A COLLECTION OF OBSERVATIONAL DATA

Introduction

The several scientifically conducted cloud seeding experiments reported in this volume indicate that the effect of cloud seeding is substantially more complex than originally anticipated. In fact, it appears that, rather than speaking of *the effect* of cloud seeding, one should speak of *effects* of seeding that occasionally increase the precipitation and occasionally decrease it. The reports suggest several factors which are likely to determine or to influence the character of the effect of cloud seeding: type of clouds and their temperature, winds aloft, possible aftereffects of earlier seeding, and so forth. The understanding of the interplay of these and other similar factors, indeed, the firm establishment of the existence of the various suspected effects, will require new and extensive experimentation. In most favorable conditions, this may take some five or more years and a very considerable expense. In these circumstances it is natural to investigate whether a tentative hypothesis suggested by one particular experiment is consistent with the results of other already completed experiments.

Because of the proverbial variability of weather characteristics, any attempt at a tentative verification of a new hypothesis using the results of a completed experiment must mean an empirical statistical study based on observations collected in the course of that experiment. Usually, the work would need raw data and some observations not available in the published reports. Thus, for example, in order to investigate whether, as a rule, the seeding of cumuliform clouds increases precipitation if the tops of the clouds are $-10°C$ or colder, and decreases the precipitation otherwise (E. J. Smith), it is essential to have information both on types of clouds and on their temperature. Also, it is necessary to be able to sort the data accordingly. While observations on clouds and on their temperatures are frequently made in the course of cloud seeding experiments, the results of such observations are published only in very exceptional cases. This, then, creates a problem of accessibility of observations already made that, in principle, are available.

As indicated in informal conferences after the Symposium with the active participation of Messrs. J. Bernier, K. R. Gabriel, M. Neiburger, E. J. Smith, and F. Yates, there is an additional problem, or a subproblem. Currently, not only are there difficulties in obtaining access to observations that are known to have been made, but also in many cases it is not clear what kind of observations have been performed in what experiment, where the records are kept (if at all) and whether it is easy or difficult to extract the necessary data from the various files.

In order to overcome the difficulties of learning about, and of obtaining access to the observations made at experiments already performed, it may be hoped that, as the research on weather modification develops, a special institution will be established. Its express purpose would be to serve as a source of information on all the major publicly financed experiments already completed and those in progress: what has been or is being observed, and what data are available and where. In addition, that same institution might establish the routine of collecting photocopies of at least some observations as they are made, of organizing the data, preserving them and of making them available at cost.

As a step towards establishing easy accessibility of the results of experiments already performed, it was decided to publish the following collection of raw data from five major rain stimulation experiments conducted in five different countries. In all cases, rainfall data are accompanied by some collateral observations. Also, in some cases, there is information as to other data that is available and accessible. It is hoped that the publication of this material in a single volume will contribute to the facility of establishing facts. It is also hoped that the comparison of five sets of data published below, combined with reports on two other experiments (pp. 65–90 and 357–369), will bring to the fore the problem of some sort of standard of reporting on weather modification experiments. As things stand now, the variability of reporting is comparable to the variability of weather itself.

I. Arizona experiments

The three tables given below are reproduced, with the author's permission, from the article by Louis J. Battan "Silver-iodide seeding and rainfall from

TABLE I

ANNUAL AVERAGES OF PRECIPITATION, 1300–1800 MST (IN INCHES) ON SEEDED AND NOT SEEDED DAYS

Year	Number of Pairs	Seeded	Not Seeded	$\frac{S}{NS}$
1957	16	0.067	0.059	1.14
1958	16	.059	.041	1.44
1959	20	.026	.094	0.28
1960	17	.018	.034	0.51
First experiment	69	.041	.059	0.70
With Aug. 17–18, 1959 not included	68	.042	.045	0.93
1961	17	0.035	0.106	0.33
1962	7	.029	.039	0.74
1964	13	.101	.072	1.40
Second Experiment	37	.057	.082	0.70

TABLE II

TABULATION OF PRECIPITABLE WATER IN INCHES, TOTAL AND MEAN RAINFALL PER GAGE BETWEEN 1300 TO 1800 MST IN INCHES AND THE NUMBER OF STATIONS WITH RAINFALL ON SEEDED AND NOT SEEDED DAYS DURING SUMMERS 1957 TO 1960

	Seeded					Not Seeded				
Date	Precipitable Water	Total Rain	No. Gages with Rain	Mean Rain	Date	Precipitable Water	Total Rain	No. Gages with Rain	Mean Rain	Difference of Means
July 1957					July 1957					
8	1.54	0	0	0	9	1.26	4.01	22	0.154	−0.154
10	1.15	4.16	14	0.154	11	1.19	0	0	0	+0.154
13	1.31	0.07	2	0.003	12	1.24	0.22	5	0.008	−0.005
16	1.42	2.26	7	0.084	17	1.25	0.83	5	0.033	+0.051
19	1.38	0.04	1	0.002	18	1.60	0.87	7	0.035	−0.033
29	1.34	4.09	10	0.157	27	1.40	0.19	2	0.007	+0.150
30	1.22	0.28	2	0.010	31	1.37	3.50	18	0.140	−0.130
August 1957					August 1957					
1	1.54	0	0	0	2	1.65	0.60	2	0.022	−0.022
9	1.36	0.04	1	0.002	10	1.37	0	0	0	+0.002
12	1.64	2.12	8	0.078	13	1.50	1.99	10	0.074	+0.004
15	1.65	2.63	11	0.101	14	1.42	0.06	1	0.002	+0.099
16	1.57	4.56	9	0.169	17	1.45	8.26	18	0.318	−0.149
20	1.62	3.61	9	0.139	19	1.62	2.41	10	0.096	+0.043
22	1.37	4.46	24	0.172	21	1.49	0	0	0	+0.172
24	1.30	0	0	0	23	1.33	0	0	0	0
26	1.31	0	0	0	27	1.18	1.30	8	0.050	−0.050
Totals (1957)	22.72	28.32	98	1.071		22.32	24.24	108	0.939	+0.132
July 1958					July 1958					
17	1.54	3.94	12	0.152	16	1.36	0.37	11	0.013	+0.139
18	1.68	0	0	0	19	1.43	0	0	0	0
24	1.11	0	0	0	25	1.25	12.47	19	0.445	−0.445
31	1.28	0.05	2	0.002	30	1.59	0	0	0	+0.002

TABLE II (Continued)

Date	Seeded Precipitable Water	Seeded Total Rain	Seeded No. Gages with Rain	Seeded Mean Rain	Date	Not Seeded Precipitable Water	Not Seeded Total Rain	Not Seeded No. Gages with Rain	Not Seeded Mean Rain	Difference of Means
August 1958					August 1958					
2	1.29	0.19	1	0.007	1	1.40	2.30	6	0.079	−0.072
4	1.54	0.36	5	0.013	5	1.83	0.15	1	0.006	+0.007
6	1.40	4.52	15	0.161	7	1.22	0.21	1	0.008	+0.153
12	1.34	0	0	0	13	1.47	0.03	1	0.001	−0.001
14	1.51	7.40	16	0.274	15	1.52	0.02	1	0.001	+0.273
16	1.44	0.02	1	0.001	18	1.44	0.69	4	0.025	−0.024
19	1.46	3.53	14	0.122	20	1.65	1.33	6	0.046	+0.076
21	1.29	2.83	11	0.101	22	1.46	0.20	1	0.007	+0.094
25	1.53	0.31	4	0.012	23	1.63	0.52	2	0.019	−0.007
28	1.23	0.05	2	0.002	27	1.11	0	0	0	+0.002
29	1.51	1.66	10	0.066	30	1.45	0	0	0	+0.066
September 1958					September 1958					
4	1.45	1.07	13	0.040	3	1.12	0.31	4	0.012	+0.028
Totals (1958)	22.60	25.93	106	0.953		22.93	18.60	57	0.662	+0.291
July 1959					July 1959					
7	1.35	0.39	4	0.015	8	1.23	0	0	0	+0.015
10	1.13	0	0	0	9	1.12	0	0	0	0
14	1.11	0	0	0	13	1.25	2.14	13	0.086	−0.086
16	1.38	0.53	4	0.021	15	1.49	0.16	2	0.006	+0.015
18	1.24	0	0	0	17	1.40	2.76	13	0.115	−0.115
20	1.38	0.09	1	0.004	21	1.57	2.24	7	0.090	−0.086
23	1.40	0.28	2	0.010	24	1.32	0	0	0	+0.010
28	1.55	0	0	0	29	1.57	0	0	0	0
30	1.42	1.42	12	0.055	31	1.19	0	0	0	+0.055
August 1959					August 1959					
4	1.58	0.10	3	0.004	3	1.50	1.97	3	0.076	−0.072
6	1.46	1.38	5	0.053	5	1.57	2.24	8	0.090	−0.037
7	1.36	0	0	0	8	1.33	0	0	0	0
11	1.75	0	0	0	10	1.49	2.18	8	0.078	−0.078
12	1.55	2.51	13	0.090	13	1.72	3.27	10	0.121	−0.031
18	1.66	0.79	6	0.028	17	1.69	28.80	28	1.027	−0.999
20	1.15	0	0	0	19	1.55	3.03	10	0.104	−0.104
22	1.53	0.84	4	0.032	21	1.30	0.68	3	0.023	+0.009
24	1.53	3.73	16	0.133	25	1.57	2.07	15	0.072	+0.061
27	1.49	2.25	10	0.083	26	1.35	0.07	2	0.002	+0.081
29	1.52	0	0	0	28	1.44	0	0	0	0
Totals (1959)	28.54	14.31	80	0.528		28.65	51.61	122	1.890	−1.362

July 1960					July 1960					
7	1.15	0	0	0	6	1.25	0.27	3	0.010	−0.010
8	1.12	0	0	0	9	1.22	0	0	0	0
25	1.68	1.04	14	0.042	23	1.19	1.37	10	0.057	−0.015
27	1.42	0	0	0	26	1.37	0.99	14	0.040	−0.040
					30	1.14	0	0	0	+0.042
August 1960					August 1960					
1	1.18	0.97	7	0.042	3	1.50	0	0	0	0
2	1.30	0	0	0	6	1.56	1.96	8	0.093	−0.093
8	1.52	0	0	0	9	1.54	3.85	9	0.183	−0.031
10	1.72	3.20	13	0.152	11	1.69	0	0	0	0
12	1.35	0	0	0	16	1.13	0	0	0	0
17	1.30	0	0	0	20	1.34	0	0	0	0
22	1.47	0	0	0	23	1.17	0	0	0	0
25	1.13	0	0	0	26	1.16	0	0	0	0
27	1.52	0	0	0	30	1.11	0	0	0	+0.008
31	1.47	0.20	7	0.008						
September 1960					September 1960					
2	1.38	1.07	10	0.040	1	1.37	1.62	16	0.060	−0.020
6	1.51	0.08	3	0.003	7	1.48	2.76	11	0.102	−0.099
8	1.14	0.30	3	0.011	9	1.54	1.15	8	0.041	−0.030
Totals (1960)	23.36	6.86	57	0.298		22.76	13.97	79	0.586	−0.288
Grand totals	97.22	75.42	341	2.850		96.66	108.42	366	4.077	−1.227
Mean 69 pairs	1.41	1.09	4.9	0.041		1.40	1.57	5.3	0.059	−0.018
Totals minus 17–18 Aug. 1959	95.56	74.63	335	2.822		94.97	79.62	338	3.050	−0.228
Mean 68 pairs	1.40	1.08	4.9	0.042		1.40	1.17	5.0	0.045	−0.003

TABLE III

TABULATION OF PRECIPITABLE WATER IN INCHES (MEAN OF MORNING AND AFTERNOON SOUNDINGS), TOTAL AND MEAN RAINFALL PER GAGE BETWEEN 1300 AND 1800 MST IN INCHES AND THE NUMBER OF STATIONS WITH RAINFALL ON SEEDED AND NOT SEEDED DAYS DURING 1961, 1962, AND 1964

Seeded					Not Seeded					
Date	Mean Precipitable Water	Total Rain	No. Gages with Rain	Mean Rain	Date	Mean Precipitable Water	Total Rain	No. Gages with Rain	Mean Rain	Difference of Means
July 1961					July 1961					
17	1.30	0	0	0	18	1.26	0	0	0	0
22	1.39	6.69	28	0.203	21	1.34	0.63	10	0.019	+0.184
24	1.30	0.90	5	0.029	26	1.28	3.29	11	0.122	−0.093
29	1.48	0.69	3	0.025	27	1.48	2.53	17	0.097	−0.072
31	1.48	0.74	13	0.025						
August 1961					August 1961					
					1	1.32	8.00	22	0.285	−0.261
2	1.42	2.72	18	0.094	3	1.26	1.35	15	0.044	+0.051
8	1.30	0	0	0	9	1.23	0	0	0	0
10	1.40	0	0	0	11	1.30	0	0	0	0
12	1.28	3.37	16	0.105	14	1.34	0.07	2	0.002	+0.103
15	1.46	0	0	0	16	1.34	0.52	7	0.017	−0.017
18	1.38	1.22	10	0.038	17	1.46	2.72	14	0.091	−0.053
21	1.41	0	0	0	19	1.50	0.17	3	0.005	−0.005
23	1.33	0	0	0	22	1.70	5.18	26	0.167	−0.167
24	1.44	1.05	9	0.031	25	1.28	0.36	3	0.010	+0.021
28	1.30	1.34	15	0.039	29	1.51	5.09	22	0.154	−0.115
September 1961					September 1961					
9	1.33	0.17	1	0.005	8	1.38	8.00	29	0.235	−0.230
12	1.37	0	0	0	11	1.42	18.49	32	0.560	−0.560
Totals (1961)	23.37	18.89	118	0.594		23.40	56.40	213	1.808	−1.214
July 1962					July 1962					
20	1.40	1.41	21	0.042	19	1.31	0.02	1	0.001	+0.041
23	1.47	1.23	8	0.037	21	1.60	0	0	0	+0.037
24	1.45	0.53	7	0.016	25	1.26	5.95	15	0.186	−0.170
27	1.58	0	0	0	26	1.38	0.08	3	0.002	−0.002
					31	1.26	0.38	5	0.012	−0.012

August 1962					August 1962					
1	1.26	0	0	0	21	1.39	0	0	0	+0.109
20	1.32	3.37	12	0.109	September 1962					
September 1962					4	1.50	2.18	12	0.070	−0.068
5	1.38	0.05	2	0.002		9.70	8.61	36	0.271	−0.065
Totals (1962)	9.86	6.59	50	0.206	July 1964					
July 1964					9	1.26	3.47	10	0.102	+0.015
8	1.35	3.88	14	0.117	11	1.18	1.40	6	0.042	+0.087
13	1.49	4.13	11	0.129	14	1.30	0.48	5	0.015	+0.537
15	1.71	16.56	27	0.552	16	1.20	1.34	7	0.039	−0.039
17	1.23	0	0	0	18	1.42	3.06	16	9.090	−0.083
20	1.29	0.23	5	0.007	22	1.49	2.37	8	0.072	−0.054
21	1.36	0.61	5	0.018	25	1.44	7.72	22	0.220	−0.012
24	1.51	7.30	27	0.208	29	1.42	12.25	24	0.360	−0.307
30	1.50	1.35	10	0.053	August 1964					
August 1964					3	1.50	0	0	0	0
4	1.54	0	0	0	5	1.22	0	0	0	+0.001
7	1.16	0.02	1	0.001	8	1.36	0.04	1	0.001	+0.125
10	1.45	4.15	15	0.126	13	1.28	0	0	0	+0.004
14	1.33	0.12	4	0.004	19	1.18	0	0	0	+0.102
17	1.50	3.26	16	0.102		17.25	32.13	99	0.941	+0.376
Totals (1964)	18.42	41.61	135	1.317		50.35	97.14	348	3.020	−0.903
Grand totals	51.65	67.09	303	2.117		1.36	2.63	9.4	0.082	−0.024
Mean per day	1.40	1.81	8.2	0.057						

convective clouds," published in *Journal of Applied Meteorology*, October 1966, pp. 669–683.

A brief description of the two experiments to which the tables refer is given in this volume, pp. 29–33. It is understood that in the course of the experiments a great variety of important observations have been made.

The randomization applied to pairs of seedable days. The decision as to seedability was based mostly on precipitable water. During the first experiment the requirement was that the precipitable water, as indicated by the 0500 MST radiosonde data, be greater than 1.10 inches. In the second experiment a day was considered suitable only if the precipitable water was equal to or greater than 1.15 inches at both 0500 and 1700 MST. The seeding, from an airplane, was conducted from about 1230 to 1630 MST. The actual seeding time ranged from two to four hours, depending mostly on the functioning of the generator.

II. An Australian experiment

EXPLANATORY NOTE BY E. J. SMITH

Four randomized cloud seeding experiments have been performed over areas of Australia, in the Snowy Mountains, South Australia, New England, and the Warragamba Catchment. Each experiment continued for three to six years and involved the accumulation of a large volume of data.

These experiments are briefly described in the paper by Smith (pp. 161–176), and a description of each experiment, together with a brief summary of the data, results, and conclusions has appeared in the literature (for references see p. 175). In addition, annual reports of each experiment have been prepared by the Radiophysics Division of the CSIRO, containing more detailed information concerning each year's operations.

The total volume of data accumulated in the course of operations of the four experiments is too great to allow a meaningful summary and the tables given below refer to only one experiment, that in New England. These tables are extracted from the six annual reports covering the years 1958 through 1963 which are available at the Radiophysics Division of the CSIRO. The numerical tables are followed by reproductions of several pages, illustrating certain summaries published in the annual reports and a page illustrating the record of observations made by the Cloud Seeding Officer. Such records were made for each experimental flight on which some seeding was done.

As mentioned, the general description of the experiment is given by Smith, this volume, pp. 161–176. For the understanding of the numerical data in tables I, II, and III it is essential to remember the following details.

The experiment involved two areas labeled "North Area" and "South Area."

The experimental unit was a period of 12 (or more) days. A randomization procedure, applied to pairs of consecutive periods, determined which of the two areas is to be seeded during a given experimental period. Thus, the whole

experiment is divided into periods of about 12 days each, some of which were "north seeded" and the others "south seeded." However, not all days during a given period were necessarily seeded. On each day of an experimental period on which clouds were possibly present the seeding aircraft would proceed to the appropriate area, the Cloud Seeding Officer would survey the cloud situation, would measure winds and, if the conditions appeared suitable for seeding, the silver iodide generators would be turned on. Seeding would continue as long as the conditions remained favorable, unless some unexpected event forced an interruption. Tables II and III give data relating to particular days on which some seeding was done. The lines, each referring to a particular day, are divided into groups, each group belonging to a particular experimental period. Because randomization applied to whole periods, rather than to days, the precipitation data given in the last two columns of tables II and III refer to whole periods, not to days. It will be seen that the number of days with seeding varied considerably from one experimental period to the next.

Table II gives data for experimental periods that were "north seeded." Table III refers to "south seeded" periods. The symbols C, S, and I under the heading "Class of Clouds" have the following meanings: C, cumulus; S, Stratiform; I, Indeterminate. The classification of the clouds was made from the seeding aircraft and refers only to the seeded area.

Under the heading "Wind" the symbol LV means light and variable, while CD means cloud drift, usually estimated from shadows.

These data are displayed in various ways in the annual reports. Examples are given as figures 1 and 2, showing cloud and wind conditions on days when cumulus clouds were seeded in two years associated with apparently successful (1958) and unsuccessful (1963) seeding.

The rules for determining the suitability of clouds for seeding were:

(a) the cloud tops must be colder than $-5°C$;

(b) the cloud tops must contain supercooled water droplets;

TABLE I

YEAR BY YEAR PRECIPITATION AMOUNTS IN INCHES, AVERAGED PER EXPERIMENTAL PERIOD

Year	North Seeded			South Seeded		
	No. of Periods	Mean North Area	Mean South Area	No. of Periods	Mean North Area	Mean South Area
1958	11	0.91	0.67	11	0.72	0.92
1959	9	0.75	0.66	9	1.67	1.52
1960	12	0.66	0.65	13	0.92	1.02
1961	12	0.89	1.04	12	0.59	0.54
1962	12	1.24	1.10	12	0.57	0.74
1963	8	1.12	1.50	8	0.53	0.53
All Years	64	0.93	0.92	65	0.82	0.87

TABLE II

SUMMARIES OF SEEDING FLIGHTS OVER NORTH AREA
NEW ENGLAND EXPERIMENT, AUSTRALIA, 1958–63

Randomized experimental units: periods of about 12 days. Weather data given for each flight of actual seeding only. Precipitation data (last two columns) represent totals over particular experimental units. The precipitation amounts are printed against the last actual seeding day of the corresponding experimental unit. For example, the first entry 1.540 inches in the last column represents the total precipitation in the South Area observed during the first experimental period which was seeded in the North. During this period there were three seeding flights, on February 17, 18, and 19, 1958, and the first three lines of the table record the observations made during these flights. During the second North seeded period there were 10 seeding flights and the total precipitation in the South Area observed during this period was 1.230 inches, and so on.

Date	Height of 0°C Isotherm (1000′)	Wind			Cloud				Class of Clouds	Seeding			Rainfall (inches)	
					Top		Base							
		Dir. (degs)	Speed (kts)	Ht. (1000′)	Ht. (1000′)	Temp. (°C)	Ht. (1000′)	Temp. (°C)		Ht. (1000′)	Temp. (°C)	Time (hrs mins)	North Area	South Area
170258	15.5	050	14	7.5	13.0	5	7.5	17	C	7.5	17	1 25		
180258	15.5	040	14	6.5	18.0	−5	6.5	20	I	6.5	20	1 50		
190258	16.5	360	10	CD	>20.0	<−8	8.0	18	C	8.0	18	1 20	1.080	1.540
030358	13.5	290	15	10.5	20.0	−12	10.5	6	C	10.5	6	2 01		
040358	13.5	260	18	12.5	17.0	−8	8.5	10	C	8.5	10	1 06		
050358	13.0	240	30	10.5	15.0	−4	10.5	5	S	10.5	5	2 05		
060358	12.0		LV	10.5	>12.0	<0	5.5	14	I	10.5	3	3 20		
070358	14.5	035	10	11.0	>13.0	<2	7.0	12	C	7.0	12	1 00		
080358	12.0	020	9	6.0	18.0	−11	5.0	12	C	5.0	12	3 00		
090358	12.0	320	10	10.0	>20.0	<−12	6.0	16	C	6.0	16	3 30		
100358	13.0	020	12	8.0	17.0	−8	8.0	10	I	8.0	10	1 20		
110358	12.0	040	25	10.0	20.0	−15	7.0	14	C	7.0	14	3 15		
120358	13.0	290	20	10.0	16.0	−6	4.0	18	I	4.0	18	2 05	2.880	1.230
310358	14.0	300	15	10.0	17.0	−6	6.0	16	I	6.0	16	1 20		
020458	12.0	310	15	14.0	16.0	−7	11.0	2	S	15.0	−5	2 25		
030458	12.0		LV	15.0	15.0	−5	11.0	3	S	14.5	−4	0 40	0.370	0.050
210458	10.0	140	10	6.5	25.0	−30	6.5	7	C	6.5	7	3 00		
220458	9.5		LV	7.0	18.0	−14	7.0	6	C	8.0	4	3 20		
230458	9.0	100	10	6.0	20.0	−26	6.5	5	C	6.5	5	2 45		

240458	9.0	130	10	7.0	18.0	−19	7.5	4	C	7.5	4	2	20	
250458	8.5		LV	6.0	13.0	−9	6.5	4	C	6.5	4	1	00	
270458	8.5		LV	8.0	13.0	−10	7.5	3	C	7.5	3	1	00	0.320	0.040
190558 280558	(Flying Time = 6 Hrs. 30 Mins. Experiment Suspended)													0.040	0.000
020658	9.0	360	20	11.0	12.5	−6	7.0	6	S	11.5	−4.5	2	00		
030658	10.0	340	10	10.0	>12.0	<−4	5.0	10	I	10.5	−1	0	26		
080658	9.0	090	20	11.0	>13.0	<−7	10.0	−2	S	12.0	−5	5	15		
090658	9.0	100	30	11.0	15.0	−10	9.0	0	S	12.0	−5	3	40	0.600	0.250
150658	4.0	170	40	6.0	7.0	−7	5.0	−1	I	6.5	−5	1	10	0.070	0.090
040858	7.0	080	30	7.0	>11.0	<−5	8.0	−2.5	S	11.0	−5	1	15	0.730	0.770
040958	3.5	260	30	6.0	10.0	−13	2.5	2	I	6.0	−4	1	30	1.500	1.860
110958	6.5	300	25	7.0	9.5	−7	7.0	−1	C	7.0	−1	0	40		
120958	6.0	340	15	6.0	11.5	−12	7.5	−5	S	7.5	−6	1	10		
130958	7.0	210	15	5.0	11.0	−5	5.0	4	C	5.0	4	1	45		
150958	8.0		LV	6.0	11.0	−6	6.5	3	C	6.5	3	1	00	1.590	0.680
300958	7.5		LV	6.0	15.0	−15	6.0	5	C	6.0	5	2	05		
051058	11.0	310	30	10.0	15.5	−8	10.0	3	I	10.0	3	3	45		
061058	10.5	290	30	8.0	16.0	−11	6.5	10	C	6.5	10	1	55	0.780	0.820
180159 300159	(Flying Time = 11 Hrs. 30 Mins. Experiment Suspended)													2.400	1.040
250259	14.5	120	20	7.0	12.0	5	6.0	16	C	6.0	16	1	00		
260259	14.0	100	10	7.0	>20.0	<−11	6.5	15	C	6.5	15	1	10		
270259	14.0	100	15	7.0	19.0	−10	7.0	15	C	7.0	15	1	40		
280259	14.0	120	10	7.0	18.0	−8	6.5	15	C	6.5	15	1	25		
010359	13.5		LV	4.5	18.0	−9	4.5	19	C	4.5	19	1	05		
020359	13.5		LV	4.5	15.0	−3	4.0	19	C	4.0	19	1	00		
030359	14.0	270	10	CD	15.0	−2	5.0	17	C	5.0	17	0	40		
050359	14.5	320	10	5.0	12.0	4	4.5	18	C	4.5	18	0	55	1.833	2.309
210459 030559	(Flying Time = 4 Hrs. 40 Mins. Experiment Suspended)											0	00	0.200	0.023
040559 130559	(Flying Time = 0 Hrs. 0 Mins. Experiment Suspended)											0	00	0.001	0.010
250559 040659	(Flying Time = 10 Hrs. 5 Mins. Experiment Suspended)											0	00	0.015	0.021
150659 240659	(Flying Time = 6 Hrs. 50 Mins. Experiment Suspended)											0	00	0.028	0.127

TABLE II (Continued)

Date	Height of 0°C Isotherm (1000′)	Wind			Cloud				Class of Clouds	Seeding				Rainfall (inches)	
					Top		Base								
		Dir. (degs)	Speed (kts)	Ht. (1000′)	Ht. (1000′)	Temp. (°C)	Ht. (1000′)	Temp. (°C)		Ht. (1000′)	Temp. (°C)	Time (hrs mins)		North Area	South Area
300759	5.5	280	10	9.0	>10.0	<−5	5.5	0	S	9.0	−4	2	45	0.143	0.121
080859	7.5	280	30	10.0	13.0	−10	11.0	−10	S	12.0	−8	0	35	0.001	0.190
070959	7.5	070	10	7.0	13.0	−13	7.0	1	C	7.0	1	2	15		
080959	6.5	230	10	8.0	14.0	−15	7.5	−2	C	7.5	−2	2	15		
090959	6.5	150	10	6.0	12.0	−9	5.5	3	C	5.5	3	1	45		
100959	7.0	090	10	6.0	14.0	−14	6.5	1	C	6.5	1	1	30		
110959	7.5	080	15	4.5	14.0	−13	6.5	2	C	6.5	2	2	00		
120959	8.0		LV	5.0	14.0	−13	5.5	6	C	5.5	6	2	15		
160959	7.5	300	40	12.0	>15.0	<−9	8.5	−1	S	12.0	−4	3	35		
170959	7.0	300	40	12.0	11.5	−4	9.5	−3	S	11.5	−4	4	50		
190959	8.5	300	30	3.5	>12.0	<−5	3.5	12	I	8.0	1	5	05	1.929	1.817
271059	11.0	010	15	10.0	14.5	−7	7.0	10	I	10.0	2	1	30		
281059	9.5	310	35	10.0	18.0	−13	10.5	−2	I	10.5	−2	2	10		
301059	10.0	310	20	5.0	18.0	−17	5.5	9	C	5.5	9	2	35		
311059	10.0		LV	CD	18.0	−16	5.0	11	C	5.0	11	5	00		
011159	10.5	240	16	6.0	18.0	−16	5.5	10	C	5.5	10	3	50		
021159	10.5		LV	CD	14.0	−9	6.5	8	C	6.5	8	3	50	2.572	1.346
070160 170160	(Flying Time = 5 Hrs. 45 Mins. Experiment Suspended)											0	00	0.004	0.099
090260	13.0	140	10	7.0	14.0	−2	7.0	14	I	7.0	14	0	35		
100260	14.0		LV	7.0	20.0	−12	7.0	14	C	7.0	14	3	35		
130260	15.0	240	10	6.0	>20.0	<−10	6.5	15	C	6.5	15	2	20		
170260	12.5	260	20	5.0	15.5	−3	5.0	12	I	5.0	12	1	30		
250260	11.0		LV	CD	20.0	−16	2.5	16	C	2.5	16	5	00		
020360	10.0	080	30	11.0	15.0	−7	5.0	10	I	10.0	0	4	00	2.274	1.789
220360	10.5	260	30	8.0	14.0	−7	8.0	5	C	8.0	5	4	05	0.043	0.181
100460	9.5	230	25	8.0	18.0	−17	7.5	7	C	7.5	7	2	40		
150460	9.0	320	35	11.0	15.0	−9	9.0	1	S	12.0	−4	0	35		
160460	10.0	320	35	11.0	15.0	−9	9.0	1	I	11.0	−2	3	25	0.253	0.494

300460	11.0	350	45	6.0	18.0	−13	3.0	13	I	6.0	9	0	15		
010560	11.0	340	40	7.0	16.0	−8	3.0	11	I	7.0	5	4	40		
060560	6.5	290	35	6.0	10.0	−4	6.0	2	I	6.0	2	1	30	1.254	0.896
120560	9.0	320	35	7.0	17.0	−14	6.5	5	I	7.5	4	5	20	1.403	0.920
150660	7.0	260	30	15.0	15.5	−16	13.0	−10	S	14.0	−12	0	30		
210660	5.0	300	30	11.0	>11.0	<−10	6.5	−3	S	11.0	−10	1	00		
220660	4.5	280	30	12.0	11.0	−10	6.0	−3	S	9.5	−8	5	00	0.993	0.779
080760	6.5	290	10	6.5	11.5	−11	6.5	0	C	6.5	0	1	55		
090760	6.5	300	25	13.0	14.5	−14	12.0	−10	S	13.0	−11	0	20		
100760	6.5	300	25	13.0	14.5	−14	12.0	−10	S	13.0	−11	1	25		
110760	6.0	320	30	13.0	13.5	−13	10.0	−7	S	13.0	−12	3	30	1.031	1.654
180760	4.5	290	40	7.0	15.0	−19	4.5	0	I	7.0	−3	3	35		
190760	3.0	230	10	3.0	6.5	−5	3.0	0	I	6.0	−4	1	35	0.593	0.660
180860	7.5	310	10	CD	10.5	−6	7.0	1	C	7.0	1	0	30		
200860	9.0	270	10	CD	11.0	−6	3.5	8	I	3.5	8	0	55	0.033	0.187
250860 040960	(Flying Time = 0 Hrs. 0 Mins. Experiment Suspended)													0.003	0.010
081060	10.5	270	20	CD	13.5	−8	12.0	−5	S	12.0	−5	0	55	0.082	0.085
130161	11.0	280	15	11.0	14.0	−6	11.0	0	I	11.0	0	1	05		
160161	9.5	130	15	14.0	14.0	−9	8.0	3	C	14.0	−9	0	50	0.572	0.147
140261	10.0	360	10	CD	12.0	−4	7.5	6	I	7.5	6	1	00		
170261	9.5	020	40	13.0	>14.0	<−5	10.0	−2	S	12.0	−3	6	35		
180261	10.0	360	25	14.0	14.5	−5.5	6.0	7	S	13.5	−3	6	35		
190261	11.0	360	15	CD	15.5	−8	4.5	10	I	4.5	10	3	05		
230261	13.0		LV	CD	15.0	−4	8.5	10	C	10.0	5	1	10		
280261	11.5	050	10	8.0	13.0	−4	8.0	6	C	8.0	6	1	45	2.434	3.574
190361	10.5		LV	5.0	14.0	−7	5.0	12	I	5.0	12	1	00		
240361	11.0	290	15	CD	18.0	−14	8.5	5	C	8.5	5	3	00		
290361	11.0	020	10	CD	18.0	−14	6.0	11	C	6.0	11	1	25		
300361	11.0	300	10	CD	15.0	−8	6.0	10	C	6.0	10	0	50	0.637	1.279
130461	10.0	300	30	CD	11.0	−2	3.5	13	I	3.5	13	1	05	0.176	0.206
020561	8.5		LV	6.5	12.0	−7	6.5	5	C	6.5	5	0	30		
030561	8.5	310	20	5.0	11.5	−5	5.5	6	C	5.5	6	1	05		
040561	4.0	230	25	CD	7.5	−6	5.0	−2	I	6.0	−3	2	00	0.146	0.611
270561	8.5	350	10	7.0	11.0	−6	7.0	3	C	7.0	3	2	00		
280561	8.0	360	10	CD	13.0	−10	9.0	−3	S	11.5	−7	3	15		
290561	7.5	140	35	12.0	12.0	−7	8.0	−1	S	12.0	−7	2	25		
030661	8.0	330	15	10.0	12.0	−5	8.0	0	S	11.5	−4	1	40		
040661	8.0	310	10	CD	20.0	−20	5.0	6	C	5.0	6	5	10	2.028	0.583

TABLE II (Continued)

Date	Height of 0°C Isotherm (1000′)	Wind			Cloud				Class of Clouds	Seeding				Rainfall (inches)	
					Top		Base								
		Dir. (degs)	Speed (kts)	Ht. (1000′)	Ht. (1000′)	Temp. (°C)	Ht. (1000′)	Temp. (°C)		Ht. (1000′)	Temp. (°C)	Time (hrs mins)		North Area	South Area
080661	(Flying Time = 0 Hrs. 0 Mins. Experiment Suspended)														
190661												0	00	0.094	0.282
100661	(Flying Time = 1 Hr. 25 Mins. Experiment Suspended)														
190761												0	00	0.000	0.002
230761	9.0	330	30	14.0	18.0	−14	4.0	7	S	14.0	−6	4	35		
270761	6.0	230	25	5.0	8.0	−3	5.0	1	I	5.0	1	2	05	1.959	1.397
150861	8.0	350	10	7.0	11.0	−6	7.0	4	I	7.0	4	3	15		
160861	10.0	010	25	4.0	12.0	−6	9.0	2	I	10.0	0	1	30		
170861	6.5	280	20	6.0	9.5	−6	6.0	2	C	6.0	2	1	35	0.851	2.123
180961	8.5	300	20	CD	14.0	−12	8.5	0	C	8.5	0	1	30		
190961	8.0	260	20	CD	11.0	−6	7.0	3	I	7.0	3	0	55		
200961	8.0	250	20	CD	12.0	−8	6.5	4	C	6.5	4	1	15	0.187	0.121
161061	12.0	270	20	10.0	>14.0	<−3	9.0	4	I	10.0	3	4	05		
231061	11.5		LV	6.0	13.0	−4	6.0	13	C	6.0	13	2	30		
241061	11.5	300	16	6.0	13.0	−4	5.5	12	C	5.5	12	1	05	1.652	2.215
300162	13.5	270	10	CD	18.0	−9	6.0	15	C	6.0	15	1	50		
310162	14.0	090	10	CD	18.0	−8	5.5	17	C	5.5	17	1	25		
010262	14.0	310	10	10.0	>20.0	<−12	9.0	9	C	9.0	9	2	00	1.903	1.827
040262	14.5		LV	CD	23.0	−17	7.0	14	C	7.0	14	0	45		
050262	14.0	100	15	7.0	14.0	0	7.0	14	C	7.0	14	0	35		
090262	14.0	200	10	7.0	25.0	−20	7.0	16	C	7.0	16	2	10		
110262	15.5	310	10	CD	25.0	−19	7.0	17	C	7.0	17	1	00	1.645	1.726
030362	13.5	300	25	14.0	15.0	−3	7.5	8	S	14.0	−1	1	30		
070362	13.5	020	30	15.0	18.0	−6	12.0	1	S	15.0	−2	0	50		
100362	13.0	130	10	CD	>20.0	<−14	4.5	16	C	4.5	16	3	45		
110362	11.5	140	15	13.0	>15.0	<−6	12.0	−1	S	13.0	−2	3	25		
140362	12.0	120	10	5.0	18.0	−12	5.5	12	C	5.5	12	1	55		
150362	11.0	170	10	CD	16.0	−9	7.0	7	I	7.0	7	0	45	2.676	1.069
010462	12.0	140	10	7.0	13.0	−2	7.0	9	C	7.0	9	1	05		

040462	12.0	360	10	9.0	14.0	−4	7.0	8	I	7.0	8	0	50		
050462	10.0	180	15	13.0	14.0	−7	9.0	1	S	13.0	−5	1	30		
070462	11.5	150	30	9.0	20.0	−16	15.0	−6	S	15.0	−6	0	40		
100462	10.0	250	15	12.0	22.0	−20	6.5	6	C	6.5	6	3	20		
130462	10.5		LV	7.0	12.5	−4	7.0	6	I	9.0	2	0	25	1.538	1.734
020562	5.5	260	25	8.0	11.0	−11	7.0	−4	I	7.0	−4	1	00	0.004	0.087
280562	10.0	310	30	11.0	12.0	−5	6.0	6	I	11.0	−2	3	25		
020662	12.0	280	60	14.0	>14.0	<−4	13.0	−2	S	14.0	−4	0	45	1.507	1.202
140662 240662	(Flying Time = 0 Hrs. 0 Mins. Experiment Suspended)											0	00	0.000	0.010
100762	9.0	120	40	11.0	>16.0	<−13	9.0	0	I	11.5	−5	4	55	1.949	0.451
240762	9.0	290	40	10.0	>16.0	<−12	4.0	11	I	11.0	−5	1	50	1.214	0.827
270862 060962	(Flying Time = 3 Hrs. 50 Mins. Experiment Suspended)											0	00	0.000	0.000
110962	7.5	290	30	12.0	13.5	−8	9.0	−1	S	12.0	−5	1	55		
150962	11.0	290	20	9.0	>20.0	<−20	6.0	9	C	6.0	9	1	30		
160962	7.5	270	20	4.0	11.0	−8	4.0	8	C	4.0	8	2	15	1.002	0.758
181062	11.5	290	15	CD	18.0	−14	6.5	12	C	6.5	12	1	05		
201062	11.0	310	35	13.0	18.0	−14	4.0	13	C	10.0	2	2	25	1.480	3.461
180163	14.5	270	15	CD	17.0	−5	5.0	18	C	5.0	18	0	40		
300163	14.0	360	5	6.0	16.0	−4	5.5	16	C	5.5	16	1	15		
020263	14.0		LV	CD	15.0	−2	7.0	13	C	7.0	13	1	45		
030263	14.0	260	25	6.0	12.0	4	7.0	13	I	7.0	13	0	25	1.485	2.901
120263	12.5	200	20	7.0	14.0	−3	7.0	11	C	7.0	11	1	05	0.086	0.187
270363	13.0	100	15	8.0	15.0	−4	5.0	17	I	6.0	13	3	20	2.299	2.957
040463	12.0	220	20	CD	16.0	−7	6.0	10	C	6.0	10	1	10	0.392	0.814
240463 180563	(Flying time = 23 Hrs. 30 Mins. Experiment Suspended)											4	15	6.044	6.890
150863	11.0	310	20	6.0	>20.0	<−20	5.0	10	C	5.0	10	0	30		
220863	10.0	310	20	10.0	13.0	−6	8.0	4	C	10.0	0	1	30		
230863	11.0	260	50	12.0	14.0	−6	9.0	2	I	12.0	−2	1	25		
250863	11.0	320	25	6.0	12.0	−4	6.0	8	S	10.0	3	1	20	1.803	2.085
290863	7.0	320	15	8.0	13.0	−12	6.5	3	C	10.0	−6	0	40	1.435	1.370
300963	10.5	300	15	CD	18.0	−15	3.5	18	C	3.5	18	1	20	1.173	1.348
031163	12.0	310	60	12.0	15.0	−5	10.0	3	S	12.0	0	0	15		
071163	14.0	260	20	3.0	20.0	−12	2.5	14	C	3.0	14	1	25	0.301	0.332

TABLE III

SUMMARIES OF SEEDING FLIGHTS OVER SOUTH AREA
NEW ENGLAND EXPERIMENT, AUSTRALIA, 1958–63
(For explanation, see table II.)

Date	Height of 0°C Isotherm (1000′)	Wind			Cloud				Class of Clouds	Seeding				Rainfall (inches)	
					Top		Base								
		Dir. (degs)	Speed (kts)	Ht. (1000′)	Ht. (1000′)	Temp. (°C)	Ht. (1000′)	Temp. (°C)		Ht. (1000′)	Temp. (°C)	Time (hrs mins)		North Area	South Area
140358	11.5	270	20	10.0	10.5	2	7.5	8	C	7.5	8	1	10		
200358	11.5		LV	10.0	12.0	−2	8.0	8	C	8.0	8	1	00		
220358	12.0	250	12	10.5	18.0	−12	10.5	4	C	10.5	4	2	30		
230358	14.0	300	28	10.0	20.0	−12	9.0	12	C	9.0	12	3	30	0.070	0.030
080458	11.0	180	10	10.0	14.5	−6	7.0	10	I	8.0	8	3	55		
090458	10.5		LV	10.0	12.0	−5	6.0	10	I	8.0	5	1	15		
110458	11.0		LV	13.0	16.5	−13	13.0	−4	S	14.0	−6	2	15		
140458	11.0		LV	7.5	18.0	−14	7.5	12	C	7.5	12	2	10		
150458	10.0	320	20	6.0	20.0	−20	4.0	12	C	4.0	12	3	50		
160458	8.5		LV	5.0	11.0	−5	5.0	7	C	5.0	7	0	25	0.390	0.520
010558	9.5	330	15	9.0	11.0	−3	7.5	5	I	9.0	1	0	52		
020558	9.5	270	15	5.5	>12.0	<−4	5.5	8	I	5.5	8	3	15	0.030	0.170
100558	8.0	360	10	7.0	12.0	−7	7.0	2	I	7.0	2	3	50		
130558	8.0	290	15	10.0	11.5	−6	3.5	6	S	11.0	−6	3	45		
140558	10.0	250	20	8.0	12.0	−7	9.0	2	I	10.0	0	1	58		
150558	12.0	290	40	CD	>13.0	−3	10.5	3	S	10.5	3	1	51	2.050	2.560
240658	9.0	270	20	5.0	12.0	−7	5.5	11	I	5.5	11	1	45		
270658	4.5	050	25	9.0	>10.0	<−7	6.5	−3	S	9.0	−5	1	15		
280658	5.0	050	25	9.5	13.0	−11	7.5	−3	S	10.0	−5	4	40		
290658	7.0	290	25	6.0	11.5	−10	2.5	8.5	I	6.0	2	3	55		
300658	4.5	270	25	7.5	9.5	−8	2.5	4	S	7.5	−5	4	15	1.070	1.620
150758	7.0	280	50	8.5	>12.0	<−6	8.0	−1	S	9.5	−5	1	20		
160758	7.0	290	45	11.0	>12.0	<−6	8.5	−1	S	11.0	−5	3	30		
180758	6.0	230	35	8.0	9.0	−6	5.5	2	C	5.5	2	1	00	0.800	0.610
150858	9.0	310	45	6.0	>12.0	<−7	7.0	5	I	7.0	5	1	30		

160858	9.0	310	40	5.0	17.0	−17	5.0	9	C	5.0	9	4	50	0.490	1.320
200858	5.0	280	25	5.0	14.0	−17	4.5	1	C	4.5	1	2	25		
250858	8.0	310	30	8.0	>11.0	<−7	5.0	6	I	5.0	6	6	49		
260858	5.5	290	17	3.5	9.5	−8	4.0	3	C	4.0	3	6	00	0.750	0.720
260958	10.0		LV	8.0	15.5	−12	8.0	4	I	8.0	4	2	C0		
270958	10.0	310	15	4.0	17.0	−13	3.5	13	C	3.5	13	5	05	1.420	1.370
161058	8.0	300	25	5.0	16.0	−12	5.0	6	I	5.0	6	5	00		
171058	7.5	210	15	4.0	8.5	−1	4.0	7	C	4.0	7	0	55	0.760	0.890
241058	8.0	270	30	CD	20.0	−22	6.0	6	C	6.0	6	4	20		
251058	5.0	240	30	4.0	10.5	−10	4.5	2	I	4.5	2	3	20	0.070	0.290
070259	15.5		LV	7.0	18.0	−5	8.0	15	C	8.0	15	1	35		
080259	16.0		LV	7.5	25.0	−18	7.5	15	C	7.5	15	2	00		
090259	15.5		LV	7.5	18.0	−5	7.5	16	C	7.5	16	0	40		
100259	13.5	240	15	CD	25.0	−22	7.0	14	C	7.0	14	5	35		
120259	15.0	340	15	5.0	18.0	−6	5.0	18	C	5.0	18	1	00		
150259	14.5	320	25	4.5	25.0	−22	5.0	19	C	5.0	19	2	50		
160259	15.5	250	10	4.0	16.0	−2	4.0	21	I	4.0	21	2	30		
170259	18.0	290	20	15.0	>18.0	<0	12.0	5	S	17.0	2	0	55	2.910	4.035
110359	13.0	110	15	4.5	18.0	−10	5.0	15	C	5.0	15	1	05		
170359	12.5		LV	5.0	30.0	−25	5.0	16	C	5.0	16	2	45		
200359	12.0	100	15	5.0	15.0	−6	5.5	13	C	5.5	13	2	25		
280359	14.0	330	20	15.0	>15.0	<−2	8.0	9	I	10.0	5	4	25		
300359	13.5	330	10	4.0	25.0	−20	4.5	18	C	4.5	18	1	30		
020459	12.0	320	15	CD	>14.0	<−4	6.5	8	I	6.5	8	7	45		
030459	13.0		LV	4.0	18.0	−10	4.0	17	C	4.0	17	1	50	4.254	2.663
070459 200459	(Flying Time = 7 Hrs. 05 Mins. Experiment Suspended)											0	00	0.318	0.257
190559	10.0	310	15	10.0	>14.0	<−6	8.5	1	S	12.5	−3	3	45		
200559	12.0	300	20	10.0	14.0	−3	2.0	14	S	13.0	−3	2	35	1.582	1.119
060659	7.5	290	10	3.0	11.0	−7	3.0	9	C	3.0	9	1	40	0.052	0.128
250659	7.0	300	30	CD	15.0	−18	5.0	5	C	5.0	5	4	30		
260659	4.5	230	15	10.0	>10.0	<−9	5.0	−2	S	10.0	−9	2	05		
270659	4.0	150	20	10.0	10.0	−11	4.0	0	S	9.0	−9	4	10	0.547	0.577
140759	7.0		LV	CD	11.0	−10	5.5	3	C	5.5	3	8	20		
200759	7.0	360	15	CD	>12.0	<−8	8.0	−1	S	9.5	−5	5	35		
210759	5.0	270	25	7.0	>12.0	<−10	2.0	6	S	7.5	−4	4	50		
230759	4.5	270	30	4.0	8.0	−7	3.5	2	I	3.5	2	6	50		
240759	3.5	260	25	5.0	9.0	−11	3.5	0	C	5.0	−4	2	45		

TABLE III (Continued)

Date	Height of 0°C Isotherm (1000′)	Wind			Cloud				Class of Clouds	Seeding				Rainfall (inches)	
					Top		Base								
		Dir. (degs)	Speed (kts)	Ht. (1000′)	Ht. (1000′)	Temp. (°C)	Ht. (1000′)	Temp. (°C)		Ht. (1000′)	Temp. (°C)	Time (hrs	mins)	North Area	South Area
250759	2.0	260	20	4.0	6.0	−7	3.0	−1	I	3.0	−1	3	10	3.066	2.399
200859 010959	(Flying Time = 0 Hrs. 0 Mins. Experiment Suspended)											0	00	0.065	0.017
240959	6.0	250	20	10.0	12.5	−11	8.0	−4	S	10.0	−5	0	50		
250959	6.0	250	30	10.0	>12.0	<−10	7.5	−4	S	10.0	−5	7	00		
260959	7.0		LV	6.0	14.0	−15	5.5	3	C	5.5	3	2	30		
031059	7.5	300	40	11.0	>14.0	<−10	8.0	−2	S	11.0	−5	5	30		
041059	7.0	280	15	5.0	14.0	−16	4.0	6	C	4.0	6	6	00	1.317	1.367
091059	6.5	330	10	11.0	>13.0	<−8	10.0	−4	S	11.0	−5	4	40		
161059	6.5	090	10	8.0	12.5	−14	8.0	−5	I	9.0	−7	2	30		
171059	6.5		LV	7.0	13.0	−14	7.0	−1	C	7.0	−1	2	30		
181059	8.0	250	40	9.5	>16.0	<−19	9.5	−5	I	9.5	−5	1	35		
191059	9.0	310	15	CD	13.0	−9	4.0	9	I	11.0	−4	0	15		
201059	9.0	290	20	CD	15.0	−13	5.0	9	C	9.0	2	3	05		
211059	5.0	290	30	6.0	15.0	−18	5.5	−1	C	5.5	−1	5	40	1.194	1.414
180160	12.0	270	15	CD	15.0	−6	6.0	10	I	14.0	−5	1	25		
190160	11.0	340	15	8.0	14.5	−6	7.0	8	I	9.0	5	6	25		
200160	10.0	020	20	11.0	15.0	−7	10.0	1	I	12.0	−3	5	55		
210160	11.0	030	10	7.0	19.0	−12	7.0	7	C	7.0	7	9	45		
220160	11.5	010	10	9.0	18.0	−12	5.0	11	I	8.0	5	6	05	1.848	1.831
280160	15.5	250	20	CD	11.0	8	7.0	15	C	7.0	15	1	55		
300160	13.5	270	20	CD	20.0	−13	6.5	16	C	6.5	16	4	15		
020260	13.5	260	50	13.0	16.0	−5	12.0	3	S	15.0	−3	3	50		
030260	13.0	250	40	13.0	16.5	−7	13.5	−2	S	15.0	−4	2	15	1.376	0.600
110360	12.0	150	15	CD	14.0	−4	7.0	10	C	8.0	8	3	00		
120360	10.0	130	15	CD	16.0	−15	6.5	8	C	6.5	8	3	45		
140360	8.5		LV	CD	15.0	−10	6.0	6	I	8.0	1	7	15		
150360	9.0		LV	CD	20.0	−22	5.0	7	C	5.0	7	5	00	0.695	0.535
020460	11.5	270	25	8.5	14.0	−6	8.0	8	I	8.0	8	1	30		

030460	11.5	260	15	7.0	18.0	−13	7.0	7	C	7.0	7	2	15	
040460	11.0	270	15	6.0	20.0	−16	5.5	9	C	5.5	9	4	30	
050460	10.5	130	10	CD	18.0	−14	6.0	9	C	6.0	9	0	50	0.700	0.812
200460	10.5		LV	CD	14.0	−8	7.0	7	C	7.0	7	2	15	
210460	11.0	300	10	3.5	18.0	−13	4.0	14	C	5.0	12	4	00	0.348	1.192
300560	6.0	230	50	12.0	13.5	−17	5.5	2	S	12.0	−14	1	10	0.181	0.314
010660 / 100660	(Flying Time = 1 Hr. 10 Mins. Experiment Suspended)											0	00	0.113	0.035
260660	5.0	230	30	CD	11.0	−10	4.0	1	S	10.0	−8	0	45		
020760	7.0	310	50	11.0	13.5	−9	8.0	−2	I	11.0	−6	2	15		
030760	7.0	310	50	11.0	13.5	−9	8.0	−2	I	11.0	−6	4	25		
040760	5.0	270	40	10.0	8.0	−7	3.5	2	I	7.0	−6	3	20	1.124	1.198
010860	7.5	310	35	6.0	11.0	−6	3.5	7	I	6.0	3	6	25		
020860	5.0	320	25	6.0	9.0	−7	3.0	4	I	6.0	−1	5	25		
030860	4.0	250	30	4.0	7.0	−6	3.5	1	I	3.5	1	3	15	1.715	1.867
060860	4.5		LV	4.0	11.0	−15	4.0	1	C	4.0	1	1	50		
090860	5.0	270	10	6.0	9.0	−10	6.0	−2	I	6.0	−2	1	20		
100860	4.5	260	15	5.5	8.5	−9	5.5	−2	I	5.5	−2	1	15		
120860	4.5	280	35	8.0	11.5	−14	6.0	−4	I	8.0	−6	2	00		
130860	5.0	280	30	4.5	8.0	−8	5.0	0	I	5.0	0	2	05	0.020	0.168
080960	4.5	300	20	3.5	7.0	−6	3.5	2	I	3.5	2	2	30		
140960	8.5	300	30	7.0	13.0	−8	8.0	1	I	9.0	0	1	50		
170960	9.5	270	15	6.5	14.0	−9	6.0	6	C	6.0	6	2	05		
180960	7.0	260	30	7.0	10.5	−8	6.5	1	C	6.5	1	2	50		
220960	7.5	300	25	7.0	11.5	−7	7.5	0	S	10.0	−5	3	30		
260960	5.0	250	35	7.0	9.0	−9	6.0	−3	I	9.0	−9	2	40	1.771	2.226
151060	9.0	260	10	6.0	18.0	−19	7.0	5	C	7.0	5	2	10		
171060	9.0	310	25	6.0	16.0	−12	5.5	7	I	8.0	2	1	40		
181060	8.0	310	25	6.0	15.0	−13	4.5	7	I	5.0	6	2	10		
201060	7.0	330	30	10.0	11.0	−7	5.5	3	I	9.0	−3	1	20		
211060	7.0	310	20	9.0	12.0	−9	5.5	3	I	7.0	0	5	10		
221060	10.0		LV	CD	20.0	−20	4.5	11	C	4.5	11	2	35		
231060	9.0		LV	CD	11.0	−4	7.0	4	C	7.0	4	2	45		
251060	10.5	320	25	5.0	19.0	−17	6.5	8	C	6.5	8	3	00	1.800	2.125
291060	11.5	270	10	CD	20.0	−17	7.5	10	C	7.5	10	3	15		
311060	12.5	260	25	6.0	18.0	−12	6.5	12	C	6.5	12	0	45	0.222	0.366
310161	14.0	360	10	8.0	>20.0	<−13	7.5	15	C	7.5	15	2	30		
010261	11.0	270	10	CD	>20.0	<−17	9.0	6	C	9.0	6	1	30		

TABLE III (Continued)

Date	Height of 0°C Isotherm (1000′)	Wind			Cloud				Class of Clouds	Seeding				Rainfall (inches)	
					Top		Base								
		Dir. (degs)	Speed (kts)	Ht. (1000′)	Ht. (1000′)	Temp. (°C)	Ht. (1000′)	Temp. (°C)		Ht. (1000′)	Temp. (°C)	Time (hrs	mins)	North Area	South Area
070261	13.0	230	15	CD	18.0	−10	10.0	6	C	10.0	6	2	00		
080261	13.5	280	30	11.0	14.0	−1	10.5	6	I	10.5	6	1	35		
090261	12.5	270	10	CD	18.0	−11	7.5	11	C	7.5	11	2	20		
100261	11.5	200	10	CD	18.0	−12	5.5	13	C	5.5	13	3	30	1.682	1.173
110361	11.0	270	20	CD	14.0	−7	5.0	12	I	5.0	12	2	25		
120361	10.0	250	15	CD	15.0	−11	4.0	8	C	4.0	8	1	20	1.297	0.550
210461	9.0		LV	CD	11.0	−3	6.0	7	I	7.0	5	1	20		
240461	9.0	320	50	13.0	16.0	−12	5.0	4	I	8.0	2	3	20	0.733	1.110
090561	6.5	270	10	CD	10.0	−7	9.0	−6	S	10.0	−7	0	20	0.005	0.020
150561	(Flying Time = 0 Hrs. 0 Mins. Experiment Suspended)														
240561												0	00	0.004	0.003
200661	(Flying Time = 0 Hrs. 0 Mins. Experiment Suspended)														
290661												0	00	0.018	0.096
010761	7.5	230	10	CD	14.0	−15	5.5	5	C	6.0	4	0	45		
070761	6.0	270	20	CD	9.5	−8	4.0	4	I	4.5	3	1	55	0.416	0.723
020861	8.0	270	10	CD	12.0	−10	6.0	7	C	12.0	−10	1	00		
090861	8.5	270	10	CD	14.0	−12	6.5	5	I	6.5	5	1	55		
100861	5.5	240	15	7.0	9.0	−8	3.5	4	I	6.0	0	2	20		
140861	8.5	130	10	CD	11.0	−5	7.5	3	C	11.0	−5	0	20	1.279	0.840
020961	8.0	280	30	5.0	12.0	−9	5.0	6	C	5.0	6	2	20	0.191	0.177
150961	8.0	270	20	CD	15.0	−13	5.0	6	C	5.0	6	1	20	0.435	0.401
051061	11.5	090	20	CD	15.0	−9	6.0	12	C	6.0	12	2	40		
111061	10.5	260	10	CD	16.0	−11	6.5	8	C	6.5	8	2	50	0.566	0.526
021161	11.5		LV	CD	17.0	−11	6.5	13	C	6.5	13	2	35		
031161	12.5	340	12	8.0	17.0	−9	8.0	10	C	8.0	10	1	15		
041161	11.5	180	10	7.0	20.0	−17	6.5	11	C	6.5	11	1	55	0.564	0.851
140262	14.0	250	10	5.0	>15.0	<−2	5.5	15	I	5.5	15	1	15		
200262	15.5		LV	CD	16.0	−2	7.0	17	C	7.0	17	0	17		
220262	13.0	270	10	4.0	23.0	−20	3.5	18	C	3.5	18	5	25	1.368	1.516

100362	12.0	220	15	CD	14.5	−5	9.0	7	C	9.0	7	0	50	0.458	0.383
230462	10.0		LV	CD	14.0	−8	7.0	7	C	7.0	7	1	55	0.060	0.055
100562	7.5	120	25	10.0	14.0	−12	9.0	−3	S	10.0	−5	1	05		
120562	8.5	020	15	12.0	14.0	−10	11.0	−4	S	12.0	−6	0	25	0.162	1.261
170562	5.5	260	30	CD	8.5	−4	3.5	6	C	6.0	−1	0	38		
220562	9.5	270	20	CD	13.0	−8	4.0	12	C	4.0	12	2	10	0.181	0.256
040662 130662	(Flying Time = 1 Hr. 50 Mins. Experiment Suspended)											0	00	0.058	0.023
250662 040762	(Flying Time = 5 Hrs. 25 Mins. Experiment Suspended)											0	00	0.015	0.029
260762	6.0	250	20	4.0	10.0	−8	4.0	4	C	4.0	4	2	15		
070862	8.5	270	25	CD	13.0	−10	8.5	0	C	8.5	0	2	30		
080862	6.0	270	10	4.0	9.0	−5	4.5	2	I	4.5	2	1	45		
110862	7.0	060	25	9.5	>14.0	<−13	8.0	−2	S	10.0	−6	4	15		
130862	8.5	350	30	7.0	13.0	−9	7.0	3	I	7.0	3	2	40		
140862	8.0	330	35	12.0	>16.0	<−10	7.0	2	S	12.0	−5	6	25	1.629	1.598
190862	9.0	310	45	11.5	>15.0	<−12	8.0	2	I	11.5	−5	4	30		
210862	4.0	270	25	9.0	13.0	−21	4.5	−1	C	4.5	−1	1	20		
250862	6.0	240	20	CD	11.0	−11	6.5	−1	C	6.5	−1	0	35	0.819	1.083
180962	9.5	160	15	4.5	15.0	−11	4.5	10	C	5.0	9	2	25		
210962	8.0		LV	12.0	13.0	−10	4.5	8	C	4.5	8	0	45		
240962	11.0	330	20	4.0	14.0	−6	5.0	9	C	5.0	9	2	17		
250962	9.0	290	15	6.0	18.0	−19	5.0	9	C	5.0	9	1	00	1.259	1.081
290962 081062	(Flying Time = 1 Hr. 45 Mins. Experiment Suspended)											0	00	0.150	0.046
231062	10.0	320	10	8.0	14.5	−6	7.5	6	C	8.0	5	2	00		
291062	8.0	300	15	7.0	12.5	−9	7.0	4	C	7.0	4	1	50	0.725	1.541
160263 250263	(Flying Time = —— Experiment Suspended)											–	—	0.565	0.297
270263	14.0	120	15	8.0	>20.0	<−12	7.0	16	C	8.0	14	1	50		
040363	13.0	090	10	CD	14.0	−2	7.0	12	C	7.0	12	0	45		
060363	13.0	180	10	CD	20.0	−14	9.0	8	C	9.5	7	2	10		
100363	12.0	260	10	CD	14.0	−4	7.5	10	C	7.5	10	0	30		
120363	13.0	130	15	7.0	18.0	−10	7.0	12	C	8.0	10	1	35		
130363	12.0	300	10	7.0	12.0	0	7.0	11	C	7.0	11	1	00		
140363	12.5		LV	CD	13.0	−1	7.0	12	C	7.0	12	0	40		
150363	12.5		LV	CD	13.0	−1	7.5	11	C	7.5	11	1	10		

TABLE III (Continued)

Date	Height of 0°C Isotherm (1000′)	Wind			Cloud				Class of Clouds	Seeding				Rainfall (inches)	
					Top		Base								
		Dir. (degs)	Speed (kts)	Ht. (1000′)	Ht. (1000′)	Temp. (°C)	Ht. (1000′)	Temp. (°C)		Ht. (1000′)	Temp. (°C)	Time (hrs mins)		North Area	South Area
220363	13.0	320	25	13.0	>15.0	<−4	10.0	6	S	13.0	0	5	30	2.277	1.600
130463	12.0	270	10	CD	13.0	−2	6.0	12	C	6.0	12	0	20	0.107	0.025
280763	9.0	310	20	5.5	13.0	−9	6.5	7	C	6.5	7	0	50	0.273	0.269
010863 120863	(Flying Time = 2 Hrs. 30 Mins. Experiment Suspended)											—	—	0.013	0.072
120963	9.5	300	20	9.5	14.0	−8	9.5	0	I	9.5	0	0	40	0.002	0.034
021063 111063	(Flying Time = —— Experiment Suspended)											—	—	0.007	0.068
131063	11.0	270	20	CD	18.0	−14	6.0	12	C	6.0	12	2	10		
141063	8.5	130	20	5.0	18.0	−19	5.0	7	C	5.0	7	1	00		
281063	12.0	270	30	14.0	>16.0	<−8	7.0	8	S	14.0	−4	0	15		
291063	12.0	290	25	14.0	>16.0	<−8	7.0	8	S	14.0	−4	6	20		
301063	11.5	240	20	CD	18.0	−13	6.0	13	C	6.0	13	1	40		
311063	12.0	230	20	CD	18.0	−12	5.5	14	C	5.5	14	1	15	1.031	1.838

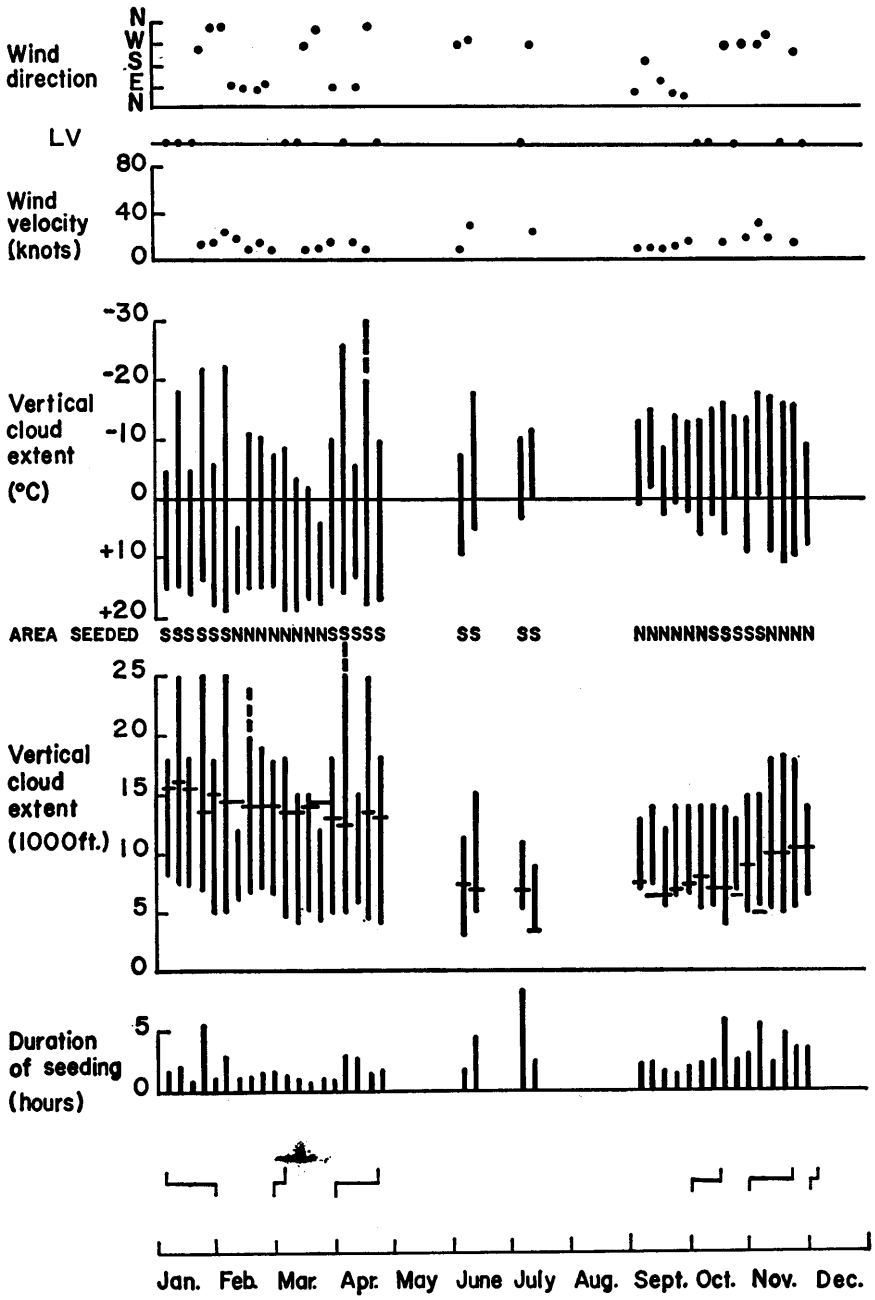


FIGURE 1

Illustration of summaries of cloud and wind conditions on seeded days.
Type of clouds: cumulus, year 1959.
(Such summaries, referring to three types of clouds, are published in all the Annual Reports of the Australian experiments.)

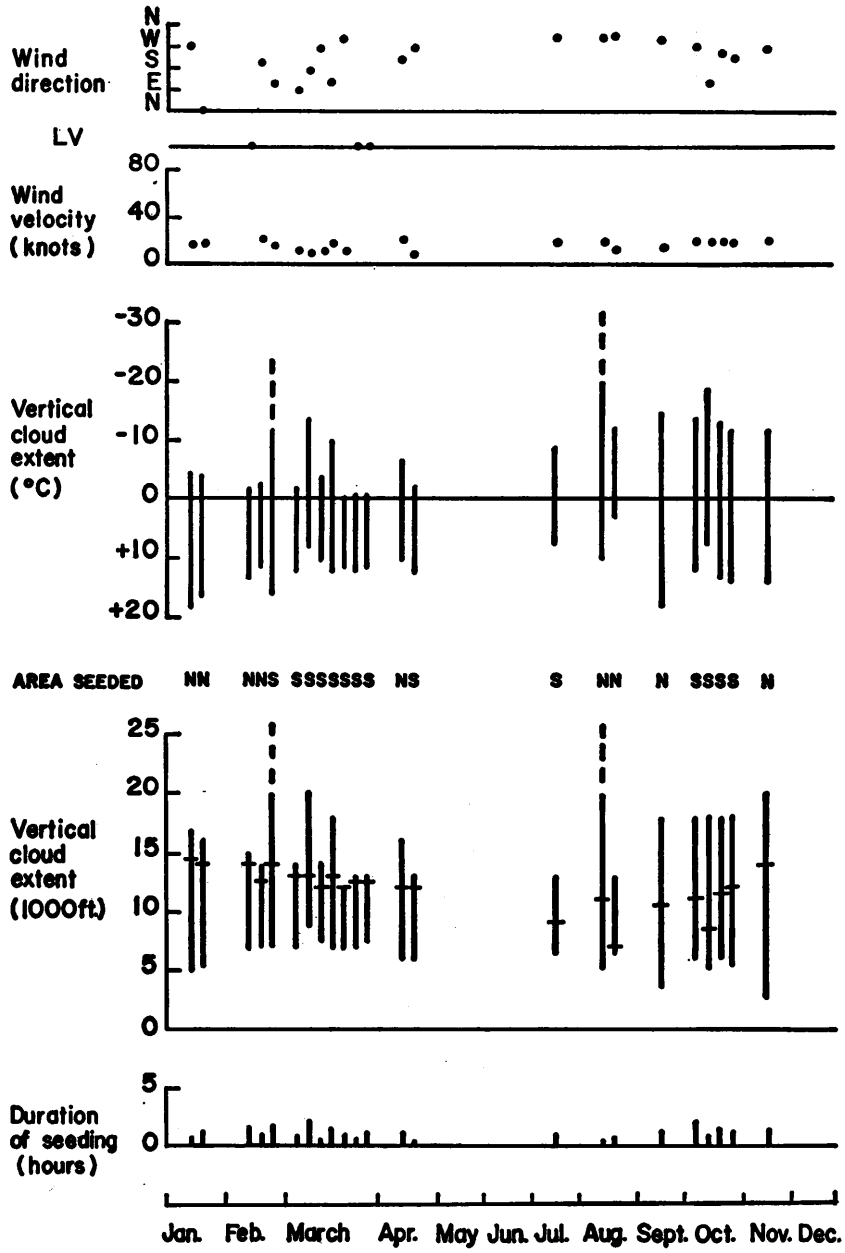


FIGURE 2

Illustration of summaries of cloud and wind conditions on seeded days. Type of clouds: cumulus, year 1963.
(Such summaries, referring to three types of clouds, are published in all the Annual Reports of the Australian experiments.)

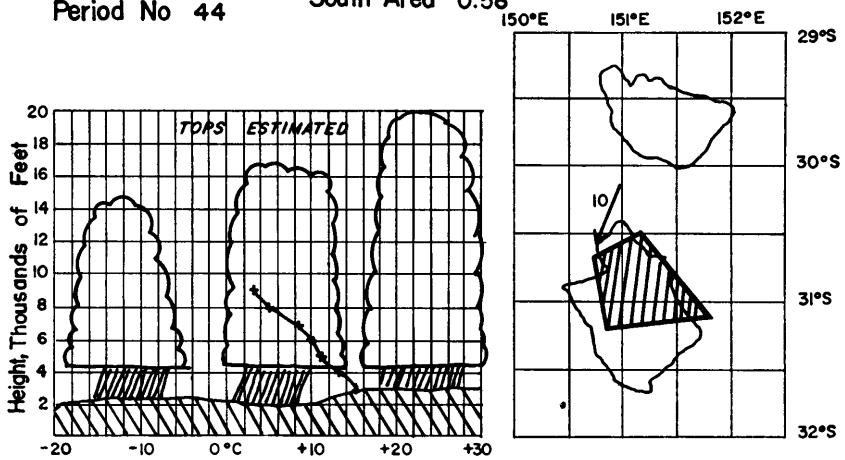
Project New England Aircraft VH-EWT Engines On) 1130

Date 22nd January 1960 Pilot Towner Engines Off) 1355

Area South C.S.O. Hewitt Burners On) 1140

Rain (Inches) North Area 0.10 Burners Off) 1345

Period No 44 South Area 0.58



Description of Clouds, etc.

5-6/8 Large Cu Base 4-5,000' Tops 15-20,000'.

Seeded large Cu at base or within from 4-6,000' between Walcha and Kingstown. Moderate to severe turbulence within and below Cu. Intermittent very heavy showers were observed in seeding area. Returned to Tamworth to change crews. Pilot exceeded weekly flight time limitation.

Winds: 025/10 at 6,000' (3 Co)

Turbulence: Moderate to severe

Clouds in other Area: Not Recorded

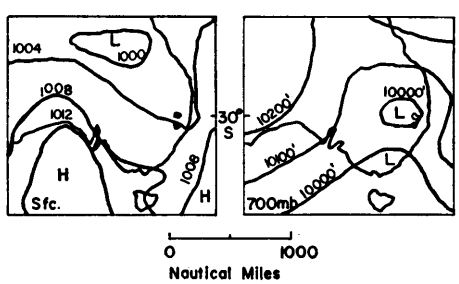


FIGURE 3

Illustration of Cloud Seeding Officer's Reports prepared for each seeding operation as published in the Annual Reports of the experiment.

(c) the clouds must have a depth exceeding half the terrain clearance of their bases;

(d) the clouds should be "solid" without included clear spaces; where these spaces exist, as in multilayer situations, the sum of the depths of the individual layers is used in assessing whether the clouds meet requirement (c);

(e) the clouds must be compact, with their tops vertically above some part of their bases.

The results of the New England experiment, as so far analyzed (Smith *et al.* 1965, Smith 1966), suggest that:

(a) seeding had pronounced effects in increasing the rainfall at the beginning of the experiment, but the results deteriorated and after the first year or two no further increases were detected in the mean rainfall;

(b) the seeding seems to have increased the variance of rainfall, by increasing rainfall on some occasions and decreasing it on others;

(c) rainfall seems to have been increased when cumuliform clouds with tops $-10°C$ or colder were seeded but reduced when warmer clouds were seeded.

The raw data presented above, supplemented if required by those in the Annual Reports, may provide a basis from which further conclusions or suggestions can be derived as to the results of seeding in this experiment.

III. An experiment in France, 1963–64

The following data, kindly supplied by Mr. Jacques Bernier, refer to the Cère-Maronne randomized cloud seeding experiment performed by the Electricité de France. A detailed description of the experiment is given in the article by Mr. Bernier, pp. 35–54.

TABLE I

YEAR BY YEAR DATA
EXPERIMENTAL PERIODS AND AMOUNTS OF PRECIPITATION IN MILLIMETERS

Year	Seeded			Not Seeded		
	No. of Periods	Average Precipitation		No. of Periods	Average Precipitation	
		Target	Control		Target	Control
1963	15	7.9	7.4	20	12.6	10.2
1964	12	16.6	13.8	9	15.5	9.2
Both Years	27	11.7	10.2	29	13.5	9.9

TABLE II

PERIOD BY PERIOD DATA
SEEDED PERIODS, EXPERIMENTAL PERIODS, PRECIPITATION AMOUNTS
WEATHER, AND HEIGHT OF −5°C LEVEL

Symbols used to characterize the type of weather:
A, instability showers; F, cold front; C, warm front.
Numerals 5, 6, 7 following letters F and C indicate the direction from which the given front approaches the experimental area: 5 means Southwest, 6 means West, 7 means Northwest.

No.		Rainy Period Between				Maximum Duration (hours)	Mean Precipitation (mm)		Weather Situation	Height (min) of −5°C Level (100 m)
							Target	Control		
1963										
1	May	9^d	08^h	9^d	20^h	12	1.1	2.2	A	29
3		13	08	14	20	36	3.5	5.2	A	25
5		27	08	28	08	24	2.6	0.0	A	36
6		28	08	29	08	24	2.6	2.0	A	36
10	June	13	08	14	08	24	9.8	4.9	A	34
11		14	08	15	08	24	5.6	8.5	F8	32
15		27	08	27	20	12	0.1	3.5	F7	48
18	July	25	08	26	20	36	0.0	1.1	F7	40
20	Aug.	8	08	9	20	36	17.7	11.0	F7	42
21		17	08	19	20	60	19.4	19.8	F6	31
26	Sept.	6	08	7	08	24	8.9	5.3	F7	25
27		24	08	25	08	24	10.6	8.9	F6	38
32	Nov.	20	08	21	08	24	10.2	4.5	F5	30
34		26	08	27	20	36	16.0	13.0	A	23
35	Dec.	11	08	12	08	24	9.7	21.1	F7	25
1964										
37	Jan.	30^d	08^h	1^d	20^h	60	21.4	15.9	F7	20
38	Feb.	24	08	26	08	48	6.1	19.5	F5	26
41	Mar.	14	20	15	20	24	24.3	16.3	F6	27
43		24	08	25	08	24	20.9	6.3	F6	28
44	Apr.	17	08	18	20	36	60.2	47.0	F6	26
46	June	13	08	15	20	60	15.2	10.8	F6	35
47		18	08	19	08	24	2.7	4.8	F7	39
49	July	11	08	12	20	36	0.3	0.0	A + C7	40
50		27	08	28	20	36	12.2	5.7	A	42
52	Aug.	9	08	10	20	36	2.2	5.1	F6	45
53		17	08	19	20	60	23.3	30.6	F6	39
54	Sept.	6	08	7	20	36	9.9	3.7	F7	37

TABLE III

NOT SEEDED PERIODS, EXPERIMENTAL PERIODS, PRECIPITATION AMOUNTS, WEATHER, AND HEIGHT OF −5°C LEVEL

Symbols used to characterize the type of weather:
A, instability showers; F, cold front; C, warm front,
Numerals 5, 6, 7 following letters F and C indicate the direction from which the given front approaches the experimental area: 5 means Southwest, 6 means West, 7 means Northwest.

No.		Rainy Period Between				Maximum Duration (hours)	Mean Precipitation (mm)		Weather Situation	Height (min) of −5°C Level (100 m)
							Target	Control		
1963										
2	May	10^d	08^h	11^d	08^h	24	1.6	1.0	A	26
4		22	08	24	20	60	28.1	27.0	A	26
7		29	08	30	08	24	7.8	0.3	A	37
8	June	5	08	5	20	12	4.0	6.0	A	36
9		10	08	12	08	48	9.6	12.6	A	36
12		18	08	19	08	24	0.2	0.5	F7	36
13		22	20	23	20	24	18.7	8.7	A	42
14		24	08	25	20	36	16.5	21.5	C6	38
16	July	10	08	11	20	36	4.6	13.9	A	42
17		12	08	13	20	36	9.3	6.7	F7	38
19	Aug.	3	08	4	20	36	3.5	4.5	A	40
22		29	08	30	20	36	0.1	0.7	F6	32
23		31	08	1	20	36	11.5	8.7	F6	36
24	Sept.	1	20	2	08	12	0.0	0.0	A	30
25		4	08	6	08	48	9.3	10.7	F7	37
28	Oct.	4	08	5	20	36	5.5	4.7	F7	38
29		30	08	1	08	48	70.2	29.1	F6	28
30	Nov.	10	08	10	20	12	0.7	1.9	F5	40
31		15	08	17	08	48	38.6	34.7	F5	25
33		24	08	26	08	48	11.3	10.2	F6	22
1964										
36	Jan.	28^d	08^h	29^d	20^h	36	3.3	2.7	F7	15
39	Feb.	26	08	27	20	36	8.9	2.8	F5	26
40	Mar.	11	08	12	20	36	11.1	4.3	F5	30
42		19	08	23	20	108	64.3	38.7	F6	23
45	May	22	08	23	20	36	16.6	11.1	F6	28
48	July	8	20	10	20	48	7.3	6.5	F7	28
51	Aug.	7	08	8	20	36	3.2	3.0	F7	43
55	Sept.	16	08	17	20	36	23.9	13.6	F7	40
56		29	08	30	20	36	0.6	0.1	F5	40

IV. Israeli experiment, 1961–65

A description of the Israeli experiment is given in the article by Dr. K. R. Gabriel, this volume, pp. 91–113. The following table I is based on tables II and III in that article. Table II, giving day by day raw observations, is based on the records of the Israeli Meteorological Service. The editors are indebted to K. R. Gabriel, K. S. Rosner, Y. Avichat, and R. Steinberg for the compilation of this table, made especially for the present volume.

TABLE I

PERIOD BY PERIOD PRECIPITATION IN NORTH AND IN CENTER AREAS AVERAGED PER EXPERIMENTAL DAY

Period	Year	Randomization by	Reading of Precipitation (hr)	No. of Days	Precipitation in North Area			Precipitation in Center Area		
					North Seeded (mm)	Center Seeded (mm)	NS/CS	Center Seeded (mm)	North Seeded (mm)	NS/CS
(i)	1961	Weeks	8 morning	77	2.50	0.74	3.35	0.85	1.05	0.81
(ii)	1961/62	Days	8 evening	160	3.21	4.35	0.74	3.39	1.83	1.86
(ii)	1962/63	Days	8 evening	182	2.04	2.91	0.70	1.99	1.16	1.72
(ii)	1963/64	Days	8 evening	69	2.96	2.47	1.20	3.42	3.99	0.86
(iii)	1963/64	Days	8 morning	113	4.32	3.25	1.33	3.39	2.41	1.41
(iii)	1964/65	Days	8 morning	182	4.26	3.19	1.34	3.88	4.01	0.97
(i) + (iii)		W/D	8 morning	372	3.91	2.70	1.45	3.10	2.91	1.06
(ii)		Days	8 evening	411	2.65	3.40	0.78	2.78	1.90	1.46
(i) + (ii) + (iii)				783	3.25	3.04	1.07	2.93	2.38	1.23

The whole experiment is a combination of three somewhat distinct parts:

(i) *preliminary part, 11 weeks of 1961;* randomization by weeks; daily precipitation measured 0800 to 0800, mornings;

(ii) *middle part, using the seasons of 1961–62, 1962–63, and a part of 1963–64;* randomization by days; daily precipitation measured from 2000 to 2000, evenings;

(iii) *part of the rainy season of 1963–64 and part of the 1963–64 season;* randomization by days; daily precipitation measured from 0800 to 0800, mornings. These three parts are separated in table II by horizontal lines.

Table II requires some explanation. Precipitation data are given separately for four areas which are labeled in the north-south direction "North," "Buffer," "Center," and "South." The areas actually seeded were North or Center. The two other areas might serve as controls. In addition to precipitation in the total North and Center areas, the table gives data for their "interior parts." The random decision determined whether during the experimental unit (week or day), the seeding (if any) was to be conducted in the North or in the Center area. However, actual seeding was limited to those days on which the Cloud Seeding Officer could ascertain, by actual observations from the operational aircraft, that the cloud tops reach or exceed the $-5°C$ level. Thus, for example, even if the random decision was to seed in the North, there may have been no seeding on the particular day if there were no clouds over the North area satisfying the above condition.

As a result, for certain studies (for example, for studies of possible aftereffects of seeding), it is important to know not only the random decision whether on a particular day the seeding (if any) is to be done over the North or over the Center area, but also whether there actually was any seeding. Furthermore, information may be required whether there was any seeding yesterday and the day before yesterday and, if so, where. Finally, analyses may be anticipated limited to general wet weather conditions, presumably not affected by the earlier seeding. As a criterion, Dr. Gabriel offers the presence or absence of rain in the Buffer zone. Thus "rainy day" means a day with some rain in the Buffer zone; "dry day" means no rain in the Buffer zone. The information on the items mentioned in this paragraph is contained in the last three digit column of table II, labeled CBA. The code is as follows: A means today; B means yesterday; C means day before yesterday. The digits 1 to 9 have the following meaning

	Random Decision to Seed in	Actual Seeding	Rain in Buffer
1	North	Yes	Raining
2	Center	Yes	Raining
3	North	No	Raining
4	Center	No	Raining
5	North	Yes	Dry
6	Center	Yes	Dry
7	North	No	Dry
8	Center	No	Dry
9	Day not in experiment		

TABLE II

DAILY PRECIPITATION AMOUNTS IN FOUR AREAS AND TWO SUBAREAS WITH RADIOSONDE DATA FOR RAINY DAYS

	Precipitation per Station											
	Entire				Interior		Radiosonde Data					Code
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
19021	1.13	1.89	0.20	8.83	1.95	2.97	−7	26	26	8	16	994
20021	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	948
21021	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	488
22021	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
23021	1.39	5.51	4.90	0.90	1.80	2.20	−4	25	38	10	12	884
24021	7.34	5.94	4.90	3.13	7.96	4.60	−7	28	33	8	13	842
25021	4.78	2.77	3.50	0.77	3.92	3.55	−3	26	43	10	14	424
26021	4.70	8.73	14.80	2.27	4.46	11.13	−7	25	30	8	14	243
27021	0.10	2.98	2.90	6.33	0.11	1.32	−8	27	39	4	17	431
28021	0.01	0.07	0.01	0.00	0.00	0.00	−8	22	25	17	13	311
1031	4.20	3.48	7.80	4.07	5.49	2.47	−9	26	41	13	10	111
2031	0.00	0.65	0.00	0.00	0.00	2.08	−4	28	25	13	10	115
3031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	157
4031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	577
5031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
6031	0.41	0.07	0.20	0.00	0.40	0.00	−1	26	40	13	14	784
7031	2.97	2.30	6.50	11.10	3.46	2.45	−3	26	70	10	15	842
8031	0.21	1.62	0.03	0.17	0.06	2.17	−5	27	44	15	15	422
9031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	228
10031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	288
11031	0.00	0.00	0.00	0.13	0.00	0.00	0	0	0	0	0	888
12031	0.01	0.40	0.00	0.53	0.02	0.40	0	0	0	0	0	887
13031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
14031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
15031	11.66	3.52	8.20	0.23	12.49	3.70	−5	999	999	999	999	771
16031	0.79	0.49	0.00	0.00	0.61	0.30	−4	29	50	6	15	715
17031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	157
18031	0.00	0.06	0.60	0.00	0.00	0.22	−4	22	25	3	16	573
19031	0.91	7.71	2.80	8.60	0.70	3.90	−7	23	10	5	20	732
20031	0.53	0.96	6.50	1.60	0.07	2.28	−5	30	15	3	20	322
21031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	228
22031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	288
23031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
24031	1.10	0.01	0.02	0.00	1.46	0.05	2	24	54	14	12	884
25031	1.21	0 05	0.02	0.00	1.79	0.00	−1	28	56	6	20	844
26031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	447
27031	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	477
28031	1.19	1.00	0.00	1.93	1.29	0.57	0	0	0	0	0	777
29031	3.54	1.88	0.90	2.60	4.89	0.53	−4	26	32	9	15	771
30031	7.65	3.05	1.00	0.00	10.60	5.00	−6	27	56	8	24	711
31031	0.00	0.03	0.00	0.00	0.00	0.00	0	0	0	0	0	117
1041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	177
2041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
3041	0.05	0.15	0.01	0.00	0.09	0.07	1	27	98	6	18	773
4041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	737
5041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
6041	29.61	2.91	5.70	0.00	24.33	2.82	−4	26	13	4	22	771
7041	12.58	3.12	7.60	0.00	14.30	2.70	−3	30	13	5	23	713

TABLE II (Continued)

	Precipitation per Station											
	Entire				Interior		Radiosonde Data					Code
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
8041	5.89	0.00	0.00	0.00	8.19	0.00	−6	29	21	6	17	135
9041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	358
10041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	588
11041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
12041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
13041	0.04	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
14041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
15041	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
16101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	998
17101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	988
18101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
19101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
20101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
21101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
22101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
23101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
24101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
25101	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
26101	0.59	1.34	1.50	1.03	0.31	1.42	5	21	28	2	25	771
27101	2.19	1.74	0.90	3.70	3.05	1.20	4	18	47	2	29	713
28101	2.40	0.00	0.00	0.00	0.77	0.00	0	21	41	6	20	135
29101	0.15	1.15	1.20	0.10	0.09	0.12	0	24	22	7	20	353
30101	1.76	2.94	1.10	1.87	3.39	2.03	−1	16	4	5	17	532
31101	0.00	0.51	0.00	0.00	0.00	0.00	0	0	0	0	0	328
1111	0.21	0.01	0.00	0.00	0.41	0.00	0	0	0	0	0	288
2111	0.49	0.07	0.00	0.00	0.00	0.00	0	0	0	0	0	888
3111	6.54	3.33	0.00	3.80	7.91	0.20	0	24	25	1	23	886
4111	0.23	0.12	0.00	0.00	0.45	0.27	−1	24	20	7	20	866
5111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	668
7111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	687
8111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
9111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
10111	2.57	4.72	4.00	0.87	2.08	4.43	0	33	16	6	20	773
11111	1.06	1.26	0.10	0.00	1.67	0.00	−2	36	19	4	23	731
12111	0.06	0.01	0.00	0.00	0.10	0.00	0	0	0	0	0	318
13111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	187
14111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
15111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
16111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
17111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
18111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
19111	2.16	0.00	0.00	0.00	2.67	0.00	0	0	0	0	0	778
20111	0.59	0.07	0.40	0.00	0.89	0.00	1	27	56	10	22	783
21111	32.32	3.37	5.10	0.23	32.35	3.83	−1	26	62	8	20	832
22111	1.84	1.39	0.50	1.43	2.25	0.40	−7	27	72	13	13	321
23111	2.32	14.76	11.80	16.33	3.38	12.97	−9	28	32	7	17	212
24111	0.01	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	127
25111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	277
26111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
27111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
28111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778

TABLE II (Continued)

	Precipitation per Station											
	Entire				Interior		Radiosonde Data					Code
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
29111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
30111	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
1121	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
2121	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
3121	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
4121	0.01	0.00	0.00	0.00	0.00	0.00	−1	18	26	1	25	788
5121	2.92	12.96	3.30	10.73	4.11	8.03	−1	11	27	5	20	882
6121	16.33	2.58	3.30	0.02	16.57	3.50	−2	17	15	4	20	822
7121	7.13	18.51	5.80	24.13	8.35	15.80	−2	29	32	7	23	221
8121	6.21	1.89	17.90	0.17	6.12	0.37	−1	24	46	10	17	212
9121	0.01	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0	128
10121	0.93	0.19	0.10	0.00	1.27	0.23	−4	24	42	8	18	283
11121	42.22	1.97	55.70	0.00	48.39	3.57	−4	26	24	7	13	831
12121	1.75	1.69	13.20	0.73	2.31	0.00	−2	22	39	9	16	314
13121	42.29	16.42	61.80	0.73	47.90	13.10	−5	24	38	6	17	141
14121	36.82	62.12	25.40	39.80	44.09	87.47	−6	27	61	7	15	412
15121	3.29	2.24	5.00	2.43	4.13	0.90	1	27	56	9	20	122
16121	0.07	0.09	0.00	0.00	0.00	0.00	0	0	0	0	0	227
17121	3.23	0.00	0.00	0.00	3.52	0.00	−2	25	48	14	15	278
18121	2.62	0.05	1.60	0.00	3.24	0.00	−1	28	44	10	25	781
19121	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	818
20121	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	187
21121	2.04	0.00	0.00	0.00	2.64	0.00	−4	26	78	13	15	875
22121	57.98	10.36	35.20	00.30	68.88	10.77	−4	27	83	9	23	752
23121	38.33	24.95	53.70	0.02	45.06	39.43	−5	25	80	7	17	522
24121	1.16	2.16	1.10	1.40	0.99	0.97	−1	25	28	14	18	224
25121	0.14	0.14	0.00	0.00	0.00	0.43	0	0	0	0	0	247
26121	2.82	0.09	0.00	0.17	3.66	0.30	0	0	0	0	0	478
27121	3.04	0.00	0.00	0.00	3.85	0.00	0	0	0	0	0	788
28121	0.64	0.00	0.00	0.00	0.45	0.00	0	0	0	0	0	888
29121	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
30121	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
31121	2.24	0.46	0.20	6.20	1.33	0.23	−4	27	33	8	18	882
1012	2.01	12.32	11.80	2.63	18.97	17.33	−4	27	33	6	17	821
2012	0.01	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	218
3012	0.05	0.01	0.00	0.00	0.07	0.00	0	0	0	0	0	188
4012	0.02	0.00	0.00	0.00	0.03	0.00	0	0	0	0	0	887
5012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
6012	3.18	5.14	7.30	2.47	2.97	4.40	−4	23	6	7	17	782
7012	0.71	5.76	10.50	4.93	0.19	6.00	−4	26	36	8	20	822
8012	11.64	6.05	41.30	0.33	14.42	0.87	−6	26	16	7	15	221
9012	21.15	0.22	4.20	0.00	16.02	0.00	−4	27	35	8	17	214
10012	15.78	15.05	19.80	1.37	16.32	11.47	−5	22	30	6	19	142
11012	11.80	7.58	16.70	2.57	10.67	5.70	−6	28	39	11	17	421
12012	0.78	0.67	7.20	0.00	1.08	0.60	−3	22	21	10	17	214
13012	0.04	1.80	2.00	0.00	0.06	1.93	−7	25	27	12	15	141
14012	0.02	2.69	4.80	0.00	0.02	0.60	−8	24	20	4	17	411
15012	0.00	0.61	1.10	0.00	0.00	0.23	−1	32	29	12	16	113
16012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	138
17012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	387
18012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877

TABLE II (Continued)

	Precipitation per Station											
	Entire				Interior		Radiosonde Data					Code
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
19012	0.04	0.00	0.00	0.00	0.06	0.00	0	0	0	0	0	777
20012	12.93	16.79	12.90	1.83	14.55	16.67	−4	27	44	3	23	772
21012	5.67	4.29	9.60	2.43	6.37	4.57	−5	30	20	7	17	722
22012	0.30	2.61	0.50	6.40	0.47	1.93	−3	30	18	6	20	223
23012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	237
24012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	378
25012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
26012	35.22	16.79	37.00	6.73	38.44	23.23	−8	35	20	6	17	871
27012	0.43	8.09	8.90	3.47	0.04	4.83	−4	25	22	10	20	714
28012	4.33	2.32	1.30	1.43	4.34	1.23	−8	23	25	4	15	141
29012	47.63	22.49	10.60	3.13	50.32	27.73	−3	28	49	7	20	411
30012	0.17	0.21	0.00	0.00	0.13	1.00	0	0	0	0	0	117
31012	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	178
1022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
2022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
3022	0.59	0.13	0.80	0.00	0.81	0.60	0	26	48	13	20	773
4022	0.34	0.07	0.30	0.00	0.31	0.00	−3	25	110	19	12	733
5022	0.03	0.00	0.00	0.00	0.04	0.00	0	0	0	0	0	337
6022	0.15	0.00	0.00	0.00	0.21	0.00	0	0	0	0	0	378
7022	12.85	6.62	18.90	0.00	13.42	5.87	−8	24	45	9	15	782
8022	30.33	8.87	28.20	1.00	35.63	6.20	−8	26	63	14	15	822
9022	5.74	6.44	1.40	8.40	6.29	6.73	−1	28	27	11	18	222
10022	0.02	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	227
11022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	278
12022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
13022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
14022	0.00	0.00	0.10	0.02	0.00	0.00	2	23	80	9	17	774
15022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	748
16022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	488
17022	12.85	15.09	7.90	6.17	14.57	14.87	−8	23	54	10	13	881
18022	3.60	4.78	2.20	1.70	4.27	2.87	−1	26	61	20	13	813
19022	9.46	3.11	2.20	3.93	12.21	2.93	−4	24	73	12	13	133
20022	10.98	43.03	7.70	29.73	12.27	22.53	−12	28	60	8	10	332
21022	0.34	7.25	1.00	13.53	0.53	1.90	−8	28	45	15	12	323
22022	0.30	0.04	1.40	0.20	0.42	0.00	−6	28	34	15	14	233
23022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	337
24022	0.00	0.02	0.00	0.02	0.00	0.00	0	0	0	0	0	377
25022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
26022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
27022	0.00	0.17	0.40	0.37	0.00	0.00	−5	28	15	5	18	783
28022	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	837
1032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
2032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
3032	0.00	0.00	0.10	0.00	0.00	0.00	1	24	30	9	13	783
4032	0.00	0.00	0.60	0.00	0.00	0.00	1	21	14	7	13	834
5032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	348
6032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	487
7032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
8032	1.24	0.26	0.00	0.00	1.66	0.10	0	0	0	0	0	777
9032	20.12	0.42	0.40	0.00	2.94	0.77	−2	28	56	8	23	773
10032	0.37	0.41	0.90	0.02	0.52	0.10	−3	30	67	19	13	734

TABLE II (Continued)

Date	Precipitation per Station: Entire Nort	Entire Cent	Entire Buff	Entire Sout	Interior Nort	Interior Cent	Radiosonde Data V	W	X	Y	Z	Code CBA
11032	0.00	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0	347
12032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	478
13032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
14032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
15032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
16032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
17032	0.06	0.00	0.00	0.00	0.09	0.00	0	0	0	0	0	778
18032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
19032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
20032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
21032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
22032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
23032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
24032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
25032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
26032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
27032	0.01	0.00	0.00	0.02	0.01	0.00	0	0	0	0	0	888
28032	0.00	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0	887
29032	0.26	0.00	0.01	0.00	0.22	0.00	1	27	92	8	22	873
30032	0.45	0.00	0.00	0.00	0.42	0.00	0	0	0	0	0	737
31032	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	378
1042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
2042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
3042	0.02	0.00	0.00	0.00	0.03	0.00	0	0	0	0	0	878
4042	0.01	0.00	0.00	0.00	0.02	0.00	0	0	0	0	0	788
5042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
6042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
7042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
8042	0.06	0.00	0.00	0.00	0.09	0.00	0	0	0	0	0	878
9042	0.06	0.09	0.00	0.02	0.09	0.00	0	0	0	0	0	788
10042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
11042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
12042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
13042	0.00	0.02	0.00	0.13	0.00	0.00	0	0	0	0	0	787
14042	0.00	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0	877
15042	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
16102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	998
17102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	987
18102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
19102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
20102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
21102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
22102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
23102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
24102	0.07	2.64	0.20	0.36	0.05	0.82	5	26	31	2	27	872
25102	0.87	0.07	0.02	1.86	1.36	0.00	2	25	15	5	25	721
26102	0.20	0.00	0.00	0.00	0.32	0.00	3	25	36	3	23	215
27102	0.10	0.15	0.01	0.24	0.13	0.00	4	18	40	8	17	151
28102	0.00	0.02	0.00	0.03	0.00	0.00	0	0	0	0	0	518
29102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	188
30102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887

TABLE II (Continued)

	Precipitation per Station											
	Entire				Interior		Radiosonde Data					Code
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
31102	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
1112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
2112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
3112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
4112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
5112	0.00	0.00	0.01	0.00	0.00	0.00	8	28	23	6	23	784
6112	0.01	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	848
7112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	487
8112	3.20	1.66	1.10	0.00	2.86	2.55	1	30	32	7	23	871
9112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	718
10112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	187
11112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
12112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
13112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
14112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
15112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
16112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
17112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
18112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
19112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
20112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
21112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
22112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
23112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
24112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
25112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
26112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
27112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
28112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
29112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
30112	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
1122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
2122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
3122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
4122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
5122	9.73	5.81	6.70	7.71	11.84	4.82	−2	26	60	12	15	881
6122	13.96	8.88	39.40	6.40	14.59	12.77	−2	26	45	3	28	812
7122	7.46	14.16	4.90	8.83	8.44	12.37	−3	25	36	7	18	121
8122	13.08	15.88	27.90	1.17	13.97	18.72	−3	26	38	6	17	212
9122	44.56	41.99	50.70	0.26	46.51	46.27	−6	26	36	7	13	122
10122	32.57	12.19	40.20	0.06	29.58	21.85	−9	24	56	6	25	222
11122	32.74	0.23	12.40	0.00	40.57	0.77	−6	27	27	6	17	221
12122	0.04	0.00	0.00	0.00	0.03	0.00	0	0	0	0	0	217
13122	14.86	1.28	21.80	4.60	15.41	1.47	−2	29	41	4	20	172
14122	0.30	7.90	2.60	0.20	0.53	10.00	1	28	33	11	20	722
15122	0.03	0.00	0.00	0.00	0.04	0.00	0	0	0	0	0	228
16122	1.96	0.09	0.00	0.00	2.21	0.00	−1	26	74	7	17	286
17122	9.09	5.16	23.70	0.00	11.33	9.47	2	28	34	13	17	862
18122	0.14	0.00	0.00	0.00	0.13	0.00	0	0	0	0	0	628
19122	0.11	0.00	0.00	0.00	0.23	0.00	0	0	0	0	0	287
20122	1.71	0.00	0.00	0.00	1.62	0.00	0	0	0	0	0	877

TABLE II (Continued)

Date	Precipitation per Station: Entire Nort	Entire Cent	Entire Buff	Entire Sout	Interior Nort	Interior Cent	Radiosonde Data V	W	X	Y	Z	Code CBA
21122	0.01	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
22122	0.09	0.00	0.00	0.00	0.10	0.00	0	0	0	0	0	787
23122	0.06	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
24122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
25122	0.13	0.00	0.10	0.00	0.18	0.00	2	26	28	10	17	873
26122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	738
27122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	388
28122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
29122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
30122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
31122	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
1013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
2013	1.23	0.00	1.50	0.00	2.04	0.00	2	28	45	4	17	881
3013	0.86	0.21	0.20	0.03	1.12	0.00	1	30	49	12	15	813
4013	0.16	0.00	0.40	0.00	0.30	0.00	3	29	45	8	23	133
5013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	337
6013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
7013	0.01	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	777
8013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
9013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
10013	2.44	2.31	3.60	0.00	3.42	3.32	−3	27	33	4	25	773
11013	0.95	0.49	0.40	0.57	1.27	0.15	1	32	38	11	17	733
12013	0.02	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	337
13013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
14013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
15013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
16013	0.41	0.03	0.00	0.00	0.73	0.00	0	0	0	0	0	778
17013	10.34	3.56	9.90	2.23	11.72	4.00	−2	26	55	4	17	781
18013	0.01	0.11	0.01	0.03	0.01	0.12	−3	28	36	10	17	811
19013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	117
20013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	178
21013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
22013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
23013	0.01	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0	777
24013	11.77	10.83	9.20	0.00	14.09	24.62	−4	26	35	4	25	771
25013	22.50	0.57	1.30	0.00	30.90	0.42	−1	25	75	9	15	711
26013	47.89	31.32	36.20	0.00	57.39	57.62	−3	25	65	4	17	112
27013	17.04	7.63	13.40	0.00	19.41	10.10	−9	25	45	7	13	121
28013	00.01	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	217
29013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	177
30013	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
31013	0.68	0.26	0.40	0.05	0.67	0.77	−4	25	55	1	17	772
1023	1.68	0.00	0.00	0.00	2.28	0.00	−4	25	25	1	15	725
2023	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	257
3023	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	578
4023	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
5023	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
6023	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
7023	0.06	0.00	0.00	0.00	0.00	0.00	2	24	30	2	20	777
8023	0.30	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	775
9023	0.76	0.34	0.00	0.10	1.59	0.97	−4	24	5	1	25	756

TABLE II (Continued)

	Precipitation per Station						Radiosonde Data					Code
	Entire				Interior							
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
10023	0.98	2.48	0.90	3.13	0.94	2.32	−3	25	40	6	15	564
11023	34.87	19.29	33.70	7.33	40.03	31.95	−4	25	45	1	20	642
12023	20.06	25.28	15.90	42.30	25.39	20.35	−5	29	45	5	20	421
13023	3.94	9.18	1.40	7.53	5.71	10.67	−2	29	26	10	11	213
14023	0.09	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	138
15023	0.01	0.07	0.00	0.00	0.03	0.02	0	0	0	0	0	388
16023	0.94	0.27	0.50	0.00	1.39	0.30	−1	26	35	8	15	881
17023	0.06	0.03	0.00	0.00	0.09	0.12	0	0	0	0	0	818
18023	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	187
19023	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
20023	0.00	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	788
21023	0.13	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
22023	2.10	0.00	0.00	0.00	3.11	0.00	0	0	0	0	0	887
23023	0.81	0.00	0.00	0.00	1.50	0.00	0	0	0	0	0	878
24023	0.39	0.01	0.01	0.00	0.22	0.00	−2	25	80	5	25	784
25023	9.59	16.18	11.20	16.53	12.36	15.77	−3	26	60	8	15	841
26023	0.23	0.58	0.30	0.00	0.24	0.27	0	25	55	10	18	414
27023	0.26	0.99	1.50	0.00	0.32	0.75	−5	26	80	1	17	141
28023	0.47	0.00	0.10	0.00	0.29	0.00	−2	26	71	11	16	413
1033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	137
2033	0.15	0.00	0.00	0.00	0.14	0.00	0	0	0	0	0	377
3033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
4033	4.17	1.59	4.20	0.01	4.07	1.40	−9	25	90	6	15	784
5033	16.78	7.64	4.50	16.07	21.09	7.02	−4	27	65	8	15	841
6033	1.66	1.78	1.20	0.30	2.46	1.35	−5	26	55	7	15	411
7033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	118
8033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	187
9033	0.00	0.00	0.00	0.02	0.00	0.00	0	0	0	0	0	877
10033	0.00	0.03	0.00	0.83	0.00	0.00	0	0	0	0	0	777
11033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
12033	0.01	0.00	0.00	0.00	0.02	0.00	0	0	0	0	0	787
13033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
14033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
15033	8.18	5.28	2.20	0.03	10.07	7.60	−4	25	25	2	17	782
16033	5.01	3.15	1.60	2.20	6.21	3.55	−5	28	65	8	15	822
17033	14.01	0.47	8.20	0.00	16.61	0.55	−3	28	60	14	10	221
18033	0.14	0.00	0.00	0.00	0.23	0.00	0	0	0	0	0	218
19033	0.67	1.43	1.40	3.97	0.56	1.72	−4	28	35	6	13	182
20033	0.44	0.05	0.01	0.00	0.67	0.12	−5	27	50	3	21	824
21033	0.63	0.00	0.10	0.00	0.58	0.00	2	28	34	11	21	244
22033	0.03	0.00	0.00	0.00	0.06	0.00	0	0	0	0	0	447
23033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	478
24033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
25033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
26033	0.08	0.00	0.00	0.00	0.15	0.00	0	0	0	0	0	878
27033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
28033	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
29033	0.07	0.00	0.00	0.00	0.15	0.00	0	0	0	0	0	777
30033	4.92	1.62	0.40	0.00	6.72	1.52	−3	29	40	15	20	771
31033	0.05	0.01	0.00	0.00	0.09	0.02	0	0	0	0	0	717
1043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	178

TABLE II (Continued)

Date	Precipitation per Station: Entire Nort	Entire Cent	Buff	Sout	Interior Nort	Interior Cent	Radiosonde Data: V	W	X	Y	Z	Code CBA
2043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
3043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
4043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
5043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
6043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
7043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
8043	1.37	1.33	0.10	0.17	1.09	1.07	2	21	43	0	30	784
9043	0.03	0.00	0.00	0.00	0.04	0.00	0	0	0	0	0	848
10043	0.00	0.02	0.00	0.00	0.00	0.00	0	0	0	0	0	488
11043	3.56	4.41	0.00	0.00	5.66	3.22	−1	30	60	8	15	887
12043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
13043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
14043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
15043	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
1113	6.35	4.07	3.50	3.17	5.61	6.58	2	999	999	999	35	994
2113	11.77	21.51	12.00	25.70	13.06	12.65	−2	30	25	4	28	942
3113	0.05	0.08	1.00	0.17	0.04	0.00	−1	36	13	999	22	424
4113	0.00	0.03	0.00	0.00	0.00	0.00	0	0	0	0	0	248
5113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	488
6113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
7113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
8113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
9113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
10113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
11113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
12113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
13113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
14113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
15113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
16113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
17113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
18113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
19113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
20113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
21113	5.90	16.83	17.30	8.73	4.31	26.98	−2	33	15	2	20	781
22113	0.00	0.00	8.00	0.00	0.00	0.00	0	27	11	999	999	814
23113	0.18	0.00	0.20	0.00	0.00	0.00	2	999	999	999	999	144
24113	13.11	8.92	13.20	10.23	9.88	16.10	−1	26	35	6	25	441
25113	0.28	1.04	0.90	0.00	0.50	0.28	1	999	999	1	25	411
26113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	118
27113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	188
28113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
29113	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
30113	6.60	0.92	7.70	0.00	7.04	1.50	1	25	49	11	15	884
1123	16.26	21.62	4.50	28.90	17.48	24.53	−4	28	45	8	15	841
2123	11.37	9.66	5.80	33.40	13.57	3.13	−3	27	40	6	22	411
3123	10.87	35.21	24.10	60.10	10.15	31.75	−5	28	20	4	20	111
4123	21.48	7.74	10.00	7.77	21.83	6.73	−6	31	59	11	10	113
5123	0.70	0.32	0.30	0.60	0.84	3.65	−3	31	53	5	20	133
6123	0.00	1.06	0.00	0.53	0.01	0.10	0	0	0	0	0	337
7123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377

TABLE II (Continued)

	Precipitation per Station											
	Entire				Interior		Radiosonde Data					Code
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
8123	12.20	0.49	20.00	0.00	13.56	0.55	−3	26	47	5	16	774
9123	27.48	64.69	26.50	26.70	28.20	95.05	−5	27	50	8	21	744
10123	6.91	16.93	4.40	18.63	7.67	12.25	−8	999	999	15	12	443
11123	0.94	0.05	0.00	0.00	0.67	0.00	0	0	0	0	0	438
12123	0.01	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	387
13123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
14123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
15123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
16123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
17123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
18123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
19123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
20123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
21123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
22123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
23123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
24123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
25123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
26123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
27123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
28123	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
29123	12.35	15.61	12.00	9.97	14.01	14.95	−7	26	40	10	18	771
30123	20.83	26.69	20.10	12.23	20.99	28.38	−10	28	40	10	18	712
31123	1.29	0.74	0.80	1.53	1.04	1.08	−10	28	50	18	9	121
1014	0.00	0.23	0.00	0.20	0.00	0.00	0	0	0	0	0	218
2014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	187
3014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
4014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
5014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
6014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
7014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
8014	0.07	0.82	0.00	0.00	0.05	1.30	0	0	0	0	0	786
9014	0.88	0.00	1.50	0.00	0.97	0.00	−8	999	999	6	15	861
10014	0.01	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	618
11014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	188
12014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
13014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
14014	1.65	2.86	1.16	3.07	1.79	1.85	−6	28	15	999	12	884
15014	19.94	17.97	7.36	12.53	21.44	15.62	−6	28	35	8	21	841
16014	4.36	10.60	1.93	3.00	4.69	14.45	−5	27	45	8	17	412
17014	22.82	26.72	25.80	13.10	26.96	25.50	−8	26	85	9	16	122
18014	3.50	2.03	0.90	2.40	4.37	1.05	−14	27	75	9	12	222
19014	0.06	0.00	0.00	0.00	0.03	0.00	0	0	0	0	0	228
20014	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	287
21014	0.17	0.42	0.26	0.20	0.09	0.37	−7	27	57	999	8	873
22014	0.04	0.48	0.00	1.07	0.08	0.37	0	0	0	0	0	736
23014	3.16	11.68	14.53	13.83	3.15	14.10	−8	26	45	6	16	362
24014	22.20	31.23	22.93	38.53	23.69	41.40	−8	26	25	4	19	622
25014	3.54	7.39	4.83	5.20	3.87	5.80	−8	30	40	15	12	221
26014	1.13	2.30	3.80	3.00	0.90	2.85	−8	28	30	6	17	213
27014	2.23	0.10	0.56	0.83	2.27	0.22	−5	28	40	13	13	133

TABLE II (Continued)

Date	Precipitation per Station: Entire Nort	Entire Cent	Entire Buff	Entire Sout	Interior Nort	Interior Cent	Radiosonde Data V	W	X	Y	Z	Code CBA
28014	0.40	0.40	2.83	0.43	0.38	0.67	−4	27	50	999	14	334
29014	0.04	0.01	0.10	0.00	0.00	0.00	−2	29	39	999	11	343
30014	0.04	0.01	0.01	0.00	0.05	0.00	1	27	34	999	19	434
31014	4.29	3.20	2.36	0.87	4.46	2.72	−2	23	61	9	11	341
1024	0.54	0.00	0.00	0.00	0.20	0.00	0	0	0	0	0	417
2024	14.15	5.35	9.63	1.00	17.27	6.65	−7	22	64	7	13	171
3024	45.20	6.91	19.00	0.83	52.91	10.67	−7	24	999	5	14	711
4024	33.54	32.33	21.80	6.27	39.41	45.52	−6	27	45	4	21	112
5024	11.41	20.39	3.86	13.93	12.42	21.52	−8	28	50	7	16	121
6024	0.43	0.40	0.16	1.23	0.52	0.25	−6	32	26	12	999	214
7024	0.05	0.00	0.00	0.00	0.02	0.00	0	0	0	0	0	148
8024	1.68	1.39	2.03	0.30	2.48	2.60	1	25	59	16	11	483
9024	9.82	10.49	14.33	4.60	10.80	13.40	−6	26	55	6	18	832
10024	10.72	3.75	14.13	0.57	12.61	6.45	−4	28	25	5	21	321
11024	3.40	1.70	6.43	2.50	4.62	0.40	−9	27	25	3	12	211
12024	13.22	15.61	25.03	17.90	15.00	12.02	−9	26	25	7	16	111
13024	9.49	9.56	23.50	8.43	10.84	12.50	−6	26	20	7	18	112
14024	5.01	0.19	0.86	0.00	4.76	0.00	−8	28	20	5	22	121
15024	0.39	0.00	0.00	0.00	0.25	0.00	0	0	0	0	0	217
16024	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	177
17024	6.10	1.31	7.00	0.00	7.82	1.02	−5	25	60	11	14	773
18024	0.24	0.23	0.43	0.30	0.25	0.00	−4	999	999	13	14	734
19024	0.04	0.00	0.00	0.00	0.07	0.00	0	0	0	0	0	347
20024	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	477
21024	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
22024	4.62	3.90	1.06	2.87	6.62	4.87	−4	27	45	6	19	771
23024	8.23	8.06	11.50	4.90	10.12	10.22	−7	25	55	9	21	712
24024	5.15	1.70	2.43	1.20	6.61	1.42	−2	26	51	17	17	123
25024	1.67	0.63	1.16	0.03	1.02	0.01	−5	28	49	14	13	233
26024	0.04	0.12	0.00	0.00	0.00	0.00	0	0	0	0	0	338
27024	0.00	0.00	0.00	0.00	0.00	0.00	−5	0	0	0	0	388
28024	7.37	9.80	13.46	28.17	9.35	12.12	−4	27	25	7	18	881
29024	4.69	6.32	3.20	28.83	3.57	3.87	−3	29	25	4	23	811
1034	0.02	0.00	0.02	0.00	0.00	0.00	0	28	52	999	999	114
2034	4.51	3.67	1.33	0.00	6.97	1.17	−1	28	58	13	17	143
3034	0.22	1.87	0.00	0.23	0.10	0.60	0	0	0	0	0	437
4034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
5034	0.26	0.00	0.06	0.00	0.42	0.00	3	23	50	6	13	773
6034	0.85	0.26	0.80	0.00	1.52	0.22	−1	26	60	10	23	734
7034	0.03	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	347
8034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	477
9034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
10034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
11034	33.74	16.17	15.60	3.60	38.90	19.10	3	22	50	6	20	874
12034	1.90	3.60	0.50	0.07	2.29	2.32	−4	28	60	7	15	743
13034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	438
14034	0.50	1.58	1.46	0.27	0.59	1.15	−1	24	41	12	12	384
15034	10.12	3.64	7.16	0.00	10.36	3.62	−3	26	35	5	20	842
16034	0.32	0.05	0.00	0.00	0.03	0.00	0	0	0	0	0	427
17034	0.00	0.11	0.00	0.17	0.00	0.10	0	0	0	0	0	277
18034	1.98	7.03	2.36	9.50	2.07	4.00	−3	23	25	5	18	771

TABLE II (Continued)

	Precipitation per Station						Radiosonde Data					Code
	Entire				Interior							
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
19034	13.41	2.72	6.70	3.33	16.49	0.90	−4	25	35	7	22	711
20034	38.61	5.22	15.00	0.87	42.57	9.95	−4	26	25	8	18	111
21034	1.09	0.05	0.03	0.00	0.00	0.00	−9	32	47	13	17	114
22034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	147
23034	0.00	0.02	0.00	0.00	0.00	0.10	0	0	0	0	0	478
24034	0.35	0.87	0.33	0.00	0.48	2.97	1	24	28	5	15	783
25034	5.37	8.72	2.60	7.00	6.75	13.10	−5	24	60	8	11	834
26034	1.77	1.66	0.20	1.47	2.35	0.02	−3	29	35	4	19	342
27034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	427
28034	0.02	0.00	0.00	0.00	0.05	0.00	0	0	0	0	0	277
29034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
30034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
31034	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
1044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
2044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
3044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
4044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
5044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
6044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
7044	0.02	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
8044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
9044	0.02	0.00	0.00	0.00	0.04	0.00	0	0	0	0	0	888
10044	1.02	0.02	0.20	0.00	1.75	0.00	0	999	999	14	15	884
11044	0.00	0.07	0.01	0.00	0.00	0.12	2	29	58	2	10	843
12044	0.71	0.04	0.13	0.00	0.66	0.05	5	999	999	5	22	434
13044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	348
14044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	487
15044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
16044	20.21	2.93	9.96	1.60	23.00	1.62	−4	29	35	6	15	771
17044	0.18	1.12	0.60	0.00	0.35	0.15	−4	29	35	9	17	714
18044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	147
19044	0.01	0.00	0.00	0.00	0.02	0.00	0	0	0	0	0	478
20044	3.13	6.13	3.26	17.43	5.14	4.56	−5	24	24	2	15	784
21044	1.05	1.05	0.00	0.37	0.56	0.50	0	0	0	0	0	848
22044	0.31	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	488
23044	0.00	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	888
24044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
25044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
26044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
27044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
28044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
29044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
30044	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
16104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	998
17104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	987
18104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
19104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
20104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
21104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
22104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
23104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788

TABLE II (Continued)

Date	Precipitation per Station: Entire Nort	Entire Cent	Buff	Sout	Interior Nort	Interior Cent	Radiosonde Data V	W	X	Y	Z	Code CBA
24104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
25104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
26104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
27104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
28104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
29104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
30104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
31104	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
1114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
2114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
3114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
4114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
5114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
6114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
7114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
8114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
9114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
10114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
11114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
12114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
13114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
14114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
15114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
16114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
17114	20.76	24.17	21.93	20.10	25.79	26.45	−6	18	24	3	27	871
18114	21.16	22.83	47.30	0.90	24.62	31.60	−3	22	12	4	27	712
19114	19.21	5.88	26.90	3.47	21.64	6.55	−4	24	20	3	27	122
20114	80.45	22.23	99.99	6.70	90.59	26.00	−3	24	65	6	25	221
21114	51.80	60.46	60.70	0.00	66.53	82.85	−4	24	80	−1	18	211
22114	2.54	36.90	3.60	11.77	3.53	45.05	−5	27	49	6	21	112
23114	15.02	7.83	16.47	2.90	14.22	10.05	−5	25	26	8	15	123
24114	7.88	9.18	11.03	21.00	9.39	7.05	−6	30	48	6	17	231
25114	2.20	2.76	1.23	3.20	2.89	2.48	−3	28	52	7	17	311
26114	1.18	3.01	0.10	0.97	1.48	0.77	0	30	20	13	26	113
27114	0.00	0.28	0.00	0.23	0.00	0.00	0	0	0	0	0	138
28114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	387
29114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
30114	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
1124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
2124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
3124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
4124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
5124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
6124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
7124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
8124	19.06	5.16	15.03	2.40	24.05	6.10	−4	25	50	3	15	782
9124	2.07	0.26	1.90	0.03	0.45	0.20	−10	21	44	6	12	821
10124	40.77	79.23	48.67	1.10	38.29	95.38	−6	26	35	−1	16	212
11124	2.13	0.09	0.00	0.00	0.89	0.00	0	0	0	0	0	125
12124	0.21	0.26	2.67	1.03	0.07	0.18	−7	32	7	7	23	253
13124	15.90	27.98	7.60	23.93	16.66	16.83	−7	27	26	2	17	531

TABLE II (Continued)

	Precipitation per Station						Radiosonde Data					Code
	Entire				Interior							
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
14124	9.60	16.86	11.70	9.80	10.36	17.68	−9	26	21	1	18	311
15124	5.60	20.15	24.40	8.10	6.91	24.55	−7	36	10	−1	20	112
16124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	128
17124	0.00	0.04	0.87	0.57	0.06	0.13	−3	29	13	13	11	284
18124	0.00	0.01	0.00	0.00	0.00	0.00	0	0	0	0	0	847
19124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	478
20124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
21124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
22124	3.89	0.83	4.23	0.40	4.34	0.98	3	26	31	13	14	873
23124	1.97	0.93	0.67	0.53	2.14	0.73	0	28	69	0	25	732
24124	0.63	0.61	0.03	2.80	0.18	0.00	−4	26	50	9	21	323
25124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	237
26124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
27124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
28124	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
29124	0.00	0.00	0.00	0.00	0.07	0.00	0	0	0	0	0	778
30124	0.85	0.01	0.20	0.00	0.01	0.00	−1	30	40	15	10	783
31124	1.42	0.76	2.33	0.20	1.51	1.35	−1	29	47	2	14	833
1015	20.03	15.72	13.67	23.53	19.90	8.32	−4	28	68	12	22	331
2015	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	317
3015	0.34	0.00	0.00	0.00	0.46	0.00	0	0	0	0	0	177
4015	13.16	0.00	1.60	0.00	14.67	0.00	−3	29	40	7	22	774
5015	0.01	0.00	0.00	0.00	0.01	0.00	0	0	0	0	0	748
6015	1.42	3.29	0.27	0.07	1.52	3.58	−1	28	54	9	21	483
7015	0.27	3.48	0.00	0.00	0.19	5.65	0	0	0	0	0	838
8015	30.28	18.42	9.67	20.43	24.48	12.15	−4	28	30	9	15	381
9015	0.21	5.19	0.43	13.10	0.31	3.15	−9	34	13	7	16	812
10015	21.13	44.03	21.70	59.47	22.99	57.15	−6	27	39	6	14	121
11015	15.54	20.07	11.77	46.70	14.86	19.85	−9	28	53	6	20	212
12015	0.01	3.89	0.10	5.60	0.00	6.03	−10	31	17	999	999	123
13015	1.30	14.00	10.90	11.43	1.24	15.40	−12	29	47	5	21	232
14015	0.10	3.56	2.16	4.00	0.01	2.15	−10	29	62	8	17	323
15015	3.97	3.68	3.90	0.00	4.61	2.53	−7	28	65	9	17	232
16015	0.39	0.00	0.00	0.00	0.67	0.00	0	0	0	0	0	327
17015	0.73	0.72	1.53	0.37	0.73	0.60	−3	27	45	9	17	274
18015	27.83	20.57	19.17	7.77	27.16	22.58	−1	25	52	3	23	742
19015	13.01	27.64	12.67	30.63	14.58	23.38	−6	29	45	2	21	422
20015	1.30	0.00	0.07	0.00	1.32	0.00	−4	25	40	12	16	223
21015	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	238
22015	0.29	0.02	0.00	0.00	0.21	0.00	0	0	0	0	0	387
23015	0.00	0.09	0.00	0.00	0.00	0.00	0	0	0	0	0	877
24015	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
25015	2.40	0.07	0.83	0.13	2.88	0.00	−4	21	68	11	15	774
26015	23.40	26.44	30.40	1.60	25.98	38.48	−6	27	60	2	20	741
27015	4.48	8.28	10.07	0.73	3.51	9.75	−7	26	31	6	14	411
28015	1.91	4.24	4.27	0.87	2.93	2.40	−8	25	22	6	14	113
29015	1.30	1.36	2.77	2.73	1.29	0.23	−7	30	16	2	17	132
30015	0.73	0.13	0.20	0.00	0.77	0.00	−6	29	27	9	16	324
31015	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	248
1025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	487
2025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878

TABLE II (Continued)

Date	Precipitation per Station: Entire Nort	Entire Cent	Entire Buff	Entire Sout	Interior Nort	Interior Cent	Radiosonde Data V	W	X	Y	Z	Code CBA
3025	3.27	0.48	1.17	0.37	3.69	0.33	−2	23	24	9	14	783
4025	16.00	25.30	7.10	19.67	21.65	15.63	−9	26	81	1	16	831
5025	3.80	5.72	7.03	0.23	4.50	5.55	−5	26	62	9	17	312
6025	6.00	1.27	2.93	0.00	8.59	2.90	−2	24	76	15	12	122
7025	1.94	5.72	0.90	0.00	2.15	10.95	−7	26	61	7	17	222
8025	11.87	14.96	4.97	10.90	14.64	12.45	−5	25	108	13	12	223
9025	0.51	1.68	0.63	2.23	0.71	1.03	−4	28	59	13	14	232
10025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	328
11025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	288
12025	0.15	0.02	0.00	0.00	0.24	0.10	0	0	0	0	0	888
13025	7.49	2.63	5.73	0.00	9.13	3.03	−3	26	57	11	13	881
14025	4.09	3.38	7.13	0.00	4.07	5.43	−6	26	101	9	22	814
15025	0.00	0.14	0.07	0.00	0.00	0.00	−2	26	72	999	999	143
16025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	437
17025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
18025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
19025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
20025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
21025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
22025	8.89	4.89	2.57	3.07	10.76	6.10	−6	27	98	13	11	884
23025	0.09	0.25	0.00	0.00	0.17	0.48	0	0	0	0	0	848
24025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	487
25025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
26025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
27025	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
28025	7.36	5.63	8.73	6.03	9.11	5.80	5	23	80	3	23	774
1035	1.73	0.72	0.63	1.17	0.73	0.07	−5	27	32	9	15	743
2035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	437
3035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	377
4035	0.54	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
5035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
6035	0.01	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
7035	0.02	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
8035	0.89	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
9035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
10035	0.71	0.00	0.00	0.30	0.00	0.00	0	0	0	0	0	887
11035	2.02	1.39	0.56	0.47	1.52	2.45	1	999	999	6	24	874
12035	0.10	0.11	0.00	0.00	0.03	0.00	0	0	0	0	0	747
13035	0.01	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	477
14035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	777
15035	0.03	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
16035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	788
17035	0.01	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888
18035	0.02	0.00	0.00	0.00	0.04	0.00	0	0	0	0	0	887
19035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	877
20035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	778
21035	2.82	2.57	5.90	2.40	2.61	3.12	0	22	38	5	17	784
22035	20.24	24.45	30.00	55.60	21.75	16.17	−6	23	38	7	16	842
23035	13.39	10.68	9.40	14.97	16.68	6.12	−3	30	30	9	15	422
24035	0.19	0.27	0.10	0.00	0.28	0.58	−3	30	40	9	17	223
25035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	238

TABLE II (Continued)

	Precipitation per Station											
	Entire				Interior		Radiosonde Data					Code
Date	Nort	Cent	Buff	Sout	Nort	Cent	V	W	X	Y	Z	CBA
26035	9.76	5.52	6.60	0.50	12.01	6.15	−6	23	60	4	17	382
27035	1.33	1.11	4.70	0.00	1.46	2.22	1	25	15	1	14	824
28035	0.00	0.00	0.00	0.00	0.07	0.00	0	0	0	0	0	247
29035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	478
30035	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
31035	0.78	1.79	5.67	5.10	0.90	3.85	−4	999	999	6	15	874
1045	2.68	4.17	1.53	5.57	2.93	2.95	−6	28	30	8	13	742
2045	12.89	10.99	4.73	11.67	16.46	8.03	−4	23	60	6	18	421
3045	6.45	7.29	7.30	2.40	8.79	6.78	−11	26	40	7	12	212
4045	0.41	1.28	1.57	1.27	0.61	0.45	−8	30	37	6	12	124
5045	2.84	0.00	1.97	0.00	2.67	0.00	−7	29	41	9	11	244
6045	0.12	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	448
7045	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	488
8045	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	887
9045	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	878
10045	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	787
11045	4.57	0.00	5.20	0.00	5.78	0.00	1	999	999	2	20	874
12045	8.25	0.03	0.53	0.00	11.35	0.00	−1	999	999	6	22	741
13045	0.54	0.00	0.00	0.00	0.24	0.00	0	0	0	0	0	418
14045	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	188
15045	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	888

Columns of table II with headings V, W, X, Y, and Z are based on radiosonde data available only for "rainy days": V = 700 mb temperature; W = 500 mb wind direction; X = 500 mb wind speed in knots; Y = Showalter stability index; Z = precipitable water surface to 500 mb, in millimeters. The symbol 0 entered on dry days means absence of information. The sequence of numerals 999 entered on a few rainy days indicates missing data.

The first column of table II gives the dates of the consecutive experimental days. Of the five digits the first two indicate the day of the month. The next two digits refer to the month. The last digit identifies the year 1961, 62, 63, 64, and 1965, respectively.

V. Swiss hail prevention experiment "Grossversuch III" 1957–63

"Grossversuch III" is described and discussed in some detail in three papers published in this volume pp. 141–159, pp. 293–325 and pp. 327–350. The following tables have been compiled at the Statistical Laboratory using the information provided in the seven annual reports. Since there was just one raingage in zone 1 and since this zone is out of character with the rest of the target, data for zone 1 are not given in tables II and III.

TABLE I

YEAR BY YEAR PRECIPITATION AMOUNTS IN MILLIMETERS AVERAGED PER EXPERIMENTAL DAY PER STATION

Year	Zone 1		Zone 2		Zone 3		Zone 4 Low		Zone 4 High	
	S	N	S	N	S	N	S	N	S	N
1957	9.55	4.84	14.85	5.89	15.00	4.85	9.48	6.55	6.15	6.60
1958	7.97	6.50	13.04	13.51	18.97	13.97	22.53	10.99	23.54	11.60
1959	11.39	7.86	8.29	7.64	5.38	5.87	4.50	5.37	3.02	4.66
1960	17.10	14.77	20.01	21.84	28.58	18.80	21.11	14.59	18.88	10.10
1961	8.30	13.50	6.78	18.24	12.78	15.25	12.71	12.07	9.80	11.59
1962	4.76	2.50	9.73	4.30	11.24	5.34	8.19	5.40	5.79	4.85
1963	9.14	12.53	13.27	18.35	12.81	16.03	9.69	13.53	7.19	11.56
All Years	9.37	8.42	12.26	12.07	14.43	10.85	12.12	9.42	10.20	8.39

The codes in tables II and III have the following meanings. The date code is in six digits. The first two designate the day of the month, the subsequent two designate the month and the last two identify the year, 1957 through 1963. "Weather type" refers primarily to thunderstorms: K = Keine (no thunderstorms); L = Local storms; F = Cold Front storms; S = "Sudstau" (barrage). When two letters are used to characterize the weather type, the order of these letters indicates the temporal sequence of two weather situations so that, for example FL is not the same as LF.

TABLE II

DAY BY DAY OBSERVATIONS, SEEDED DAYS

Exp. Day No.	Date	Forecaster	Noon Winds Aloft in Milan Direction and Speed in km/hr		Weather Type	Precipitation in mm				No. of Hail Reports
						Zone				
			1500 m	5500 m		2	3	4 Lo	4 Hi	
2	150657	A	ESE 11	SE 37	L	13.0	4.1	6.2	7.0	4
4	170657	L	W 13	SSE 24	SL	3.1	1.6	2.8	1.9	0
5	180657	A	WSW 7	WNW 37	K	0.0	0.0	0.7	0.6	0
8	220657	ZE	WSW 18	WSW 81	FS	21.2	45.1	29.6	4.1	14
9	230657	A	SSW 28	SW 89	S	52.8	99.4	75.2	48.7	6
12	010757	T	SSE 4	N 11	LF	9.9	14.8	7.4	5.5	4
14	030757	A	SSW 13	WNW 31	K	0.0	0.0	0.0	0.0	0
15	090757	A	SSE 13	WSW 33	SF	11.5	3.4	9.0	2.6	5
20	190757	ZE	S 38	SW 65	F	58.5	25.8	18.0	22.4	1
21	200757	ZE	NNW 17	NW 46	K	0.8	1.1	2.5	1.4	0
22	210757	ZE	SW 33	W 91	SF	14.0	16.0	11.6	2.3	3
24	280757	A	NNW 18	WNW 70	K	0.0	0.0	0.0	0.1	0
26	080857	A	S 11	WSW 41	S	16.1	7.3	2.2	5.9	1
27	090857	A	SSW 22	WSW 70	S	70.7	57.0	18.2	15.3	0
29	140857	L	SSW 44	WSW 37	F	20.6	22.9	5.5	2.6	14
31	170857	L	WNW 4	WNW 85	K	0.0	0.0	0.2	0.0	0
32	190857	T	N 39	NNE 39	K	0.0	0.0	0.0	0.8	0
36	020957	L	W 9	W 44	F	2.6	1.5	0.4	1.0	0
37	030957	A	ENE 17	NW 57	F	2.2	0.0	0.0	0.8	0
39	080957	T	S 9	SSW 22	K	0.0	0.0	0.0	0.0	0
43	240558	ZE	** **	** **	S	0.0	0.0	1.2	7.5	0
44	250558	A	SW 25	S 45	K	2.0	1.0	4.3	9.0	0
46	270558	L	SSE 43	SSW 75	S	71.9	96.7	105.9	119.2	12
47	300558	ZE	SSE 17	SSW 69	SF	16.8	24.4	25.6	14.8	0
49	030658	L	SSW 13	SW 76	F	0.9	6.8	7.7	18.6	7
51	100658	A	E 28	SW 56	K	12.2	8.2	5.8	8.8	0
52	180658	ZE	0	SE 12	K	0.0	0.0	0.1	0.2	0
54	230658	A	SSW 13	WNW 99	L	2.3	0.9	4.8	6.8	1
55	260658	L	SE 13	SW 58	K	39.7	35.2	27.3	27.8	0
59	020758	A	SSW 26	WSW 128	L	33.8	12.6	32.1	46.4	0
60	030758	A	SSW 41	SW 84	SF	22.6	26.6	32.7	22.5	14
64	130758	L	S 4	W 32	K	0.0	0.0	0.2	2.7	0
65	140758	L	S 8	W 34	F	0.0	0.0	1.0	5.1	0
66	160758	ZE	ESE 41	SSW 99	S	18.8	19.7	27.0	29.7	24
70	270758	ZE	** **	** **	K	0.0	0.0	0.0	0.0	0
73	020858	A	SSE 17	WSW 52	SF	2.9	3.3	10.7	1.5	10
77	120858	ZE	SSW 26	WSW 67	FL	16.2	1.8	9.2	4.8	14
78	160858	ZE	S 4	WSW 45	LF	0.0	0.0	10.9	9.5	0
79	180858	ZE	S 13	SW 65	S	3.1	25.4	25.0	20.9	6
80	190858	L	SSE 25	SSW 197	SF	1.1	49.2	69.5	102.5	27
82	210858	L	S 26	WSW 78	S	42.5	105.6	94.6	59.5	0
84	270858	ZE	SW 4	NW 50	K	0.0	0.0	0.0	0.0	0
87	200559	ZR	WSW 4	WSW 59	K	0.0	0.0	0.9	0.0	0
89	300559	ZR	NNW 17	WSW 30	F	0.0	0.0	0.0	0.0	0
91	050659	ZE	ENE 9	SSW 22	F	30.3	9.8	11.2	4.6	0
94	100659	ZR	N 26	NW 61	K	0.0	0.0	0.0	0.4	0
96	190659	A	** **	** **	L	0.7	0.0	0.4	3.0	2

TABLE II (Continued)

Exp. Day No.	Date	Forecaster	Noon Winds Aloft in Milan Direction and Speed in km/hr		Weather Type	Precipitation in mm				No. of Hail Reports
						Zone				
			1500 m	5500 m		2	3	4 Lo	4 Hi	
100	230659	ZR	ENE 9	NW 33	L	2.7	0.0	0.0	0.0	0
101	240659	ZR	NNE 4	W 11	L	23.3	5.3	6.4	9.3	2
103	260659	ZR	SSE 13	SW 28	SF	45.6	29.2	18.6	9.4	0
106	090759	A	W 4	ENE 59	K	0.0	0.0	0.0	0.0	0
109	130759	ZE	S 2	W 78	K	0.0	0.0	0.0	0.0	0
111	210759	ZE	0	N 28	K	0.0	0.0	0.0	0.0	0
114	270759	ZE	N 33	WNW 76	K	0.0	0.0	0.0	0.0	0
116	300759	ZR	SSW 30	SW 91	FL	11.7	9.7	17.6	1.2	4
117	310759	ZR	NNW 19	WSW 37	L	0.0	0.0	0.0	1.0	0
119	090859	A	W 19	WNW 15	K	1.4	4.5	6.7	5.4	0
122	120859	ZE	SW 7	N 52	L	0.0	0.0	0.0	0.1	0
124	220859	ZR	SSE 17	S 30	F	50.2	49.7	29.2	24.2	0
126	290859	A	NW 9	WNW 35	F	2.3	1.4	0.0	0.0	1
127	300859	ZR	ESE 20	WSW 31	F	5.8	3.4	2.1	0.8	0
130	170959	ZR	WSW 17	W 31	L	0.1	0.0	1.3	3.3	0
131	180959	ZR	E 20	N 15	K	0.0	0.0	0.0	0.8	0
133	180560	ZR	SSE 46	SSE 59	S	42.5	49.4	93.7	105.0	0
136	050660	ZR	0	SW 26	L	2.3	2.4	1.9	2.6	0
139	090660	ZR	SW 24	SW 15	S	15.7	40.6	12.8	13.3	0
140	130660	A	SSE 17	SW 42	F	18.4	9.0	16.3	10.9	0
141	200660	A	NNW 28	NNW 35	K	0.0	0.0	0.0	0.0	0
144	290660	ZR	N 24	WNW 69	F	0.0	0.0	0.0	0.0	0
146	080760	ZE	S 50	SSW 112	SFL	28.6	48.8	53.4	36.7	2
148	150760	A	E 15	SW 54	FL	11.5	30.1	11.3	13.9	1
149	180760	A	SSW 7	WSW 81	K	0.0	0.0	0.0	0.0	0
151	300760	ZE	S 7	WSW 39	K	0.1	0.0	0.4	0.0	0
154	050860	A	SE 19	WSW 80	S	40.4	52.4	27.6	23.5	0
155	060860	B	WNW 22	W 107	K	0.0	0.0	0.0	0.0	0
157	120860	ZR	W 59	WSW 145	SF	20.4	45.3	46.0	29.5	0
158	180860	A	SE 9	WSW 100	FL	106.9	153.5	54.1	49.3	1
163	040960	A	SSW 19	SW 56	LF	32.3	25.0	14.5	9.1	0
164	170960	ZE	SSE 11	S 117	S	1.0	0.7	5.7	8.2	3
165	170561	A	NE 11	WSW 70	S	9.1	13.8	10.8	7.8	0
166	220561	A	NE 19	E 44	K	0.4	0.4	0.4	3.3	0
167	260561	A	SW 9	WSW 39	L	0.0	13.3	12.4	5.9	0
170	070661	ZE	N 5	NE 26	L	8.0	0.0	0.0	0.0	1
173	270661	ZE	SSW 44	SW 46	SF	22.0	2.9	12.2	5.1	4
175	120761	A	SW 31	W 59	LF	13.9	67.1	82.3	70.8	5
176	130761	A	WNW 15	W 52	F	0.0	0.0	0.0	1.0	7
177	220761	ZR	** **	** **	FL	0.0	0.0	0.0	0.2	0
180	060861	ZE	SSE 13	SSW 48	K	0.0	0.0	1.2	1.7	0
181	070861	ZE	SSW 15	SW 44	L	0.0	0.0	0.2	1.0	0
183	120861	B	S 30	SW 130	F	5.0	14.8	24.8	16.7	2
186	050961	B	ESE 33	SSW 93	K	29.8	53.9	20.1	13.2	0
188	070961	A	WSW 26	W 87	K	0.0	0.0	0.8	0.7	0
189	190562	A	SSE 37	S 78	K	18.3	17.4	20.2	18.4	0
190	270562	A	SE 26	SW 81	F	49.1	39.5	28.7	20.7	3
191	280562	A	SSW 20	WSW 78	K	1.3	2.2	7.7	11.5	0
193	300562	B	W 4	W 69	K	0.8	0.0	0.0	0.0	0

TABLE II (Continued)

Exp. Day No.	Date	Forecaster	Noon Winds Aloft in Milan Direction and Speed in km/hr		Weather Type	Precipitation in mm				No. of Hail Reports
						Zone				
			1500 m	5500 m		2	3	4 Lo	4 Hi	
194	310562	ZE	E 22	WSW 65	L	8.3	4.9	8.7	4.7	0
195	010662	A	SSE 56	S 111	SF	37.0	22.9	40.5	33.6	3
199	150662	A	SSE 11	S 69	KS	12.3	13.1	11.8	14.0	0
201	160662	A	NNW 4	NNW 11	K	0.0	0.0	0.0	0.0	0
204	210662	B	E 9	NE 7	L	0.0	0.0	0.0	0.0	0
205	270662	ZE	N 15	W 70	K	0.0	0.0	0.0	0.0	0
206	010762	ZE	ESE 17	WNW 37	K	0.0	0.1	0.5	0.0	0
207	100762	B	SW 2	W 63	F	5.0	31.6	7.4	3.4	0
211	260762	ZE	S 7	WSW 65	LF	0.0	6.0	9.9	5.9	14
212	290762	ZE	E 15	W 26	L	35.9	8.9	1.6	0.0	2
214	030862	ZE	SSE 13	W 22	L	1.7	0.0	0.1	0.0	0
215	040862	B	ESE 4	W 15	L	20.4	9.8	19.2	5.2	4
216	050862	B	SW 11	W 42	L	0.0	0.0	0.7	0.0	0
219	120862	ZE	0	0	K	0.0	0.0	0.0	0.0	0
220	150862	A	ESE 15	WSW 41	LF	4.1	3.6	5.2	11.2	1
224	250862	B	WSW 20	W 106	K	0.0	0.0	0.0	0.0	0
225	300862	B	ESE 4	NW 26	L	0.3	5.7	0.0	0.0	2
228	040962	A	0	0	SF	56.4	126.4	47.4	20.2	13
230	060962	A	SSW 19	W 48	K	0.0	0.1	0.0	0.0	0
235	260962	ZE	NE 11	NW 24	KS	0.0	0.0	0.2	0.1	0
236	270962	ZE	ENE 5	SW 22	KS	0.2	0.0	0.0	1.2	0
237	290962	ZE	SW 9	SW 19	L	1.9	0.0	3.1	0.4	0
239	210563	ZE	SE 14	WNW 28	K	0.0	0.0	0.0	0.0	0
242	280563	A	ESE 11	SSE 11	L	0.6	4.8	7.6	0.6	0
243	290563	B	ESE 9	ESE 20	L	29.1	8.0	6.5	8.6	0
244	300563	B	0	0	L	0.3	0.0	0.3	0.6	0
246	020663	V	ESE 19	WSW 20	K	1.5	4.3	4.3	4.6	0
250	070663	V	SSW 19	W 11	K	17.3	11.5	11.3	14.1	0
252	090663	A	SW 7	SW 9	L	7.2	0.1	1.2	0.5	1
254	110663	ZE	0	0	L	3.6	0.8	0.4	0.0	0
255	140663	ZE	S 41	NNE 46	F	26.0	16.8	14.3	12.9	0
258	230663	B	S 13	WSW 56	F	8.5	49.9	20.5	15.3	5
259	250663	B	SSW 33	WSW 46	F	86.1	17.0	6.5	4.5	0
260	260663	B	S 11	W 78	K	0.0	0.0	0.0	0.0	0
263	010763	V	SW 17	SW 69	K	0.0	0.0	0.2	2.2	0
266	050763	V	NW 5	W 61	L	13.6	7.9	7.7	2.9	0
267	060763	V	SW 5	W 24	K	0.0	0.0	0.5	0.0	0
270	100763	B	SE 17	W 44	L	2.3	1.9	4.5	3.6	1
271	230763	B	ENE 2	E 15	L	6.4	13.6	11.9	2.7	4
272	240763	B	W 15	NNE 20	K	0.0	0.1	0.1	12.0	0
273	250763	B	SE 11	NNE 15	L	11.4	0.7	2.6	7.9	2
275	010863	ZE	SE 7	S 19	L	0.0	0.0	0.6	0.3	0
277	060863	A	SE 26	SSW 78	SF	11.8	12.2	20.3	25.7	1
278	070863	A	SW 7	SW 63	F	27.5	6.4	4.3	5.4	0
282	140863	ZE	S 5	WSW 69	S	28.4	42.6	21.6	12.6	0
285	180863	A	NNW 26	SW 56	F	0.0	0.0	0.0	0.0	0
287	020963	B	SE 35	SW 94	F	22.0	93.8	69.8	29.0	0
290	060963	A	SSW 19	SW 56	F	42.1	46.3	39.4	27.8	2
293	250963	B	WSW 19	WNW 31	F	12.7	7.1	5.2	0.4	0

TABLE III

DAY BY DAY OBSERVATIONS, NOT SEEDED DAYS

Exp. Day No.	Date	Forecaster	Noon Winds Aloft in Milan Direction and Speed in km/hr		Weather Type	Precipitation in mm				No. of Hail Reports
						Zone				
			1500 m	5500 m		2	3	4 Lo	4 Hi	
1	130657	A	E 63	E 72	S	8.0	4.7	6.0	1.5	0
3	160657	A	ESE 48	S 56	S	30.5	33.6	30.0	40.3	6
6	190657	ZE	NW 5	W 22	L	0.0	0.6	0.9	0.0	1
7	210657	ZE	SE 9	WSW 44	S	16.6	23.1	33.2	46.8	8
10	240657	A	WSW 28	W 74	SF	23.8	17.5	56.2	23.9	5
11	250657	L	SSW 13	WSW 91	L	0.1	0.0	0.0	0.1	1
13	020757	A	W 11	WNW 9	K	0.0	0.0	0.0	0.0	0
16	100757	A	SSE 9	SW 22	F	8.6	5.4	2.4	4.5	2
17	110757	A	N 42	N 38	K	0.0	0.0	0.0	0.1	0
18	160757	ZE	W 7	W 52	K	8.1	4.9	2.2	7.0	0
19	170757	ZE	E 11	W 26	K	4.3	0.7	4.3	0.5	0
23	270757	A	** **	** **	K	18.1	5.4	4.0	5.6	0
25	060857	L	SSE 4	W 31	F	2.6	3.7	2.5	5.5	0
28	100857	ZE	WSW 17	W 93	K	0.0	0.0	0.0	0.6	0
30	160857	L	SW 28	WSW 74	F	0.0	0.0	0.4	1.2	1
33	220857	ZE	N 28	NW 78	F	8.8	7.2	1.5	1.7	0
34	240857	ZE	** **	** **	K	0.0	0.0	0.4	2.3	0
35	280857	L	W 18	WNW 81	K	0.0	0.0	0.0	0.6	0
38	040957	L	NNE 17	N 67	K	0.0	0.0	0.0	0.0	0
40	120957	ZE	S 9	W 105	K	0.0	0.0	0.0	0.0	0
41	240957	L	WSW 29	WNW 52	K	0.0	0.0	0.0	3.1	0
42	270957	L	NNE 18	NNE 44	K	0.0	0.0	0.0	0.0	0
45	260558	A	S 15	SW 87	S	18.9	20.6	12.8	12.8	0
48	010658	ZE	SSE 4	WSW 23	K	0.0	0.0	0.0	0.0	0
50	070658	L	SE 10	W 41	F	2.5	5.5	5.7	1.4	0
53	220658	A	SW 19	WSW 104	F	54.3	15.7	5.7	7.5	4
56	270658	L	** **	** **	K	9.0	2.9	0.2	2.5	0
57	300658	L	WSW 6	SSW 30	K	0.0	0.0	0.5	1.3	0
58	010758	A	WNW 19	W 76	S	7.0	10.9	10.4	14.7	0
61	040758	A	W 15	WSW 78	L	6.0	3.0	2.0	3.3	0
62	110758	A	0	NNE 26	L	1.5	8.5	0.5	3.1	0
63	120758	A	SSW 13	W 26	S	0.0	0.0	0.0	0.0	0
67	210758	A	0	W 52	S	1.4	14.3	4.3	9.9	1
68	220758	A	SSW 37	SE 50	F	40.3	22.7	14.4	14.0	1
69	230758	A	WSW 10	W 52	K	0.0	0.0	0.4	0.4	0
71	280758	ZE	** **	** **	K	0.0	0.0	0.0	0.4	0
72	010858	L	S 6	WSW 41	S	52.5	4.9	0.5	2.3	1
74	070858	L	** **	** **	F	3.6	32.7	3.7	5.6	0
75	080858	A	NNW 26	NNW 99	K	0.0	0.0	0.0	0.0	0
76	110858	L	WSW 2	SW 19	SF	50.3	62.7	57.4	35.6	12
81	200858	L	** **	** **	F	5.2	3.8	11.4	21.7	11
83	220858	L	SSW 28	SSW 67	FL	1.9	7.7	4.2	15.5	1
85	011058	ZE	S 50	SSW 86	SF	29.3	77.5	96.6	91.7	0
86	190559	A	SSW 11	** 30	S	1.9	3.9	2.6	2.9	0
88	220559	A	E 63	SE 80	K	20.0	13.4	14.8	10.8	0
90	010659	ZR	W 7	N 33	K	0.0	0.0	0.0	0.0	0
92	060659	ZE	SSW 5	W 11	S	10.6	9.4	6.8	2.5	1

TABLE III (Continued)

Exp. Day No.	Date	Forecaster	Noon Winds Aloft in Milan Direction and Speed in km/hr		Weather Type	Precipitation in mm				No. of Hail Reports
						Zone				
			1500 m	5500 m		2	3	4 Lo	4 Hi	
93	070659	ZE	ENE 11	S 7	S	1.1	0.3	2.6	1.7	0
95	170659	A	S 7	WSW 30	K	0.0	0.0	0.6	4.2	0
97	200659	ZR	NNW 19	SW 37	S	0.1	0.3	4.5	3.9	0
98	210659	A	ESE 31	S 26	S	26.9	19.9	13.6	13.3	0
99	220659	A	NNE 4	NNW 17	K	0.1	0.0	0.2	0.0	0
102	250659	ZR	ENE 4	WNW 37	L	0.1	6.6	1.7	4.0	0
104	270659	ZR	NE 13	NNW 33	K	0.0	0.0	0.0	0.0	0
105	290659	ZR	WSW 24	WSW 93	F	31.1	4.1	3.1	6.1	1
107	100759	A	WSW 7	ENE 33	L	1.5	4.7	19.5	7.9	2
108	120759	ZE	SW 5	SSW 33	L	0.0	0.0	6.4	9.8	0
110	150759	ZR	N 11	WNW 22	F	2.8	0.0	4.5	2.4	0
112	240759	ZE	SSW 31	W 58	L	0.0	4.8	3.2	5.5	1
113	250759	ZR	W 9	W 11	L	3.4	11.6	0.0	0.0	0
115	290759	ZR	SSW 48	W 59	F	19.9	9.0	3.3	2.7	5
118	050859	A	NE 2	NW 31	K	0.0	0.0	0.0	0.0	0
120	100859	A	SSW 9	SW 42	SF	23.8	34.8	28.0	21.8	0
121	110859	ZE	SSW 9	SW 53	L	8.1	1.5	1.5	6.5	2
123	210859	ZR	ESE 5	S 26	K	39.0	22.1	16.9	9.7	0
125	230859	A	E 35	S 42	L	0.7	0.4	0.4	0.0	0
128	030959	A	NE 19	WSW 13	K	0.0	0.0	0.0	0.0	0
129	140959	ZE	WSW 26	SSE 22	S	0.0	0.0	0.0	0.7	0
132	170560	A	E 31	SW 33	L	6.5	9.0	13.2	10.5	5
134	200560	ZR	WSW 24	WSW 76	L	11.0	0.2	0.0	0.3	1
135	020660	A	E 2	ENE 11	L	0.8	0.0	1.0	1.0	0
137	060660	ZR	WSW 4	N 11	L	0.0	0.0	0.0	3.2	0
138	070660	ZR	0	E 20	FL	15.3	6.3	2.7	0.1	4
142	240660	ZE	SE 15	SW 31	F	17.6	39.5	29.4	23.5	0
143	260660	ZE	SSE 33	S 61	FS	40.7	32.4	18.3	17.7	7
145	070760	ZE	** **	** **	S	81.2	99.5	77.6	32.4	0
147	110760	A	S 15	WSW 69	F	60.5	25.3	10.1	14.3	0
150	230760	ZR	NW 30	WSW 61	K	0.0	0.0	0.0	1.4	0
152	310760	ZE	SE 15	WSW 50	S	63.7	76.9	60.3	48.8	0
153	010860	ZE	WSW 46	SSW 93	SFL	43.7	6.5	6.8	2.5	1
156	080860	A	SW 31	WSW 59	LFL	18.9	17.1	9.3	4.6	8
159	190860	A	NNW 46	WNW 33	L	0.0	0.0	0.0	0.3	0
160	260860	ZE	E 7	WSW 48	K	0.0	0.0	0.0	0.0	0
161	280860	ZR	SSW 26	SW 109	SF	11.3	6.9	19.4	11.1	28
162	290860	ZR	0	WNW 54	K	0.0	0.0	0.0	0.0	0
168	010661	A	SW 31	S 56	F	68.1	58.5	38.8	23.7	0
169	060661	ZE	NE 4	ESE 24	L	0.1	0.0	0.6	0.1	0
171	080661	ZE	S 5	NW 19	L	32.5	6.4	5.8	4.0	0
172	090661	A	S 9	WSW **	LF	63.1	70.0	54.2	57.0	0
174	040761	A	WSW 5	WSW 33	F	2.6	1.8	4.1	0.8	0
178	280761	ZE	SSW 13	W 56	S	20.0	1.4	0.9	4.4	0
179	290761	ZE	NNW 39	NW 20	K	0.0	0.0	0.0	0.0	0
182	110861	ZE	SSW 26	SW 74	S	14.2	29.2	25.4	31.1	0
184	030961	A	SE 5	SW 17	LS	0.0	0.0	0.0	0.4	1
185	040961	A	S 4	WSW 31	K	0.0	0.0	0.2	1.3	0
187	060961	B	SW 11	WSW 44	K	0.0	0.5	2.8	4.7	0
192	290562	ZE	S 9	WSW 102	L	9.4	7.5	6.1	12.3	0

TABLE III (Continued)

Exp. Day No.	Date	Forecaster	Noon Winds Aloft in Milan Direction and Speed in km/hr		Weather Type	Precipitation in mm				No. of Hail Reports
						Zone				
			1500 m	5500 m		2	3	4 Lo	4 Hi	
196	110662	B	NW 11	NW 22	F	11.7	0.0	0.0	0.8	0
197	120662	B	SE 9	NNW 63	K	0.2	0.4	0.2	0.1	0
198	140662	A	W 5	W 42	KS	0.0	0.0	0.0	0.0	0
200	260562	A	0	0	L	15.4	9.2	14.8	12.7	0
202	180662	A	WSW 4	WSW 15	L	3.6	1.4	0.5	0.7	0
203	190662	B	SW 4	W 28	F	2.3	1.8	2.0	0.5	0
208	150762	B	WSW 9	W 130	FL	0.0	0.0	0.0	0.0	0
209	210762	A	W 13	W 122	S	0.0	0.6	7.0	8.8	0
210	220762	A	SSW 9	WSW 67	F	0.1	2.7	3.6	0.6	0
213	010862	B	WSW 11	WNW 39	K	0.2	0.0	0.0	0.0	0
217	060862	B	0	0	S	14.1	23.8	37.9	31.4	0
218	070862	ZE	0	0	SF	30.7	40.8	35.0	25.9	3
221	160862	A	SSE 4	W 67	K	0.0	0.9	0.5	0.0	0
222	180862	A	0	0	K	0.0	0.0	0.0	0.0	0
223	210862	ZE	N 15	0	F	5.8	1.9	4.5	0.5	5
226	010962	B	WSW 7	ENE 4	F	1.1	12.0	0.0	0.0	0
227	030962	A	0	0	S	3.3	19.5	8.4	7.8	0
229	050962	A	SW 30	WNW 104	F	0.0	0.0	0.0	0.0	0
231	070962	A	SW 39	0	K	1.5	0.2	1.7	4.8	0
232	110962	ZE	NW 19	WNW 50	K	0.0	0.0	0.0	0.0	0
233	160962	A	NW 2	S 22	KS	0.2	1.7	2.1	6.0	0
234	180962	B	NW 35	W 137	K	0.0	0.0	0.0	0.9	0
238	131062	ZE	ESE 28	SSW 44	KS	3.5	3.8	5.2	2.7	0
240	220563	A	SW 20	0	K	0.0	0.0	0.2	0.0	0
241	230563	A	SSE 7	S 44	KS	0.0	0.5	3.8	5.3	0
245	010663	B	S 9	N 22	L	11.5	3.7	3.3	2.4	10
247	030663	V	WSW 7	SW 19	S	40.5	11.4	11.1	10.8	0
248	050663	V	SSW 11	S 42	KS	9.2	4.2	3.3	5.1	0
249	060663	V	ESE 22	S 17	S	10.2	5.7	3.4	4.2	0
251	080663	V	WSW 19	W 15	K	2.0	1.6	2.9	5.9	0
253	100663	A	SW 19	WSW 17	F	4.4	1.9	2.1	0.7	2
256	150663	ZE	N 24	SW 52	K	0.7	0.0	0.0	0.2	0
257	160663	ZE	E 9	ENE 52	K	0.0	0.0	0.0	0.0	0
261	280663	B	S 19	SSW 69	SF	40.4	70.0	71.1	86.4	2
264	030763	B	SSE 11	W 50	L	17.5	17.5	4.2	5.2	5
265	040763	B	NE 2	W 35	L	18.3	7.0	11.7	4.9	1
268	070763	A	W 4	WSW 22	L	4.5	2.3	2.9	7.5	0
269	080763	A	WNW 9	W 61	F	0.0	0.0	0.0	0.2	0
274	260763	B	N 2	W 15	LF	2.4	0.1	0.0	0.5	0
276	020863	ZE	W 7	WSW 17	K	0.0	0.0	0.0	0.0	0
279	090863	ZE	NNW 17	WNW 15	F	0.0	0.0	0.0	0.0	0
280	120863	A	SW 52	WSW 94	F	7.8	5.4	9.4	11.9	0
281	130863	ZE	WSW 24	W 59	L	21.3	20.0	10.8	20.0	0
283	150863	ZE	SW 22	WSW 93	F	0.7	36.1	8.6	2.3	1
284	170863	ZE	SW 37	SW 93	SF	113.4	95.3	76.1	38.0	2
286	010963	B	SE 31	SSW 48	F	140.4	108.9	102.8	70.9	0
288	030963	A	0	WSW 83	K	0.2	0.0	1.3	4.0	0
289	050963	A	NW 37	SW 54	F	19.4	18.7	10.0	5.1	0
291	180963	V	E 17	E 24	L	3.0	2.4	7.4	8.4	0
292	190963	V	E 33	E 39	KS	27.7	20.1	18.9	12.3	0