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C. 2

WIND DATA SUMMARY
LAWRENCE RADIATION LABORATORY–BERKELEY

John S. Peck, Herbert P. Cantelow, Jensen Young,
and Robert M. Latimer

December 1970

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LAWRENCE RADIATION LABORATORY
UNIVERSITY of CALIFORNIA BERKELEY

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WIND DATA SUMMARY
LAWRENCE RADIATION LABORATORY–BERKELEY

John S. Peck, Herbert P. Cantelow, Jensen Young,
and Robert M. Latimer

Lawrence Radiation Laboratory
University of California
Berkeley, California 94720

December 1970

ABSTRACT

Wind data for the 5-year period ending March 1, 1968 is summarized for Building 4, Lawrence Radiation Laboratory–Berkeley. Data are presented in three forms: conventional wind roses; the tabulation of the values used to prepare the roses; and as "pseudo trajectories."

INTRODUCTION

Safety Services Group at Lawrence Radiation Laboratory–Berkeley, set up a wind probe and recording rain gauge on the roof of Building 4. Data in one form or another have been recorded since 1960. This report presents a summarization of these data for a 5-year period when all the features were functioning and the data were being transcribed to machine-readable language. The results given here are computer-produced.

MEASUREMENT

The anemometer and wind vane are mounted atop a 40-foot pole on the roof of Building 4, giving the instruments a height of 299 m above mean sea level. The vane is nothing more than a dural fin on a continuously rotating Helipot. The three-cup anemometer is a Navy surplus device of unknown pedigree. The rain gauge, standing on the roof, is a Henry Green tipping bucket gauge with 8-in-diam hopper. All three instruments record remotely on an Esterline-Angus strip-chart milliammeter.

The charts were read, numbers recorded and key-punched, and the data processed by computer.

METHOD OF TABULATION

1. Wind velocity transcribed is the mean velocity for 1-hour periods centered on the hour. Wind movement is recorded in knots.

2. Wind direction is the most obvious direction at each hour. The direction is recorded on a continuous analog of 0.01 mA per 4 deg.azimuth.

3. Inversion data are taken from "Inversion and Upper Wind Data Report, WBAS, Oakland, Calif." Winds classified as lapse or inversion winds are for 5 consecutive hours centered on the hour of the sounding. Whenever the wind station lies within the inversion layer, the wind is tabulated as inversion; otherwise it is called lapse. Starting with spring 1966, the category "below inversion"

has been incorporated into the data; whenever the inversion base lies between the station height and 600 m (the approximate height of the hills east of the station) the wind is tabulated in this category.

4. Whenever the recording rain gauge indicates rainfall on the chart, the wind for that hour is tabulated as "precipitation." Other winds are tabulated as "fair."

PRESENTATION OF DATA

1. Wind speeds are classified into six groups:

a. Calm
b. 1 to 3 knots
c. 4 to 10
d. 11 to 21
e. 22 to 27
f. greater than 27 knots.

2. Directions are classified into 16 compass points.

3. Tabulation by season is for 3-month periods, with December, January, and February presented as "winter."

4. The center circle has a radius equal to 5%.

5. The tabulation of hourly vector means is presented as "Wind Pseudo-Trajectories." The plot represents a mean trajectory in inelastic air on a flat, frictionless plain.

SOME MORE OBVIOUS DEDUCTIONS

1. This summarization includes 40,705 hourly observations, out of a possible 43,824 hours. This represents 92.88% sampling.

2. No winds stronger than 27 knots were recorded. Only 0.09% of the winds were greater than 21 knots.

3. The most prevalent direction in the 11-21 knot category is SSE. This direction is also the most prevalent direction for winds of all speeds occurring during precipitation.

4. The most prevalent direction for winds less than 11 knots is W. This is also the most prevalent direction for fair winds of all speeds. The most frequent single wind category is W, 4-10 knots. It occurs

6.45% for all hours,
15.56% for 12-15 hours,
9.25% for 16-19 hours.

5. The fastest winds are ENE and E winds.

6. Frequencies by type:

fair	94.71%
precipitation	4.95
lapse	64.66
inversion	28.42
below inversion	6.90.

SEASONAL COMPARISONS

Fair winds are most consistent in spring and summer. The frequencies of calms are lower, the velocities fall in a narrower range, and most of the wind directions lie from SE clockwise through NW. Fair winds for fall and winter show a more even azimuthal distribution, higher frequencies of calms, and a much wider range of wind speeds.

Frequency of total rainy hours by season:

Spring	30.32%
Summer	3.66
Fall	20.96
Winter	45.04.

We have a summer-dry climate.

Summer rain winds show a predominance of SE winds; other seasons show SSE to be the predominant rain direction. In autumn, the S wind is almost as prevalent as SSE, with SE and E running a close third and fourth. Calms are rare. Only winter shows velocities in excess of 21 knots.

For winds observed under lapse conditions, winter has the highest incidence of calms (5.0%). Only spring data show any predominant direction (W).

The inversion pattern is quite uniform for all seasons except winter. Summer inversion shows only half the calms of other seasons, and winter shows a fairly even directional distribution plus velocities greater than 21 knots from the east.

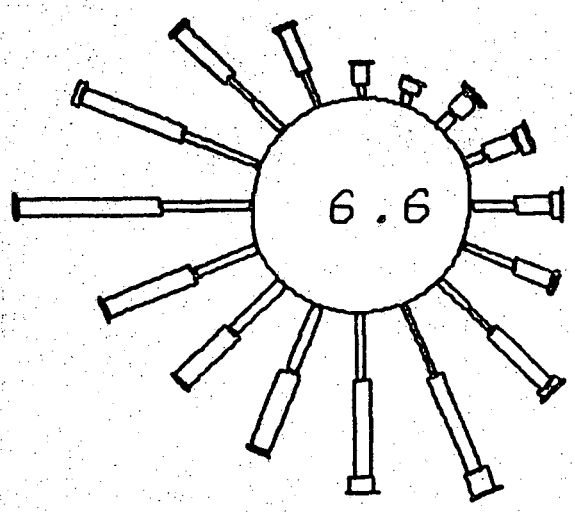
A below-inversion condition is twice as probable in summer as in any other season, and the chance of calm is less than half. Below-inversion directions favor SE to S. Other seasons show variable distribution. Fall and winter subinversions show heavier winds from NE and ENE; all other winds are less than 12 knots.

CONCLUSIONS

It has been said that the wind always blows from the west. On a mild spring afternoon, it is quite possible; but other times, almost anything can happen.

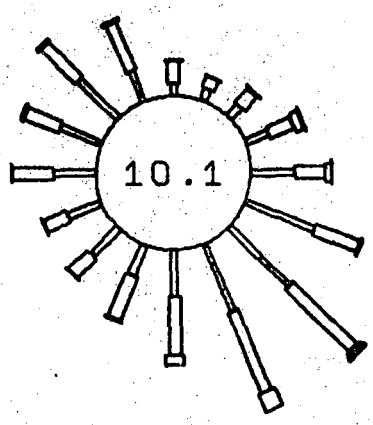
Diagrams and tables of wind direction follow.

FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY



ALL HOURS

FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY



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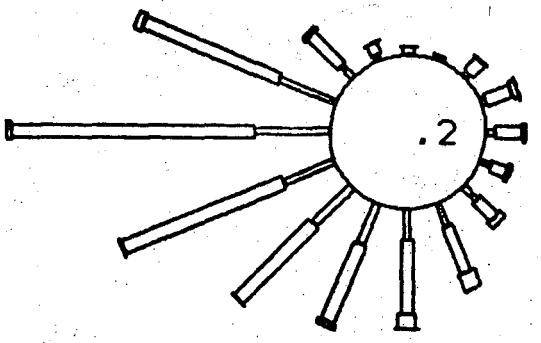

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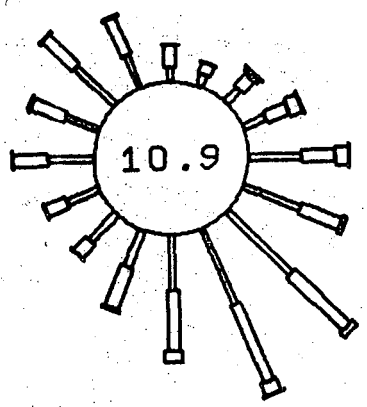

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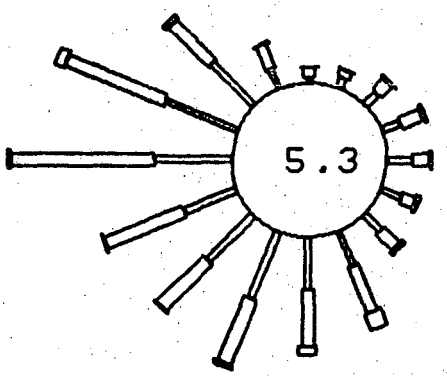

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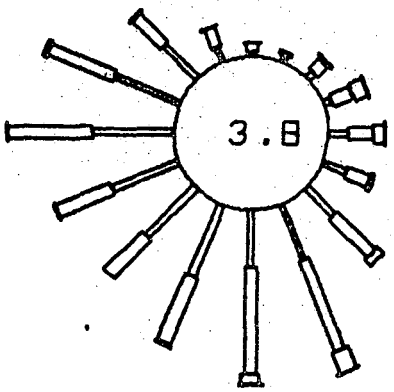

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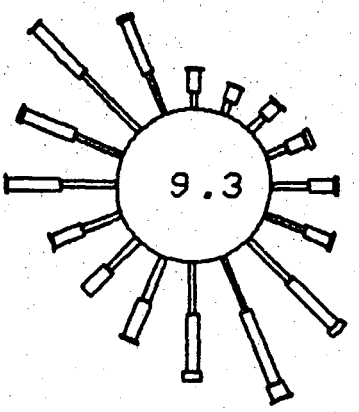

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FREQUENCY OF WINDS
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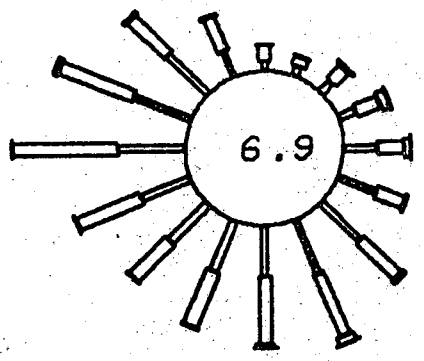
FIVE YEAR SUMMARY



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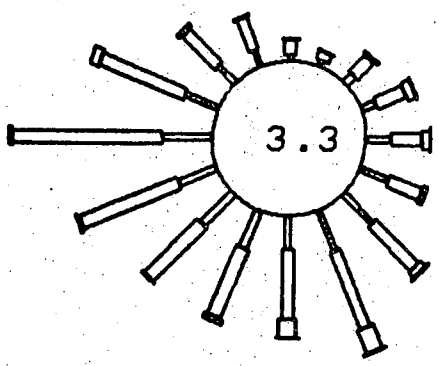

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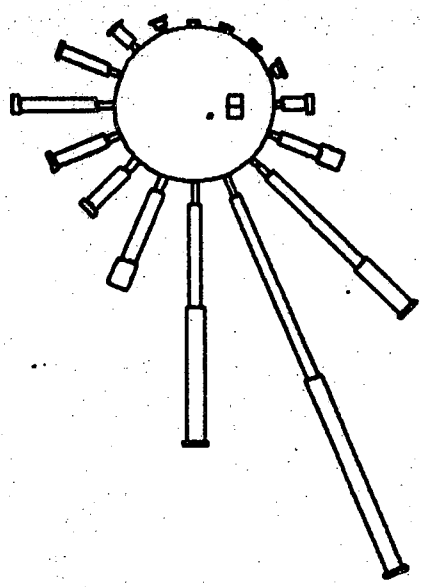

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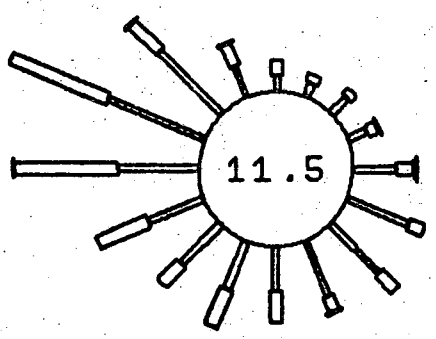

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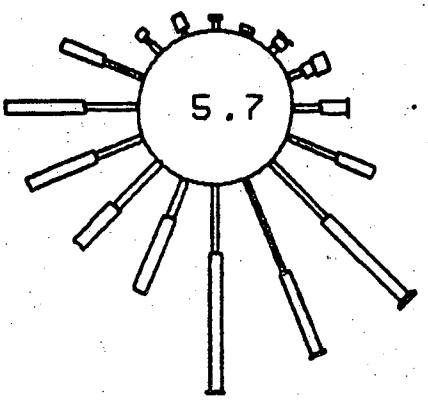

BELOW INVERSION

FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY
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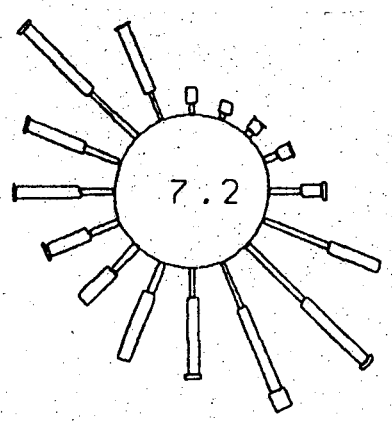

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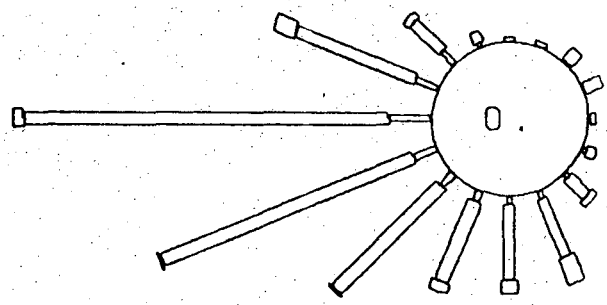

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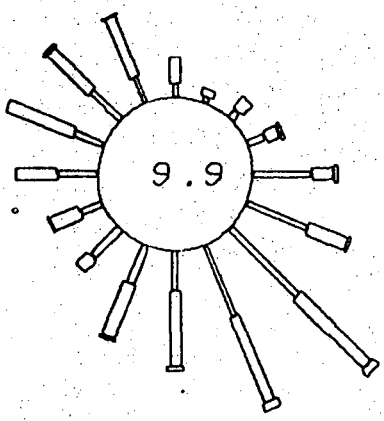

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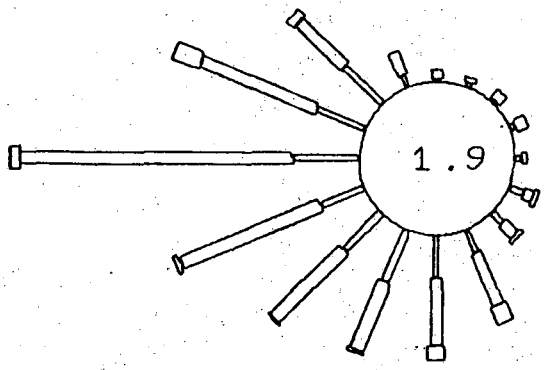

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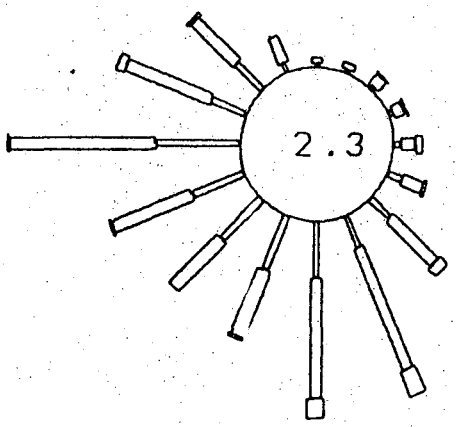

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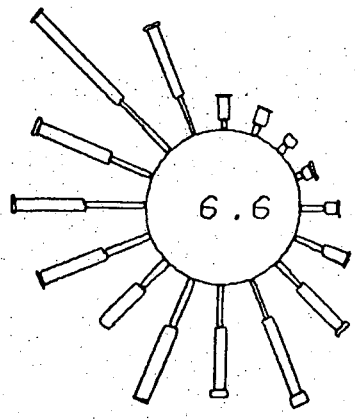
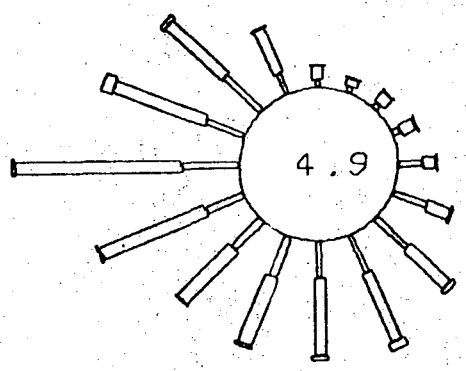


2000 - 2300 HRS

FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY
SPRING 1967



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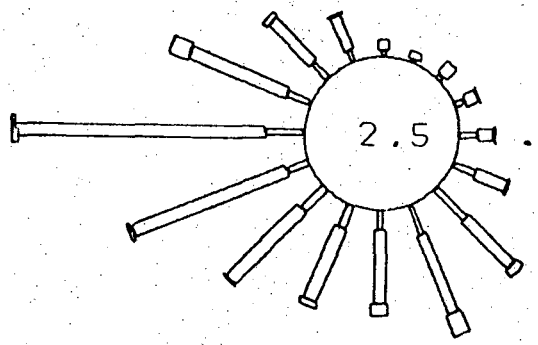
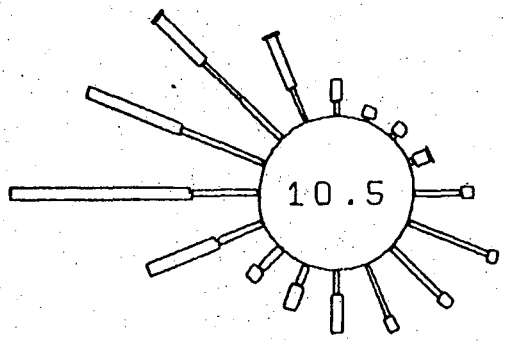


LAPSE



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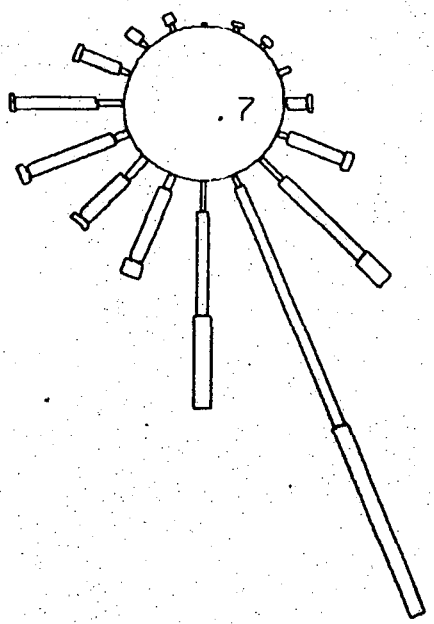

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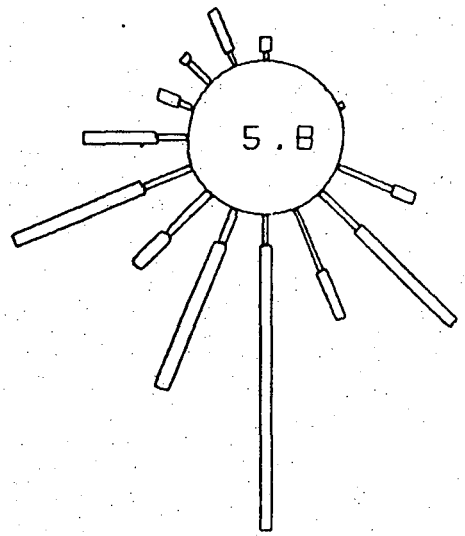
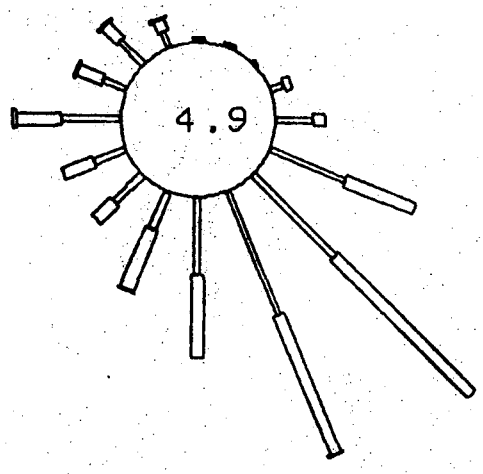


BELOW INVERSION

FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY
SUMMER 1967



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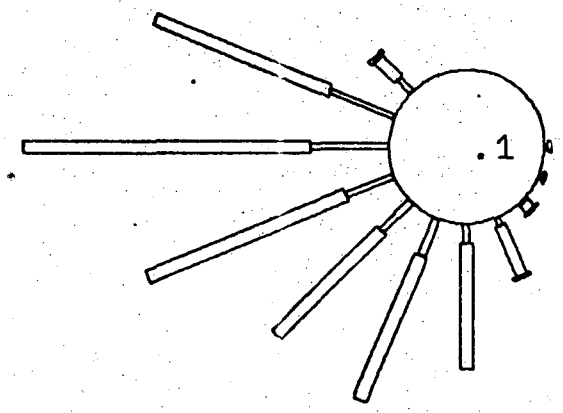

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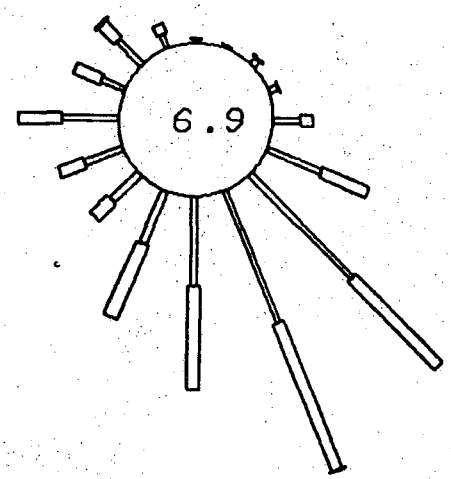

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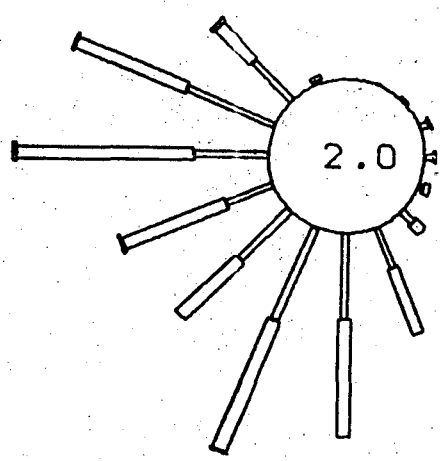

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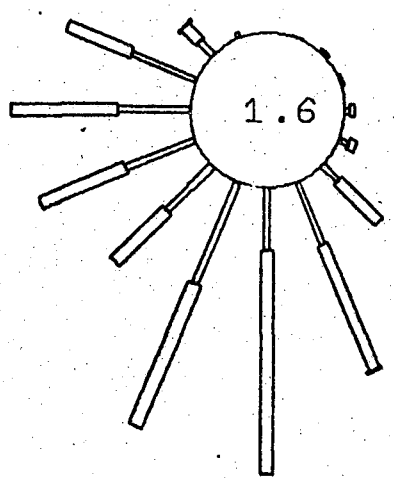

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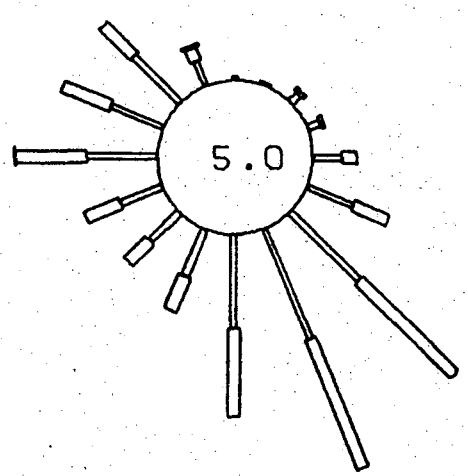

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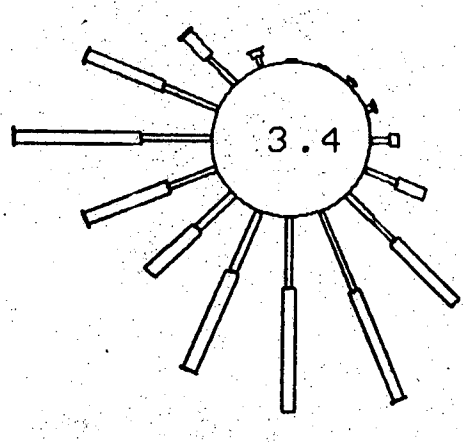
FREQUENCY OF WINDS STATION LRL1
FIVE YEAR SUMMARY
SUMMER 1967



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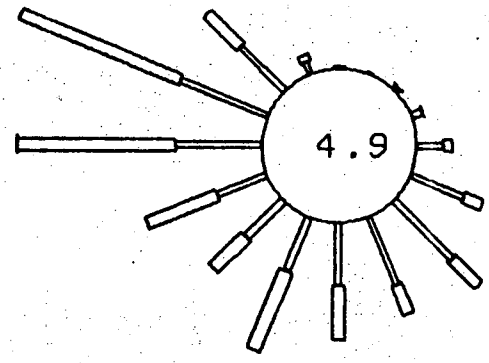

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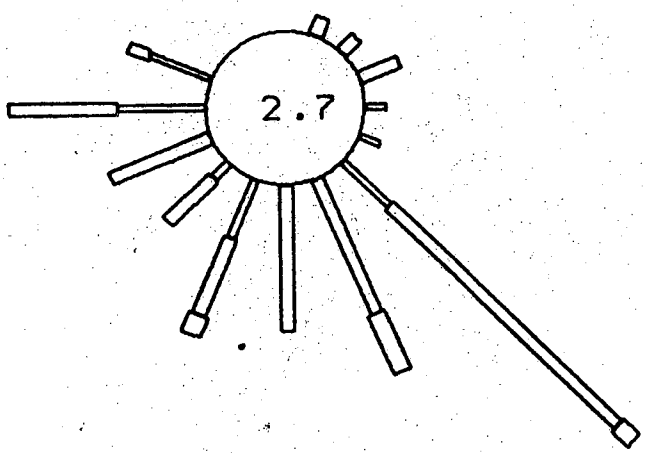

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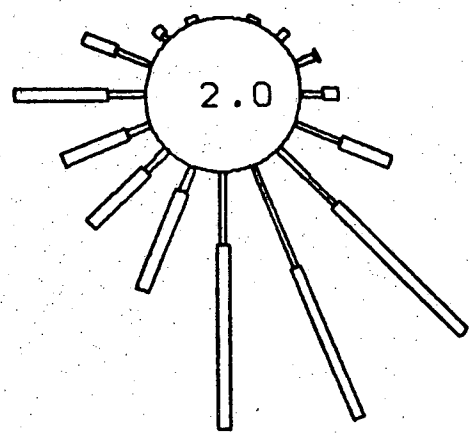
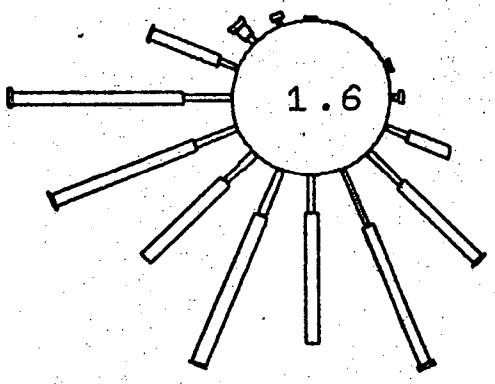
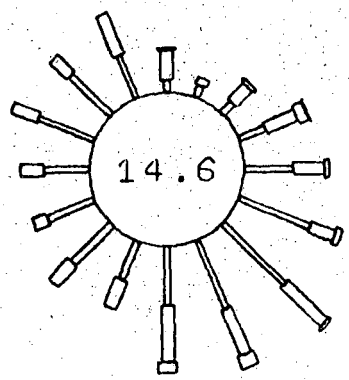


BELOW INVERSION



LAPSE

FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY
AUTUMN 1967



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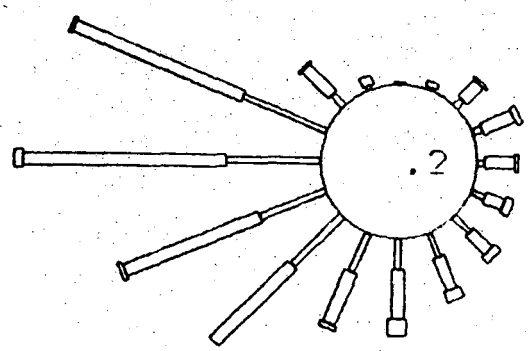

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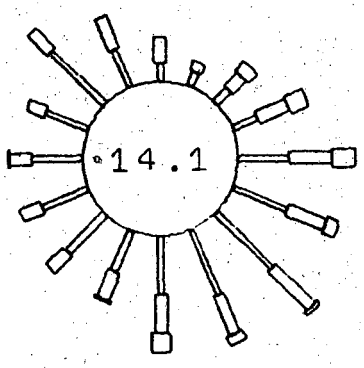

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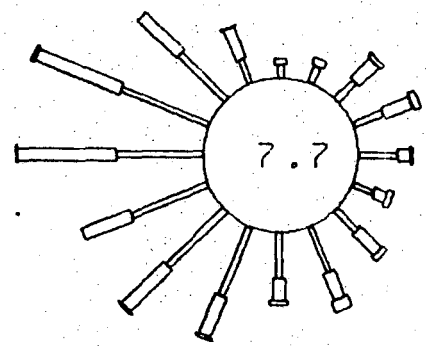

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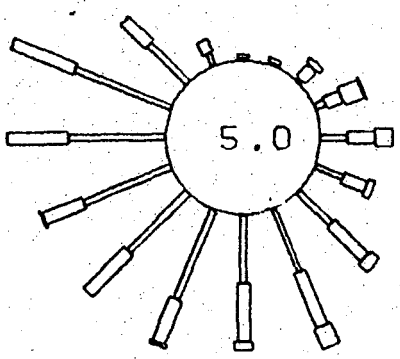

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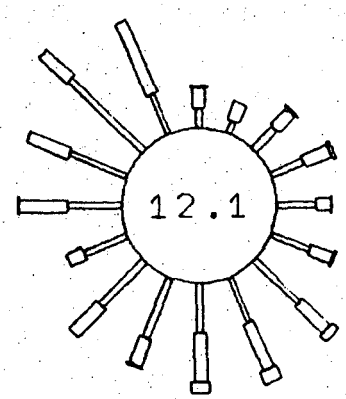
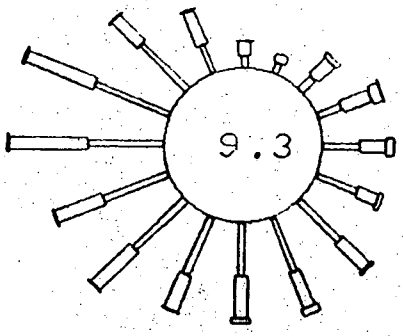


2000 - 2300 HRS

FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY
AUTUMN 1967



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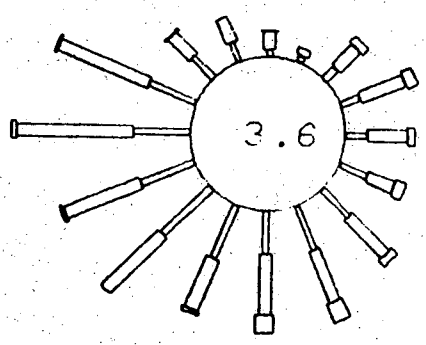

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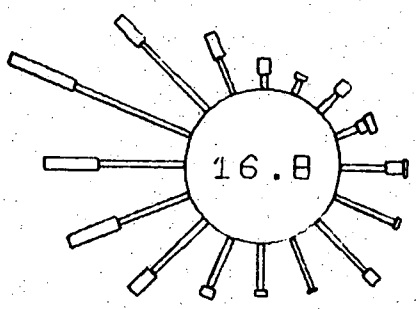

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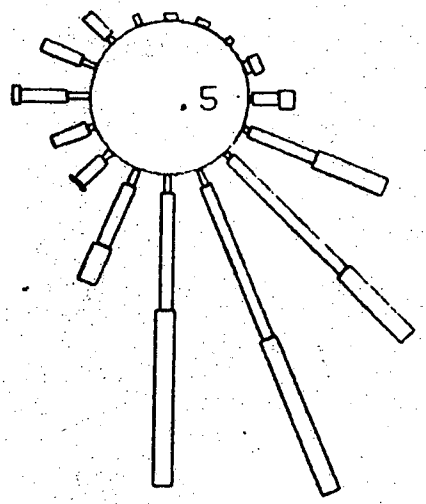

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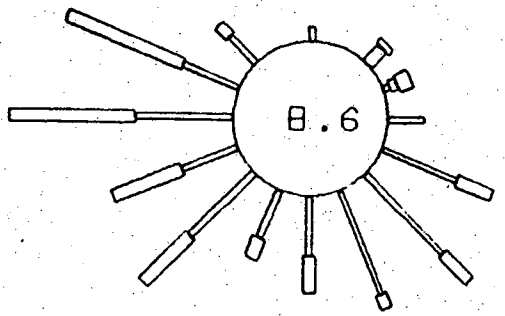
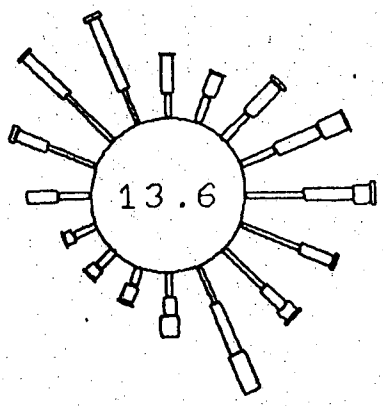
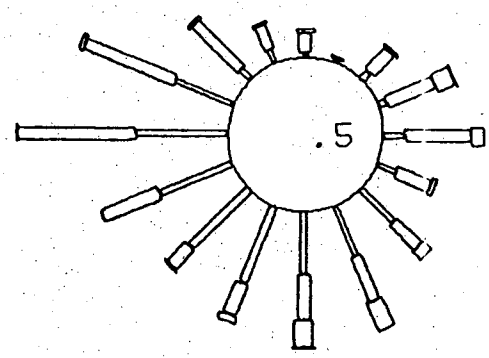


BELOW INVERSION

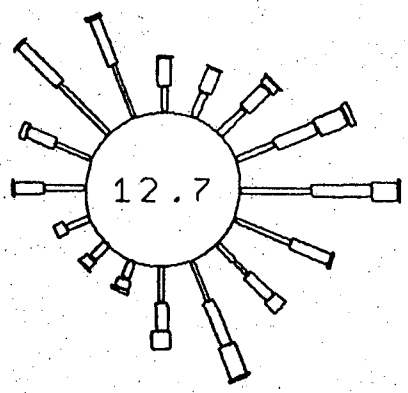
FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY
WINTER 1968



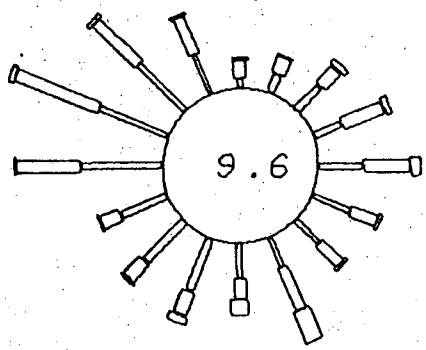
0000 - 0300 HRS



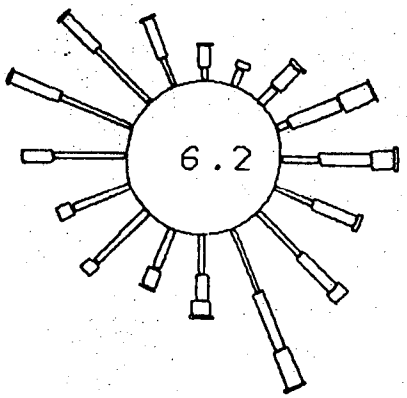
1200 - 1500 HRS



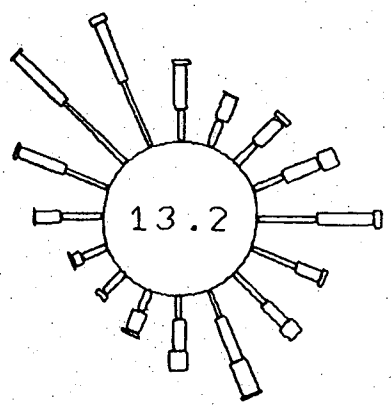
0400 - 0700 HRS



1600 - 1900 HRS

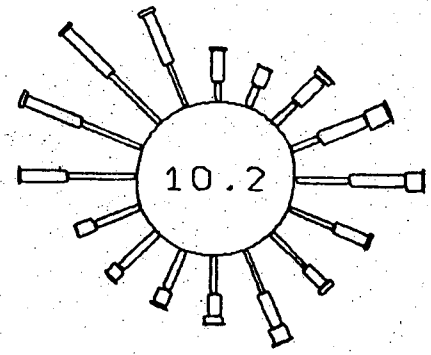


0800 - 1100 HRS

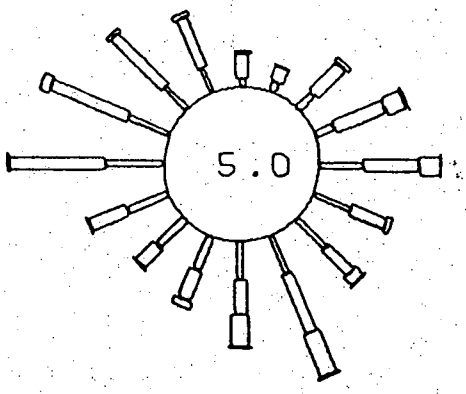


2000 - 2300 HRS

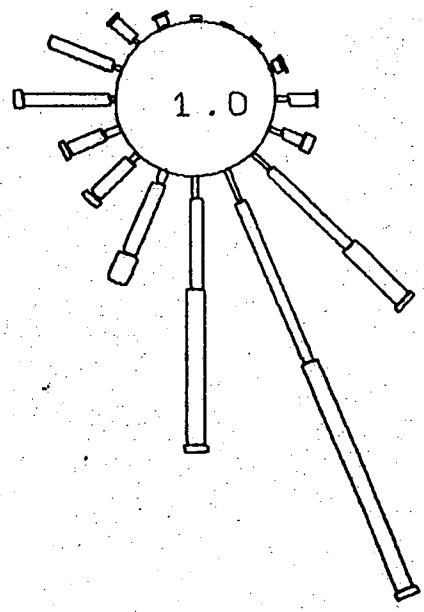
FREQUENCY OF WINDS
STATION LRL1
FIVE YEAR SUMMARY
WINTER 1968



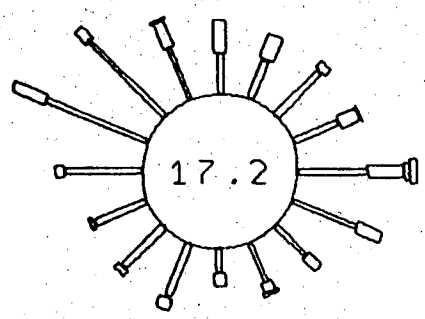
FAIR



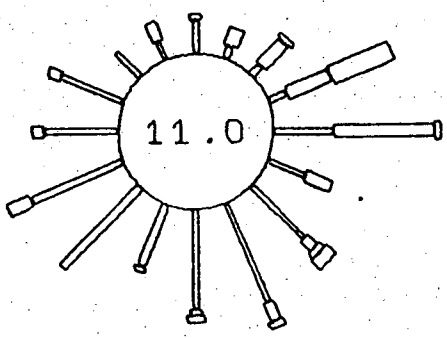
LAPSE



PRECIPITATION



INVERSION



BELOW INVERSION

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

ALL HOURS

CALM 6.58

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.59	.97	.05	0.	0.
NNE	.61	.61	.01	0.	0.
NE	.89	1.10	.20	.00	0.
ENE	1.10	1.52	.59	.03	0.
E	1.97	1.68	.45	.03	0.
ESE	2.46	1.87	.17	0.	0.
SE	3.31	3.53	.39	.01	0.
SSE	3.59	4.76	1.13	.01	0.
S	3.12	4.44	.70	.01	0.
SSW	3.36	3.86	.18	0.	0.
SW	3.24	3.30	.03	0.	0.
WSW	3.17	4.28	.09	0.	0.
W	4.02	6.45	.14	0.	0.
WNW	3.65	4.86	.26	0.	0.
NW	3.33	3.19	.13	0.	0.
NNW	1.64	2.24	.08	0.	0.

40705 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY
ALL SEASONS

0000 - 0300 HRS

CALM 10.12

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.80	1.43	.04	0.	0.
NNE	.80	.78	.01	0.	0.
NE	.99	1.24	.16	0.	0.
ENE	1.54	1.68	.64	.04	0.
E	2.79	1.85	.44	.06	0.
ESE	4.69	3.02	.13	0.	0.
SE	5.37	5.75	.33	.04	0.
SSE	4.73	5.48	1.23	0.	0.
S	3.02	3.78	.61	0.	0.
SSW	2.14	3.02	.04	0.	0.
SW	2.39	1.77	.01	0.	0.
WSW	2.29	1.63	.07	0.	0.
W	2.66	2.65	.09	0.	0.
WNW	2.79	2.42	.12	0.	0.
NW	3.50	3.15	.10	0.	0.
NNW	2.07	3.36	.12	0.	0.

6766 OBSERVATIONS

0400 - 0700 HRS

CALM 10.90

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.95	1.38	.03	0.	0.
NNE	.80	.74	.03	0.	0.
NE	1.19	1.08	.36	.01	0.
ENE	1.57	1.53	.89	.12	0.
E	3.37	2.21	.86	.04	0.
ESE	3.89	2.82	.24	0.	0.
SE	5.75	4.93	.42	0.	0.
SSE	5.29	5.44	.86	.03	0.
S	3.55	3.92	.73	0.	0.
SSW	2.55	2.88	.13	0.	0.
SW	2.41	1.23	.01	0.	0.
WSW	2.23	1.50	.01	0.	0.
W	2.96	2.20	.06	0.	0.
WNW	2.27	2.35	.09	0.	0.
NW	3.51	2.66	.07	0.	0.
NNW	2.24	2.63	.06	0.	0.

6733 OBSERVATIONS

0800 - 1100 HRS

CALM 3.78

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.29	.51	.03	0.	0.
NNE	.41	.31	0.	0.	0.
NE	.51	.99	.21	0.	0.
ENE	.51	1.40	.94	.03	0.
E	1.21	1.60	.76	.07	0.
ESE	1.54	1.62	.21	0.	0.
SE	2.47	3.47	.53	0.	0.
SSE	3.81	6.19	1.44	.03	0.
S	3.62	6.81	.69	.04	0.
SSW	4.94	4.65	.12	0.	0.
SW	4.44	3.44	0.	0.	0.
WSW	4.57	3.82	.06	0.	0.
W	5.18	5.53	.04	0.	0.
WNW	4.56	4.50	.16	0.	0.
NW	2.96	2.60	.07	0.	0.
NNW	.94	1.34	.03	0.	0.

6800 OBSERVATIONS

1200 - 1500 HRS

CALM .19

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.07	.43	.06	0.	0.
NNE	.07	.26	0.	0.	0.
NE	.35	1.10	.10	0.	0.
ENE	.31	1.72	.41	.01	0.
E	.53	1.72	.25	0.	0.
ESE	.68	1.09	.18	0.	0.
SE	1.19	1.57	.44	0.	0.
SSE	1.56	3.20	1.18	0.	0.
S	1.93	4.81	.96	.03	0.
SSW	2.84	5.41	.37	0.	0.
SW	3.38	6.94	.07	0.	0.
WSW	3.59	11.12	.13	0.	0.
W	4.85	15.56	.34	0.	0.
WNW	3.89	9.46	.47	0.	0.
NW	1.04	2.75	.25	0.	0.
NNW	.37	.75	.03	0.	0.

6805 OBSERVATIONS

1600 - 1900 HRS

CALM 5.31

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.38	.60	.03	0.	0.
NNE	.70	.53	.01	0.	0.
NE	1.03	1.01	.21	0.	0.
ENE	1.23	1.45	.25	0.	0.
E	1.56	1.10	.21	0.	0.
ESE	1.34	.90	.19	0.	0.
SE	1.45	1.41	.21	0.	0.
SSE	2.38	3.21	1.06	0.	0.
S	3.30	3.67	.60	0.	0.
SSW	4.61	4.54	.28	0.	0.
SW	4.12	4.24	.10	0.	0.
WSW	3.65	5.42	.16	0.	0.
W	4.89	9.26	.21	0.	0.
WNW	5.01	6.83	.59	0.	0.
NW	3.80	3.65	.26	0.	0.
NNW	1.35	1.66	.04	0.	0.

6813 OBSERVATIONS

2000 - 2300 HRS

CALM 9.25

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	1.05	1.46	.12	0.	0.
NNE	.88	1.06	.03	0.	0.
NE	1.30	1.15	.16	0.	0.
ENE	1.41	1.31	.44	0.	0.
E	2.39	1.61	.18	0.	0.
ESE	2.67	1.80	.10	0.	0.
SE	3.68	4.08	.44	0.	0.
SSE	3.79	5.02	1.00	.03	0.
S	3.30	3.67	.62	0.	0.
SSW	3.03	2.68	.13	0.	0.
SW	2.65	2.14	0.	0.	0.
WSW	2.67	2.15	.09	0.	0.
W	3.57	3.43	.12	0.	0.
WNW	3.34	3.57	.10	0.	0.
NW	5.16	4.33	.03	0.	0.
NNW	2.90	3.73	.19	0.	0.

6788 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY
ALL SEASONS

FAIR

CALM 6.90

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.61	1.01	.05	0.	0.
NNE	.64	.63	.02	0.	0.
NE	.93	1.14	.20	.00	0.
ENE	1.13	1.55	.59	.04	0.
E	2.05	1.65	.46	.03	0.
ESE	2.54	1.80	.11	0.	0.
SE	3.40	3.27	.20	0.	0.
SSE	3.71	4.32	.47	.01	0.
S	3.21	4.33	.28	.00	0.
SSW	3.48	3.82	.10	0.	0.
SW	3.35	3.32	.01	0.	0.
WSW	3.29	4.33	.07	0.	0.
W	4.18	6.56	.13	0.	0.
WNW	3.80	4.96	.26	0.	0.
NW	3.49	3.29	.14	0.	0.
NNW	1.72	2.34	.08	0.	0.

38553 OBSERVATIONS

PRECIPITATION

CALM .84

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.10	.25	0.	0.	0.
NNE	.10	.35	0.	0.	0.
NE	.25	.30	0.	0.	0.
ENE	.35	.45	.25	0.	0.
E	.50	1.54	.35	0.	0.
ESE	.74	2.68	1.44	0.	0.
SE	1.54	8.13	4.11	.15	0.
SSE	1.49	12.69	13.43	.20	0.
S	1.49	6.59	8.77	.20	0.
SSW	1.09	4.86	1.78	0.	0.
SW	1.04	3.17	.45	0.	0.
WSW	.89	3.57	.40	0.	0.
W	1.14	4.81	.45	0.	0.
WNW	.79	3.27	.10	0.	0.
NW	.50	1.49	.05	0.	0.
NNW	.35	.50	.05	0.	0.

2018 OBSERVATIONS

LAPSE

CALM 3.32

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.37	.99	.06	0.	0.
NNE	.39	.57	.01	0.	0.
NE	.74	1.49	.26	0.	0.
ENE	.95	2.04	.59	.04	0.
E	1.60	1.96	.55	.01	0.
ESE	1.93	2.25	.27	0.	0.
SE	2.63	3.90	.50	.01	0.
SSE	2.78	5.30	1.64	.02	0.
S	2.16	4.47	1.16	.02	0.
SSW	2.60	4.78	.37	0.	0.
SW	2.80	4.90	.05	0.	0.
WSW	2.64	6.83	.19	0.	0.
W	3.17	9.59	.26	0.	0.
WNW	2.28	5.87	.57	0.	0.
NW	1.51	3.02	.25	0.	0.
NNW	1.10	2.18	.08	0.	0.

10896 OBSERVATIONS

INVERSION

CALM 11.50

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.96	.96	0.	0.	0.
NNE	.90	.56	0.	0.	0.
NE	1.40	.56	0.	0.	0.
ENE	1.36	.67	.19	0.	0.
E	2.80	1.09	.15	.10	0.
ESE	4.28	.96	0.	0.	0.
SE	4.43	1.44	0.	0.	0.
SSE	3.84	1.04	.04	0.	0.
S	2.84	1.96	0.	0.	0.
SSW	3.30	2.61	0.	0.	0.
SW	3.55	1.82	0.	0.	0.
WSW	3.82	3.59	0.	0.	0.
W	5.16	6.74	.02	0.	0.
WNW	6.70	6.76	0.	0.	0.
NW	5.64	2.55	.02	0.	0.
NNW	2.09	1.57	.04	0.	0.

4790 OBSERVATIONS

BELOW INVERSION

CALM 5.67

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.69	.26	0.	0.	0.
NNE	.17	.43	0.	0.	0.
NE	.52	.69	.17	0.	0.
ENE	1.03	.77	1.03	0.	0.
E	1.81	1.72	.09	0.	0.
ESE	3.53	2.49	0.	0.	0.
SE	5.07	7.22	.09	.17	0.
SSE	6.53	5.59	.09	0.	0.
S	4.39	8.94	.09	0.	0.
SSW	2.67	5.16	0.	0.	0.
SW	4.04	3.44	0.	0.	0.
WSW	3.27	4.82	0.	0.	0.
W	3.44	5.07	0.	0.	0.
WNW	2.75	2.84	0.	0.	0.
NW	1.38	.52	0.	0.	0.
NNW	.43	.95	0.	0.	0.

1163 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

SPRING 1967

0000 - 0300 HRS

CALM 7.22

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.69	1.04	0.	0.	0.
NNE	.46	.75	0.	0.	0.
NE	.40	.81	.06	0.	0.
ENE	.98	.92	.06	0.	0.
E	2.02	1.39	.29	0.	0.
ESE	4.56	3.46	0.	0.	0.
SE	5.08	5.60	.29	0.	0.
SSE	3.23	5.77	1.21	0.	0.
S	1.91	4.97	.29	0.	0.
SSW	2.14	4.62	0.	0.	0.
SW	2.19	2.77	0.	0.	0.
WSW	2.14	2.83	.23	0.	0.
W	2.14	4.16	.17	0.	0.
WNW	2.42	3.93	.12	0.	0.
NW	4.10	5.83	.17	0.	0.
NNW	1.91	4.62	.06	0.	0.

1732 OBSERVATIONS

0400 - 0700 HRS

CALM 9.91

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.81	1.80	0.	0.	0.
NNE	.35	.52	0.	0.	0.
NE	.70	.99	0.	0.	0.
ENE	1.22	.93	.29	0.	0.
E	3.83	1.45	.29	0.	0.
ESE	4.17	2.72	.12	0.	0.
SE	6.09	6.32	.52	0.	0.
SSE	4.93	5.91	.52	0.	0.
S	2.55	4.87	.29	0.	0.
SSW	2.61	3.77	.12	0.	0.
SW	2.49	1.10	0.	0.	0.
WSW	1.51	2.09	.06	0.	0.
W	2.55	2.67	0.	0.	0.
WNW	2.03	4.46	0.	0.	0.
NW	2.55	3.71	.17	0.	0.
NNW	1.74	4.23	.06	0.	0.

1725 OBSERVATIONS

0800 - 1100 HRS

CALM 2.29

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.23	.34	0.	0.	0.
NNE	.23	.40	0.	0.	0.
NE	.17	.86	.06	0.	0.
ENE	.29	.80	.17	0.	0.
E	.40	.97	.52	0.	0.
ESE	.97	1.43	.17	0.	0.
SE	1.72	4.06	.63	0.	0.
SSE	2.18	8.41	1.72	0.	0.
S	3.61	7.73	1.26	0.	0.
SSW	3.78	4.58	.17	0.	0.
SW	3.66	4.41	0.	0.	0.
WSW	3.66	5.50	.17	0.	0.
W	5.38	9.39	.17	0.	0.
WNW	2.35	5.90	.52	0.	0.
NW	2.35	3.84	.17	0.	0.
NNW	.63	1.77	0.	0.	0.

1747 OBSERVATIONS

1200 - 1500 HRS

CALM 0.

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	.28	0.	0.	0.
NNE	0.	.34	0.	0.	0.
NE	.11	1.02	0.	0.	0.
ENE	.11	1.31	0.	0.	0.
E	.17	.40	0.	0.	0.
ESE	.28	.63	0.	0.	0.
SE	.28	1.65	.46	0.	0.
SSE	.51	3.98	1.82	0.	0.
S	.51	4.89	.91	0.	0.
SSW	.68	5.69	.63	0.	0.
SW	1.08	9.50	.17	0.	0.
WSW	1.59	17.47	.23	0.	0.
W	2.73	23.39	.74	0.	0.
WNW	1.54	8.25	1.42	0.	0.
NW	1.14	2.56	.46	0.	0.
NNW	.28	.74	0.	0.	0.

1757 OBSERVATIONS

1600 - 1900 HRS

CALM 1.94

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.11	.68	0.	0.	0.
NNE	.29	.34	0.	0.	0.
NE	.17	.74	0.	0.	0.
ENE	.40	.86	0.	0.	0.
E	.46	.40	0.	0.	0.
ESE	.97	.63	.23	0.	0.
SE	.91	1.08	.29	0.	0.
SSE	1.60	3.65	1.20	0.	0.
S	2.68	4.39	.97	0.	0.
SSW	3.59	4.73	.23	0.	0.
SW	3.31	6.39	.11	0.	0.
WSW	2.97	9.81	.40	0.	0.
W	4.16	15.29	.46	0.	0.
WNW	3.31	8.10	1.77	0.	0.
NW	3.37	4.11	.57	0.	0.
NNW	.80	1.54	0.	0.	0.

1753 OBSERVATIONS

2000 - 2300 HRS

CALM 6.60

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.64	1.50	.06	0.	0.
NNE	.69	1.10	.06	0.	0.
NE	.69	.69	0.	0.	0.
ENE	.52	.64	.29	0.	0.
E	1.56	.81	.17	0.	0.
ESE	1.97	1.62	.06	0.	0.
SE	2.08	3.65	.29	0.	0.
SSE	2.72	5.15	.75	0.	0.
S	2.72	3.99	.46	0.	0.
SSW	3.36	4.98	.12	0.	0.
SW	2.31	3.53	0.	0.	0.
WSW	3.13	4.40	.23	0.	0.
W	3.88	4.51	.17	0.	0.
WNW	2.95	4.92	.29	0.	0.
NW	4.46	7.70	.06	0.	0.
NNW	2.60	4.75	.17	0.	0.

1728 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

SPRING 1967

FAIR

CALM 4.88

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.43	1.00	.01	0.	0.
NNE	.34	.59	.01	0.	0.
NE	.38	.88	.02	0.	0.
ENE	.57	.97	.14	0.	0.
E	1.48	.88	.20	0.	0.
ESE	2.24	1.62	.07	0.	0.
SE	2.73	3.51	.31	0.	0.
SSE	2.63	4.78	.47	0.	0.
S	2.35	5.03	.37	0.	0.
SSW	2.80	4.70	.16	0.	0.
SW	2.55	4.69	.02	0.	0.
WSW	2.59	7.13	.19	0.	0.
W	3.59	10.26	.28	0.	0.
WNW	2.54	6.15	.71	0.	0.
NW	3.13	4.84	.28	0.	0.
NNW	1.37	3.07	.05	0.	0.

9827 OBSERVATIONS

PRECIPITATION

CALM .65

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.16	0.	0.	0.	0.
NNE	.33	.33	0.	0.	0.
NE	.33	.49	0.	0.	0.
ENE	.82	0.	0.	0.	0.
E	.16	1.31	.33	0.	0.
ESE	.65	3.76	.49	0.	0.
SE	1.96	7.03	2.12	0.	0.
SSE	.82	16.67	13.07	0.	0.
S	1.96	6.70	6.05	0.	0.
SSW	.98	5.07	.98	0.	0.
SW	1.80	3.76	.49	0.	0.
WSW	.98	5.72	.65	0.	0.
W	1.63	5.07	.33	0.	0.
WNW	.65	2.61	.33	0.	0.
NW	.65	.98	0.	0.	0.
NNW	.49	.65	0.	0.	0.

612 OBSERVATIONS

LAPSE

CALM 2.54

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.34	.76	0.	0.	0.
NNE	.21	.52	0.	0.	0.
NE	.34	1.04	0.	0.	0.
ENE	.67	.92	.09	0.	0.
E	1.19	1.04	.15	0.	0.
ESE	1.53	2.14	.06	0.	0.
SE	2.69	4.18	.52	0.	0.
SSE	2.02	5.44	1.53	0.	0.
S	1.22	4.80	.86	0.	0.
SSW	1.56	5.16	.40	0.	0.
SW	2.02	6.54	.09	0.	0.
WSW	1.53	10.60	.34	0.	0.
W	2.47	13.96	.34	0.	0.
WNW	1.62	6.72	1.28	0.	0.
NW	1.37	3.70	.34	0.	0.
NNW	.79	2.38	.03	0.	0.

3274 OBSERVATIONS

INVERSION

CALM 10.49

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.95	1.43	0.	0.	0.
NNE	.24	.72	0.	0.	0.
NE	.36	.83	0.	0.	0.
ENE	.36	1.07	.12	0.	0.
E	2.98	.83	0.	0.	0.
ESE	5.48	.60	0.	0.	0.
SE	4.41	.83	0.	0.	0.
SSE	3.69	.95	0.	0.	0.
S	1.55	2.50	0.	0.	0.
SSW	1.43	1.67	0.	0.	0.
SW	1.91	.95	0.	0.	0.
WSW	3.22	4.89	0.	0.	0.
W	4.29	11.68	0.	0.	0.
WNW	5.72	6.56	0.	0.	0.
NW	7.03	4.05	.12	0.	0.
NNW	2.38	3.58	.12	0.	0.

839 OBSERVATIONS

BELOW INVERSION

CALM 5.77

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.48	.96	0.	0.	0.
NNE	0.	0.	0.	0.	0.
NE	0.	0.	0.	0.	0.
ENE	.48	0.	0.	0.	0.
E	0.	0.	0.	0.	0.
ESE	3.85	1.44	0.	0.	0.
SE	3.37	8.65	0.	0.	0.
SSE	4.33	3.37	0.	0.	0.
S	1.92	18.27	0.	0.	0.
SSW	2.40	10.10	0.	0.	0.
SW	3.85	2.88	0.	0.	0.
WSW	3.37	9.13	0.	0.	0.
W	1.92	4.81	0.	0.	0.
WNW	.96	1.44	0.	0.	0.
NW	1.92	.48	0.	0.	0.
NNW	.96	2.88	0.	0.	0.

208 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

SUMMER 1967

0000 - 0300 HRS

CALM 4.92

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.12	.18	0.	0.	0.
NNE	.06	.18	0.	0.	0.
NE	.25	0.	0.	0.	0.
ENE	.86	.55	0.	0.	0.
E	2.34	.86	0.	0.	0.
ESE	5.22	4.73	0.	0.	0.
SE	7.44	12.42	0.	0.	0.
SSE	8.60	9.65	.06	0.	0.
S	4.98	5.41	0.	0.	0.
SSW	2.58	4.30	.06	0.	0.
SW	2.52	1.66	0.	0.	0.
WSW	2.21	2.09	0.	0.	0.
W	3.69	2.95	.18	0.	0.
WNW	1.60	1.72	.06	0.	0.
NW	2.09	1.35	.12	0.	0.
NNW	1.04	.80	.12	0.	0.

1627 OBSERVATIONS

0400 - 0700 HRS

CALM 6.86

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.19	.12	0.	0.	0.
NNE	.12	.06	0.	0.	0.
NE	.49	.19	0.	0.	0.
ENE	.62	.12	0.	0.	0.
E	1.73	.80	0.	0.	0.
ESE	3.71	3.28	0.	0.	0.
SE	9.33	7.97	0.	0.	0.
SSE	9.21	10.20	.06	0.	0.
S	5.81	6.67	0.	0.	0.
SSW	3.71	5.25	0.	0.	0.
SW	2.47	1.61	0.	0.	0.
WSW	2.66	1.73	0.	0.	0.
W	3.58	2.78	0.	0.	0.
WNW	1.61	1.79	0.	0.	0.
NW	2.16	1.48	.06	0.	0.
NNW	.93	.62	0.	0.	0.

1618 OBSERVATIONS

0800 - 1100 HRS

CALM 1.63

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	0.	0.	0.	0.
NNE	0.	.06	0.	0.	0.
NE	.18	.12	0.	0.	0.
ENE	.12	.06	0.	0.	0.
E	.30	.30	0.	0.	0.
ESE	.61	.48	0.	0.	0.
SE	1.39	3.69	0.	0.	0.
SSE	4.36	8.66	.06	0.	0.
S	4.06	14.29	0.	0.	0.
SSW	7.08	9.93	0.	0.	0.
SW	5.44	5.82	0.	0.	0.
WSW	4.78	5.93	0.	0.	0.
W	4.60	6.78	0.	0.	0.
WNW	4.42	4.42	0.	0.	0.
NW	1.21	1.33	.06	0.	0.
NNW	.24	0.	0.	0.	0.

1652 OBSERVATIONS

1200 - 1500 HRS

CALM .12

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	0.	0.	0.	0.
NNE	0.	0.	0.	0.	0.
NE	0.	0.	0.	0.	0.
ENE	0.	0.	0.	0.	0.
E	.18	.24	0.	0.	0.
ESE	.24	.12	0.	0.	0.
SE	.12	.66	.06	0.	0.
SSE	.54	3.49	.12	0.	0.
S	1.20	8.19	0.	0.	0.
SSW	2.59	10.17	0.	0.	0.
SW	2.65	9.51	0.	0.	0.
WSW	3.19	13.79	0.	0.	0.
W	4.94	18.30	0.	0.	0.
WNW	4.39	11.98	0.	0.	0.
NW	1.14	1.81	.24	0.	0.
NNW	0.	0.	0.	0.	0.

1661 OBSERVATIONS

1600 - 1900 HRS

CALM 2.00

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	0.	0.	0.	0.
NNE	.06	0.	0.	0.	0.
NE	.12	.06	0.	0.	0.
ENE	.54	.18	0.	0.	0.
E	.54	.12	0.	0.	0.
ESE	.30	.36	0.	0.	0.
SE	.97	.79	0.	0.	0.
SSE	2.78	4.48	0.	0.	0.
S	5.57	7.57	0.	0.	0.
SSW	6.54	9.08	.12	0.	0.
SW	4.54	5.27	0.	0.	0.
WSW	3.21	7.14	.18	0.	0.
W	4.78	11.26	.24	0.	0.
WNW	6.11	7.63	.06	0.	0.
NW	3.51	3.15	.24	0.	0.
NNW	.18	.30	0.	0.	0.

1652 OBSERVATIONS

2000 - 2300 HRS

CALM 5.01

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.18	0.	0.	0.	0.
NNE	.12	.06	0.	0.	0.
NE	.73	.31	0.	0.	0.
ENE	.79	.31	0.	0.	0.
E	1.83	.92	0.	0.	0.
ESE	3.11	2.38	0.	0.	0.
SE	6.23	8.55	0.	0.	0.
SSE	7.63	8.91	0.	0.	0.
S	6.04	5.68	0.	0.	0.
SSW	3.30	2.44	0.	0.	0.
SW	2.63	2.01	0.	0.	0.
WSW	2.87	2.44	0.	0.	0.
W	4.46	4.52	.12	0.	0.
WNW	3.54	3.30	0.	0.	0.
NW	4.15	2.75	0.	0.	0.
NNW	1.65	.92	.12	0.	0.

1638 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

SUMMER 1967

FAIR

CALM 3.41

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.08	.05	0.	0.	0.
NNE	.06	.05	0.	0.	0.
NE	.30	.10	0.	0.	0.
ENE	.49	.18	0.	0.	0.
E	1.15	.54	0.	0.	0.
ESE	2.19	1.89	0.	0.	0.
SE	4.22	5.54	0.	0.	0.
SSE	5.54	7.53	.02	0.	0.
S	4.64	7.94	0.	0.	0.
SSW	4.31	6.89	.02	0.	0.
SW	3.16	4.16	0.	0.	0.
WSW	3.18	5.55	.03	0.	0.
W	4.34	7.82	.09	0.	0.
WNW	3.62	5.20	.02	0.	0.
NW	2.40	2.00	.12	0.	0.
NNW	.68	.44	.04	0.	0.

9769 OBSERVATIONS

PRECIPITATION

CALM 2.70

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	0.	0.	0.	0.
NNE	0.	1.35	0.	0.	0.
NE	0.	1.35	0.	0.	0.
ENE	0.	2.70	0.	0.	0.
E	1.35	0.	0.	0.	0.
ESE	1.35	0.	0.	0.	0.
SE	4.05	20.27	1.35	0.	0.
SSE	0.	9.46	4.05	0.	0.
S	0.	9.46	0.	0.	0.
SSW	4.05	5.41	1.35	0.	0.
SW	1.35	4.05	0.	0.	0.
WSW	0.	6.76	0.	0.	0.
W	5.41	6.76	0.	0.	0.
WNW	4.05	1.35	0.	0.	0.
NW	0.	0.	0.	0.	0.
NNW	0.	0.	0.	0.	0.

74 OBSERVATIONS

LAPSE

CALM 1.55

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.05	.16	0.	0.	0.
NNE	0.	.05	0.	0.	0.
NE	0.	.05	0.	0.	0.
ENE	.16	.27	0.	0.	0.
E	.54	.32	0.	0.	0.
ESE	1.61	2.79	0.	0.	0.
SE	2.95	6.91	.05	0.	0.
SSE	4.02	9.53	.21	0.	0.
S	2.41	8.46	0.	0.	0.
SSW	3.21	10.34	.11	0.	0.
SW	2.62	7.02	0.	0.	0.
WSW	2.84	9.48	.16	0.	0.
W	3.00	10.55	.21	0.	0.
WNW	1.23	4.55	.05	0.	0.
NW	.54	.80	.37	0.	0.
NNW	.43	.37	0.	0.	0.

1867 OBSERVATIONS

INVERSION

CALM 4.92

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.06	.06	0.	0.	0.
NNE	.12	0.	0.	0.	0.
NE	.23	.12	0.	0.	0.
ENE	.70	.12	0.	0.	0.
E	1.74	.52	0.	0.	0.
ESE	3.65	1.22	0.	0.	0.
SE	5.27	2.38	0.	0.	0.
SSE	4.69	2.03	0.	0.	0.
S	4.06	3.48	0.	0.	0.
SSW	3.77	5.50	0.	0.	0.
SW	3.36	2.95	0.	0.	0.
WSW	3.42	4.87	0.	0.	0.
W	5.45	10.08	.06	0.	0.
WNW	5.97	11.07	0.	0.	0.
NW	4.00	2.95	0.	0.	0.
NNW	.81	.41	0.	0.	0.

1726 OBSERVATIONS

BELOW INVERSION

CALM 1.96

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	0.	0.	0.	0.
NNE	0.	.39	0.	0.	0.
NE	.79	0.	0.	0.	0.
ENE	1.38	.20	0.	0.	0.
E	1.38	.98	0.	0.	0.
ESE	3.14	3.34	0.	0.	0.
SE	5.11	11.59	0.	0.	0.
SSE	7.07	10.41	0.	0.	0.
S	4.72	11.79	0.	0.	0.
SSW	1.77	6.88	0.	0.	0.
SW	1.96	4.91	0.	0.	0.
WSW	1.57	4.52	0.	0.	0.
W	2.36	5.89	0.	0.	0.
WNW	2.36	2.16	0.	0.	0.
NW	.39	.59	0.	0.	0.
NNW	0.	.39	0.	0.	0.

509 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

AUTUMN 1967

0000 - 0300 HRS

CALM 14.64

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.78	1.93	.12	0.	0.
NNE	.78	.54	0.	0.	0.
NE	.96	1.45	.24	0.	0.
ENE	1.81	2.11	.72	.06	0.
E	3.07	1.99	.30	0.	0.
ESE	4.88	1.69	.36	0.	0.
SE	5.60	3.55	.18	0.	0.
SSE	4.76	3.19	.90	0.	0.
S	3.80	3.67	.72	0.	0.
SSW	2.71	1.99	0.	0.	0.
SW	3.49	1.87	0.	0.	0.
WSW	3.25	.96	0.	0.	0.
W	2.83	1.51	0.	0.	0.
WNW	3.80	1.81	0.	0.	0.
NW	3.61	1.51	0.	0.	0.
NNW	2.95	2.89	0.	0.	0.

1660 OBSERVATIONS

0300 - 0700 HRS

CALM 14.05

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	1.15	1.70	0.	0.	0.
NNE	.97	.67	0.	0.	0.
NE	1.21	1.15	.85	0.	0.
ENE	1.70	2.12	1.27	0.	0.
E	3.27	2.67	1.51	0.	0.
ESE	3.76	2.60	.73	0.	0.
SE	5.03	3.51	.24	0.	0.
SSE	4.48	2.73	.61	0.	0.
S	3.76	2.42	1.33	0.	0.
SSW	2.79	1.94	.12	0.	0.
SW	3.39	1.57	0.	0.	0.
WSW	3.15	1.45	0.	0.	0.
W	3.15	1.45	.06	0.	0.
WNW	2.91	1.15	0.	0.	0.
NW	4.78	1.76	0.	0.	0.
NNW	2.60	2.24	0.	0.	0.

1651 OBSERVATIONS

0800 - 1100 HRS

CALM 4.99

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.12	.24	0.	0.	0.
NNE	.12	.30	0.	0.	0.
NE	.24	1.08	.42	0.	0.
ENE	.72	1.14	1.38	.06	0.
E	1.68	1.80	1.08	0.	0.
ESE	1.92	1.56	.42	0.	0.
SE	2.95	3.07	.72	0.	0.
SSE	4.39	3.79	1.38	0.	0.
S	4.33	3.79	.54	0.	0.
SSW	6.25	3.01	.24	0.	0.
SW	5.35	3.73	0.	0.	0.
WSW	5.95	2.83	.06	0.	0.
W	6.13	3.91	0.	0.	0.
WNW	6.61	4.27	0.	0.	0.
NW	3.49	2.16	0.	0.	0.
NNW	.90	.84	0.	0.	0.

1663 OBSERVATIONS

1200 - 1500 HRS

CALM .18

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	.12	0.	0.	0.
NNE	.12	.42	0.	0.	0.
NE	.61	1.51	.18	0.	0.
ENE	.61	2.18	.42	0.	0.
E	.42	1.94	.24	0.	0.
ESE	.91	1.27	.48	0.	0.
SE	1.39	1.70	.55	0.	0.
SSE	1.70	2.18	.73	0.	0.
S	1.94	3.21	1.15	0.	0.
SSW	2.73	3.63	.30	0.	0.
SW	4.54	7.03	0.	0.	0.
WSW	4.54	9.27	.30	0.	0.
W	6.06	12.84	.55	0.	0.
WNW	5.81	11.63	.18	0.	0.
NW	1.03	2.42	.12	0.	0.
NNW	.24	.61	0.	0.	0.

1651 OBSERVATIONS

1600 - 1900 HRS

CALM 7.66

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.84	.42	0.	0.	0.
NNE	1.15	.54	0.	0.	0.
NE	1.63	1.75	.36	0.	0.
ENE	2.05	1.87	.54	0.	0.
E	2.41	.84	.12	0.	0.
ESE	1.45	.78	.36	0.	0.
SE	1.87	1.93	.36	0.	0.
SSE	3.14	1.81	.78	0.	0.
S	2.90	1.45	.30	0.	0.
SSW	4.77	2.84	.18	0.	0.
SW	5.13	3.74	.12	0.	0.
WSW	5.25	3.32	0.	0.	0.
W	5.49	4.28	.06	0.	0.
WNW	6.04	5.79	.18	0.	0.
NW	4.16	3.44	0.	0.	0.
NNW	1.63	2.17	.06	0.	0.

1657 OBSERVATIONS

2000 - 2300 HRS

CALM 12.06

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	1.26	1.32	.12	0.	0.
NNE	.84	1.26	0.	0.	0.
NE	1.92	1.44	.18	0.	0.
ENE	2.22	1.80	.24	0.	0.
E	2.40	.96	.06	0.	0.
ESE	2.58	1.50	.12	0.	0.
SE	3.90	2.46	.48	0.	0.
SSE	3.12	3.24	.84	0.	0.
S	3.12	3.12	.72	0.	0.
SSW	4.08	1.92	.12	0.	0.
SW	3.90	2.58	0.	0.	0.
WSW	2.94	1.14	0.	0.	0.
W	3.36	3.12	.06	0.	0.
WNW	3.96	2.76	0.	0.	0.
NW	6.54	2.40	0.	0.	0.
NNW	2.76	5.04	0.	0.	0.

1666 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

AUTUMN 1967

FAIR

CALM 9.31

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.72	.98	.04	0.	0.
NNE	.69	.63	0.	0.	0.
NE	1.12	1.46	.39	0.	0.
ENE	1.59	1.93	.77	.02	0.
E	2.30	1.70	.54	0.	0.
ESE	2.68	1.44	.22	0.	0.
SE	3.59	2.37	.18	0.	0.
SSE	3.71	2.48	.44	0.	0.
S	3.40	2.74	.33	0.	0.
SSW	4.01	2.48	.05	0.	0.
SW	4.46	3.48	.01	0.	0.
WSW	4.35	3.19	.06	0.	0.
W	4.64	4.93	.10	0.	0.
WNW	5.03	4.65	.06	0.	0.
NW	4.09	2.30	.02	0.	0.
NNW	1.90	2.40	.01	0.	0.

9525 OBSERVATIONS

PRECIPITATION

CALM .47

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	0.	.47	0.	0.	0.
NNE	0.	.47	0.	0.	0.
NE	.47	0.	0.	0.	0.
ENE	0.	.47	.71	0.	0.
E	.24	1.65	.95	0.	0.
ESE	.47	4.49	4.73	0.	0.
SE	.47	10.17	5.91	0.	0.
SSE	1.18	10.64	10.64	0.	0.
S	1.18	7.57	11.35	0.	0.
SSW	1.18	4.26	2.60	0.	0.
SW	.71	2.13	.24	0.	0.
WSW	.47	2.36	0.	0.	0.
W	1.42	2.84	.47	0.	0.
WNW	.95	2.60	0.	0.	0.
NW	.47	1.89	0.	0.	0.
NNW	.71	0.	0.	0.	0.

423 OBSERVATIONS

LAPSE

CALM 3.63

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.45	1.17	.04	0.	0.
NNE	.49	.45	0.	0.	0.
NE	1.02	1.85	.61	0.	0.
ENE	1.36	2.99	.79	0.	0.
E	1.44	2.50	.49	0.	0.
ESE	1.97	1.82	.68	0.	0.
SE	2.42	3.40	.53	0.	0.
SSE	3.06	3.56	1.29	0.	0.
S	2.80	3.86	1.25	0.	0.
SSW	3.74	3.56	.30	0.	0.
SW	4.31	5.14	0.	0.	0.
WSW	3.67	5.30	.19	0.	0.
W	3.56	7.53	.34	0.	0.
WNW	3.25	6.28	.08	0.	0.
NW	1.85	1.93	.08	0.	0.
NNW	1.29	1.70	0.	0.	0.

2644 OBSERVATIONS

INVERSION

CALM 16.80

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.94	1.02	0.	0.	0.
NNE	1.02	.39	0.	0.	0.
NE	1.73	.94	0.	0.	0.
ENE	1.57	.63	.55	0.	0.
E	2.90	1.10	.31	0.	0.
ESE	4.24	.31	0.	0.	0.
SE	4.55	.86	0.	0.	0.
SSE	3.61	.08	0.	0.	0.
S	2.98	.39	0.	0.	0.
SSW	3.53	.63	0.	0.	0.
SW	4.79	1.81	0.	0.	0.
WSW	4.87	3.45	0.	0.	0.
W	5.49	3.53	0.	0.	0.
WNW	8.06	4.47	0.	0.	0.
NW	6.04	2.20	0.	0.	0.
NNW	2.51	1.65	0.	0.	0.

1274 OBSERVATIONS

BELOW INVERSION

CALM 8.57

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.95	0.	0.	0.	0.
NNE	0.	0.	0.	0.	0.
NE	0.	1.43	.48	0.	0.
ENE	.48	.48	.95	0.	0.
E	2.38	0.	0.	0.	0.
ESE	5.24	2.38	0.	0.	0.
SE	7.14	2.38	0.	0.	0.
SSE	7.14	.95	0.	0.	0.
S	3.81	2.38	0.	0.	0.
SSW	3.33	1.43	0.	0.	0.
SW	5.71	4.29	0.	0.	0.
WSW	3.81	4.76	0.	0.	0.
W	6.19	8.10	0.	0.	0.
WNW	3.81	8.10	0.	0.	0.
NW	2.38	.95	0.	0.	0.
NNW	0.	0.	0.	0.	0.

210 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

WINTER 1968

0000 - 0300 HRS

CALM 13.57

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	1.55	2.52	.06	0.	0.
NNE	1.83	1.60	.06	0.	0.
NE	2.29	2.63	.34	0.	0.
ENE	2.46	3.09	1.72	.11	0.
E	3.72	3.09	1.14	.23	0.
ESE	4.12	2.23	.17	0.	0.
SE	3.49	1.77	.80	.17	0.
SSE	2.58	3.49	2.63	0.	0.
S	1.55	1.20	1.37	0.	0.
SSW	1.20	1.20	.11	0.	0.
SW	1.43	.80	.06	0.	0.
WSW	1.60	.63	.06	0.	0.
W	2.06	1.95	0.	0.	0.
WNW	3.32	2.18	.29	0.	0.
NW	4.12	3.72	.11	0.	0.
NNW	2.35	4.92	.29	0.	0.

1747 OBSERVATIONS

0400 - 0700 HRS

CALM 12.65

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	1.61	1.84	.12	0.	0.
NNE	1.73	1.67	.12	0.	0.
NE	2.30	1.96	.58	.06	0.
ENE	2.70	2.88	1.96	.46	0.
E	4.54	3.85	1.61	.17	0.
ESE	3.91	2.70	.12	0.	0.
SE	2.76	2.07	.86	0.	0.
SSE	2.76	3.11	2.19	.12	0.
S	2.24	1.84	1.27	0.	0.
SSW	1.21	.69	.29	0.	0.
SW	1.32	.69	.06	0.	0.
WSW	1.67	.75	0.	0.	0.
W	2.59	1.90	.17	0.	0.
WNW	2.53	1.90	.35	0.	0.
NW	4.49	3.57	.06	0.	0.
NNW	3.62	3.28	.17	0.	0.

1739 OBSERVATIONS

0800 - 1100 HRS

CALM 6.16

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.81	1.44	.12	0.	0.
NNE	1.27	.46	0.	0.	0.
NE	1.44	1.84	.35	0.	0.
ENE	.92	3.51	2.19	.06	0.
E	2.42	3.28	1.44	.29	0.
ESE	2.65	2.93	.23	0.	0.
SE	3.80	3.05	.75	0.	0.
SSE	4.37	3.91	2.53	.12	0.
S	2.53	1.67	.92	.17	0.
SSW	2.82	1.27	.06	0.	0.
SW	4.66	.98	0.	0.	0.
WSW	3.97	1.09	0.	0.	0.
W	4.60	2.01	0.	0.	0.
WNW	4.95	3.39	.12	0.	0.
NW	4.72	2.99	.06	0.	0.
NNW	1.96	2.65	.12	0.	0.

1738 OBSERVATIONS

1200 - 1500 HRS

CALM .46

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.29	1.27	.23	0.	0.
NNE	.17	.29	0.	0.	0.
NE	.69	1.84	.23	0.	0.
ENE	.52	3.34	1.21	.06	0.
E	1.32	4.26	.75	0.	0.
ESE	1.27	2.30	.23	0.	0.
SE	2.94	2.25	.69	0.	0.
SSE	3.46	3.11	1.96	0.	0.
S	4.03	3.00	1.73	.12	0.
SSW	5.36	2.25	.52	0.	0.
SW	5.30	1.79	.12	0.	0.
WSW	5.07	3.92	0.	0.	0.
W	5.76	7.60	.06	0.	0.
WNW	3.97	6.22	.23	0.	0.
NW	.86	4.15	.17	0.	0.
NNW	.92	1.61	.12	0.	0.

1736 OBSERVATIONS

1600 - 1900 HRS

CALM 9.59

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.57	1.26	.11	0.	0.
NNE	1.31	1.20	.06	0.	0.
NE	2.17	1.48	.46	0.	0.
ENE	1.94	2.86	.46	0.	0.
E	2.80	2.97	.69	0.	0.
ESE	2.57	1.77	.17	0.	0.
SE	2.06	1.83	.17	0.	0.
SSE	2.06	2.91	2.17	0.	0.
S	2.17	1.37	1.09	0.	0.
SSW	3.66	1.66	.57	0.	0.
SW	3.60	1.60	.17	0.	0.
WSW	3.26	1.37	.06	0.	0.
W	5.14	4.17	.06	0.	0.
WNW	4.68	5.77	.29	0.	0.
NW	4.17	3.88	.23	0.	0.
NNW	2.74	2.57	.11	0.	0.

1751 OBSERVATIONS

2000 - 2300 HRS

CALM 13.15

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	2.05	2.90	.28	0.	0.
NNE	1.82	1.77	.06	0.	0.
NE	1.82	2.11	.46	0.	0.
ENE	2.11	2.45	1.20	0.	0.
E	3.70	3.64	.46	0.	0.
ESE	3.02	1.71	.23	0.	0.
SE	2.68	1.88	.97	0.	0.
SSE	1.88	2.96	2.33	.11	0.
S	1.48	1.99	1.25	0.	0.
SSW	1.48	1.37	.28	0.	0.
SW	1.82	.46	0.	0.	0.
WSW	1.77	.63	.11	0.	0.
W	2.62	1.65	.11	0.	0.
WNW	2.96	3.25	.11	0.	0.
NW	5.47	4.33	.06	0.	0.
NNW	4.50	4.10	.46	0.	0.

1756 OBSERVATIONS

FREQUENCY OF WINDS (PERCENT), STATION LRL1
FIVE YEAR SUMMARY

WINTER 1968

FAIR

CALM 10.20

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	1.24	2.05	.17	0.	0.
NNE	1.51	1.26	.05	0.	0.
NE	1.96	2.17	.42	.01	0.
ENE	1.93	3.20	1.48	.13	0.
E	3.33	3.56	1.11	.13	0.
ESE	3.06	2.27	.14	0.	0.
SE	3.07	1.57	.31	0.	0.
SSE	2.94	2.39	.99	.02	0.
S	2.44	1.45	.43	.01	0.
SSW	2.78	1.07	.15	0.	0.
SW	3.27	.86	.02	0.	0.
WSW	3.06	1.30	0.	0.	0.
W	4.17	3.03	.02	0.	0.
WNW	4.06	3.80	.25	0.	0.
NW	4.37	4.01	.12	0.	0.
NNW	2.97	3.47	.22	0.	0.

9432 OBSERVATIONS

PRECIPITATION

CALM .99

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.11	.33	0.	0.	0.
NNE	0.	.22	0.	0.	0.
NE	.11	.22	0.	0.	0.
ENE	.22	.55	.22	0.	0.
E	.77	1.76	.11	0.	0.
ESE	.88	1.32	.66	0.	0.
SE	1.54	6.93	4.84	.33	0.
SSE	2.20	11.22	15.84	.44	0.
S	1.43	5.83	10.12	.44	0.
SSW	.88	4.95	1.98	0.	0.
SW	.66	3.19	.55	0.	0.
WSW	1.10	2.42	.44	0.	0.
W	.33	5.39	.55	0.	0.
WNW	.55	4.18	0.	0.	0.
NW	.44	1.76	.11	0.	0.
NNW	.11	.66	.11	0.	0.

909 OBSERVATIONS

LAPSE

CALM 4.95

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	.51	1.58	.16	0.	0.
NNE	.74	1.03	.03	0.	0.
NE	1.38	2.51	.39	0.	0.
ENE	1.35	3.47	1.29	.13	0.
E	2.80	3.47	1.35	.03	0.
ESE	2.51	2.41	.29	0.	0.
SE	2.57	2.22	.74	.03	0.
SSE	2.60	4.11	2.93	.06	0.
S	2.44	2.25	2.09	.06	0.
SSW	2.35	2.09	.55	0.	0.
SW	2.44	1.70	.06	0.	0.
WSW	2.83	2.57	.06	0.	0.
W	3.66	6.17	.13	0.	0.
WNW	2.76	5.43	.55	0.	0.
NW	1.96	4.56	.23	0.	0.
NNW	1.67	3.47	.26	0.	0.

3111 OBSERVATIONS

INVERSION

CALM 17.25

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	2.63	2.10	0.	0.	0.
NNE	2.73	1.68	0.	0.	0.
NE	4.00	.63	0.	0.	0.
ENE	3.15	1.37	.11	0.	0.
E	4.42	2.31	.32	.53	0.
ESE	4.42	1.68	0.	0.	0.
SE	2.73	1.05	0.	0.	0.
SSE	2.73	.63	.21	0.	0.
S	1.58	.84	0.	0.	0.
SSW	3.79	.84	0.	0.	0.
SW	3.68	.53	0.	0.	0.
WSW	3.68	.32	0.	0.	0.
W	4.94	.63	0.	0.	0.
WNW	7.05	2.21	0.	0.	0.
NW	6.83	.95	0.	0.	0.
NNW	3.58	1.79	.11	0.	0.

951 OBSERVATIONS

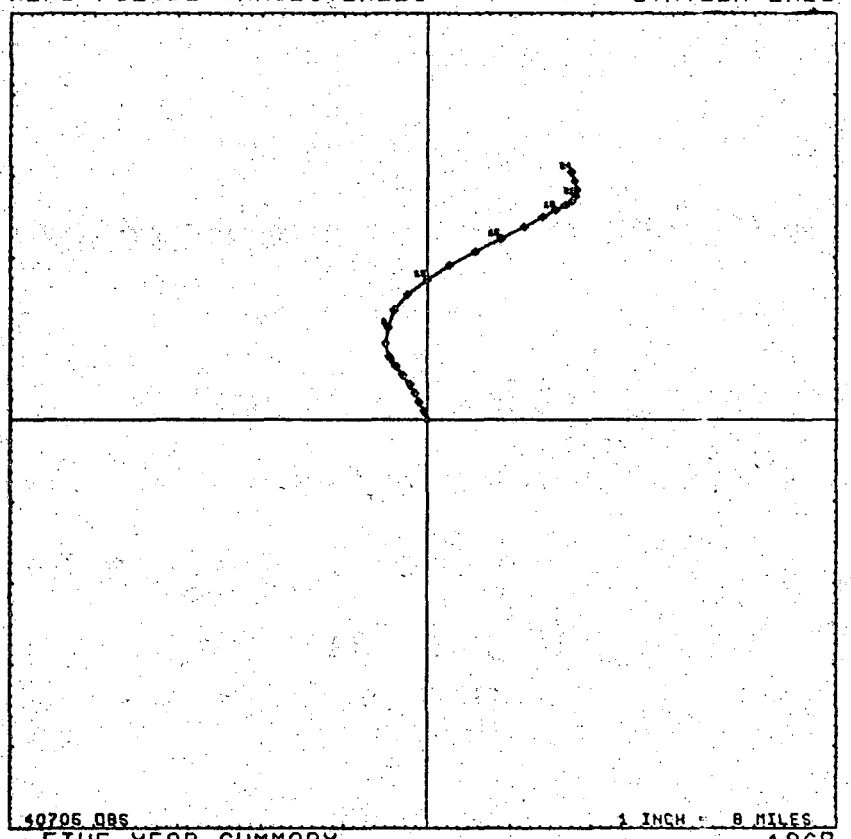
BELOW INVERSION

CALM 11.02

SPEED →	1-3	4-10	11-21	22-27	OVER 27
N	2.12	.42	0.	0.	0.
NNE	.85	1.27	0.	0.	0.
NE	.85	2.12	.42	0.	0.
ENE	1.27	2.97	4.24	0.	0.
E	3.81	6.36	.42	0.	0.
ESE	2.54	1.69	0.	0.	0.
SE	4.66	.85	.42	.85	0.
SSE	6.78	1.27	.42	0.	0.
S	6.36	.42	.42	0.	0.
SSW	4.24	.42	0.	0.	0.
SW	7.20	0.	0.	0.	0.
WSW	6.36	1.69	0.	0.	0.
W	4.66	.85	0.	0.	0.
WNW	4.24	.85	0.	0.	0.
NW	2.12	0.	0.	0.	0.
NNW	1.27	1.27	0.	0.	0.

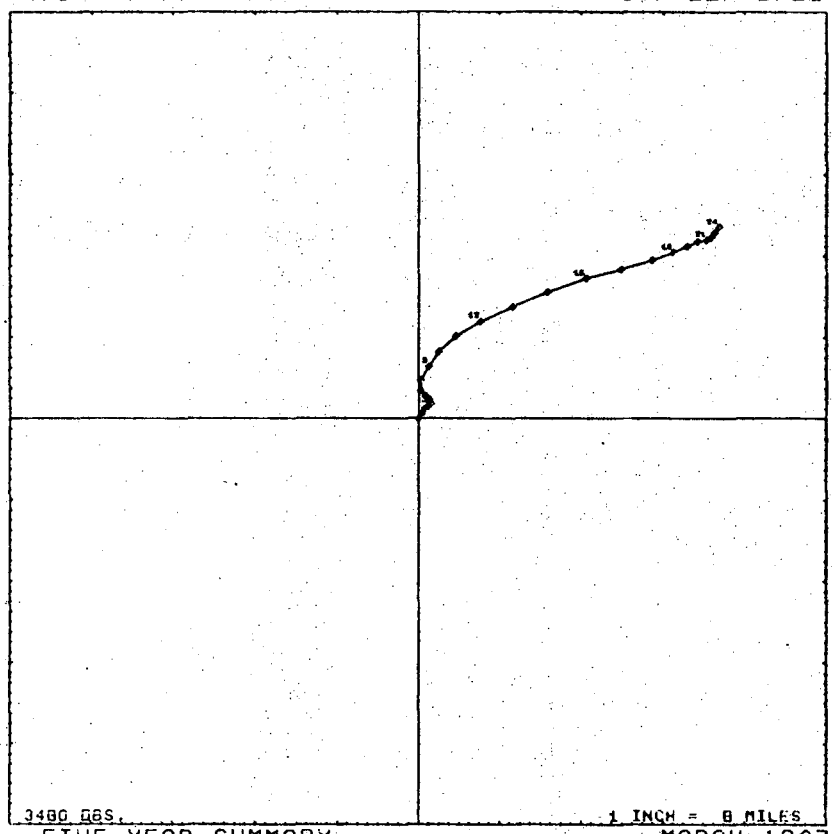
236 OBSERVATIONS

WIND PSEUDO-TRAJECTORIES STATION LRL1

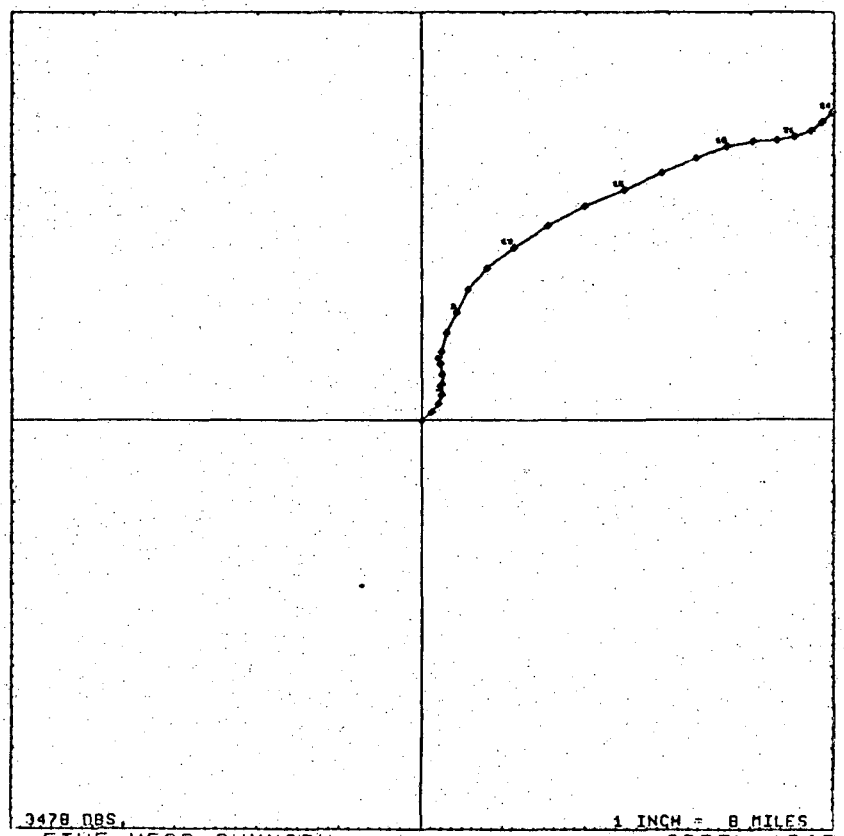


FIVE YEAR SUMMARY 1968

WIND PSEUDO-TRAJECTORIES STATION LRL1

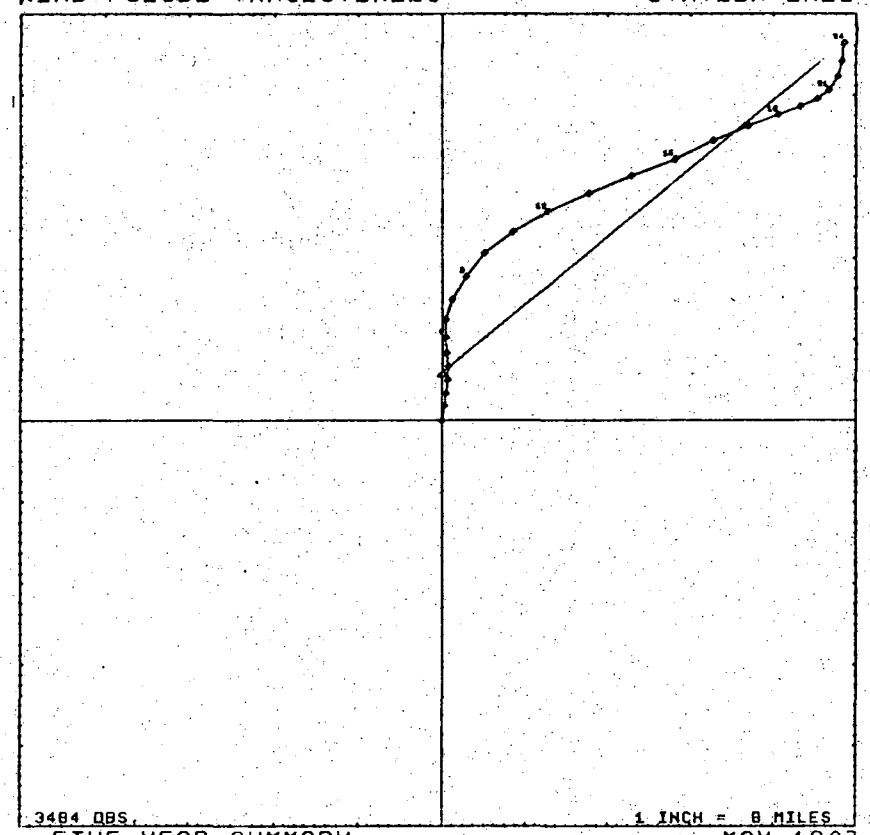


FIVE YEAR SUMMARY MARCH 1967

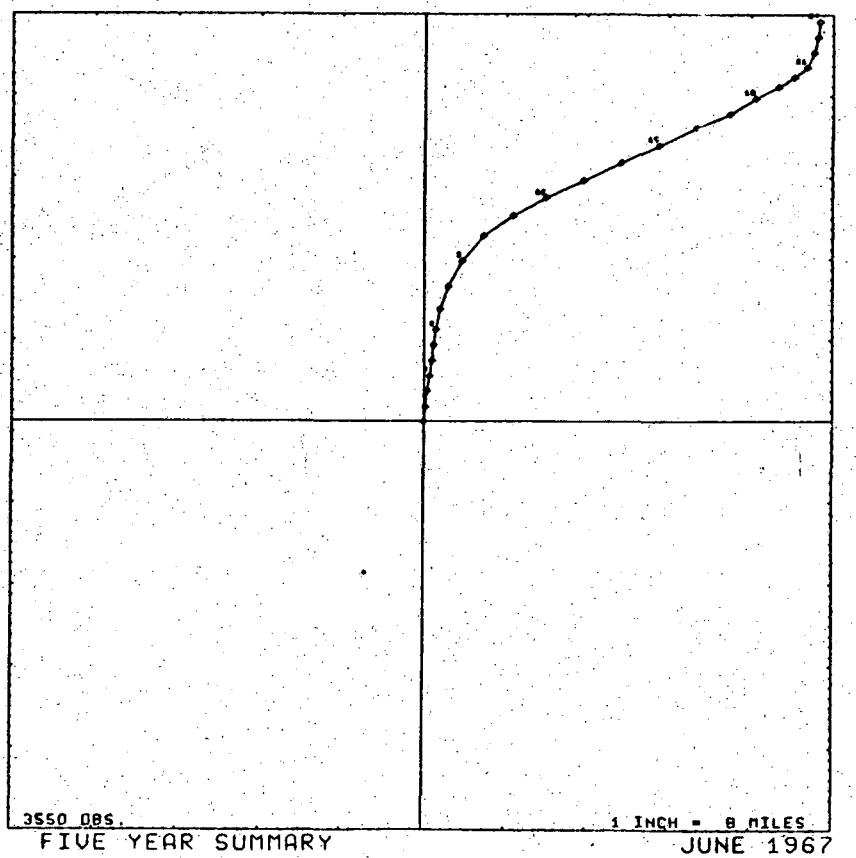


FIVE YEAR SUMMARY APRIL 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

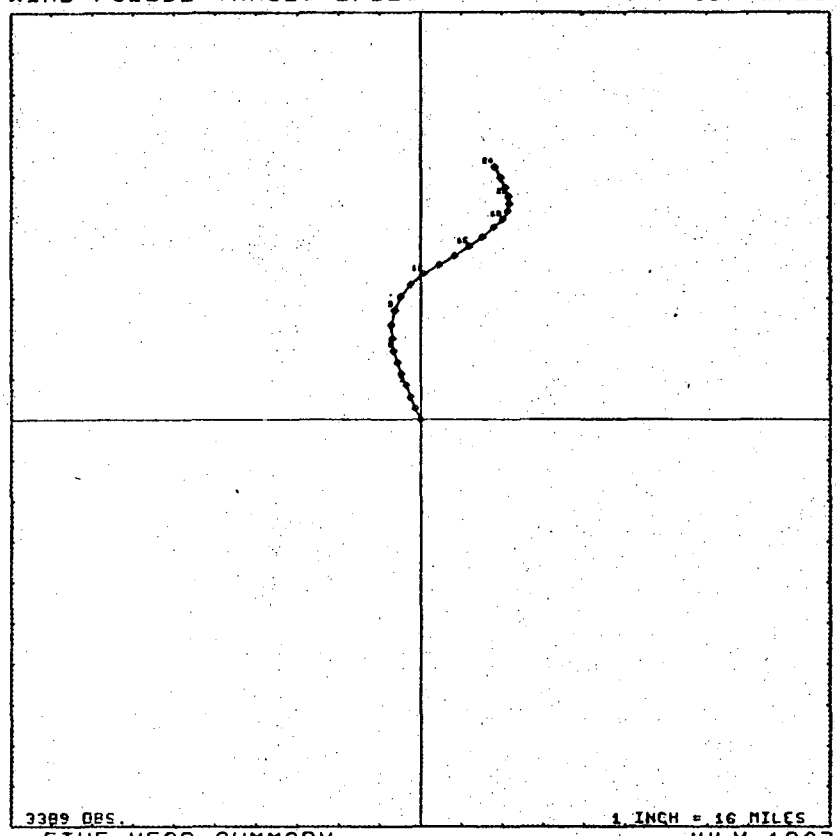


FIVE YEAR SUMMARY MAY 1967

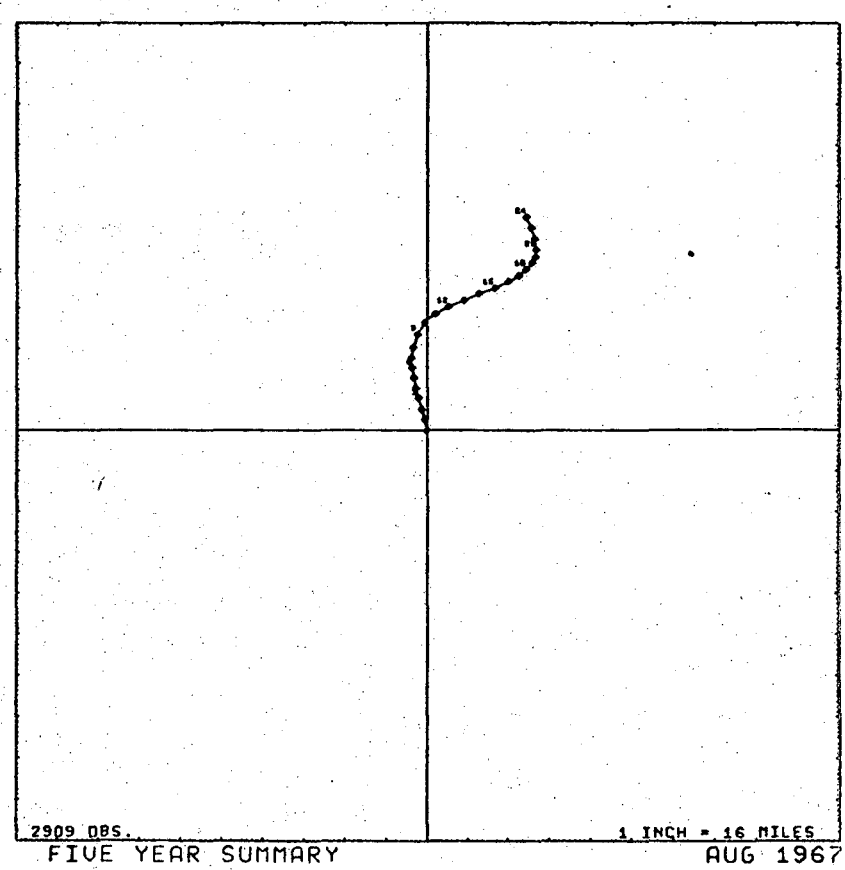


FIVE YEAR SUMMARY JUNE 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

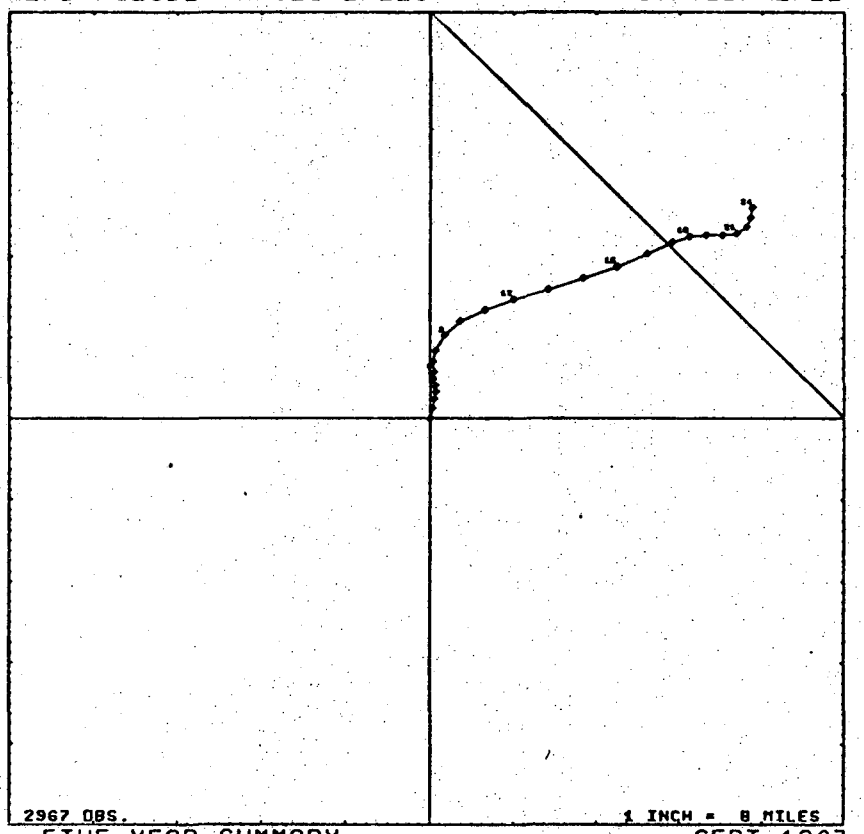


FIVE YEAR SUMMARY JULY 1967

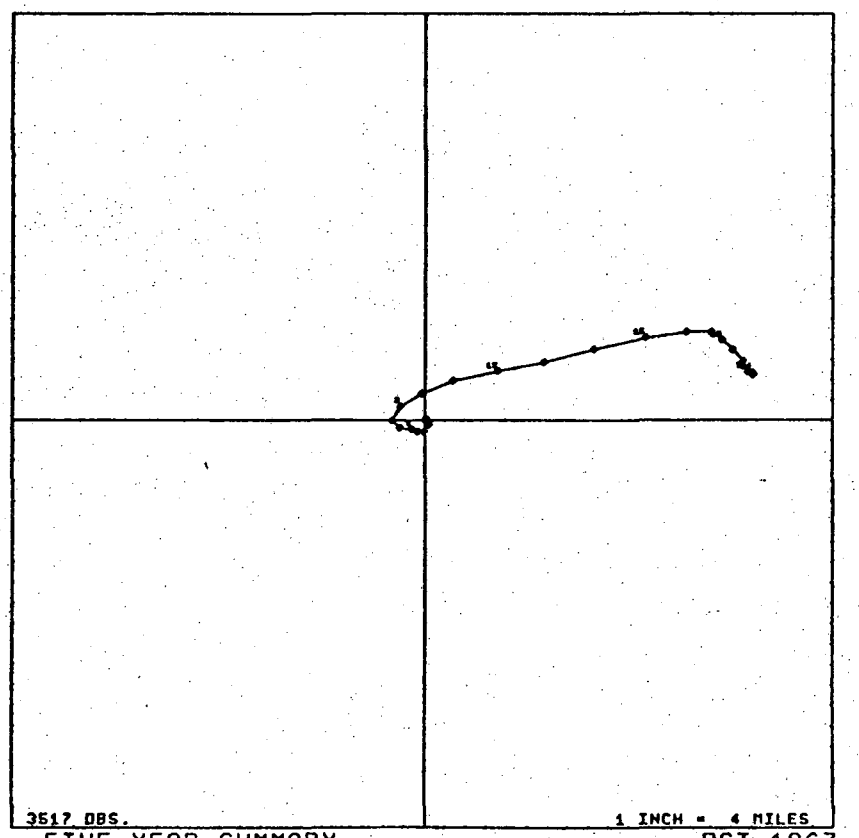


FIVE YEAR SUMMARY AUG 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

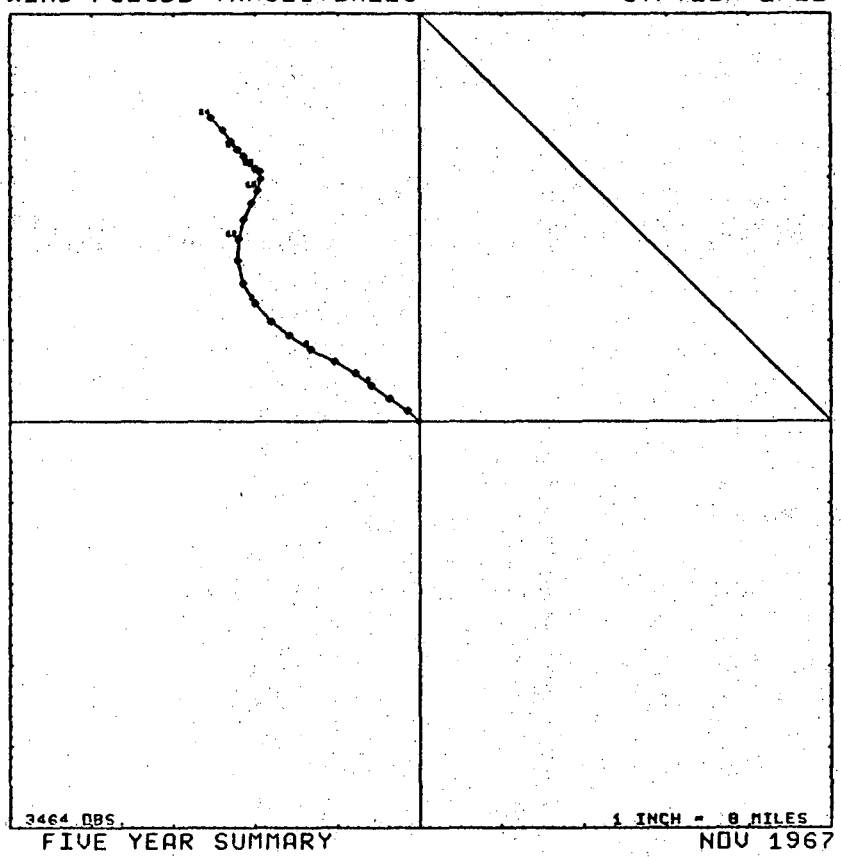


FIVE YEAR SUMMARY SEPT 1967

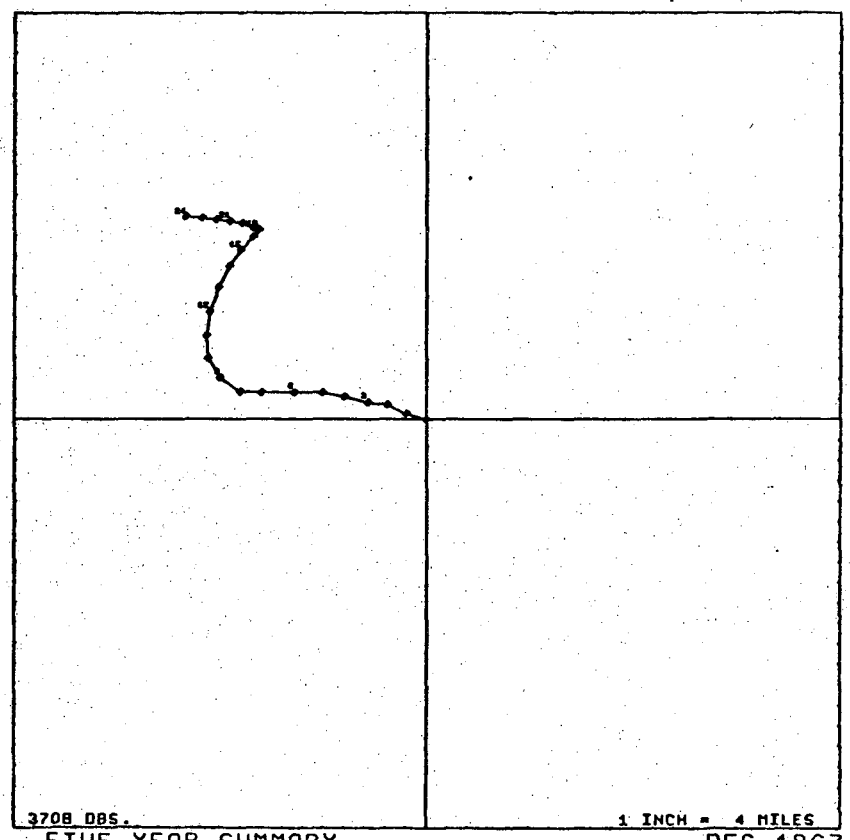


FIVE YEAR SUMMARY OCT 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

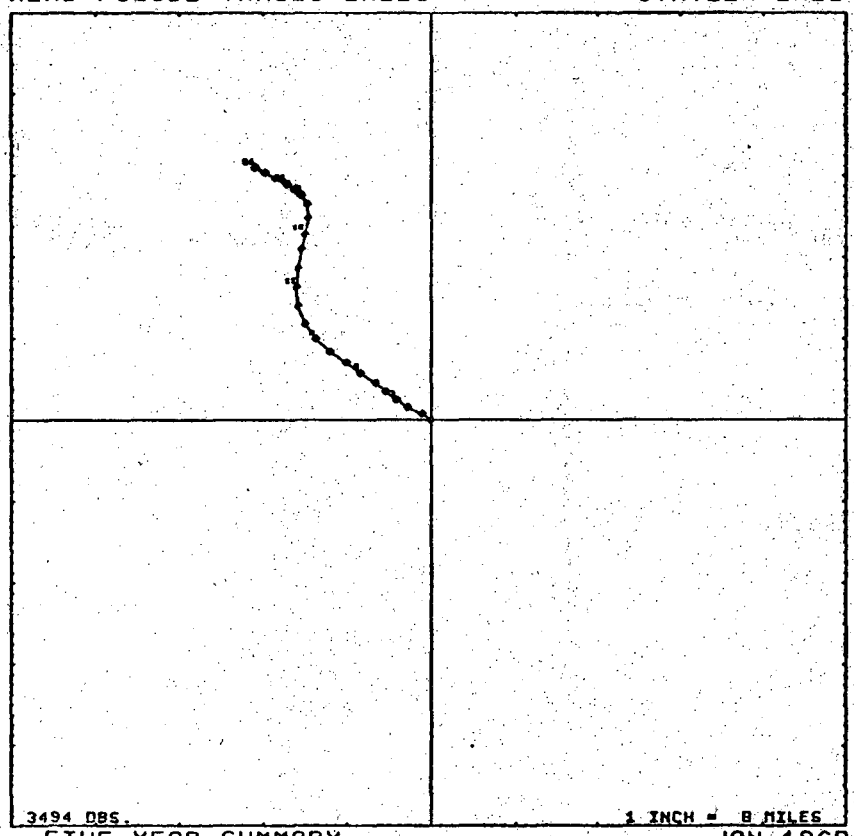


FIVE YEAR SUMMARY NOV 1967

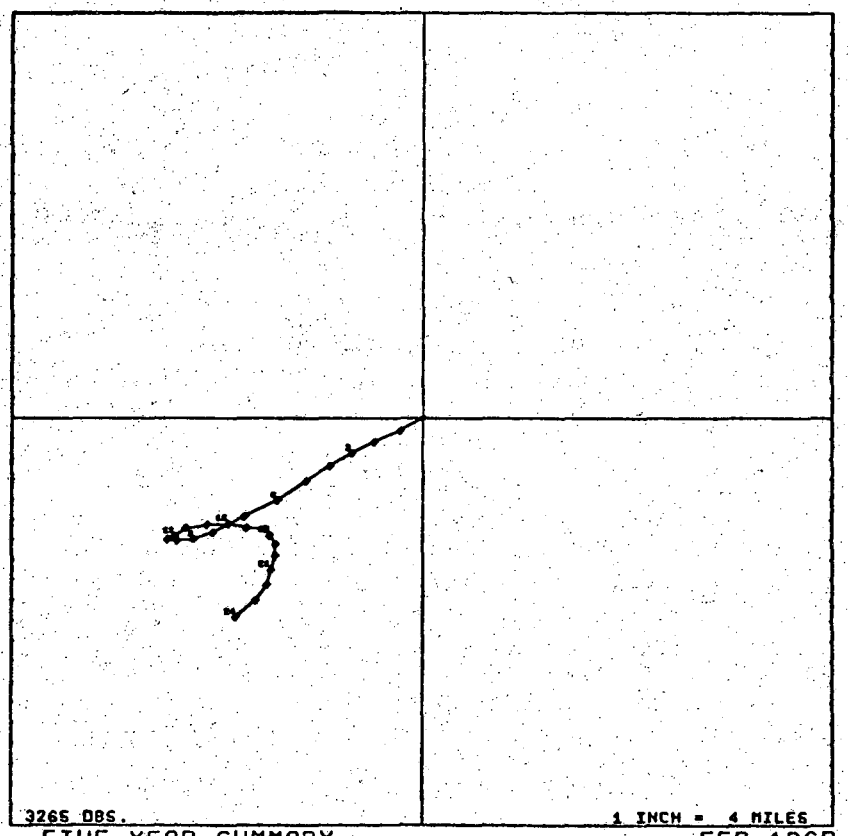


FIVE YEAR SUMMARY DEC 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

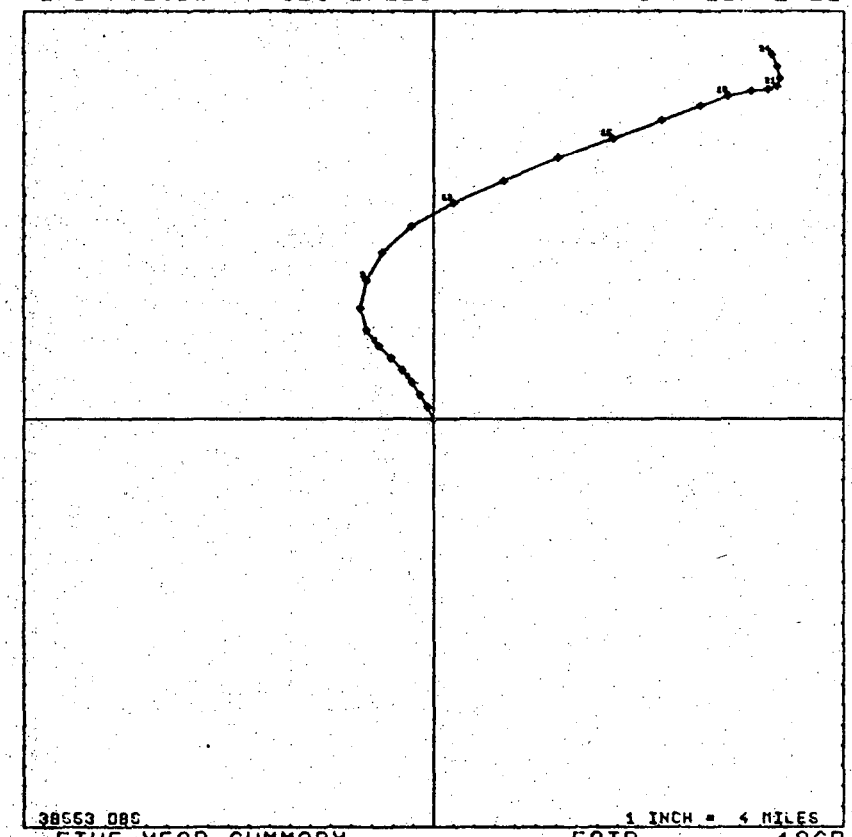


FIVE YEAR SUMMARY JAN 1968

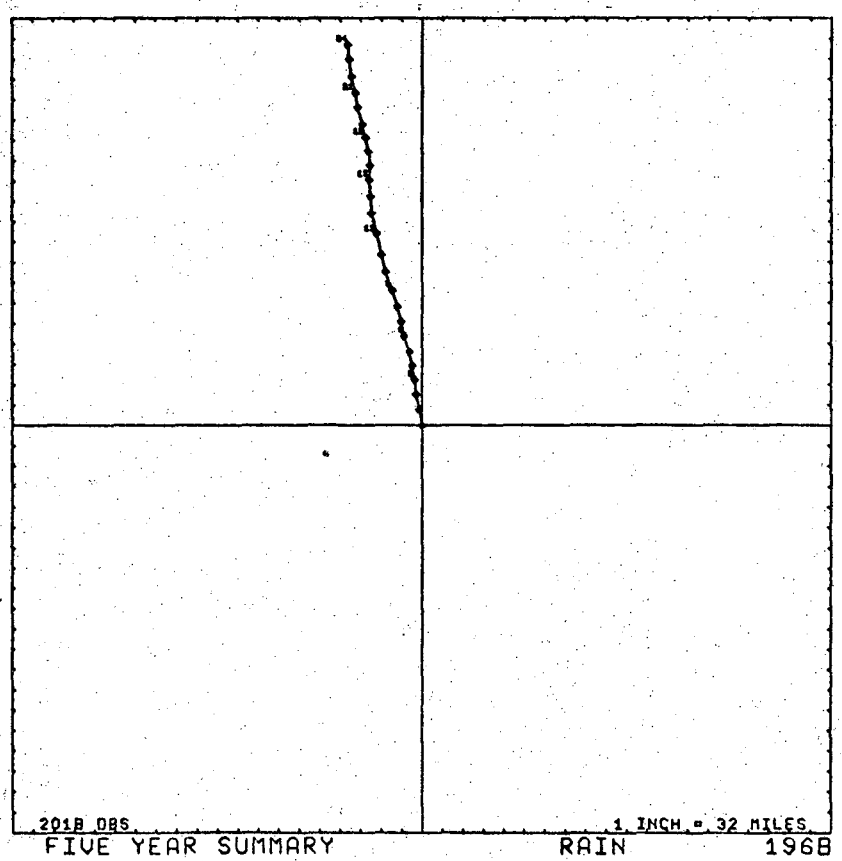


FIVE YEAR SUMMARY FEB 1968

WIND PSEUDO-TRAJECTORIES STATION LRL1

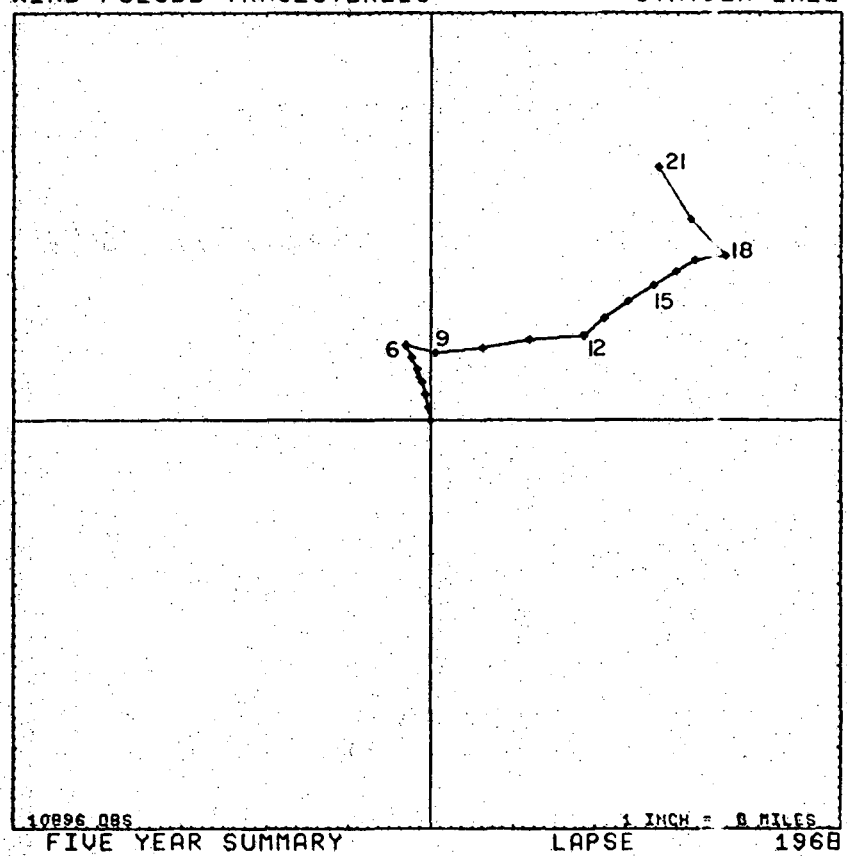


FIVE YEAR SUMMARY FAIR 1968

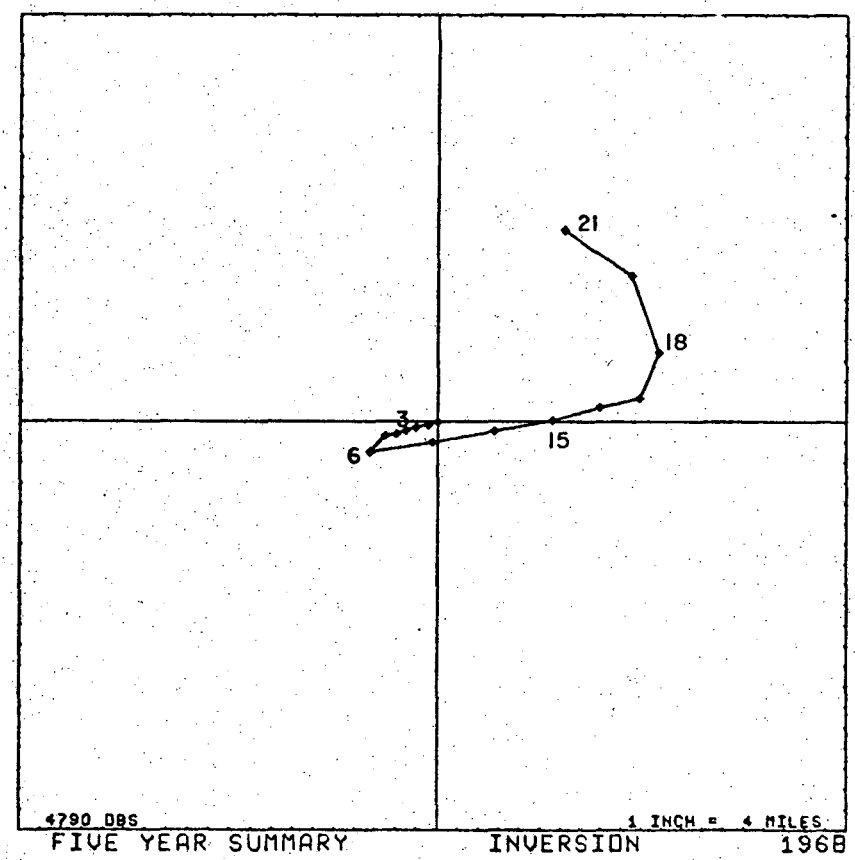


FIVE YEAR SUMMARY RAIN 1968

WIND PSEUDO-TRAJECTORIES STATION LRL1

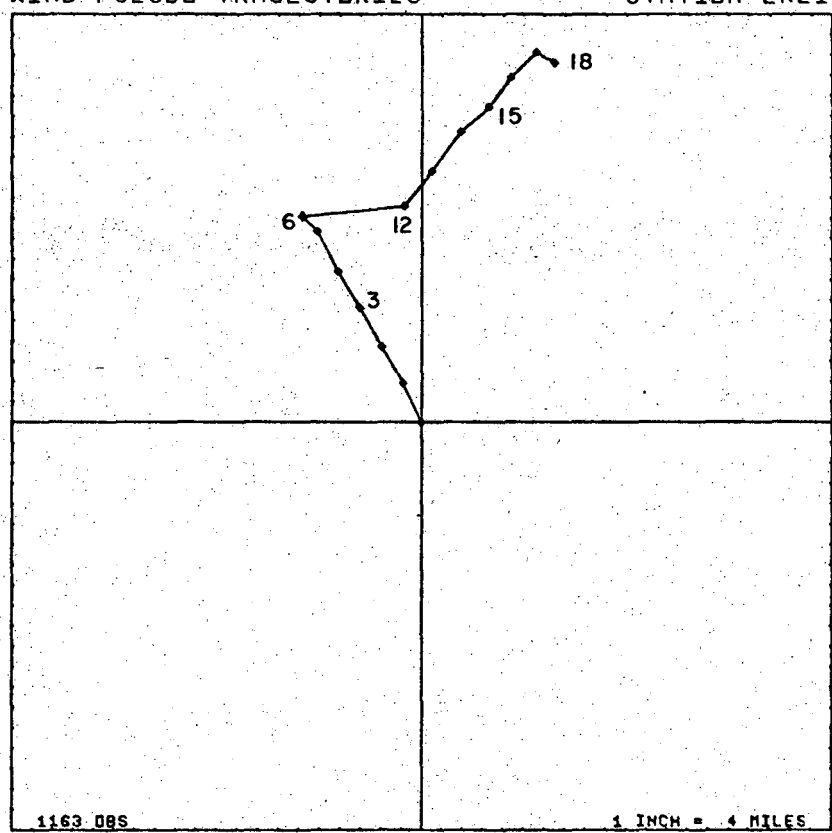


FIVE YEAR SUMMARY LAPSE 1968



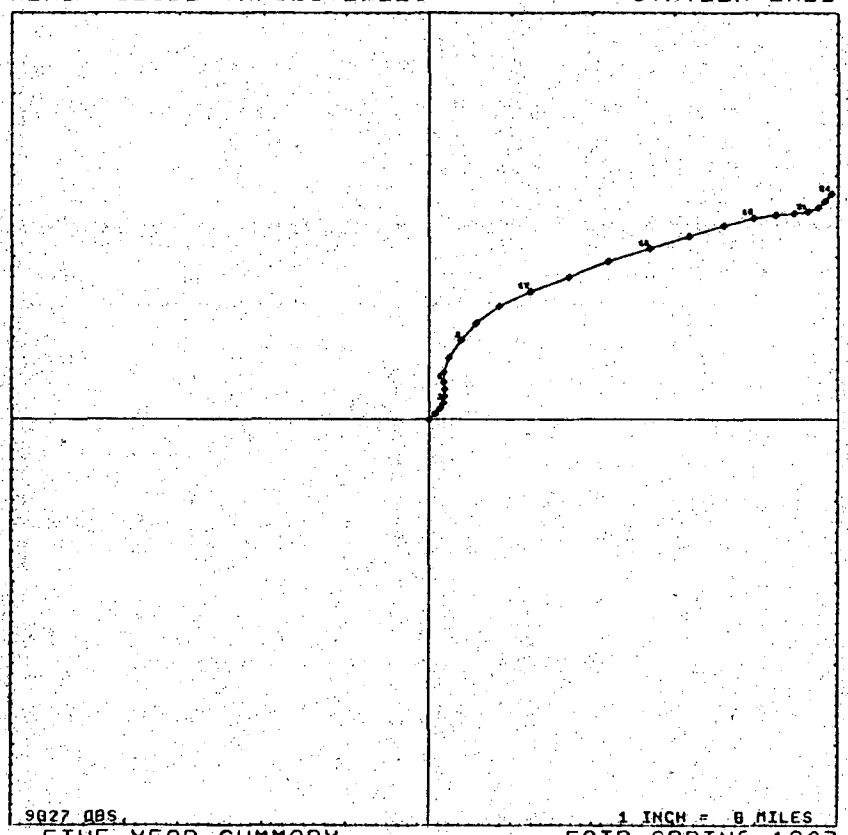
FIVE YEAR SUMMARY INVERSION 1968

WIND PSEUDO-TRAJECTORIES STATION LRL1

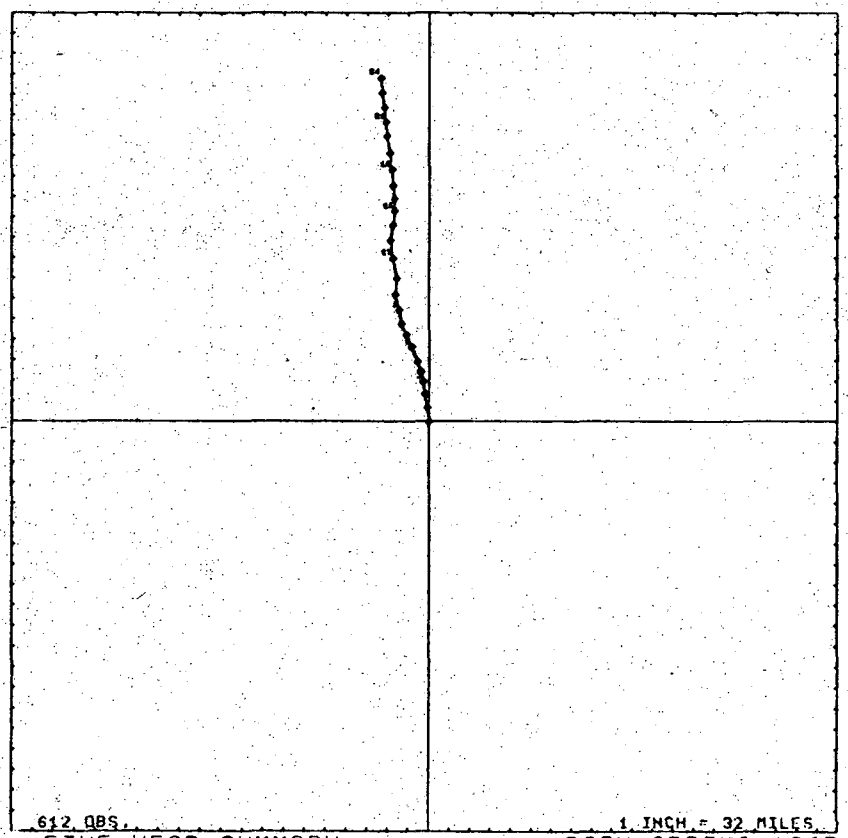


FIVE YEAR SUMMARY SUB-INVER. 1968

WIND PSEUDO-TRAJECTORIES STATION LRL1

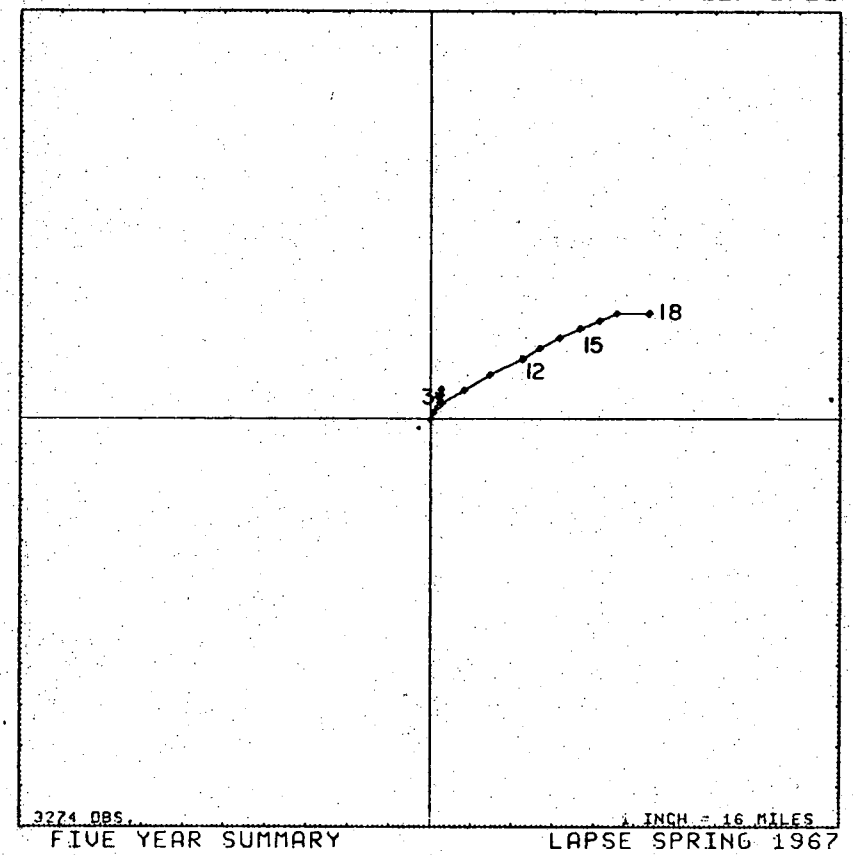


FIVE YEAR SUMMARY FAIR SPRING 1967

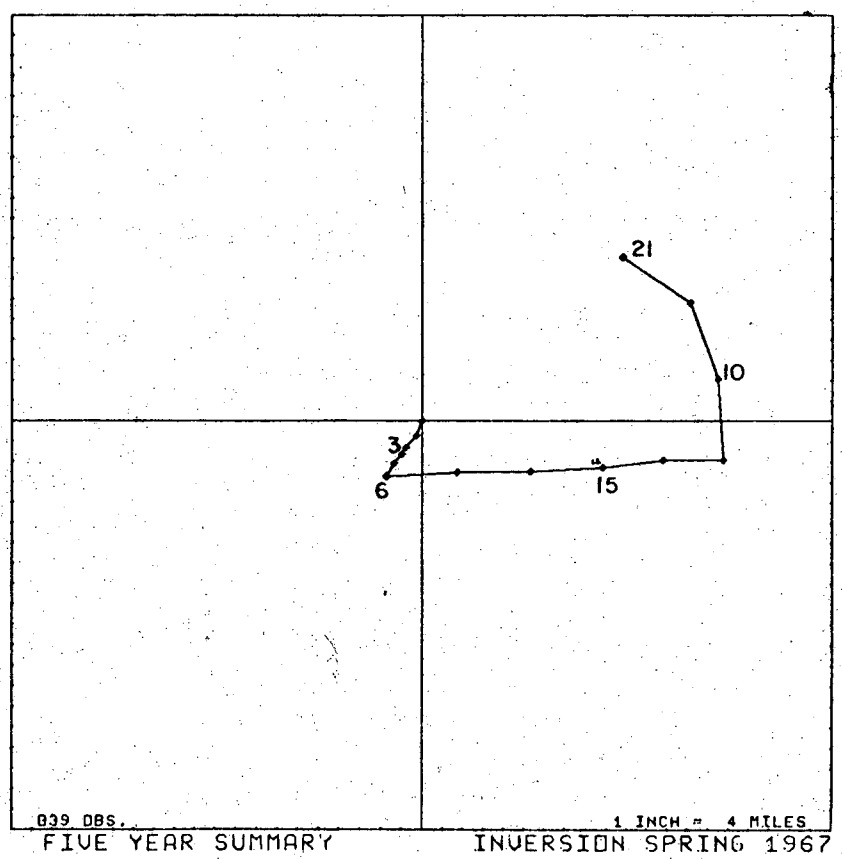


FIVE YEAR SUMMARY RAIN SPRING 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

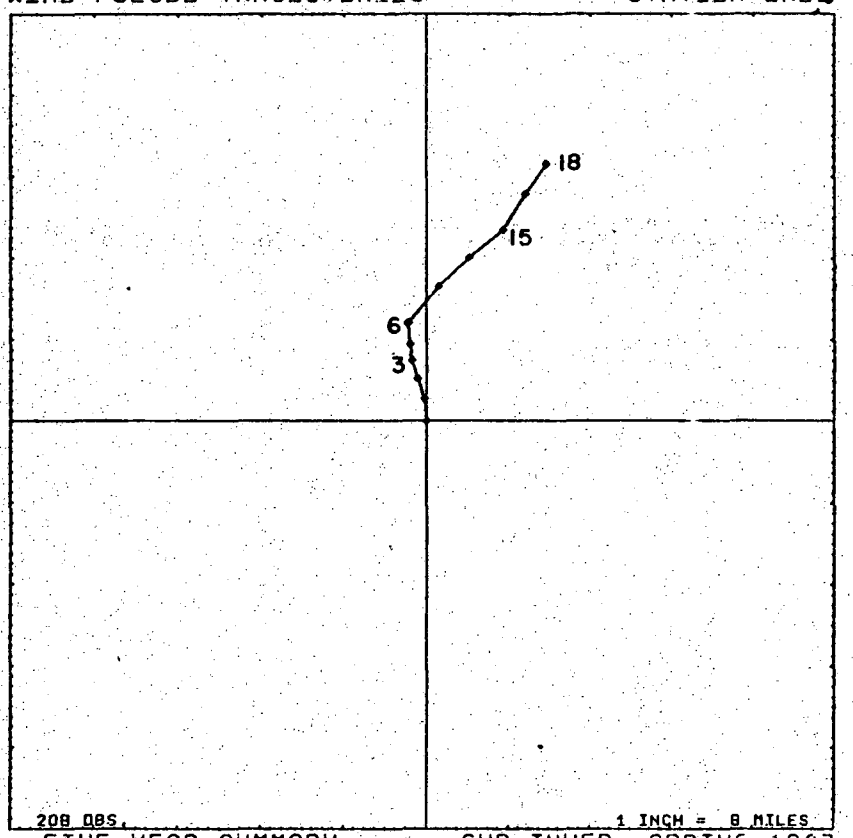


FIVE YEAR SUMMARY LAPSE SPRING 1967



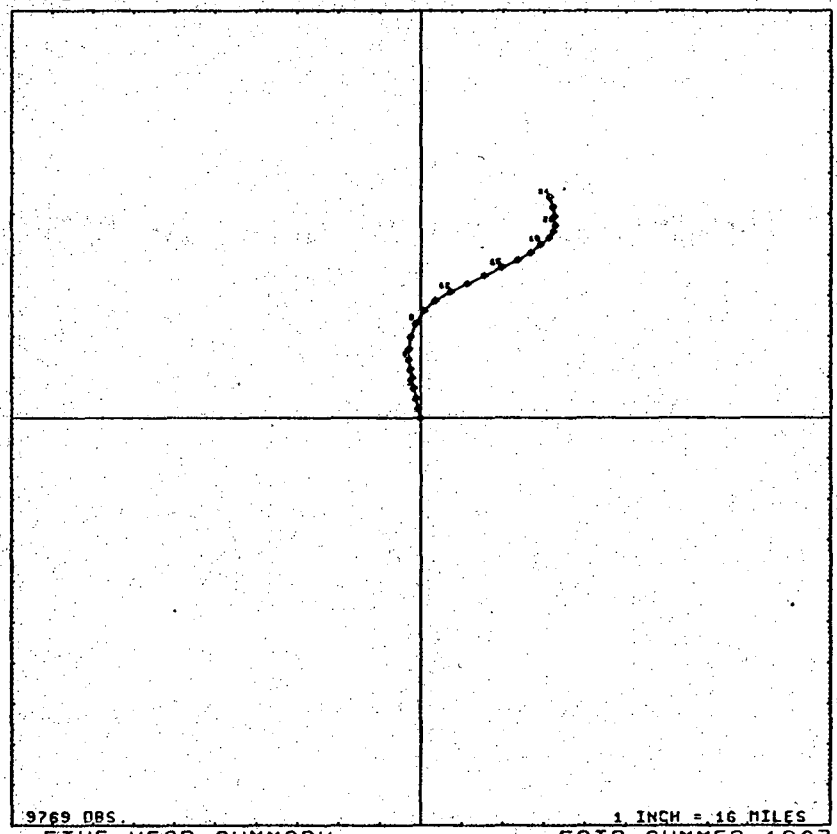
FIVE YEAR SUMMARY INVERSION SPRING 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

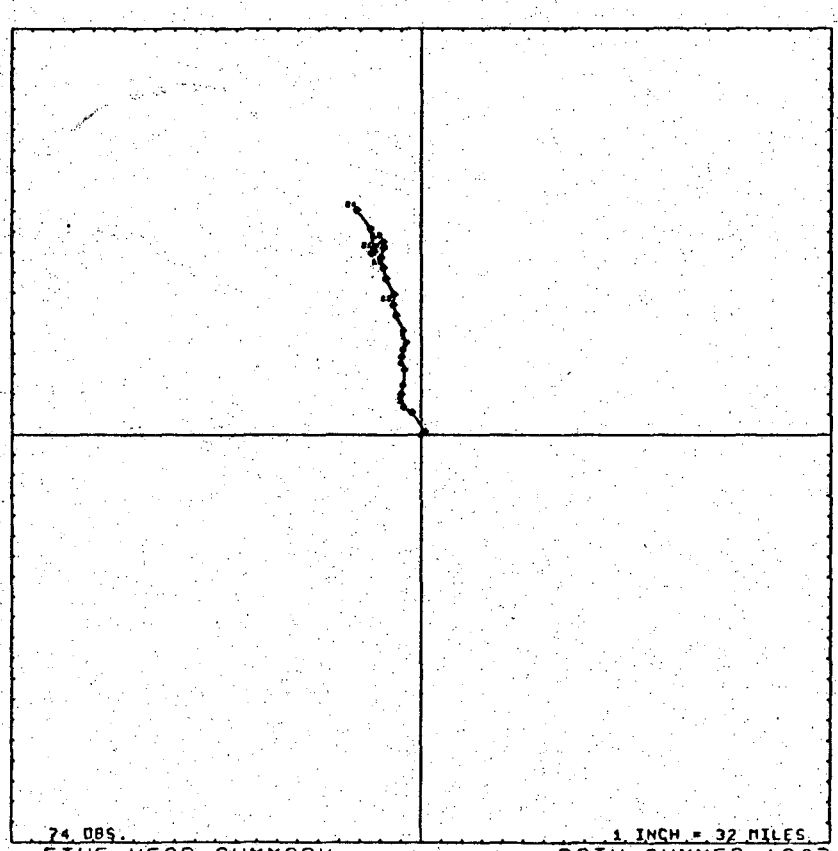


FIVE YEAR SUMMARY SUB-INVER. SPRING 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

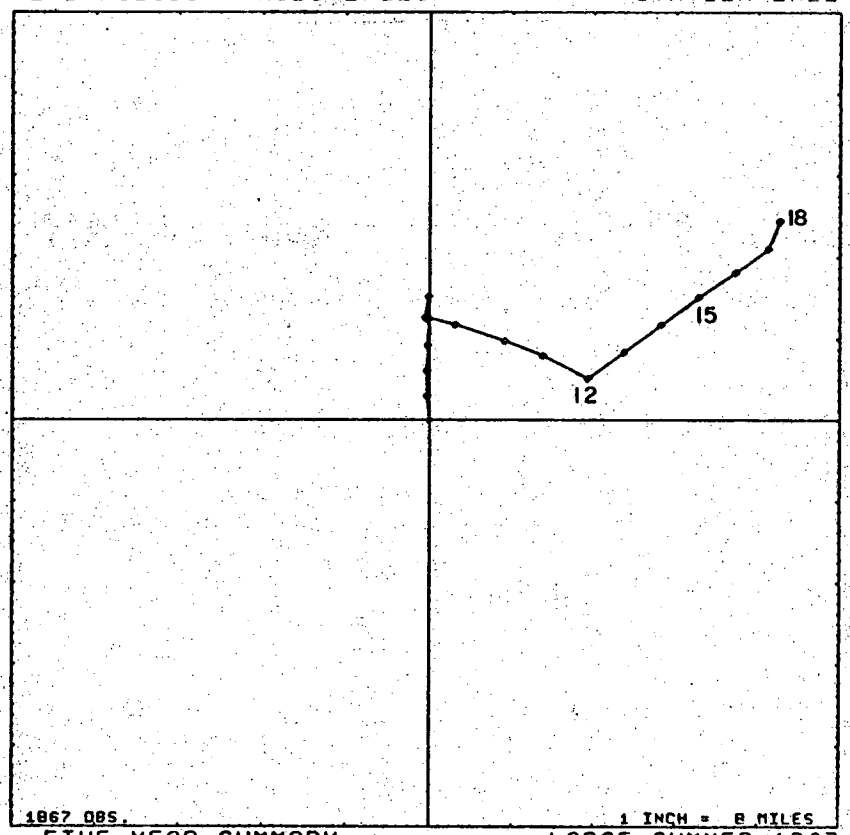


FIVE YEAR SUMMARY 82 FAIR SUMMER 1967

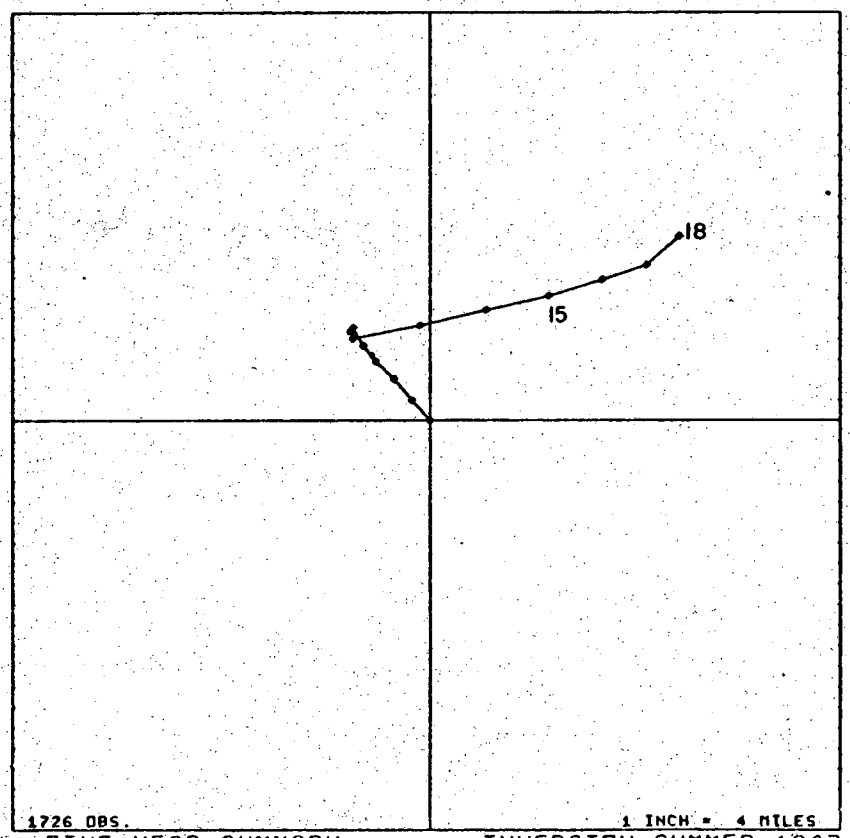


FIVE YEAR SUMMARY 83 RAIN SUMMER 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

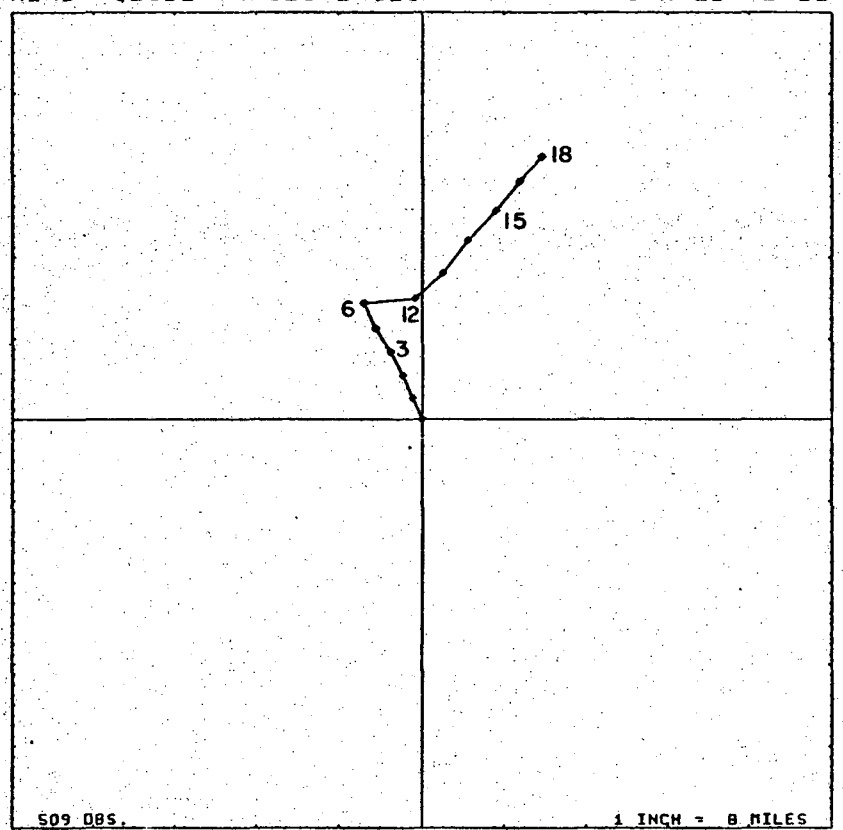


FIVE YEAR SUMMARY LAPSE SUMMER 1967



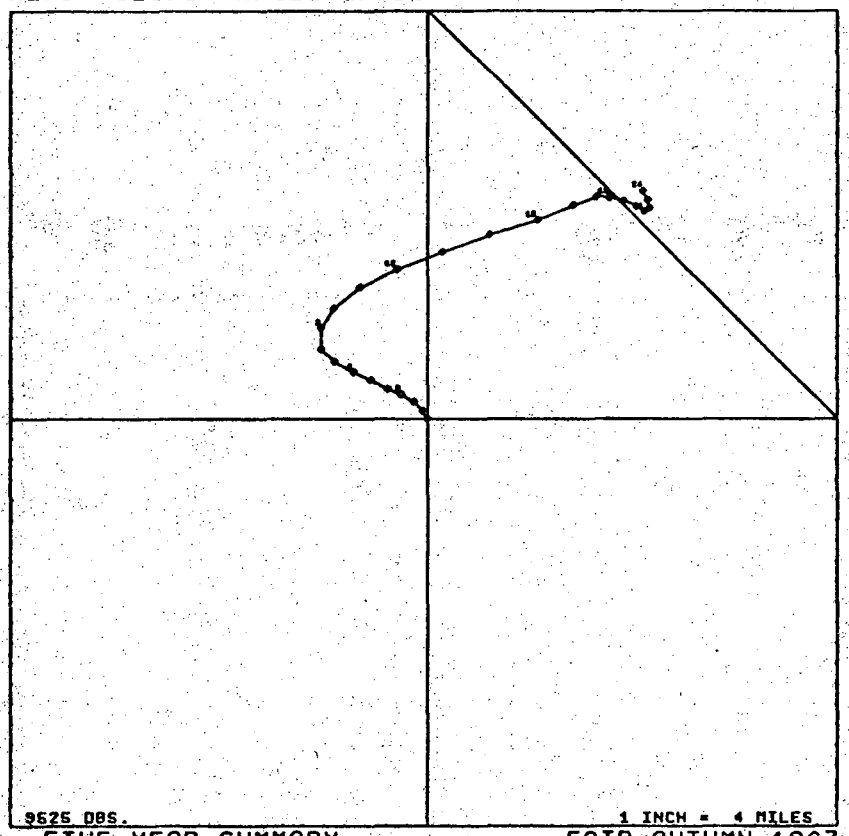
FIVE YEAR SUMMARY INVERSION SUMMER 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

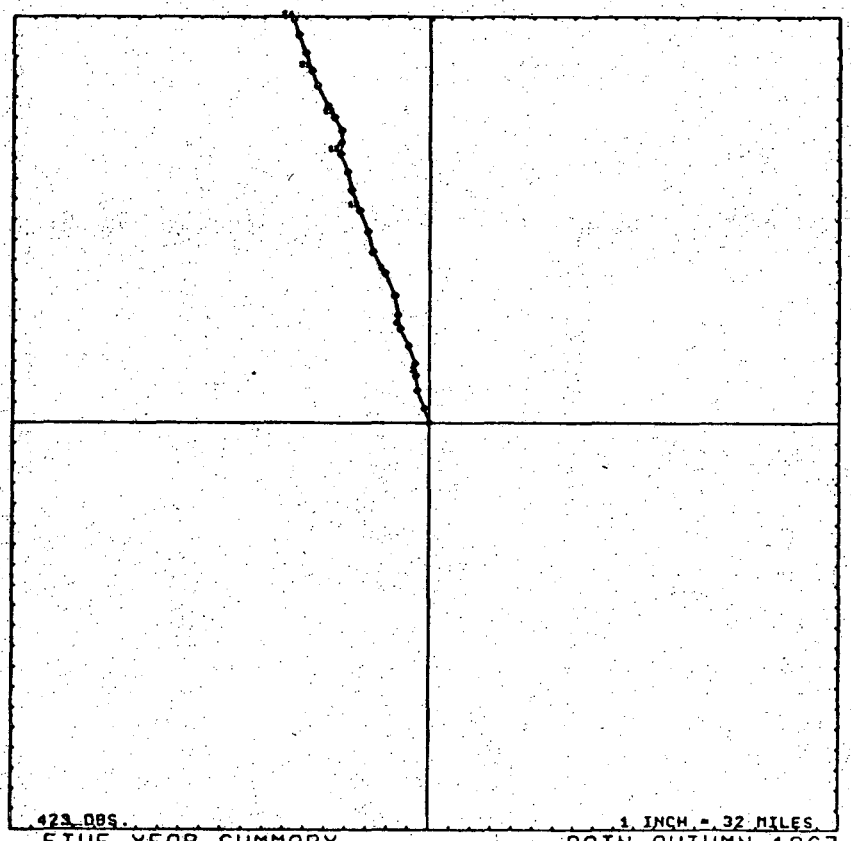


FIVE YEAR SUMMARY SUB-INVER. SUMMER 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

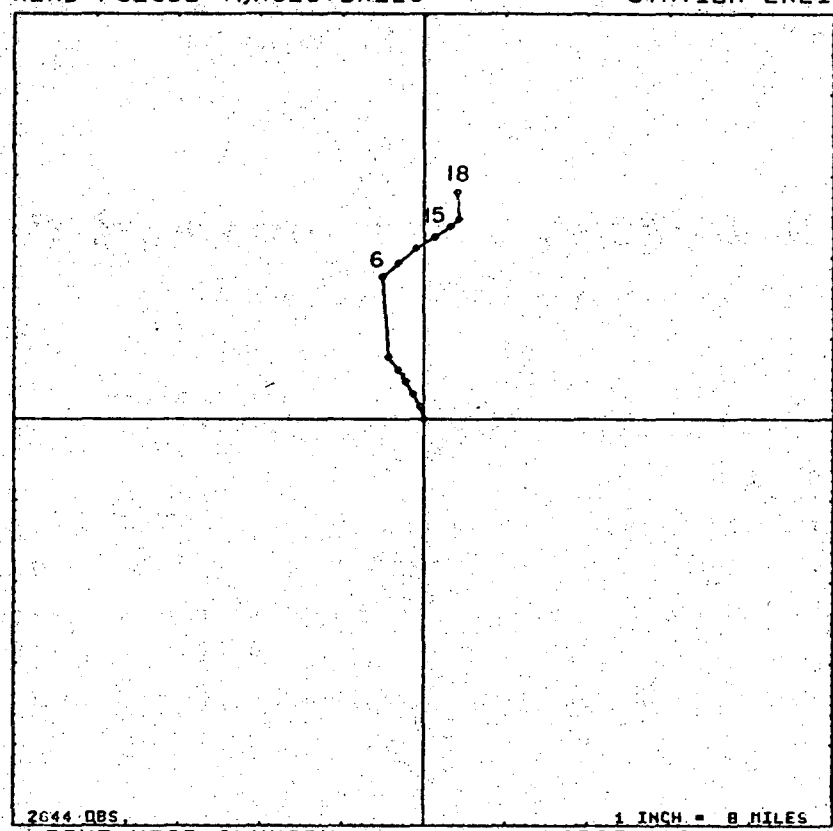


FIVE YEAR SUMMARY FAIR AUTUMN 1967

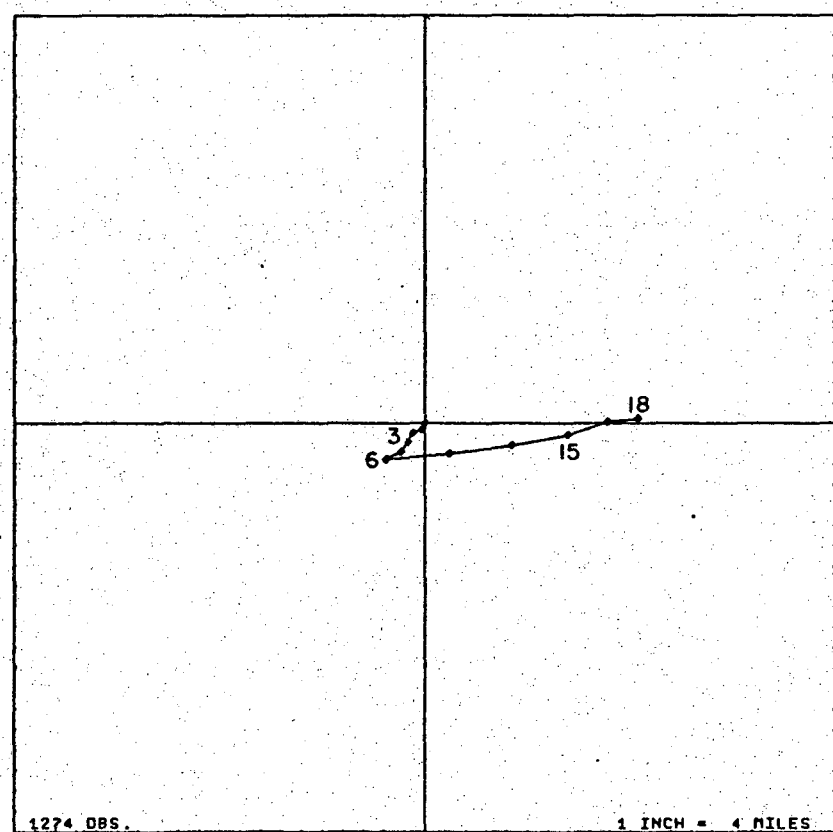


FIVE YEAR SUMMARY RAIN AUTUMN 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

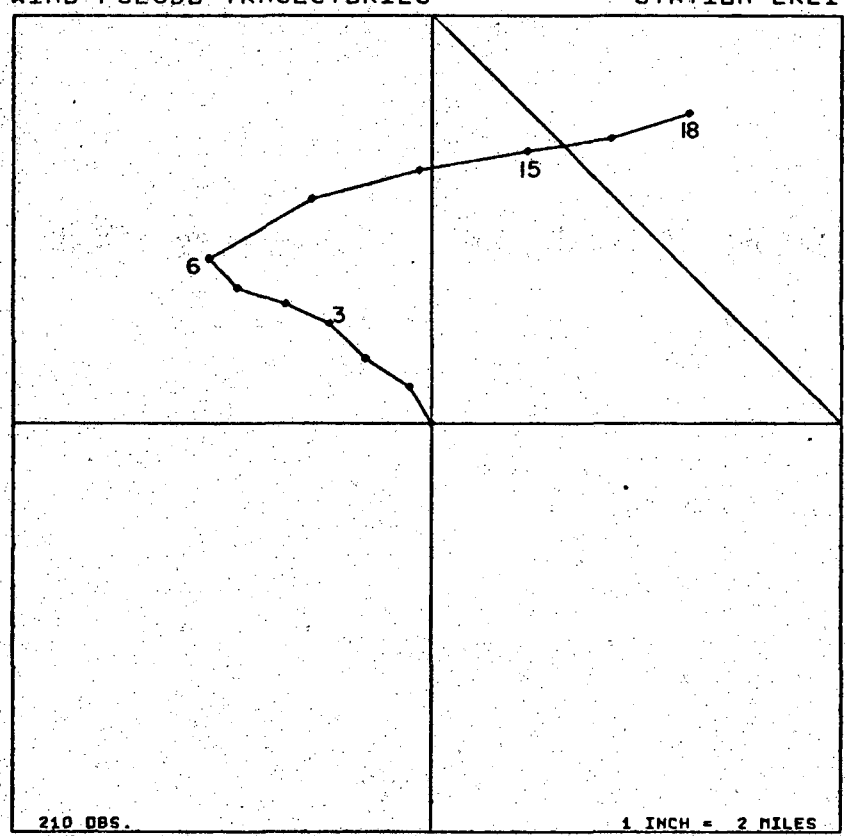


FIVE YEAR SUMMARY LAPSE AUTUMN 1967



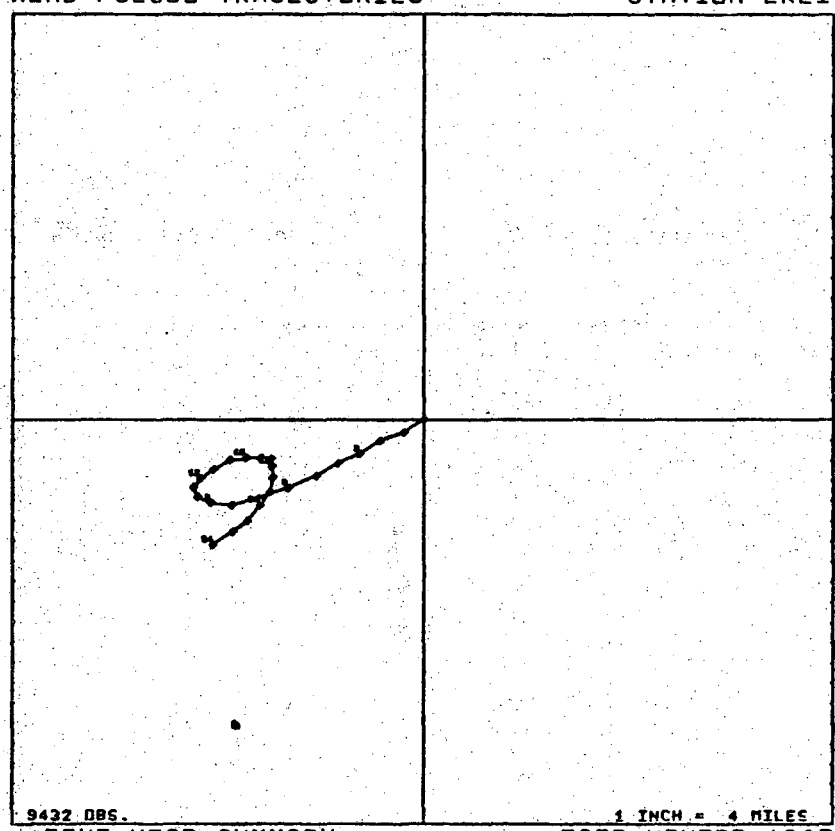
FIVE YEAR SUMMARY INVERSION AUTUMN 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

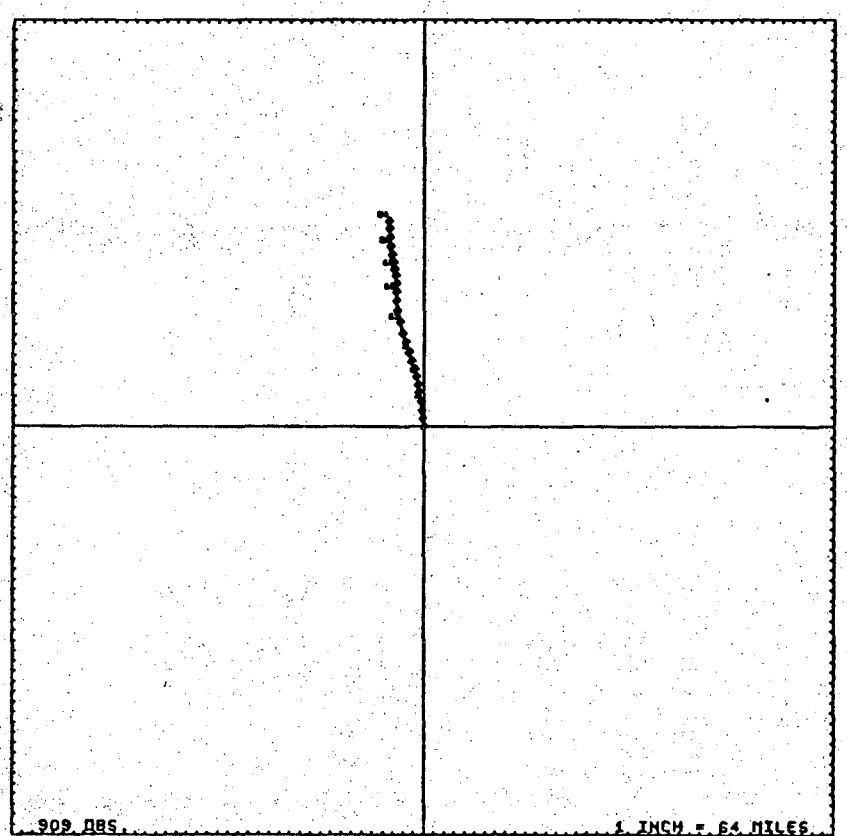


FIVE YEAR SUMMARY SUB-INVER. AUTUMN 1967

WIND PSEUDO-TRAJECTORIES STATION LRL1

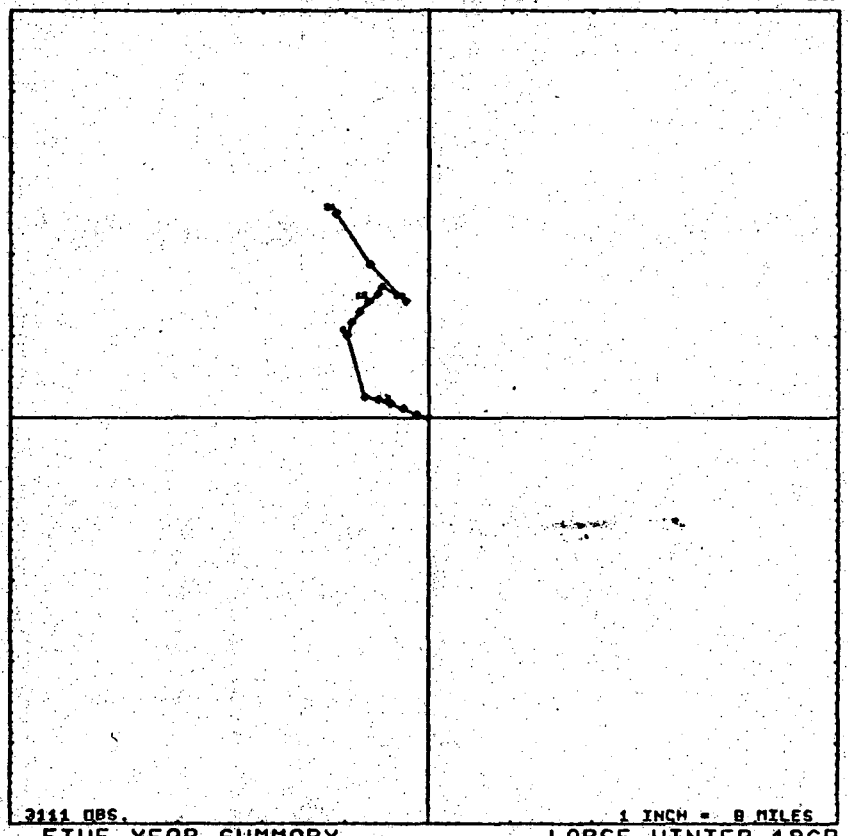


FIVE YEAR SUMMARY FAIR WINTER 1968

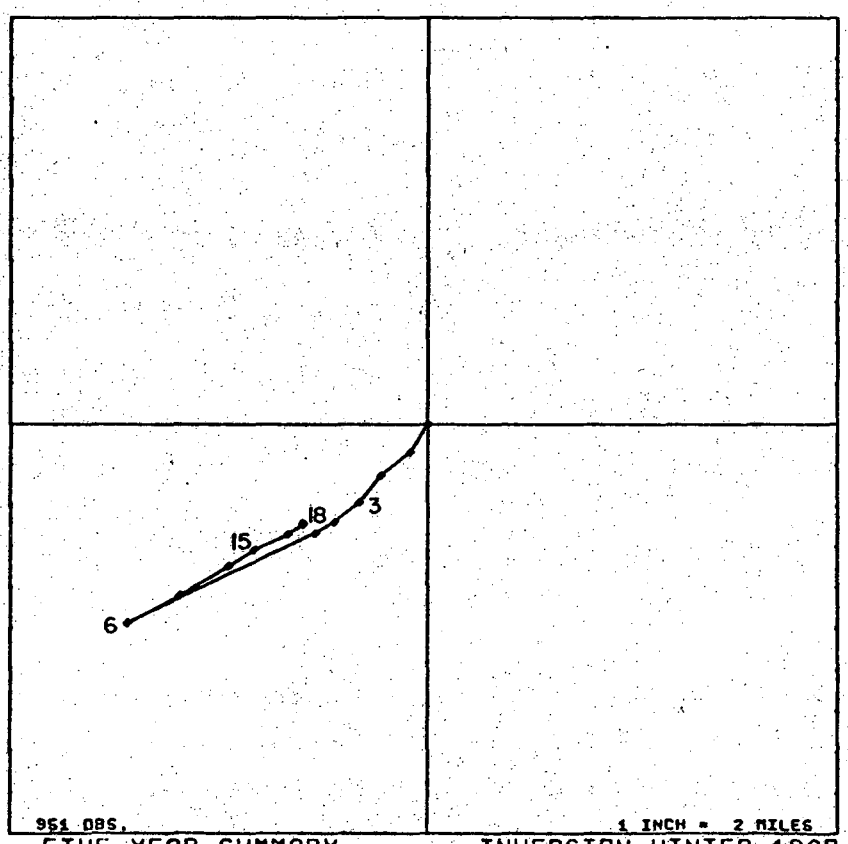


FIVE YEAR SUMMARY RAIN WINTER 1968

WIND PSEUDO-TRAJECTORIES STATION LRL1

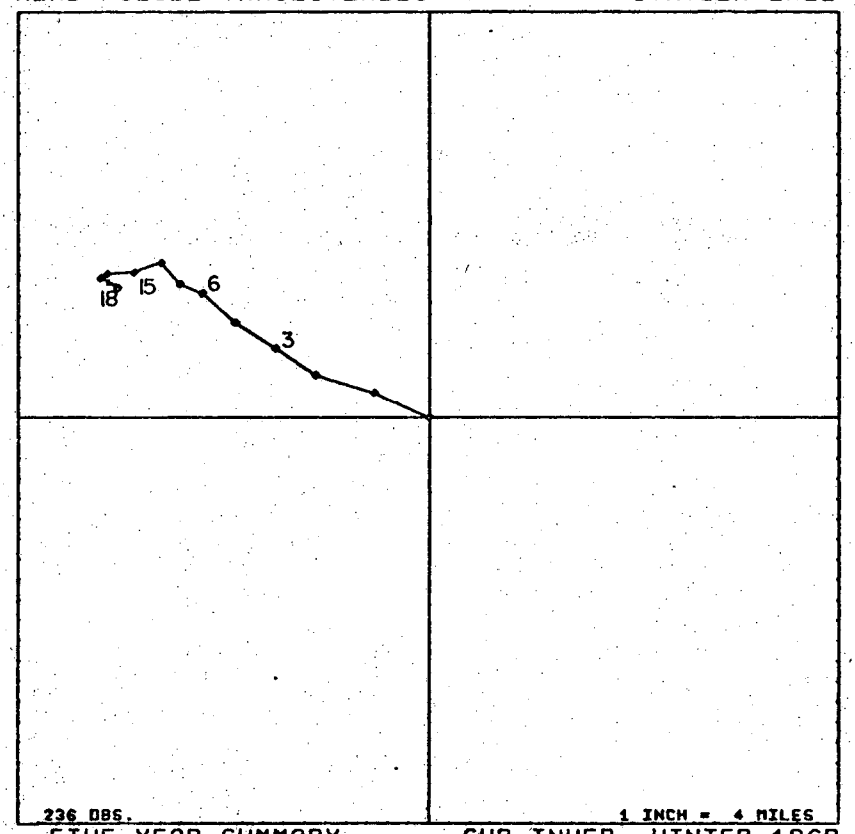


FIVE YEAR SUMMARY LAPSE WINTER 1968



FIVE YEAR SUMMARY INVERSION WINTER 1968

WIND PSEUDO-TRAJECTORIES STATION LRL1



FIVE YEAR SUMMARY SUB-INVER. WINTER 1968

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