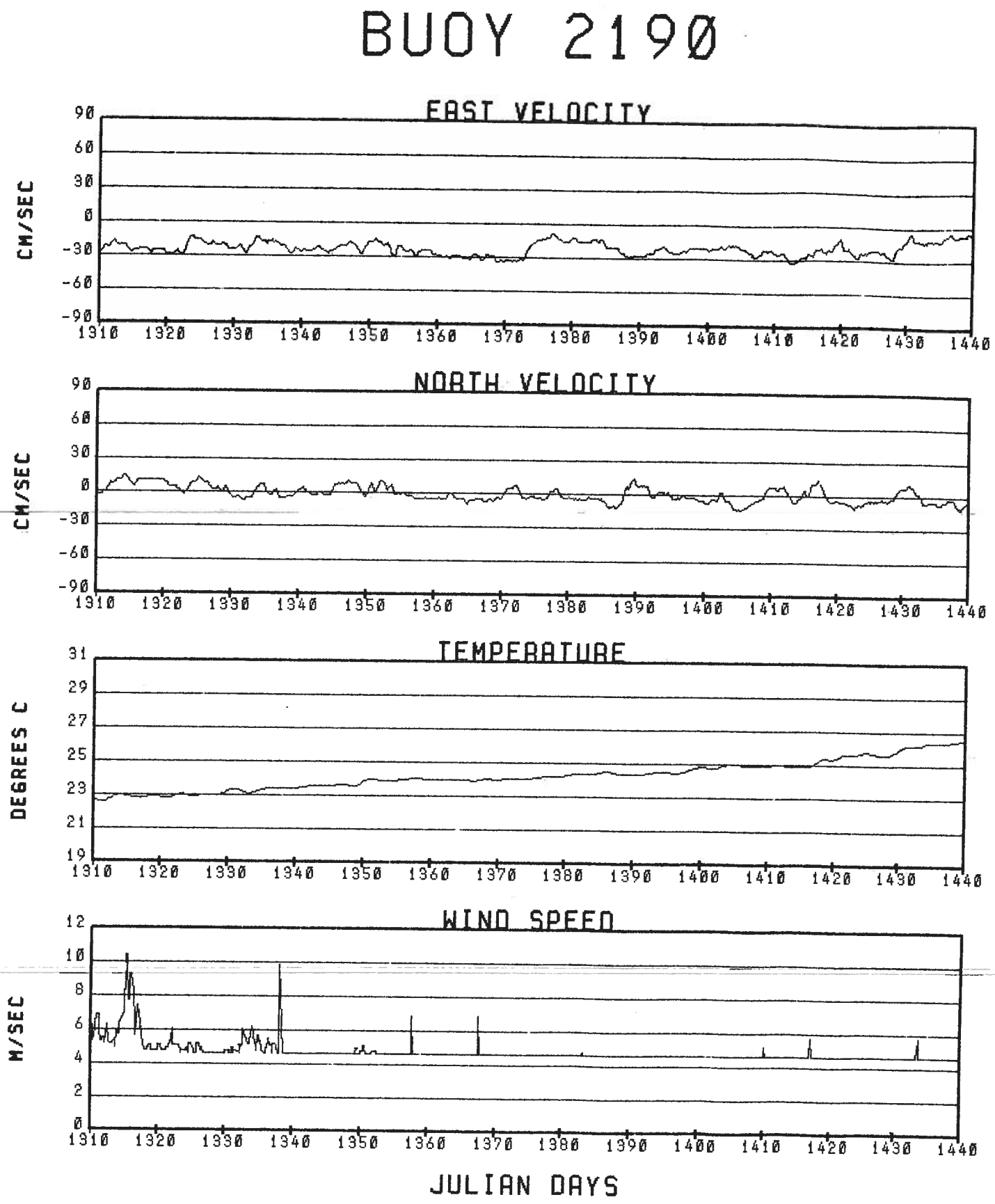


Figure 59. (continued)

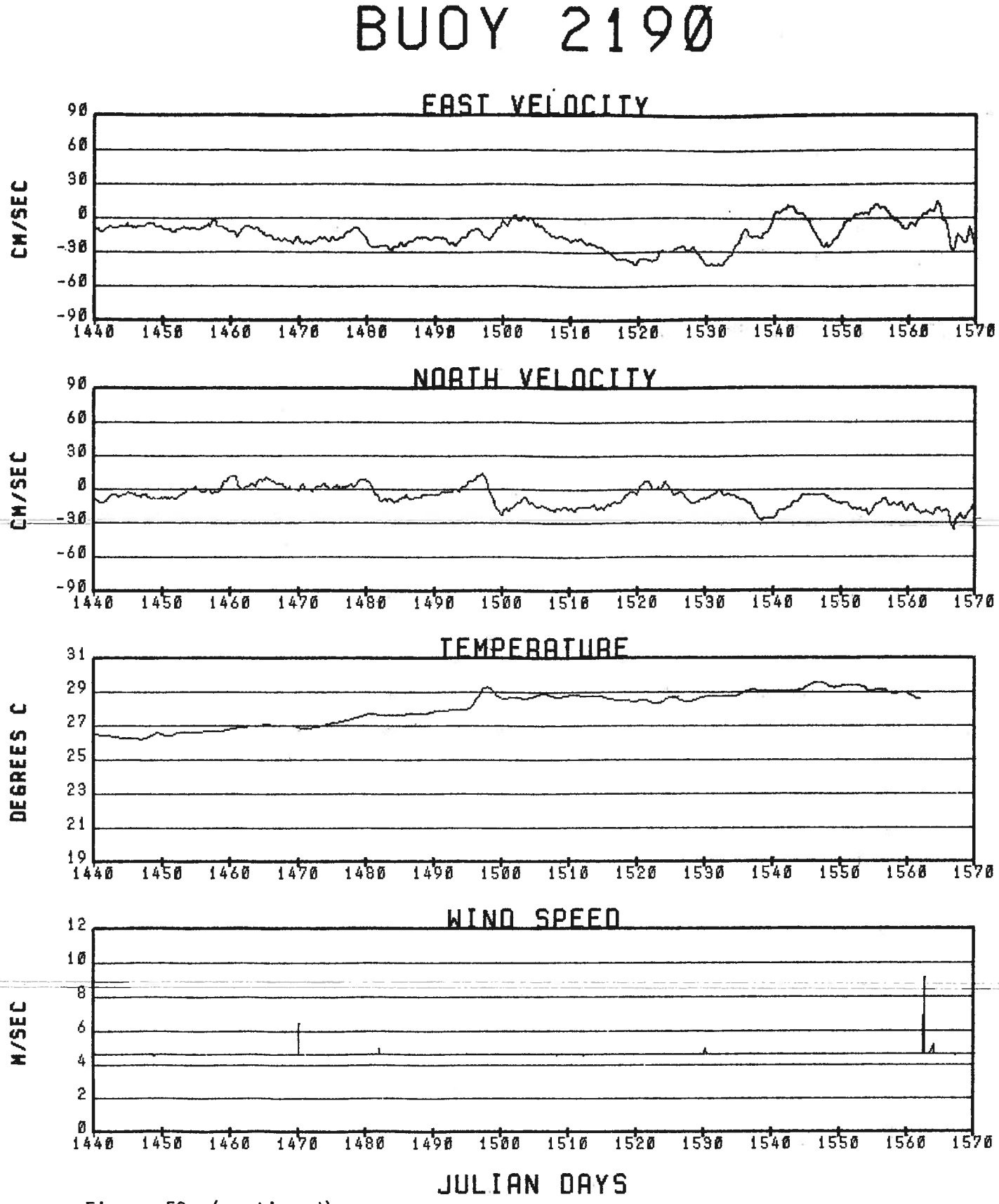


Figure 59. (continued)

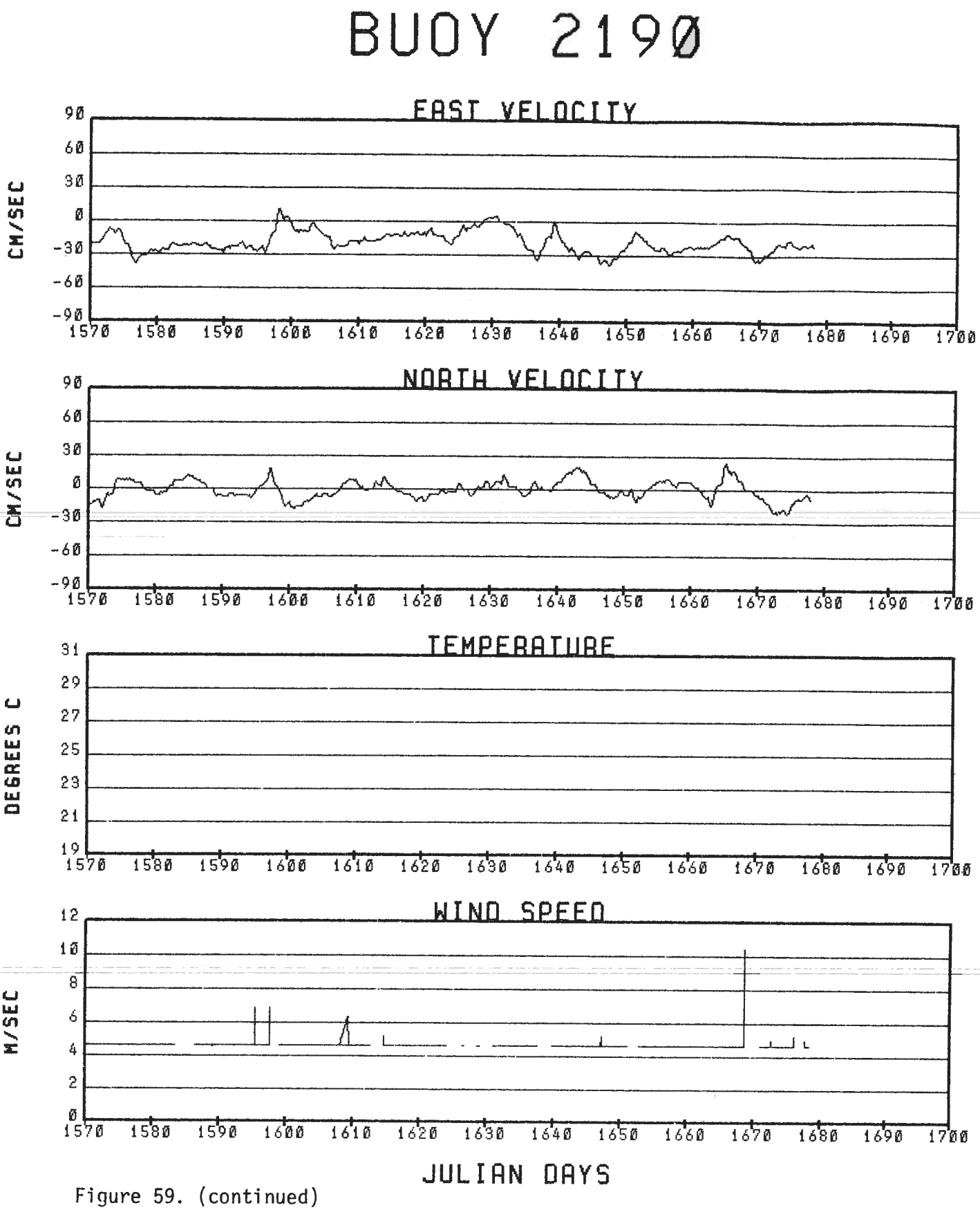


Figure 59. (continued)

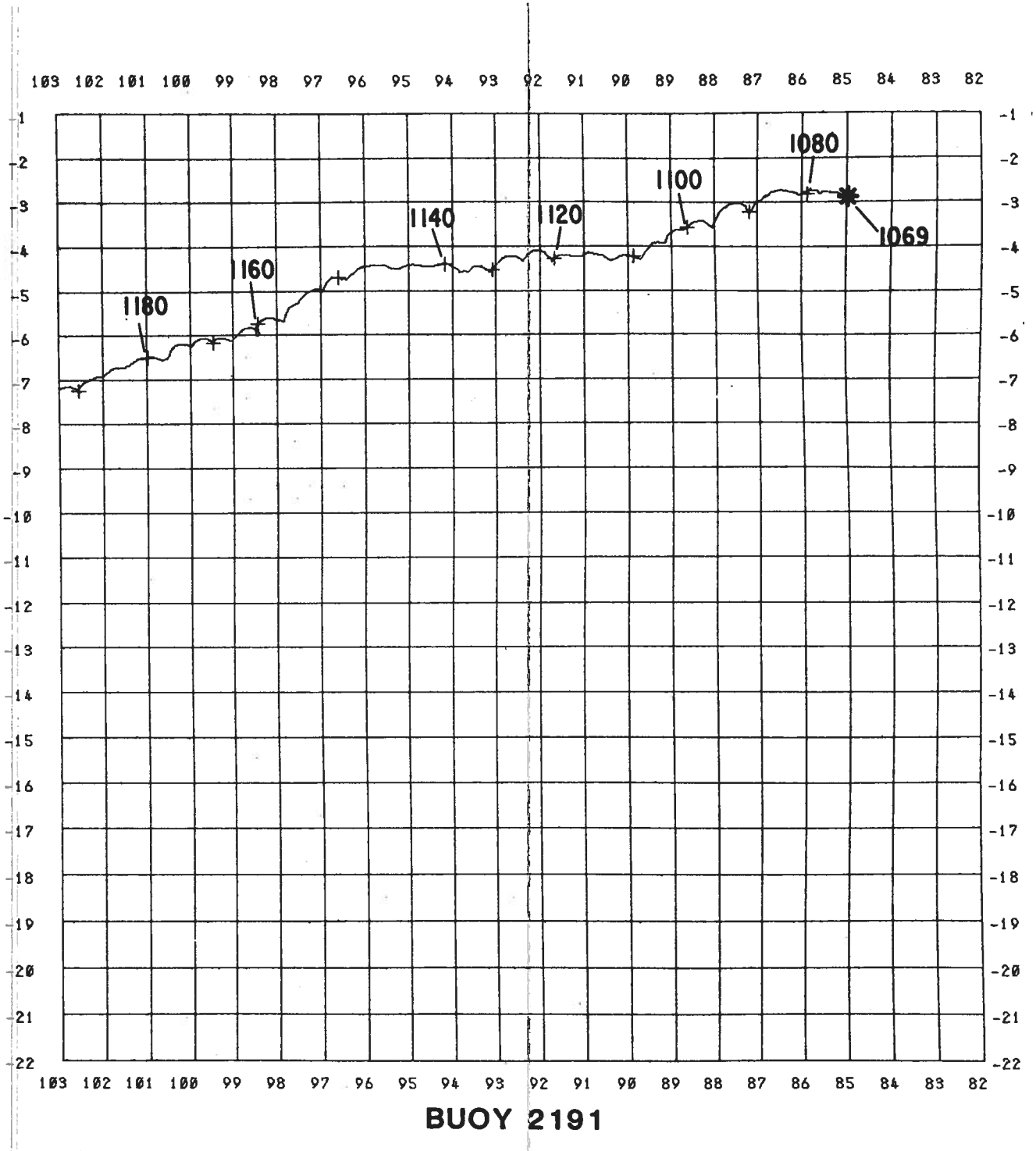


Figure 60. Drifting buoy trajectory.

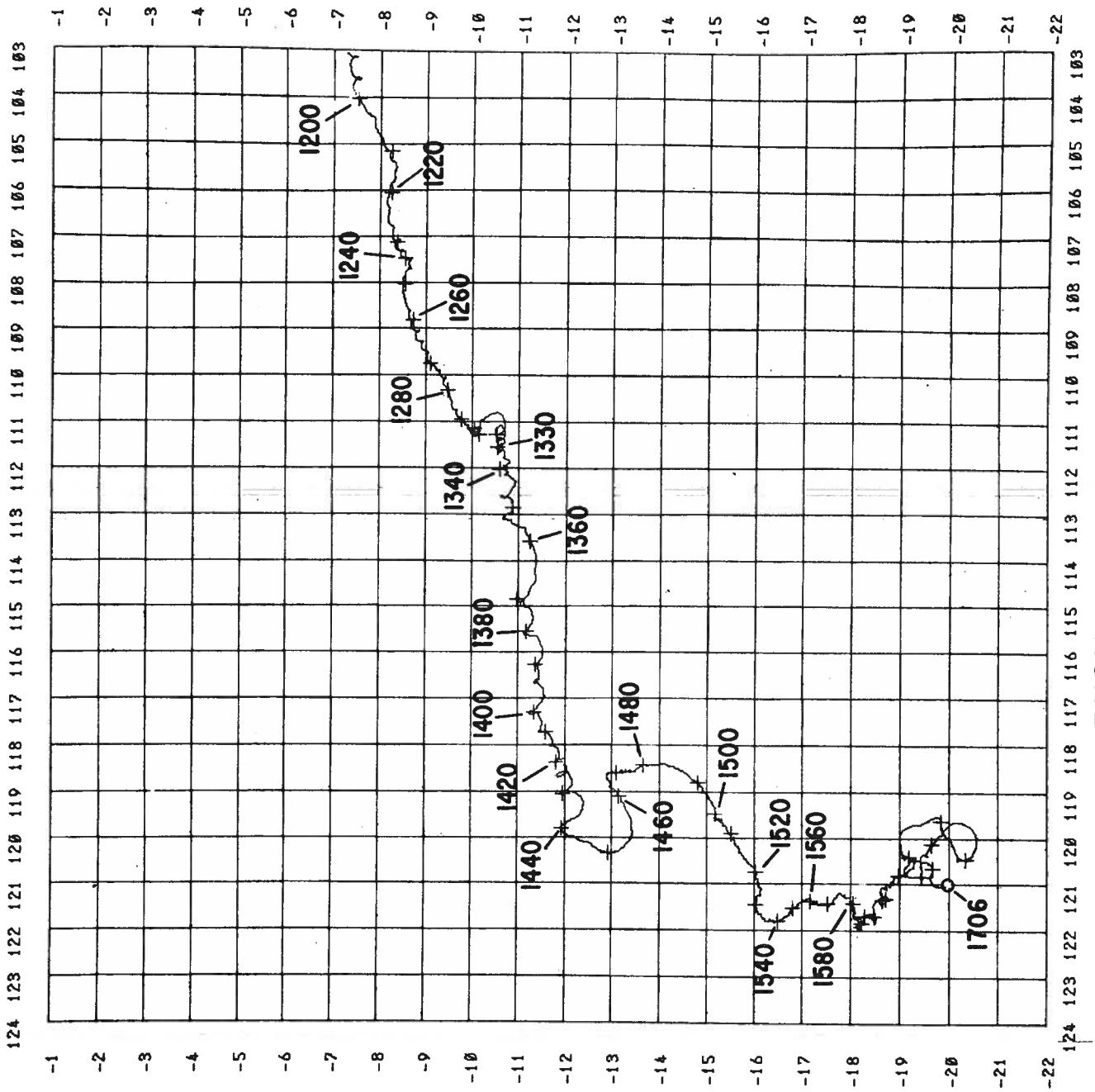


Figure 60. (continued)

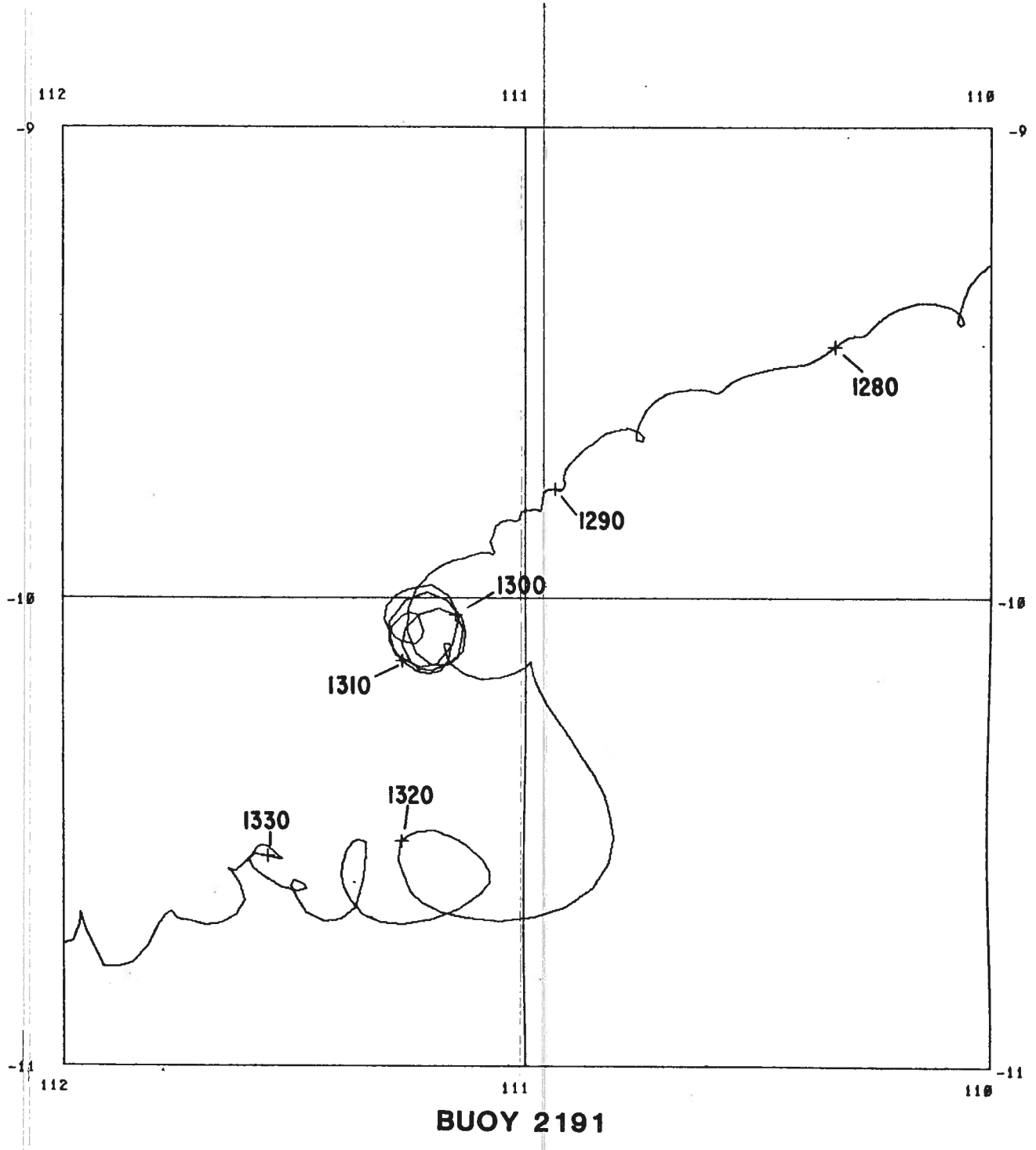


Figure 61. Drifting buoy trajectory detail.

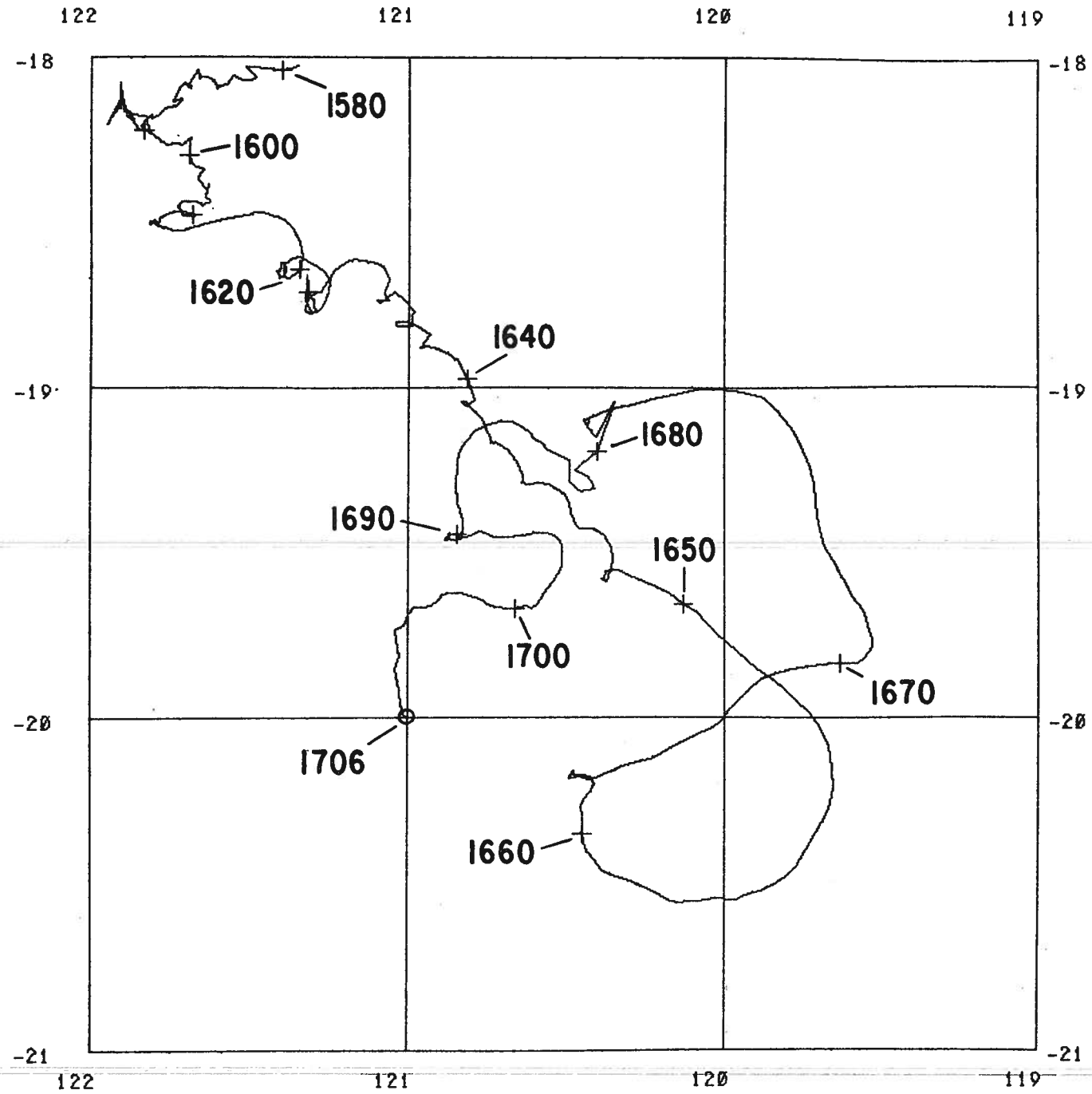


Figure 62. Drifting buoy trajectory detail.

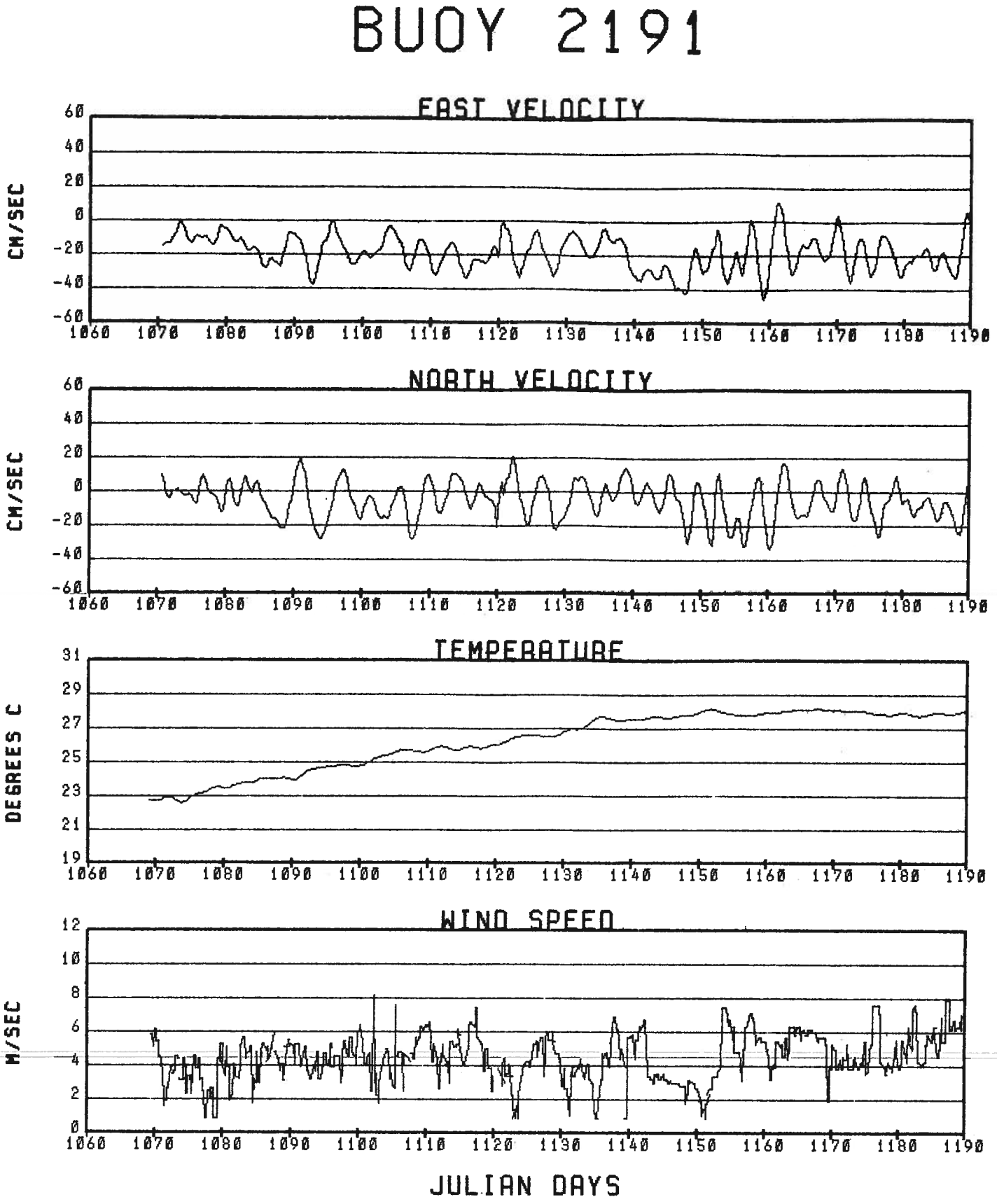


Figure 63. Time series of velocity and sensor data.

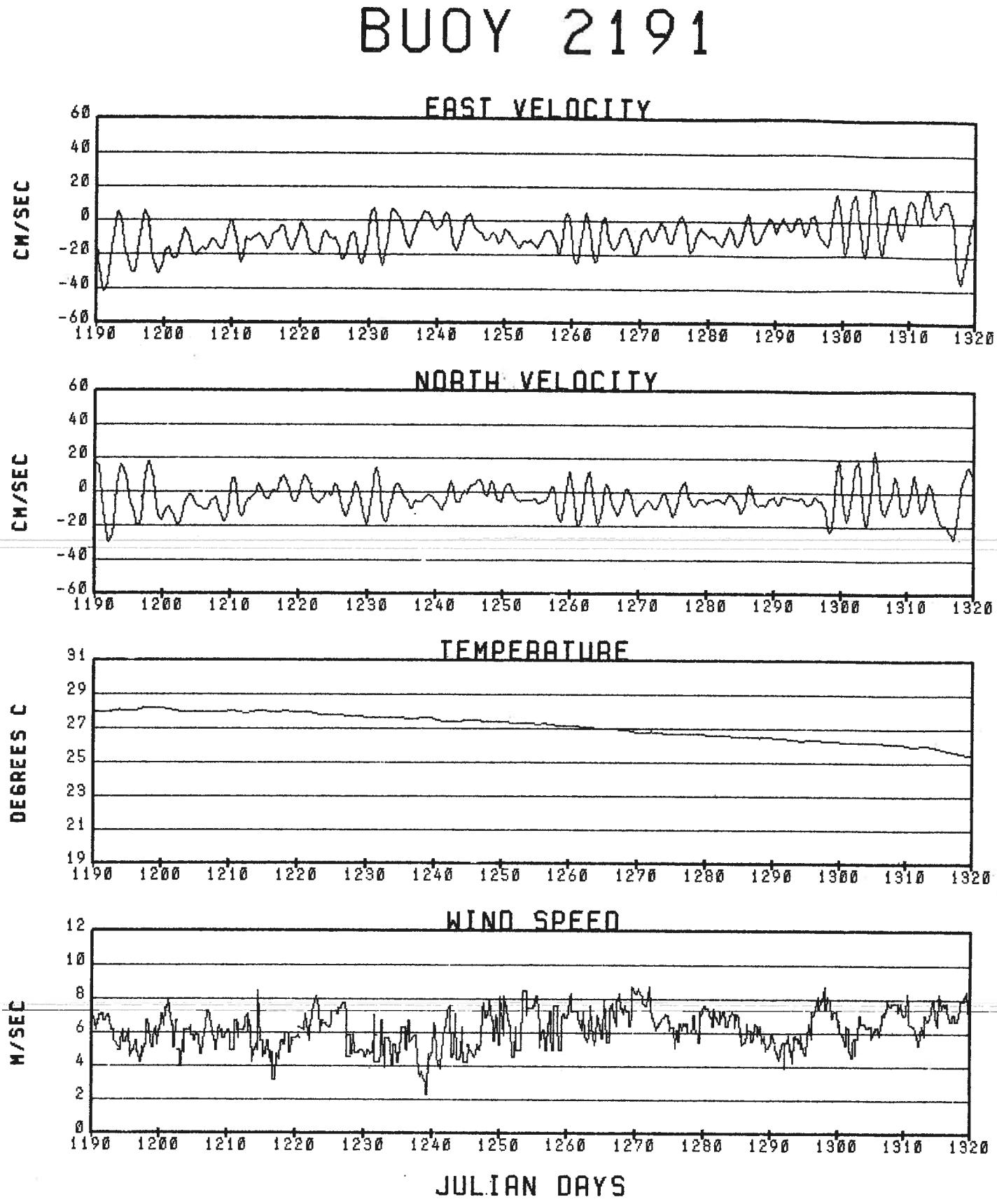


Figure 63. (continued)

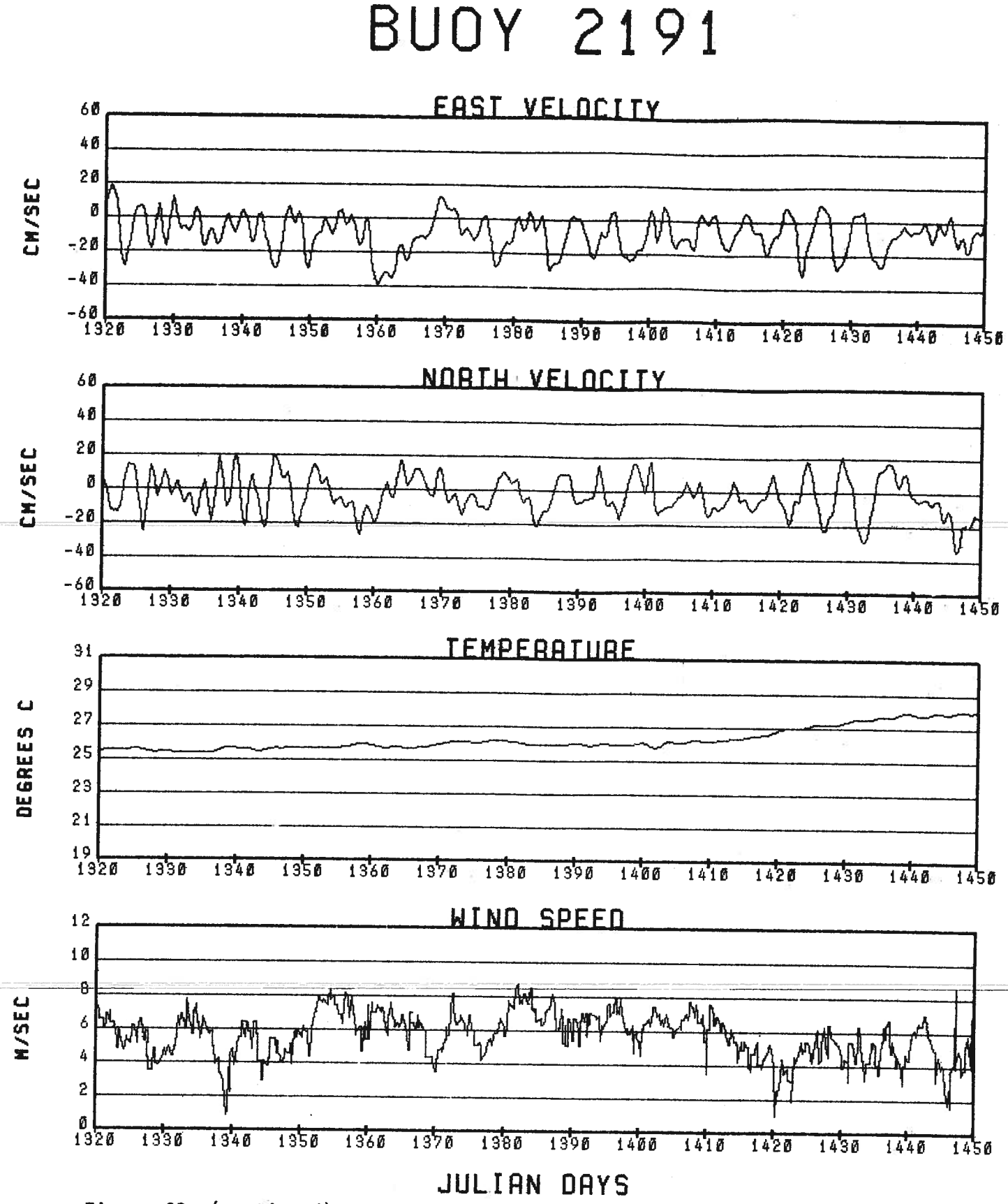


Figure 63. (continued)

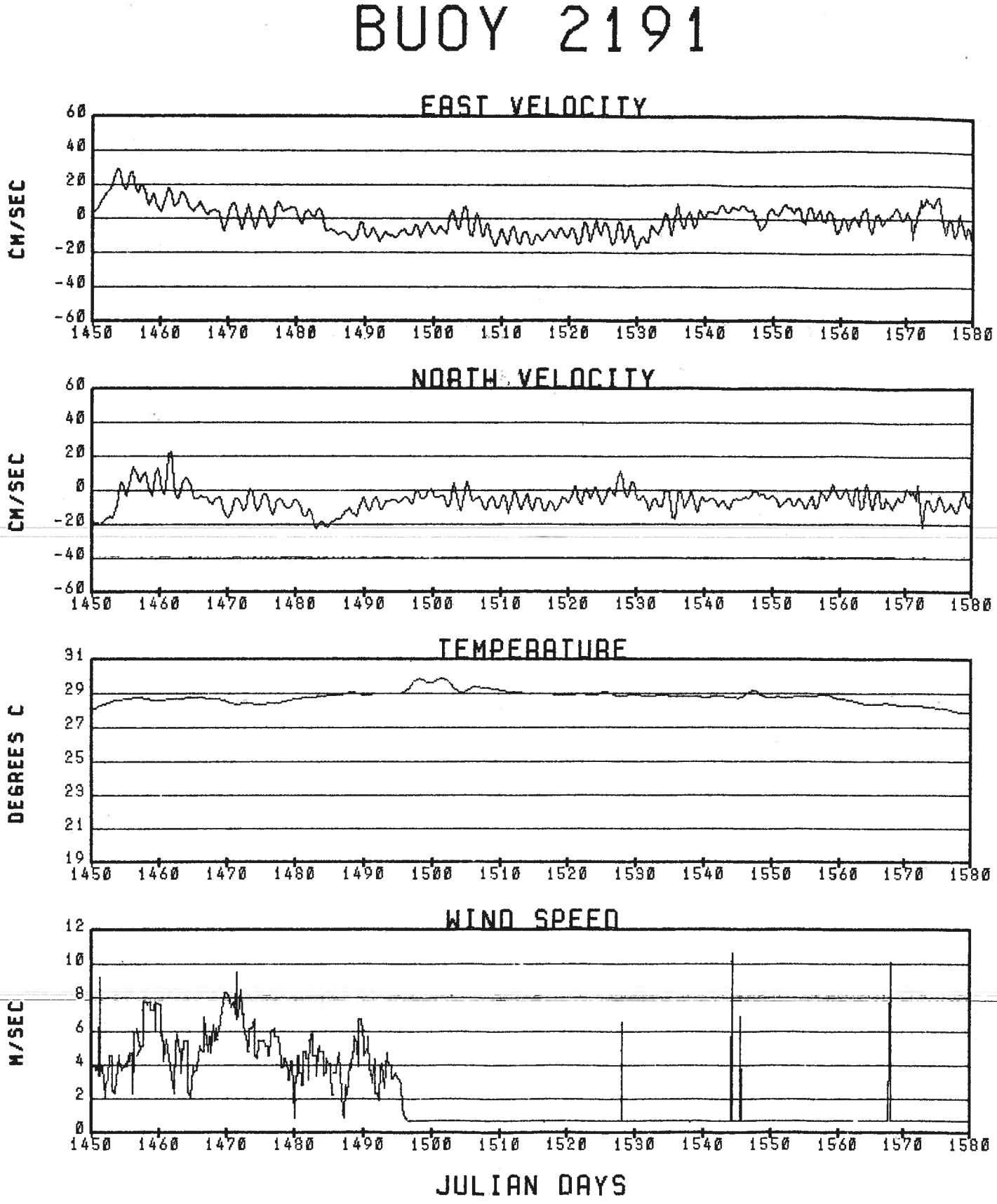


Figure 63. (continued)

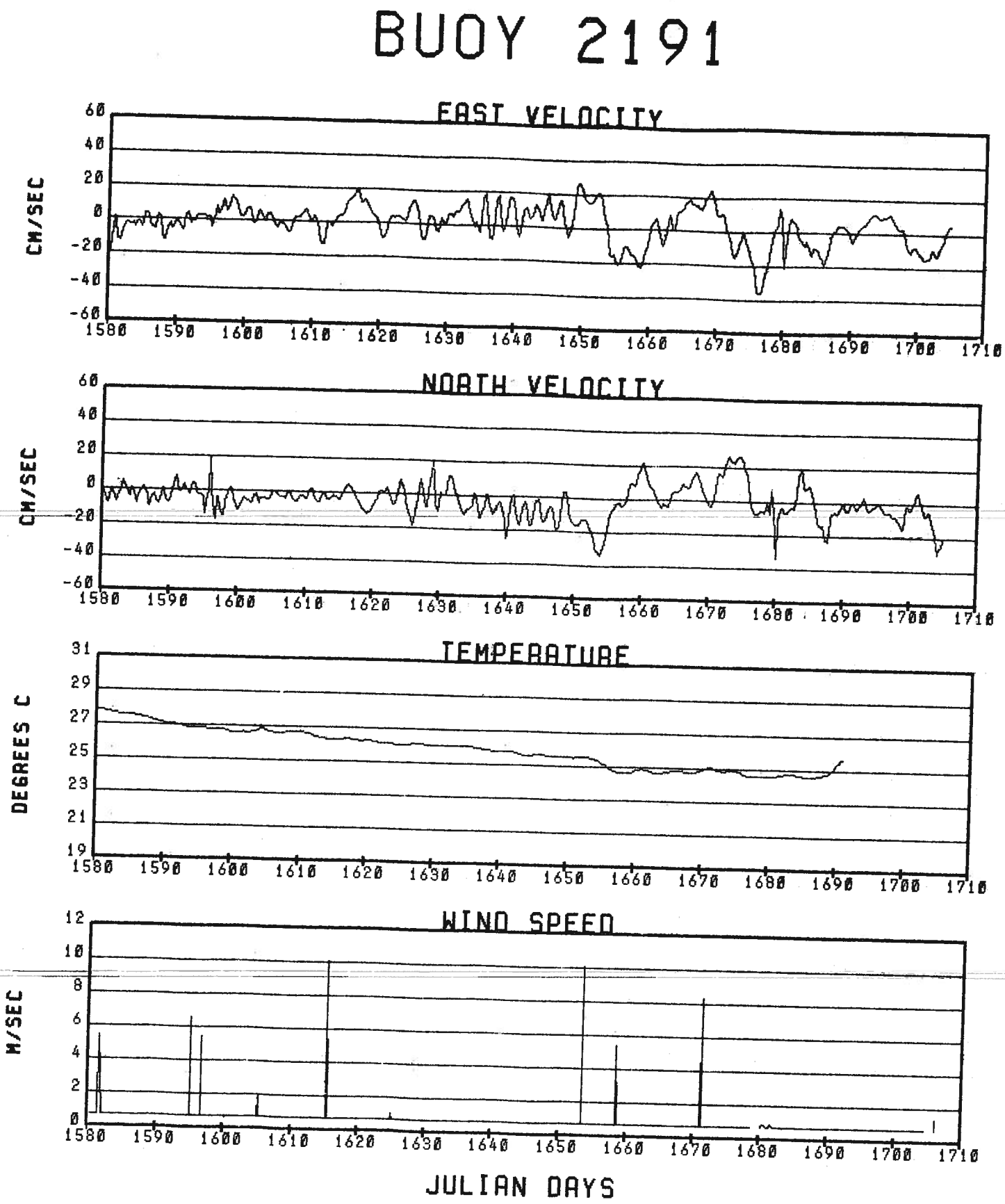


Figure 63. (continued)

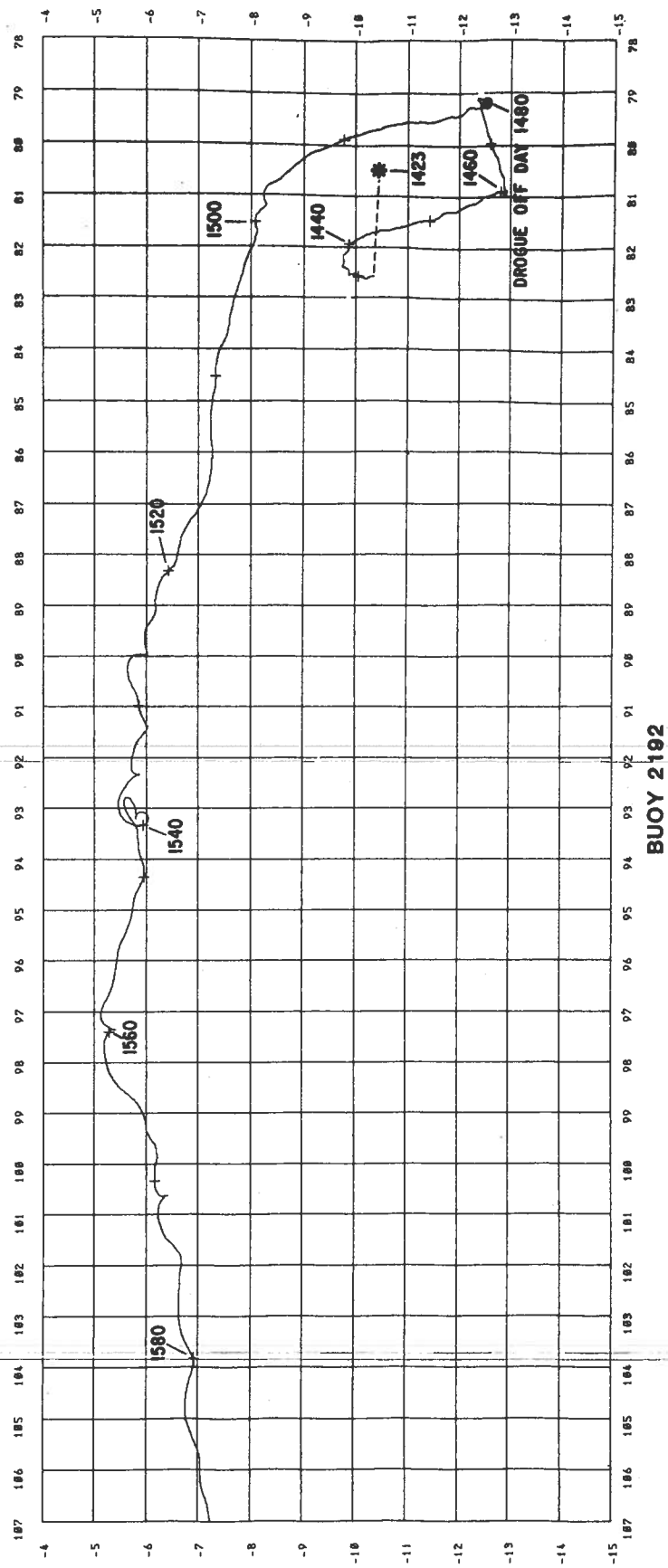


Figure 64. Drifting buoy trajectory.

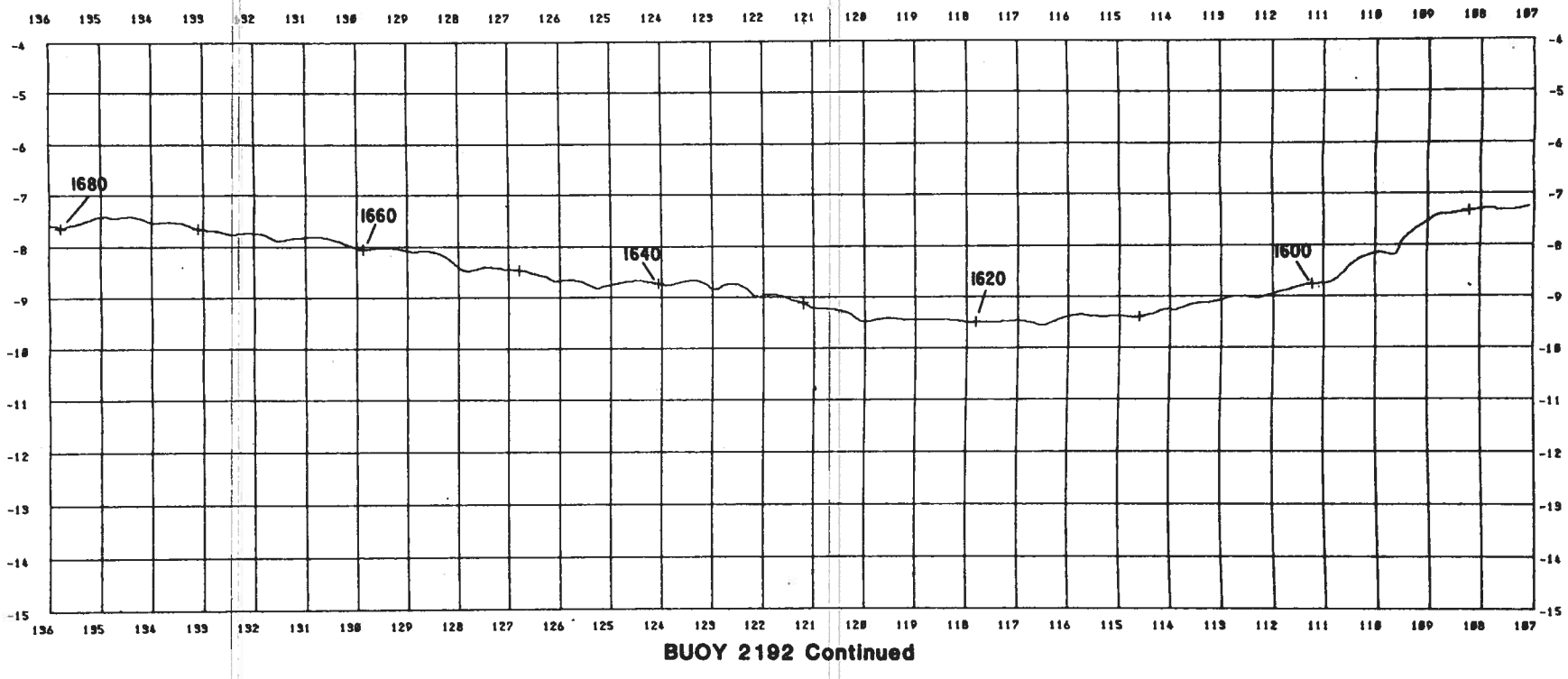


Figure 64. (continued)

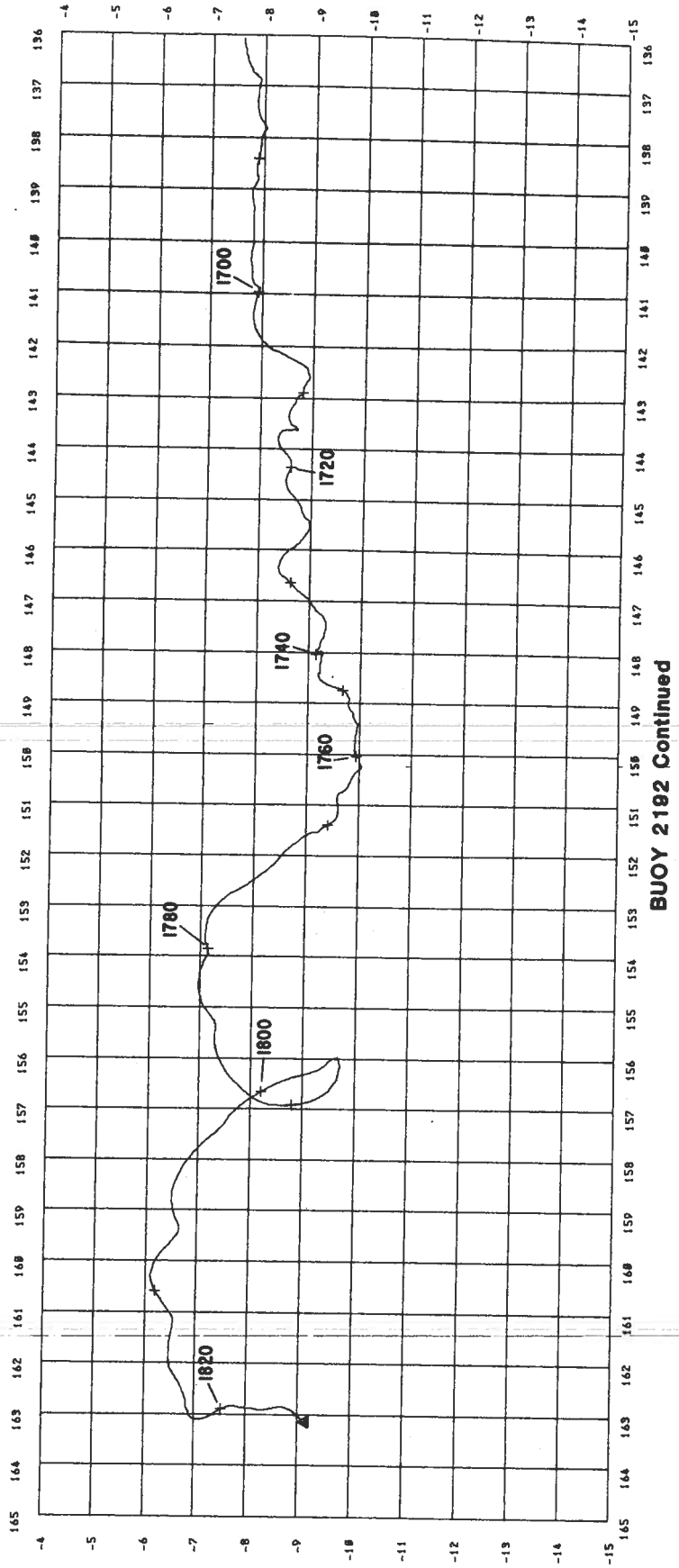


Figure 64. (continued)

BUOY 2192

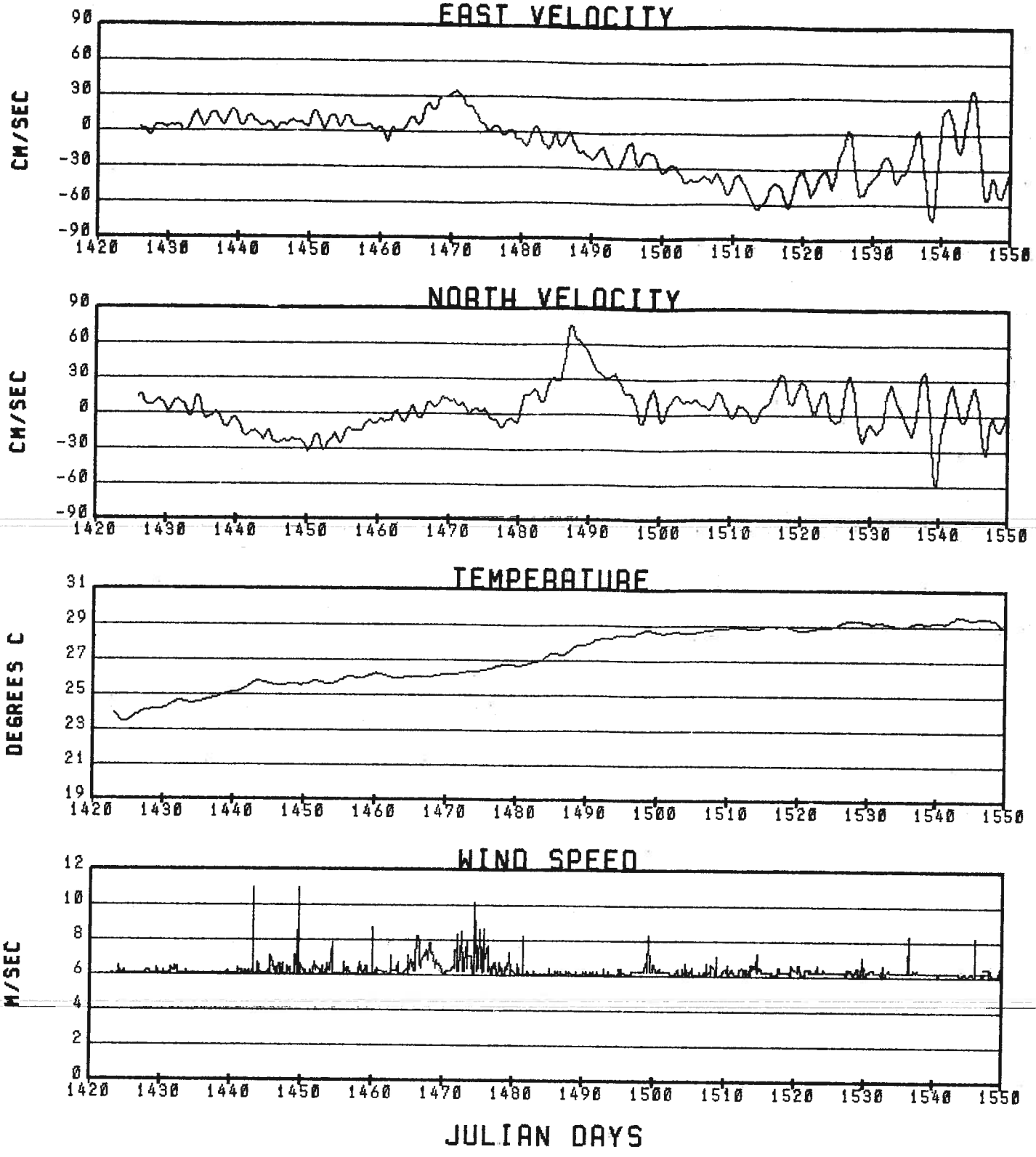


Figure 65. Time series of velocity and sensor data.

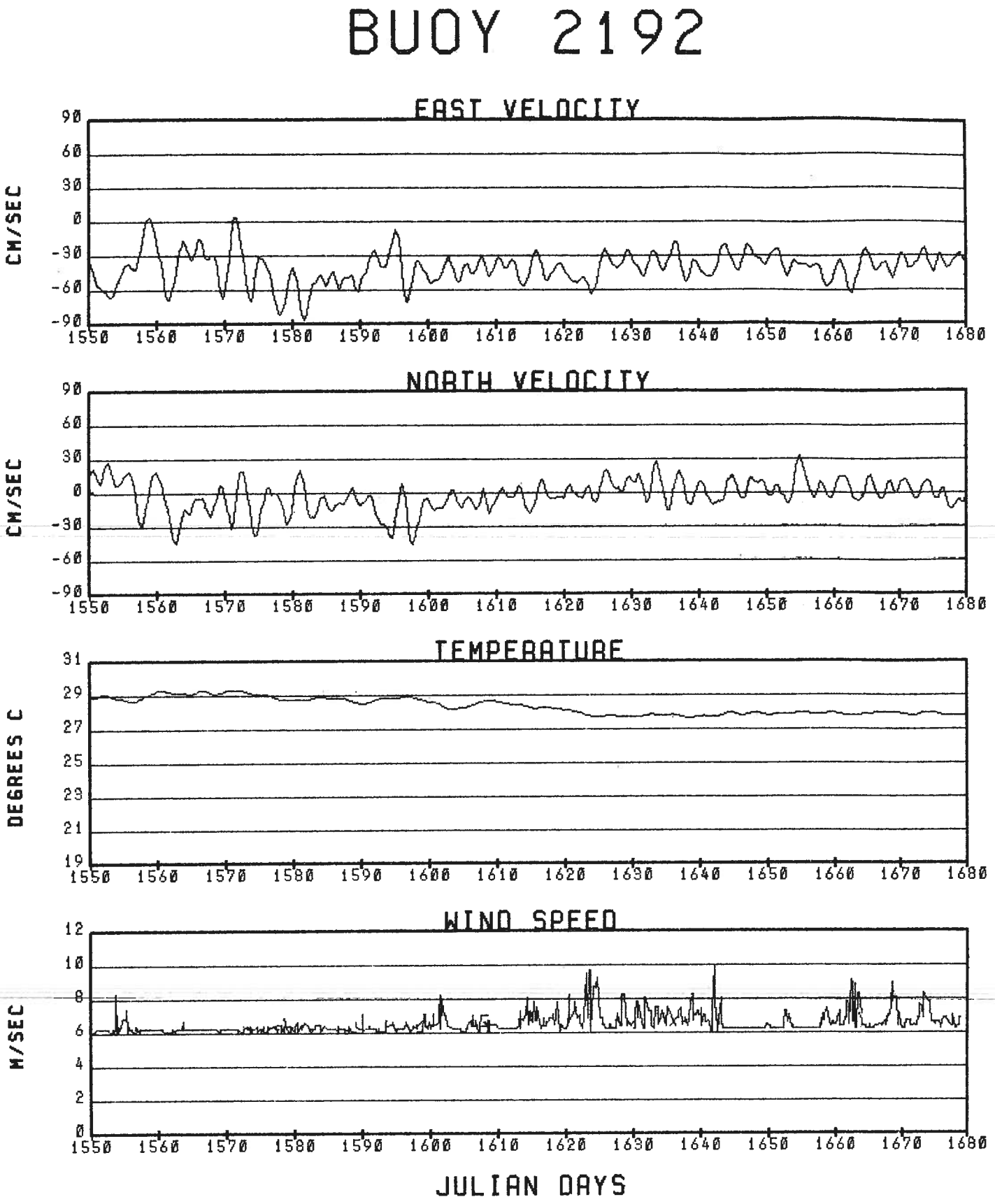


Figure 65. (continued)

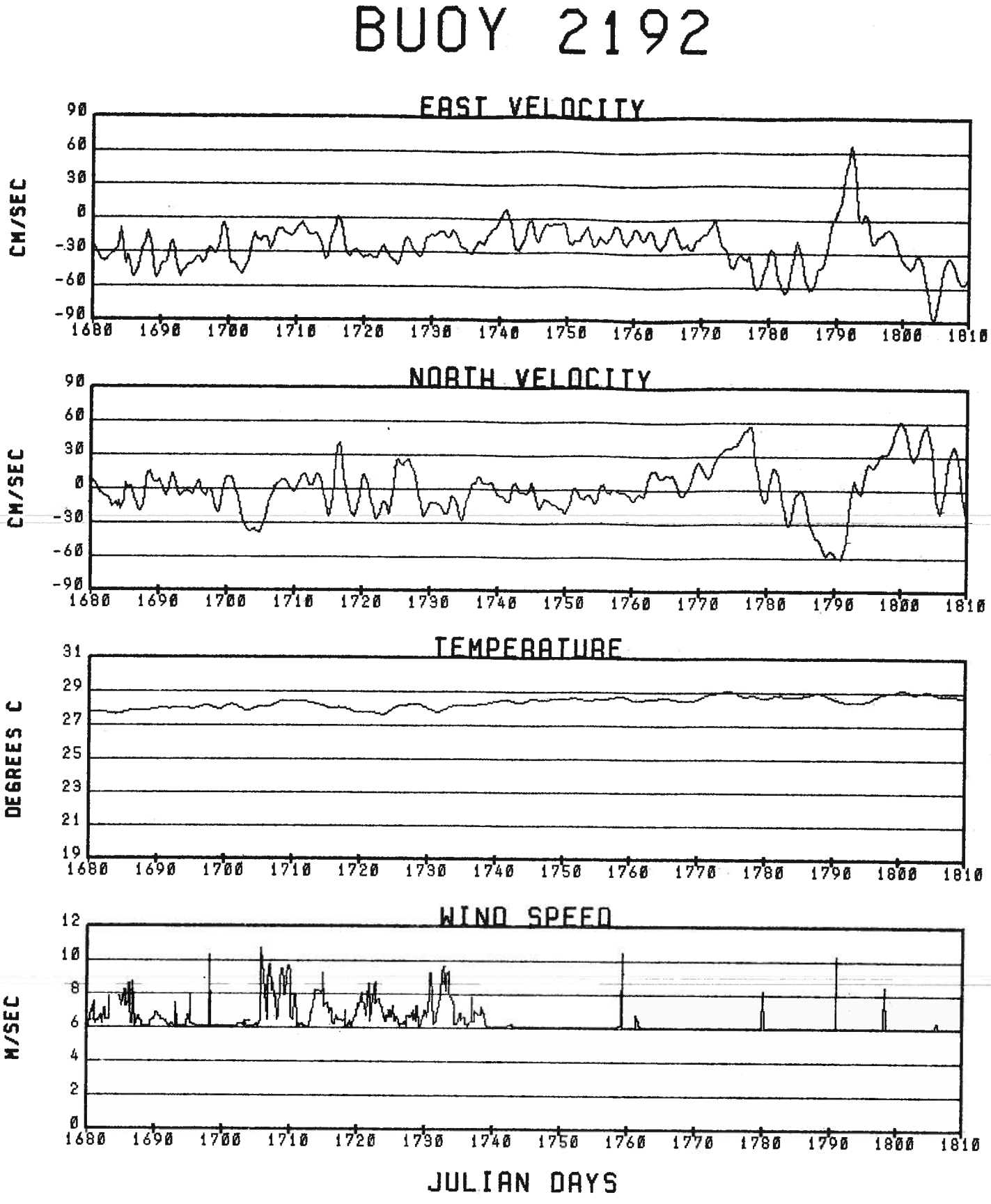


Figure 65. (continued)

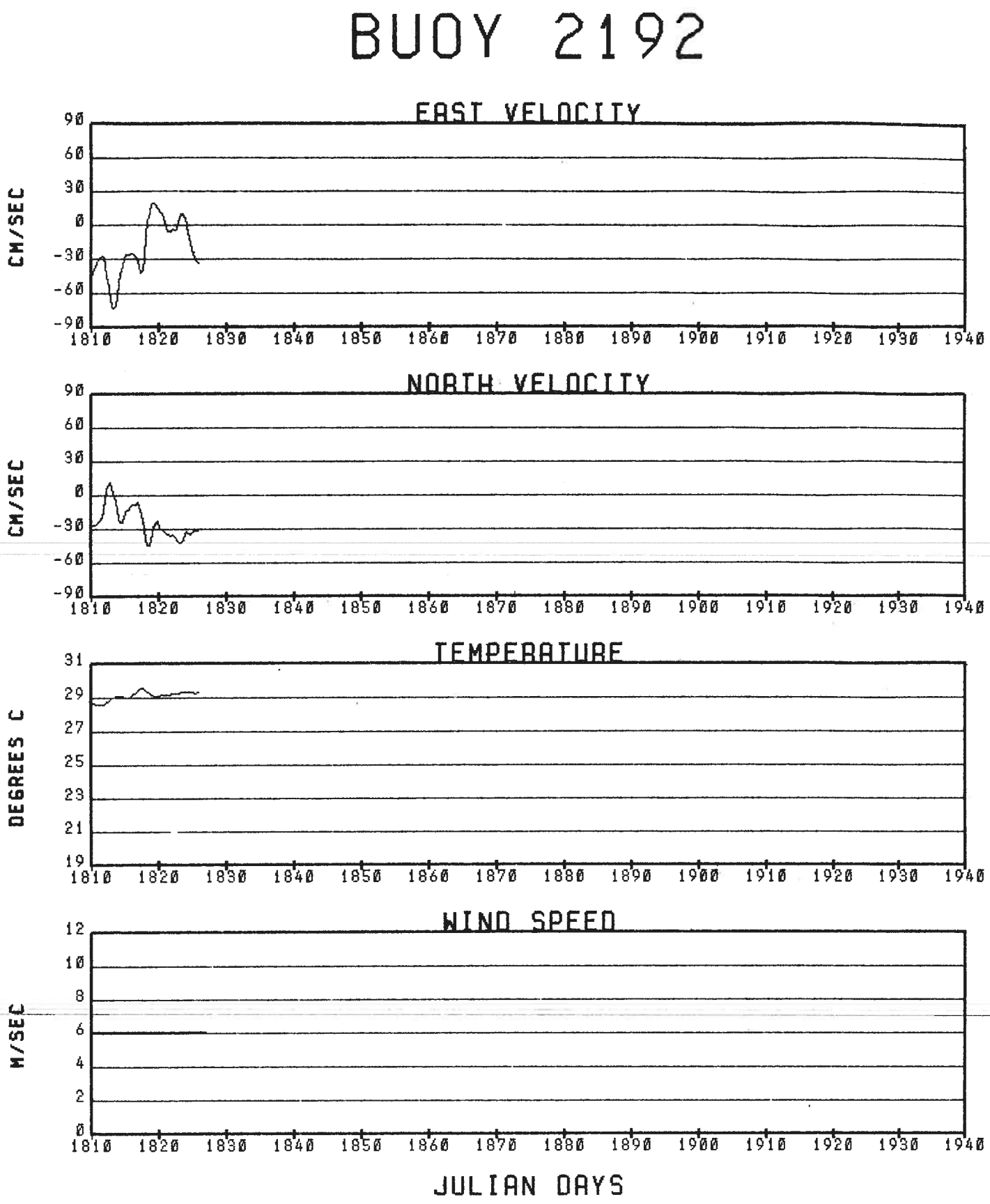


Figure 65. (continued)

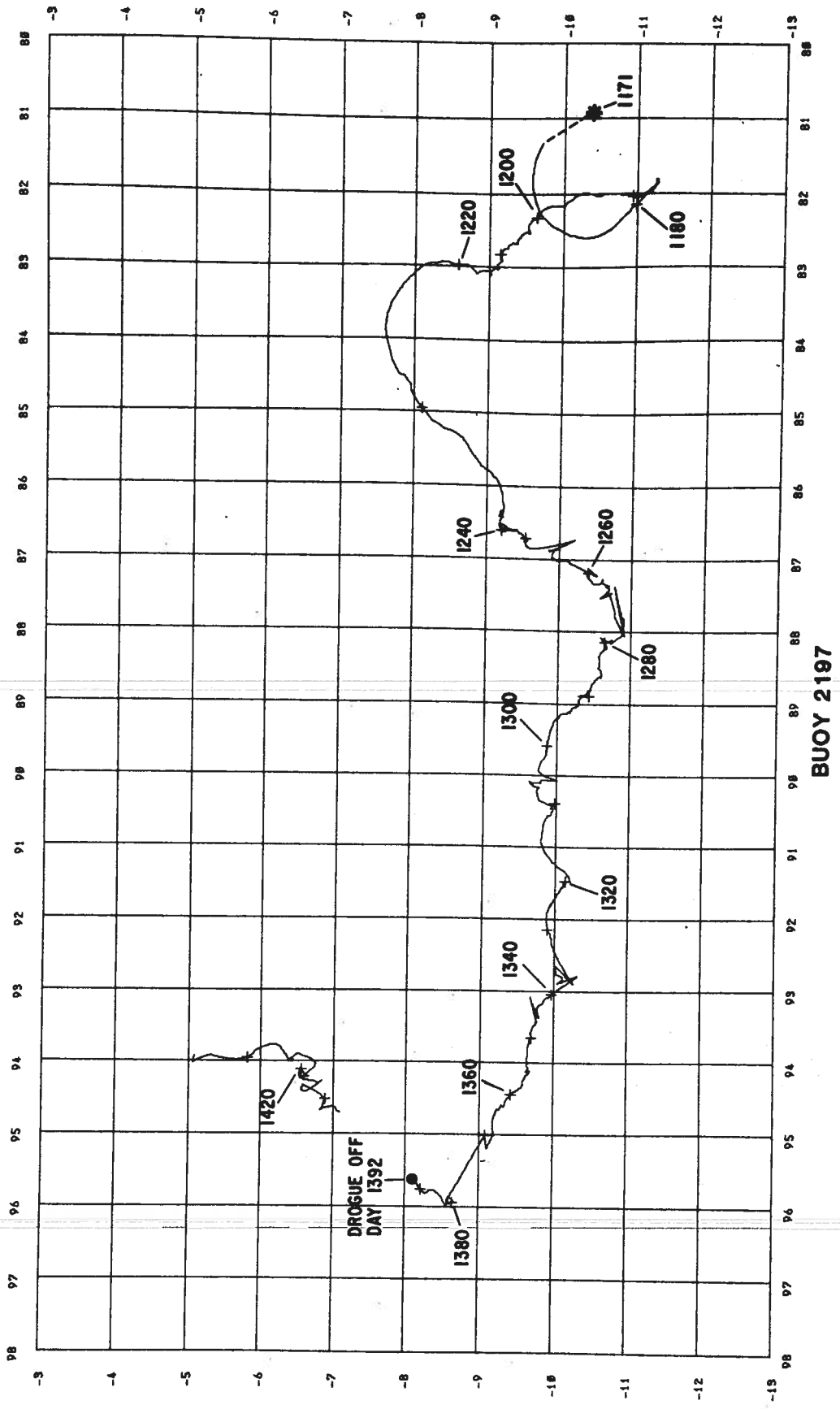


Figure 66. Drifting buoy trajectory.

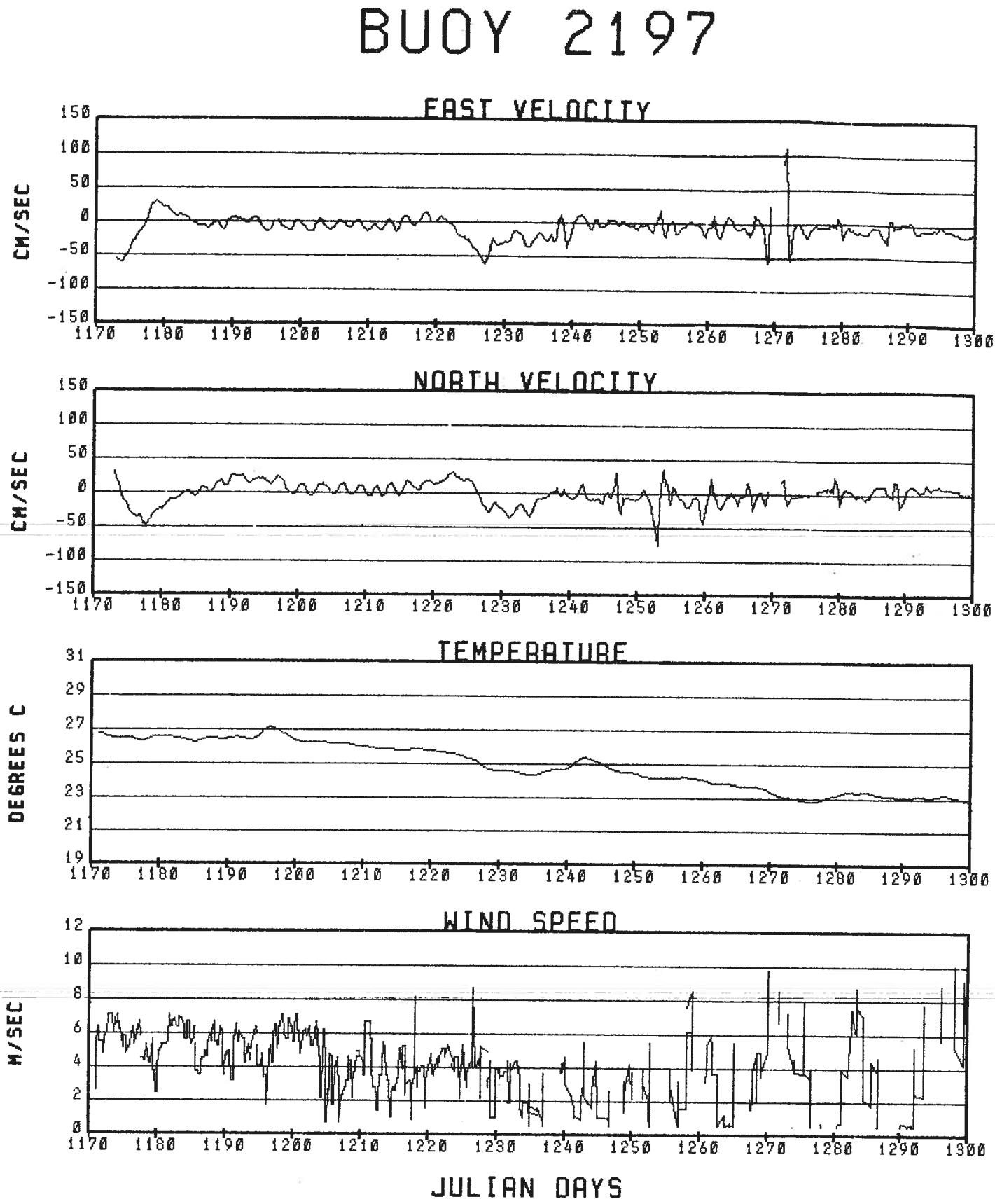


Figure 67. Time series of velocity and sensor data.

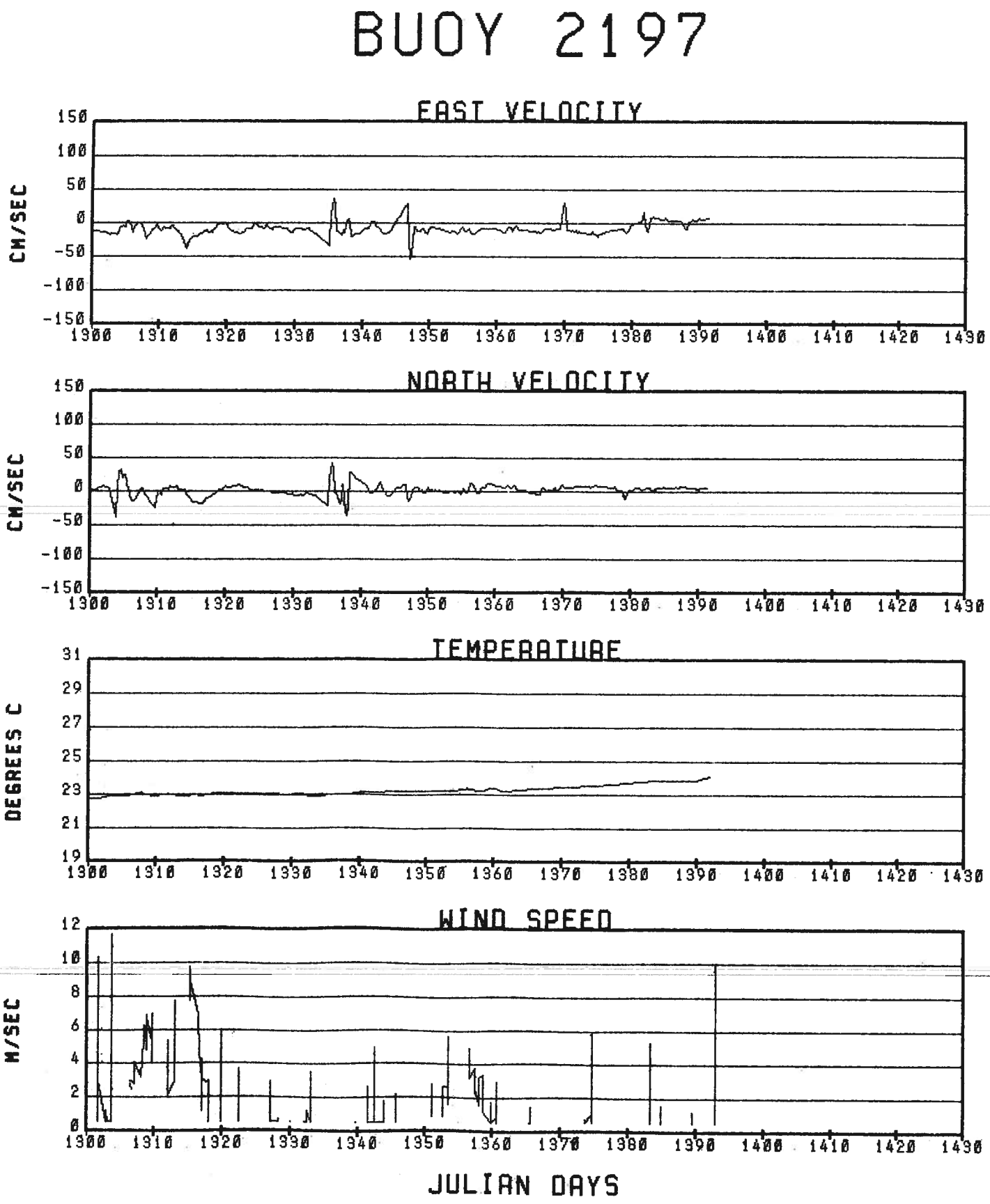


Figure 67. (continued)

BUOY 2197

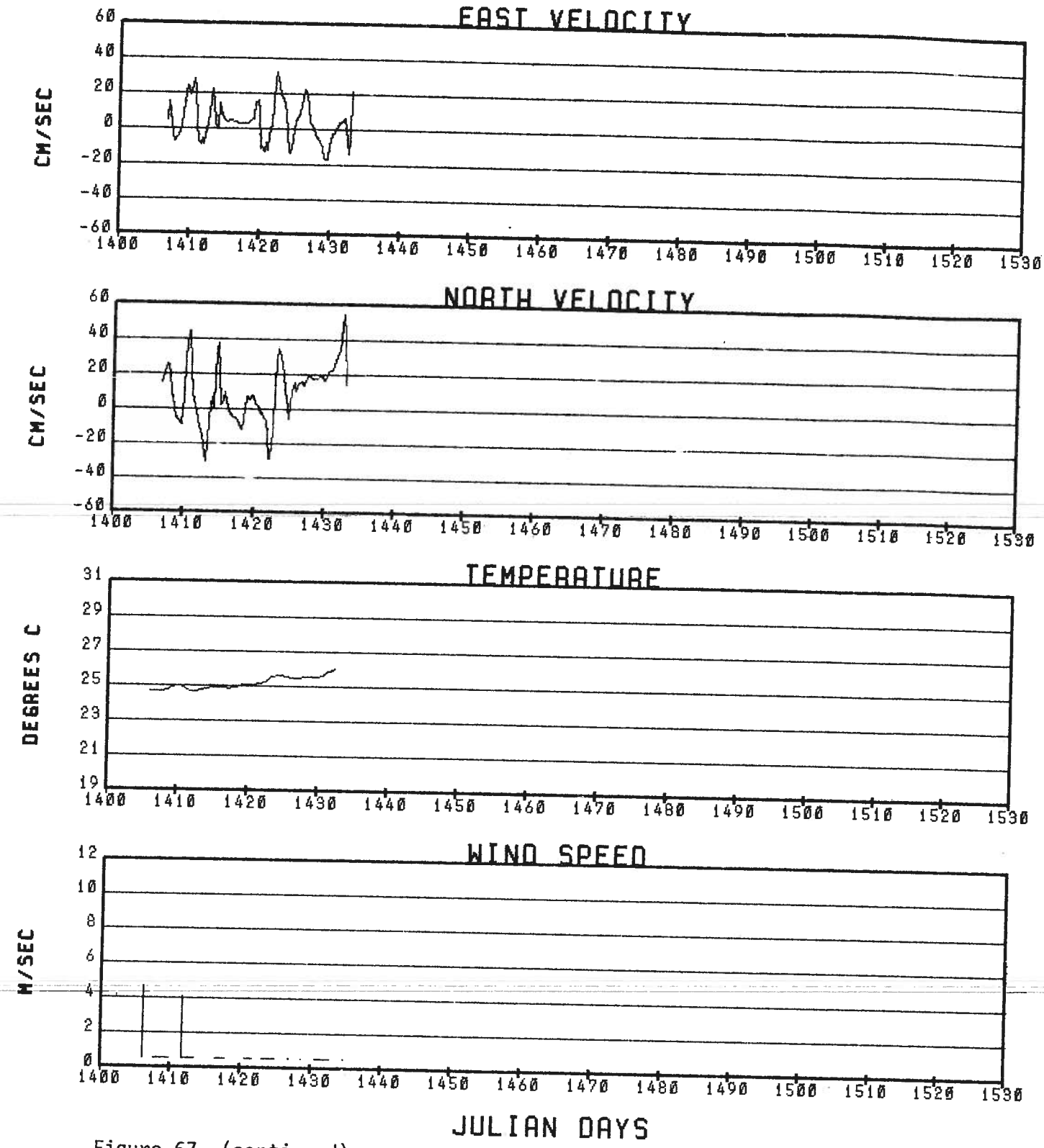


Figure 67. (continued)

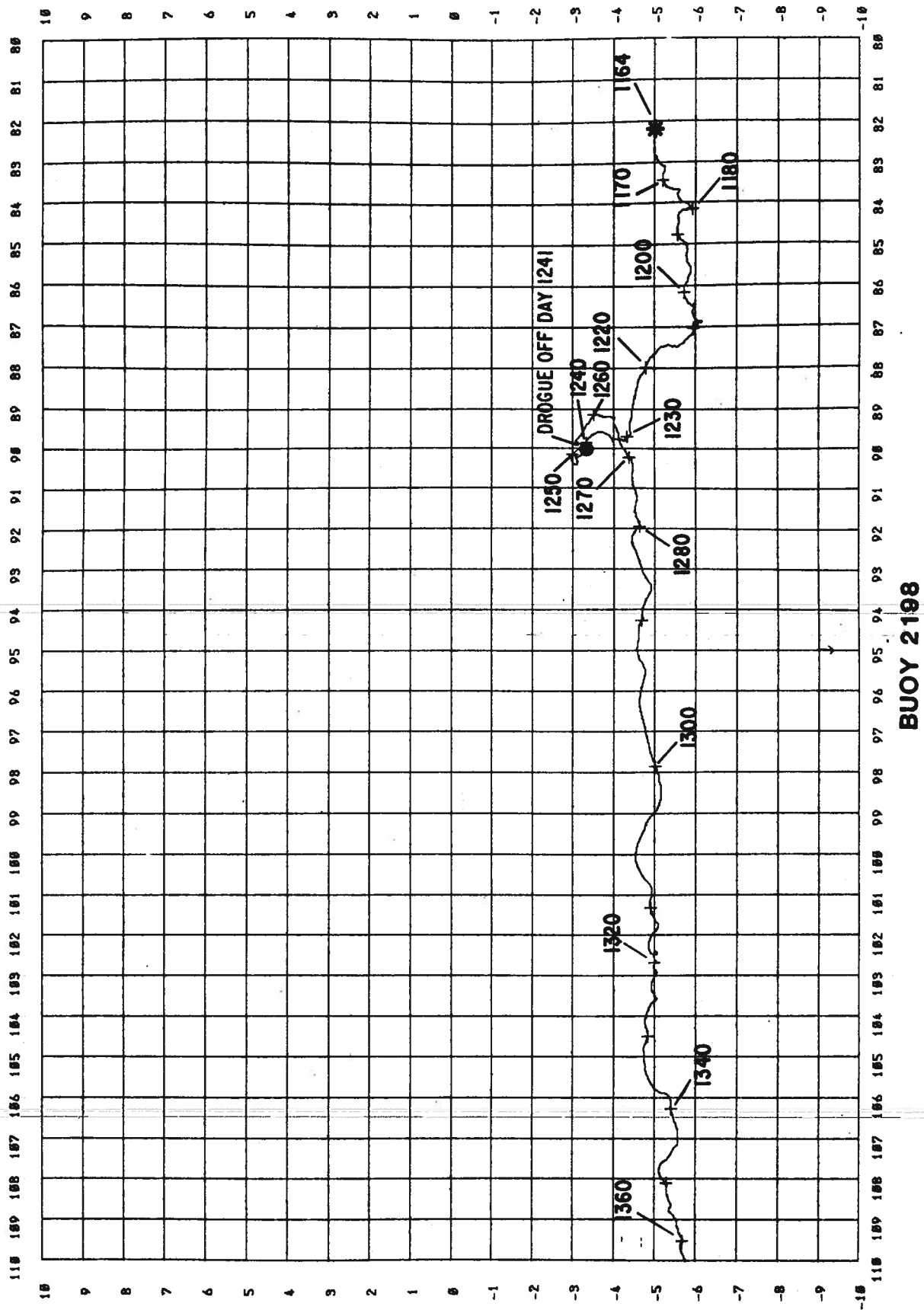


Figure 68. Drifting buoy trajectory.

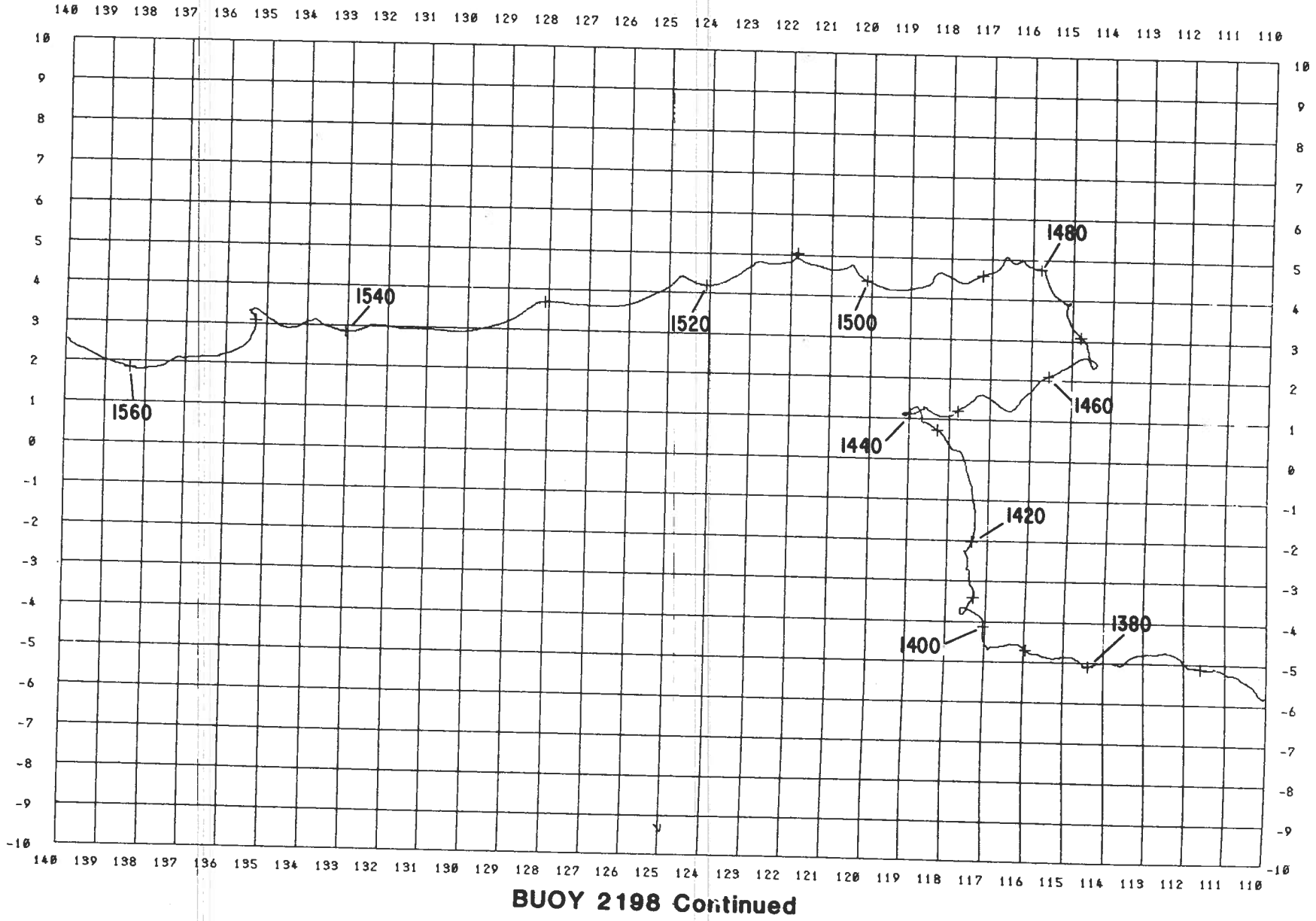


Figure 68. (continued)

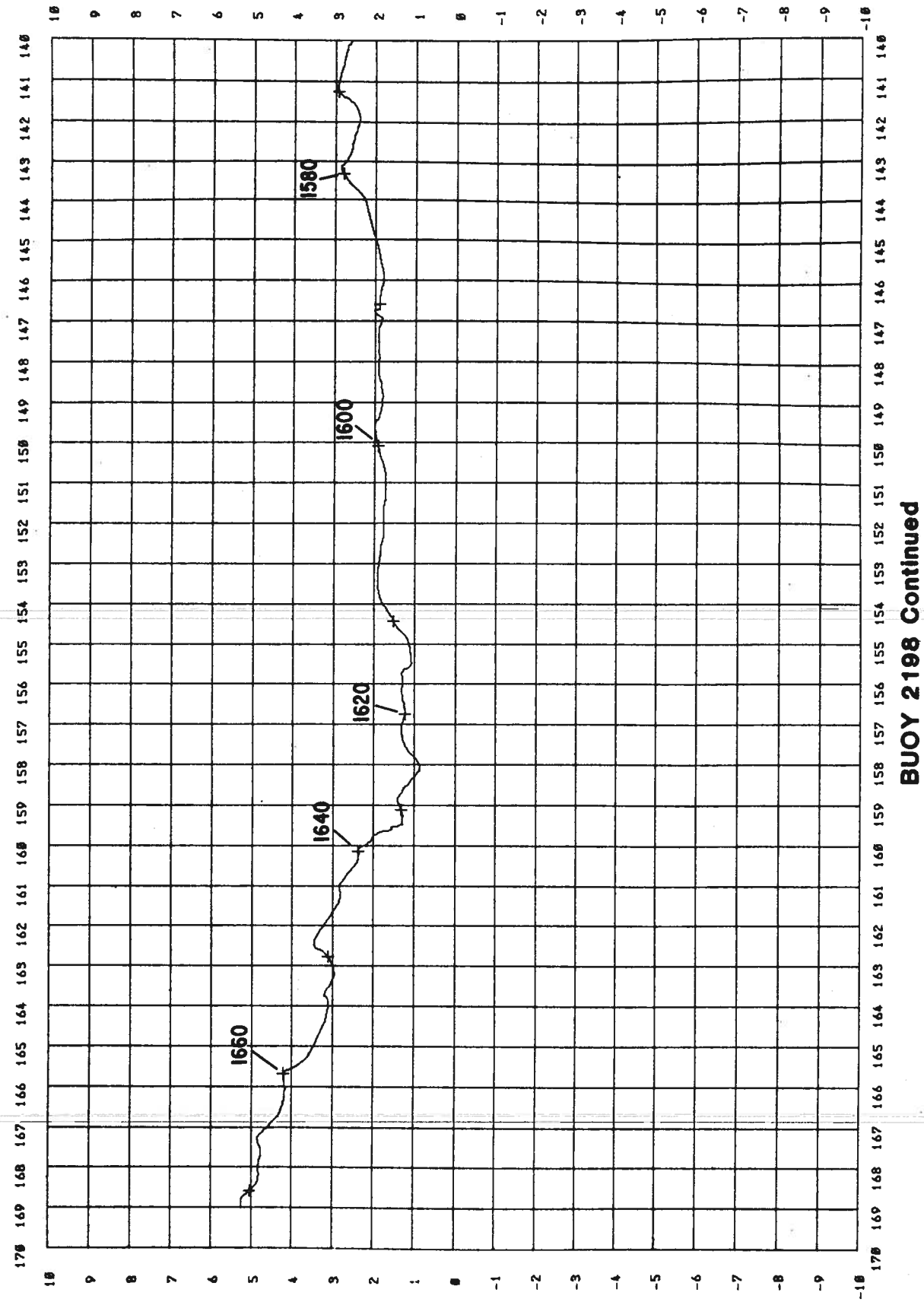


Figure 68. (continued)

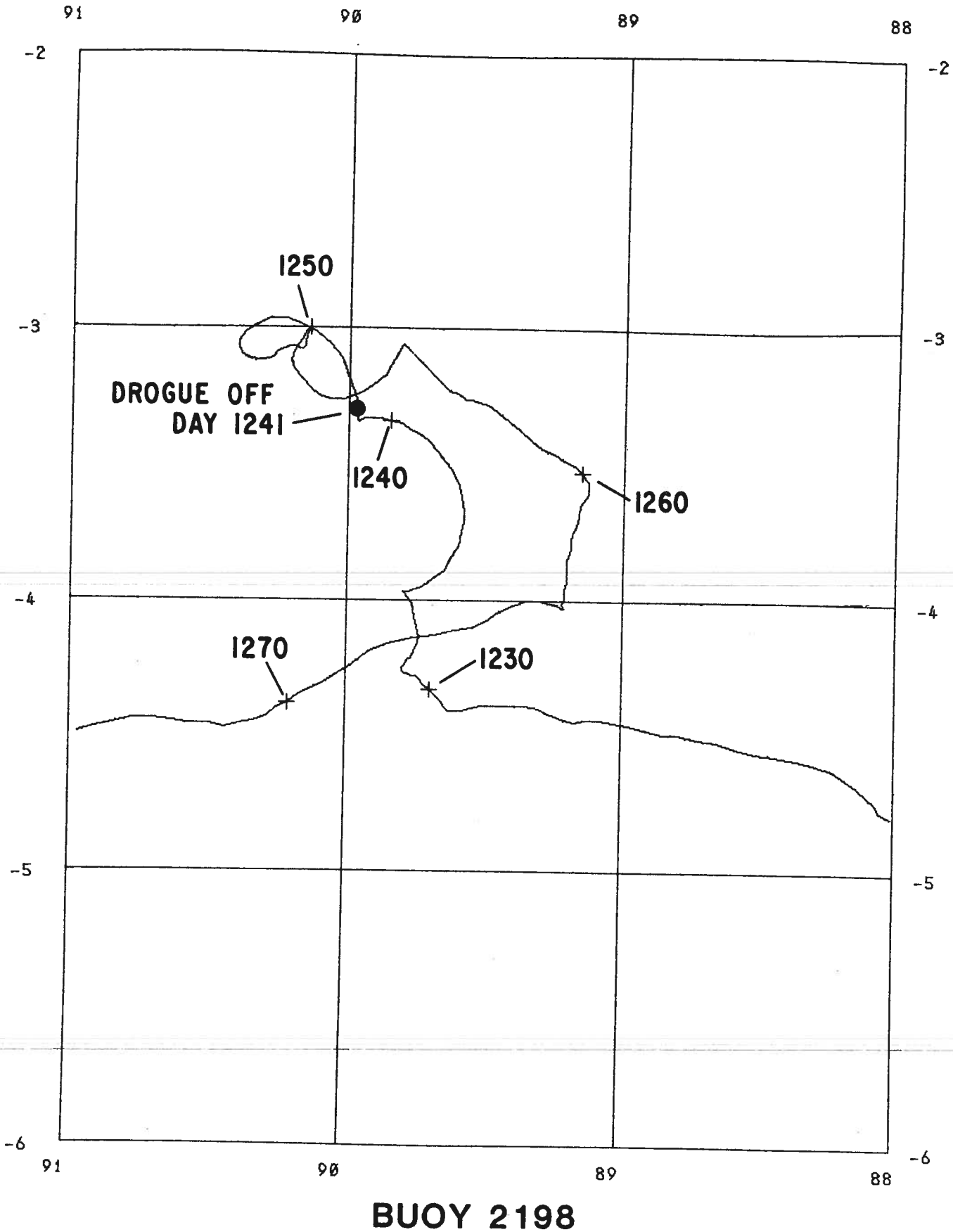


Figure 69. Drifting buoy trajectory detail.

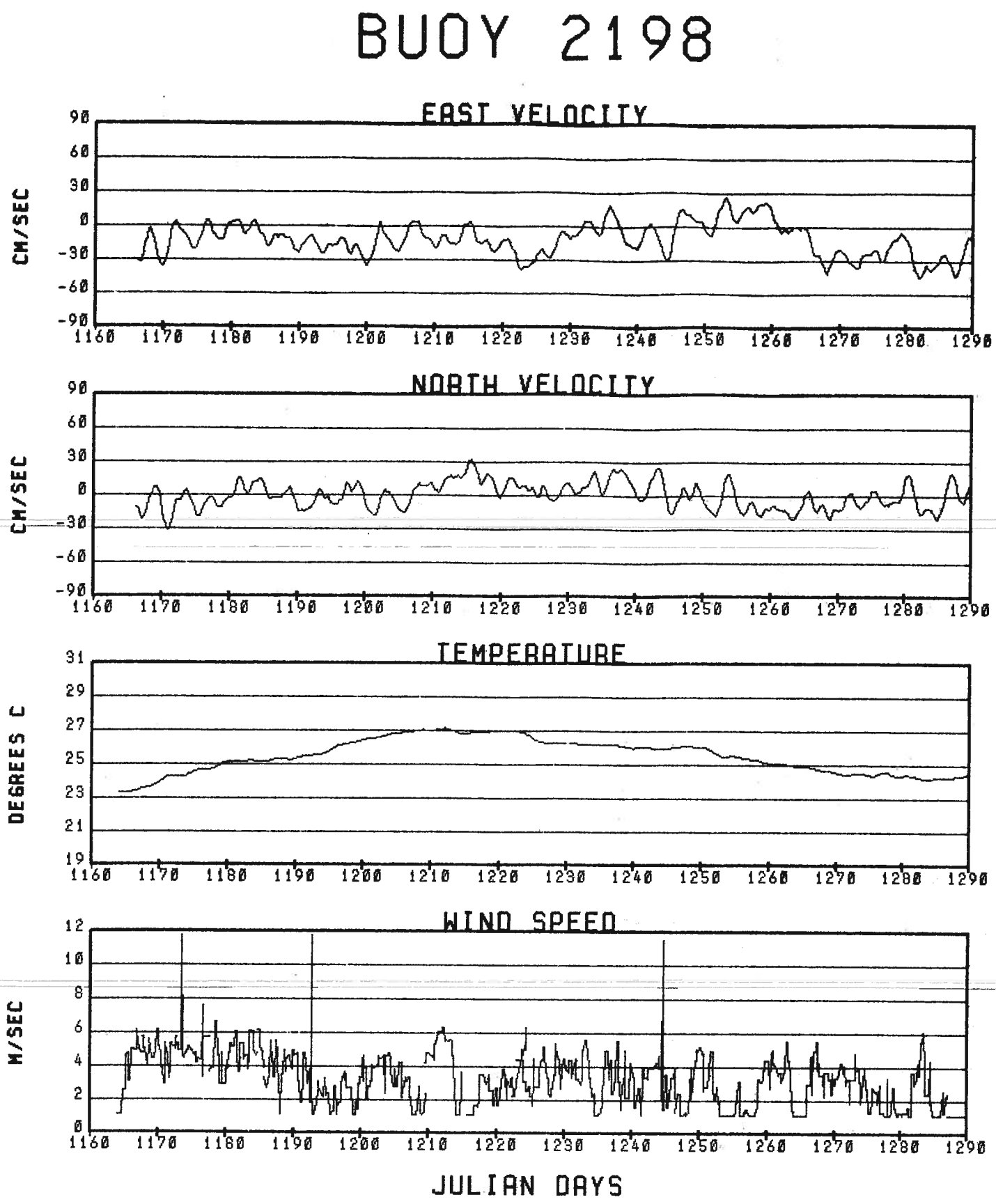


Figure 70. Time series of velocity and sensor data.

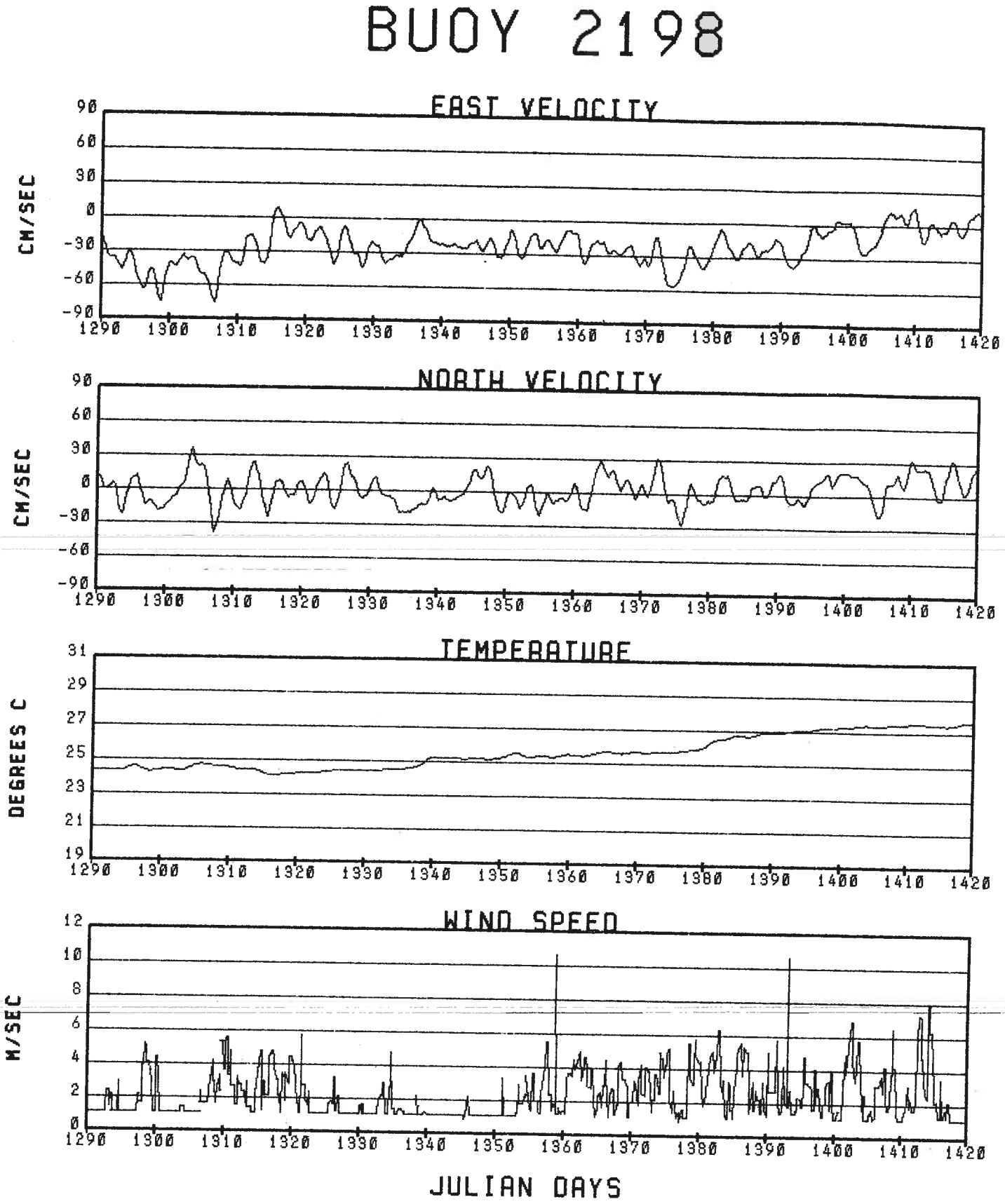


Figure 70. (continued)

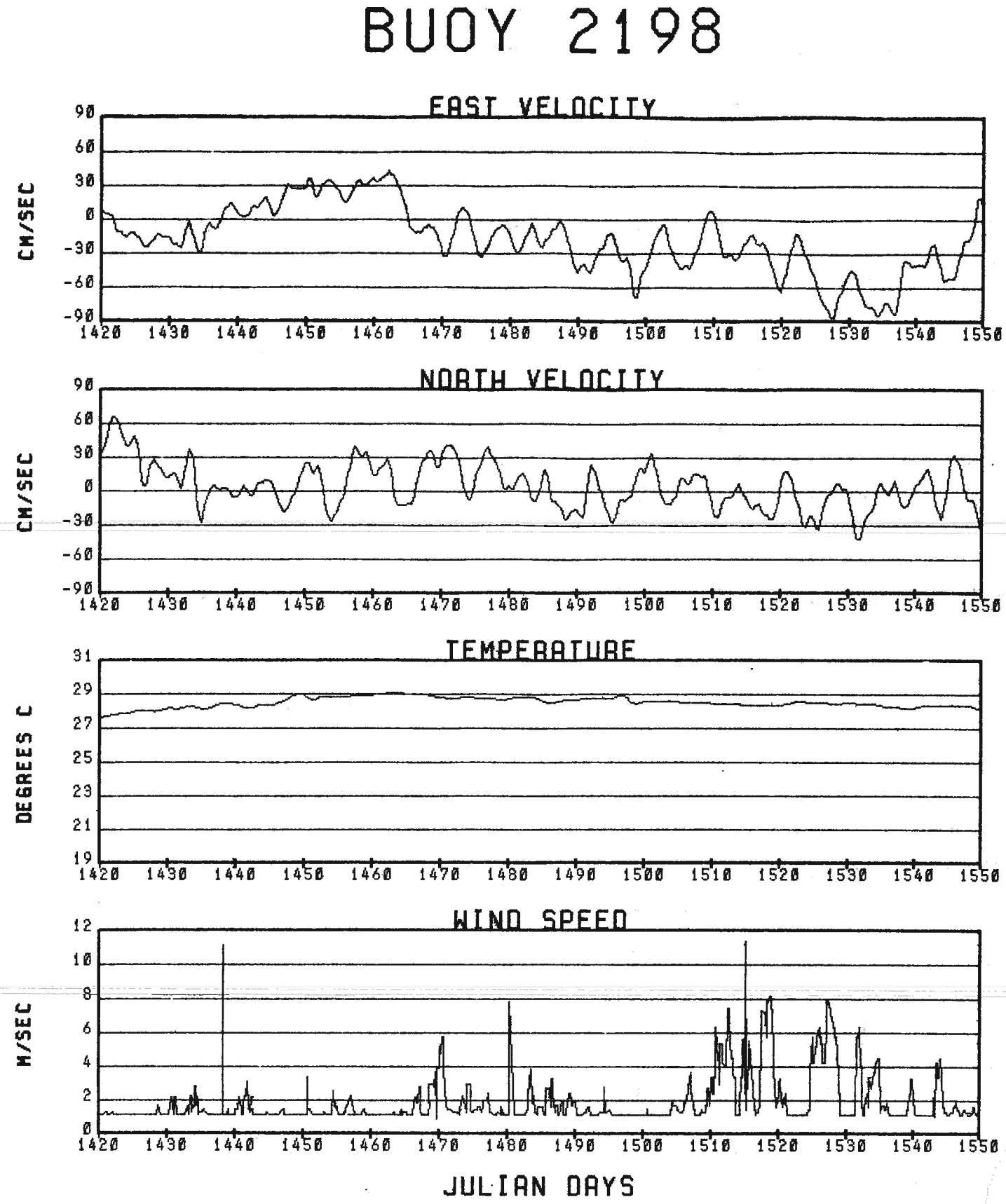


Figure 70. (continued)

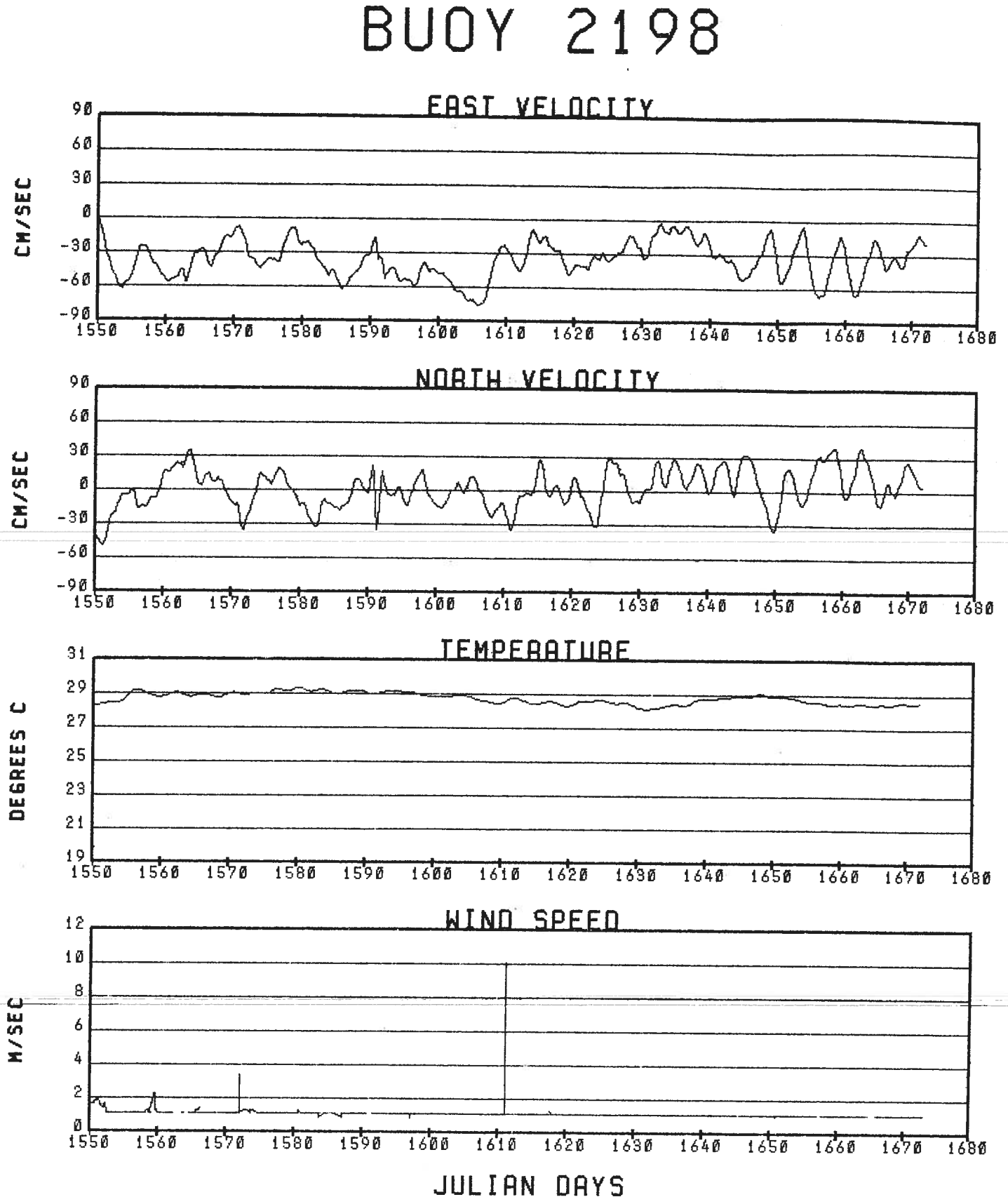


Figure 70. (continued)

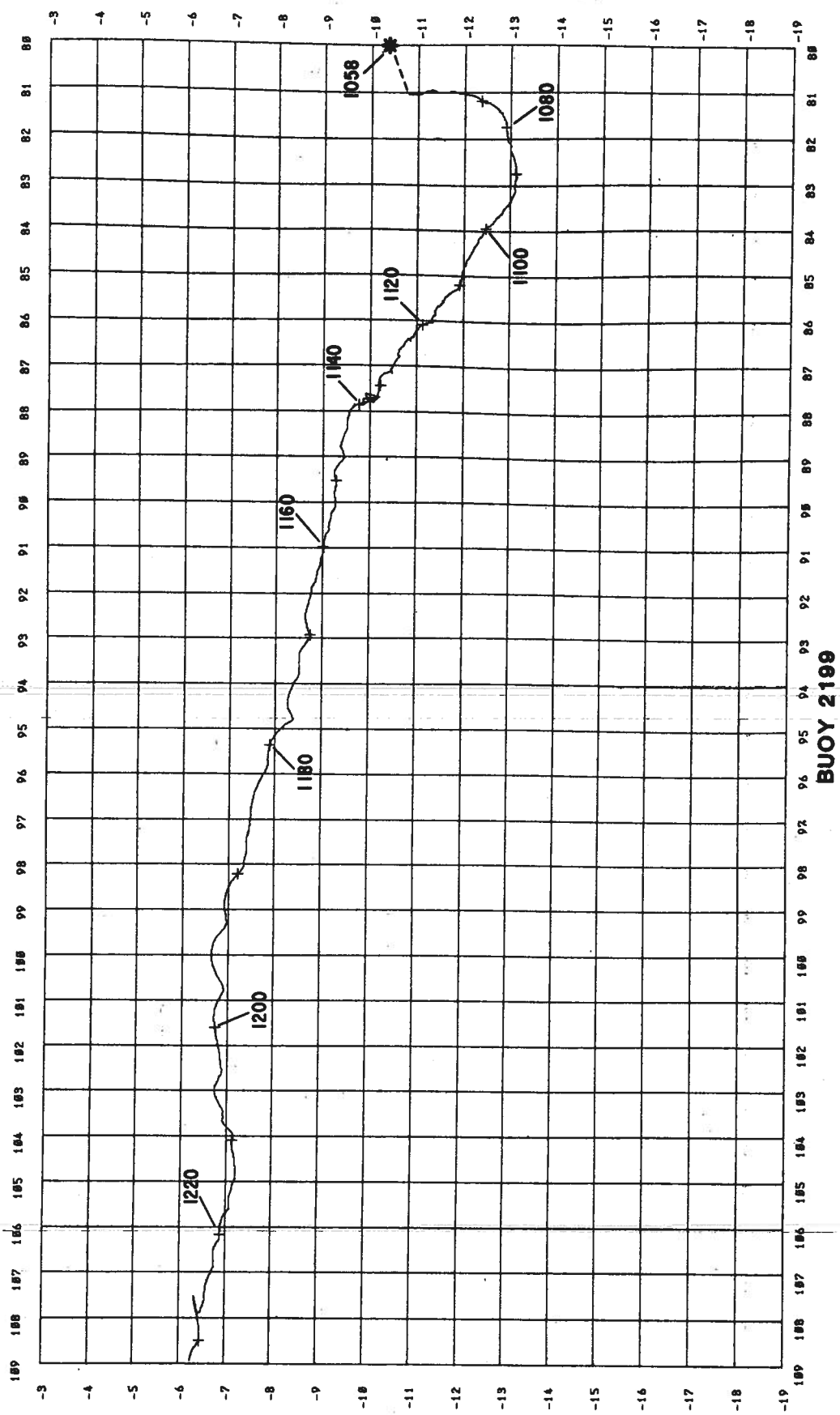


Figure 71. Drifting buoy trajectory.

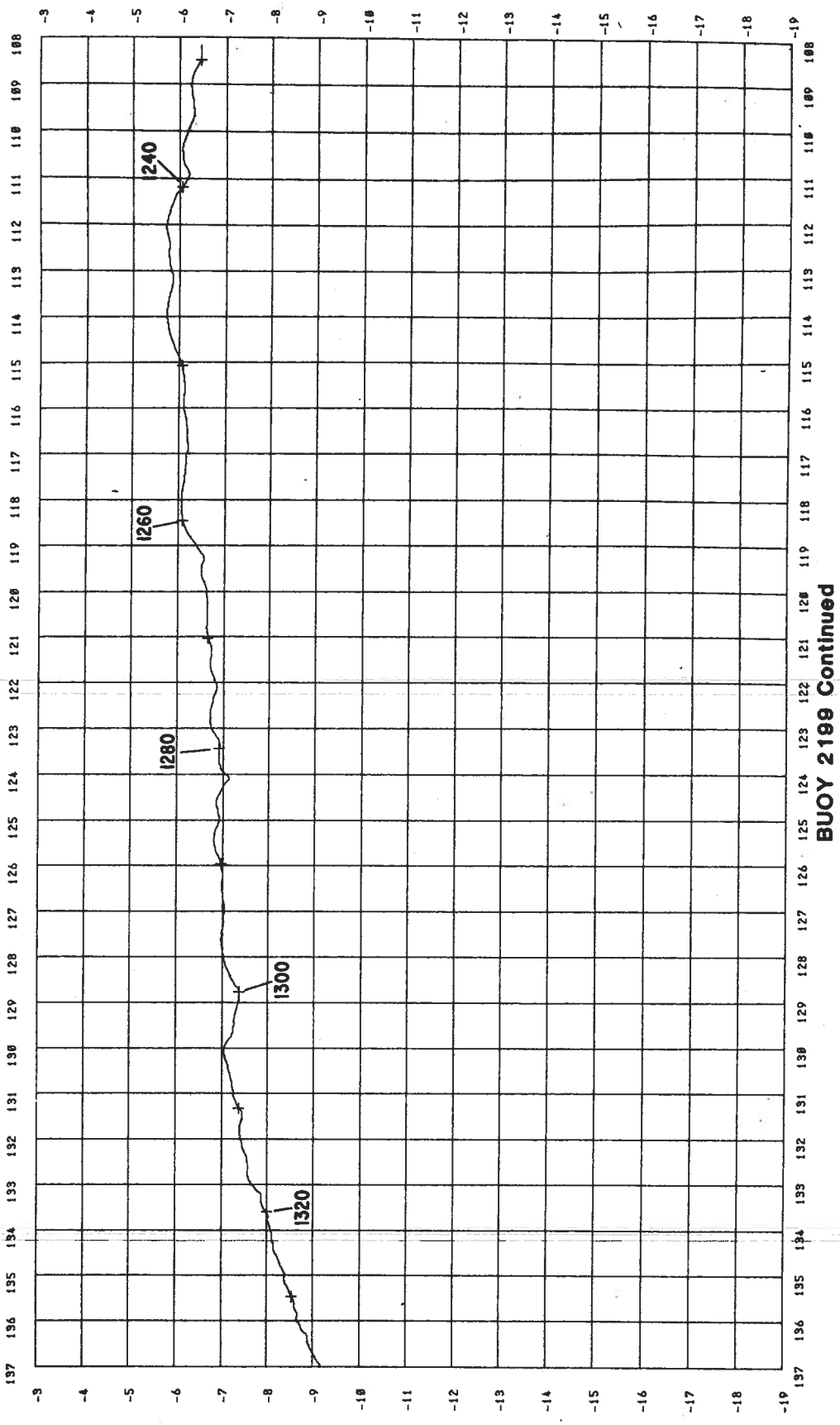


Figure 71. (continued)

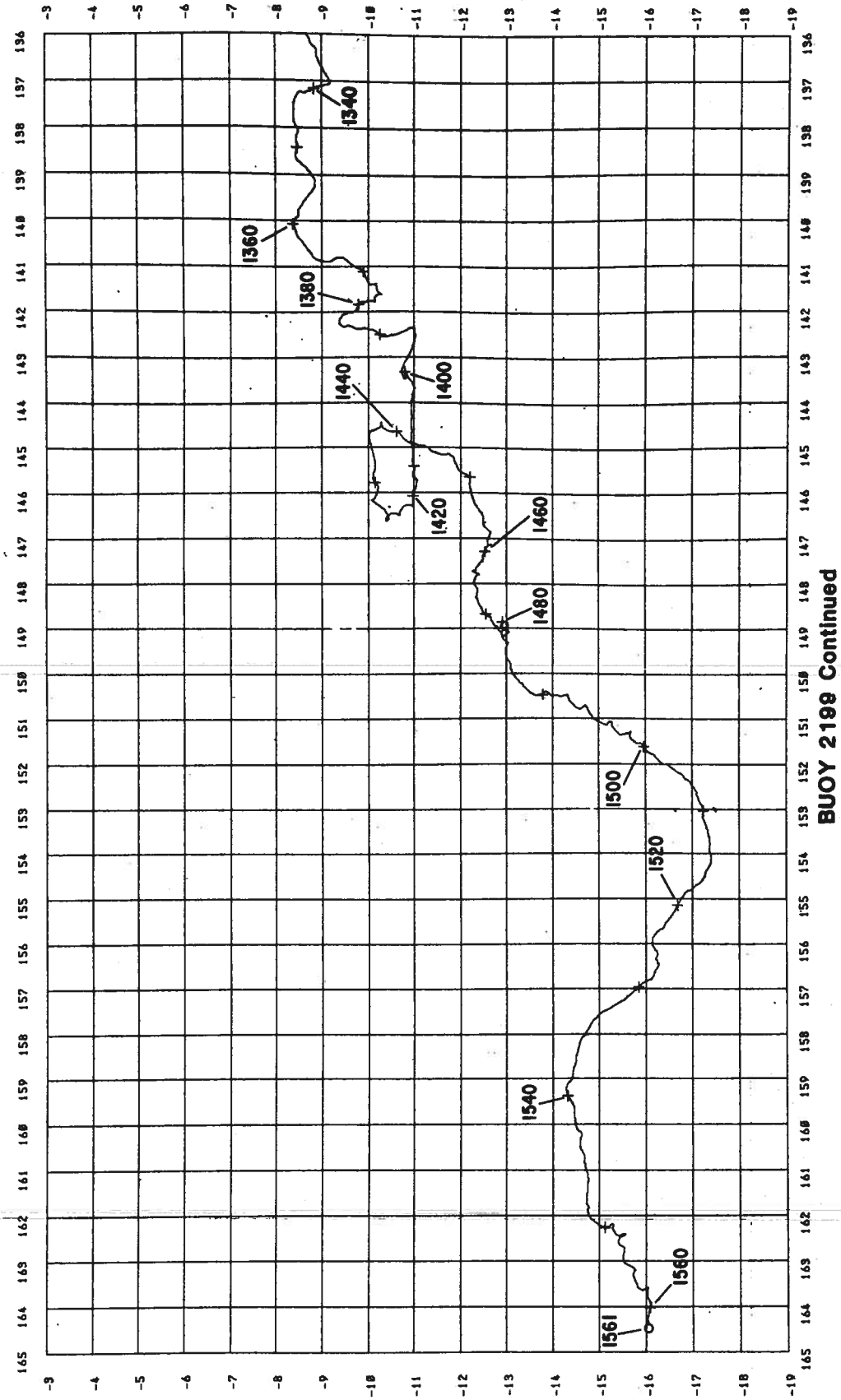


Figure 71. (continued)

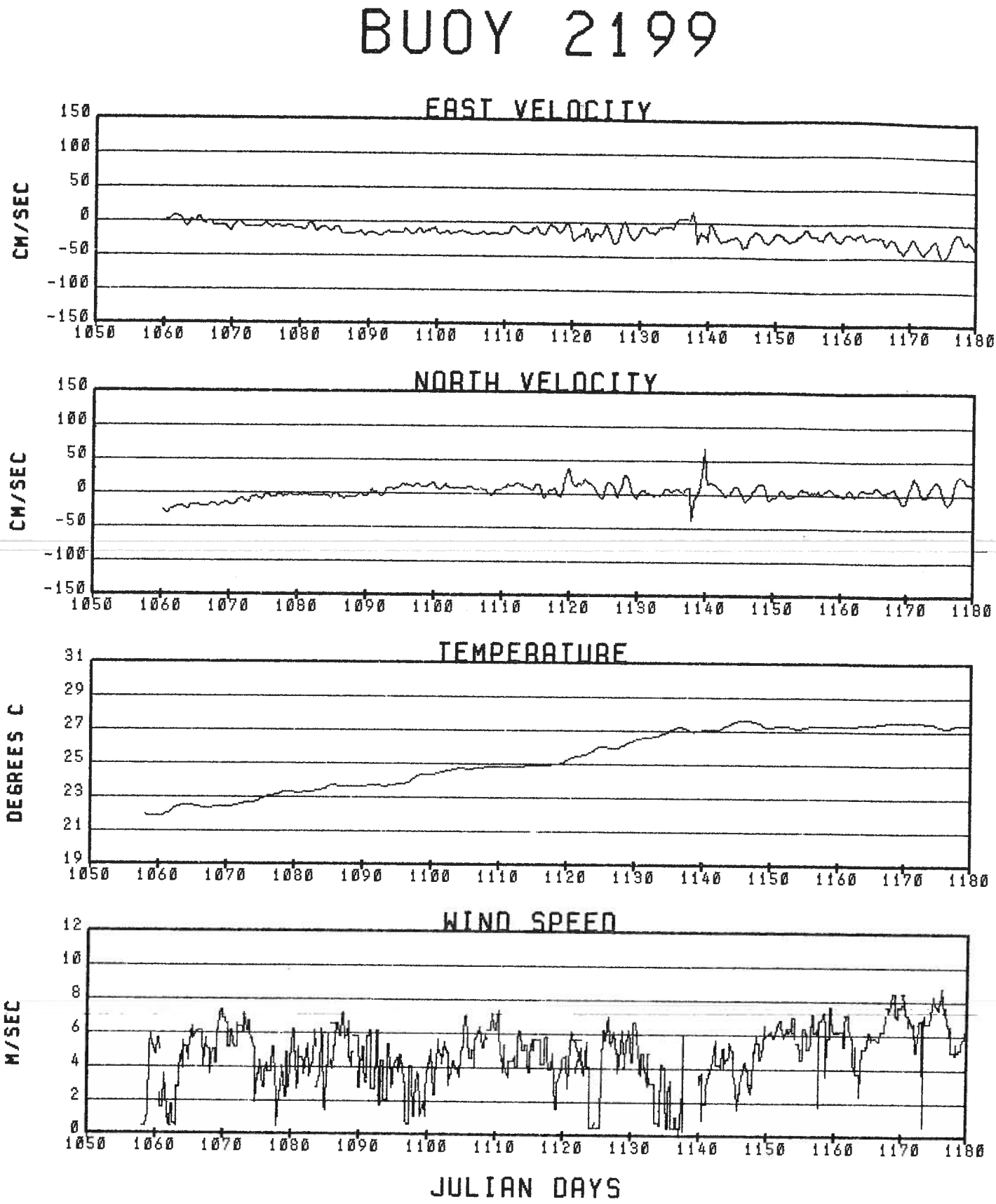


Figure 72. Time series of velocity and sensor data.

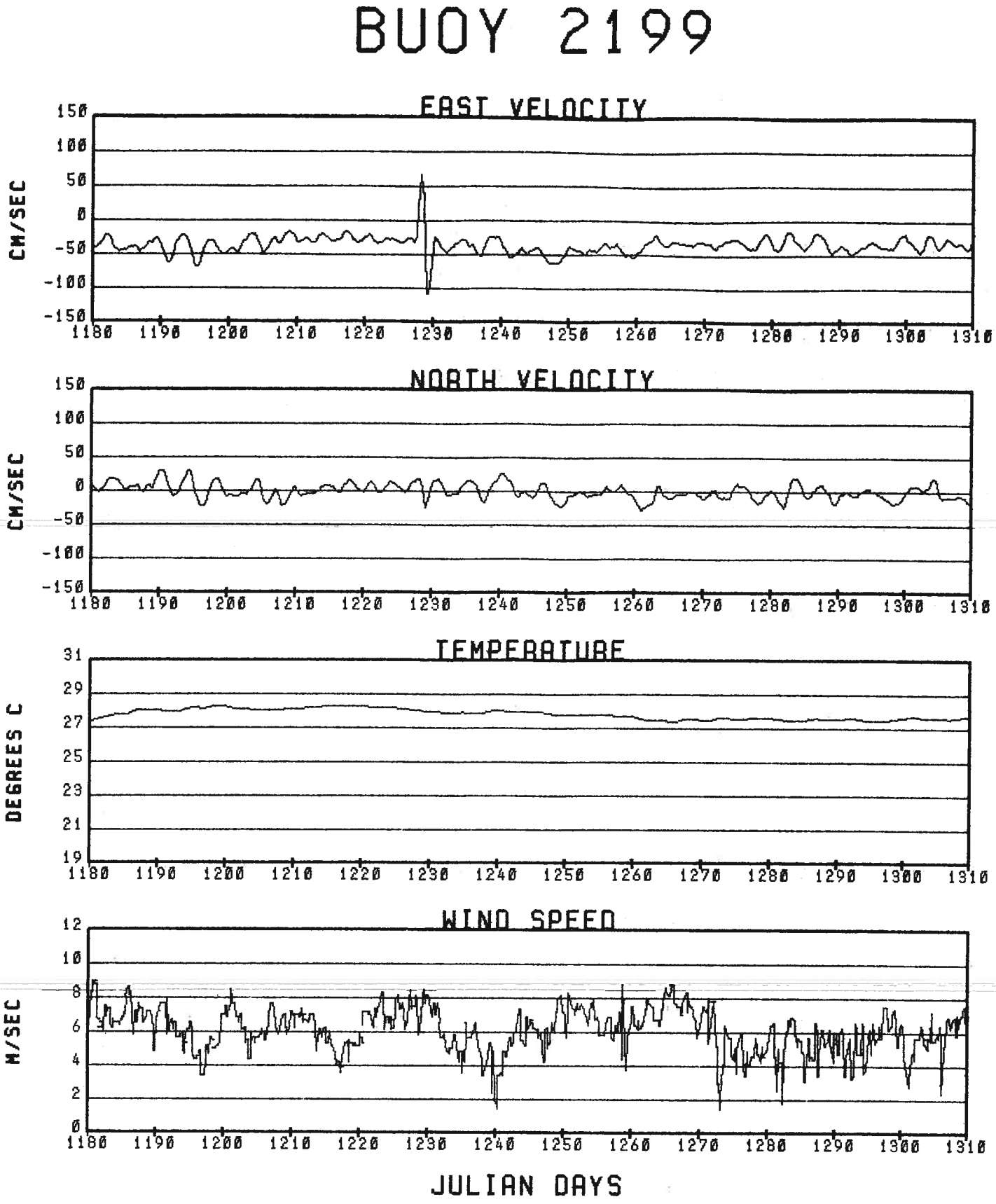


Figure 72. (continued)

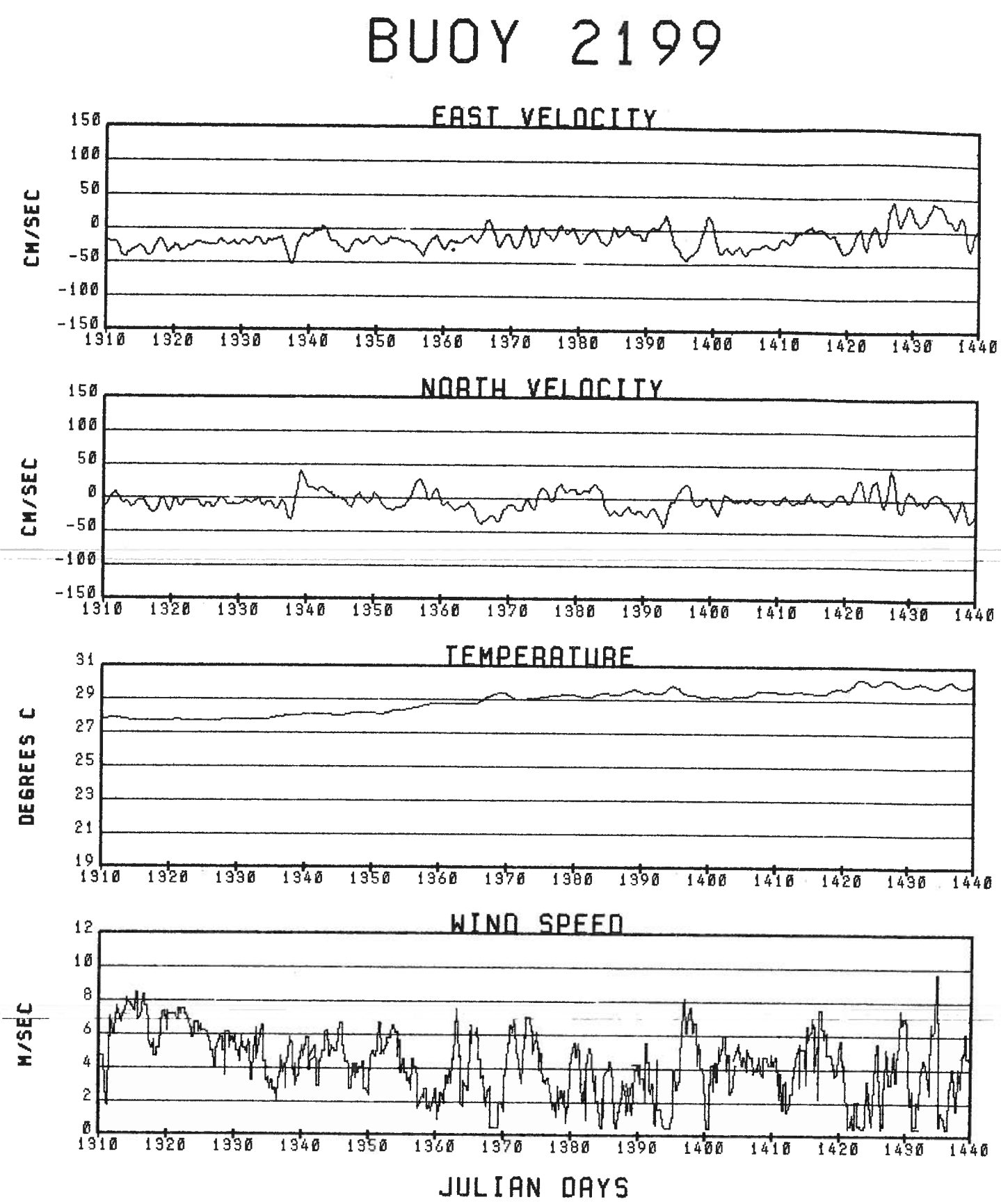


Figure 72. (continued)

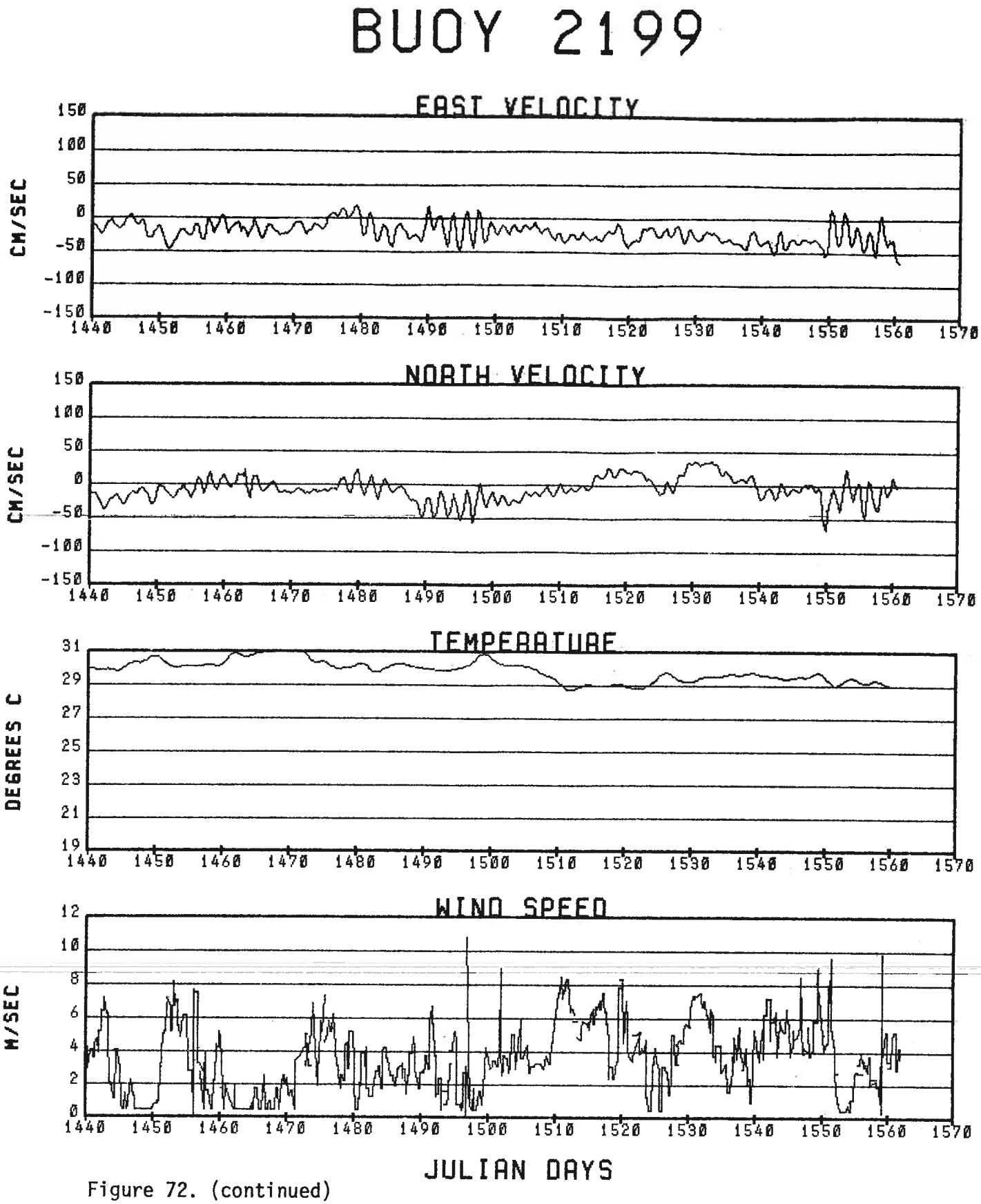


Figure 72. (continued)

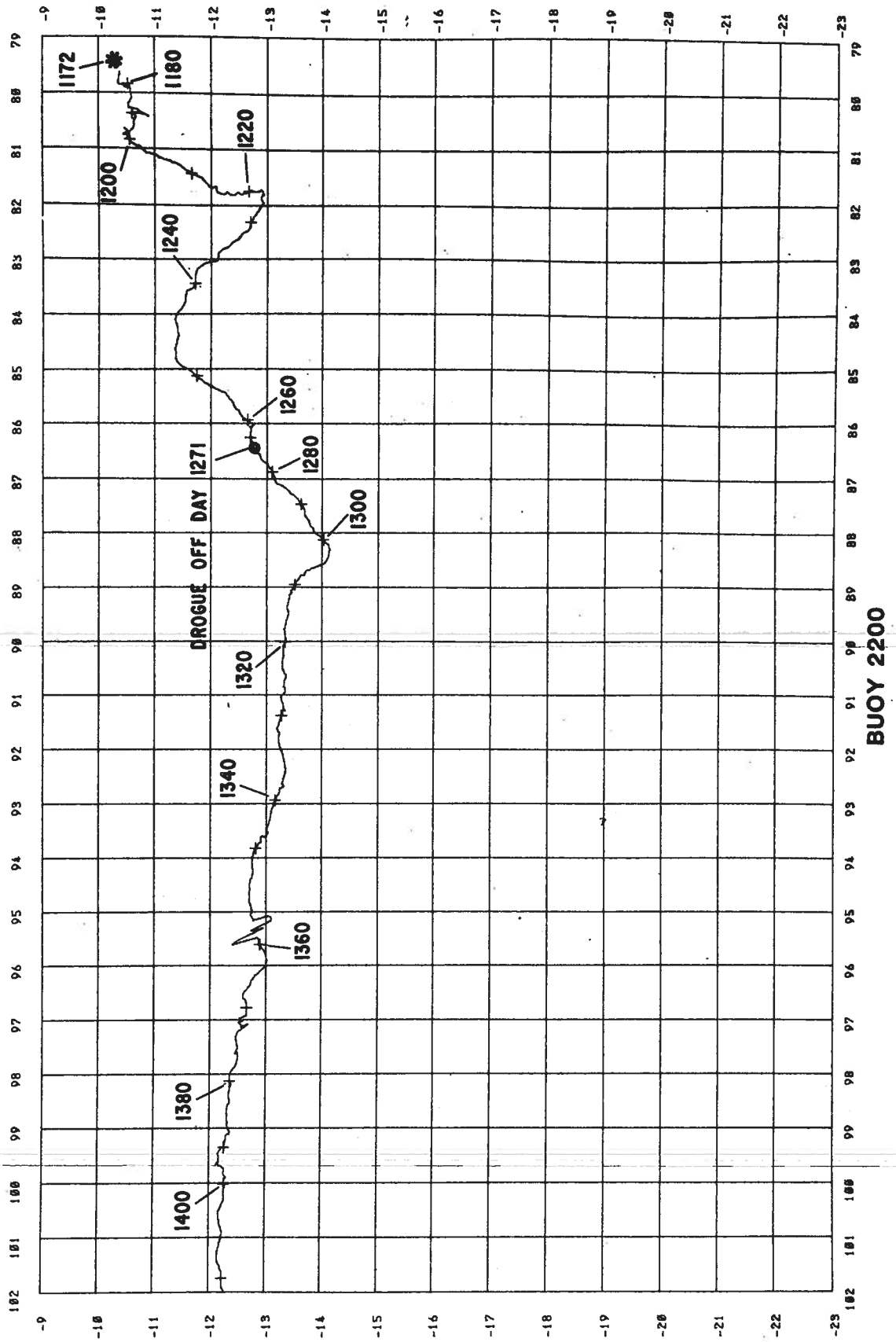


Figure 73. Drifting buoy trajectory.

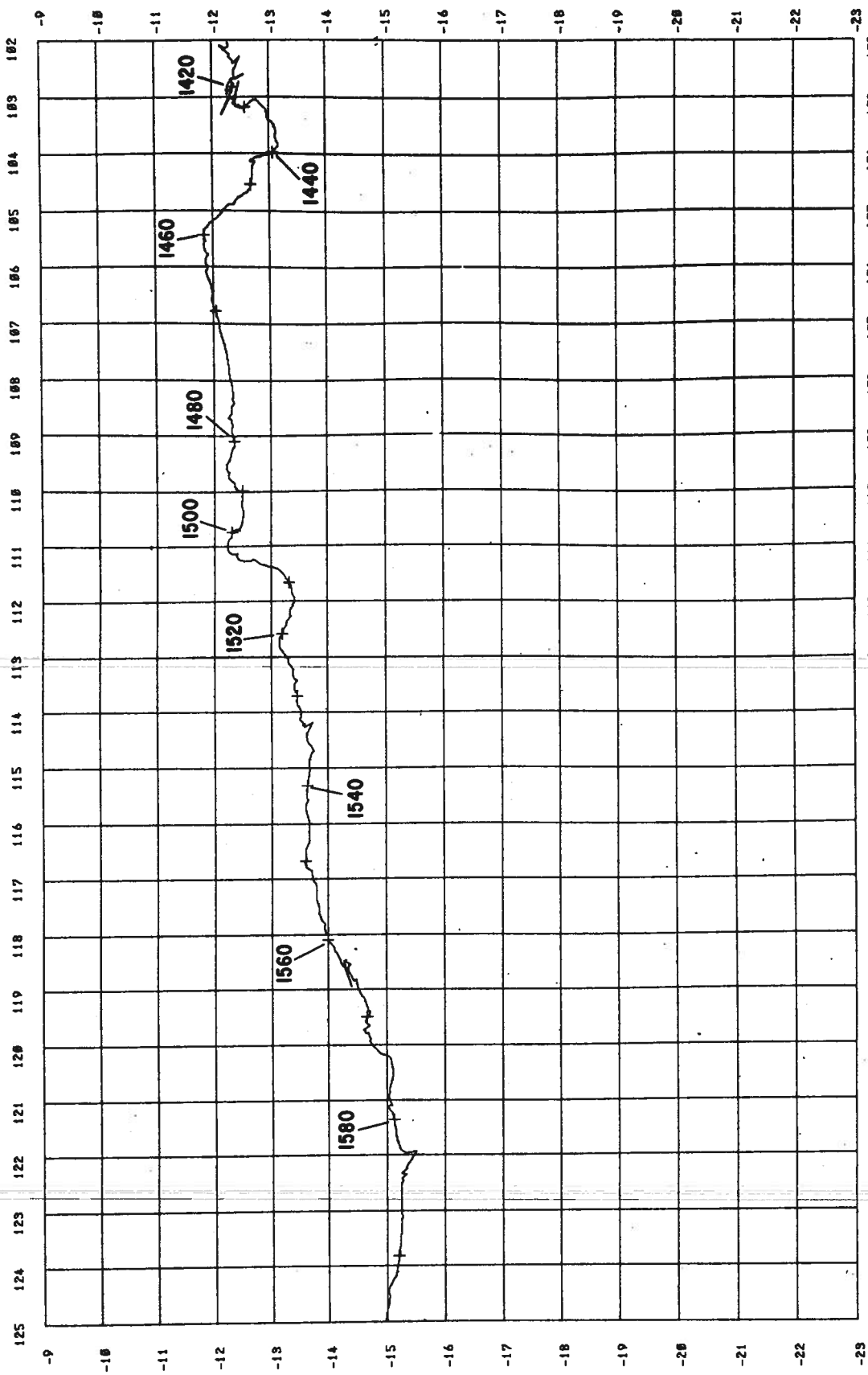


Figure 73. (continued)

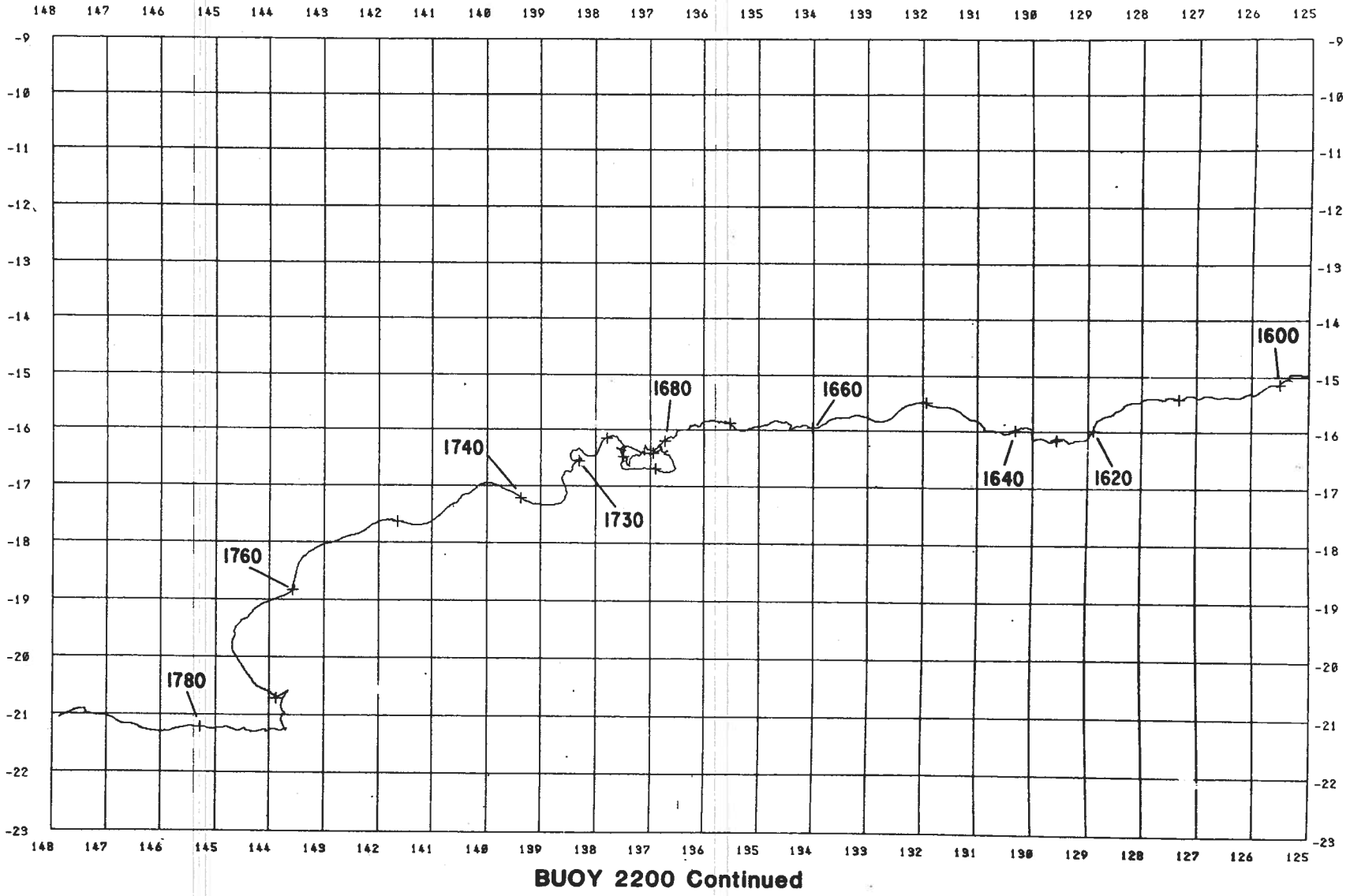


Figure 73 (continued)

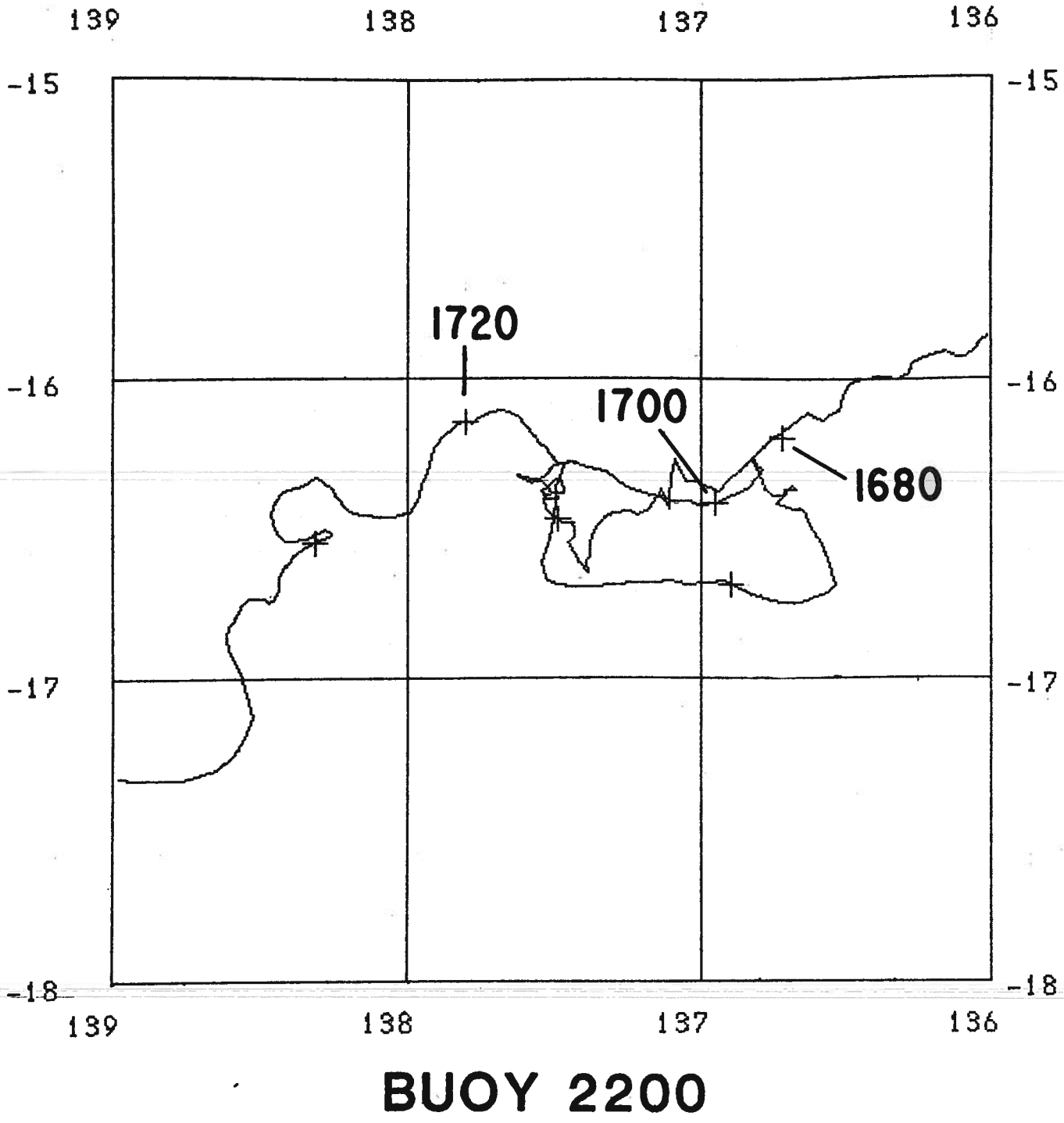


Figure 74. Drifting buoy trajectory detail.

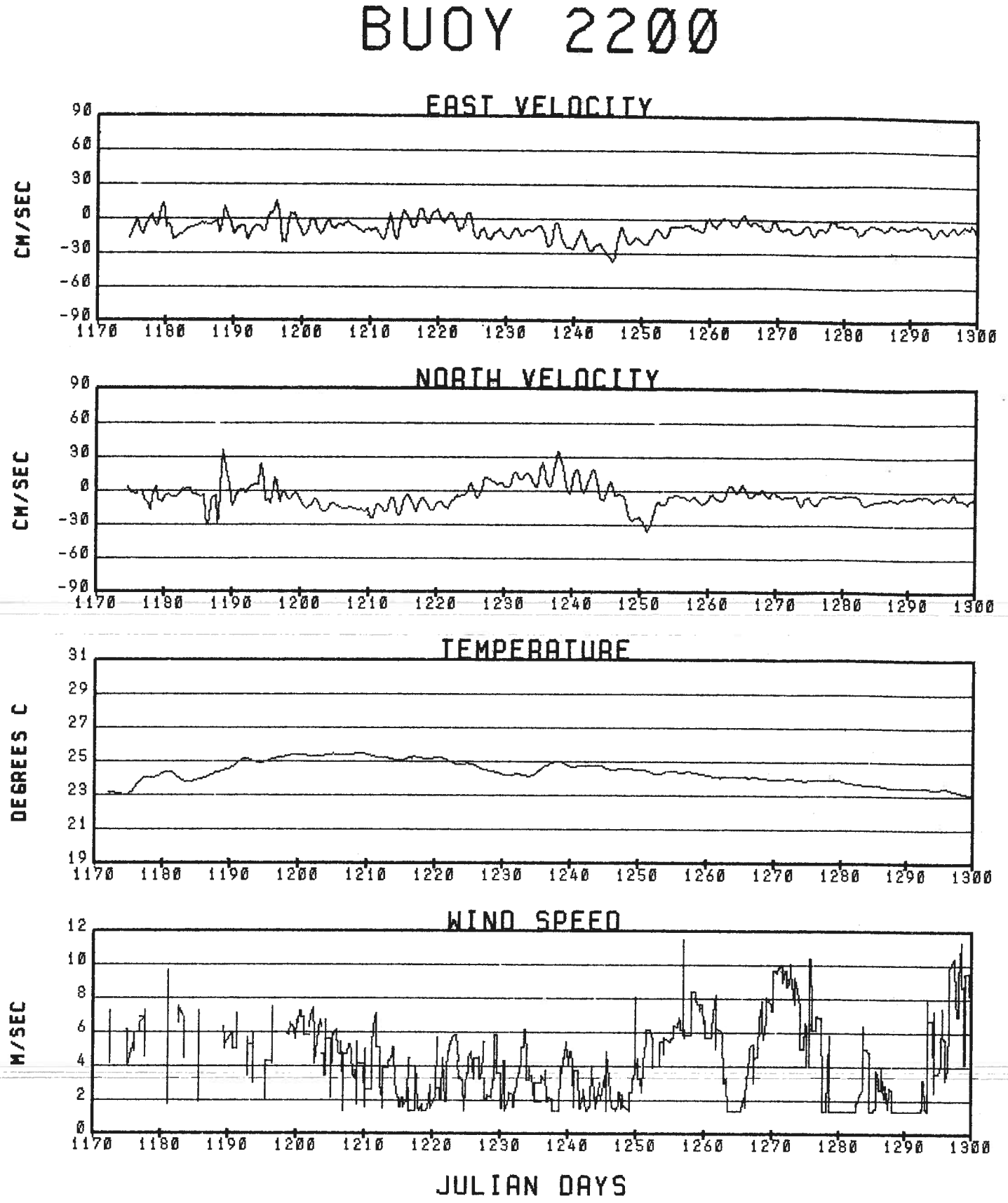


Figure 75. Time series of velocity and sensor data.

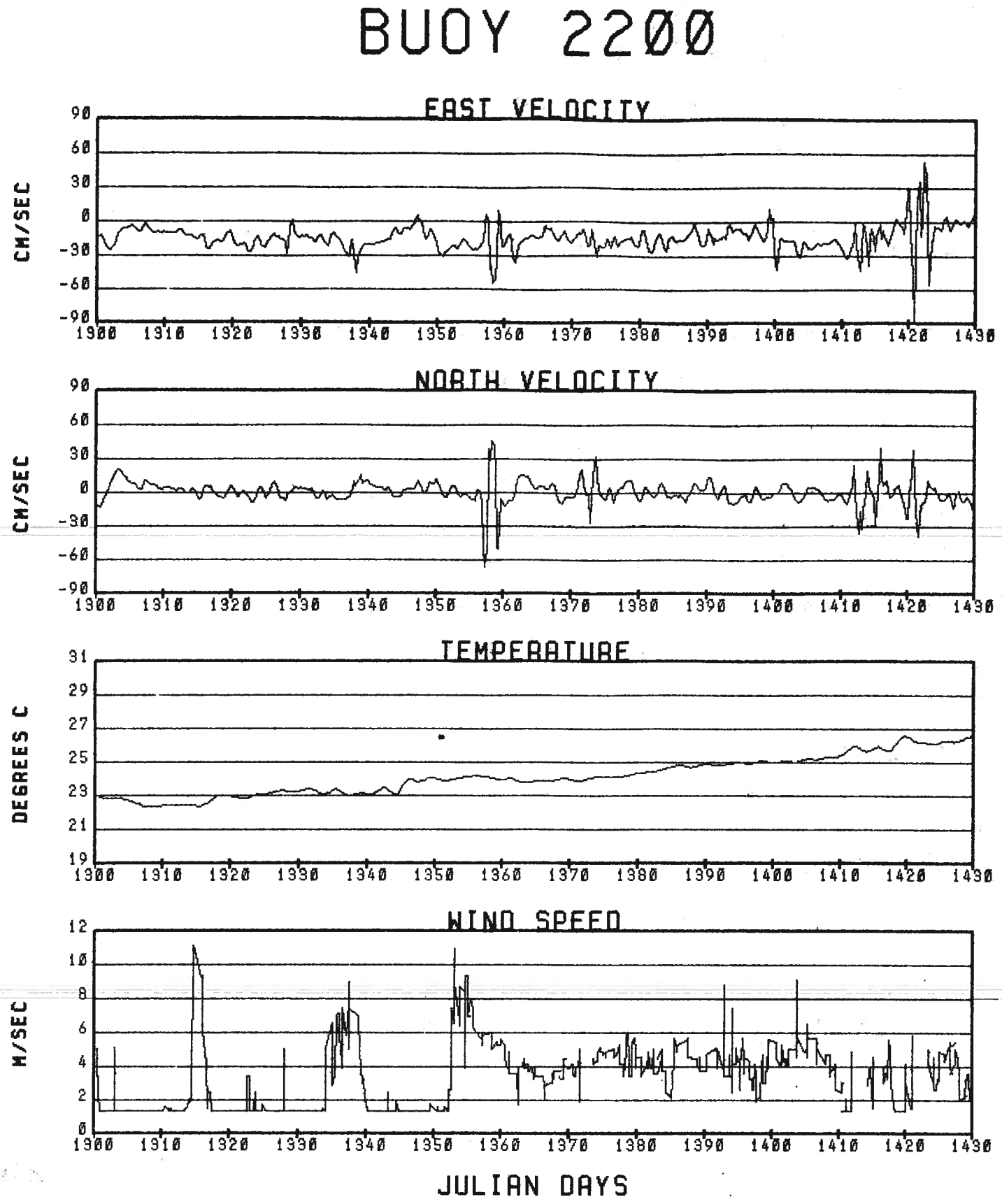


Figure 75. (continued)

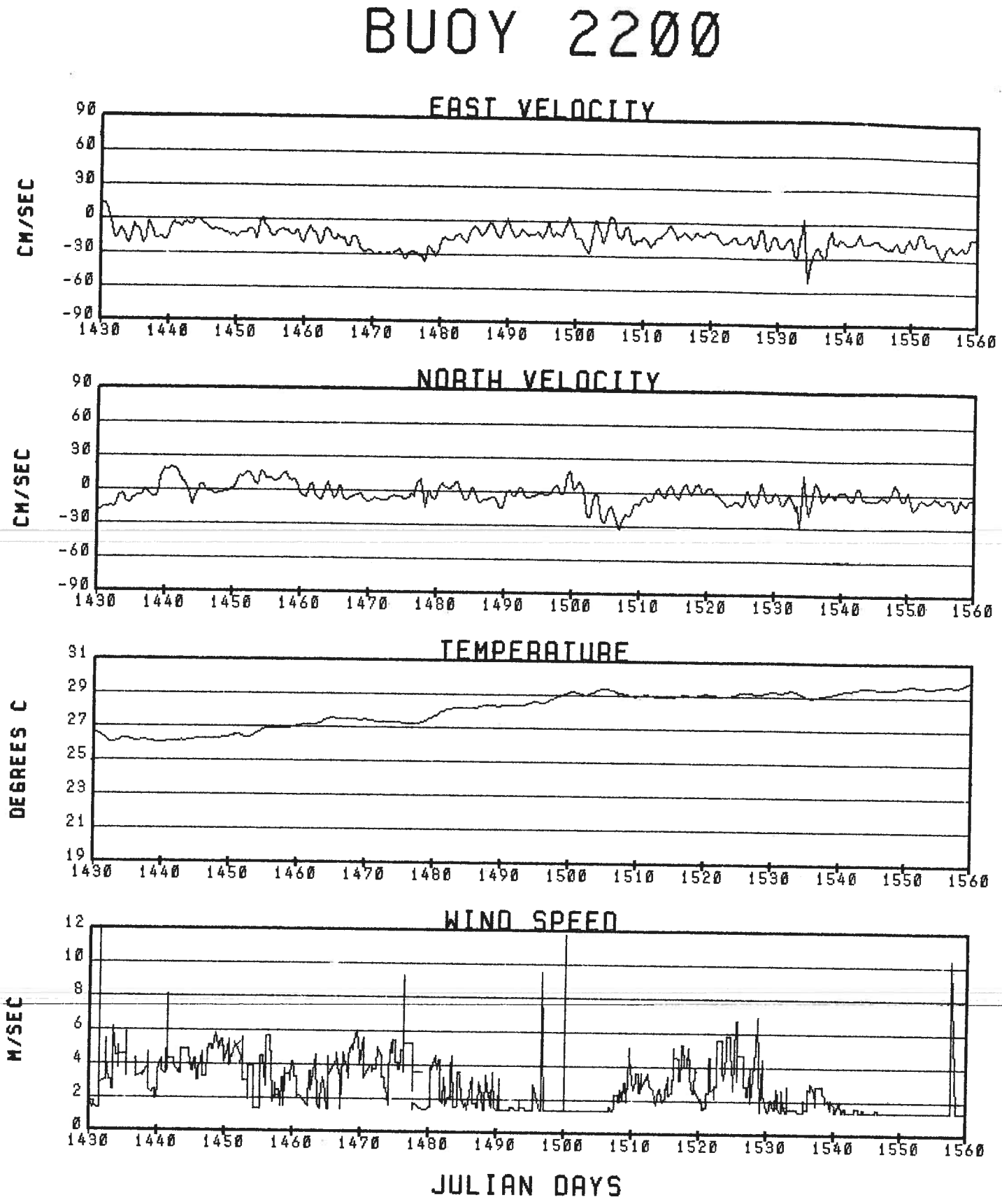


Figure 75. (continued)

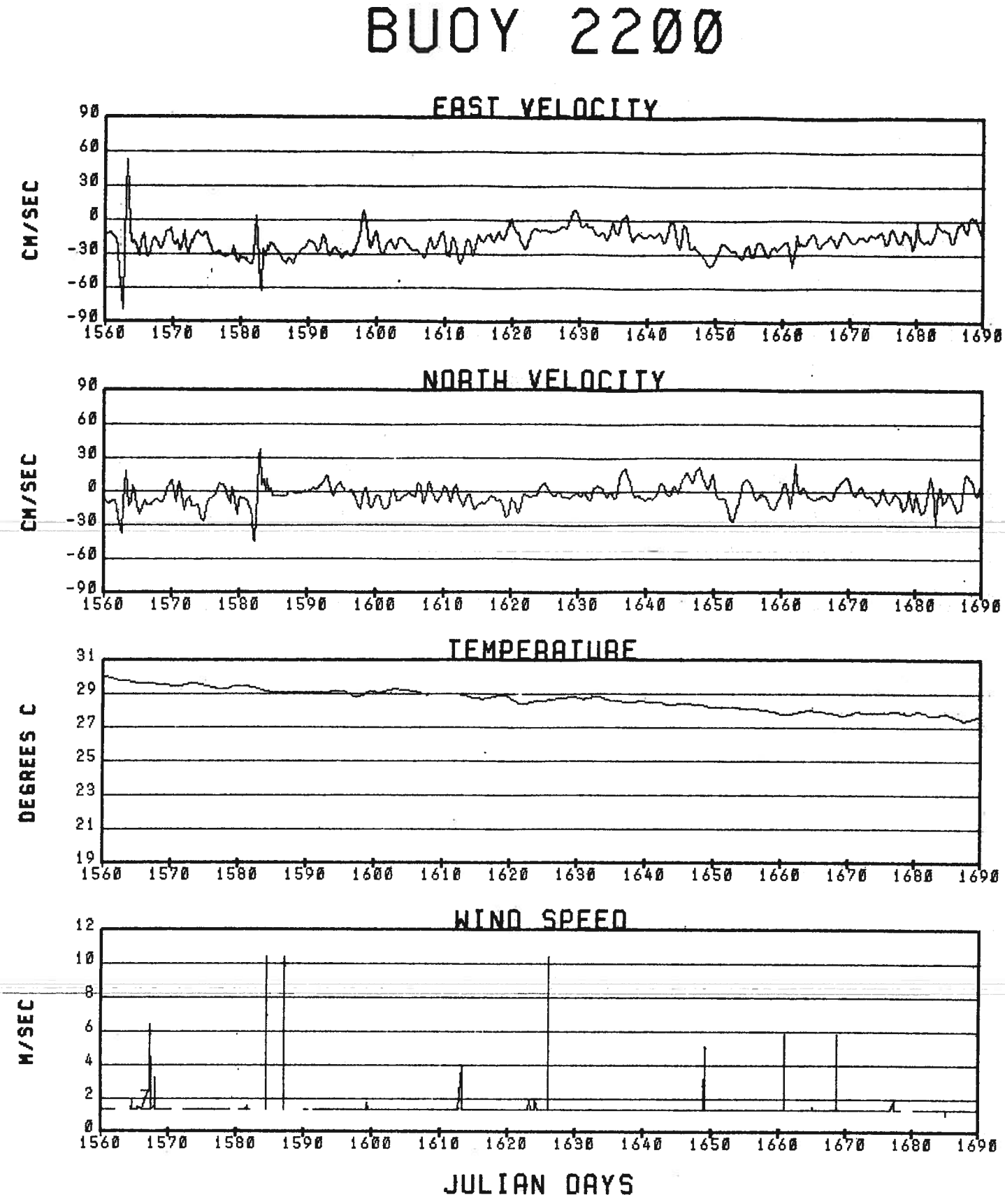


Figure 75. (continued)

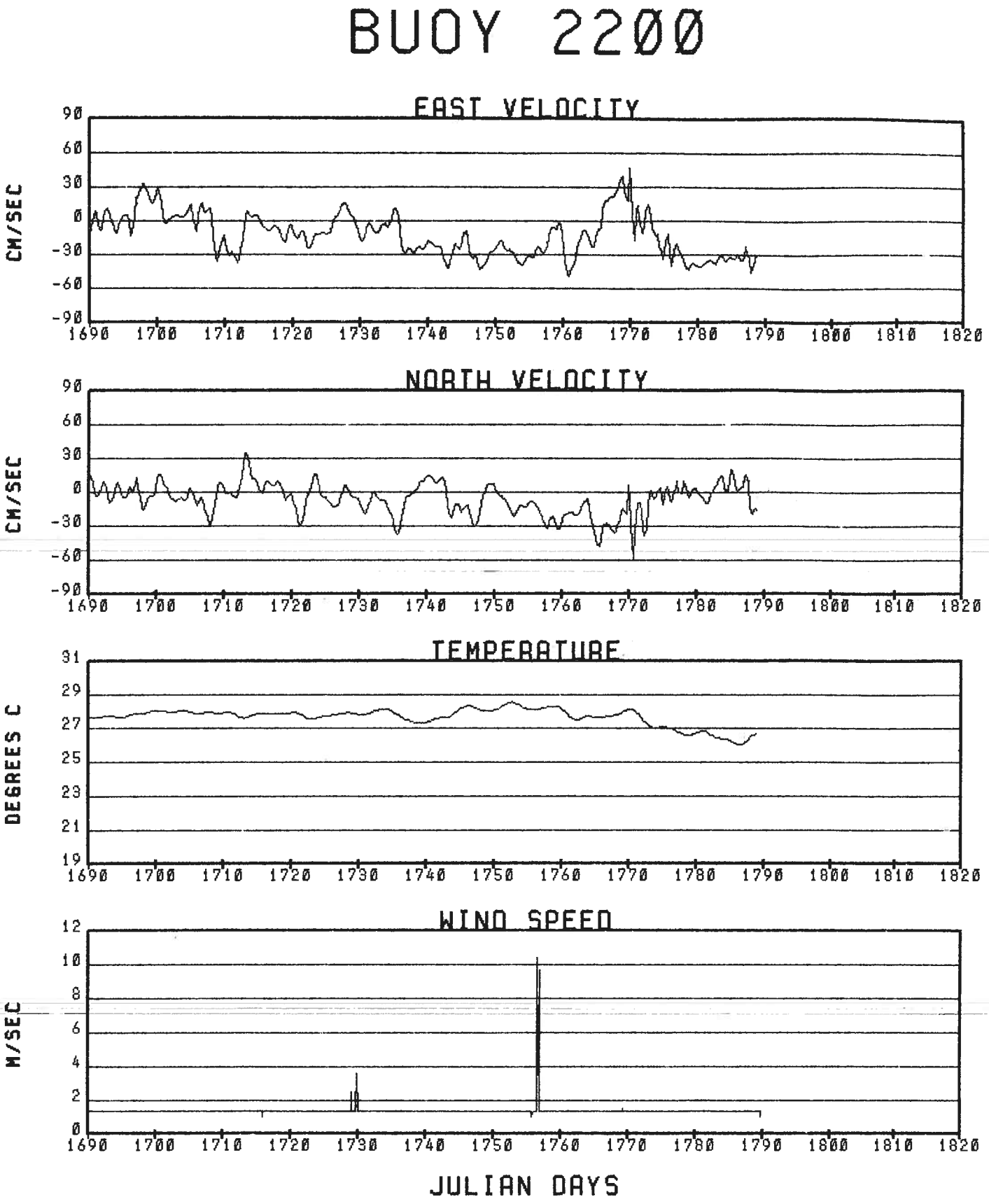


Figure 75. (continued)

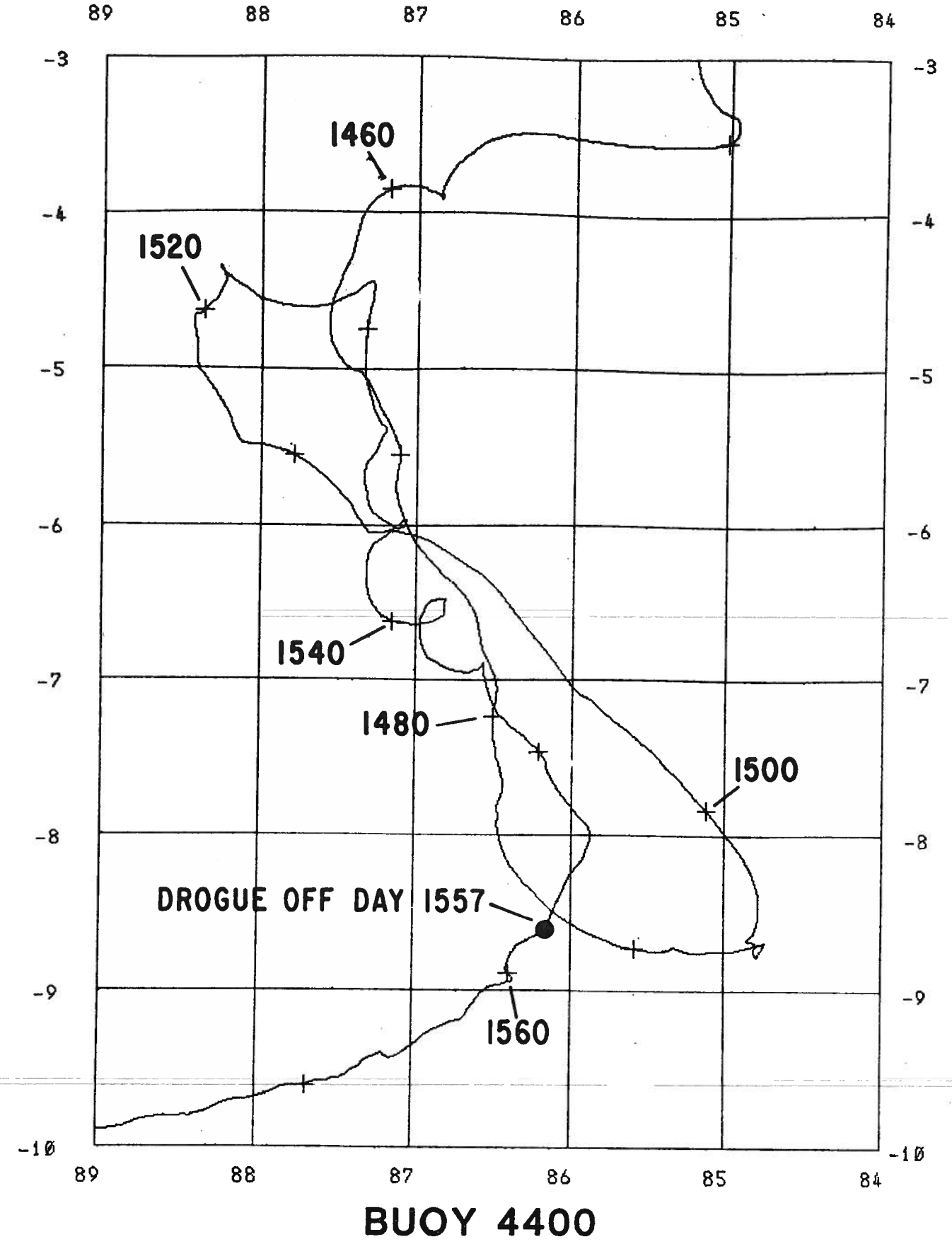


Figure 77. Drifting buoy trajectory detail.

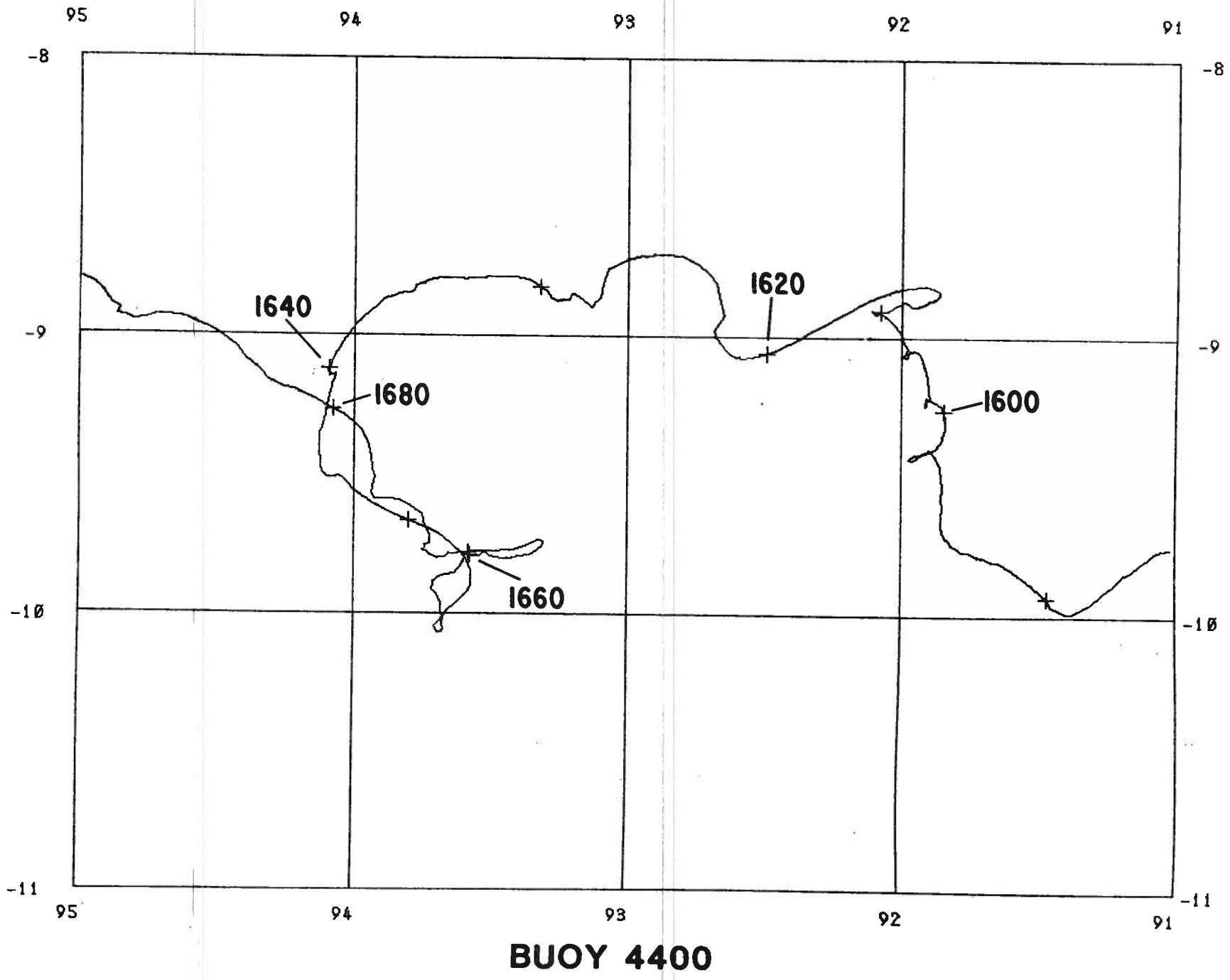


Figure 78. Drifting buoy trajectory detail.

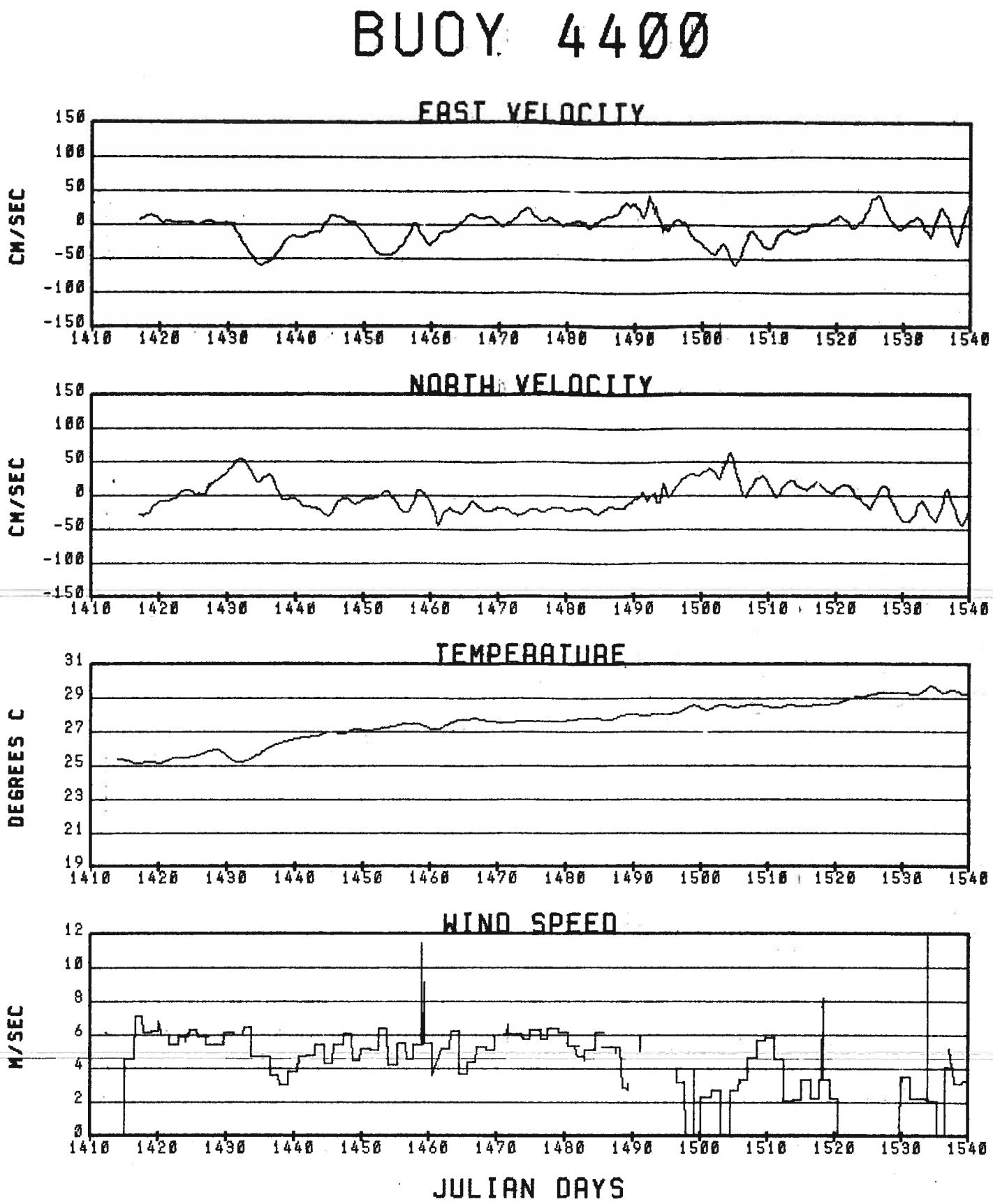


Figure 79. Time series of velocity and sensor data.

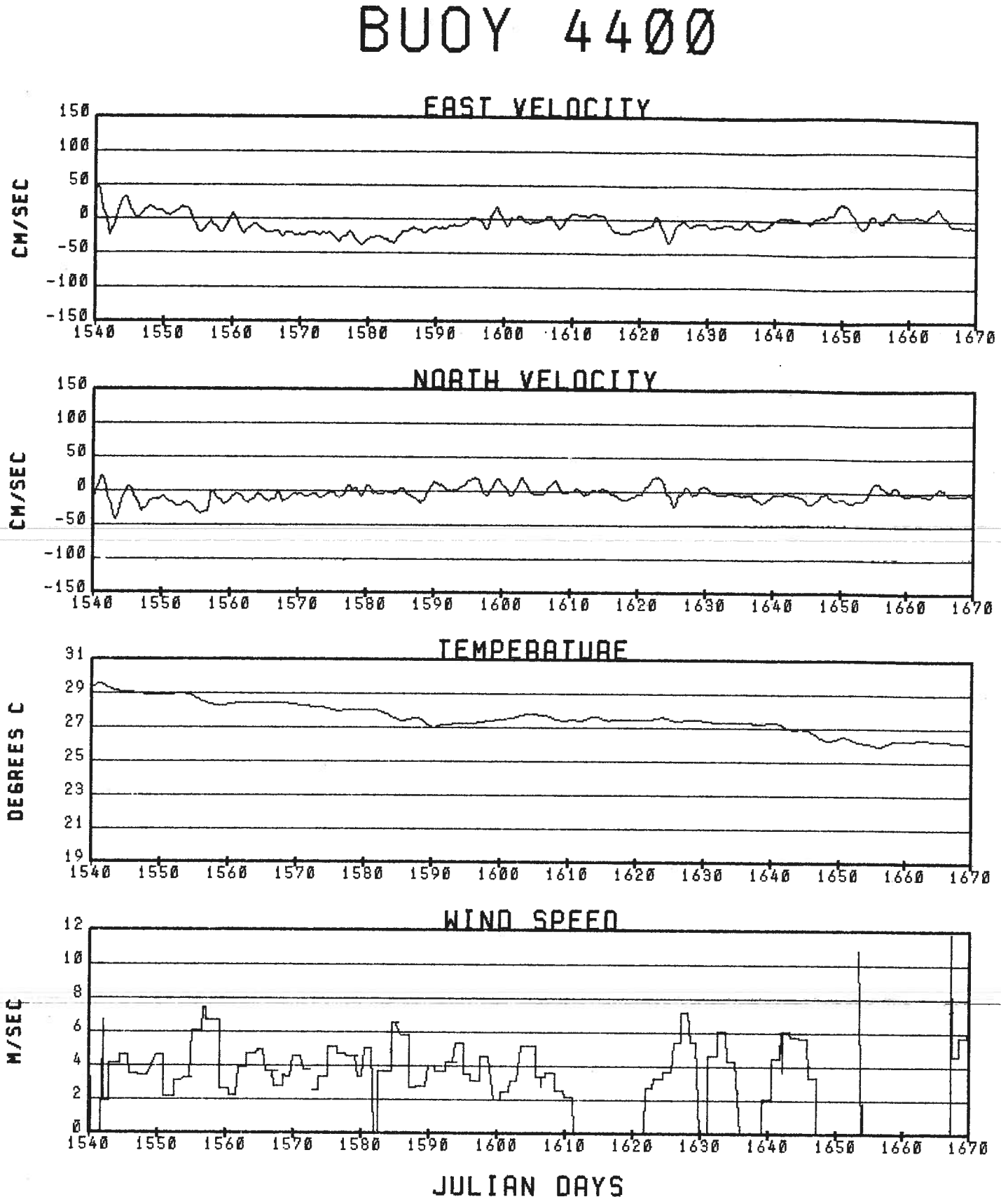


Figure 79. (continued)

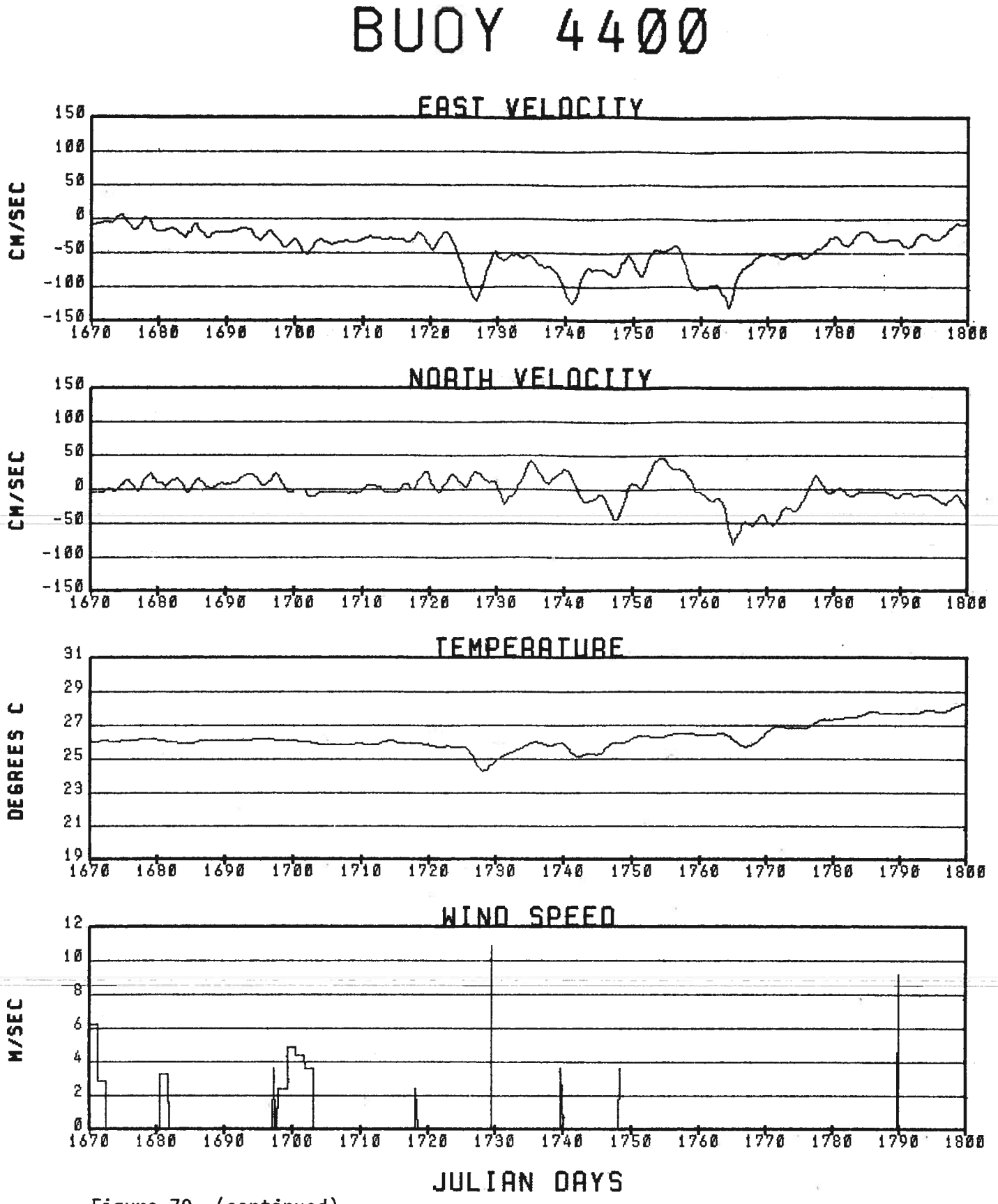


Figure 79. (continued)

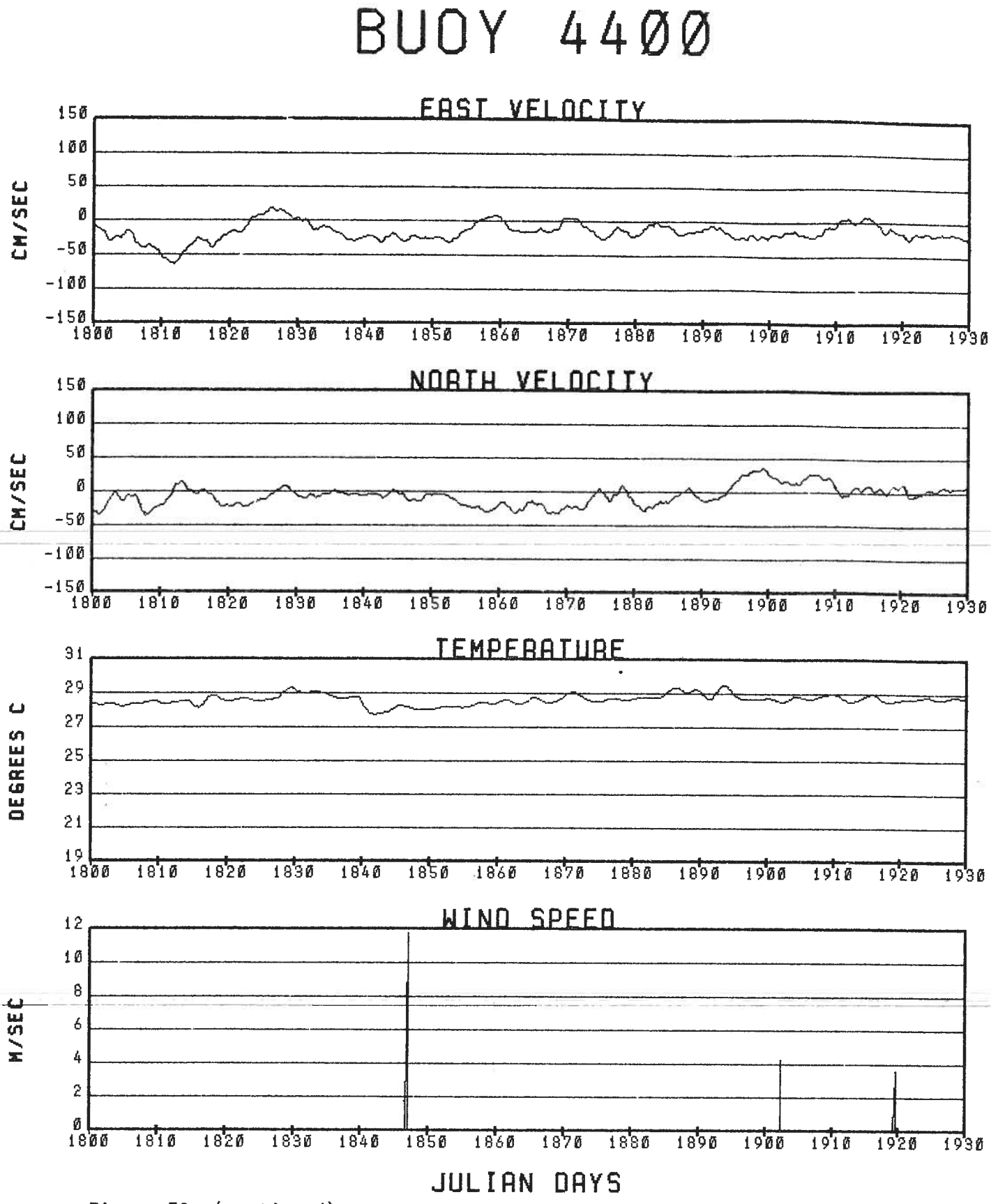


Figure 79. (continued)

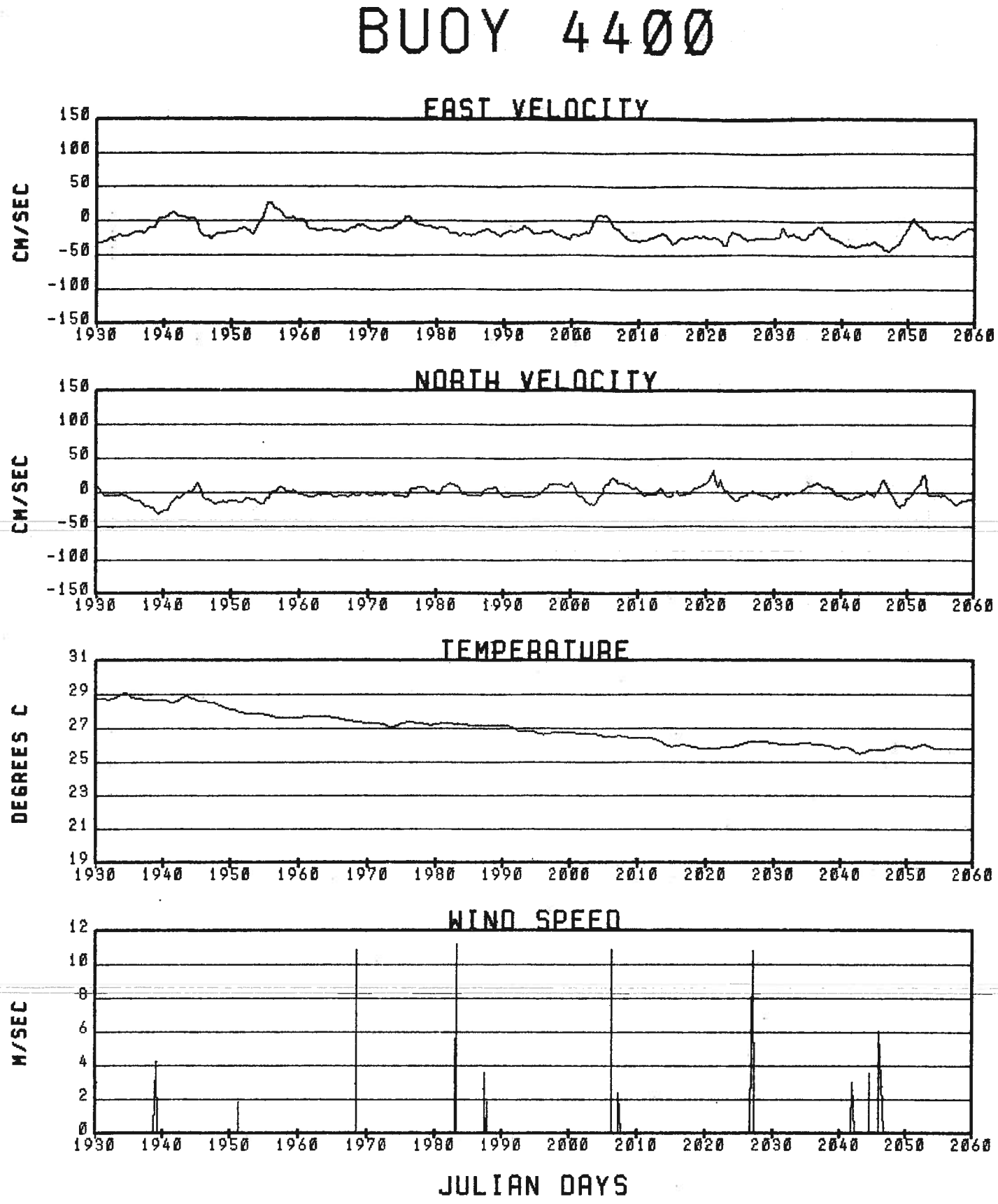


Figure 79. (continued)

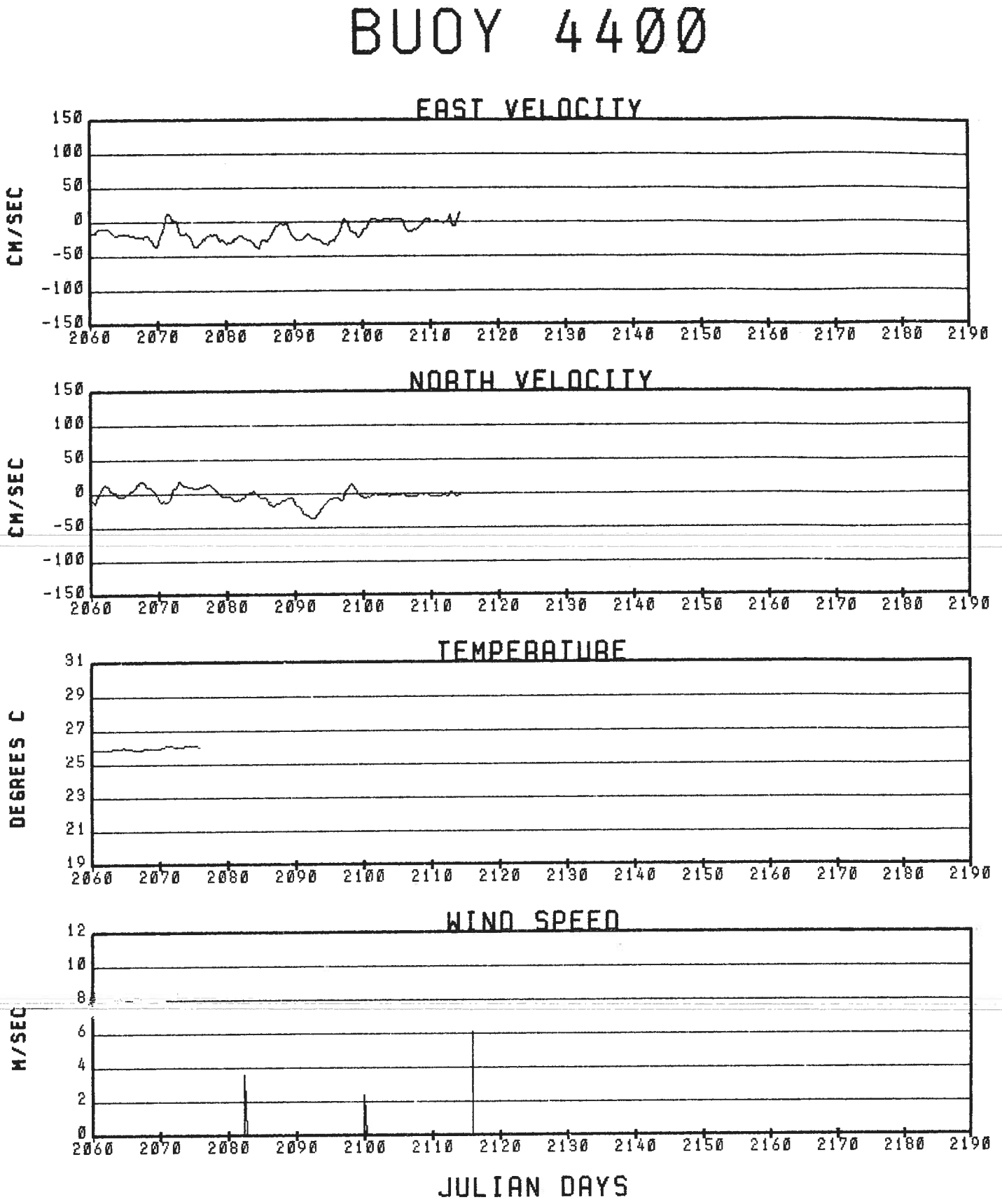


Figure 79. (continued)

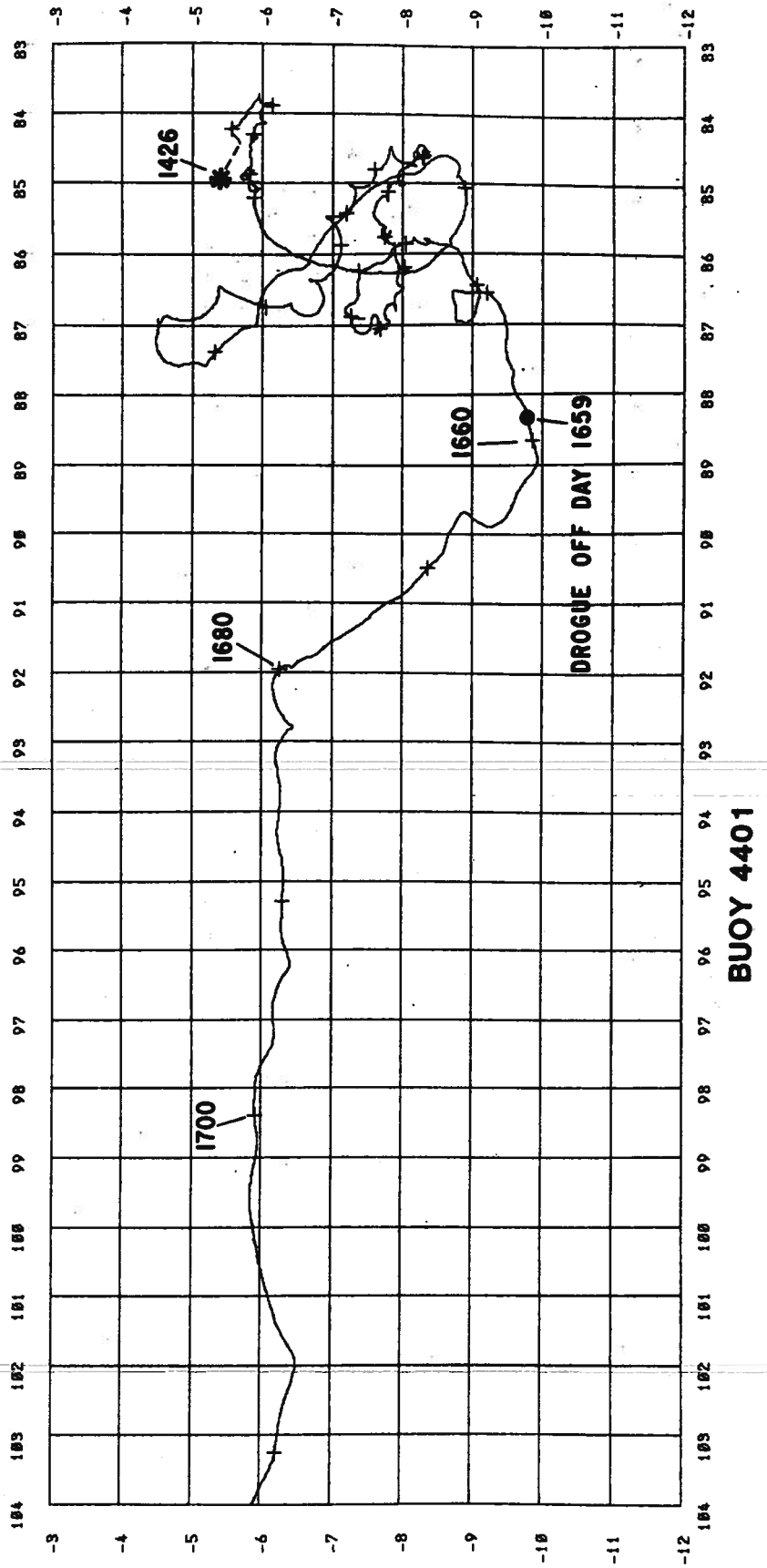


Figure 80. Drifting buoy trajectory.

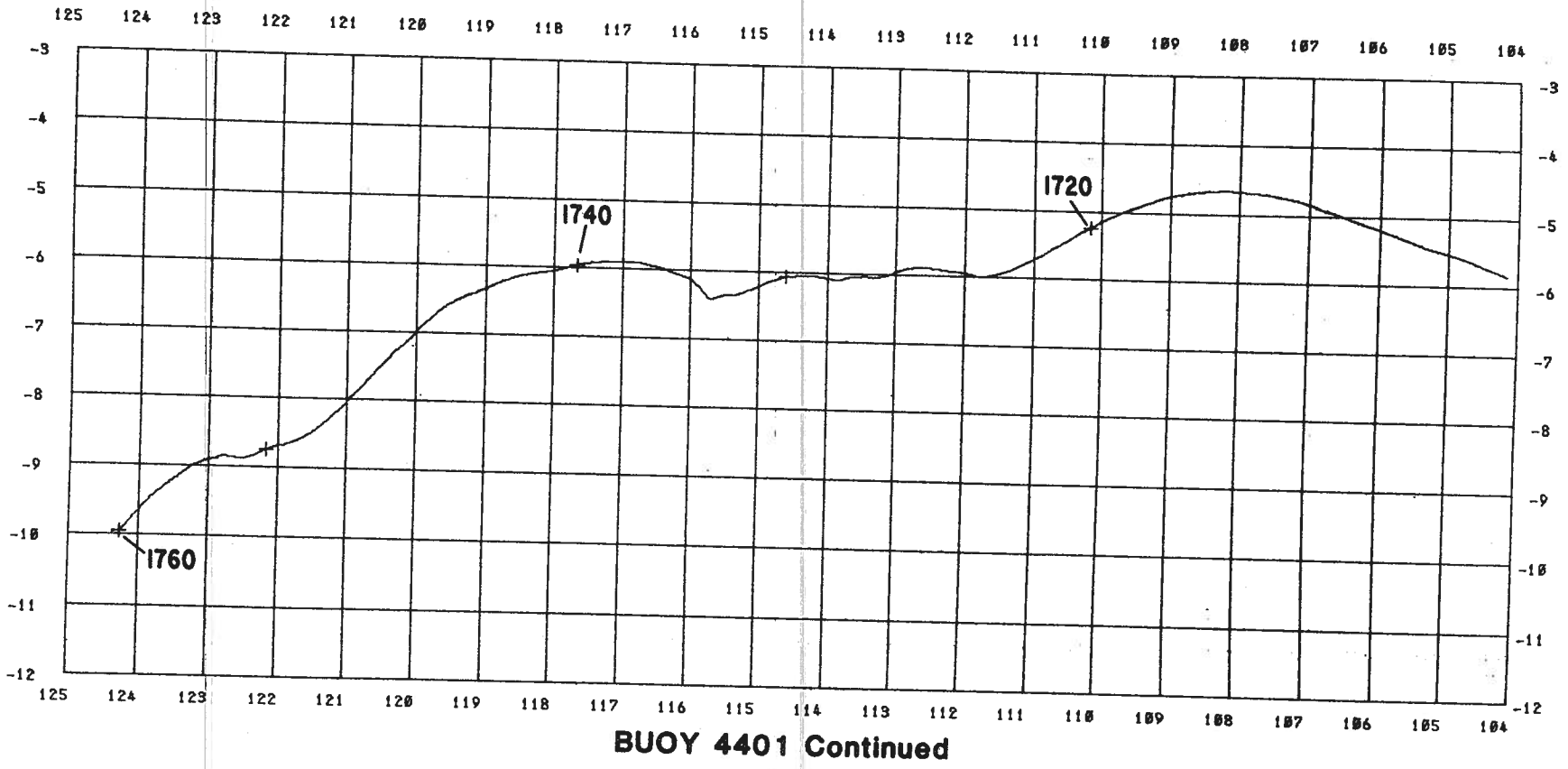


Figure 80. (continued)

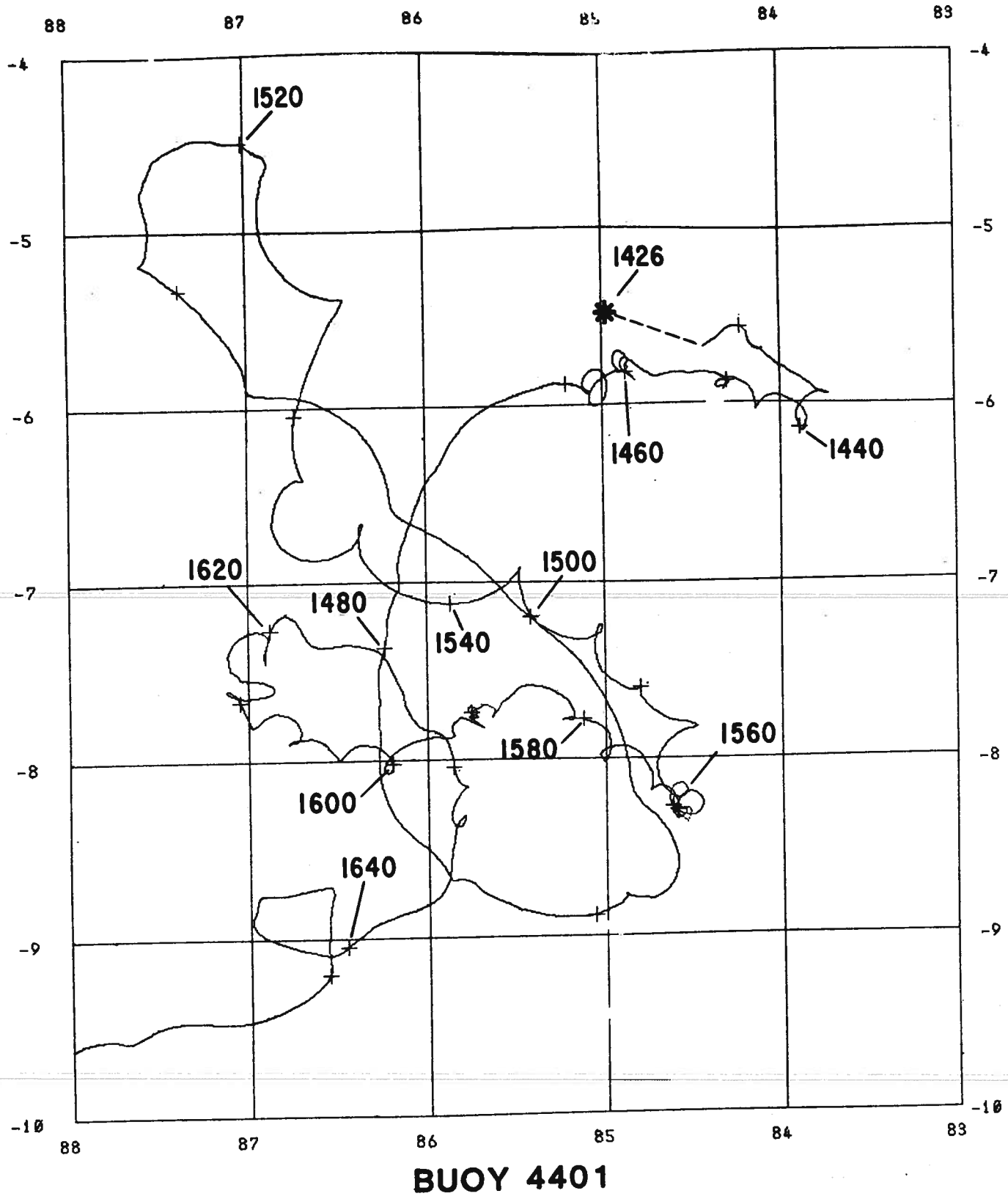


Figure 81. Drifting buoy trajectory detail.

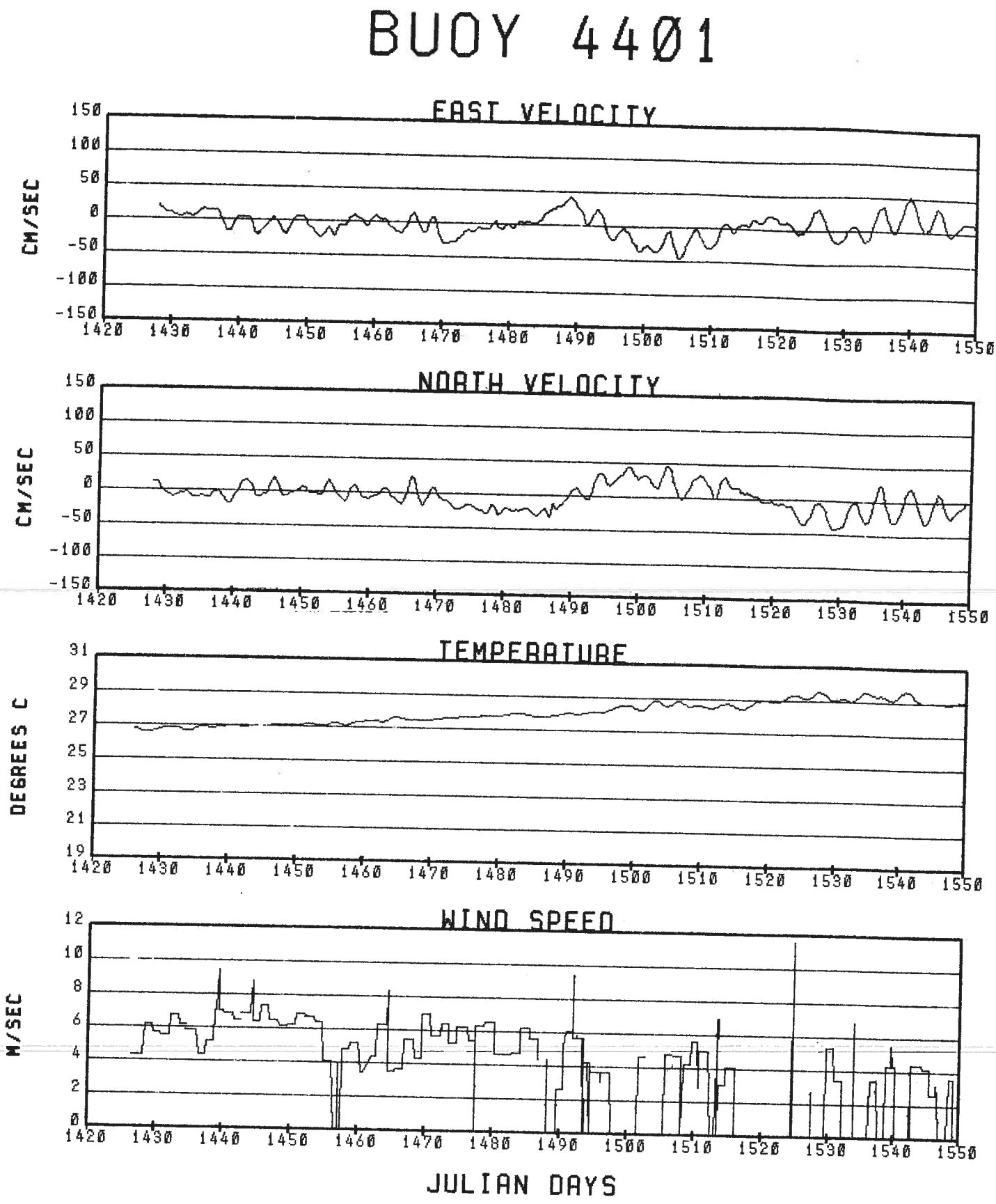


Figure 82. Time series of velocity and sensor data.

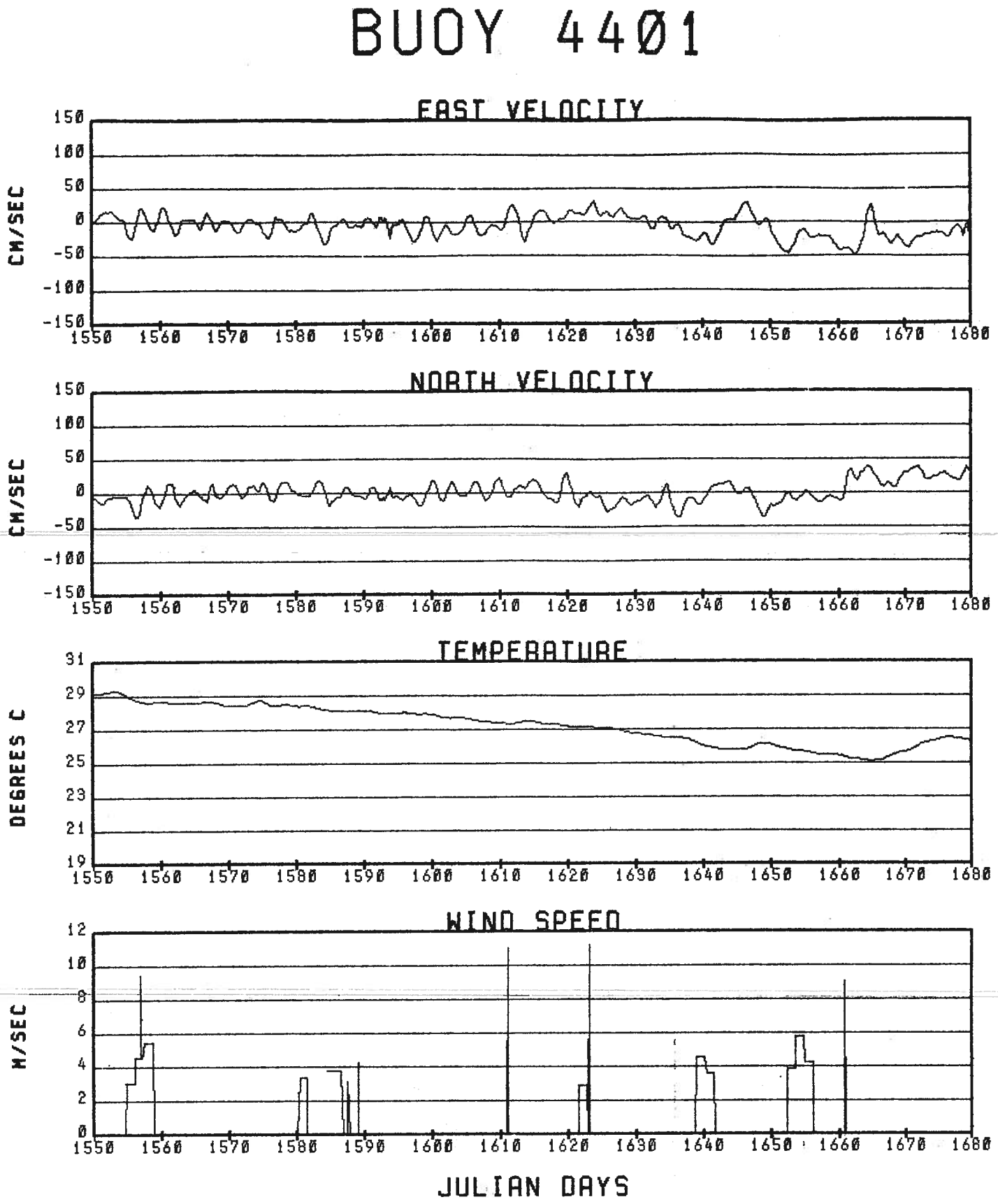


Figure 82. (continued)

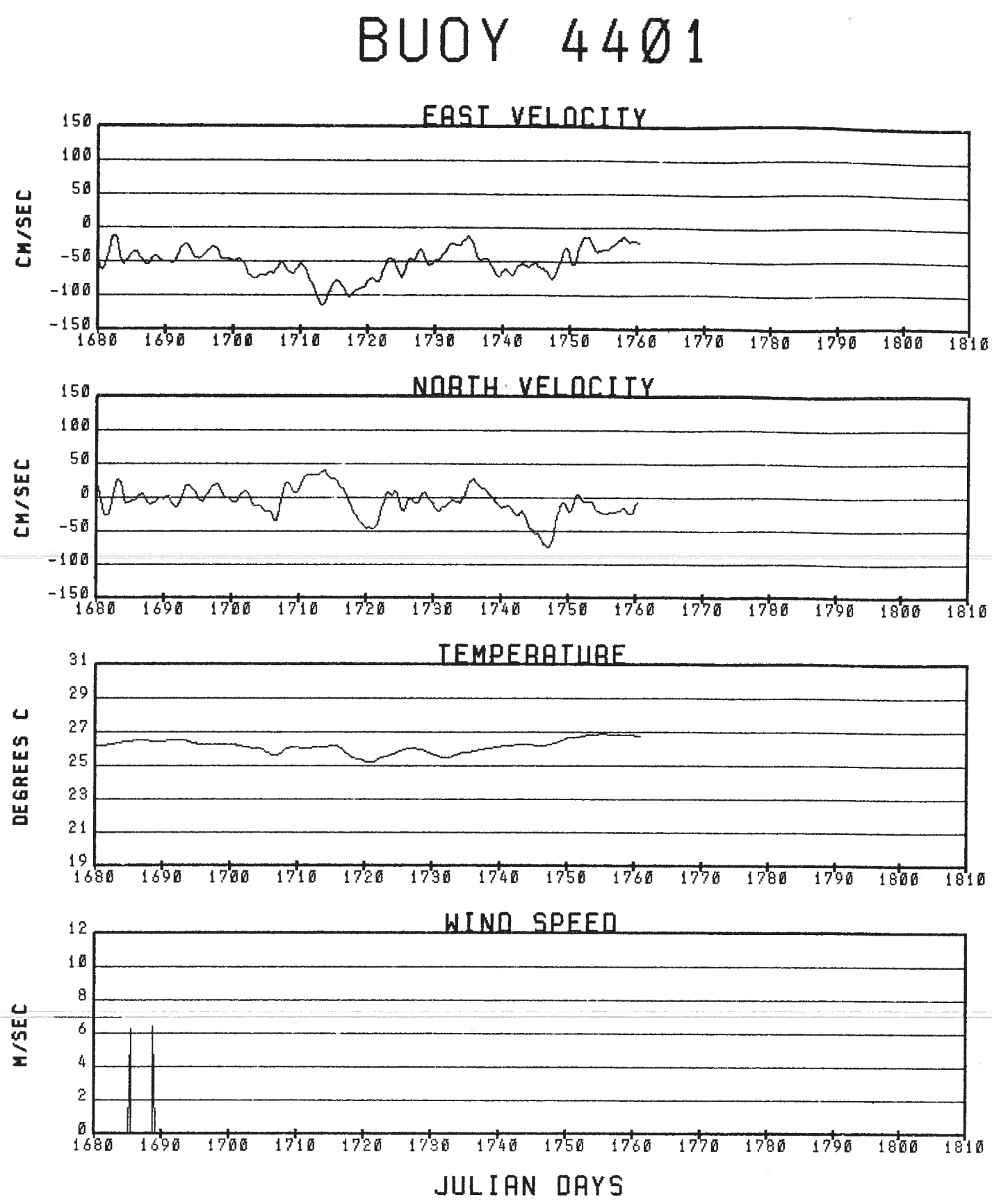


Figure 82. (continued)

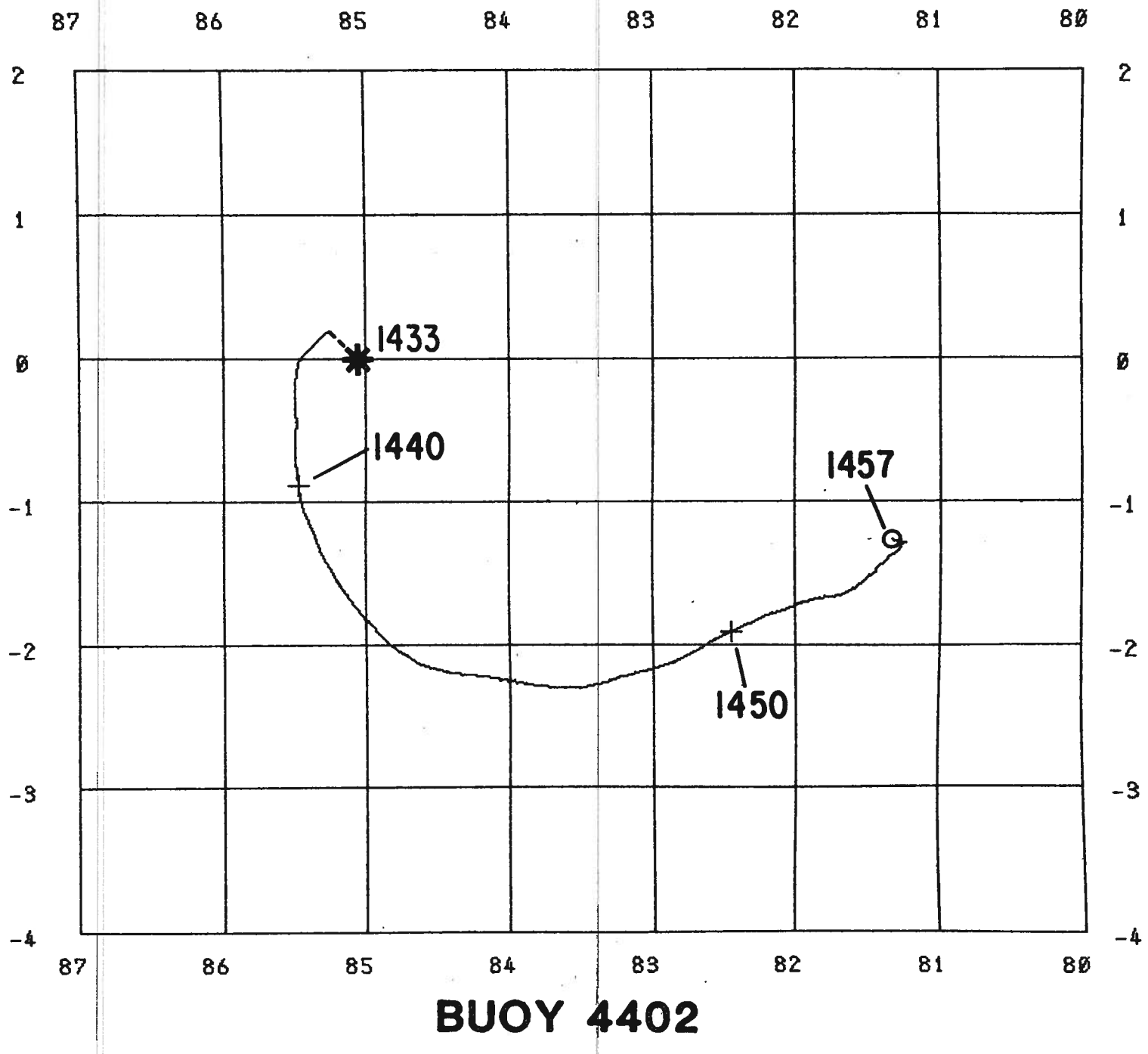


Figure 83. Drifting buoy trajectory.

BUOY 4402

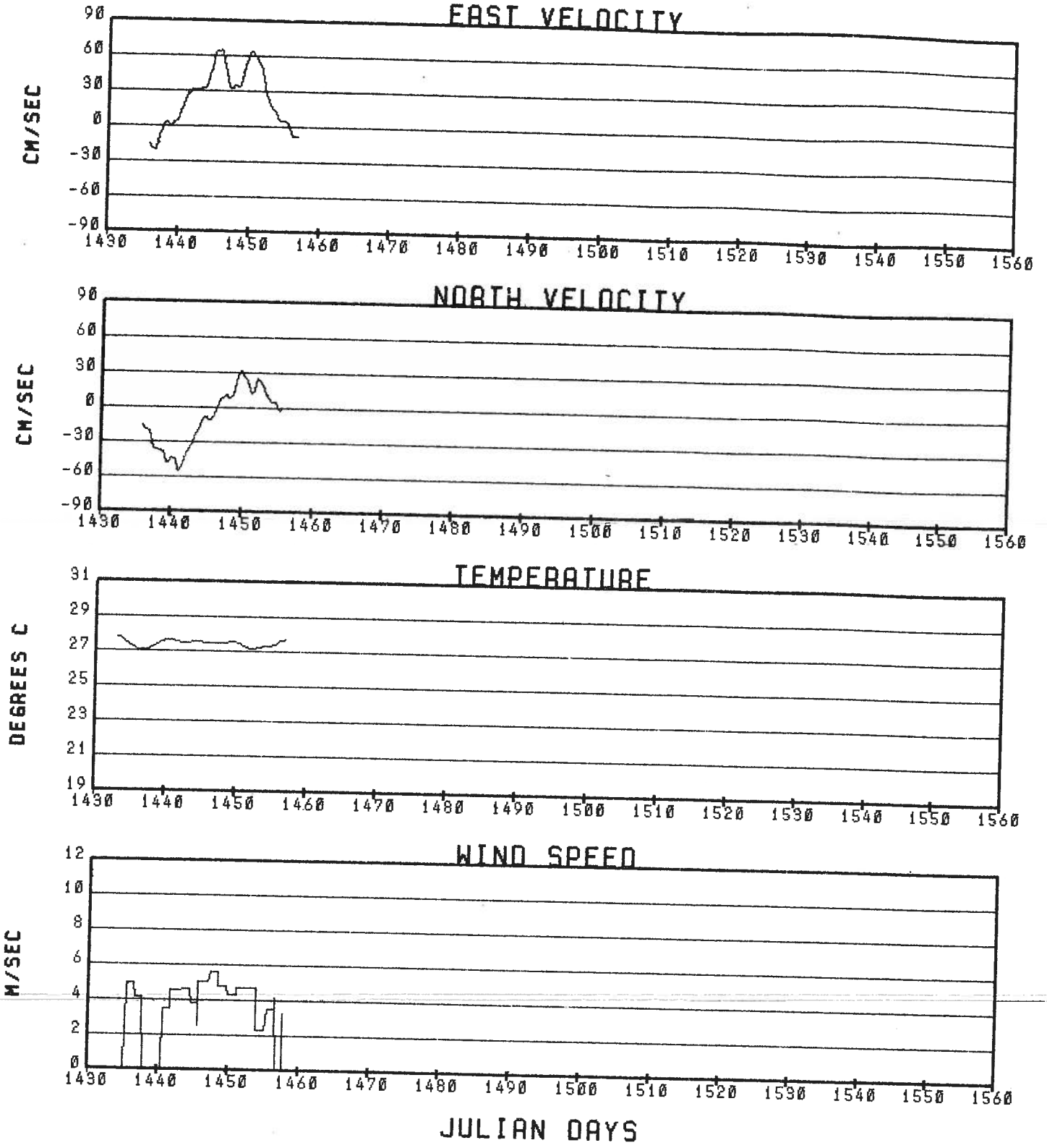


Figure 84. Time series of velocity and sensor data.

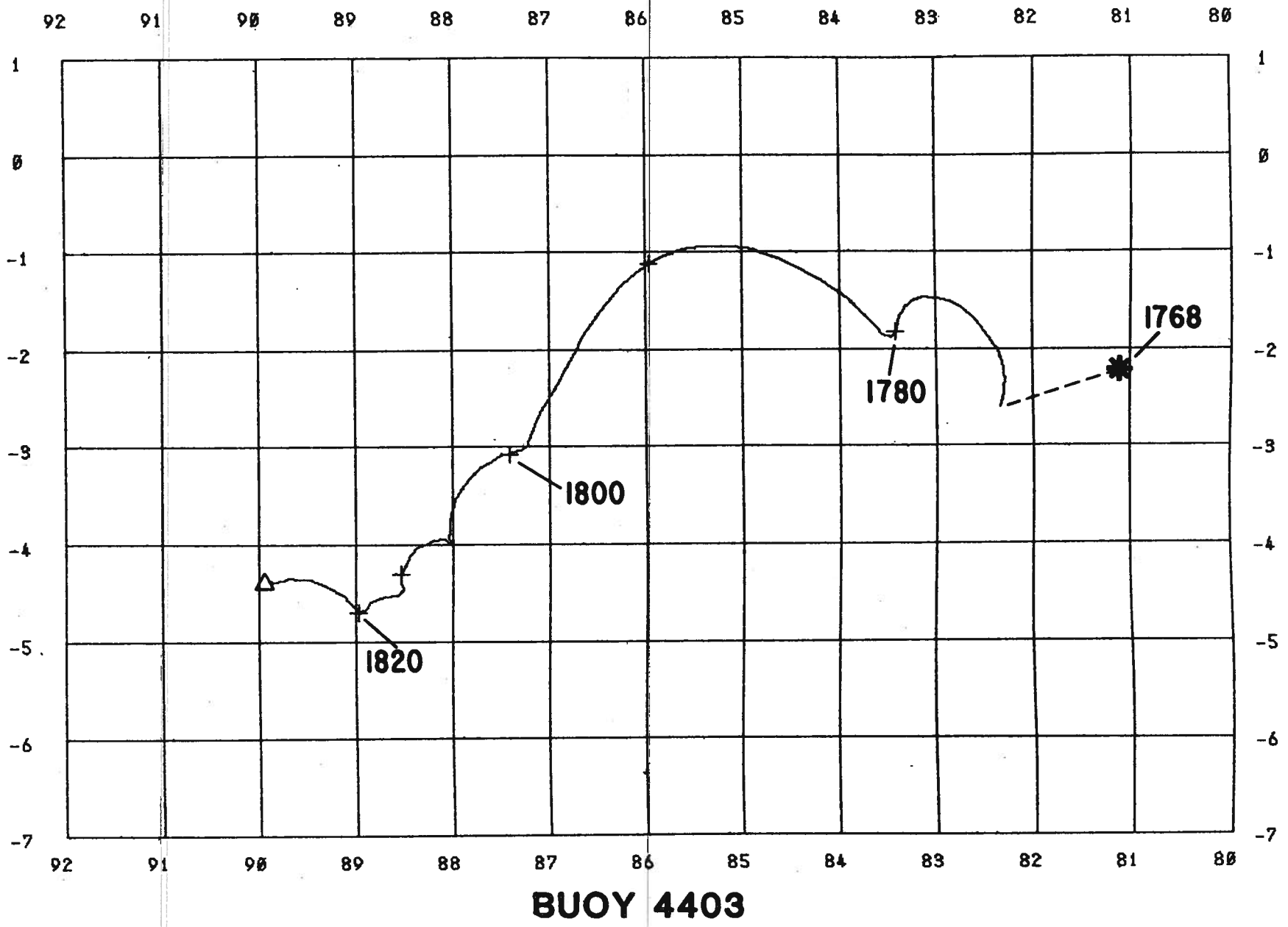


Figure 85. Drifting buoy trajectory.

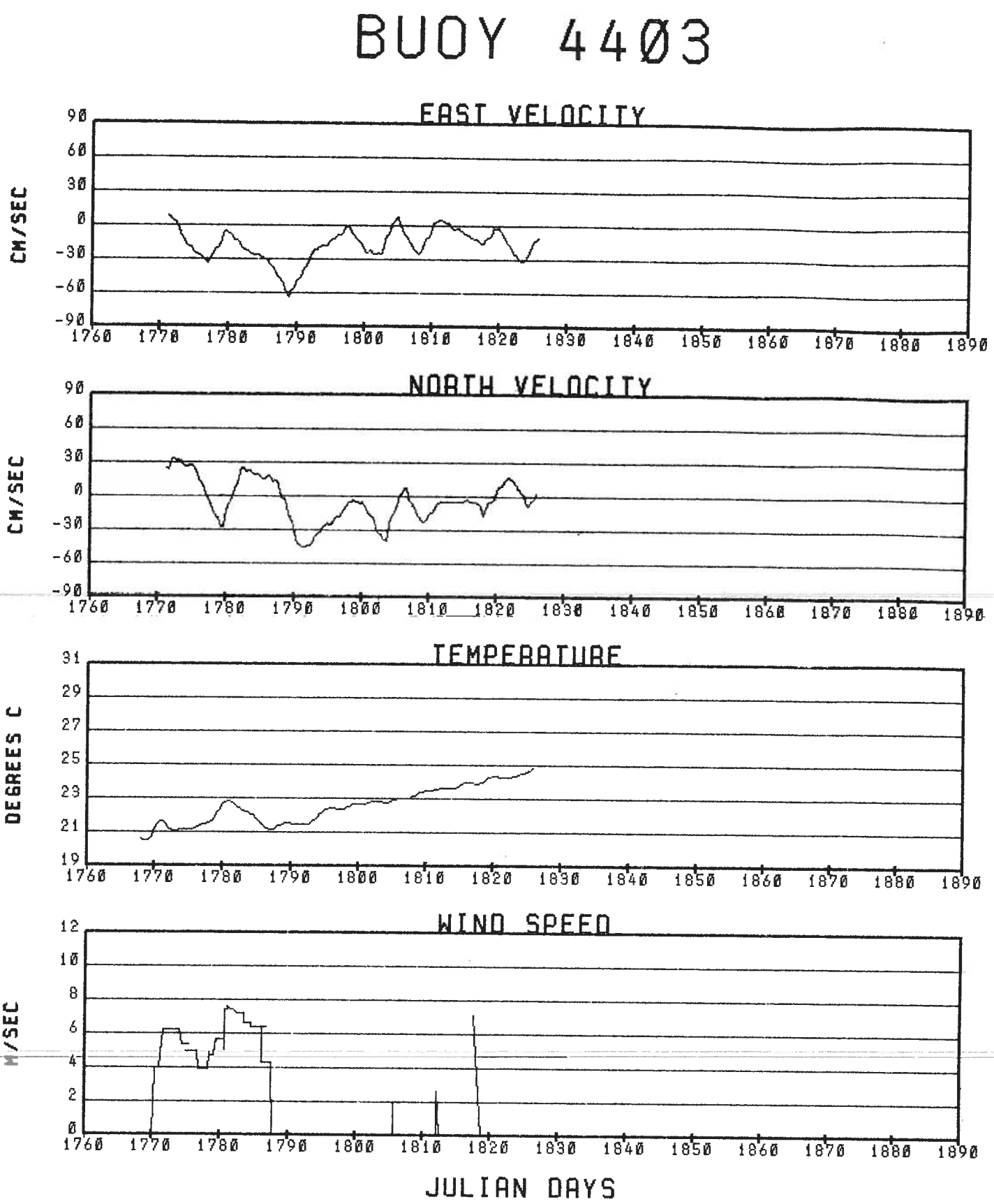


Figure 86. Time series of velocity and sensor data.

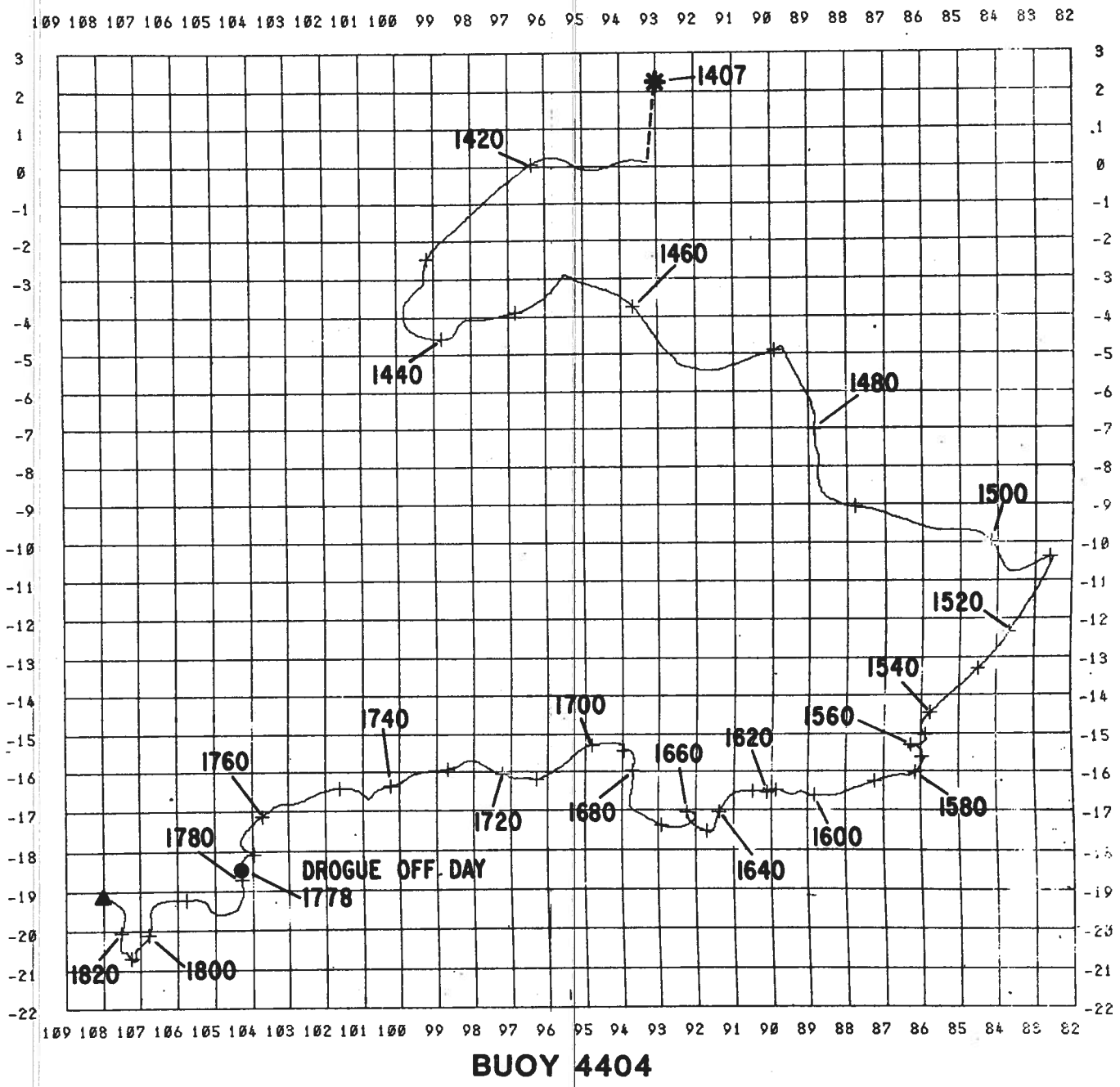


Figure 87. Drifting buoy trajectory.

BUOY 4404

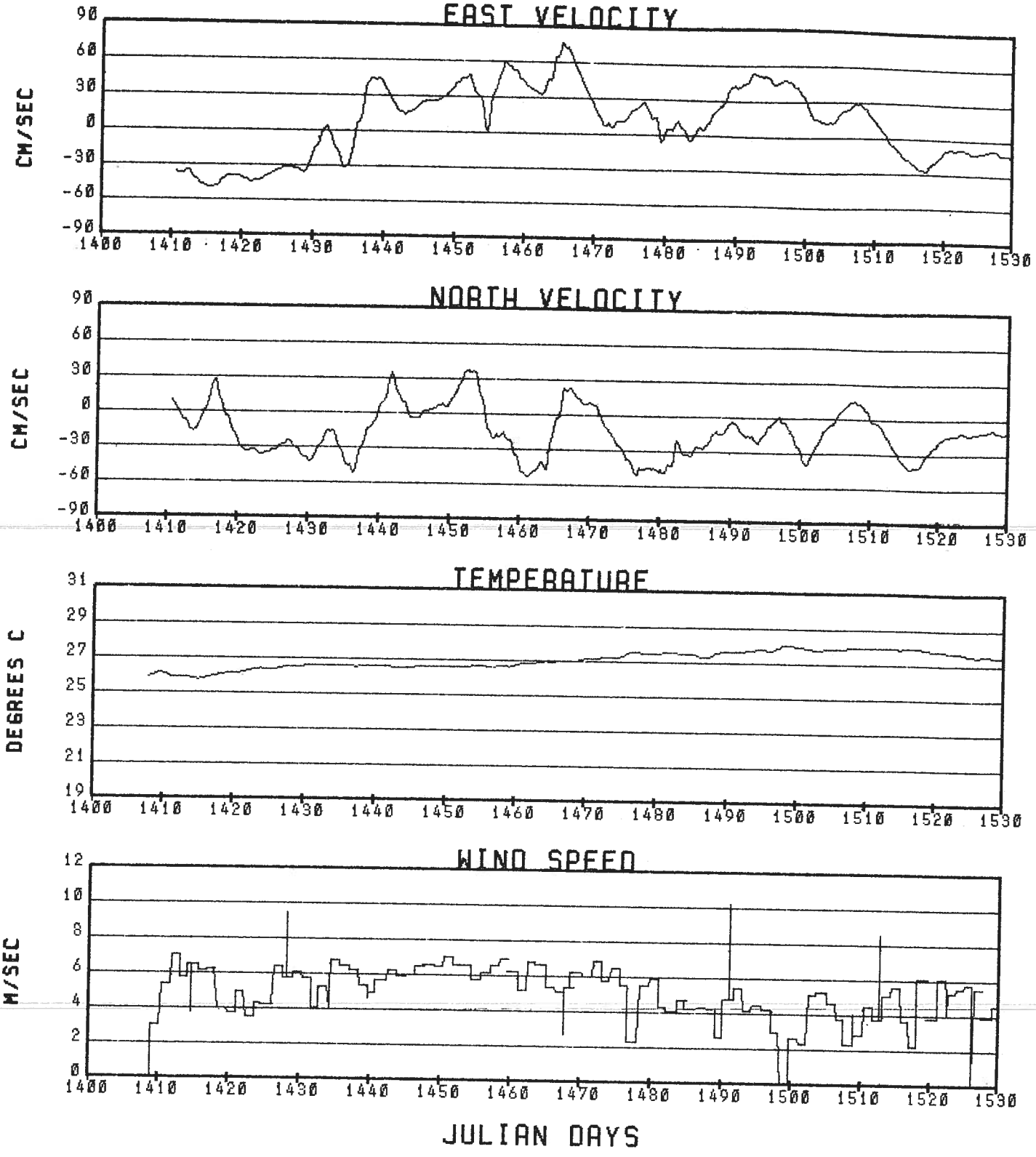


Figure 88. Time series of velocity and sensor data.

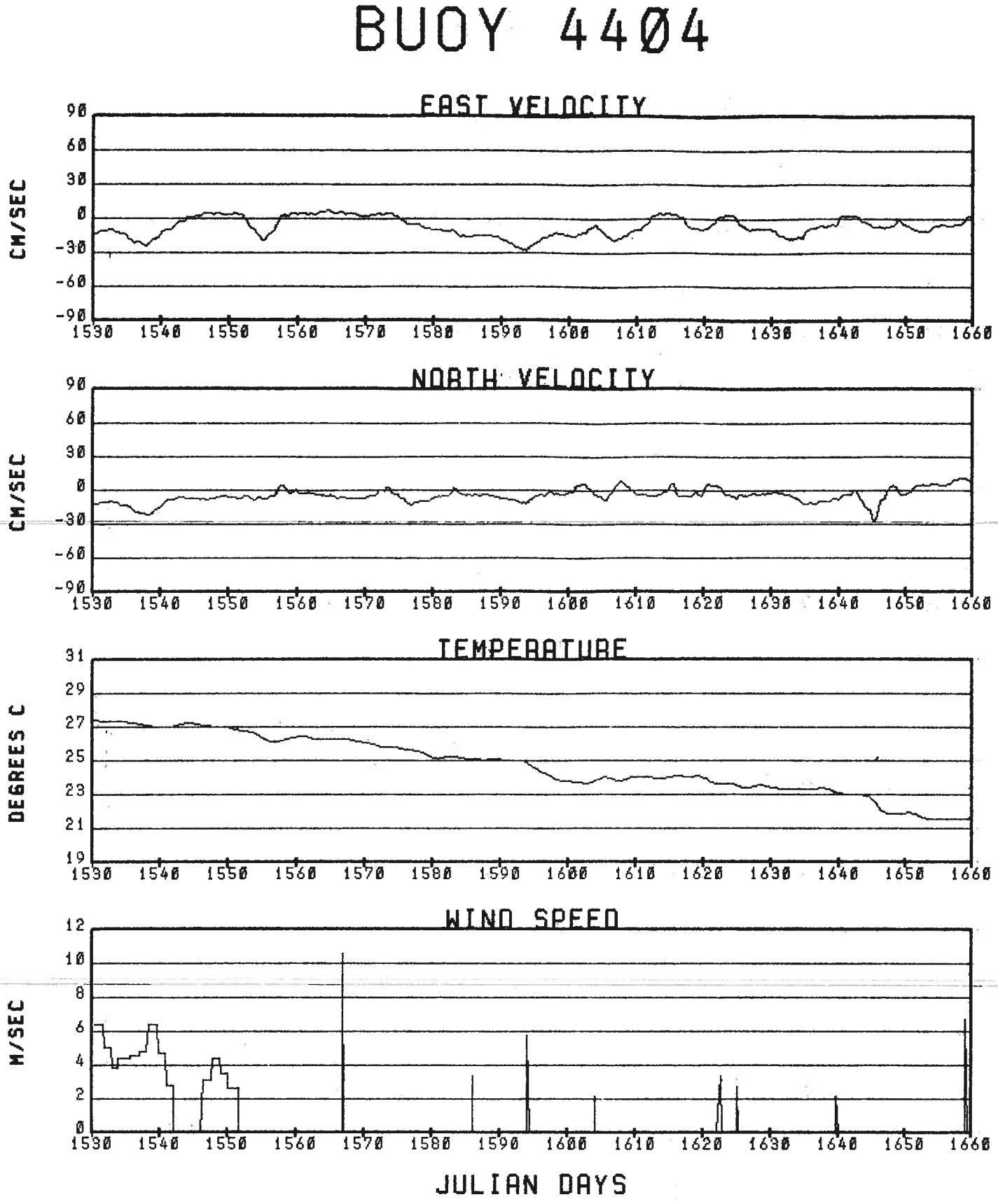


Figure 88. (continued)

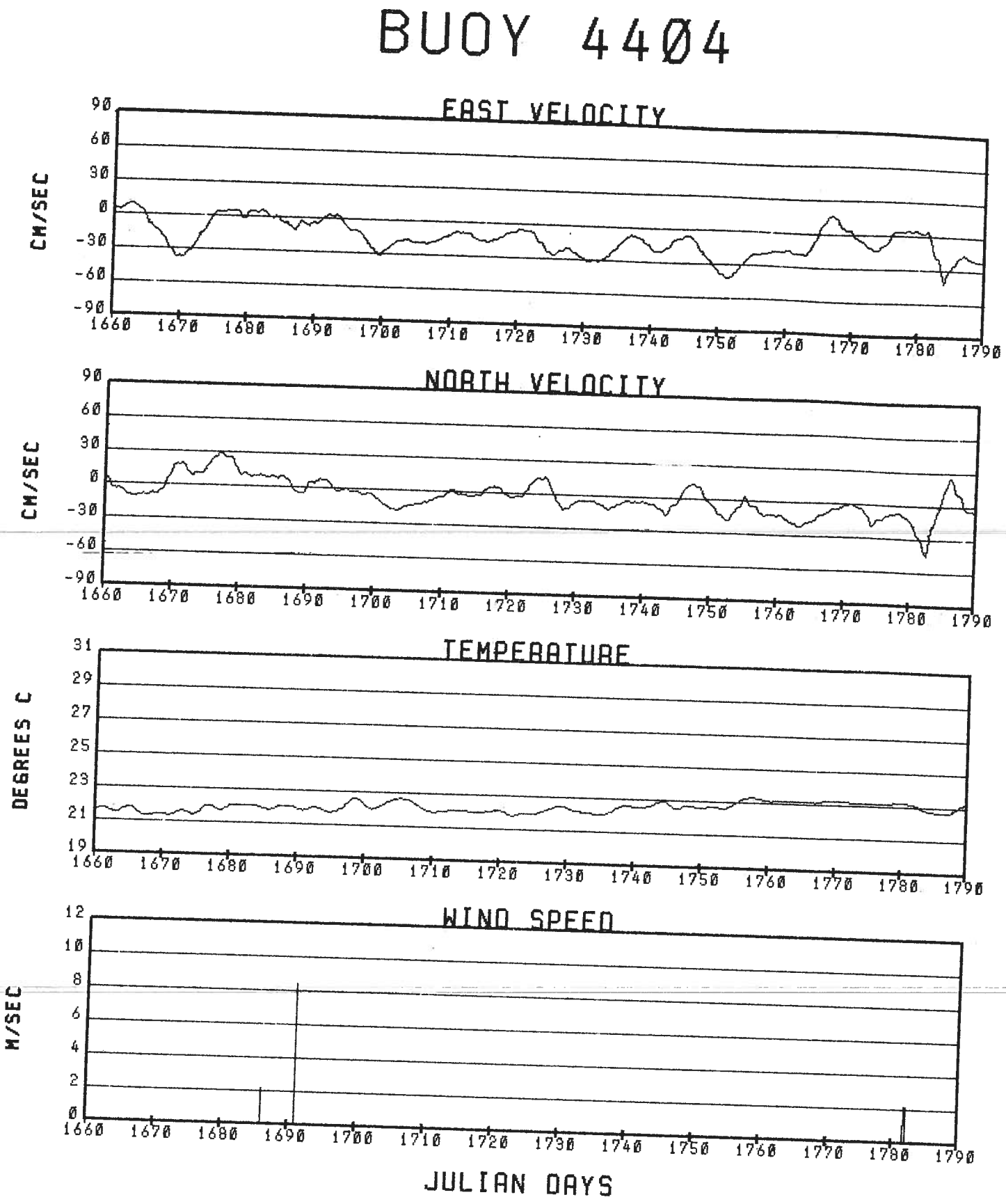


Figure 88. (continued)

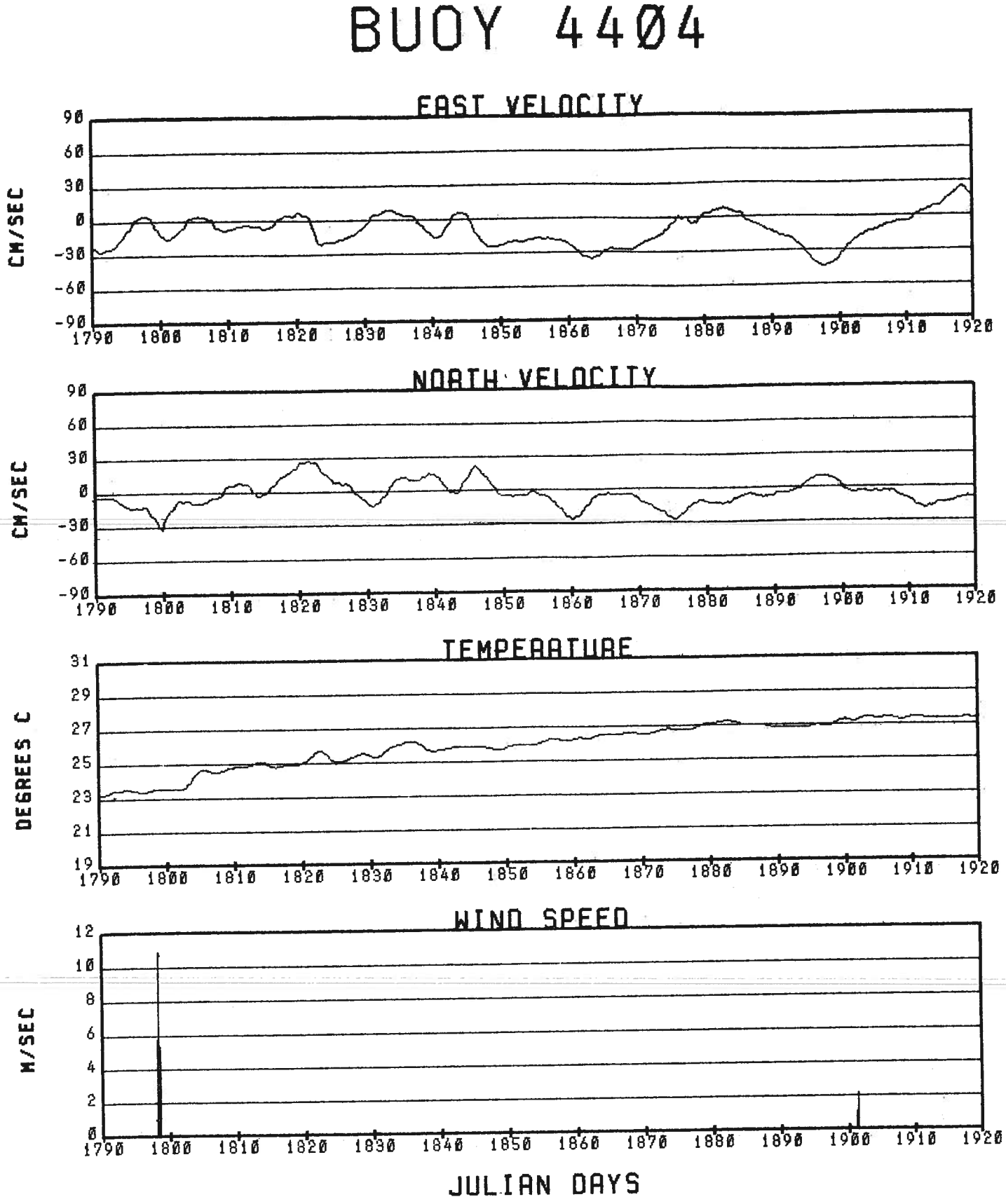


Figure 88. (continued)

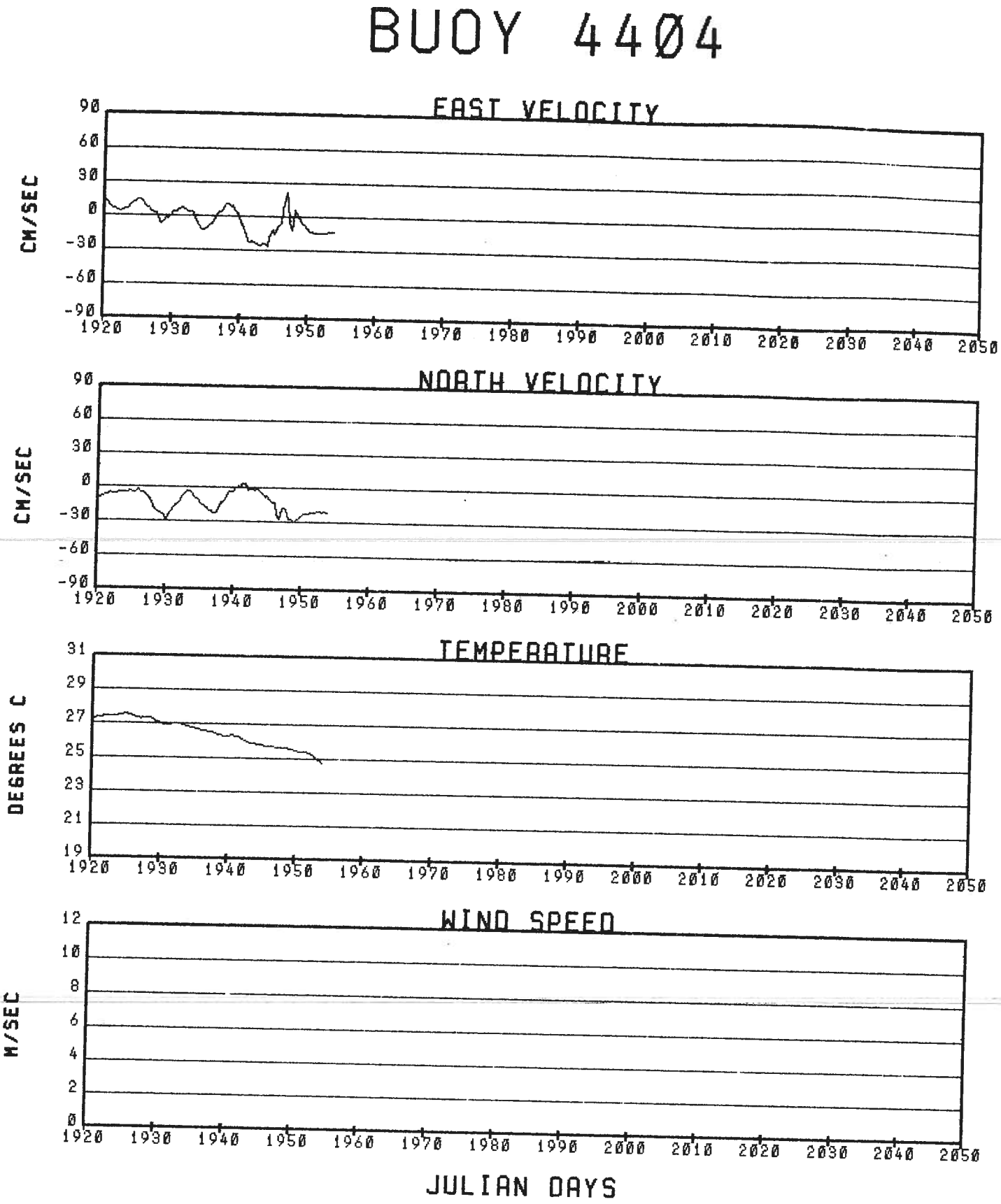


Figure 88. (continued)

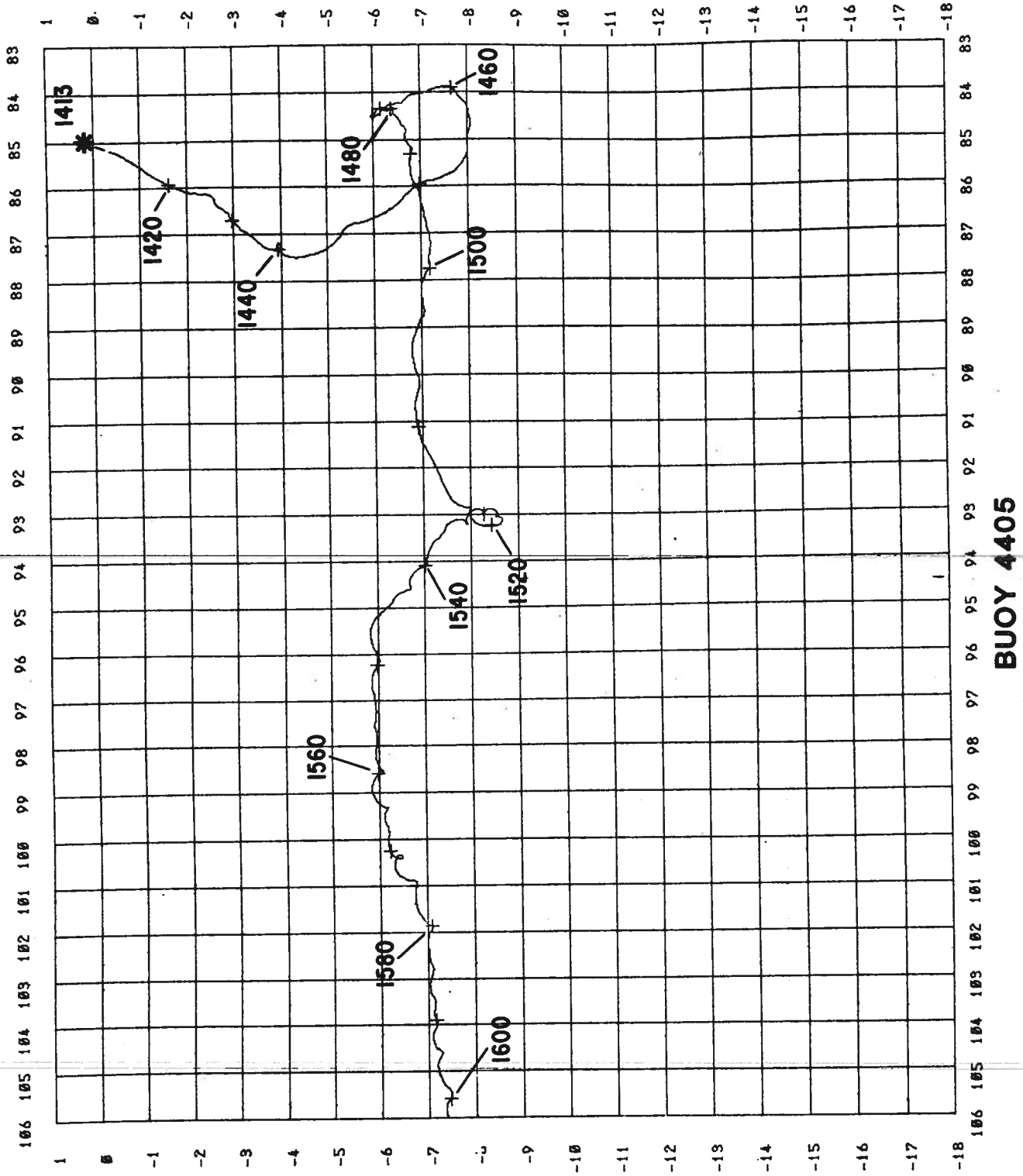


Figure 89. Drifting buoy trajectory.

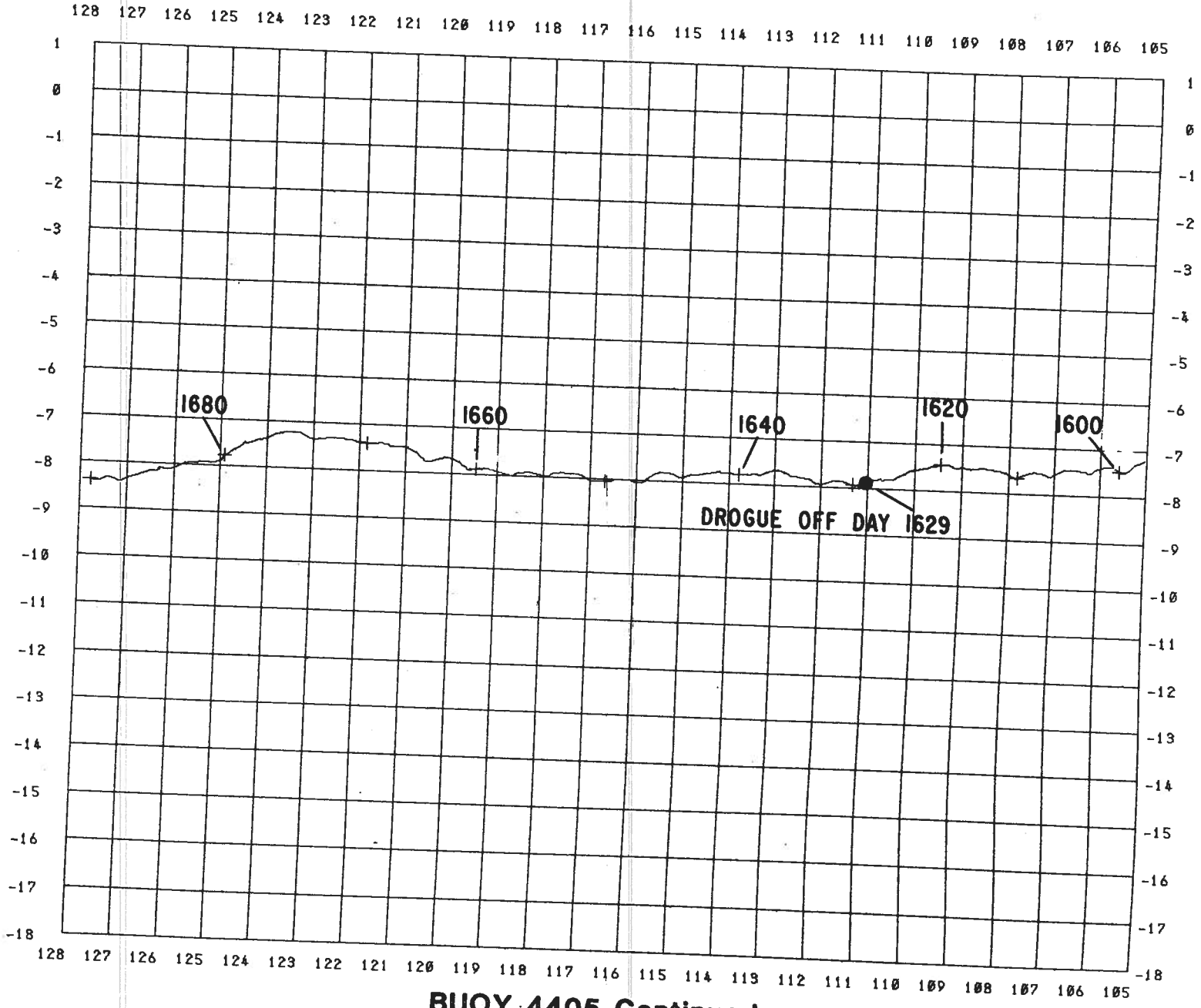


Figure 89. (continued)

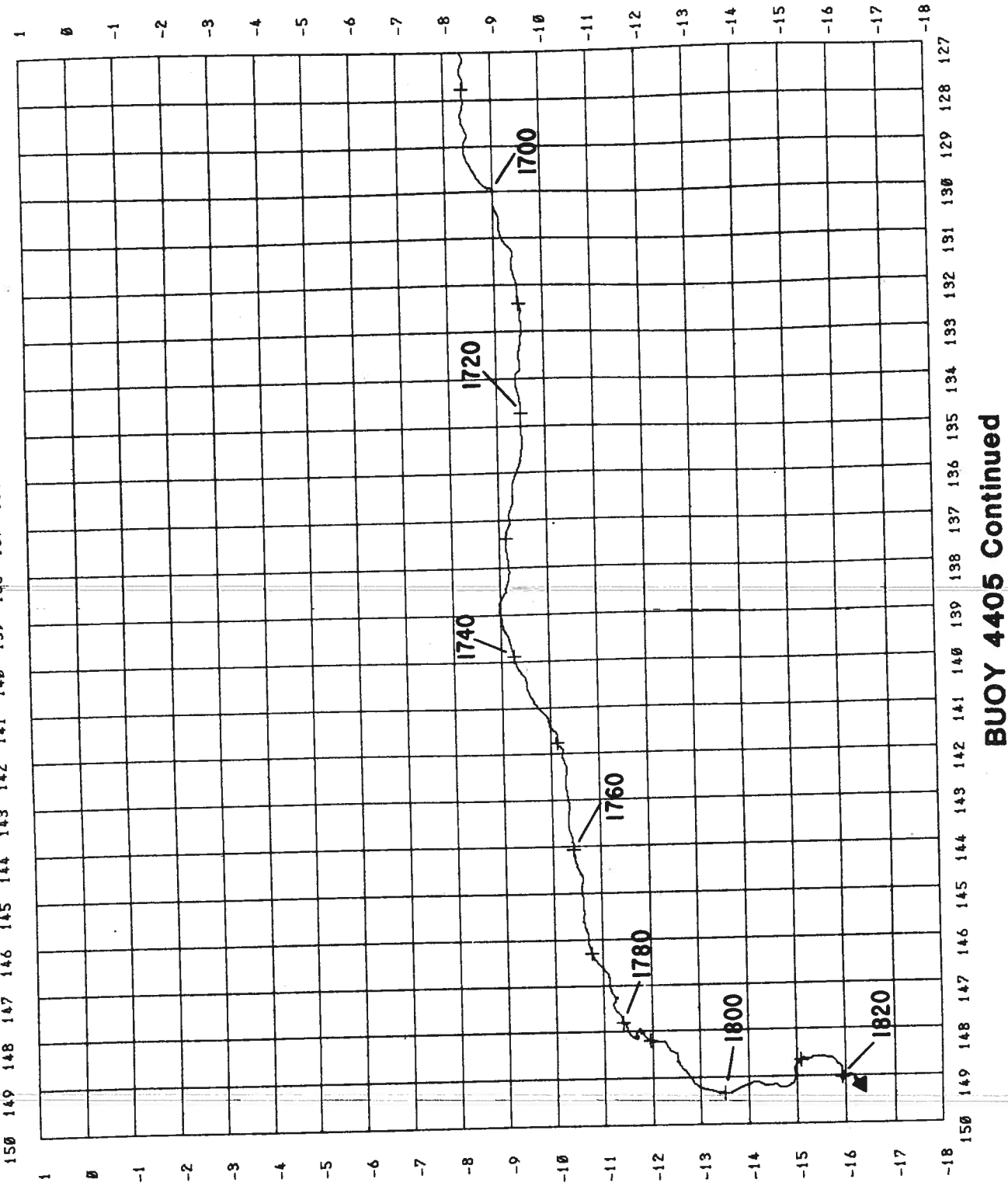


Figure 89. (continued)

BUOY 4405

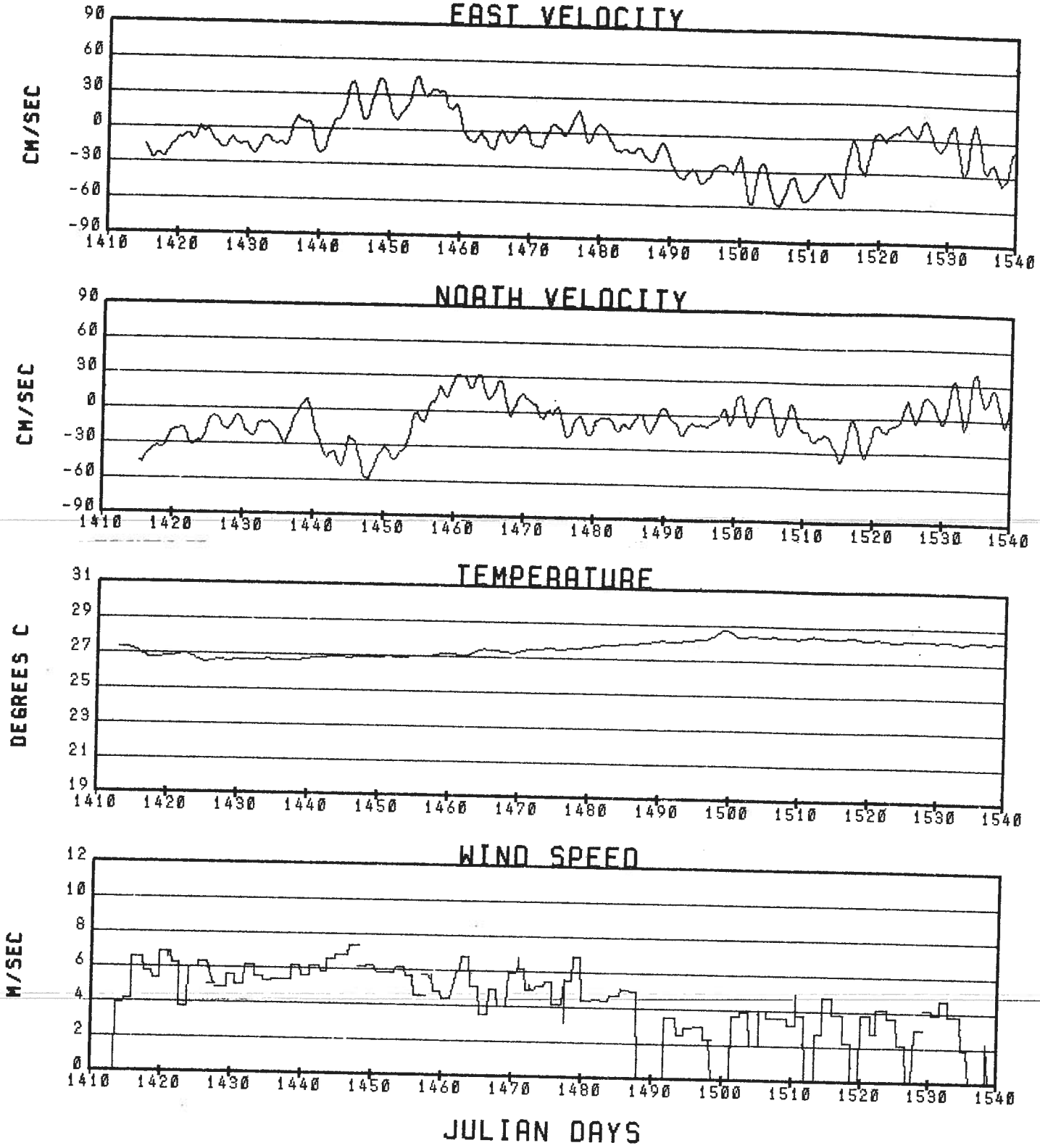


Figure 90. Time series of velocity and sensor data.

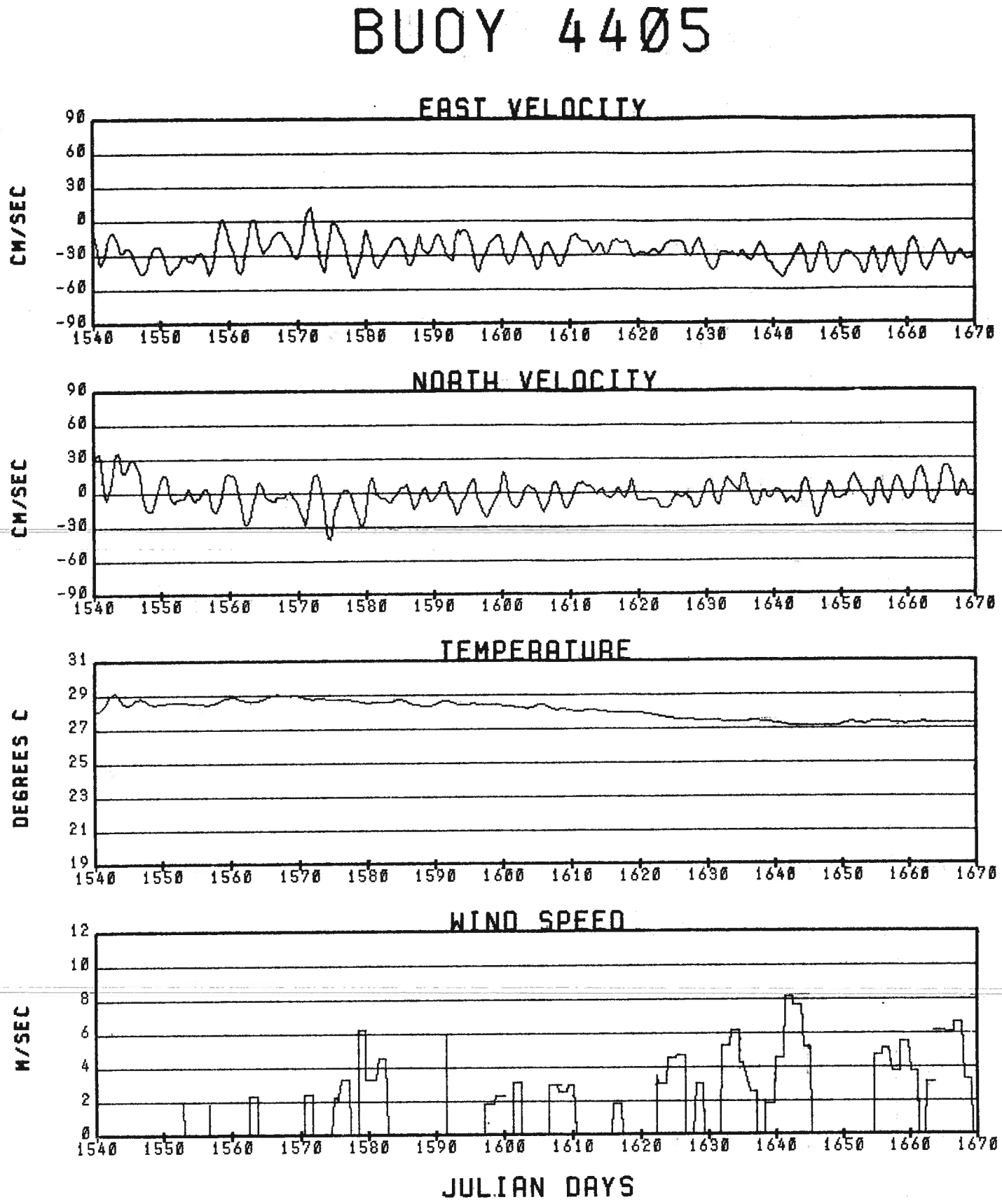


Figure 90. (continued)

BUOY 4405

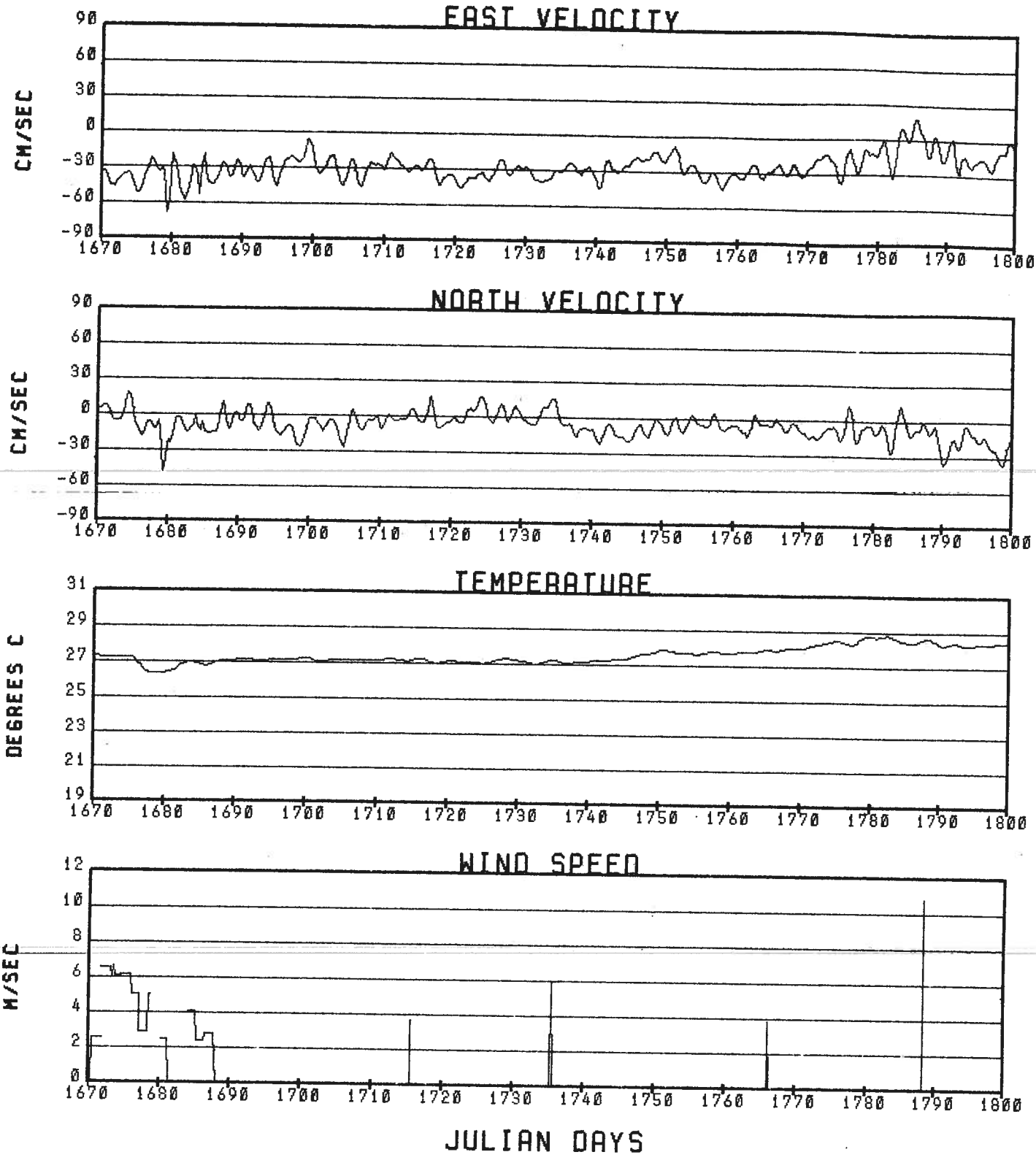


Figure 90. (continued)

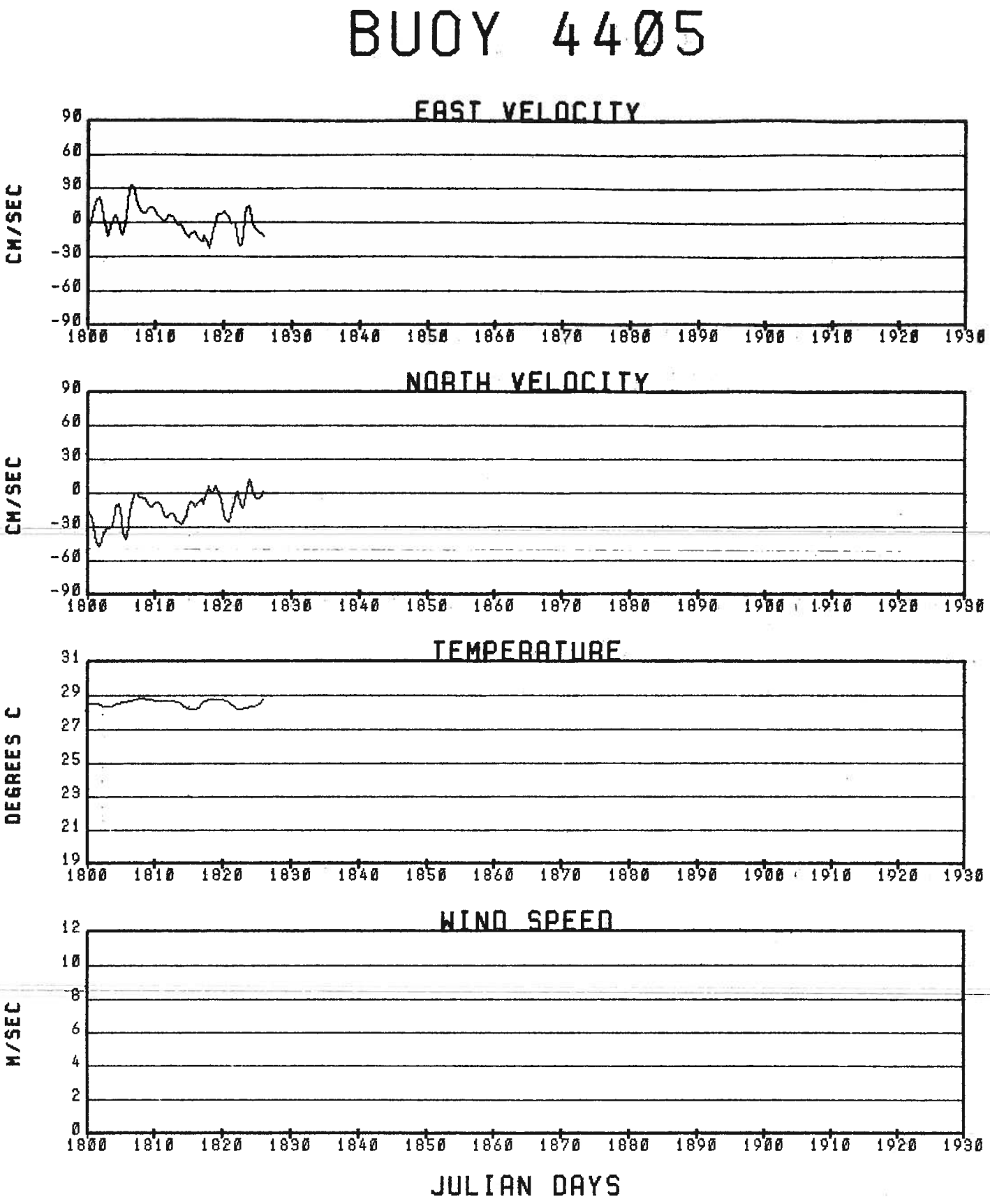


Figure 90. (continued)

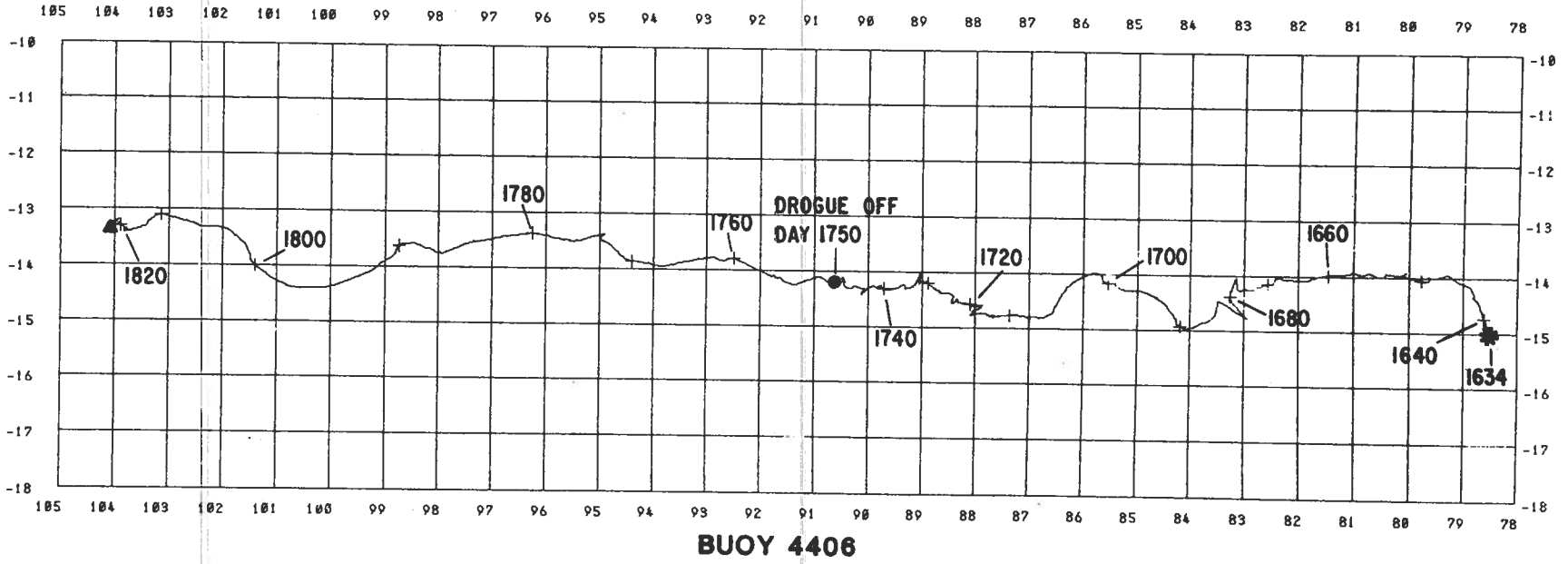


Figure 91. Drifting buoy trajectory.

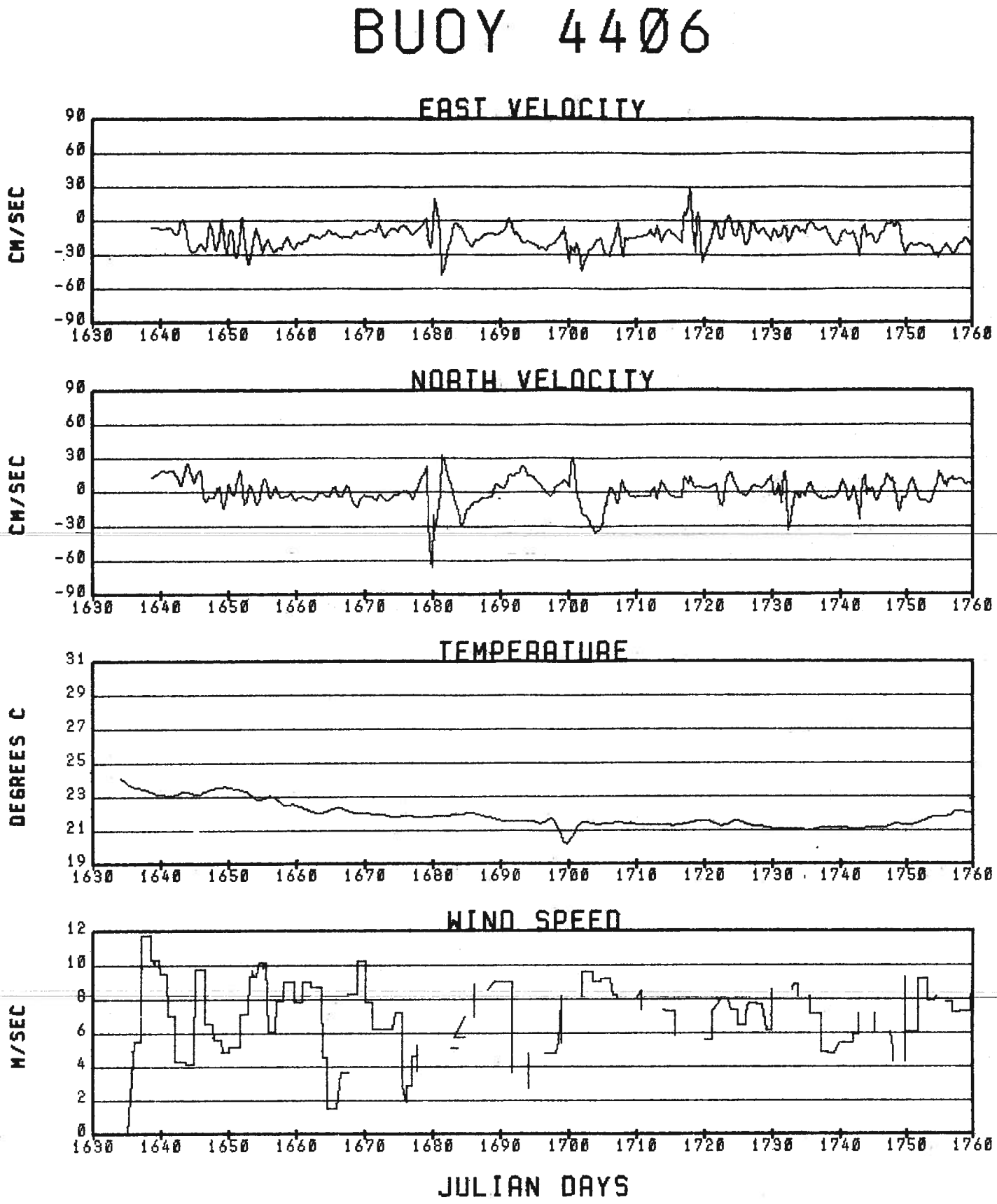


Figure 92. Time series of velocity and sensor data.

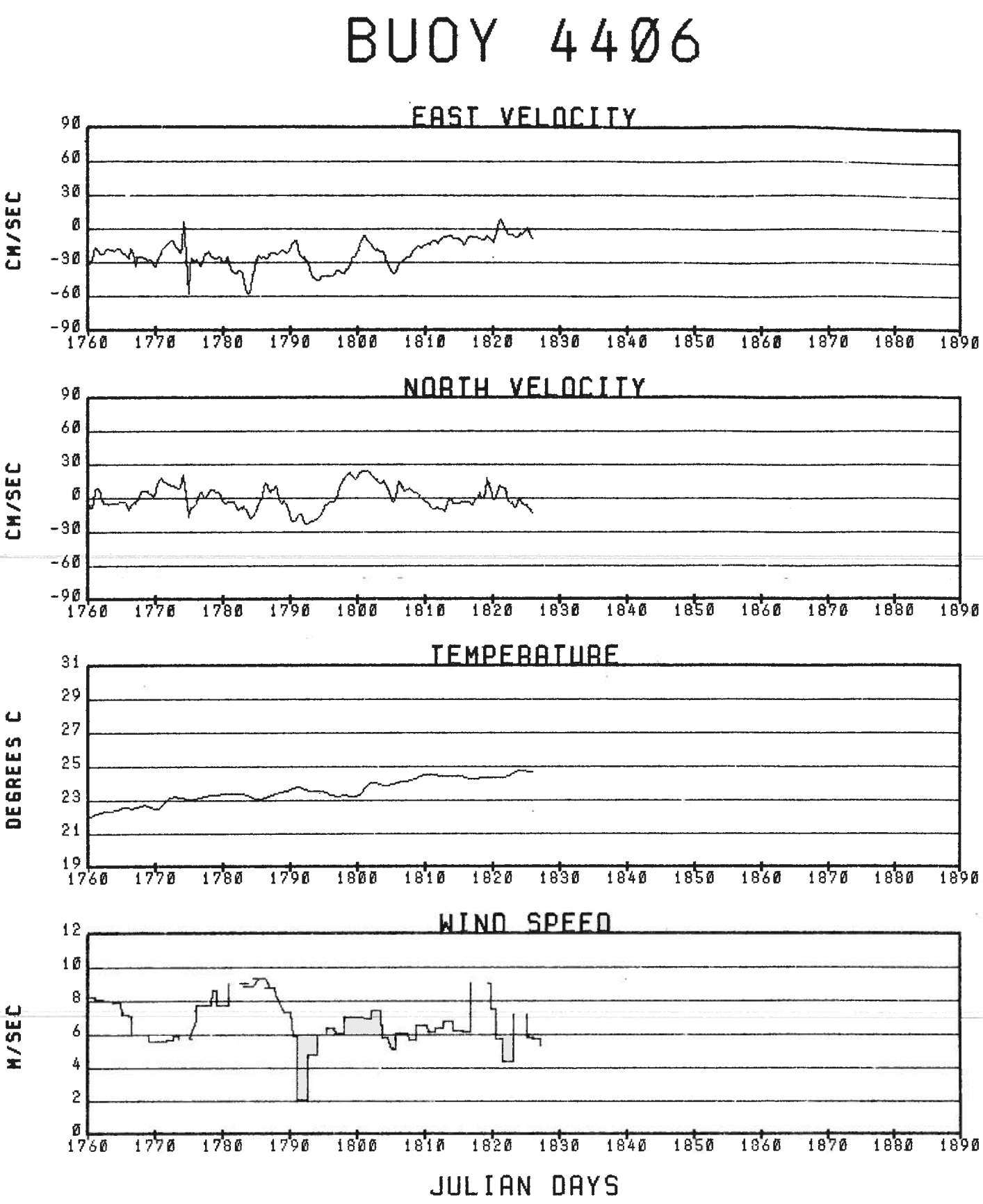


Figure 92. (continued)

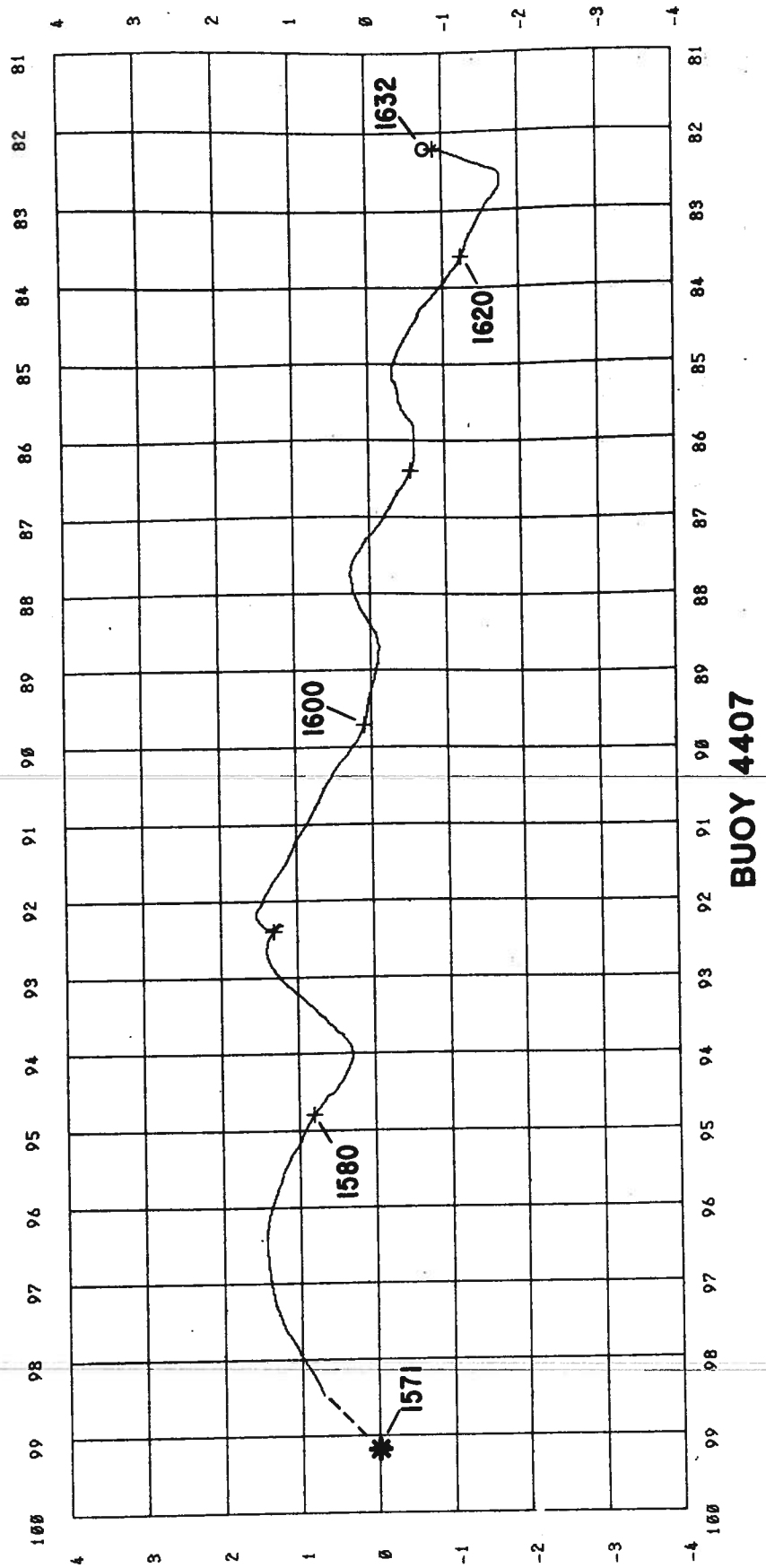


Figure 93. Drifting buoy trajectory.

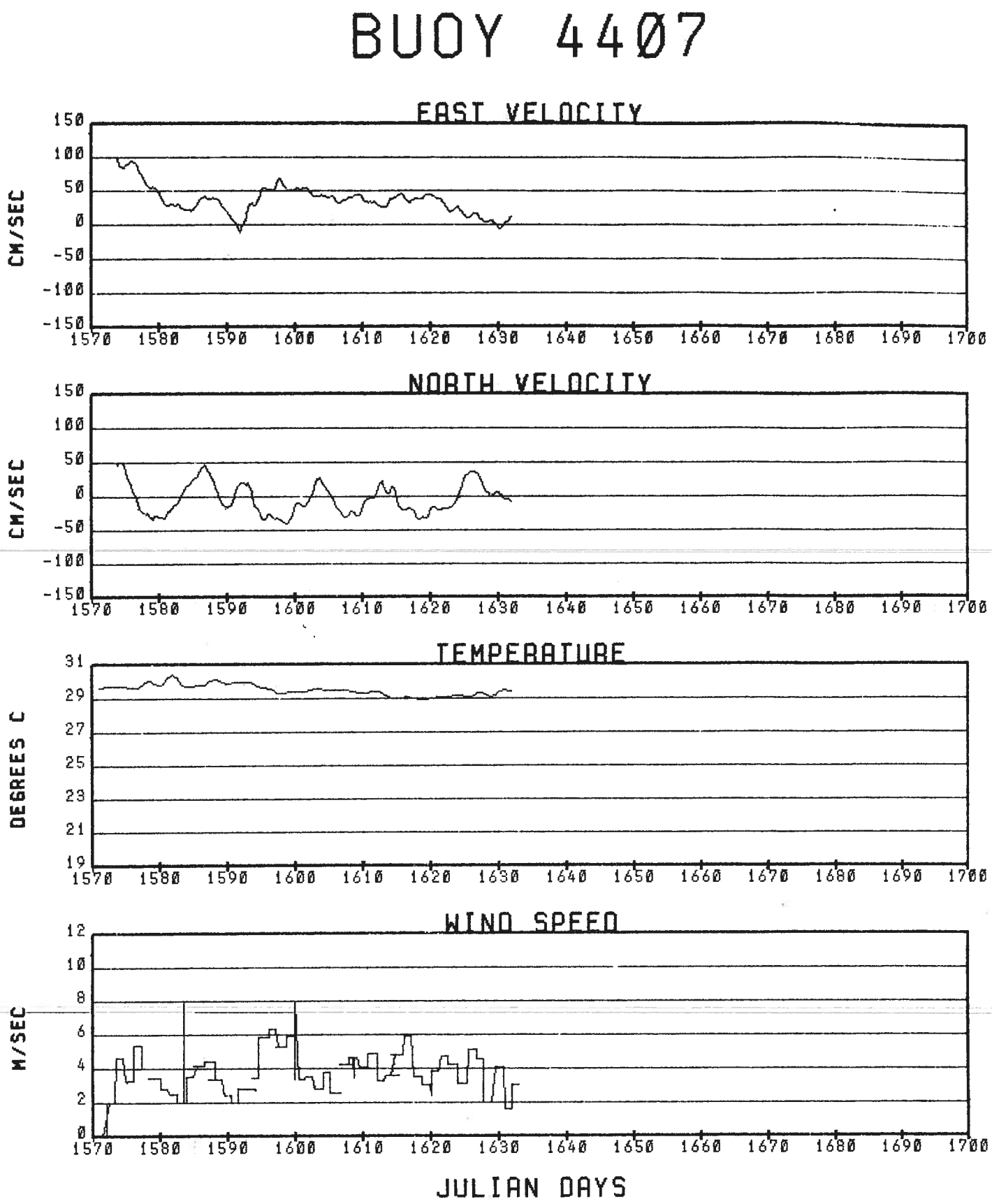


Figure 94. Time series of velocity and sensor data.

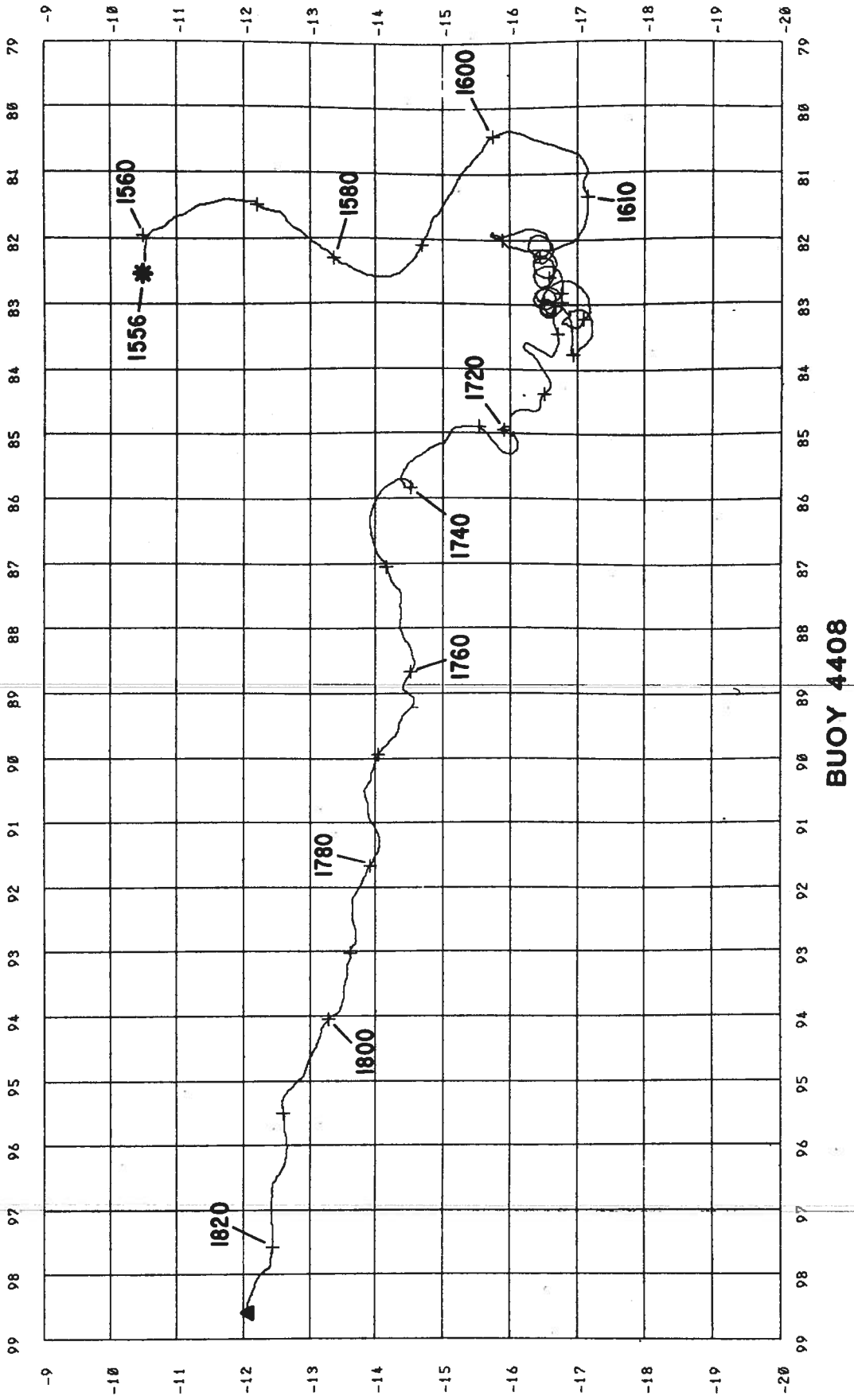


Figure 95. Drifting buoy trajectory.

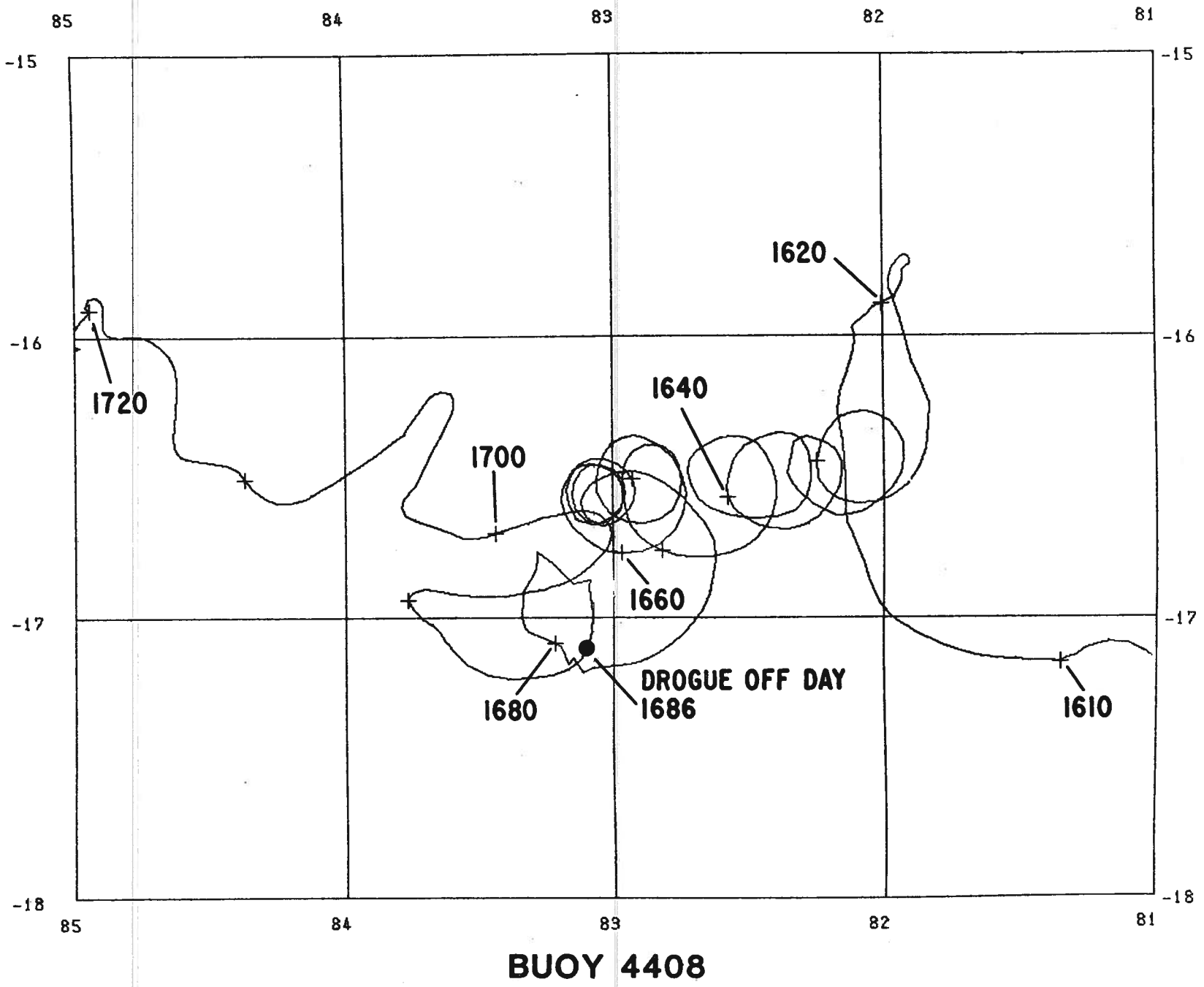


Figure 96. Drifting buoy trajectory detail.

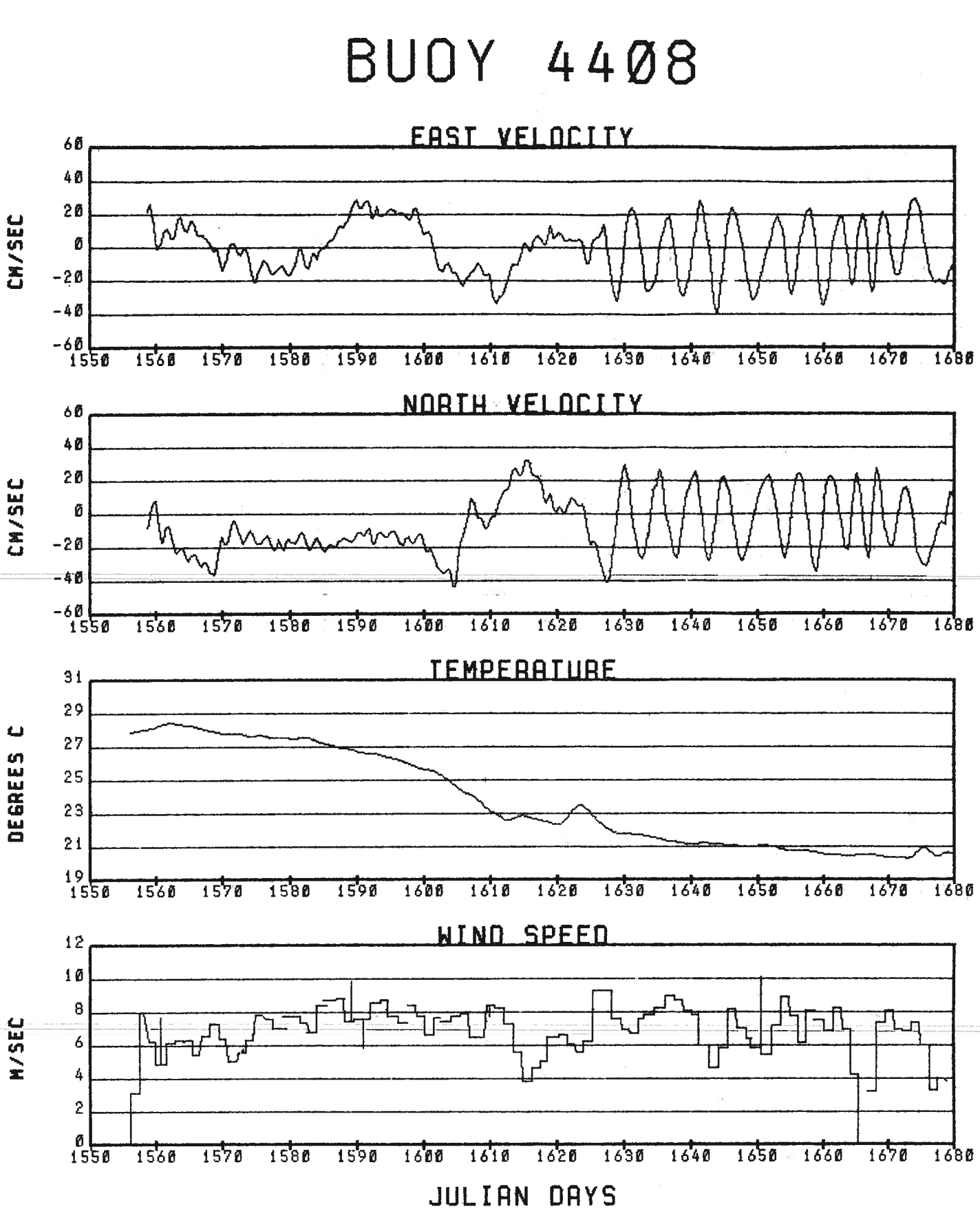


Figure 97. Time series of velocity and sensor data.

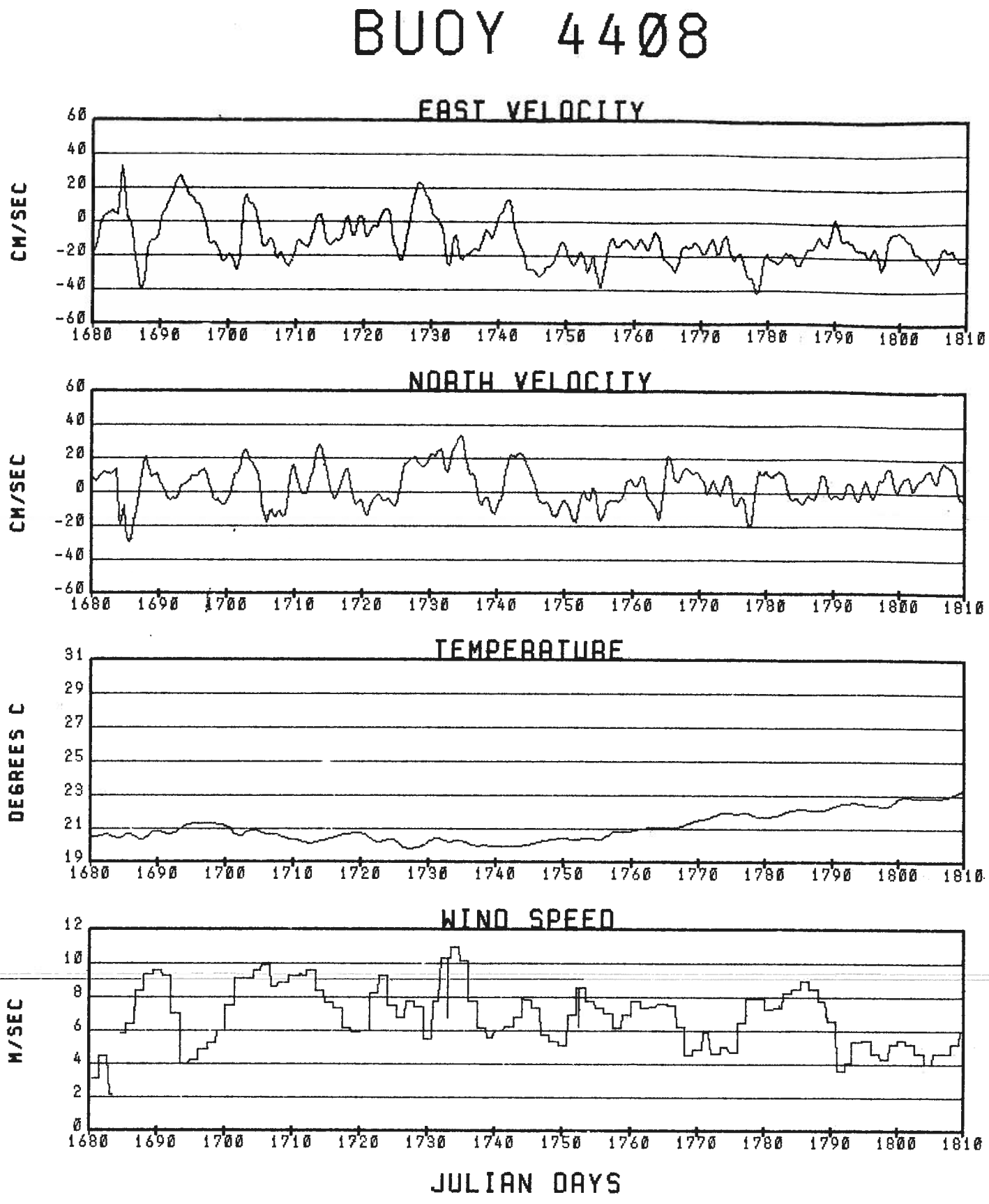


Figure 97. (continued)

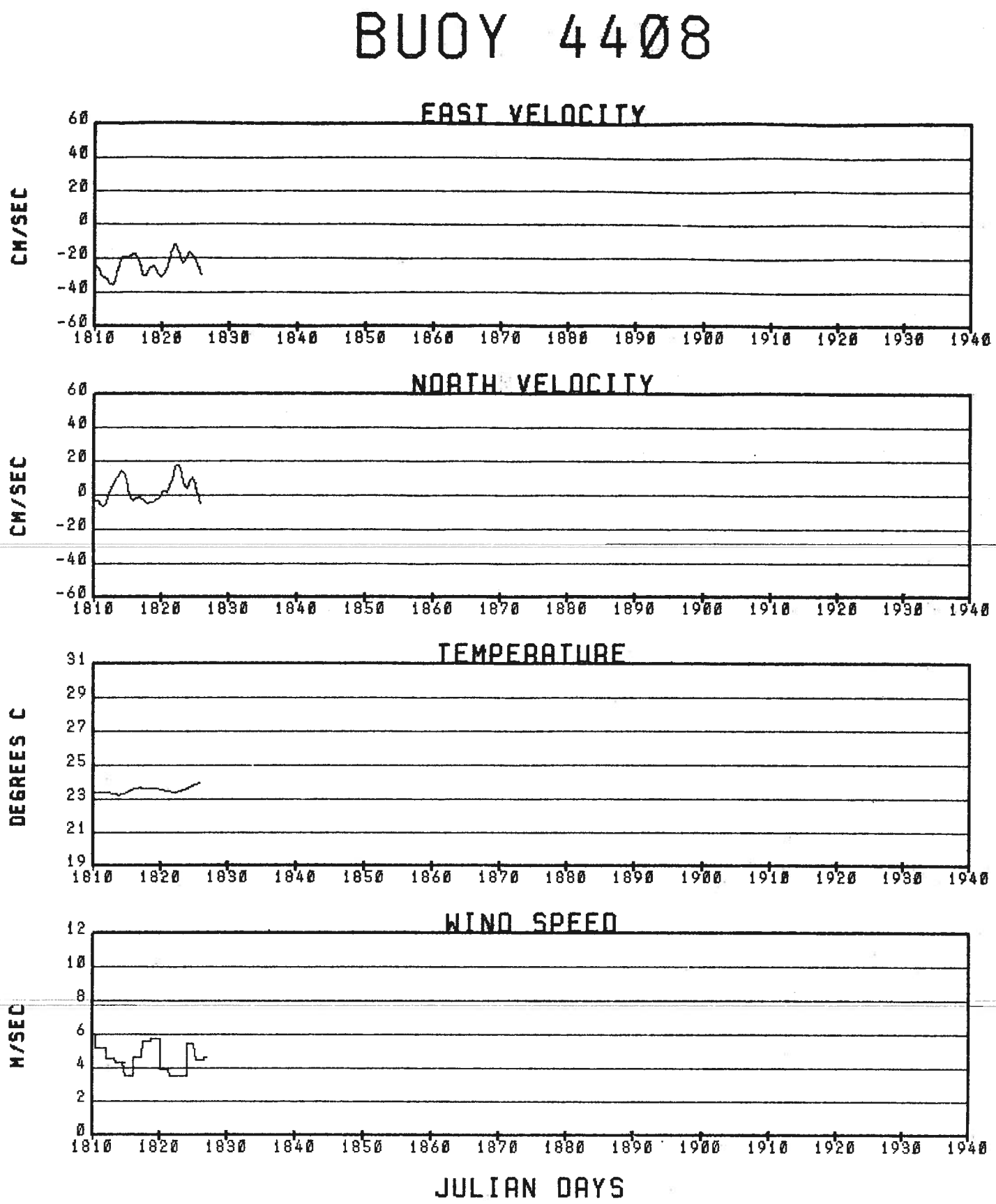


Figure 97. (continued)

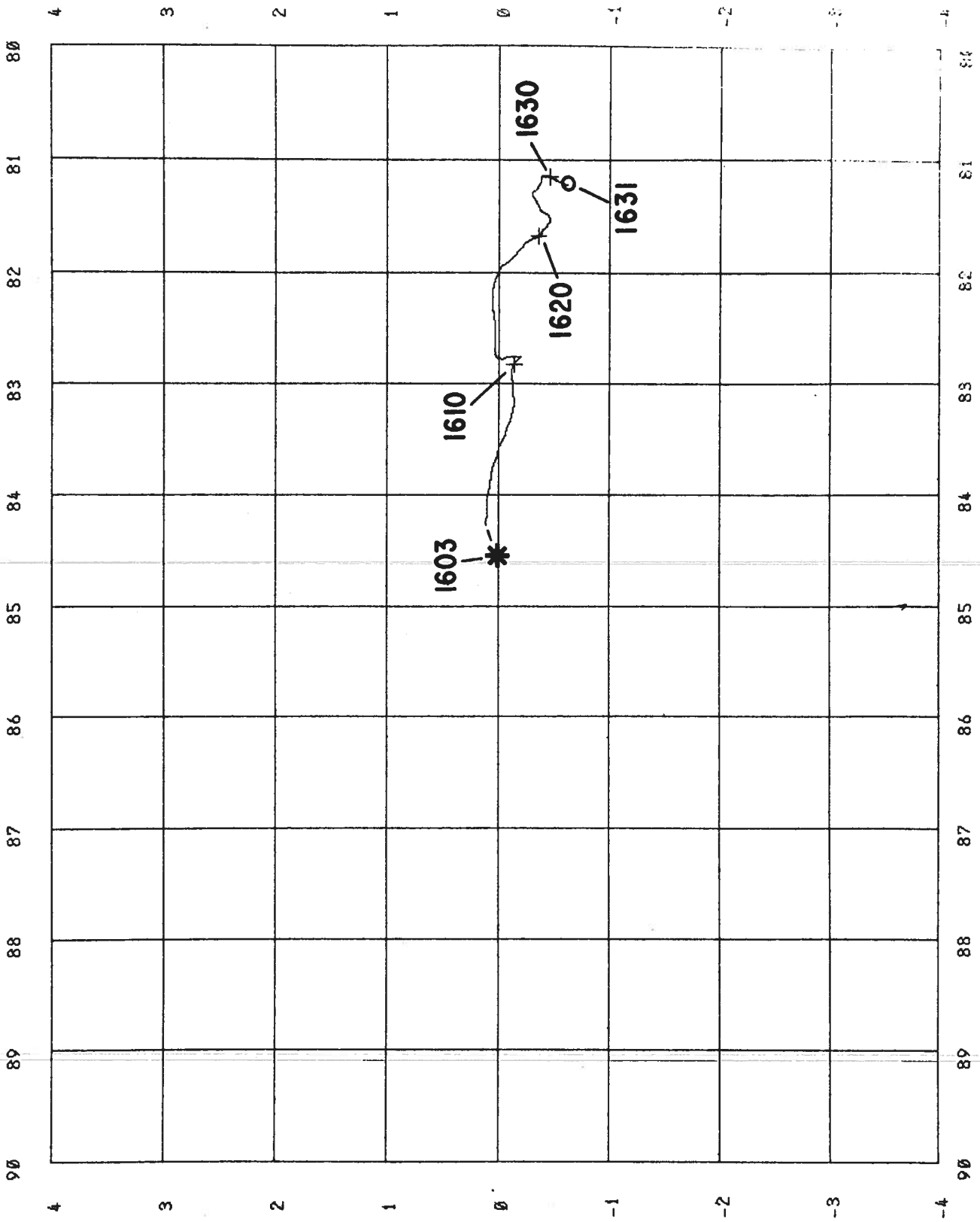


Figure 98. Drifting buoy trajectory.

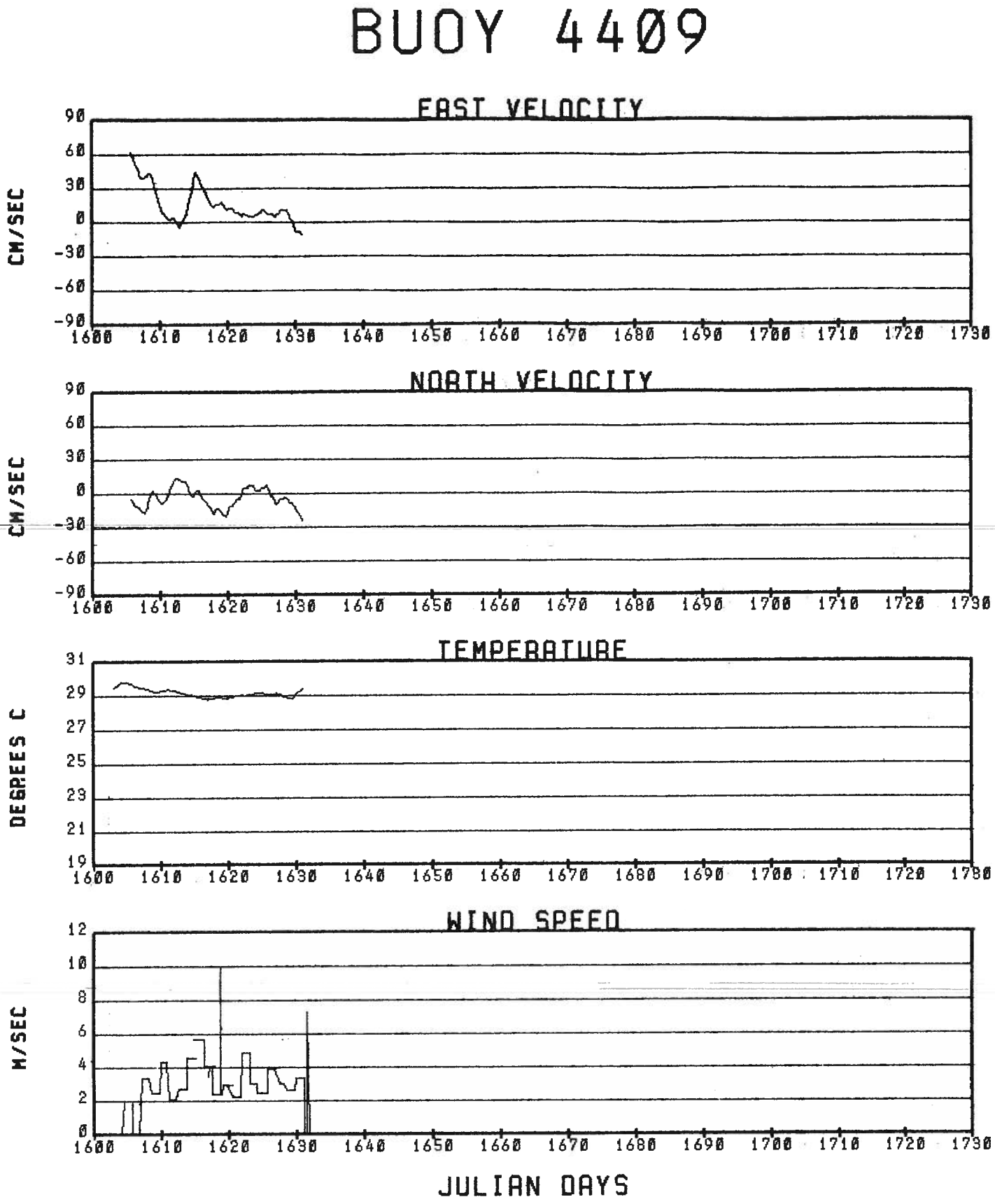
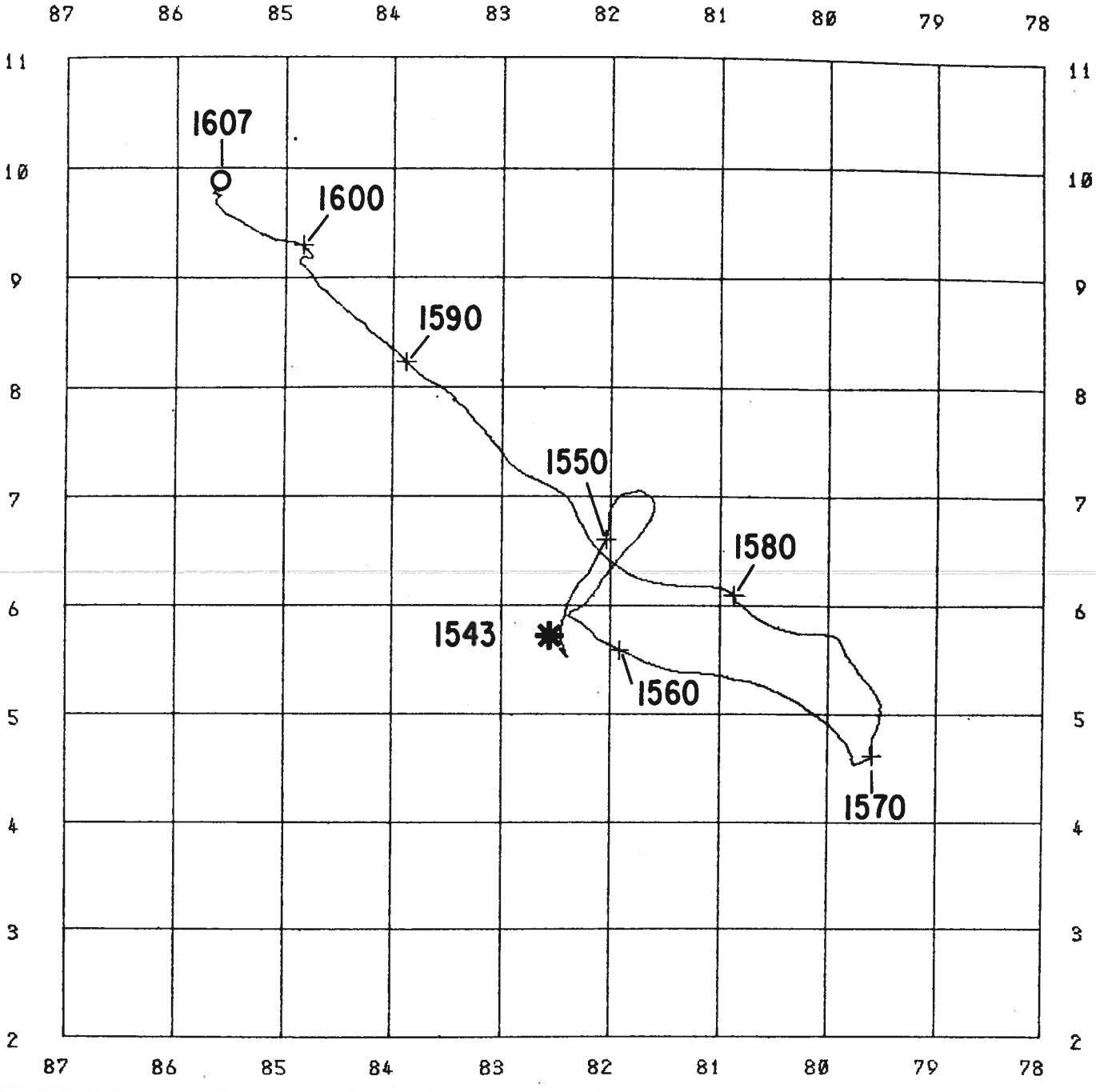


Figure 99. Time series of velocity and sensor data.



BUOY 4411

Figure 100. Drifting buoy trajectory.

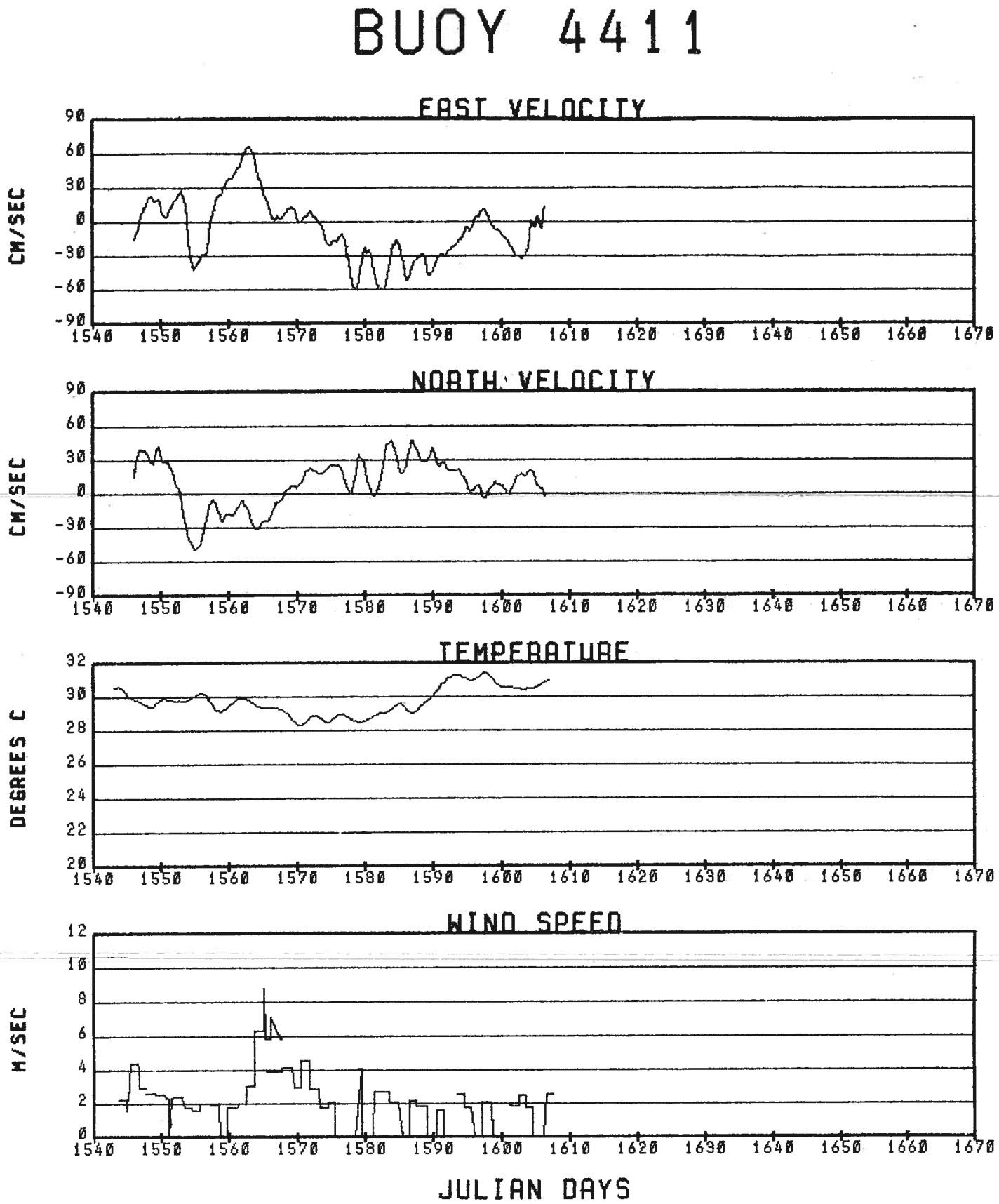
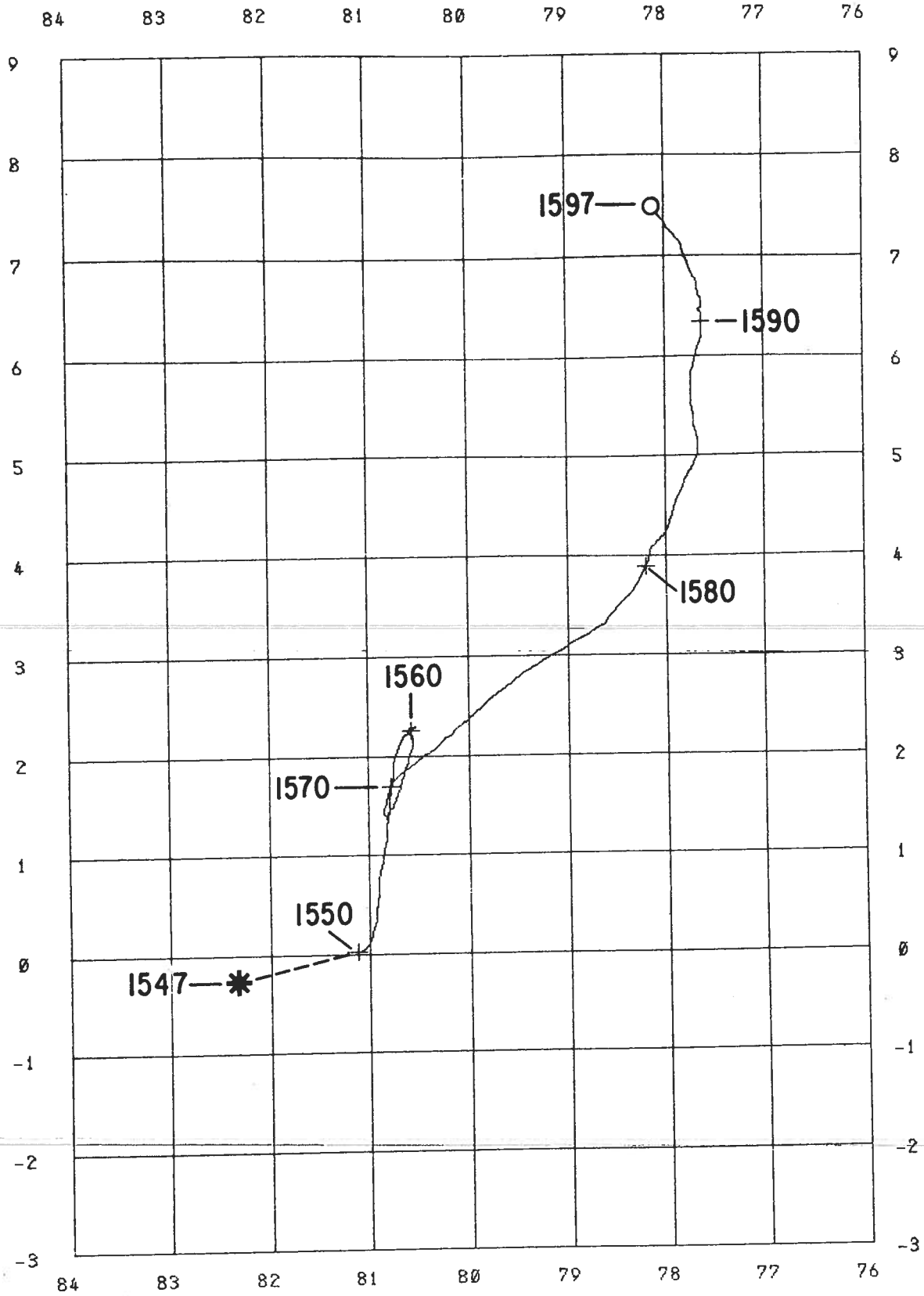


Figure 101. Time series of velocity and sensor data.



BUOY 4413

Figure 102. Drifting buoy trajectory.

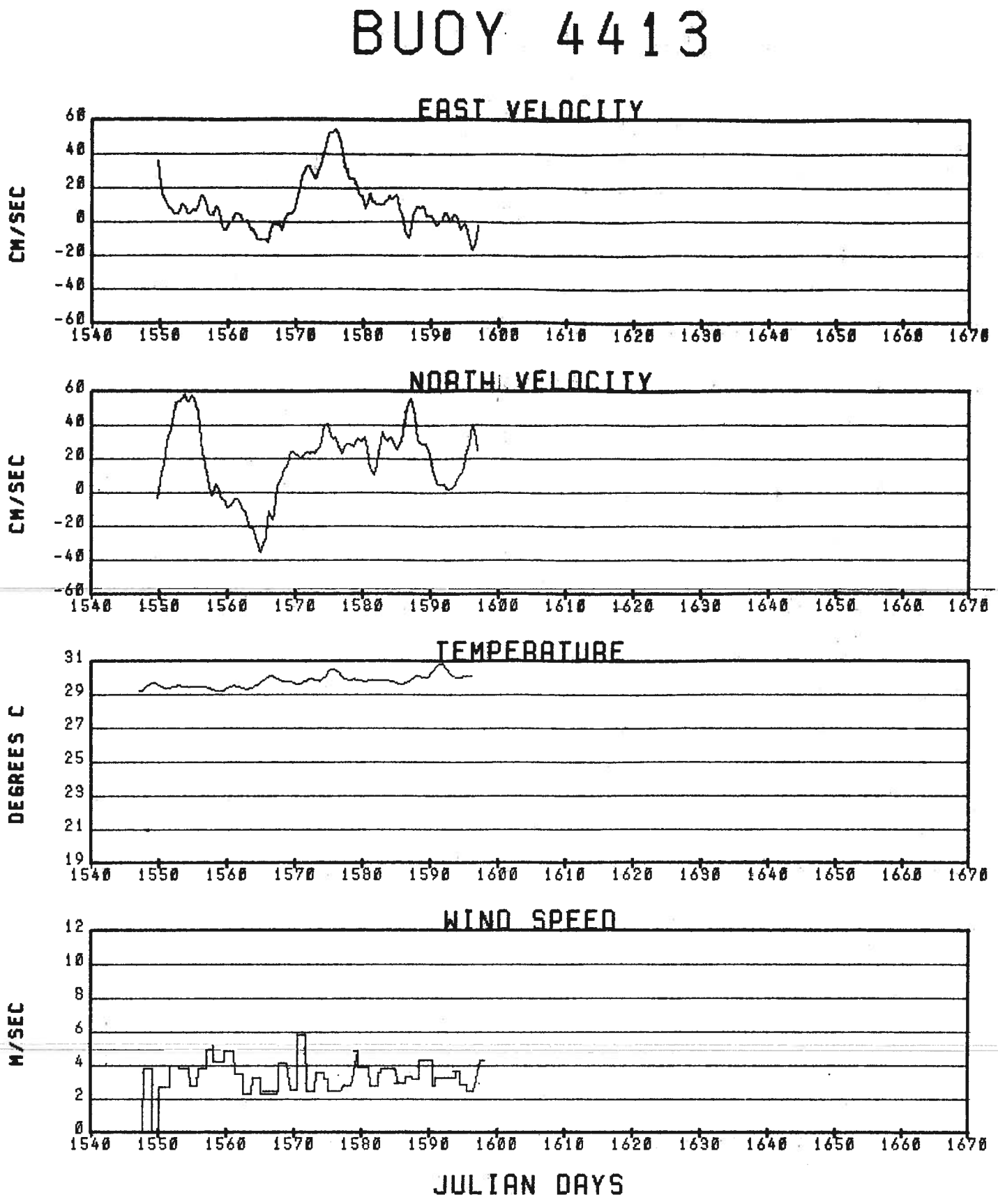


Figure 103. Time series of velocity and sensor data.

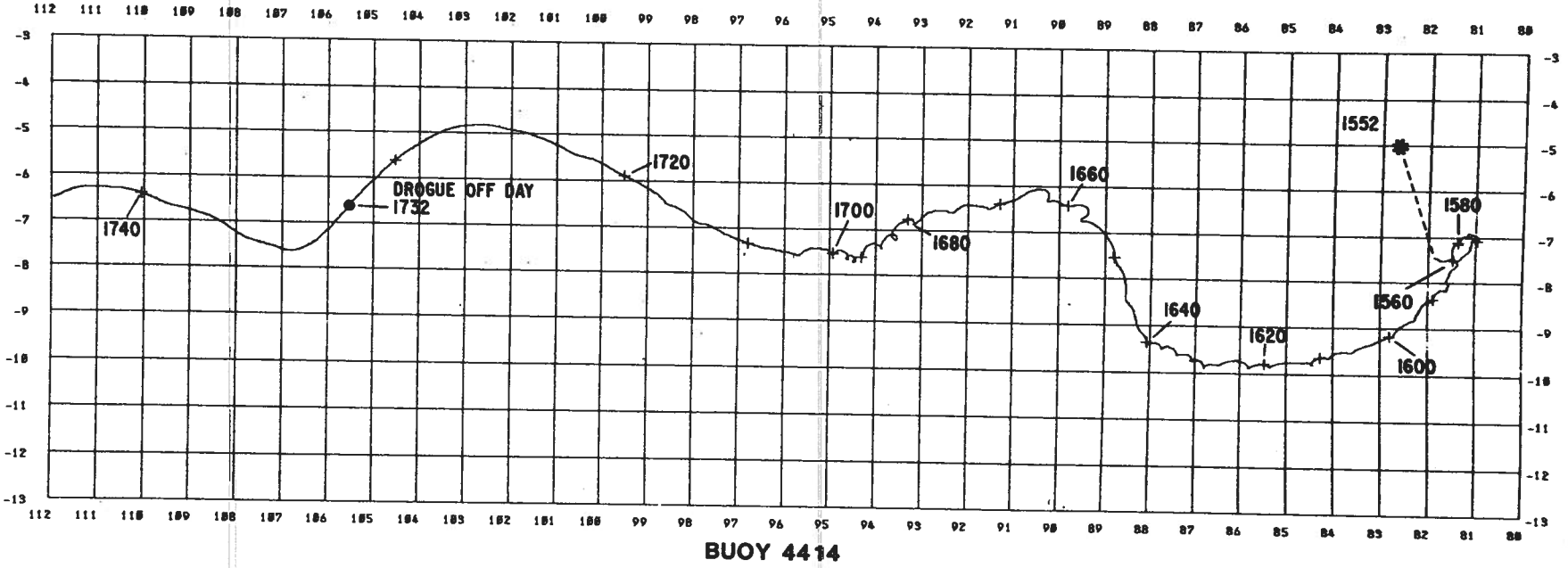


Figure 104. Drifting buoy trajectory.

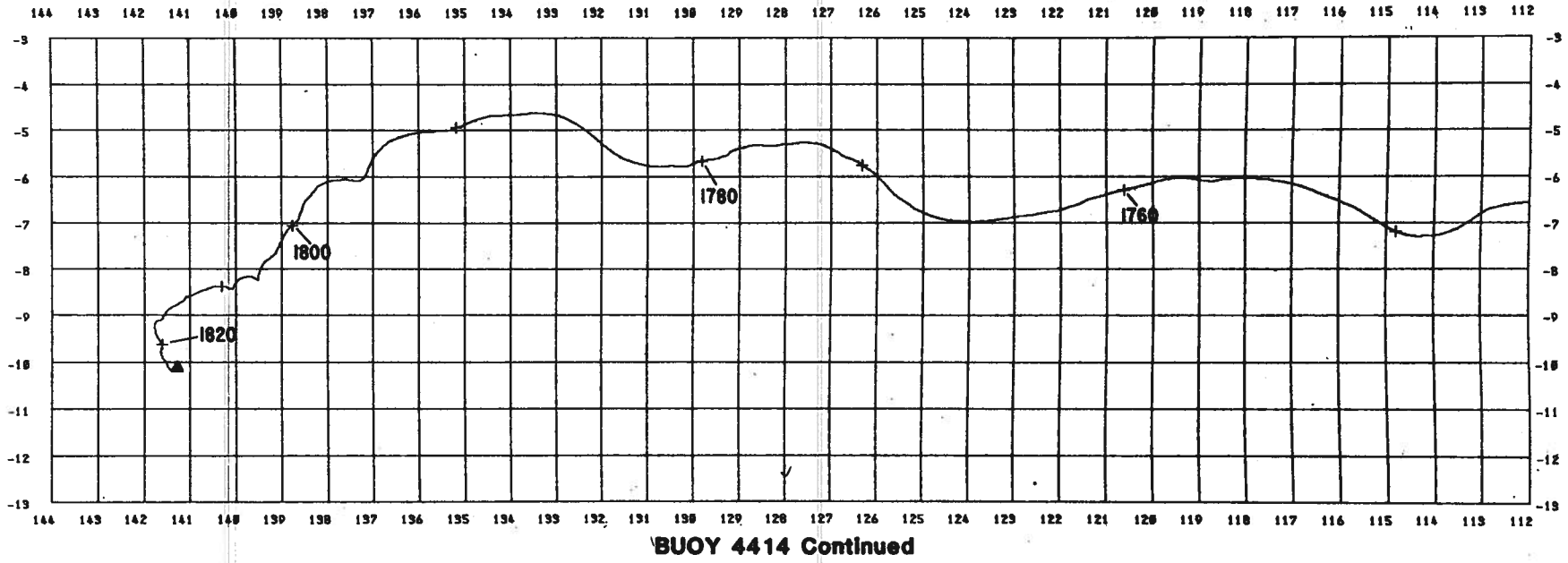


Figure 104. (continued)

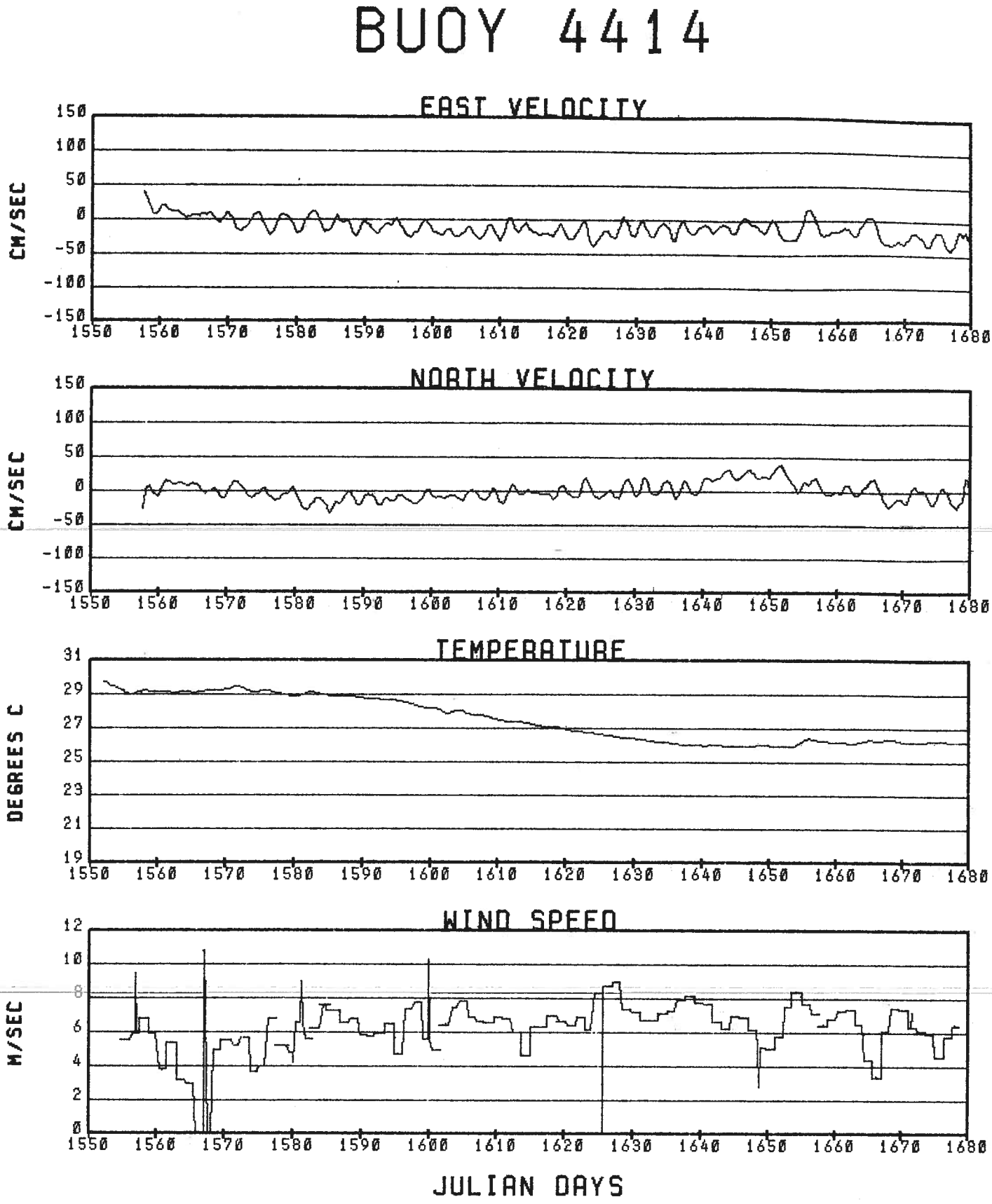


Figure 105. Time series of velocity and sensor data.

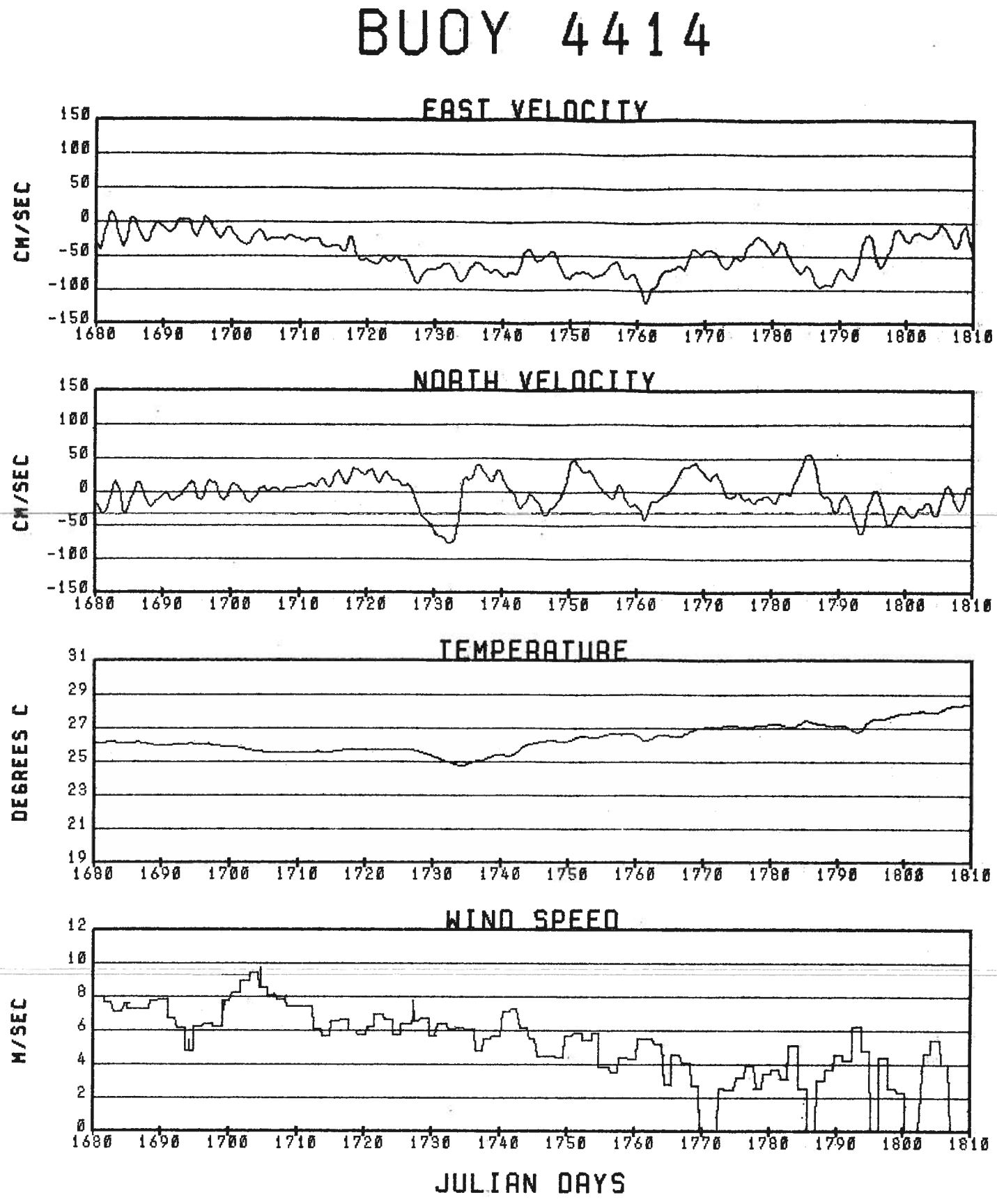


Figure 105. (continued)

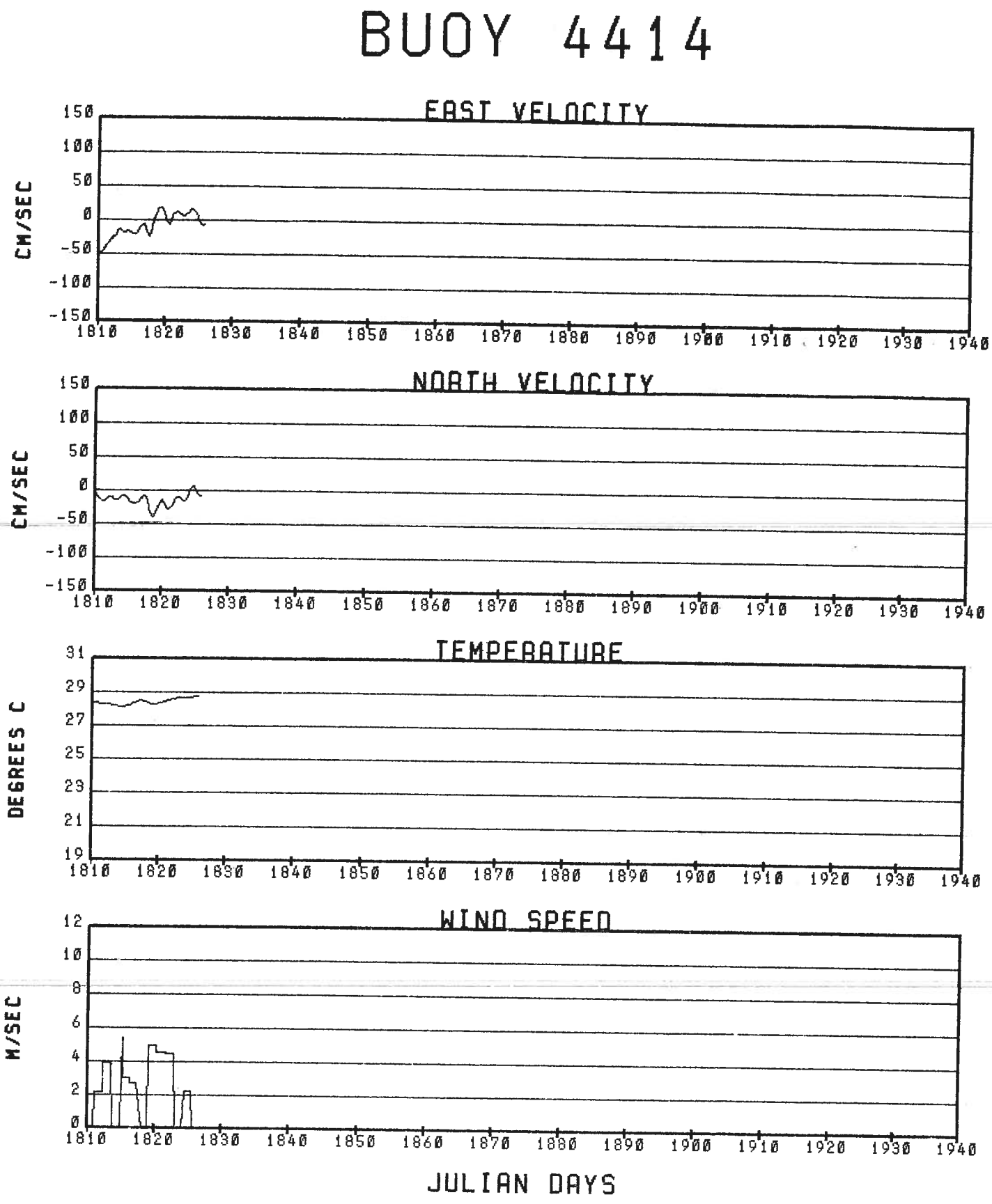


Figure 105. (continued)

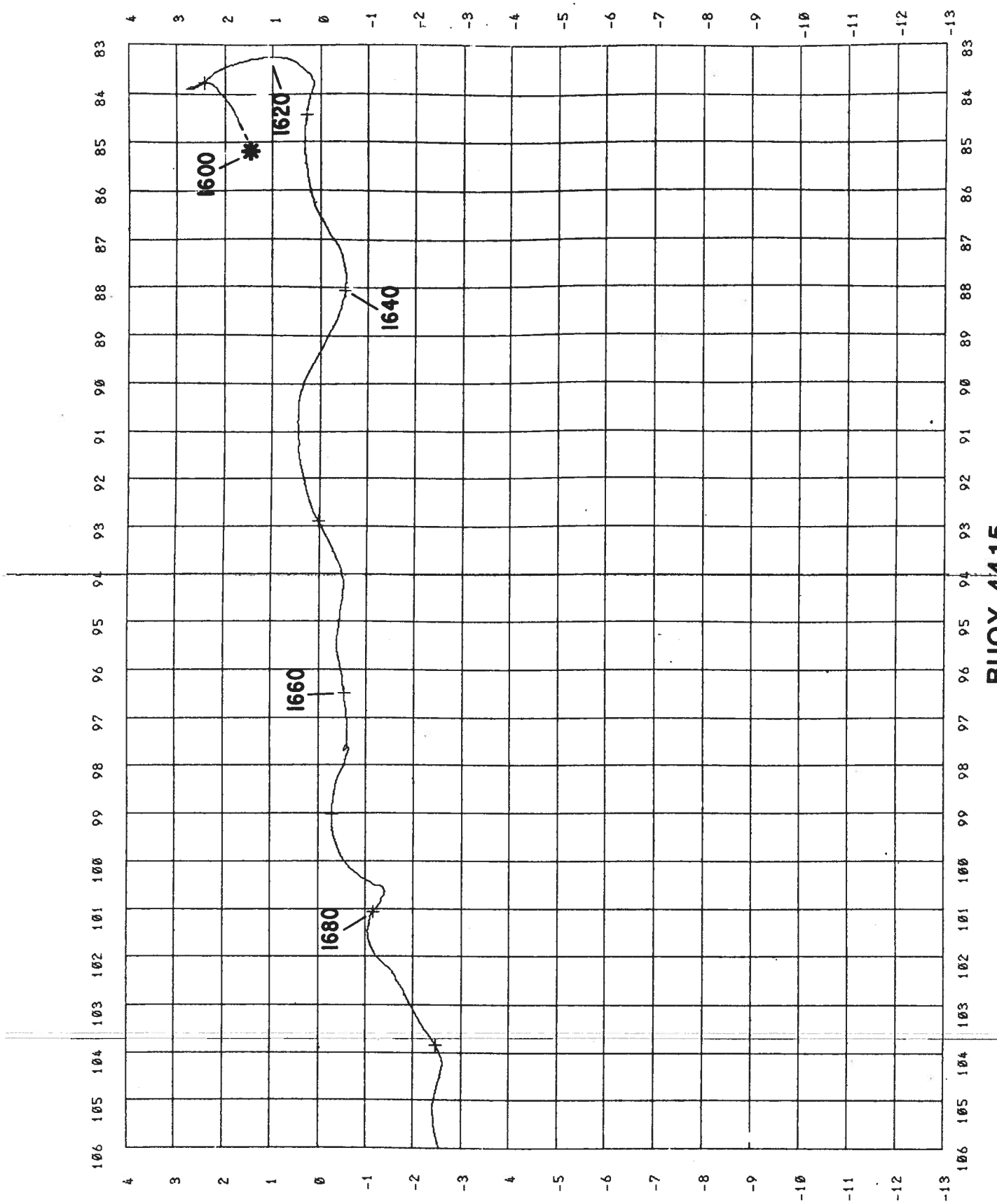


Figure 106. Drifting buoy trajectory.

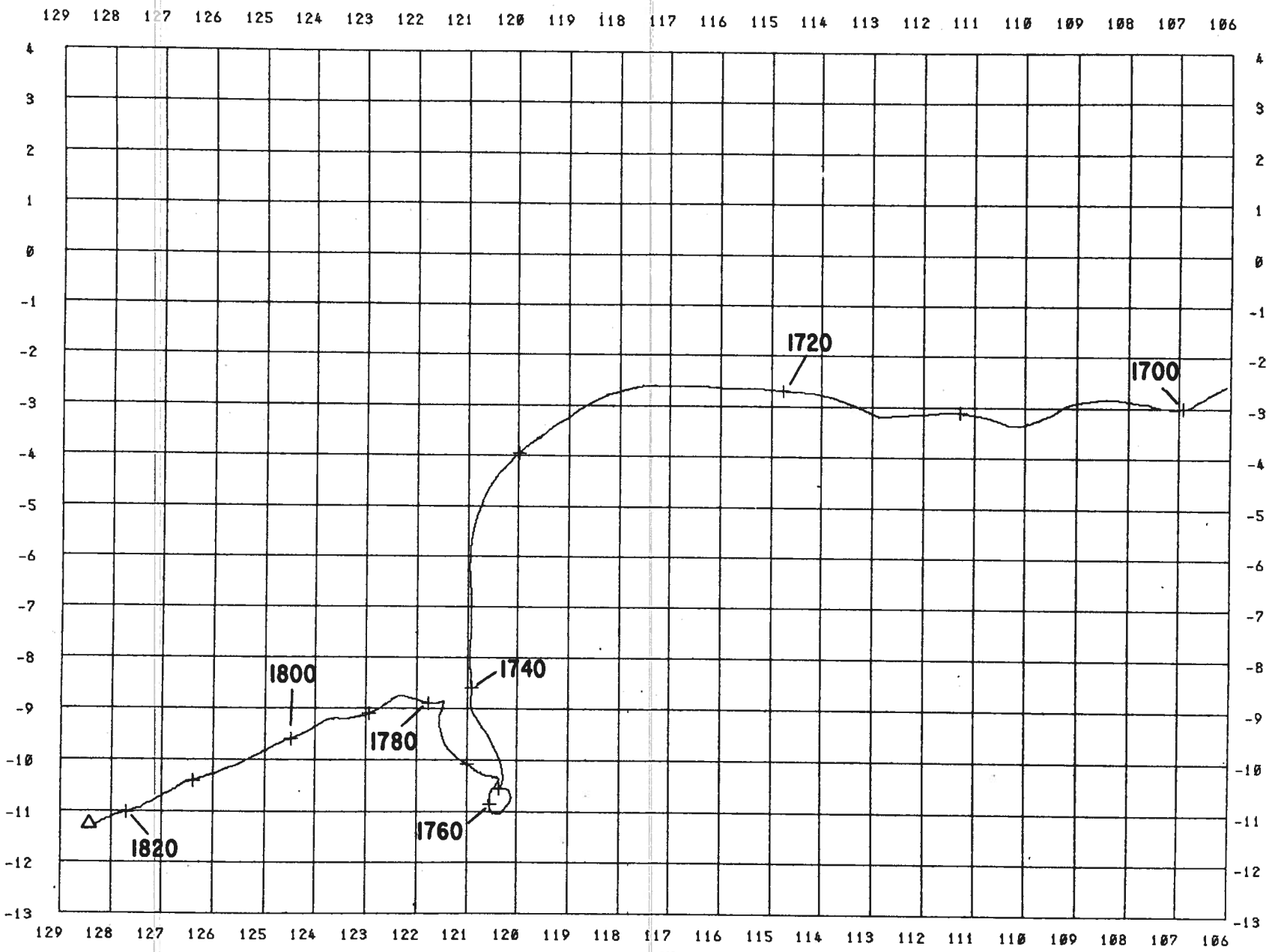


Figure 106. (continued)

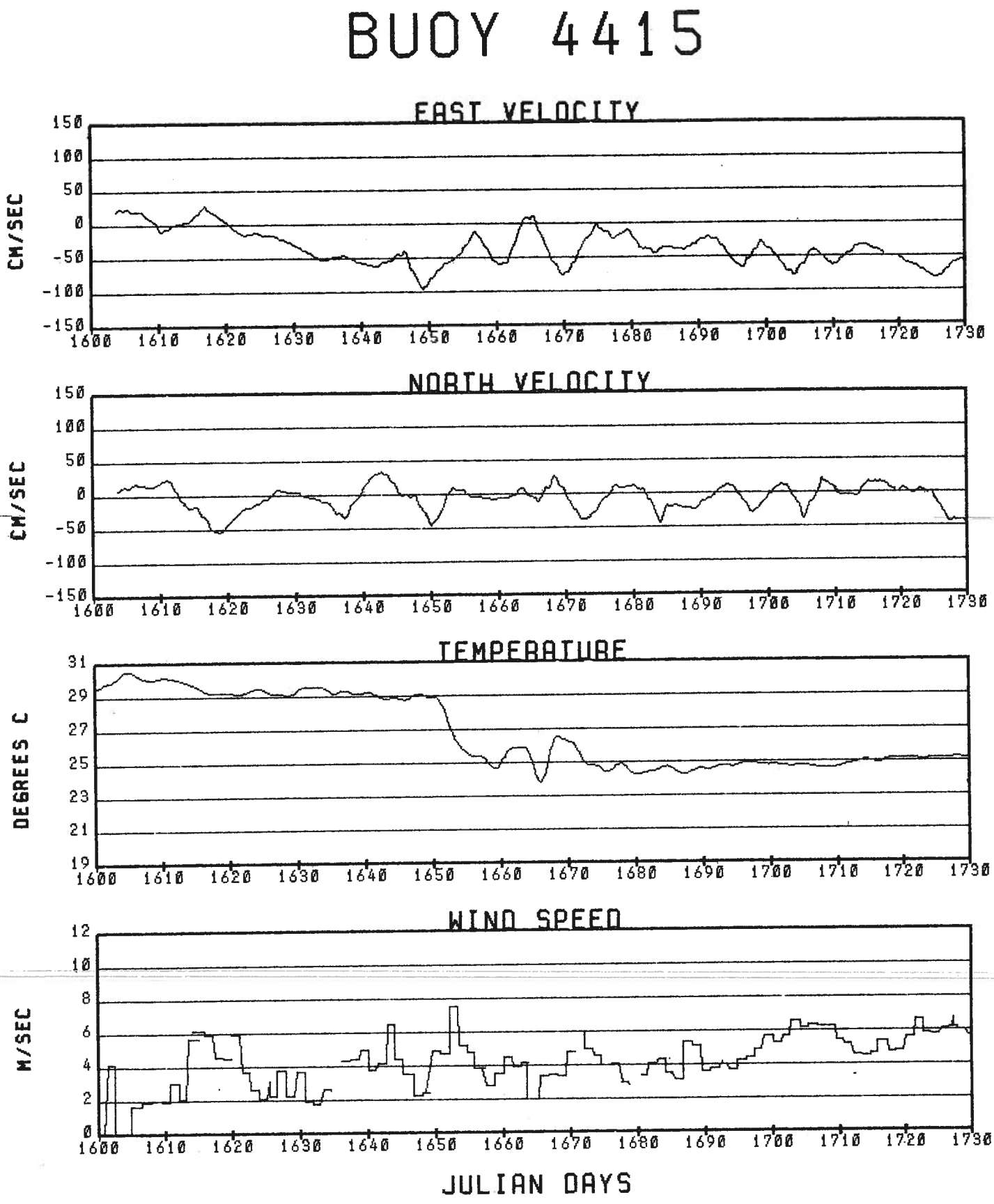


Figure 107. Time series of velocity and sensor data.

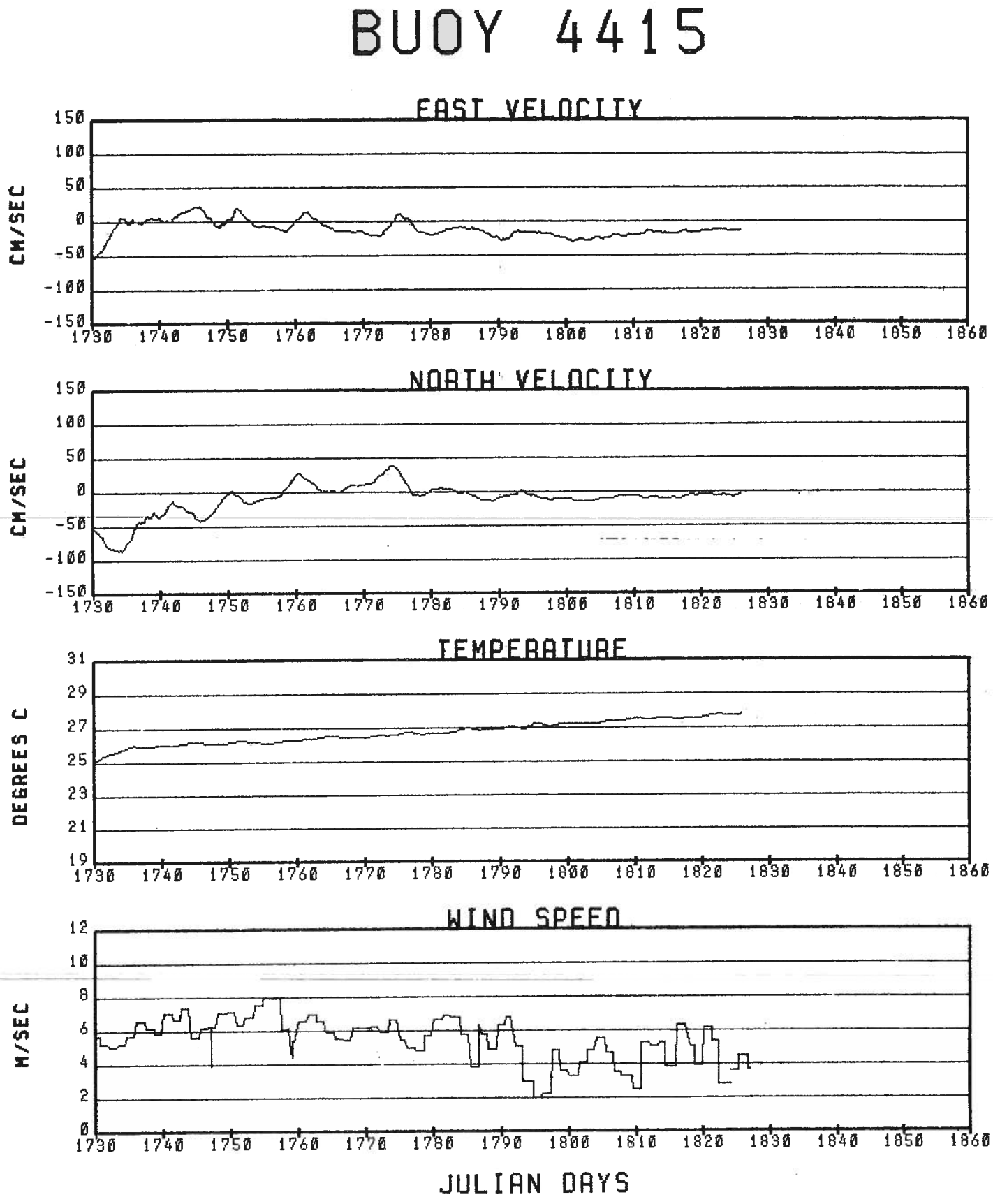


Figure 107. (continued)

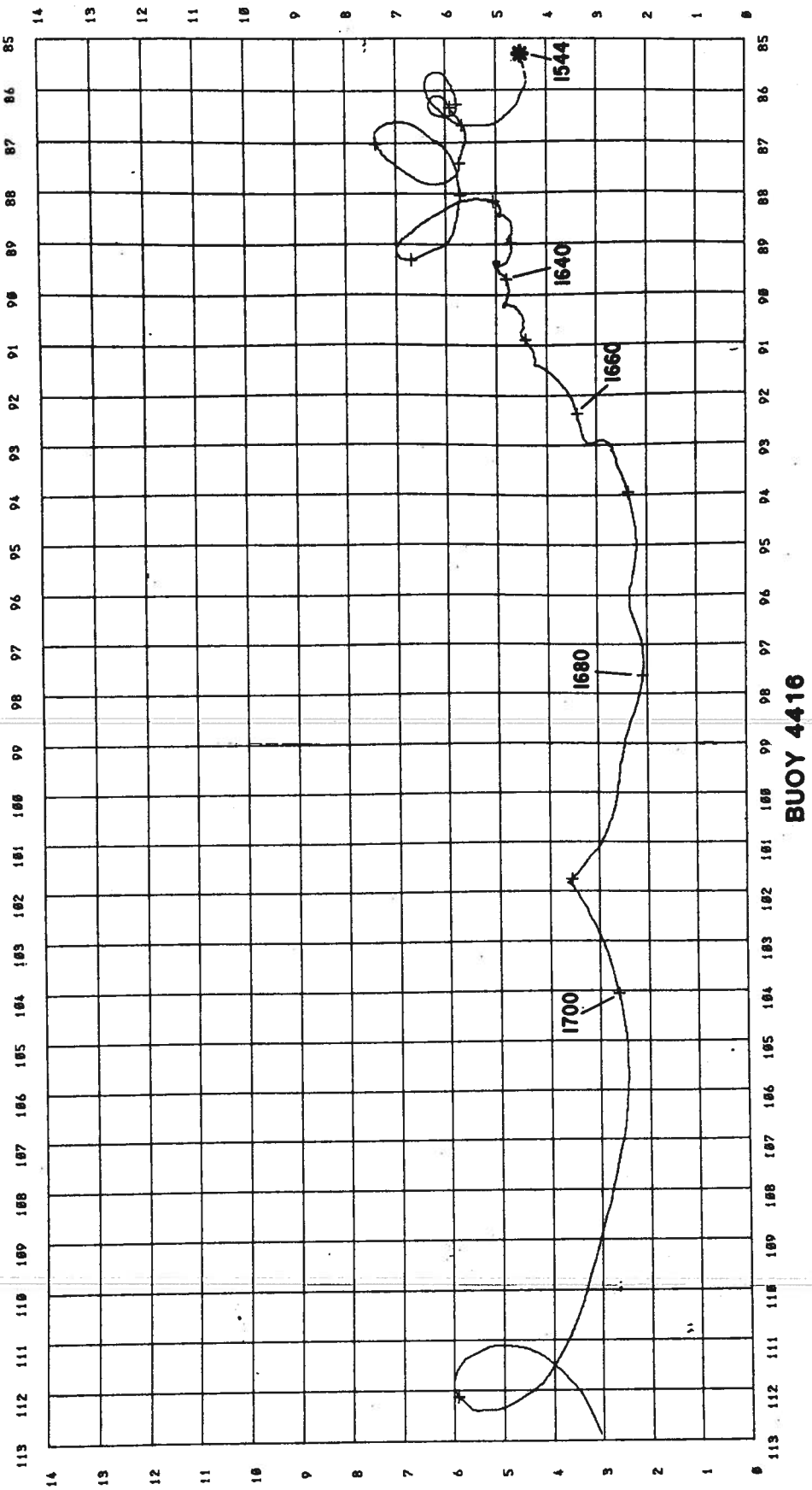


Figure 108. Drifting buoy trajectory.

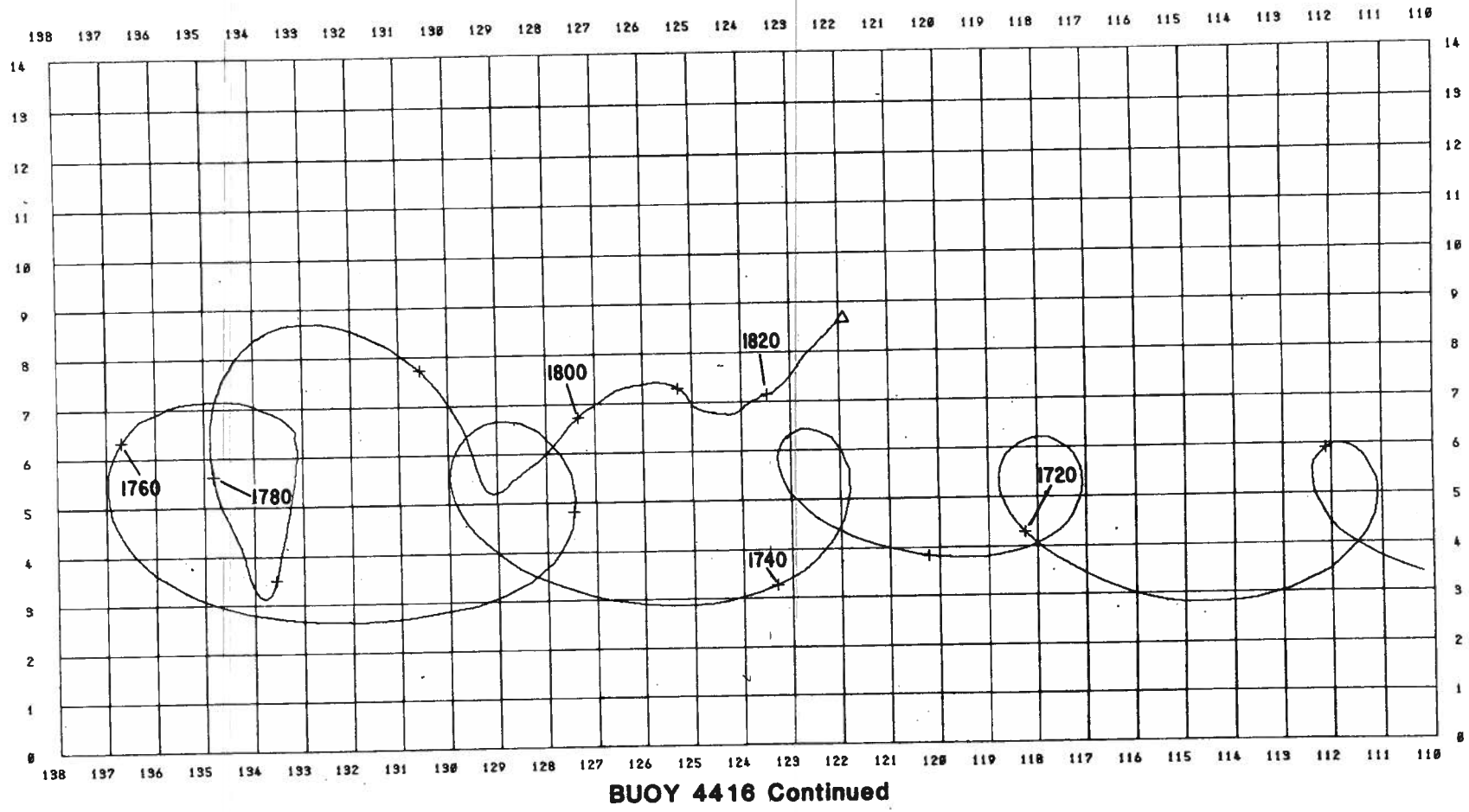
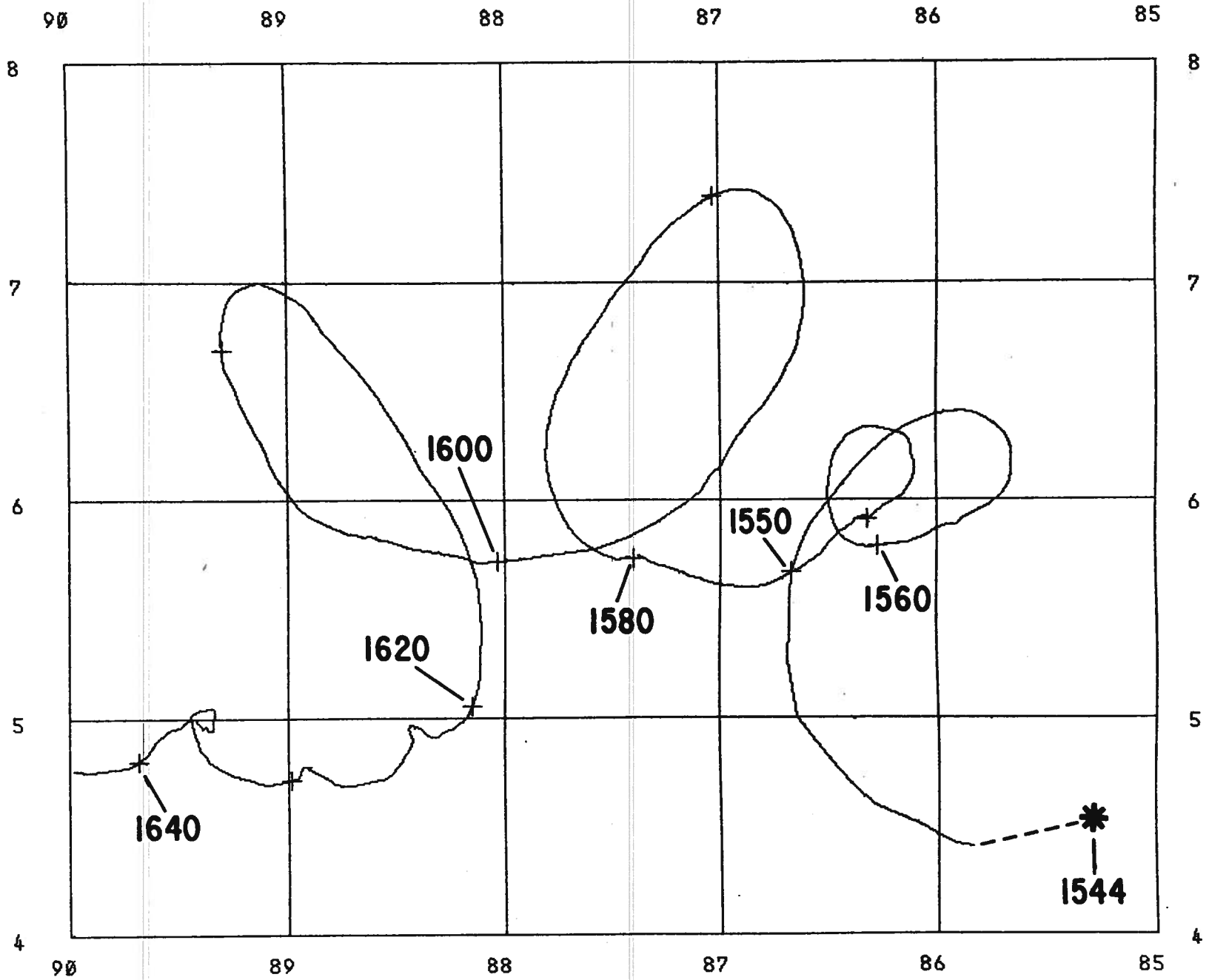


Figure 108. (continued)



BUOY 4416

Figure 109. Drifting buoy trajectory detail.

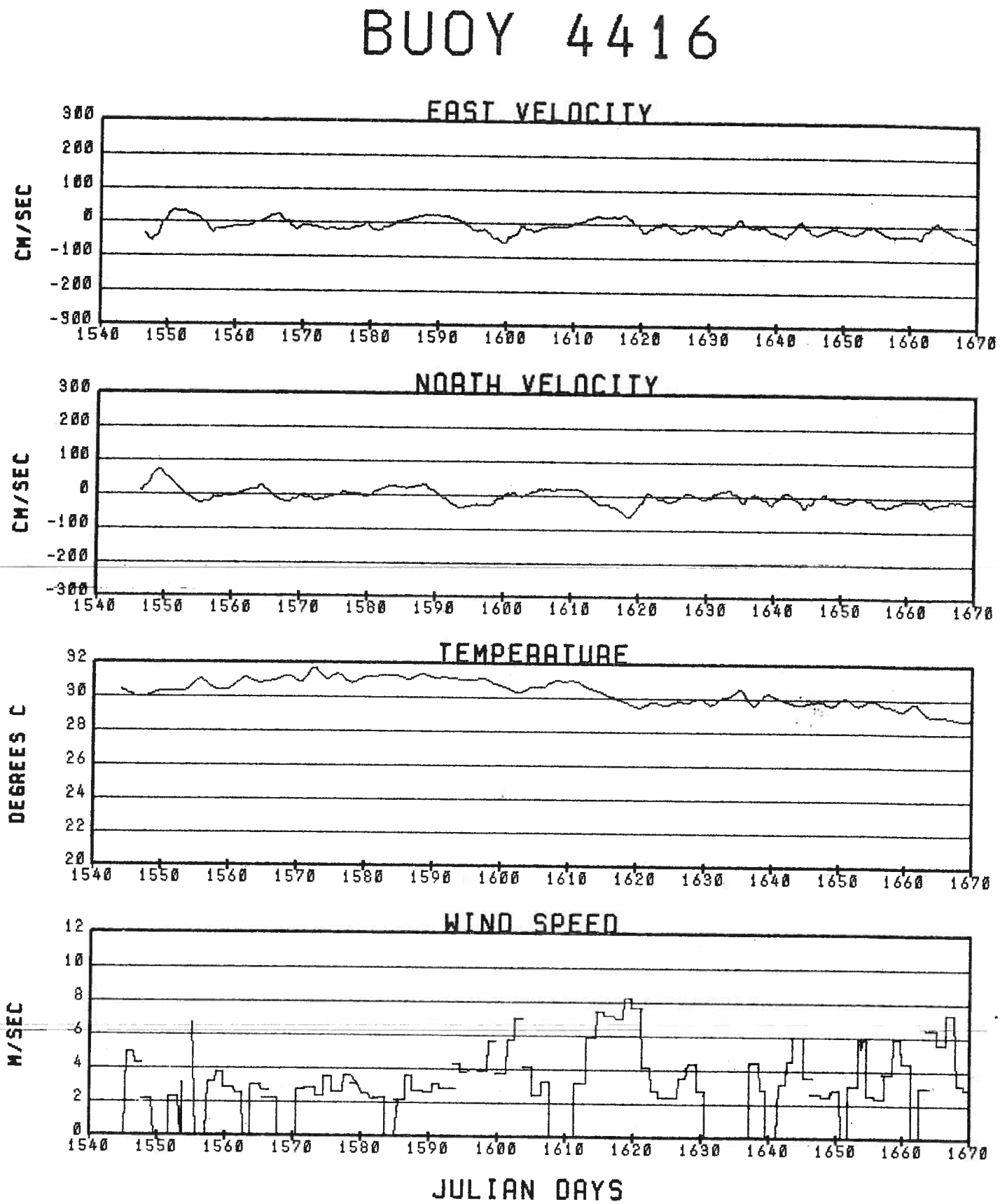


Figure 110. Time series of velocity and sensor data.

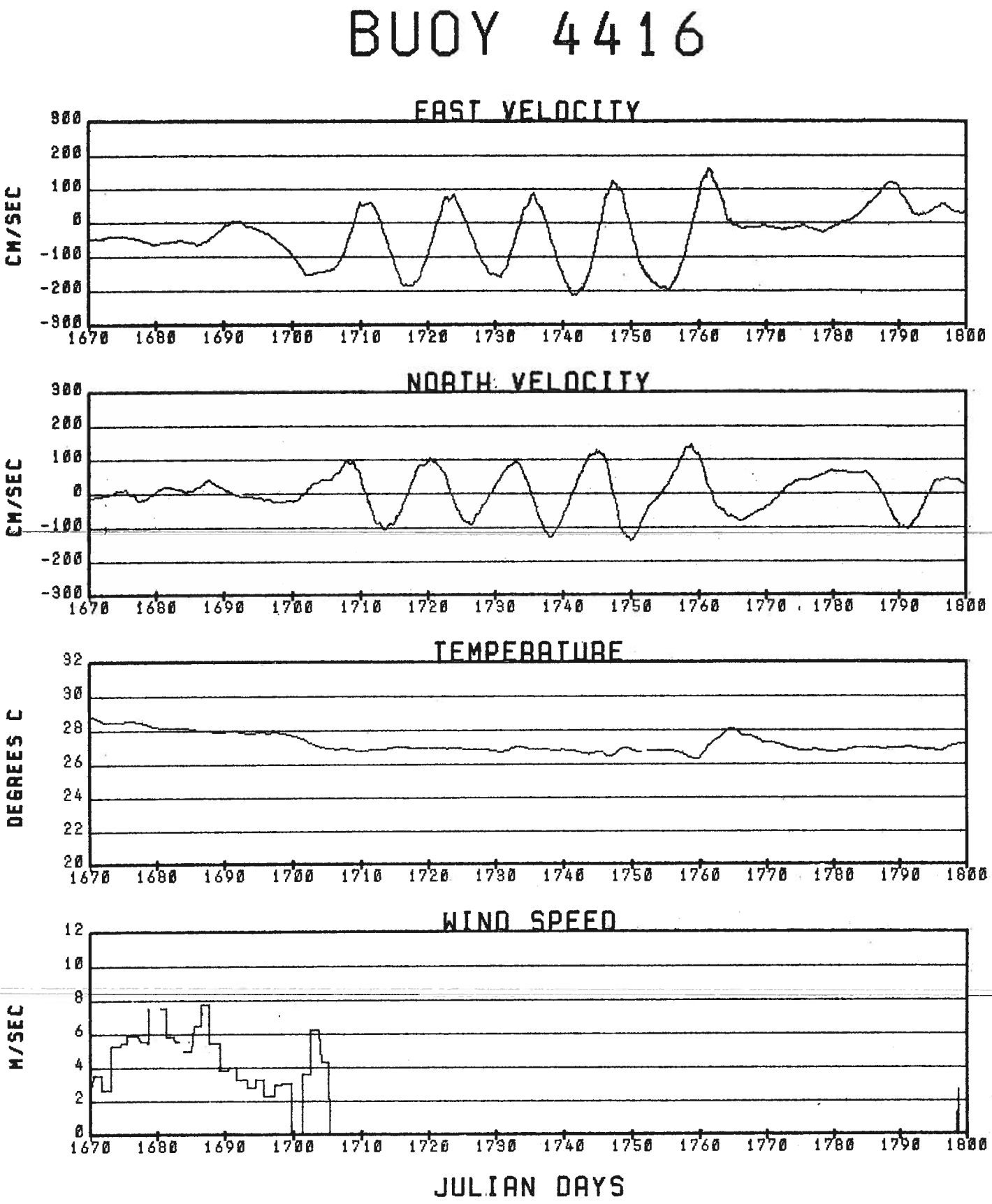


Figure 110. (continued)

BUOY 4416

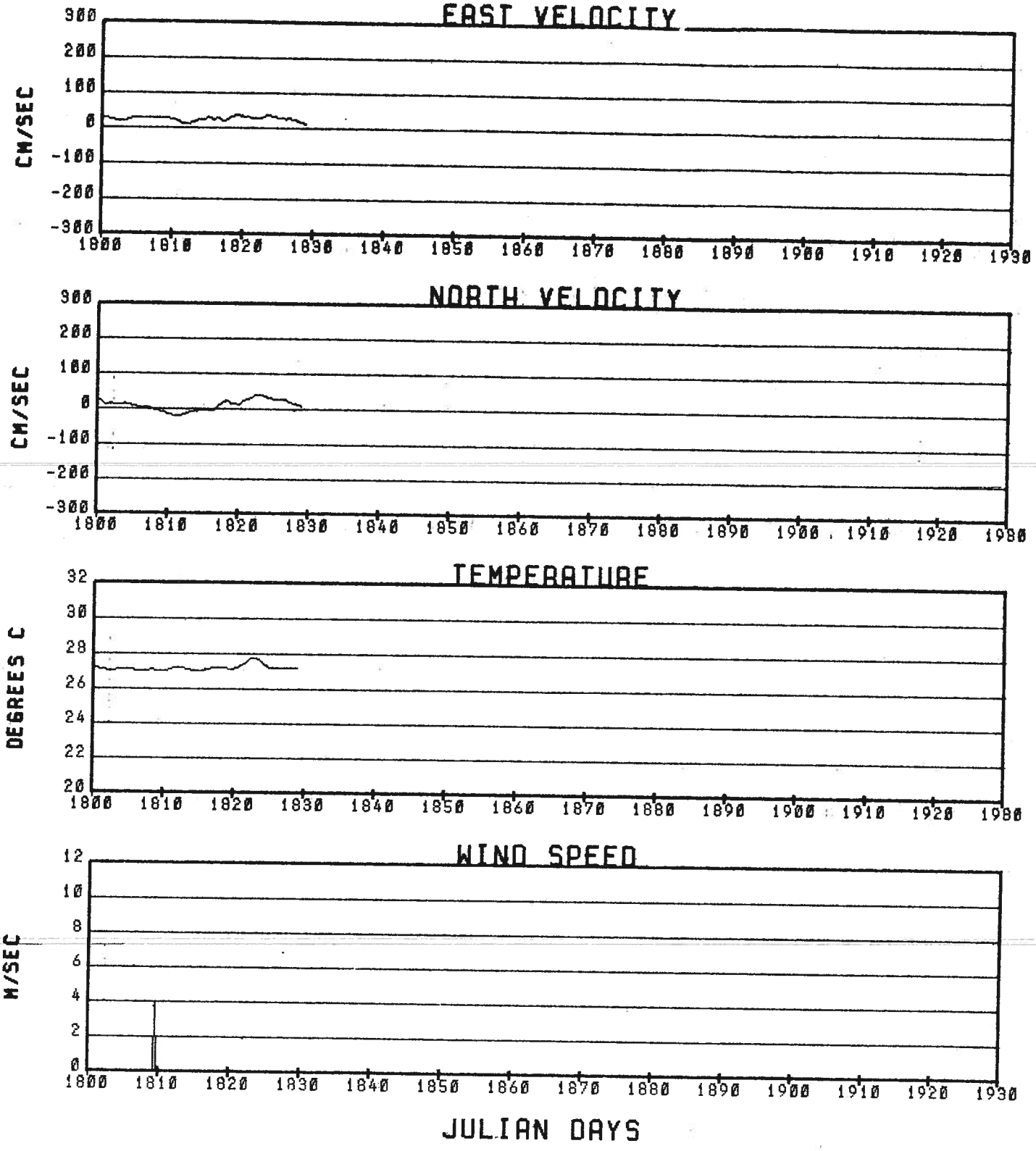
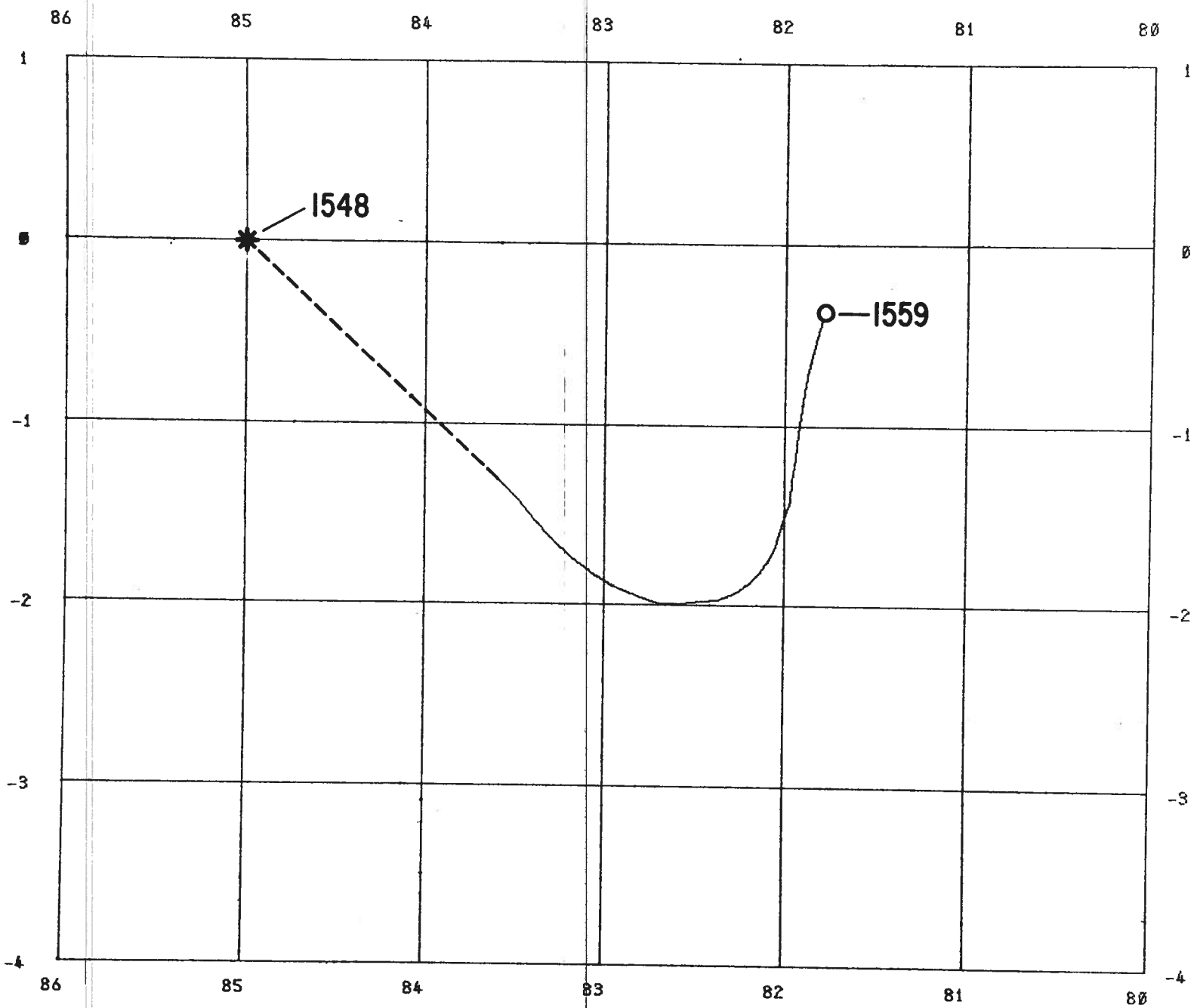


Figure 110. (continued)



BUOY 4417

Figure 111. Drifting buoy trajectory.

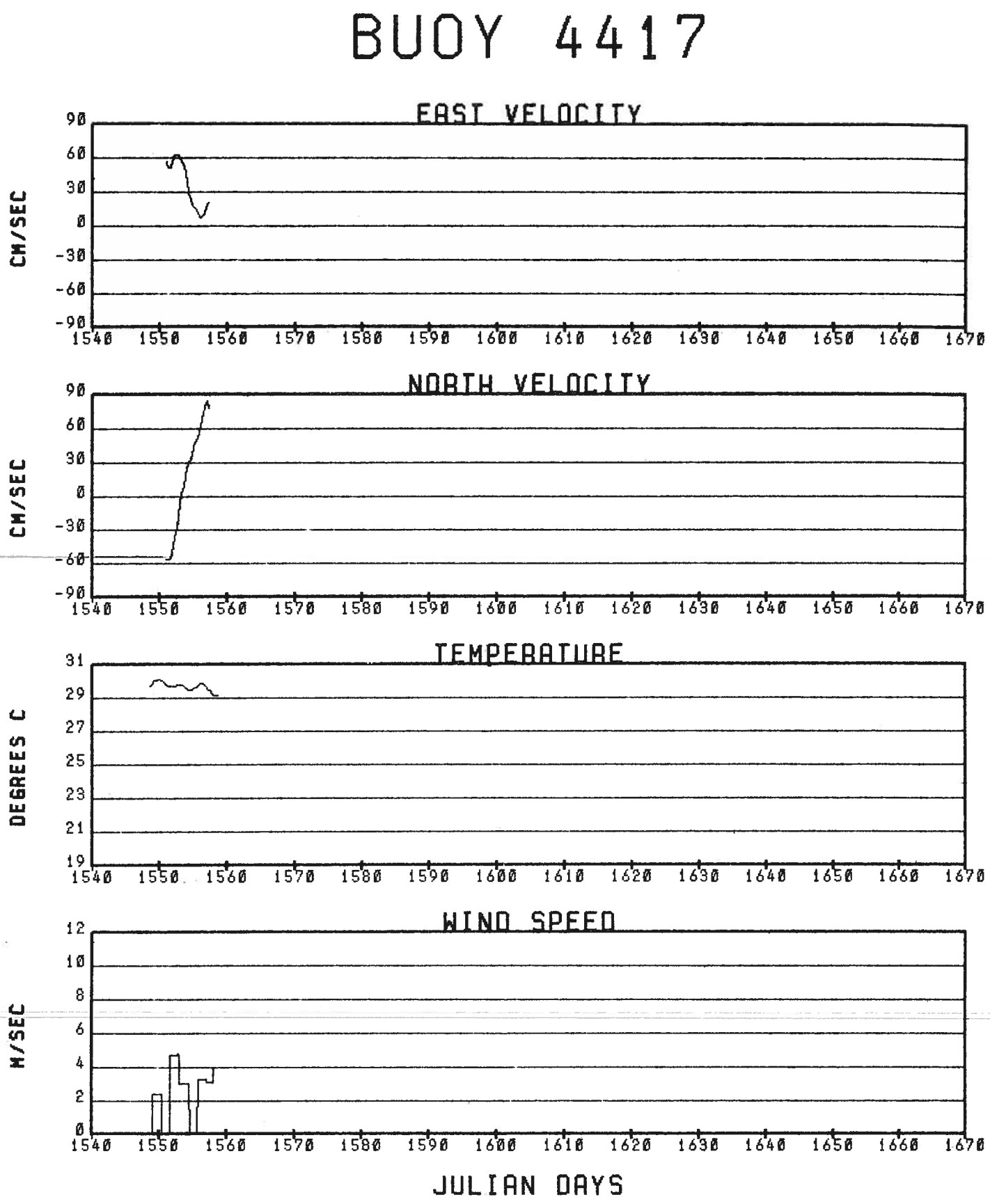


Figure 112. Time series of velocity and sensor data.