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Environmental Research Laboratories

Wind Energy Flux Calculated From INEL Sensor Network Data

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IDAHO
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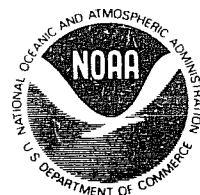WIND ENERGY FLUX CALCULATED FROM
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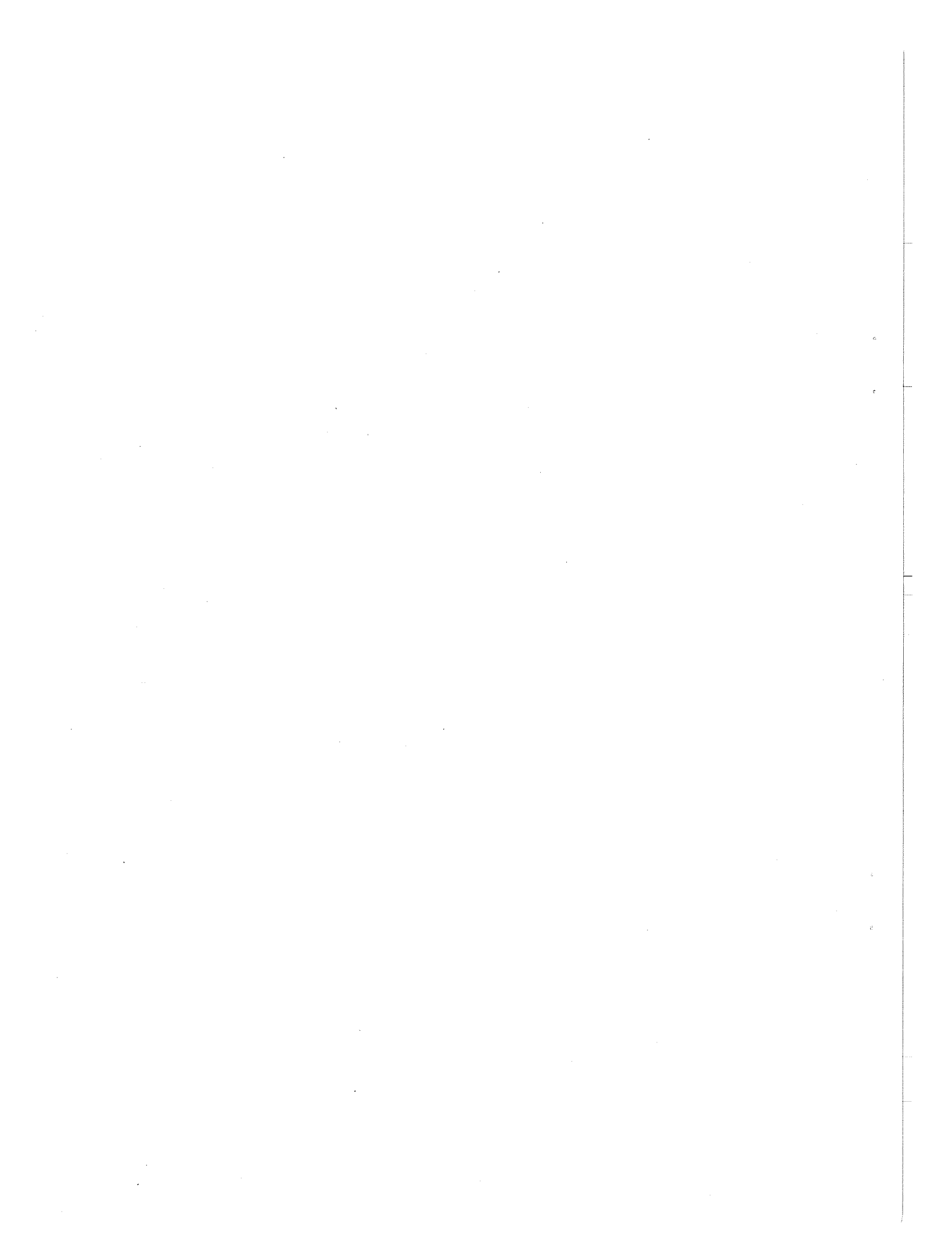Idaho Falls, Idaho
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PREFACE

This work was conducted under contract with the Idaho Nuclear Energy
Commission for Project Aquilla, a wind energy survey for the Upper Snake
River Plain.

CONTENTS

WIND ENERGY FLUX CALCULATED FROM INEL SENSOR NETWORK DATA

John H. Cate
Robert G. Nisle[1]

Computer programs to calculate root mean cube of wind-
speed, developed for Project Aquilla, are presented with
details of their use. Data from the Idaho National Engin-
eering Laboratory (INEL) wind sensing network for 1968 through
1970 and 1972 through April 1975 serve as input. From these
data, the programs calculate the available energy flux for
the upper Snake River plain.

1. INTRODUCTION

Computer programs (Appendix A, B, and C) have been developed to calcu-
late the root mean cube, V_{rmc}, of the windspeed. Input data are from the
Idaho National Engineering Laboratory (INEL), formerly the National Reactor
Testing Station (NRTS), wind sensing network which encompasses most of the
Upper Snake River Valley in southeastern Idaho. Data are available for the
years 1968-1970 and 1972-1974 in generally complete form. Data for 1971 and
January 1972 have not been reduced from the recorder strip charts, and hence
could not be used for the calculations. Data for January through April 1975
are also included.

Sensor height is listed with the values calculated from 1968-1970 data.
It is not included with the 1972-1975 values since the telemetry sensors were
at fixed heights (table 1).

2. SENSOR STATION INFORMATION

The INEL network covers most of the Upper Snake River Valley, the great-
est sensor density being located on and near the INEL proper. The sensor
station locations are shown in figure 1. A unique three-letter call sign has
been assigned to each station.

Call signs are listed below with the geographical name of the station
and a description of the location. Any peculiar local influences, such as
canyon winds, are noted.

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[1] Idaho Nuclear Energy Commission, Idaho Falls, Idaho.

Table 1. Alphabetical List of Telemetry Stations According to Call Sign.

Call Sign	General Geographic Location	Wind Sensor Height (Meters)
ABN	Aberdeen, Idaho	15.2
ARC	Arco, Idaho	15.2
BDM	Blue Dome, Idaho	15.2
BLG	INEL Burial Ground	22.8
BLK	Blackfoot, Idaho	15.2
BSN	Big Southern Butte, Idaho	15.2
CFA	INEL Central Facilities	15.2
DBS	Dubois, Idaho	15.2
DUN	INEL Dunes area	22.8
EBR 2	Experimental Breeder Reactor II, INEL	73.2
HMR	Hamer, Idaho	30.0
HOW	Howe, Idaho	6.1
IDF	Idaho Falls, Idaho	15.2
KTB	Kettle Butte Idaho	22.8
MIN	Minidoka, Idaho	15.2
MTV	Monteview, Idaho	30.0
NRF	Naval Reactor Facility, INEL	15.2
PBF	Power Burst Facility, INEL	15.2
RBT	Roberts, Idaho	15.2
RCH	Richfield, Idaho	15.2
ROV	Rover, INEL	15.2
STA	St. Anthony, Idaho	15.2
TAN 1,2	INEL, Test Area North	6.1/42.7
TBR	Tabor, Idaho	15.2
TRN	Terreton, Idaho	15.2

ABN - Aberdeen, Idaho. Station is 7 miles north of town on Idaho 39.

ARC - Arco, Idaho. Station is southeast of town off U. S. 20/26. Station is somewhat influenced by airflow from Big Lost River Valley located to the northwest.

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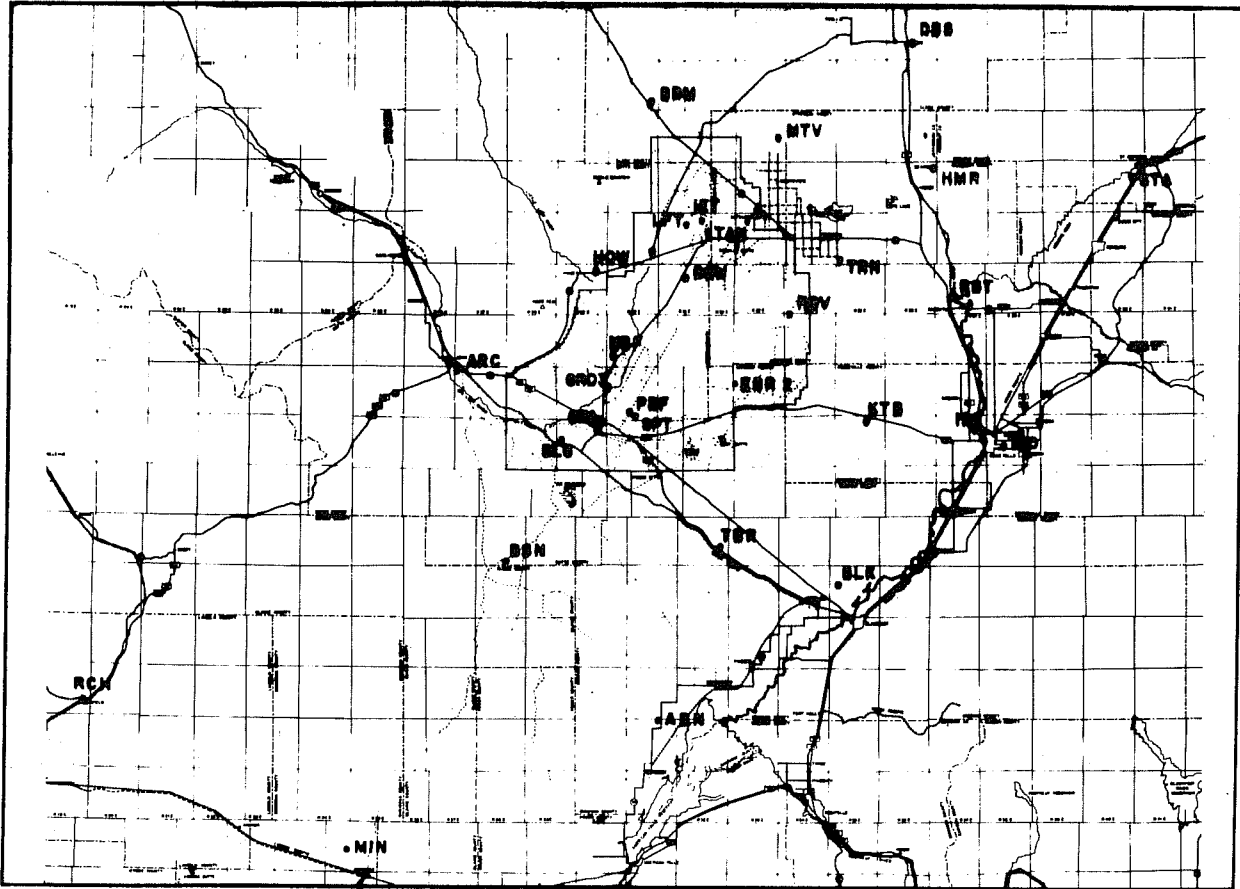
Figure 1. INEL wind sensing network stations in southeastern Idaho.

BDM - Blue Dome. Station is off Idaho 28 approximately 8 miles northwest of junction of Idaho 28 and Idaho 22 in Birch Creek Canyon. Predominant flows are up- and down-canyon flows.

BLG - Burial Ground. Station is on INEL near the old EBR I.

BLK - Blackfoot, Idaho. Station is approximately 4 miles northwest of the city.

BSN - Big Southern. Station is approximately 11 miles southwest of Big Southern Butte in Butte County on county line.

CFA - Central Facilities. Stations are on INEL in the Central Facilities Area near Building CF-690.

DBS - Dubois, Idaho. Station is just east of town.

DUN - Dunes. Station is on INEL approximately 6 miles south of Test Area North.

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ERB2 - Experimental Breeder Reactor 2. Station is on INEL at Argonne West facilities.

GRD3 - Grid 3. Station is on INEL just south of fire station #2.

HMR - Hamer, Idaho. Station is northeast of town on Hamer Butte.

HOW - Howe, Idaho. Station is on Idaho 22 east of town nearly centered in mouth of Little Lost River Canyon. Station is influenced by up- and down-canyon flows; down-canyon flows may be quite strong.

IDF - Idaho Falls, Idaho. Station is on airport beacon tower, apparently in a slight depression; winds recorded are generally lower than those recorded at other stations in area.

IET - Station is on INEL at Test Area North. Station is influenced by down-canyon flows from Birch Creek Canyon.

KID - Idaho Falls, Idaho. Station is at radio station KID.

KTB - Kettle Butte. Station is on U.S. 20 approximately 14 miles west of Idaho Falls.

LFT - Loss of Fluid Test. Station is on INEL at northern end of site. Station is influenced by Birch Creek down-canyon flows. (No data available).

MIN - Minidoka, Idaho. Station is approximately 4 miles northwest of town.

MTV - Monteview, Idaho. Station is approximately 5 miles north of town. Location is generally out of flow from Birch Creek.

NRF - Naval Reactor Facility - INEL.

PBF - Power Burst Facility - INEL.

RBT - Roberts, Idaho. Station is approximately 2 miles north of town.

RCH - Richfield, Idaho.

ROV - Rover. Station is on INEL near east central boundary of site.

SPT - SPERT Reactor Facility on INEL.

STA - St. Anthony, Idaho. Station is approximately 2 miles southwest of town on U.S. 20/191.

TAN - Test Area North. Station is on northern part of INEL. Station is somewhat influenced by Birch Creek drainage flow.

TBR - Tabor, Idaho. Station is on U. S. 26.

TRN - Terreton, Idaho. Station is approximately 3 miles southeast of town.

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3. PROGRAMS

3.1 Program AQUILLA/1968-1970

This program (Appendix A) processes hourly averaged data and calculates the root mean cube of velocity on a monthly and annual basis.

The data, now stored on magnetic tape, were loaded from cards. The data tape was written through the use of a buffer called BUFOUT; hence it must be read through the use of three statements, namely: CALL BUFIN (1,LA,1488,IT, IC) CALL BUFDLY (1,0,0,IT,IC) and IF (IT.EQ.3) GO to 16. The last statement is an end-of-file check. The variables in BUFIN are the unit number (1), array name (LA), number of 8-byte segments in a record to be read, a status report, and the actual number of 8-byte segments read. For a tape written with a conventional FORTRAN WRITE statement, these three statements may be replaced with a READ statement, e.g., READ (1,END=16) LA.

Data statement NDAMON supplies the number of days in each month to the program. A check is included to put an additional day in February if the year is a leap year.

Input control and program information are supplied to the program with seven input cards (table 2). The first card contains six control parameters. Parameter 1 is IYEAR which is the year of interest, e.g., 1969. The second, NSTA, is the number of stations; NMON is the number of months of data to process. In present form this is a dummy variable. NSKP is a record skip control. For three years of data on one tape file NSKP=365 would allow processing to begin with the second year. Set=0 to start with the first record. MST is the number of the first month to be processed, e.g., 1 for January. NSTOP, the last parameter, is a control on the number of records to process, e.g., NSTOP=365 will process for a full year. If the year is a leap year NSTOP is incremented to 366 within the program.

The next two cards contain the station names; up to 25 stations can be processed at once in this program. Both cards are required even though only one may have information. These cards are followed by two cards that contain up to 25 channel numbers. The channel numbers allow the program to select the proper i components of the data array LA (i,j). If, for example, the first data appear in LA (i,6) where i-1,24, setting NCH(1)=6 goes to LA (i, NCH(1))=LA(i,6) and processes data. Both cards are required. Zeros are not legal subscripts and should not appear between two good numbers. However, only NCH(1) through NCH(NSTA) are used; hence zeros may appear on the cards after the last good data channel.

The last two cards (both are required) contain the sensor heights above ground.

Output is printed with subroutine PRINT. Listed are the station names, sensor height, V_{rmc}, number of data points available, and the percent of data available for each month and annually (Appendix D).

Execution time for a full year of data is approximately 16 seconds.

Table 2. Input Summary for Program AQUILLA/1968-1970

Card Number	Card Cols.	Input Para.	Parameter Description
1	1-5	1YEAR	Year of data, e.g., 1969
1	6-10	NSTA	Number of stations, maximum of 25
1	11-15	NMON	Number of months of data to process
1	16-20	NSKP	Number of records to skip to first record
1	21-25	MST	Number of starting month
1	26-30	NSTOP	Number of records to process
2	2-5	NMSTA(1)	Name of the first station
	.	.	
	.	.	
2	76-80	NMSTA(16)	Name of the sixteenth station
3	2-5	NMSTA(17)	Name of the seventeenth station
	.	.	
	.	.	
3	41-45	NMSTA(25)	Name of the twenty-fifth station
4	1-5	NCH(1)	Ith component of first station
	.	.	
	.	.	
4	76-80	NCH(16)	Ith component of sixteenth station
5	1-5	NCH(17)	Ith component of seventeenth station
	.	.	
	.	.	
5	41-45	NCH(25)	Ith component of twenty-fifth station
6	1-5	HT(1)	Height of first sensor
	.	.	
	.	.	
6	76-80	HT(16)	Height of sixteenth sensor
7	1-5	HT(17)	Height of seventeenth sensor
	.	.	
	.	.	
7	41-45	HT(25)	Height of last sensor

3.2 Program AQUILLA/1972-1973

The program, listed in Appendix B, processes hourly averaged telemetry data and calculates the root mean cube of the windspeed on a monthly and annual basis. The hourly averages are vector averages of readings made at six-minute intervals and may produce lower results than the strip chart reductions.

As in program AQUILLA/1968-1970, NDAMON supplies the number of days in the months and corrects for leap year. NAMMON supplies the names of the months.

Input controls (table 3) are much simpler than those of AQUILLA/1968-1970. NRSTA is the number of stations; IYEAR is the year of interest. NSTOP is the stop control, incremented for leap year. INREAD is the read selection, set = 1 to use a FORTRAN READ; set = 0 to use BUFIN read. The second card contains IDSTRT which controls the starting record. It is the month and day of the first record to be processed. The last two cards contain the station name. Both are needed even though only one may contain information. Channels are not selected in this program as the telemetry data are fixed in a set order. Sensor heights are not included as these are fixed as listed in table 1.

Execution time for this program is approximately 15 seconds for a full year of data. Output is shown in Appendix E.

Table 3. Input Summary for Program AQUILLA/1972-1973

Card Number	Card Col.	Input Para.	Para. Description
1	1-5	NRSTA	Number of stations
	6-10	IYEAR	Year of interest, e.g., 1972
	11-15	NSTOP	Number of records to process
	16-20	INREAD	Read format control a for BUFIN 1 for READ
2	1-10	IDSTRT	Month and day of starting record ex 0101
3 ⋮	1-4	NSTA(1)	Identifier of first station
3	76-80	NSTA(20)	Identifier for station twenty
4 ⋮	1-4	NSTA(21)	Identifier for station twenty-one
4	41-44	NSTA(31)	Identifier for station thirty-one

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3.3 Program AQUILLA/1974-1975

This program (Appendix C) calculates the root mean cube of windspeed from the 6-minute (integrated) telemetry data from the INEL telemetry network. The program is flexible enough to use whenever 6-minute telemetry data are available. Estimated execution time for a full year of data is 12 minutes although this will vary with the number of stations and with the percentage of completeness of the data.

Since these data are stored on tape with a separate file for each month only three input parameters are required (table 4). The first parameter, IYEAR, is the year of data. The second, NRSTA, is the number of wind stations + 2. The two is added to include the date and time blocks. No channel controls are needed as the data are in a fixed and set order. The third parameter is NRMON which is the number of months to process. A check is made for leap year and necessary adjustments made when one is encountered.

At each point the velocity must be calculated from the voltages contained in the record. This calculation is the primary reason for the increase in execution time for this program compared with the other two.

Printing is done through subroutine PRINT which contains the formats, month names, and station names. Station names are entered into the program by means of a data statement; should the need arise they could be read in from a data card. Printouts for each month and for the year list the station name along with V_{rmc}, the percent of available data, the actual number of data points and the maximum velocity for the month (monthly summaries only) (Appendix F).

Table 4. Input Summary for Program AQUILLA/1974-1975

Card Number	Card Cols.	Input Para.	Parameter Description
1	1-5	IYEAR	Year of interest
1	6-10	NRSTA	Number of stations
1	11-15	NRMON	Number of months of data

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4. METHODS AND CONCLUSIONS

Since the data were from sensors at various heights, a correction to a common height was performed to make the data meaningful. The average root mean cubed velocity was determined for each sensor height at each station. The arithmetic mean was calculated for each sensor height. These data were then plotted against height, and the best-fit curve of the data was determined. This curve was then used to correct the velocity at each station to a common height of 15.2 m.

A conversion of the velocity data to watts/meter^2 was performed and the results plotted (figure 2). A maximum resulting from the Birch Creek Canyon airflow is evident around BDM and the north end of the site. A second maximum occurs around HMR possibly owing to the exposed location of the station allowing it to feel some influence from the Birch Creek outflow. A third maximum occurs over the high ground around EBR 2.
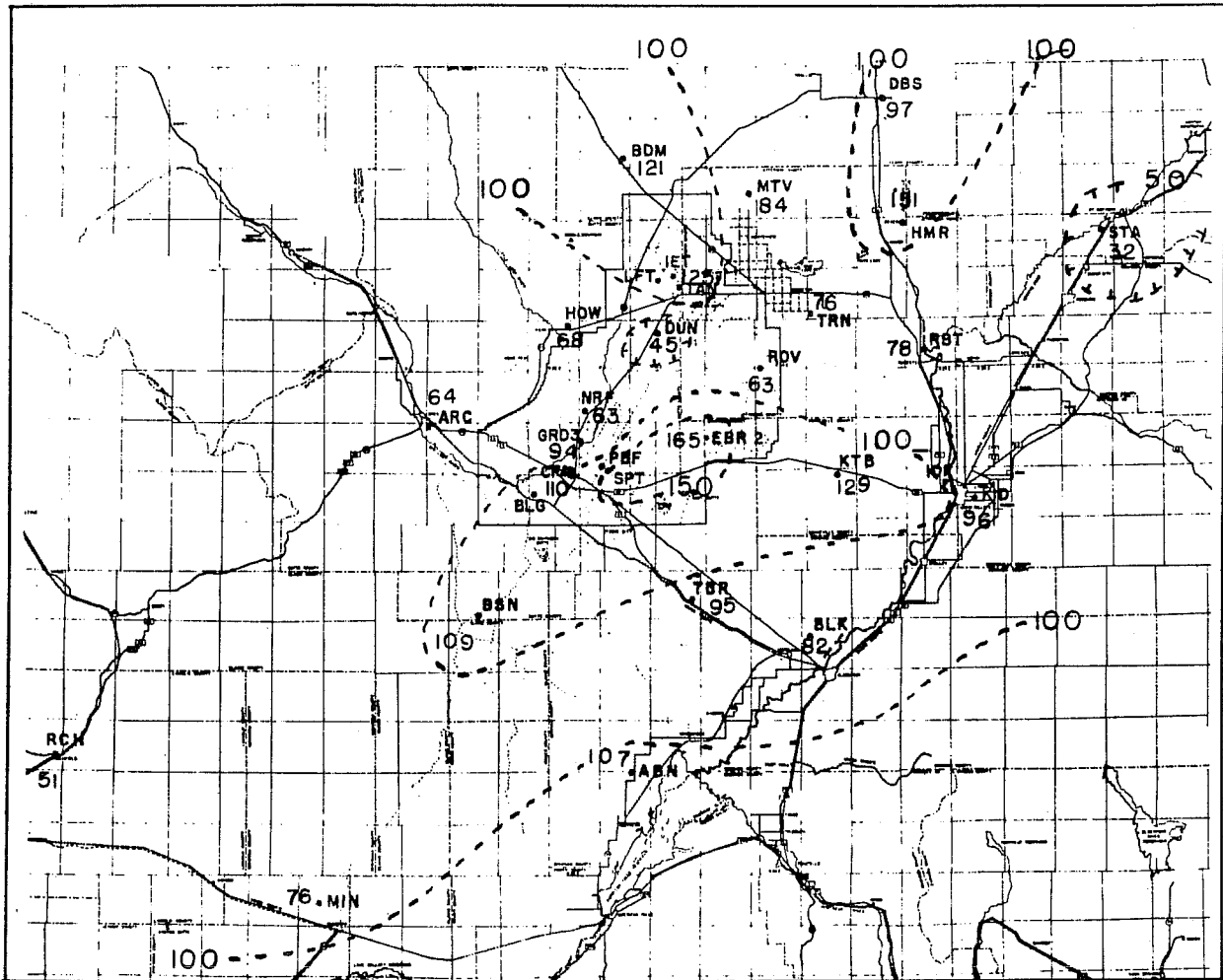
Figure 2. Wind energy in watts/meter^2 from velocity data of INEL wind sensing network in southeastern Idaho.

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The low point around DUN is possibly due to a flow stagnation point location in that area. The extreme low at STA appears unreasonable and is possibly a result of the peculiarities of the sensor location or erroneous data.

In general, more wind power appears to be available in the upper regions of the upper Snake River plain than in the lower regions.

Table 5 lists the ratio of the monthly root mean cubed velocity to the annual mean for the data aggregate. Table 6 lists the same information for CFA. In general, winds across the upper Snake River plain are stronger in the spring with April appearing to have the most wind energy available. Lighter winds occur in the fall.

Table 5. Ratio of Monthly Root Mean Cubed Velocity for All Stations Combined to Yearly Value for All Data.

Month	Ratio
Jan	1.4
Feb	0.8
Mar	1.3
Apr	1.6
May	1.2
Jun	1.1
Jul	0.9
Aug	0.7
Sep	1.0
Oct	0.9
Nov	0.9
Dec	0.9

From this preliminary data survey it would appear that wind generating stations may be feasible on the Upper Snake River Plain as a supplementary power source.

Table 6. Monthly Root Mean Cubed Velocities for CFA Stations and Ratios of Monthly Mean to Annual Mean.

Month	Height - 76.2 meters					Height - 6.1 meters					Height - 15.2 meters				
	1968	1969	1970	V_{rmc}	Ratio	1968	1969	1970	V_{rmc}	Ratio	1972	1973	1974	V_{rmc}	Ratio
Jan	6.1	9.1	7.2	7.7	1.1	4.0	5.9	4.1	4.8	1.0	-	3.2	5.9	4.9	1.0
Feb	6.6	5.9	6.5	6.4	.9	4.2	3.8	3.3	3.8	.8	-	3.3	4.8	4.2	.9
Mar	8.0	5.7	7.9	7.4	1.0	5.5	3.6	4.9	4.8	1.0	-	3.3	6.0	5.0	1.0
Apr	8.6	7.9	8.4	8.3	1.1	6.3	5.2	4.6	5.5	1.2	-	5.7	4.0	5.0	1.0
May	6.5	7.3	7.6	7.2	1.0	5.3	4.6	4.1	4.7	1.0	-	5.5	4.4	5.0	1.0
Jun	7.6	6.7	7.6	7.3	1.0	5.5	4.2	4.3	4.7	1.0	-	3.8	3.6	3.7	.8
Jul	7.2	7.3	7.2	7.2	1.0	4.8	4.8	4.1	4.6	1.0	-	4.6	-	4.6	1.0
Aug	6.6	7.1	7.2	7.0	1.0	4.5	4.4	4.3	4.4	1.0	4.1	5.8	3.1	4.6	1.0
Sep	7.1	8.1	8.0	7.8	1.1	4.6	5.0	4.7	4.8	1.0	6.0	5.2	3.8	5.2	1.1
Oct	6.9	7.2	7.1	7.1	1.0	4.5	4.4	3.9	4.3	.9	4.5	6.0	2.6	4.8	1.0
Nov	6.3	5.0	7.5	6.4	.9	3.8	2.6	4.2	3.7	.8	3.5	6.2	3.0	4.7	1.0
Dec	8.6	5.6	-	7.4	1.0	5.5	2.7	-	4.0	.9	4.5	3.9	2.3	3.8	.8
Annual				7.3					4.6					4.8	

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```
C      PROJECT AQUILLA  PROGRAM TO CALCULATE ROOT MEAN CUBED VELOCITY
C      FROM HOURLY AVERAGED DATA TAKEN FROM STRIP CHARTS
C      PROGRAM WILL HANDLE UP TO TWENTY FIVE STATIONS
       DIMENSION NR(25),NCH(25),HT(25),VCUBE(25),VMAX(25),P(25)
       DIMENSION VSUM(25),NDAMON(12),NSUM(25),NMSTA(25)
       INTEGER HTNOM
       INTEGER*2 LA(24,31)
       DATA NDAMON/31,28,31,30,31,30,31,31,30,31,30,31/
   01 FORMAT (16I5)
   02 FORMAT (16(1X,A4))
   03 FORMAT (16F5.0)
       READ (5,01) IYEAR,NSTA,NMOM,NSKP,MST,NSTOP
       READ (5,02) (NMSTA(I),I=1,25)
       READ (5,01) (NCH(I),I=1,25)
       READ (5,03) (HT(I),I=1,25)
C      NMON IS THE NUMBER OF MONTHS OF DATA TO PROCESS
C      NSKP IS THE NUMBER OF RECORDS TO SKIP
C      MST IS THE NUMBER OF THE FIRST MONTH PROCESSED
C      NSTOP IS THE MAXIMUM NUMBER OF RECORDS TO PROCESS
       CONFAC=0.44704
C      ZERO OUT ACCUMULATORS
       DO 10 I=1,25
       P(I)=0.0
       VCUBE(I)=0.0
       NSUM(I)=0
       NR(I)=0
       VMAX(I)=0.0
   10 VSUM(I)=0.0
       DENT=0
       NREC=0
C      THIS CARD IS NEEDED TO PRINT OUT THE LAST MONTH'S DATA
       NSTOP=NSTOP+1
C      LEAP YEAR CHECK
       IF(MOD(IYEAR,4) .EQ. 0) NDAMON(2)=29
       IF(MOD(IYEAR,4) .EQ. 0) NSTOP=NSTOP+1
C      SKIP TO THE STARTING RECORD
       IF(NSKP .EQ. 0) GO TO 11
       DO 12 N=1,NSKP
       CALL BUFIN(1,LA,1488,IT,IC)
       CALL BUFDLY(1,0,0,IT,IC)
       IF(IT .EQ. 3) GO TO 100
C      PROCESS DATA
   11 CONTINUE
   13 CALL BUFIN(1,LA,1488,IT,IC)
       CALL BUFDLY(1,0,0,IT,IC)
       IF(IT .EQ. 3) GO TO 16
       NREC=NREC+1
       IF(NREC .GT. NSTOP) GO TO 19
       MONTH=LA(1,1)/100
       IF(MONTH .NE. MST) GO TO 16
       MST=MONTH
```

```
        DO 14 I=1,24
        DO 15 J=1,NSTA
        IN=LA(I,NCH(J))/100
        V=LA(I,NCH(J))-100*IN
        IF(V .GT. 65.0) GO TO 15
        VCUBE(J)=VCUBE(J)+V*V*V
        NR(J)=NR(J)+1
        IF(VMAX(J) .LT. V) VMAX(J)=V
     15 CONTINUE
     14 CONTINUE
        GO TO 13
C       MONTHLY VALUES
     16 DEN=NDAMON(MST)*24
        MST=MONTH
        DO 17 J=1,NSTA
        IF(VCUBE(J) .EQ. 0.0) GO TO 17
        VSUM(J)=VSUM(J)+VCUBE(J)
        VCUBE(J)=VCUBE(J)/NR(J)
        VCUBE(J)=ALOG(VCUBE(J))/3.0
        VCUBE(J)=EXP(VCUBE(J))*CONFAC
        VMAX(J)=VMAX(J)*CONFAC
        NSUM(J)=NSUM(J)+NR(J)
        P(J)=(NR(J)/DEN)*100.0
     17 CONTINUE
        DENT=DENT+DEN
        KC=0
        HTNOM=MONTH-1
        IF(HTNOM .EQ. 0) HTNOM=12
        CALL PRINT1(IYEAR,NDAMON,VCUBE,P,VMAX,NR,KC,HTNOM,NMSTA,HT)
        DO 18 J=1,NSTA
        P(J)=0.0
        VMAX(J)=0.0
        NR(J)=0
     18 VCUBE(J)=0.0
        GO TO 11
C       CALCULATION OF YEARLY VALUES
     19 DO 21 J=1,NSTA
        IF(VSUM(J) .EQ. 0.0) GO TO 21
        VSUM(J)=VSUM(J)/NSUM(J)
        VSUM(J)=ALOG(VSUM(J))/3.0
        VSUM(J)=EXP(VSUM(J))*CONFAC
        P(J)=(NSUM(J)/DENT)*100.0
     21 CONTINUE
        KC=1
        HTNOM=MONTH-1
        IF(HTNOM .EQ. 0) HTNOM=12
        CALL PRINT1(IYEAR,NDAMON,VSUM,P,VMAX,NSUM,KC,HTNOM,NMSTA,HT)
    100 STOP
&       END

        SUBROUTINE PRINT1(M,L,V,P,X,N,K,MN,S,H)
        DIMENSION NAMMON(36),L(12),N(25),X(25),V(25),P(25),S(25),H(25)
        DATA MA/0/
```

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```
      DATA NAMMON/'    ',' JAN','UARY','    ','FEBR','UARY','    ','  M
     1','ARCH','    ','  A','PRIL','    ','    ',' MAY','    ','    ','
     2JUNE','    ','    ','JULY','    ',' AU','GUST','  S','EPTE','MBE
     3R','  ',' OCT','OBER','    ','NOVE','MBER','    ','DECE','MBER'/
      IF(MA .NE. 0) GO TO 49
      MB=MN*3
      MA=1
   49 PRINT 01
      MN=MN*3
      PRINT 02
      IF(K .EQ.1) GO TO 50
      PRINT 03,NAMMON(MN-2),NAMMON(MN-1),NAMMON(MN),M
      GO TO 51
   50 PRINT 04,NAMMON(MB-2),NAMMON(MB-1),NAMMON(MB),NAMMON(MN-2),NAMMON(
     1MN-1),NAMMON(MN),M
   51 PRINT 05,(S(J),J=1,25)
      PRINT 06,(H(J),J=1,25)
      PRINT 07,(V(J),J=1,25)
      PRINT 08,(P(J),J=1,25)
      PRINT 09,(N(J),J=1,25)
      IF(K .EQ. 1) GO TO 52
      PRINT 10,(X(J),J=1,25)
      GO TO 53
   52 PRINT 11
   53 PRINT 12
      PRINT 13,M
      PRINT 14
    7 PRINT 15
      PRINT 16
   01 FORMAT (1H1)
   02 FORMAT (1X,35X,'ROOT MEAN CUBED WINDSPEEDS FOR'/)
   03 FORMAT (1X,35X,'---',3A4'I5,' ---'///)
   04 FORMAT (1X,35X,'PERIOD',1X'3A4,' THRU ',3A4,I5///)
   05 FORMAT (1X,'STN  *',25(1X,A4)/)
   06 FORMAT (1X,'HT   *',25(1X,F4.1)/)
   07 FORMAT (1X,'VRMC *',25(1X,F4.1)/)
   08 FORMAT (1X,'PCT  *',25(1X,F4.0)/)
   09 FORMAT (1X,'NMBR *',25(1X,I4)/)
   10 FORMAT (1X,'MAX  *',25(1X,F4.1)///)
   11 FORMAT (1H0)
   12 FORMAT (1X,5X,'DATA UNITS ARE METERS PER SECOND'/)
   13 FORMAT (1X,5X,'DATA FOR THIS YEAR",I5,' IS TAKEN FROM RECORDER')
   14 FORMAT (1X,'STRIP CHARTS WHICH WERE MANUALLY AVERAGED OVER ONE')
   15 FORMAT (1X,'HOUR PERIODS. STATION INFORMATION AND LOCATION IS')
   16 FORMAT (1X,'GIVEN IN THE ATTACHED PAPER'/)
```
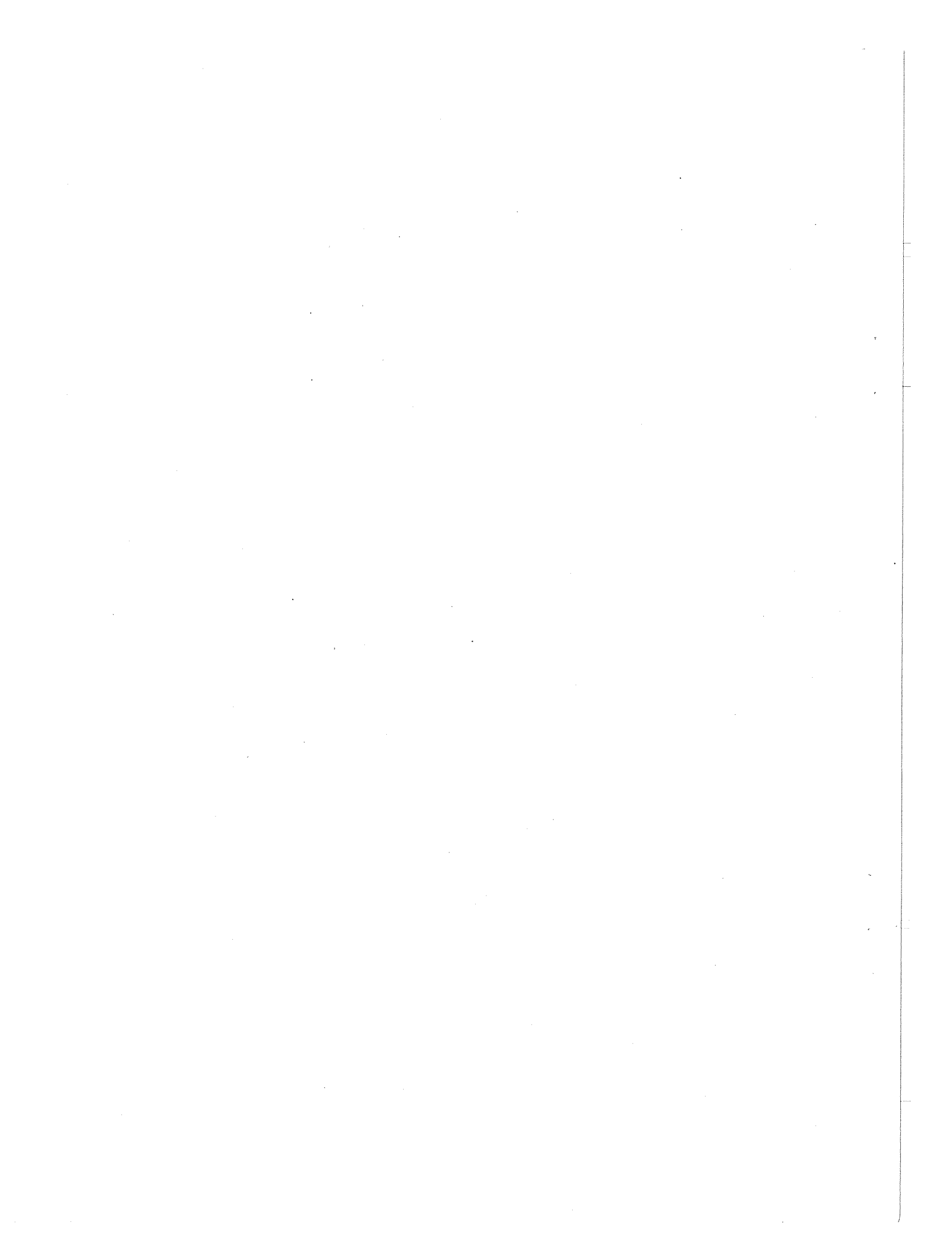
```
C     PROJECT AQUILLA
C     PROGRAM TO CALCULATE RMC VELOCITY FROM HOURLY AVERAGED DATA
      DIMENSION NSTA(31),VCUBE(31),NDAMON(12),VCSUM(12,31),NAMMON(36)
      DIMENSION P(31),CUBSUM(31),NSUM(31),NR(31)
      DIMENSION LA(24,31)
      REAL*4 MAX(31)
      DATA NDAMON/31,28,31,30,31,30,31,31,30,31,30,31/
      DATA NAMMON/'    ',' JAN','UARY','    ','FEBR','UARY','    ','  M
     1','ARCH','    ','   A','PRIL','    ','    ',' MAY','    ','    ','    ',
     2JUNE','    ','    ','JULY','    ','   AU','GUST','   S','EPTE','MBE
     3R','    ',' OCT','OBER','    ','   ','NOVE','MBER','    ','DECE','MBER/
   01 FORMAT (16I5)
   02 FORMAT (20A4)
   03 FORMAT (8I10)
   80 FORMAT (1H1)
   81 FORMAT (1X,49X,'ROOT MEAN CUBE VELOCITY VALUES FOR'/)
   82 FORMAT (1X,54X,'***',3A4,I5,' ***'///)
   83 FORMAT (1X,'STATION',25(1X,A4)/)
   84 FORMAT (1X,'V RMC',2X,25(1X,F4.1)/)
   85 FORMAT (1X,'PCT',4X,25(1X,F4.0)/)
   86 FORMAT (1X,'V MAX',2X,25(1X,F4.1)//)
   87 FORMAT (1X,'NMBR',3X,25(1X,I4)/)
   91 FORMAT (1x,'VELOCITY GREATER THAN 60MPH RECORDED FOR')
   92 FORMAT (1X,'DATE',I7,' FOR STATION'.A4,' HOUR',I3/)
   93 FORMAT (1X,' THIS IS INCLUDED IN V RMC'/)
   94 FORMAT (1X,50X,'PERIOD 1 JANUARY',I5,'THRU 31 DECEMBER',I5///)
   99 FORMAT (1X,'DATA PROBLEM ON RECORD',I4/)
   98 FORMAT (1X,5X,'THESE ROOT MEAN CUBED VELOCITIES ARE CALCULATED')
  101 FORMAT (1X,'FROM HOURLY AVERAGED DATA. THE HOURLY AVERAGE IS A')
  102 FORMAT (1X,'VECTOR AVERAGE HENCE DATA MAY BE LOWER THAN THAT')
  103 FORMAT (1X,'WHICH ACTUALLY OCCURED')
  104 FORMAT (1X,'     VELOCITY UNITS ARE METERS PER SECOND')
      READ (5,01) NRSTA,IYEAR,NSTOP,INREAD
      READ (5,03) IDSTRT
      IF(MOD(IYEAR,4) .EQ. 0) NSTOP=NSTOP+1
      IF(MOD(IYEAR,4) .EQ. 0) NDAMON(2)=29
      READ (5,02) (NSTA(I),I=1,26)
C     ZERO OUT ACCUMULATORS
      DENT=0.0
      NCOUNT=0
      NREC=0
      DO 10 L=1,31
      MAX(L)=0
      CUBSUM(L)=0.0
      VCUBE(L)=0.0
      P(L)=0.0
      NR(L)=0
      NSUM(L)=0
      DO 9 N=1,12
    9 VCSUM(N,L)=0.0
```

```fortran
   10 CONTINUE
C     INITIAL DATA READ-IN
      IF(INREAD .EQ. 1) GO TO 555
  666 CALL BUFIN (1,LA,186,IT,IV)
      CALL BUFDLY (1,0,0,IT,IV)
      IF(IT .EQ. 3) GO TO 50
      IF(LA(1,1) .EQ. IDSTRT) GO TO 6
  555 READ (1) LA
      IF(LA(1,1) .EQ. IDSTRT) GO TO 6
      GO TO 555
    6 NREC=NREC+1
      MONTH=LA(1,1)/100
      IF(MONTH .GT. 99) GO TO 61
      GO TO 62
   61 MA1=MONTH/100
      MA2=MONTH-MA1*100
      MONTH=MA2
   62 MNTH=MONTH
      MIND=MONTH
      IF(MONTH .GT. 12) GO TO 53
      GO TO 16
   14 IF(INREAD .EQ. 1) GO TO 8
      CALL BUFIN(1,LA,186,IT,IC)
      CALL BUFDLY(1,0,0,IT,IC)
      IF(IT .EQ. 3) GO TO 50
      GO TO 57
    8 READ (1,END=50) LA
   57 NREC=NREC+1
      IF(NREC .GT. NSTOP) GO TO 50
      MONTH=LA(1,1)/100
      IF(MONTH .NE. MIND) GO TO 51
   16 CONTINUE
      DO 11 I=1,24
      DO 12 J=2,NRSTA
      IF(LA(I,J) .EQ. 9999) GO TO 12
      NR(J)=NR(J)+1
      MV=LA(I,J)/100
      IV=LA(I,J)-MV*100
      IF(MAX(J) .LT. IV) MAX(J)=IV
      VCUBE(J)=VCUBE(J)+IV*IV*IV
      IF(IV .GT. 60) GO TO 52
   12 CONTINUE
   11 CONTINUE
      GO TO 14
C     SECTION TO SUM MONTH DATA AND ACCUMULATE DATA FOR THE YEAR
   51 CONTINUE
      DO 13 J=2,NRSTA
      IF(VCUBE(J) .EQ. 0.0) GO TO 15
      VCSUM(MIND,J)=VCUBE(J)
      VCUBE(J)=VCUBE(J)/NR(J)
      VCUBE(J)=ALOG(VCUBE(J))/3.0
      VCUBE(J)=EXP(VCUBE(J))
```

18

```
      MAX(J)=MAX(J)*.44704
      VCUBE(J)=.44704*VCUBE(J)
   15 DEN=NDAMON(MIND)*24
      P(J)=(NR(J)/DEN)*100
   13 CONTINUE
      DENT=DENT+DEN
      PRINT 80
      PRINT 81
      INDEX=MIND*3
      PRINT 82,NAMMON(INDEX-2),NAMMON(INDEX-1),NAMMON(INDEX),IYEAR
      PRINT 83,(NSTA(I),I=1,25)
      PRINT 84,(VCUBE(J),J=2,26)
      PRINT 85,(P(K),K=2,26)
      PRINT 87,(NR(K),K=2,26)
      PRINT 86,(MAX(J),J=2,26)
      PRINT 98
      PRINT 101
      PRINT 102
      PRINT 103
      PRINT 104
      DO 30 K=1,31
      MAX(K)=0.0
      P(K)=0.0
      VCUBE(K)=0.0
      NSUM(K)=NSUM(K)+NR(K)
   30 NR(K)=0
      MIND=MONTH
      GO TO 16
C     LISTING OF ANY VELOCITIES GREATER THAN 60
   52 CONTINUE
C     PRINT 80
      PRINT 91
      PRINT 92,LA(1,1),NSTA(J-1),I
      PRINT 93
      GO TO 12
   50 CONTINUE
C     PRINT OF FINAL MONTH'S DATA
      DO 26 J=2,NRSTA
      IF(VCUBE(J) .EQ. 0.0) GO TO 26
      VCSUM(MIND,J)=VCUBE(J)
      VCUBE(J)=VCUBE(J)/NR(J)
      VCUBE(J)=ALOG(VCUBE(J))/3.0
      VCUBE(J)=EXP(VCUBE(J))
      VCUBE(J)=.44704*VCUBE(J)
      MAX(J)=MAX(J)*.44704
      DEN=NDAMON(MIND)*24
      P(J)=(NR(J)/DEN)*100.0
   26 CONTINUE
      DENT=DENT+DEN
      PRINT 80
      PRINT 81
      INDEX=MIND*3
```

```
      PRINT 82,NAMMON(INDEX-2),NAMMON(INDEX-1),NAMMON(INDEX),IYEAR
      PRINT 83,(NSTA(I),I=1,25)
      PRINT 84,(VCUBE(J),J=2,26)
      PRINT 85,(P(K),K=2,26)
      PRINT 87,(NR(K),K=2,26)
      PRINT 86,(MAX(J),J=2,26)
      PRINT 98
      PRINT 101
      PRINT 102
      PRINT 103
      PRINT 104
C     PRINTOUT OF YEARLY DATA
      PRINT 80
      PRINT 81
      PRINT 94,IYEAR,IYEAR
      DO 22 J=2,NRSTA
   22 VCSUM(MIND,J)=VCUBE(J)
      DO 23 J=2,NRSTA
      DO 23 I=1,12
   23 CUBSUM(J)=CUBSUM(J)+VCSUM(I,J)
      PRINT 83,(NSTA(I),I=1,25)
      DO 24 I=2,NRSTA
      IF(CUBSUM(I) .EQ. 0.0) GO TO 24
      VCUBE(I)=CUBSUM(I)/NSUM(I)
      VCUBE(I)=ALOG(VCUBE(I))/3.0
      VCUBE(I)=EXP(VCUBE(I))
      VCUBE(I)=.44704*VCUBE(I)
   24 CONTINUE
      PRINT 84,(VCUBE(J),J=2,26)
      DO 25 K=1,NRSTA
   25 P(K)=(NSUM(K)/DENT)*100.0
      PRINT 85,(P(K),K=2,26)
      PRINT 87,(NSUM(K),K=2,26)
      PRINT 98
      PRINT 101
      PRINT 102
      PRINT 103
      PRINT 104
      GO TO 100
   53 PRINT 99,NREC
  100 STOP
      END
```

```
C     PROJECT AQUILLA
C     PROGRAM TO CALCULATE RMC VELOCITY FROM SIX MINUTE TELEMETRY
C     DATA FROM JANUARY 1974 ON
      DIMENSION LA(10,40),P(31),NR(31),VMAX(31)NDAMON(12),NRSUM(31)
      REAL NPOS,NTOT
      REAL*8 VCUBE(31),VCSUM(31)
      DATA NDAMON/31,28,31,30,31,30,31,31,30,31,30,31/
   01 FORMAT (16I5)
      READ (5,01) IYEAR,NRSTA,NRMON
      IF(MOD(IYEAR,4) .EQ. 0) NDAMON(2)=29
      DO 10 L=1,31
      VCUBE(L)=0.0
      VCSUM(L)=0.0
      P(L)=0.0
      NR(L)=0
      VMAX(L)=0.0
      NRSUM(L)=0
   10 CONTINUE
      NREC=0
      CONFAC=.44704
      NTOT=0.0
C
C     READ-IN OF DATA AND CALCULATION OF VELOCITY AND VELOCITY CUBED
C
      DO 9 N=1,NRMON
    8 READ (1,END=50) LA
      IA=LA(1,1)/100
      IB=IA/100
      MONTH=IA-IB*100
      DO 11 I=1,10
      DO 11 J=3,NRSTA
      IX=LA(I,J)/1000
      IF(IX .EQ. 999) GO TO 11
      IF(IX .EQ. 0) GO TO 11
      IY=LA(I,J)-IX*1000
      IF(IY .EQ. 999) GO TO 11
      IF(IY .EQ. 0) GO TO 11
      X=IX-500
      Y=IY-500
      Z=X*X+Y*Y
      V=SQRT(Z)/5.0
      V=V*CONFAC
      IF(V .GT. VMAX(J)) VMAX(J)=V
      VCUBE(J)=VCUBE(J)+V*V*V
      NR(J)=NR(J)+1
   11 CONTINUE
      GO TO 8
   50 NPOS=240*NDAMON(MONTH)
      DO 12 J=3,NRSTA
      IF(VCUBE(J) .EQ. 0.0) GO TO 12
```

```fortran
      VCSUM(J)=VCSUM(J)+VCUBE(J)
      NRSUM(J)=NRSUM(J)+NR(J)
      VCUBE(J)=VCUBE(J)/NR(J)
      VCUBE(J)=DLOG(VCUBE(J))/3.0
      VCUBE(J)=DEXP(VCUBE(J))
   12 P(J)=(NR(J)/NPOS)*100.0
      NTOT=NTOT+NPOS
      KCONTL=0
      CALL PRINT(IYEAR,MONTH,VCUBE,P,NR,VMAX,KCONTL)
      DO 14 I=2,NRSTA
      VMAX(I)=0.0
      VCUBE(I)=0.0
      NR(I)=0.0
   14 P(I)=0.0
    9 CONTINUE
      KCONTL=1
      DO 13 J=3,NRSTA
      IF(VCSUM(J) .EQ. 0.0) GO TO 13
      VCSUM(J)=VCSUM(J)/NRSUM(J)
      VCSUM(J)=DLOG(VCSUM(J))/3.0
      VCSUM(J)=DEXP(VCSUM(J))
   13 P(J)=(NRSUM(J)/NTOT)*100.0
      CALL PRINT(IYEAR,MONTH,VCSUM,P,NRSUM,VMAX,KCONTL)
      STOP
      END

      SUBROUTINE PRINT(IYR,M,V,P,NR,VMAX,K)
      DIMENSION NDAMON(12),NAMMON(36),NST(26),VMAX(31),NR(31),P(31)
      REAL*8 V(31)
      DATA NDAMON/31,28,31,30,31,30,31,31,30,31,30,31/
      DATA NAMMON/'   ',' JAN','UARY','    ','FEBR','UARY','    ','  M
     1','ARCH','    ','   A','PRIL','    ','    ',' MAY','    ','    ','
     2JUNE','    ','    ','JULY','    ','  AU','GUST','   S','EPTE','MBE
     3R','    ',' OCT','OBER','    ','NOVE','MBER','    ','DECE','MBER'/
      DATA NN/0/
      DATA NST/' ABN',' BSN',' ARC',' HOW',' MTV',' DBS',' HMR',' RBT','
     1 TRN',' KTB',' IDF',' BLK','TAN1','TAN2',' TBR',' DUN',' MIN','EBR
     22"," ROV',' STA',' RCH',' BDM',' CFA',' BLG',' NRF',' PBF'/
   01 FORMAT (1H1)
   02 FORMAT (1X,31X,'ROOT MEAN WINDSPEED VALUES FOR'/)
   03 FORMAT (1X,33X,'---',3A4,I5,'---'///)
   04 FORMAT (1X,1X,'STATION ',5X,13(2X,A4)/)
   05 FORMAT (1X,1X,'WINDSPEED RMC',13(2X,F4.1)/)
   06 FORMAT (1X,1X,'PCT AVAIL ',3X,13(2X,F4.0)/)
   07 FORMAT (1X,1X,'NMBR CASES ',2X,13(1X,I5)/)
   08 FORMAT (1X,1X,'MAX WINDSPEED',13(2X,F4.1)////)
   09 FORMAT (1X,5X,'WINDSPEED UNITS ARE METERS PER SECOND'/)
   10 FORMAT (1X,5X,'THE ABOVE DATA SOURCE IS THE SIX MINUTE')
   11 FORMAT (1X,'TELEMETRY DATA FROM THE INEL TELEMETRY')
   12 FORMAT (1X,'SYSTEM. STATION LOCATIONS AND INFORMATION')
   13 FORMAT (1X,'ARE GIVEN IN THE ATTACHED PAPER'/)
   14 FORMAT (1X,28X,'ROOT MEAN WINDSPEED VALUES FOR PERIOD'/)
   15 FORMAT (1X,28X,3A4,I5,' THRU',3A4,I5///)
```

```
      IF(MOD(IYR,4) .EQ. 0) NDAMON(2)=29
      IF(NN .EQ. 1) GO TO 32
      MS=M*3
      NN=1
 32   I=M*3
      PRINT 01
      IF(K .EQ. 1) GO TO 30
      PRINT 02
      PRINT 03,NAMMON(I-2),NAMMON(I-1),NAMMON(I),IYR
      GO TO 31
 30   PRINT 14
      PRINT 15,NAMMON(MS-2),NAMMON(MS-1),NAMMON(MS),IYR,NAMMON(I-2),NAMM
     10N(I-1),NAMMON(I),IYR
 31   PRINT 04,(NST(J),J=1,13)
      PRINT 05,(V(J),J=3,15)
      PRINT 06,(P(J),J=3,15)
      PRINT 07,(NR(J),J=3,15)
      PRINT 08,(VMAX(J),J=3,15)
      PRINT 04,(NST(J),J=14,26)
      PRINT 05,(V(J),J=16,28)
      PRINT 06,(P(J),J=16,28)
      PRINT 07,(NR(J),J=16,28)
      PRINT 08,(VMAX(J),J=16,28)
      PRINT 09
      PRINT 10
      PRINT 11
      PRINT 12
      PRINT 13
      RETURN
      END
```
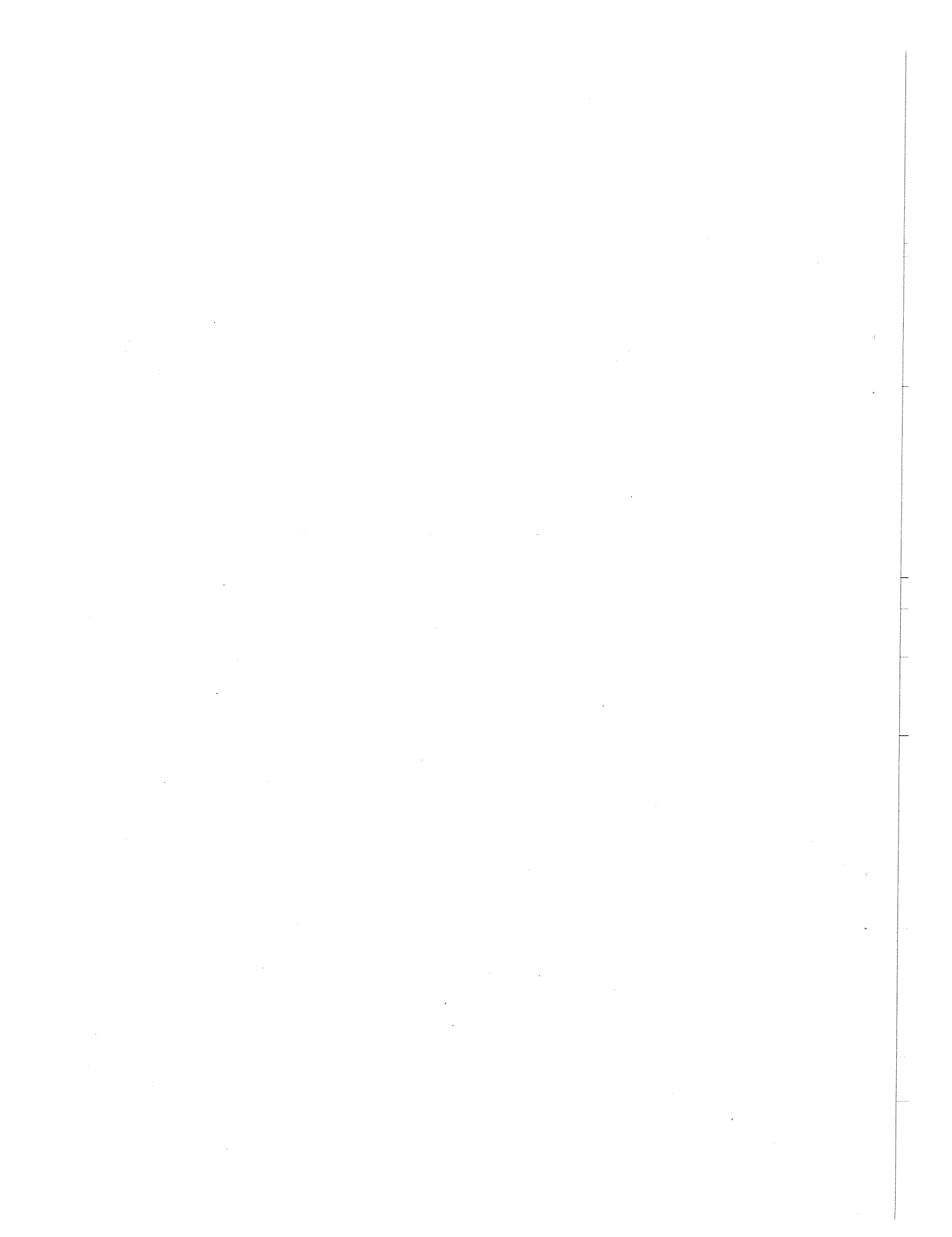
APPENDIX D

OUTPUT OF PROGRAM AQUILLA/1968-1970

The output consists of root mean cubed windspeeds for January 1968 through December 1970. The data from which these values were calculated were taken from recorder strip charts that were manually averaged over 1-hour periods. Windspeeds are given in meters per second.

ROOT MEAN CUBED WINDSPEEDS FOR

--- JANUARY 1968 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HCW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	4.0	6.1	3.4	5.5	6.0	4.6	6.5	3.6	4.5	4.9	3.2	0.0	0.	0.	0.0	0.	0.	0.	0.	0.	0.	0.0	0.	0.0
PCT	100.	100.	99.	97.	98.	100.	100.	100.	100.	94.	87.	0.	0.	0	0.	0	0	0.	0.	0	0	0	0.	0.
NMBR	743	743	740	722	729	743	744	744	696	648	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAX	13.9	18.8	11.2	19.2	17.4	11.6	16.1	9.8	14.8	13.4	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

--- FEBRUARY 1968 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HCW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	5.0	15.2	0.0	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	4.2	6.6	3.1	5.8	6.3	4.5	6.9	3.2	5.0	5.4	2.9	6.8	4.6	4.2	5.1	5.0	0.0	0.0	0.	0.	0.	0.0	0.	0.0
PCT	96.	96.	94.	96.	82.	85.	87.	96.	96.	85.	97.	93.	85.	96.	80.	84.	0.	0.	0	0	0	0	0	0
NMBR	671	671	656	665	568	595	603	665	670	590	672	644	595	667	560	587	0	0	0	0	0	0	0	0
MAX	13.9	16.1	8.5	14.8	16.5	15.6	16.1	9.8	14.8	15.2	8.9	15.2	11.6	10.3	9.8	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

--- MARCH 1968 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HCW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	5.5	8.0	5.3	8.5	8.6	5.8	7.2	4.5	6.4	6.6	5.0	5.4	5.8	5.6	5.7	6.1	0.0	0.0	0.	0.	0.	0.0	0.	0.0
PCT	97.	97.	96.	96.	91.	96.	65.	97.	97.	97.	97.	73.	96.	79.	93.	76.	0.	0.	0	0	0	0	0	0
NMBR	719	719	715	715	676	717	483	720	720	720	720	540	717	587	695	569	0	0	0	0	0	0	0	0
MAX	12.1	16.5	12.5	20.6	19.2	12.5	15.2	12.1	13.0	15.2	12.1	11.6	12.5	12.1	12.1	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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ROOT MEAN CUBED WINDSPEEDS FOR

--- APRIL 1968 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	6.3	8.6	6.3	9.8	9.3	7.1	9.0	5.9	7.3	7.5	5.5	6.2	6.7	6.1	6.4	6.5	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCT	97.	97.	96.	96.	93.	51.	84.	97.	97.	90.	51.	63.	93.	80.	94.	92.	64.	0.	0.	0.	0.	0.	0.	0.
NMBR	696	696	693	692	671	366	607	696	696	651	366	456	672	577	678	662	461	0	0	0	0	0	0	0
MAX	15.2	18.3	15.2	23.7	21.5	15.2	19.2	14.8	17.0	17.4	13.4	15.2	13.4	15.6	15.2	15.2	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

--- MAY 1968 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	5.3	6.5	5.0	7.8	7.5	4.7	6.7	4.6	5.5	5.9	4.7	3.6	5.4	4.9	5.3	5.8	6.3	0.0	0.0	0.0	0.0	0.0	2.9	5.4
PCT	97.	97.	94.	95.	95.	34.	61.	97.	96.	57.	87.	90.	89.	94.	97.	97.	97.	0.	0.	0.	0.	0.	6.	6.
NMBR	718	718	702	708	705	251	453	720	716	720	649	669	659	696	719	719	719	0	0	0	0	0	47	48
MAX	33.1	14.8	21.9	19.7	15.6	11.6	15.6	15.2	13.9	19.2	12.5	10.3	17.0	13.9	16.1	15.2	15.2	0.0	0.0	0.0	0.0	0.0	5.8	10.3

--- JUNE 1968 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	5.5	7.6	5.6	8.5	8.5	5.6	7.7	5.3	6.4	6.5	6.0	4.0	5.8	9.8	5.7	5.9	5.7	6.1	0.0	0.0	0.0	0.0	4.7	6.7
PCT	90.	86.	96.	88.	97.	97.	82.	97.	97.	87.	62.	49.	76.	96.	96.	90.	97.	88.	0.	0.	0.	0.	91.	89.
NMBR	645	622	690	692	637	696	590	696	696	629	445	356	547	691	690	645	696	634	0	0	0	0	653	643
MAX	12.5	17.0	17.0	25.9	21.5	14.3	18.3	13.4	16.5	15.2	13.0	10.3	14.3	12.5	13.9	15.2	15.6	17.9	0.0	0.0	0.0	0.0	12.5	27.7

ROOT MEAN CUBED WINDSPEEDS FOR

--- JULY 1968 ---

STN	*	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSA	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	*	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	*	4.8	7.2	4.9	7.9	8.5	5.4	6.9	5.1	6.0	5.8	4.9	5.7	4.9	4.9	4.8	5.9	6.3	0.0	0.	0.	0.0	3.7	6.1	0.0
PCT	*	97.	93.	97.	93.	85.	77.	67.	97.	97.	70.	86.	20.	95.	88.	90.	89.	97.	0.	0.	0.	95.	95.	0
NMBR	*	720	693	719	695	636	576	496	719	720	519	643	148	710	653	670	661	720	0	0	0	709	706
MAX	*	11.2	15.2	13.0	18.8	17.0	12.1	12.5	10.7	13.0	12.5	10.7	13.4	13.0	12.5	10.7	15.2	15.6	0.0	0.0	0.0	10.7	16.5	0.0

--- AUGUST 1968 ---

STN	*	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSA	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	*	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	*	4.5	6.6	4.7	7.6	7.2	4.7	7.1	4.4	5.6	4.8	4.2	5.5	4.9	4.2	4.7	4.6	5.7	5.6	0.	0.	0.0	4.0	6.0	0.0
PCT	*	94.	97.	97.	67.	96.	76.	97.	94.	97.	87.	97.	38.	78.	80.	87.	97.	83.	93.	0.	0.	0.	66.	85.	0.
NMBR	*	698	720	720	719	497	711	563	697	719	647	720	283	577	596	650	719	621	693	0	0	0	639	629	0
MAX	*	12.5	14.3	12.5	19.2	16.1	11.2	15.2	12.1	12.5	11.6	10.7	10.7	10.3	8.9	10.7	10.7	14.3	13.9	0.0	0.0	0.0	11.6	21.5	0.0

--- SEPTEMBER 1968 ---

STN	*	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSA	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	*	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	*	4.6	7.1	4.4	7.4	8.8	4.9	7.9	4.6	5.6	4.5	5.2	5.8	5.4	5.1	5.5	6.6	5.9	0.0	0.	0.	0.0	5.0	7.5	0.0
PCT	*	97.	97.	97.	97.	86.	94.	88.	97.	97.	80.	80.	60.	88.	88.	71.	90.	57.	97.	0.	0.	0.	81.	81.	0.
NMBR	*	695	695	695	695	620	674	635	696	696	574	576	430	635	636	510	648	413	696	0	0	0	586	586	0
MAX	*	12.1	16.5	12.5	19.2	18.8	13.0	17.9	10.3	13.9	13.0	11.2	13.0	11.6	12.1	12.1	14.3	18.3	14.8	0.0	0.0	0.0	14.8	21.0	0.0

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ROOT MEAN CUBED WINDSPEEDS FCR

--- OCTOBER 1968 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.5	6.9	4.6	7.6	8.9	4.9	8.0	4.3	5.4	6.0	4.4	5.9	5.3	5.5	5.2	5.4	5.9	5.1	0.0	0.0	0.0	0.0	5.0	7.9	0.0
PCT *	97.	97.	96.	96.	97.	97.	84.	96.	97.	82.	38.	79.	90.	92.	96.	94.	97.	95.	0.	0.	0.	0.	83.	83.	0.
NMBR *	720	720	717	715	720	720	622	714	720	611	279	589	673	681	713	700	720	706	0	0	0	0	621	621	0
MAX *	12.1	17.0	14.3	24.1	21.5	12.1	17.9	12.5	14.8	17.0	10.7	13.0	14.3	11.6	13.4	13.0	19.2	15.2	0.0	0.0	0.0	0.0	21.0	22.4	0.0

--- NOVEMBER 1968 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	3.8	6.3	3.2	5.8	6.8	5.0	7.2	3.5	5.3	4.9	4.0	5.6	5.0	5.8	5.5	5.8	5.3	3.8	0.0	0.0	0.0	0.0	4.1	6.0	0.0
PCT *	97.	97.	92.	89.	95.	52.	47.	97.	92.	95.	97.	33.	55.	78.	92.	96.	97.	93.	0.	0.	0.	0.	85.	85.	0.
NMBR *	696	696	666	641	687	375	335	695	666	685	696	237	396	559	661	693	696	673	0	0	0	0	610	609	0
MAX *	10.7	15.6	12.5	19.7	17.4	13.9	20.1	10.3	16.1	16.1	12.1	12.1	11.6	13.4	13.9	15.6	14.3	11.7	0.0	0.0	0.0	0.0	13.4	21.5	0.0

--- DECEMBER 1968 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	5.5	8.6	4.6	7.3	9.2	8.9	11.7	5.1	7.1	7.4	4.6	7.6	4.3	7.6	7.2	6.8	5.5	5.7	10.5	0.0	5.0	0.0	3.3	6.1	0.0
PCT *	97.	97.	93.	94.	97.	96.	87.	97.	97.	91.	97.	78.	3.	94.	95.	97.	92.	87.	59.	0.	89.	0.	72.	72.	0.
NMBR *	720	719	695	696	720	720	715	720	720	678	720	581	20	697	708	720	687	647	436	0	660	0	536	533	0
MAX *	14.8	21.5	16.5	24.1	22.8	21.9	28.2	13.0	21.5	21.5	15.2	17.4	7.2	17.0	17.6	16.1	16.5	17.0	30.4	0.0	16.5	0.0	9.4	15.2	0.0

ROOT MEAN CUBED WINDSPEEDS FOR

PERIOD JANUARY THROUGH DECEMBER 1968

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	RSN	TBR	KID	BLK	ABN	BDM	DBS	4TV	RRT	DUN	KTB	HOW	HMK
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	5.0	7.3	4.8	7.7	8.1	5.8	8.1	4.6	6.0	6.0	4.6	5.9	5.5	5.6	5.6	5.8	5.9	5.6	10.5	0.0	5.0	0.0	4.3	6.7
PCT	96.	96.	96.	95.	89.	81.	77.	97.	97.	88.	81.	56.	74.	81.	82.	83.	65.	54.	5.	0.	8.	0.	50.	50.
NMBR	8441	8412	8408	8373	7859	7125	6770	8482	8483	7720	7134	4933	6211	7097	7237	7332	5674	4769	436	0	660	0	4401	4375

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ROOT MEAN CUBED WINDSPEEDS FOR

--- JANUARY 1969 ---

STN	CFA	CFA	IET	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	5.9	9.1	6.1	9.5	9.6	8.1	12.8	5.0	7.6	8.1	5.2	7.2	8.3	7.5	6.0	6.2	11.6	7.9	6.3			0.0	7.4	11.4	0.0
PCT	100.	100.	100.	99.	79.	89.	75.	90.	100.	85.	81.	100.	68.	94.	89.	100.	72.	95.	88.	82.	78.	0.	75.	95.	0.
NMBR	743	744	733	663	590	561			673	741	635	605	744	508	702	659	744	533	653	612	579	0	555	709	0
MAX	14.3	20.1	14.8	23.2	25.5	19.2	25.9	17.0	18.8	21.9	14.8	20.1	17.9	15.6	18.8	21.0	18.8	16.1	31.7	17.0	15.2	0.0	21.0	28.2	0.0

--- FEBRUARY 1969 ---

STN	CFA	CFA	IET	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	3.8	5.9	3.2	4.9	6.0	4.5	9.2	3.3	4.7	5.0	3.7	7.0	4.7	4.7	4.8	6.1	5.4	4.9	5.3	4.4	3.8	0.0	3.7	5.9	0.0
PCT	96.	96.	96.	96.	93.	96.	95.	92.	96.	93.	70.	96.	63.	96.	96.	92.	67.	96.	86.	95.	93.	0.	94.	94.	0.
NMBR	644	647	648	626	648	640	648	618	648	628	471	648	423	643	615	648	448	648	577	636	626	0	633	633	0
MAX	10.7	15.2	10.3	15.2	16.5	11.6	19.2	8.5	13.0	13.0	13.0	13.9	10.3	13.0	10.7	13.0	13.0	13.9	12.1	11.6	13.0	0.0	10.3	17.0	0.0

--- MARCH 1969 ---

STN	CFA	CFA	IET	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	3.6	5.7	4.7	6.3	5.7	5.0	10.0	3.7	4.9	4.2	4.3	6.1	4.4	4.2	5.3	5.2	8.2	7.7	5.6	5.1	5.0	0.0	4.9	7.7	0.0
PCT	97.	97.	96.	97.	94.	96.	88.	97.	96.	97.	54.	97.	55.	96.	95.	93.	97.	97.	44.	96.	97.	0.	94.	93.	0.
NMBR	720	720	712	720	698	711	651	720	711	718	699	720	410	713	706	690	720	720	325	716	720	0	696	694	0
MAX	9.4	14.3	12.1	19.7	13.9	11.6	19.7	11.2	8.9	12.5	12.1	13.9	10.3	13.9	10.3	11.6	14.3	19.2	17.4	12.5	13.0	0.0	13.9	20.6	0.0

ROOT MEAN CUBED WINDSPEEDS FOR

--- APRIL 1969 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	5.2	7.9	5.8	9.3	7.6	6.6	12.1	5.1	7.1	6.7	6.0	7.2	6.7	6.6	6.9	7.1	6.4	6.3	6.6	6.6	5.3	0.0	6.1	9.8
PCT	97.	97.	97.	95.	96.	96.	95.	97.	96.	96.	97.	60.	48.	93.	95.	97.	72.	94.	71.	94.	78.	0.	67.	67.
NMBR	696	696	696	682	693	696	682	696	692	693	696	429	344	670	684	696	516	678	510	676	560	0	482	481
MAX	11.6	17.0	15.2	23.2	16.5	13.4	21.9	10.7	15.2	14.8	14.8	12.5	16.1	16.1	15.2	25.0	16.1	15.2	14.3	13.0	13.9	0.0	19.7	0.0

--- MAY 1969 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	4.6	7.3	4.6	7.8	6.9	6.3	9.0	4.6	6.4	6.1	5.2	6.2	5.7	5.0	5.0	5.7	6.1	5.7	6.4	5.3	5.3	6.6	3.9	7.1
PCT	97.	97.	96.	96.	97.	96.	95.	97.	90.	96.	96.	97.	72.	95.	81.	97.	86.	95.	85.	90.	95.	75.	78.	76.
NMBR	720	720	714	713	720	716	708	720	670	713	715	720	532	706	605	718	637	713	635	669	709	561	584	584
MAX	11.6	17.9	12.5	15.6	15.2	15.2	17.4	10.3	14.8	16.5	13.0	15.6	15.2	15.2	15.2	13.4	13.4	17.4	15.2	19.2	17.4	10.7	18.3	0.0

--- JUNE 1969 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	4.2	6.7	4.4	7.1	6.4	5.6	8.6	4.3	5.9	5.5	5.3	6.3	5.9	4.8	5.3	5.7	6.2	5.6	5.8	4.7	4.7	6.3	3.8	6.5
PCT	96.	96.	97.	97.	91.	69.	79.	97.	97.	86.	57.	97.	39.	95.	82.	96.	47.	95.	97.	96.	94.	97.	87.	85.
NMBR	694	693	696	696	656	499	568	696	696	616	696	696	282	687	593	694	338	691	696	688	674	696	629	615
MAX	13.4	17.9	12.1	16.1	15.6	13.4	17.9	10.3	15.6	16.1	13.4	15.2	13.4	12.5	13.9	13.4	11.6	13.9	17.9	11.2	11.2	15.2	14.3	0.0

ROOT MEAN CUBED WINDSPEEDS FOR

--- JULY 1969 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.8	7.3	5.7	8.6	7.5	6.5	8.4	4.9	6.4	6.1	5.5	6.2	6.8	5.2	4.8	5.5	6.1	6.0	6.7	5.3	5.8	6.7	3.5	5.9	0.0
PCT *	97.	97.	85.	85.	90.	85.	91.	97.	97.	95.	97.	97.	11.	96.	90.	53.	97.	97.	97.	97.	97.	97.	86.	86.	0.
NMBR *	720	720	630	636	670	636	677	720	720	706	719	720	81	717	666	395	720	719	720	720	718	720	643	637	0
MAX *	11.6	16.1	14.3	21.0	16.5	15.6	17.0	11.2	14.8	15.2	12.5	13.9	13.4	17.4	13.4	13.0	11.6	16.1	17.9	14.3	17.9	16.1	9.8	17.4	0.0

--- AUGUST 1969 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.4	7.1	5.9	8.3	7.1	6.0	8.5	4.5	5.9	5.6	4.9	6.0	4.7	4.9	4.6	4.9	5.2	5.0	5.8	4.8	5.3	5.7	4.4	8.0	0.0
PCT *	96.	96.	93.	91.	96.	77.	97.	97.	95.	96.	97.	95.	81.	94.	92.	97.	97.	95.	97.	95.	97.	80.	11.	11.	0.
NMBR *	711	713	691	677	711	571	720	719	707	716	720	708	601	697	687	720	718	704	720	709	720	592	84	84	0
MAX *	10.7	15.6	14.8	19.7	14.8	14.8	16.5	10.3	13.4	13.9	12.1	15.2	13.0	16.1	15.2	17.9	12.1	13.0	15.2	14.8	12.5	15.2	8.5	14.3	0.0

--- SEPTEMBER 1969 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	5.0	8.1	6.1	8.8	8.0	6.5	9.4	5.0	6.5	6.3	5.7	6.4	5.2	5.0	5.6	5.4	5.0	5.4	6.4	5.6	5.6	7.3	0.0	0.0	0.0
PCT *	97.	97.	96.	97.	94.	86.	95.	97.	97.	51.	97.	68.	69.	85.	97.	88.	95.	81.	95.	97.	97.	97.	0.	0.	0.
NMBR *	696	696	691	696	680	622	684	696	696	364	696	491	497	614	696	631	687	583	686	696	696	696	0	0	0
MAX *	12.5	18.8	17.9	23.7	17.9	16.1	19.7	12.5	15.6	16.5	15.2	11.6	10.7	16.1	15.2	11.6	16.1	19.7	13.4	14.8	16.1	15.2	0.0	0.0	0.0

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ROOT MEAN CUBED WINDSPEEDS FOR

--- OCTOBER 1969 ---

STN	*	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSA	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	*	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	*	7.2	8.8	5.8	6.9	3.5	6.2	4.4	6.1	5.1	6.3	5.0	6.1	5.0	5.2	5.4	5.3	6.9	6.1	7.2	4.9	5.2	7.1	4.5	8.5
PCT	*	96.	97.	97.	96.	96.	7.	11.	97.	97.	43.	94.	97.	47.	84.	93.	71.	97.	87.	42.	97.	97.	92.	86.	86.
NMBR	*	717	720	720	719	712	49	84	719	720	321	699	720	352	622	691	529	720	649	312	719	720	686	643	
MAX	*	10.3	16.1	13.4	18.3	14.3	5.8	17.4	9.8	14.3	13.0	12.1	13.0	12.1	11.6	13.4	16.5	14.3	15.2	16.1	11.2	11.6	15.2	13.0	23.7

--- NOVEMBER 1969 ---

STN	*	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	*	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	*	2.6	5.0	3.3	5.0	4.4	5.0	3.7	3.0	4.1	3.4	3.4	4.7	4.6	5.0	4.5	4.5	4.6	4.1	3.5	3.1	2.9	5.3	3.0	5.4
PCT	*	92.	97.	97.	97.	95.	72.	61.	96.	97.	79.	97.	93.	91.	95.	95.	97.	95.	97.	97.	97.	97.	54.	84.	84.
NMBR	*	664	696	696	696	696	520	438	693	696	566	696	672	656	687	686	696	693	696	696	696	696	391	603	606
MAX	*	8.9	14.3	12.1	16.5	14.8	13.0	12.1	8.9	13.4	12.5	13.4	15.2	14.3	13.4	14.3	15.2	13.4	9.8	13.4	9.8	13.4	9.8	16.5	

--- DECEMBER 1969 ---

STN	*	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR
HT	*	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	*	2.7	5.6	4.0	6.2	4.8	3.6	6.2	3.1	4.4	3.9	4.0	4.9	4.9	5.2	4.4	4.9	5.1	3.1	3.0	3.0	3.3	5.0	3.7	6.2
PCT	*	97.	97.	95.	95.	95.	38.	53.	95.	94.	97.	76.	93.	94.	96.	97.	93.	97.	93.	97.	97.	97.	84.	84.	78.
NMBR	*	720	720	705	708	706	285	391	704	697	720	698	563	694	715	701	720	695	690	720	719	720	622	582	
MAX	*	8.0	16.5	13.0	20.1	14.3	8.9	15.2	8.9	13.4	10.7	10.7	14.3	14.3	11.6	11.6	17.9	15.2	8.0	12.5	11.6	13.4	9.8	13.0	23.7

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ROOT MEAN CUBED WINDSPEEDS FOR

PERIOD JANUARY THROUGH DECEMBER 1969

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TRR	KID	BLK	ABN	BDM	DRS	MTV	ROT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	4.5	7.1	5.2	8.0	6.9	6.1	9.6	4.4	6.0	5.8	5.0	6.3	5.5	5.6	5.5	5.7	6.1	5.7	6.8	5.3	5.0	6.4	4.7	7.9
PCT	96.	97.	95.	95.	93.	75.	78.	96.	96.	84.	93.	92.	61.	92.	90.	91.	84.	95.	82.	94.	93.	58.	70.	72.
NMBR	8445	8485	8342	8338	8147	6613	6804	8374	8401	7377	8131	8029	5374	8049	7891	7951	7397	8296	7147	8246	8138	5062	6174	6268

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--- JANUARY 1970 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	4.1	7.2	5.4	8.0	7.2	7.6	7.9	4.2	6.5	7.1	3.7	7.0	6.8	7.2	6.5	6.4	4.9	4.4	5.1	4.9	4.6	7.7	5.5	9.9	0.0
PCT	99.	84.	100.	100.	97.	40.	100.	100.	84.	83.	99.	31.	90.	99.	95.	100.	100.	83.	99.	98.	97.	100.	72.	63.	0.
NMBR	734	624	744	744	718	300	742	744	628	621	733	229	672	736	704	742	744	597	734	732	718	744	533	465	0
MAX	9.4	14.3	15.2	23.2	17.9	18.8	19.2	13.4	15.6	17.9	13.4	16.1	17.4	17.0	16.5	16.1	13.4	13.0	14.8	17.9	13.4	19.2	17.4	28.2	0.0

--- FEBRUARY 1970 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	3.3	6.5	4.6	6.9	5.7	5.5	4.1	3.5	5.2	5.6	4.2	5.3	6.0	5.6	5.3	5.5	5.3	4.5	4.5	3.7	3.8	6.3	4.3	6.6	0.0
PCT	96.	96.	96.	96.	96.	96.	96.	96.	96.	96.	96.	96.	74.	96.	91.	92.	95.	63.	84.	96.	96.	90.	85.	83.	C.
NMBR	647	648	648	642	644	648	648	648	648	648	648	648	500	645	612	618	640	401	563	648	648	606	573	557	0
MAX	9.4	16.5	22.4	15.2	14.8	10.7	9.4	13.9	15.6	11.2	16.1	17.9	14.8	15.6	17.0	14.8	12.5	15.2	10.3	14.8	13.0	22.4			0.0

--- MARCH 1970 ---

STN	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC	4.9	7.9	6.8	10.3	7.0	8.3	8.0	5.0	6.9	6.7	5.7	6.1	7.7	6.8	7.0	6.4	7.8	0.0	7.6	5.8	6.1	7.8	6.0	9.6	0.0
PCT	97.	97.	97.	97.	90.	87.	97.	97.	92.	57.	55.	56.	96.	94.	95.	96.	97.	0.	81.	97.	94.	97.	85.	69.	C.
NMBR	720	720	720	720	666	650	720	720	686	720	708	716	699	706	716	708	720	0	600	718	701	720	634	516	0
MAX	33.1	18.3	16.1	25.5	15.2	20.6	19.7	11.6	16.5	17.0	13.0	14.3	18.3	13.4	17.5	15.2	17.4	0.0	19.7	14.8	15.6	17.0	16.1	20.1	0.0

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ROOT MEAN CUBED WINDSPEEDS FOR

--- --- APRIL 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HCW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.6	8.4	7.2	10.5	7.8	8.6	7.6	7.6	6.9	7.6	6.4	6.7	7.7	7.2	6.7	7.0	6.8	7.8	6.5	6.6	5.9	7.6	5.6	10.3	0.0
PCT *	97.	97.	97.	97.	97.	73.	81.	97.	97.	97.	52.	82.	82.	97.	96.	97.	96.	31.	78.	97.	96.	97.	89.	89.	0.
NMBR *	696	696	696	696	695	525	582	696	656	696	378	587	592	696	690	656	688	223	564	696	694	696	639	641	0
MAX *	10.3	17.4	17.0	23.7	17.0	20.6	17.4	21.9	16.1	18.3	15.6	16.1	16.1	17.9	16.5	16.1	13.4	17.4	18.3	17.4	14.8	17.4	13.9	26.4	0.0

--- --- MAY 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.1	7.6	6.7	9.0	7.1	7.8	8.3	7.7	6.4	6.8	5.3	6.5	6.5	6.2	5.9	5.8	5.7	6.1	6.2	5.9	5.0	6.9	4.5	8.5	0.0
PCT *	97.	97.	63.	93.	95.	93.	95.	95.	97.	95.	97.	97.	31.	96.	97.	96.	97.	49.	82.	97.	82.	80.	90.	91.	0.
NMBR *	719	720	468	691	709	693	704	710	719	707	719	720	228	717	720	717	720	363	609	720	608	596	672	676	0
MAX *	10.7	17.9	19.2	23.7	17.0	18.3	16.5	21.5	15.6	17.0	13.4	15.6	14.8	13.4	14.4	13.9	14.3	14.8	17.9	13.9	13.4	15.6	12.1	24.1	0.0

--- --- JUNE 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.3	7.6	8.6	8.8	7.0	8.0	8.3	6.3	6.3	7.1	5.0	6.6	6.5	5.8	5.2	5.5	5.1	5.5	5.2	4.8	5.4	6.8	4.2	7.3	0.0
PCT *	97.	97.	20.	97.	91.	87.	92.	96.	97.	96.	58.	97.	97.	94.	82.	45.	19.	75.	81.	97.	94.	80.	91.	78.	0.
NMBR *	696	696	142	696	657	629	660	688	696	688	418	696	695	680	590	322	136	541	583	696	676	680	652	565	0
MAX *	17.0	21.0	16.5	21.9	17.4	18.3	21.0	15.2	14.8	15.6	11.6	16.1	13.9	13.9	10.7	13.4	8.5	13.4	13.4	12.5	12.1	17.0	13.9	18.8	0.0

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ROOT MEAN CUBED WINDSPEEDS FOR

--- JULY 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.1	7.2	7.0	8.4	9.0	6.9	0.0	6.0	6.1	6.8	4.9	6.0	5.6	5.2	4.5	5.0	5.1	5.8	5.6	4.4	5.7	6.3	3.7	7.1	0.0
PCT *	97.	97.	88.	94.	95.	87.	0.	96.	97.	93.	97.	97.	91.	95.	96.	97.	80.	90.	50.	97.	94.	90.	83.	63.	0.
NMBR *	720	719	652	699	709	648	0	717	720	695	720	720	679	707	716	719	595	667	375	720	697	669	616	469	0
MAX *	10.3	16.5	15.6	20.6	19.7	16.1	0.0	13.9	14.3	16.5	13.9	16.1	13.9	12.5	12.5	13.9	12.1	14.3	13.0	11.6	13.9	15.6	11.2	18.3	0.0

--- AUGUST 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.3	7.2	6.6	8.5	8.2	0.0	0.0	5.7	5.9	6.7	4.8	5.9	5.2	5.0	4.6	4.9	5.4	5.3	5.4	4.5	5.1	6.2	3.1	5.9	0.0
PCT *	96.	96.	96.	95.	82.	0.	0.	85.	96.	64.	83.	97.	62.	84.	84.	97.	97.	87.	64.	97.	41.	97.	95.	88.	0.
NMBR *	717	717	712	710	610	0	0	633	717	473	616	720	462	627	720	646	476	719	308	720	657	720	708	657	0
MAX *	10.7	16.5	16.1	20.6	19.2	0.0	0.0	13.4	13.9	15.6	12.1	13.9	13.0	12.5	10.7	11.6	12.5	17.0	14.3	12.5	11.2	15.2	9.4	17.9	0.0

--- SEPTEMBER 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BCM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	22.8	15.2	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.7	8.0	7.3	9.8	8.8	0.0	0.0	4.7	6.8	6.4	5.4	6.5	5.9	2.7	5.7	5.7	6.6	6.1	6.9	5.3	5.4	7.1	4.2	7.0	0.0
PCT *	97.	97.	97.	97.	87.	0.	0.	80.	97.	41.	73.	97.	96.	1.	68.	96.	95.	97.	84.	97.	8.	96.	88.	62.	0.
NMBR *	696	696	696	696	626	0	0	576	696	298	527	696	694	8	487	694	687	696	603	696	61	692	634	447	0
MAX *	11.6	18.8	20.1	28.2	21.0	0.0	0.0	13.9	17.4	17.4	15.6	17.9	14.8	4.9	14.3	15.2	21.0	17.0	18.8	16.1	11.2	17.0	13.4	21.9	0.0

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ROOT MEAN CUBED WINDSPEEDS FOR

--- OCTOBER 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	ARF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	3.9	7.1	6.4	8.8	7.5	0.0	0.0	4.3	5.9	6.1	4.8	5.9	5.4	6.2	5.2	5.4	5.6	5.1	5.0	4.7	5.0	6.4	3.6	7.5	0.9
PCT *	97.	96.	96.	96.	92.	0.	0.	86.	97.	62.	96.	96.	96.	34.	76.	95.	97.	94.	58.	97.	79.	97.	64.	63.	0.
NMBR *	719	720	713	715	687	0	0	642	719	464	711	715	712	251	569	709	720	703	435	720	586	720	476	467	0
MAX *	9.8	16.1	17.9	25.9	19.7	0.0	0.0	12.1	15.2	14.3	13.4	13.9	13.9	13.4	13.4	13.4	13.4	17.0	15.6	12.5	13.4	15.2	12.1	22.8	0.0

--- NOVEMBER 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.5	8.6	7.4	10.3	8.2	0.0	0.0	4.7	7.0	7.0	5.0	6.5	5.8	7.8	6.9	6.2	5.1	5.1	6.6	6.1	9.0	7.6	5.2	9.8	0.0
PCT *	97.	97.	96.	96.	92.	0.	0.	96.	97.	47.	96.	97.	92.	97.	66.	85.	95.	97.	63.	89.	91.	97.	73.	74.	0.
NMBR *	696	696	693	693	661	0	0	689	695	338	694	696	659	696	473	612	684	696	450	644	658	696	529	532	0
MAX *	10.7	19.7	19.7	28.2	19.2	0.0	0.0	11.2	17.4	17.9	12.5	17.0	14.3	17.4	14.8	17.0	13.4	15.6	18.8	16.1	23.7	17.0	17.9	28.6	0.0

--- DECEMBER 1970 ---

STN *	CFA	CFA	IET	IET	GRD3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	DBS	MTV	RBT	DUN	KTB	HOW	HMR	
HT *	6.1	76.2	6.1	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0	0.0
VRMC *	4.2	7.5	6.8	9.0	7.4	0.0	0.0	4.4	5.6	6.4	3.6	5.9	5.7	7.1	5.8	6.1	5.5	4.6	4.4	5.1	7.7	7.0	4.2	8.0	0.0
PCT *	97.	97.	92.	95.	97.	0.	0.	95.	95.	95.	65.	86.	95.	97.	96.	96.	95.	76.	54.	97.	90.	91.	75.	79.	0.
NMBR *	720	720	683	708	720	0	0	708	708	705	484	642	704	720	712	717	705	562	405	720	671	678	556	586	0
MAX *	10.3	16.5	21.0	28.6	18.3	0.0	0.0	14.8	15.6	14.8	11.2	14.8	13.0	15.6	14.3	13.9	13.9	12.1	13.9	14.8	21.5	14.8	15.6	23.7	0.3

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ROOT MEAN CUBED WINDSPEEDS FOR

PERIOD JANUARY THROUGH DECEMBER 1970

STN	CFA	CFA	IET	IET	GRO3	EBR2	EBR2	NRF	SPT	BLG	ARC	BSN	TBR	KID	BLK	ABN	BDM	OBS	4TV	RBT	DUN	KTB	HOW	HMR
HT	6.1	76.2	6.7	46.7	61.0	6.1	73.2	15.2	15.2	22.8	15.2	15.2	15.2	22.8	15.2	15.2	15.2	15.2	30.0	15.2	22.8	22.8	6.1	30.0
VRMC	4.3	7.6	6.7	9.2	7.7	7.6	7.6	5.7	6.3	6.7	5.0	6.2	6.3	6.5	5.9	5.9	5.9	5.5	6.0	5.3	6.1	7.0	4.7	8.4
PCT	97.	96.	86.	96.	93.	47.	46.	93.	95.	81.	84.	89.	86.	80.	87.	91.	89.	70.	73.	96.	80.	94.	82.	75.
NMBR	8480	8372	7567	8416	8154	4105	3986	8171	8328	7053	7356	7777	7570	7017	7606	7982	7759	6095	6397	8429	7026	8217	7222	6578

APPENDIX E

OUTPUT OF PROGRAM AQUILLA/1972-1973

The output consists of root mean cubed windspeeds from 10 February 1972
through 31 December 1973. The data from which these values were calculated
were taken from hourly averaged telemetry data.

Wind speed units are meters per second.

ROOT MEAN CUBE VELOCITY VALUES FOR

*** FEBRUARY 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HPR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.7	5.0	4.7	3.9	5.2	4.3	5.8	6.1	5.2	6.3	4.3	6.2	5.8	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCT	62.	58.	62.	62.	63.	62.	63.	62.	61.	62.	63.	62.	63.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NMBR	434	406	434	434	437	434	435	433	423	433	435	434	435	0	0	0	0	0	0	0	0	0	0	0	0
V MAX	11.2	17.0	15.2	13.4	16.5	12.5	16.1	15.2	25.9	18.8	19.7	13.9	15.2	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*** MARCH 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HPR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TER	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.8	5.3	3.0	4.6	5.6	4.7	6.1	5.8	4.2	7.7	4.1	6.2	5.5	6.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCT	97.	88.	97.	97.	97.	97.	97.	97.	97.	97.	97.	97.	98.	68.	24.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NMBR	723	658	721	722	722	721	724	719	723	721	724	724	726	503	181	0	0	0	0	0	0	0	0	0	0
V MAX	12.1	18.3	12.1	17.9	13.9	25.0	20.1	13.4	27.8	13.4	19.2	17.4	17.4	10.7	10.7	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*** APRIL 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HPR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TER	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.3	5.2	3.4	5.9	8.1	6.2	6.0	6.4	5.8	8.1	4.3	6.6	7.9	8.5	3.9	6.2	5.5	4.9	6.1	0.0	0.0	0.0	0.0	0.0	0.0
PCT	78.	57.	78.	78.	78.	78.	78.	66.	78.	78.	78.	78.	78.	67.	26.	26.	23.	7.	0.	0.	0.	0.	0.	0.	0.
NMBR	562	413	563	562	563	563	563	473	561	561	562	563	563	481	190	185	166	51	0	0	0	0	0	0	0
V MAX	10.3	13.9	7.2	13.4	17.9	14.8	17.0	13.9	14.8	18.8	8.9	13.9	16.5	19.2	11.6	13.4	17.9	10.7	10.3	0.0	0.0	0.0	0.0	0.0	0.0

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ROOT MEAN CUBE VELOCITY VALUES FOR

*** MAY 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	3.4	5.3	2.3	5.2	5.6	4.9	3.0	4.8	4.2	5.4	3.1	4.0	5.1	6.3	5.5	5.2	4.0	7.5	3.1	4.2	0.0	0.0	0.0	0.0	0.0
PCT	78.	78.	78.	77.	76.	78.	79.	77.	78.	77.	78.	78.	78.	78.	77.	78.	77.	71.	77.	50.	0.	0.	0.	0.	0.
NMBR	579	577	579	574	564	581	579	575	579	576	579	578	579	578	573	577	574	529	575	374	0	0	0	0	0
V MAX	9.8	12.5	6.3	12.5	16.5	18.3	11.6	12.1	14.3	13.9	7.6	10.3	13.0	16.1	13.0	12.1	13.4	16.1	14.8	9.4	0.0	0.0	0.0	0.0	0.0

*** JUNE 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BCM	CFA	BLG	NRF
V RMC	3.1	5.7	2.2	5.0	4.9	3.5	2.5	5.4	3.9	4.6	3.4	4.2	5.4	6.9	5.7	5.0	4.5	7.9	5.1	3.4	4.0	7.2	0.0	0.0	0.0
PCT	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	92.	90.	89.	88.	85.	66.	86.	26.	5.	0.	0.	0.
NMBR	666	666	666	666	666	666	666	666	666	661	665	665	665	665	646	639	635	611	476	621	187	36	0	0	0
V MAX	9.8	14.8	7.2	16.1	18.8	12.5	10.3	17.9	14.8	18.8	16.5	11.2	17.0	20.6	14.3	14.8	15.6	18.8	16.5	10.7	8.9	11.2	0.0	0.0	0.0

*** JULY 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	2.5	6.0	2.2	5.3	5.9	4.3	2.0	5.7	4.2	5.0	3.3	4.6	5.8	7.4	6.0	4.5	4.3	8.3	6.3	3.4	4.2	6.9	0.0	0.0	0.0
PCT	74.	74.	74.	74.	74.	63.	74.	74.	72.	74.	74.	74.	74.	74.	74.	74.	65.	74.	54.	67.	20.	31.	0.	0.	0.
NMBR	553	554	554	554	554	470	553	553	536	547	554	554	554	554	548	551	481	554	401	497	151	229	0	0	0
V MAX	7.6	13.4	4.9	13.0	16.5	13.4	9.4	14.3	13.4	12.5	9.8	10.7	14.3	17.9	13.9	13.0	14.3	15.1	14.3	8.5	10.3	14.8	0.0	0.0	0.0

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RCOT MEAN CUBE VELOCITY VALUES FOR

*** AUGUST 1972 ***

STATION	ABN	BSN	ARC	HOM	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	3.3	4.4	1.7	4.6	4.8	2.9	3.3	3.6	4.0	4.0	3.0	3.4	4.1	5.8	4.6	3.6	3.1	5.9	5.1	2.4	3.2	5.8	.4.1	0.0	0.0
PCT	70.	79.	79.	78.	78.	79.	79.	79.	79.	79.	79.	78.	79.	56.	45.	55.	22.	78.	78.	57.	79.	70.	38.	0.	0.
NMBR	518	585	585	580	584	585	585	585	585	585	585	584	585	420	332	410	165	584	584	421	585	523	279	0	0
V MAX	11.6	11.2	5.4	13.0	14.3	9.8	10.7	10.7	10.3	18.8	8.5	9.8	12.1	16.1	10.3	11.2	6.7	15.5	14.3	6.3	9.4	15.2	10.7	0.0	0.0

*** SEPTEMBER 1972 ***

STATION	ABN	BSN	ARC	HOM	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	5.9	5.6	2.2	4.5	4.8	3.4	8.0	6.1	6.3	7.4	3.7	5.4	5.9	6.8	5.7	5.6	1.8	9.1	6.9	3.8	4.0	5.3	6.0	0.0	0.0
PCT	79.	80.	79.	80.	79.	80.	80.	77.	79.	80.	80.	79.	79.	79.	28.	80.	12.	80.	79.	80.	79.	78.	80.	0.	0.
NMBR	571	573	572	573	572	573	573	572	568	573	573	572	572	572	201	573	86	573	572	573	572	563	573	0	0
V MAX	14.3	13.9	5.8	18.8	9.8	10.7	20.6	17.0	17.4	17.4	9.4	12.5	14.8	16.5	11.6	13.0	5.8	19.2	17.9	8.5	9.8	12.5	16.1	0.0	0.0

*** OCTOBER 1972 ***

STATION	ABN	BSN	ARC	HOM	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TER	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.3	4.5	1.8	5.0	5.9	5.7	6.5	4.4	4.6	5.2	4.0	4.3	4.3	3.8	5.4	4.7	4.3	7.2	4.3	3.0	3.7	6.8	4.5	3.2	0.0
PCT	94.	94.	94.	94.	94.	93.	94.	89.	94.	46.	94.	94.	94.	94.	94.	93.	89.	94.	94.	94.	94.	93.	94.	89.	0.
NMBR	700	699	701	701	696	695	701	660	700	341	701	700	701	700	701	695	665	701	699	701	700	690	696	663	0
V MAX	12.5	13.4	4.9	15.2	17.9	13.9	15.2	10.7	12.1	14.8	15.2	13.9	10.7	13.3	14.3	12.5	14.3	16.5	14.3	7.6	11.6	15.2	15.2	11.2	0.0

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ROOT MEAN CUBE VELOCITY VALUES FOR

*** NOVEMBER 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	RDV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.2	4.7	1.4	3.9	3.7	3.9	4.3	2.9	2.6	0.0	3.2	3.3	3.2	3.4	4.7	3.0	4.3	5.0	2.4	2.3	4.5	4.9	3.5	2.2	4.5
PCT	82.	82.	82.	82.	82.	82.	82.	82.	82.	0.	82.	81.	82.	82.	81.	82.	64.	82.	82.	82.	76.	81.	75.	75.	35.
NMBR	589	589	589	589	588	589	588	589	588	0	588	584	587	587	582	588	459	588	588	588	544	586	543	543	254
V MAX	13.0	15.6	5.4	12.1	11.6	13.7	14.3	8.5	7.6	0.0	12.1	9.4	12.5	9.8	15.6	10.3	13.4	13.9	10.7	7.2	12.1	13.4	12.1	7.2	13.4

*** DECEMBER 1972 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	RDV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	3.3	5.0	1.9	5.3	5.4	5.4	5.7	4.0	3.9	0.0	4.6	3.7	4.7	2.9	5.0	4.1	3.2	7.5	1.9	3.0	4.0	6.6	4.5	1.9	4.7
PCT	67.	69.	69.	69.	69.	69.	69.	68.	65.	0.	69.	68.	68.	68.	66.	69.	19.	60.	68.	69.	68.	63.	67.	66.	66.
NMBR	501	510	510	510	510	510	510	506	486	0	510	505	504	504	490	510	145	449	506	510	509	472	501	488	488
V MAX	7.6	11.6	5.8	16.1	19.7	14.8	16.5	11.2	11.6	0.0	16.5	11.2	15.2	9.4	13.0	12.5	8.0	18.8	8.0	8.5	8.9	18.8	11.6	6.3	13.0

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ROOT MEAN CUBE VELOCITY VALUES FOR

PERIOD 10 FEB 72 THRU 31 DEC 72

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.3	5.2	2.7	4.9	5.7	4.6	5.4	5.3	4.7	6.3	3.7	5.0	5.5	6.5	5.2	4.8	4.3	7.4	5.1	3.3	3.9	6.0	4.8	2.8	4.5
PCT	73.	71.	74.	74.	74.	73.	74.	72.	74.	62.	74.	74.	74.	64.	53.	53.	40.	54.	49.	47.	34.	33.	26.	15.	3.
NMBR	5895	5720	5964	5955	5946.	5877	5967	5825	5929	4998	5966	5958	5967	5142	4245	4223	3250	4306	3946	3775	2739	2627	2091	1206	254

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RCCT MEAN CUBE VELOCITY VALUES FOR

*** JANUARY 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	3.0	4.9	2.1	3.3	2.6	6.1	5.4	3.2	2.6	0.0	3.2	2.9	3.9	5.2	4.6	3.7	1.8	5.7	0.9	2.1	4.4	7.3	3.2	2.4	3.2
PCT	91.	25.	91.	91.	90.	91.	78.	90.	90.	0.	90.	69.	90.	90.	90.	90.	9.	89.	51.	91.	90.	30.	88.	88.	88.
NMBR	679	187	677	678	669	679	579	669	671	0	672	511	668	668	670	669	65	665	379	680	670	226	658	658	658
V MAX	7.2	11.2	12.1	8.9	8.9	15.6	15.2	9.8	8.9	0.0	9.4	9.8	14.8	17.4	13.9	14.3	5.4	14.8	2.7	5.4	9.4	13.9	8.5	8.5	11.2

*** FEBRUARY 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	3.2	5.5	1.3	2.4	2.7	6.5	4.5	3.8	3.9	6.1	2.9	3.6	2.6	2.9	4.5	3.2	3.6	6.0	3.0	2.3	4.6	2.0	3.3	3.9	3.3
PCT	92.	67.	93.	93.	93.	93.	93.	93.	92.	87.	93.	93.	93.	93.	93.	89.	91.	92.	73.	93.	93.	7.	92.	92.	92.
NMBR	618	447	622	622	623	623	623	622	620	583	622	623	622	622	622	598	609	621	492	623	623	49	621	621	621
V MAX	8.9	11.6	4.5	7.6	8.0	19.2	13.9	13.9	12.5	15.6	9.8	7.6	7.6	9.8	10.3	10.3	11.6	13.4	10.7	6.3	9.4	6.7	8.9	9.8	8.9

*** MARCH 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.1	5.1	3.9	5.0	5.3	5.3	5.0	4.3	4.2	6.0	3.0	3.4	4.7	4.9	4.4	4.6	3.1	6.5	3.4	3.2	4.1	7.0	3.3	4.1	4.4
PCT	95.	95.	95.	94.	91.	91.	92.	91.	95.	93.	94.	95.	95.	95.	91.	95.	95.	91.	95.	95.	93.	90.	92.	92.	92.
NMBR	708	708	708	702	679	674	683	676	707	694	700	707	707	707	677	704	707	577	707	707	693	671	685	685	685
V MAX	12.5	12.1	9.8	11.6	13.4	13.9	16.1	13.0	11.6	14.3	8.9	9.4	13.4	14.3	11.2	13.0	8.5	14.3	11.6	8.9	10.7	14.8	10.7	9.8	12.1

ROOT MEAN CUBE VELOCITY VALUES FOR

*** APRIL 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TER	CUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	6.2	5.6	5.3	6.0	7.0	5.2	8.2	6.2	6.2	7.3	4.0	5.2	5.5	6.0	6.2	5.5	3.7	7.9	4.5	5.1	5.0	8.0	5.7	6.0	6.2
PCT	97.	97.	97.	95.	97.	93.	96.	92.	86.	96.	96.	57.	94.	94.	90.	96.	97.	92.	31.	97.	95.	90.	96.	96.	89.
NMBR	697	697	697	685	695	667	694	664	616	692	692	695	677	677	649	694	697	664	220	697	683	546	692	692	641
V MAX	17.4	13.4	12.5	14.3	16.1	14.3	20.6	15.6	14.8	18.3	8.9	13.9	13.4	14.8	16.5	13.9	9.4	17.4	5.8	12.5	14.3	17.0	14.8	13.4	15.2

*** MAY 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TER	CUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	6.1	6.0	5.4	4.0	5.9	3.7	7.3	5.7	5.9	7.0	3.6	5.2	4.5	7.3	5.6	3.9	3.1	7.8	4.1	5.3	5.2	5.7	5.5	6.4	5.5
PCT	87.	87.	87.	87.	87.	87.	87.	87.	86.	87.	87.	87.	87.	87.	87.	69.	87.	87.	87.	87.	87.	63.	87.	87.	87.
NMBR	649	649	649	649	649	649	649	649	641	646	649	649	649	649	649	510	649	649	649	649	546	466	649	649	649
V MAX	16.1	14.3	13.9	11.6	18.3	13.0	20.1	15.6	16.1	18.8	9.4	13.9	14.3	19.7	15.6	10.7	8.0	18.8	13.9	14.3	12.1	12.5	15.2	15.2	14.3

*** JUNE 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	5.0	5.8	5.1	4.0	5.4	2.5	6.8	4.9	4.8	6.2	4.1	4.4	4.0	6.5	4.8	3.6	3.0	7.2	4.0	4.8	5.2	5.9	3.8	6.1	5.0
PCT	63.	60.	62.	60.	63.	62.	63.	62.	62.	63.	63.	63.	60.	60.	63.	60.	63.	63.	62.	63.	56.	52.	63.	60.	59.
NMBR	450	429	444	431	450	449	450	443	447	450	450	450	429	429	450	433	450	450	448	450	402	374	450	429	428
V MAX	12.1	14.3	13.0	10.3	13.4	8.5	16.5	12.1	13.0	16.1	8.5	12.1	10.7	16.1	13.4	11.2	5.8	17.9	13.9	11.6	11.6	13.4	14.8	14.8	13.0

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ROOT MEAN CUBE VELOCITY VALUES FOR

*** JULY 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TOR	DUN	PIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	2.7	4.0	3.8	3.6	5.0	3.2	5.7	3.6	4.1	4.5	3.0	2.9	3.4	5.0	2.8	3.1	2.8	6.0	3.2	3.4	3.4	4.2	4.6	4.3	3.9
PCT	89.	89.	89.	89.	89.	89.	89.	89.	89.	89.	89.	89.	89.	89.	85.	89.	89.	89.	55.	89.	88.	68.	87.	87.	79.
NMBR	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	663	412	665	657	508	650	650	586
V MAX	8.9	12.5	12.1	10.3	17.9	15.6	19.2	11.2	15.6	14.3	8.9	13.4	19.2	19.2	10.3	13.9	7.6	17.4	11.6	11.2	9.8	11.6	14.8	13.9	13.4

*** AUGUST 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BCM	CFA	BLG	NRF
V RMC	2.9	5.3	4.6	3.8	5.4	2.4	7.0	4.4	4.7	6.0	3.5	4.1	4.0	5.6	4.3	4.0	3.0	7.2	2.7	4.3	4.1	5.0	5.8	5.3	4.5
PCT	100.	100.	99.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	99.	100.	100.	88.	92.	100.	99.	100.	91.	91.	91.
NMBR	742	742	734	742	742	742	742	742	742	742	741	742	742	742	736	742	742	651	685	742	736	742	678	678	678
V MAX	7.6	14.3	11.2	9.8	15.6	7.6	17.9	10.7	11.2	14.3	10.3	12.1	11.2	15.6	11.6	12.5	8.5	15.6	8.5	10.3	10.7	12.1	13.4	12.5	10.7

*** SEPTEMBER 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	RCV	STA	RCH	BCM	CFA	BLG	NRF
V RMC	3.0	4.9	4.5	1.5	5.1	3.1	6.4	4.2	4.3	5.8	2.9	3.7	3.7	6.1	4.3	3.8	2.9	6.2	2.8	4.0	4.1	6.5	5.2	4.9	4.7
PCT	98.	98.	98.	43.	98.	98.	98.	98.	98.	98.	98.	98.	98.	98.	98.	94.	98.	98.	84.	98.	97.	86.	91.	91.	91.
NMBR	706	706	706	311	704	706	704	706	706	706	705	706	706	706	704	677	706	706	604	706	701	621	657	657	657
V MAX	8.5	13.0	12.1	4.5	13.9	10.7	17.9	11.6	12.1	14.8	8.0	10.3	12.1	18.3	12.1	12.1	7.6	17.0	8.0	13.0	9.8	14.3	13.0	13.0	13.4

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RCCT MEAN CUBE VELOCITY VALUES FOR

*** OCTOBER 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	3.4	5.4	4.7	6.0	6.0	2.6	7.3	5.0	5.7	6.3	3.2	4.5	4.1	7.2	4.9	4.7	3.0	7.0	3.8	4.7	4.4	5.4	6.0	5.8	5.2
PCT	98.	86.	97.	26.	97.	98.	98.	97.	97.	98.	98.	98.	97.	97.	92.	98.	98.	97.	97.	98.	96.	57.	98.	98.	98.
NMBR	732	640	723	191	723	732	732	724	723	732	732	732	721	721	682	732	728	724	724	732	713	422	727	727	727
V MAX	9.4	14.3	13.0	14.3	17.0	8.5	20.1	14.8	17.0	17.4	9.4	13.4	11.6	18.3	12.5	17.9	7.6	21.0	14.3	14.3	12.1	12.5	16.1	15.6	15.6

*** NOVEMBER 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	3.9	5.6	4.3	5.9	7.2	2.8	7.1	5.8	6.4	7.2	4.2	5.0	4.1	7.5	5.3	5.5	3.0	7.5	5.3	5.6	3.6	4.8	6.2	5.8	5.5
PCT	62.	62.	62.	62.	62.	48.	62.	62.	62.	62.	62.	62.	62.	62.	62.	62.	62.	62.	40.	62.	57.	62.	62.	62.	62.
NMBR	449	447	448	448	448	348	443	449	444	447	446	449	449	449	445	449	449	444	290	449	407	449	448	448	448
V MAX	13.4	15.2	11.6	15.6	20.1	10.7	19.7	14.8	16.5	18.3	11.6	13.0	10.7	17.9	15.2	13.9	7.2	17.9	12.5	12.5	11.2	11.6	15.6	14.8	12.5

*** DECEMBER 1973 ***

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	5.0	4.8	3.9	4.6	3.7	3.8	4.4	3.5	3.5	5.5	2.8	4.3	3.2	5.9	4.7	3.2	2.9	5.2	3.3	3.4	3.7	6.1	3.9	4.2	3.8
PCT	99.	97.	99.	98.	99.	40.	99.	99.	98.	93.	98.	57.	99.	99.	98.	98.	99.	98.	96.	99.	81.	98.	99.	99.	99.
NMBR	737	724	737	732	736	300	736	736	732	689	732	723	736	736	732	730	736	732	711	737	603	729	737	737	737
V MAX	14.8	12.5	14.8	13.9	12.5	12.1	15.6	9.8	11.2	12.5	8.5	11.2	12.1	19.2	15.2	10.3	7.6	13.0	11.2	9.8	8.9	18.8	11.2	10.3	11.2

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ROOT MEAN CUBE VELOCITY VALUES FOR

PERIOD 1 JAN 73 THRU 31 DEC 73

STATION	ABN	BSN	ARC	HDW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TANL	TANU	TBR	DUN	MIN	EBR	ROV	STA	RCH	BDM	CFA	BLG	NRF
V RMC	4.3	5.3	4.4	4.5	5.5	4.5	6.6	4.8	4.9	6.3	3.4	4.2	4.2	6.0	4.8	4.3	3.2	6.9	3.6	4.3	4.4	6.2	5.0	5.2	4.8
PCT	81.	72.	81.	70.	80.	79.	79.	80.	80.	73.	81.	79.	80.	80.	79.	78.	74.	79.	64.	81.	79.	59.	79.	79.	77.
NMBR	7095	6317	7073	6124	7047	6934	6964	7009	6982	6357	7074	6929	7036	7035	6949	6873	6467	6914	5613	7100	6931	5174	6915	6894	6778

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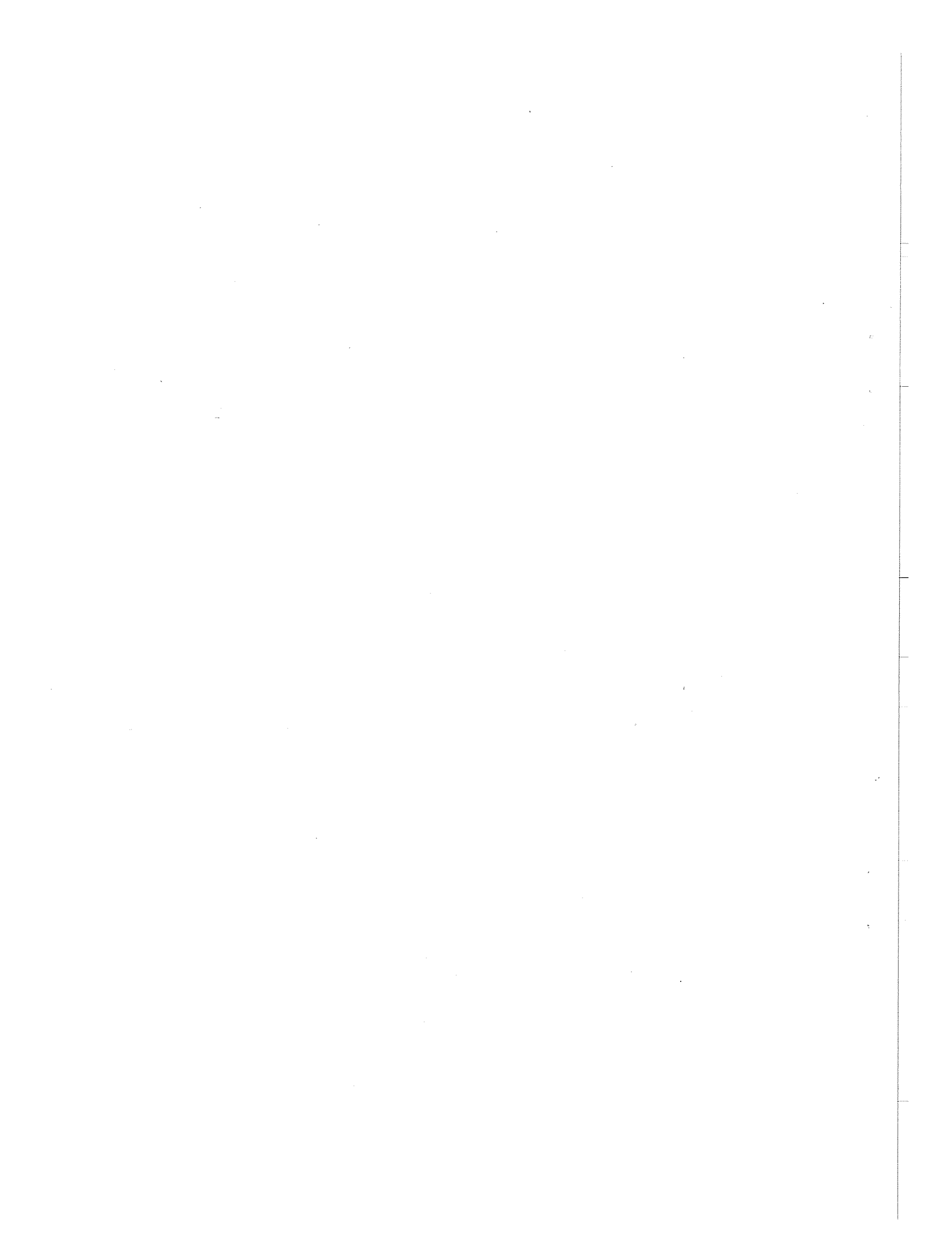
APPENDIX F

OUTPUT OF PROGRAM AQUILLA/1974-1975

The output consists of root mean cubed windspeeds for January 1974 through April 1975. The data from which these values were calculated are the six-minute integrated telemetry data.

ROOT MEAN WINDSPEED VALUES FOR

--- JANUARY 1974---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	4.7	8.5	3.9	5.1	5.5	4.5	6.7	6.1	6.3	8.0	3.5	6.2	4.7
PCT AVAIL	93.	18.	93.	92.	93.	37.	93.	93.	93.	88.	93.	71.	93.
NMBR CASES	6909	1363	6909	6870	6905	2735	6901	6908	6905	6582	6910	5274	6902
MAX WINDSPEED	11.4	18.1	12.7	20.0	19.0	14.3	18.0	16.7	17.6	21.6	13.6	20.4	15.0

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	7.9	6.8	5.8	3.7	8.0	5.7	5.7	4.0	6.8	5.9	5.9	5.2	8.8
PCT AVAIL	93.	86.	90.	92.	92.	55.	87.	46.	88.	92.	92.	92.	18.
NMBR CASES	6502	6382	6707	6838	6826	4077	6482	3459	6517	6859	6859	6859	1335
MAX WINDSPEED	21.0	43.6	44.1	9.3	21.9	13.4	14.7	12.5	16.9	40.2	15.2	15.6	17.7

--- FEBRUARY 1974---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	4.2	5.8	4.3	4.6	4.1	4.5	5.4	4.8	4.6	5.8	3.4	4.9	3.6
PCT AVAIL	93.	93.	93.	93.	93.	88.	90.	93.	93.	89.	93.	92.	93.
NMBR CASES	6279	6250	6278	6243	6275	5923	6070	6275	6275	6003	6279	6173	6269
MAX WINDSPEED	12.5	14.8	13.2	14.6	15.1	13.5	18.7	14.7	13.9	17.7	12.5	13.8	12.5

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	6.6	5.7	4.2	3.2	6.4	3.9	4.8	5.1	6.3	4.8	4.6	4.9	5.7
PCT AVAIL	93.	91.	92.	93.	93.	93.	93.	86.	92.	90.	90.	90.	90.
NMBR CASES	6270	6108	6172	6267	6274	6222	6280	5778	6189	6039	6039	6039	6039
MAX WINDSPEED	21.2	17.5	14.5	10.1	16.2	21.8	13.5	15.3	17.9	43.5	12.0	15.9	15.6

--- MARCH 1974---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	5.4	6.6	5.0	5.0	7.0	6.0	7.2	6.7	6.4	7.9	5.2	6.3	4.4
PCT AVAIL	88.	84.	87.	87.	87.	88.	87.	87.	65.	88.	88.	84.	87.
NMBR CASES	6520	6238	6492	6475	6502	6521	6498	6509	4862	6517	6514	6233	6464
MAX WINDSPEED	43.7	17.9	15.2	16.2	21.1	18.6	21.7	23.7	21.5	22.9	16.4	17.9	13.7

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	7.5	6.6	5.9	7.7	8.4	6.2	6.1	5.4	6.1	6.0	8.8	5.8	7.2
PCT AVAIL	87.	85.	84.	60.	81.	55.	88.	87.	83.	86.	86.	86.	86.
NMBR CASES	6463	6319	6233	4442	6004	4071	6519	6449	6149	6363	6363	6363	6363
MAX WINDSPEED	22.4	22.4	42.9	39.7	22.3	19.1	17.0	14.6	16.5	20.3	39.1	18.0	20.6

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ROOT MEAN WINDSPEED VALUES FOR

--- APRIL 1974---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	4.8	5.8	5.6	5.8	6.7	5.8	5.7	5.8	5.5	6.4	4.4	5.7	6.0
PCT AVAIL	95.	90.	94.	94.	94.	95.	85.	83.	94.	95.	94.	94.	94.
NMBR CASES	6805	6452	6791	6764	6804	6806	6086	5991	6799	6809	6772	6804	6790
MAX WINDSPEED	16.7	15.6	16.2	17.4	23.5	20.7	16.8	16.6	14.9	18.7	43.0	14.7	19.5

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	9.3	5.5	5.6	9.0	6.6	5.2	5.2	6.3	8.4	4.0	5.4	5.3	6.5
PCT AVAIL	94.	94.	89.	94.	93.	84.	94.	93.	82.	94.	94.	94.	94.
NMBR CASES	6790	6804	6387	6802	6671	6017	6792	6662	5921	6752	6752	6752	6752
MAX WINDSPEED	26.5	29.6	17.1	22.5	17.8	44.1	32.7	19.0	22.5	10.7	14.8	15.4	18.0

--- MAY 1974---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	6.4	6.5	5.5	4.3	6.4	6.0	6.4	6.3	6.3	7.1	4.2	5.9	4.3
PCT AVAIL	98.	93.	98.	98.	98.	98.	78.	98.	94.	87.	95.	98.	95.
NMBR CASES	7280	6952	7291	7263	7307	7309	5774	7309	7027	6506	7032	7292	7075
MAX WINDSPEED	21.0	20.4	16.7	14.6	32.2	17.5	20.5	20.6	21.7	22.3	15.0	17.4	16.3

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	7.5	6.0	4.9	7.6	6.8	4.8	5.9	5.6	6.4	4.4	5.9	5.2	7.8
PCT AVAIL	95.	98.	95.	98.	86.	97.	98.	98.	52.	97.	97.	97.	74.
NMBR CASES	7075	7280	7089	7298	6364	7253	7290	7295	3876	7207	7208	7207	5538
MAX WINDSPEED	22.9	44.5	18.4	22.2	22.3	19.5	19.7	18.6	20.0	12.6	18.5	18.1	25.0

--- JUNE 1974---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	5.2	6.3	5.7	4.7	6.1	5.5	6.3	5.9	6.3	6.8	3.0	5.6	4.2
PCT AVAIL	38.	36.	38.	39.	37.	40.	37.	39.	37.	39.	38.	39.	39.
NMBR CASES	2765	2623	2708	2829	2683	2858	2675	2798	2637	2778	2706	2830	2835
MAX WINDSPEED	13.5	17.5	15.2	42.7	17.3	15.1	19.3	17.4	17.6	41.0	11.9	13.1	12.6

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	7.4	5.4	5.1	7.7	5.5	4.5	4.9	5.8	6.4	3.6	4.5	4.8	8.5
PCT AVAIL	39.	37.	35.	40.	20.	40.	37.	39.	8.	35.	35.	35.	11.
NMBR CASES	2835	2692	2519	2889	1424	2865	2649	2823	600	2542	2542	2542	762
MAX WINDSPEED	19.2	14.3	13.9	20.1	22.1	15.4	15.3	14.1	14.1	10.5	14.9	15.4	20.4

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ROOT MEAN WINDSPEED VALUES FOR

--- JULY 1974 ---

STATION	ABN	BSN	ARC	HOW	MTV	OBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCT AVAIL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NMBR CASES	0	0	0	0	0	0	0	0	0	0	0	0	0
MAX WINDSPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STATION	TAN2	THR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCT AVAIL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NMBR CASES	0	0	0	0	0	0	0	0	0	0	0	0	0
MAX WINDSPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

--- AUGUST 1974 ---

STATION	ABN	BSN	ARC	HOW	MTV	OBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	4.7	5.0	4.0	2.2	4.0	3.4	5.3	3.0	3.5	3.4	1.0	3.6	2.3
PCT AVAIL	23.	22.	21.	21.	24.	24.	11.	24.	25.	23.	24.	24.	23.
NMBR CASES	1693	1649	1540	1797	1775	1789	791	1753	1824	1738	1800	1792	1701
MAX WINDSPEED	11.7	13.4	12.5	5.2	11.8	10.0	12.7	7.9	8.1	8.4	8.4	9.6	7.8

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	2.9	4.7	2.3	4.0	5.3	1.3	1.7	3.0	0.0	3.1	2.5	5.4	11.6
PCT AVAIL	23.	23.	6.	24.	23.	24.	24.	24.	0.	23.	5.	23.	23.
NMBR CASES	1702	1745	436	1812	1745	1785	1785	1774	0	1684	364	1684	1634
MAX WINDSPEED	9.2	11.6	5.8	11.2	12.2	6.3	4.0	7.3	0.0	8.1	17.1	12.3	20.8

--- SEPTEMBER 1974 ---

STATION	ABN	BSN	ARC	HOW	MTV	OBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	5.7	5.5	5.2	2.7	6.0	5.1	7.3	4.9	5.9	5.4	3.2	5.3	4.0
PCT AVAIL	86.	78.	64.	85.	80.	86.	75.	84.	84.	85.	86.	86.	83.
NMBR CASES	6207	5617	4593	6135	5744	6186	5377	6049	6050	6117	6215	6207	5976
MAX WINDSPEED	19.0	18.3	14.8	10.9	21.0	21.0	23.6	14.1	20.6	22.0	14.0	16.9	17.2

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	6.5	6.0	5.6	6.8	7.4	3.3	2.7	4.8	0.4	3.8	1.8	5.3	6.3
PCT AVAIL	83.	82.	85.	85.	85.	83.	85.	50.	1.	85.	85.	85.	85.
NMBR CASES	5976	5931	6156	6091	6111	5995	6097	3633	82	6129	6129	6128	6128
MAX WINDSPEED	25.5	20.1	21.1	44.1	23.3	18.7	37.7	14.3	0.6	13.3	12.5	21.5	20.7

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ROOT MEAN WINDSPEED VALUES FOR

--- OCTOBER 1974---

STATION	ABN	BSN	ARC	HOW	MTV	OBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	4.1	4.4	3.1	1.7	3.7	2.7	4.5	3.1	3.1	3.5	2.3	3.9	2.3
PCT AVAIL	89.	53.	80.	89.	89.	89.	90.	89.	89.	90.	89.	87.	88.
NMBR CASES	6629	3919	5957	6647	6625	6658	6662	6621	6625	6659	6651	6475	6572
MAX WINDSPEED	16.4	14.5	14.1	5.5	18.9	9.4	13.3	12.8	13.0	12.2	11.4	16.2	9.8

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BCM	CFA	BLG	NRF	PBF
WINDSPEED RMC	4.0	4.3	2.8	4.8	4.5	1.9	1.9	3.9	1.3	2.6	2.6	3.2	3.8
PCT AVAIL	88.	89.	90.	90.	89.	87.	89.	89.	34.	89.	89.	89.	89.
NMBR CASES	6572	6621	6663	6662	6612	6445	6655	6620	2560	6600	6601	6601	6601
MAX WINDSPEED	14.7	42.2	15.8	15.4	14.3	11.5	7.6	13.6	2.5	.8.1	38.4	13.8	14.1

--- NOVEMBER 1974---

STATION	ABN	BSN	ARC	HOW	MTV	OBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	5.4	4.9	3.7	0.9	4.1	3.1	5.6	4.4	4.4	4.4	3.0	5.3	2.8
PCT AVAIL	78.	55.	78.	78.	78.	78.	78.	78.	73.	78.	78.	78.	75.
NMBR CASES	5644	3971	5615	5630	5630	5633	5631	5633	5267	5646	5636	5635	5398
MAX WINDSPEED	18.4	15.3	12.9	4.0	17.7	11.5	20.9	16.5	19.4	16.2	11.1	17.2	12.0

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	5.0	5.4	3.7	6.2	5.7	3.0	1.8	4.7	1.4	3.0	2.1	4.1	4.7
PCT AVAIL	75.	78.	78.	78.	77.	60.	79.	78.	75.	75.	75.	75.	75.
NMBR CASES	5398	5627	5637	5600	5523	4333	5654	5638	5377	5381	5381	5381	5381
MAX WINDSPEED	17.1	17.5	17.6	21.2	20.0	10.0	7.3	14.9	2.8	9.7	8.1	16.7	22.3

--- DECEMBER 1974---

STATION	ABN	BSN	ARC	HOW	MTV	OBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	6.2	5.1	4.0	0.3	4.2	3.0	5.6	4.0	3.6	4.0	2.3	5.0	3.7
PCT AVAIL	92.	86.	92.	92.	91.	91.	92.	92.	90.	92.	88.	90.	75.
NMBR CASES	6828	6362	6810	6817	6775	6803	6822	6812	6678	6844	6561	6713	5577
MAX WINDSPEED	18.0	42.4	15.1	0.5	20.9	14.1	24.2	42.6	17.3	17.8	12.5	34.9	12.8

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	6.4	5.1	3.7	7.5	4.9	3.0	2.4	4.7	1.3	2.3	2.2	3.8	3.4
PCT AVAIL	75.	91.	92.	50.	92.	79.	92.	90.	66.	79.	79.	79.	56.
NMBR CASES	5577	6803	6828	3755	6810	5873	6853	6705	4923	5867	5867	5867	4148
MAX WINDSPEED	18.1	40.5	17.5	20.3	21.1	13.1	6.9	13.8	2.5	9.3	10.2	16.8	15.6

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ROOT MEAN WINDSPEED VALUES FOR PERIOD

JANUARY 1974 THRU DECEMBER, 1974

STATION	ADN	BSN	ARC	HOW	MTV	OBS	IMP	LNI	TRN	KTB	IOF	ULK	TAN1
WINDSPEED RMC	5.3	5.9	4.7	4.2	5.6	4.9	6.2	5.4	5.4	6.2	3.7	5.4	4.3
PCT AVAIL	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.
NMBR CASES	63562	51396	60984	63475	63025	59221	59284	62658	60949	62199	63076	61420	61559

STATION	TAN2	TBR	DUN	FIN	EBR2	ROV	STA	PCH	BOM	CFA	OLG	NRF	PBF
WINDSPEED RMC	7.1	5.8	4.9	6.7	6.7	4.4	4.7	5.1	6.1	4.4	4.9	4.9	6.6
PCT AVAIL	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.
NMBR CASES	61560	62292	60027	58496	60364	54936	63056	56836	42194	61423	60105	61423	50731

RCOT MEAN WINDSPEED VALUES FOR

--- JANUARY 1975---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	7.1	5.9	3.6	0.3	3.8	4.0	4.7	4.4	3.9	5.2	3.5	6.1	3.5
PCT AVAIL	94.	93.	91.	94.	90.	94.	70.	94.	93.	93.	94.	95.	90.
NMBR CASES	6982	6908	6773	6996	6684	7027	5185	6984	6893	6905	6991	7059	6723
MAX WINDSPEED	22.1	18.8	15.3	2.0	18.4	15.5	19.7	16.3	18.6	16.6	15.5	17.3	16.5

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	5.5	6.3	4.7	8.5	5.8	7.9	3.0	5.1	1.4	2.9	2.2	3.9	1.3
PCT AVAIL	90.	93.	78.	35.	92.	93.	94.	92.	53.	80.	80.	80.	0.
NMBR CASES	6723	6931	5773	2626	6826	6883	6982	6817	3948	5951	5951	5951	4
MAX WINDSPEED	23.4	19.5	18.9	23.4	17.2	43.6	10.8	17.5	5.4	10.3	8.0	16.8	1.3

--- FEBRUARY 1975---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	6.7	6.4	4.1	4.3	4.2	6.5	4.6	5.0	5.0	5.8	3.3	6.3	4.1
PCT AVAIL	88.	87.	88.	89.	85.	90.	68.	89.	89.	.88.	90.	89.	88.
NMBR CASES	5917	5854	5924	6002	5711	6015	4544	6014	5988	5929	6018	6003	5898
MAX WINDSPEED	22.3	37.1	14.7	15.3	16.4	20.9	35.9	14.4	16.2	17.3	10.7	16.2	14.2

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	6.5	6.4	4.6	7.2	5.8	4.8	2.7	4.3	1.3	3.3	2.5	4.7	0.0
PCT AVAIL	88.	89.	89.	89.	87.	88.	88.	88.	89.	88.	88.	88.	0.
NMBR CASES	5898	5974	6011	5965	5813	5944	5925	5922	5998	5921	5921	5921	0
MAX WINDSPEED	18.4	17.5	14.7	21.6	15.3	19.8	7.7	12.7	2.5	35.9	7.8	16.5	0.0

--- MARCH 1975---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IDF	BLK	TAN1
WINDSPEED RMC	6.7	6.0	5.1	7.0	7.2	6.1	8.6	6.6	7.0	6.8	3.8	6.2	5.4
PCT AVAIL	92.	86.	94.	94.	90.	94.	94.	94.	93.	94.	89.	94.	83.
NMBR CASES	6856	6381	7003	6960	6725	7016	7015	6976	6951	7016	6597	6960	6204
MAX WINDSPEED	19.5	20.9	15.3	20.7	21.0	26.3	20.7	18.9	18.3	22.0	14.4	16.7	19.5

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	8.3	6.7	4.6	7.1	7.2	4.8	2.4	4.2	6.3	4.3	2.6	6.2	0.1
PCT AVAIL	83.	93.	90.	87.	89.	87.	90.	92.	85.	94.	94.	94.	0.
NMBR CASES	6204	6939	6693	6447	6629	6466	6686	6853	6360	7009	7009	7009	15
MAX WINDSPEED	24.9	19.1	14.0	20.1	22.0	14.6	7.0	13.6	19.1	16.9	10.3	19.1	0.4

ROOT MEAN WINDSPEED VALUES FOR

--- APRIL 1975---

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IOF	BLK	TAN1
WINDSPEED RMC	6.6	5.3	4.1	4.7	5.2	5.8	6.5	5.1	5.4	5.3	2.9	5.5	4.2
PCT AVAIL	98.	97.	99.	99.	97.	99.	99.	94.	97.	99.	98.	99.	98.
NMBR CASES	7078	6995	7116	7119	6969	7122	7122	6765	6978	7116	7074	7108	7024
MAX WINDSPEED	18.5	13.4	13.6	57.8	17.6	17.8	17.5	15.8	18.1	19.0	12.2	14.9	14.4

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	6.9	5.2	2.7	7.3	5.2	3.7	1.9	4.7	6.8	4.6	2.1	3.6	5.8
PCT AVAIL	98.	99.	99.	99.	98.	94.	99.	99.	99.	99.	99.	99.	23.
NMBR CASES	7024	7118	7119	7122	7078	6772	7117	7108	7109	7103	7103	7103	1649
MAX WINDSPEED	19.1	15.1	13.4	22.3	15.8	12.8	7.8	15.5	14.3	15.8	7.9	13.6	41.4

ROOT MEAN WINDSPEED VALUES FOR PERIOD

JANUARY 1975 THRU   APRIL 1975

STATION	ABN	BSN	ARC	HOW	MTV	DBS	HMR	RBT	TRN	KTB	IOF	BLK	TAN1
WINDSPEED RMC	6.8	5.9	4.3	5.1	5.5	5.7	6.8	5.4	5.6	5.9	3.4	6.0	4.4
PCT AVAIL	93.	91.	93.	94.	91.	94.	83.	93.	93.	94.	93.	94.	90.
NMBR CASES	26833	26138	26816	27077	26089	27180	23866	26739	26810	26966	26680	27130	25849
MAX WINDSPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STATION	TAN2	TBR	DUN	MIN	EBR2	ROV	STA	RCH	BDM	CFA	BLG	NRF	PBF
WINDSPEED RMC	6.9	6.2	4.3	7.4	6.1	5.8	2.5	4.6	5.5	4.0	2.4	4.8	5.7
PCT AVAIL	90.	94.	89.	77.	91.	91.	93.	93.	81.	90.	90.	90.	6.
NMBR CASES	25849	26962	25596	22160	26346	26065	26710	26700	23415	25984	25984	25984	1668
MAX WINDSPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0