LARGE SCALE EFFECTS OF CLOUD SEEDING

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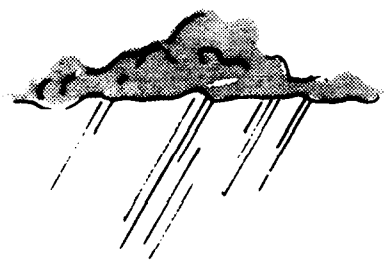
FINAL REPORT
1970-71 SEASON AND FOUR YEAR SUMMARY



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APR 17 1972

BY:
KEITH J. BROWN & ROBERT D. ELLIOTT

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SANTA BARBARA MUNICIPAL AIRPORT
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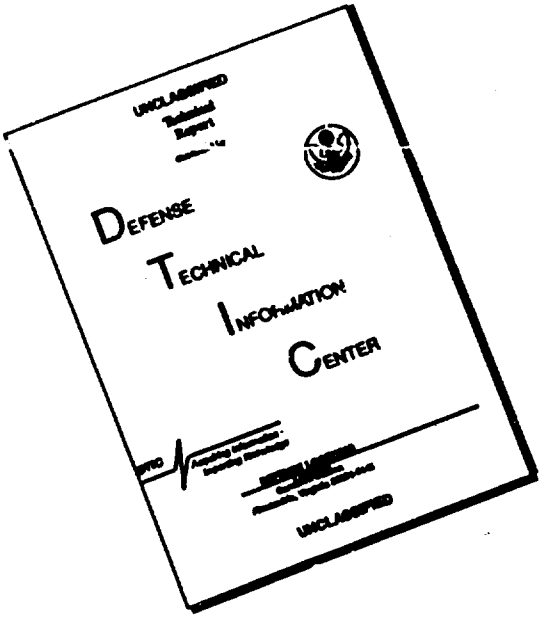

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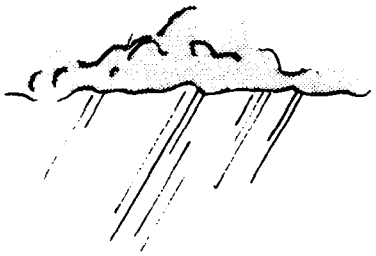

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16. ABSTRACT

This is a final report based on four years of data on the large scale effects of cloud seeding. This research was sponsored by the Bureau of Reclamation, Division of Atmospheric Water Resources Management. The study was conducted in the area surrounding a randomized seeding project in Santa Barbara County, California sponsored by the Naval Weapons Center, China Lake, California. Seeding was accomplished from a point source using pyrotechnic seeding devices. The seeding and observation unit was a convective band. Substantial statistical evidence is presented showing that precipitation has been significantly increased over a large area 70 to 125 miles from the seeding source. Evidence is also provided showing that the seeding effect is highly temperature dependent and that the time duration of bands is significantly increased as a result of seeding. Also shown is the interaction between convective bands, the possible effects of seeding on surface pressure and the diurnal effect of seeding.

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PREFACE

This report covers research into Large Scale Effects of Weather Modification performed under Contract No. 14-06-D-6841 with the U. S. Department of the Interior, Bureau of Reclamation, Division of Atmospheric Water Resources Management. This study was initiated in April 1966 under a previous contract No. 14-06-D-5963 and work has been in progress since that date.

The field portion of this project has been conducted in cooperation with an ongoing research study in Santa Barbara County, California. This program is operated by North American Weather Consultants (NAWC) under contract with the Naval Weapons Center, China Lake, California.

The authors would like to express their appreciation to the Bureau of Reclamation, Division of Atmospheric Water Resources Management for their continued support of this research effort. Particular thanks are due to Dr. Archie Kahan, Chief of DAWRM and Mr. William Douglas, Project Monitor for their support and helpful suggestions throughout the course of this study.

We are also grateful to the Naval Weapons Center, Earth and Planetary Sciences Division, China Lake, California for their cooperation in this joint program; particularly to Dr. Pierre St. Amand, Director and Dr. S. D. Elliott, Jr., Project Officer for the Santa Barbara Project.

The authors would also like to acknowledge the contributions of many staff members from ARI and NAWC for their invaluable contributions to this research. A special note of thanks to Mr. John Thompson, NAWC Project Director for the Navy's Santa Barbara Project, who also made the band analysis for the entire extended area and contributed greatly to the success of this program.

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LARGE SCALE EFFECTS OF CLOUD SEEDING

BACKGROUND

This report covers the results of the third consecutive year of a field program to investigate the Large Scale Effects of Cloud Seeding. The work during this past year was conducted under Amendatory Agreement No. 1 to Contract No. 14-06-D-6841 between the Bureau of Reclamation, Department of the Interior, and Aerometric Research Inc. (ARI). An earlier contract (No. 14-06-D-5963) starting in April 1966, and subsequent amendments, enabled ARI to make a "post-hoc" analysis of the effects of cloud seeding in extended areas downwind from six long term operational and research seeding projects in the western United States. The results of these earlier studies have been covered in previous reports (ARI 1967, 1969).

The number of scientists investigating, or at least looking for, large scale seeding effects is growing each year. In addition to the earlier investigators (North American Weather Consultants, 1956; Braham, 1965; Brier, 1966; Adderly, 1968), more recent studies were summarized at a seminar held in Santa Barbara, California on February 15-17, 1971. The transactions of this seminar (Elliott, et al, 1971) summarized the work of a number of these people.

Almost all of the data on large scale seeding effects are statistical in nature. The physical mechanisms controlling these effects can only be inferred by indirect means. To date, no field project has been conducted to measure adequately the necessary atmospheric parameters which might lead to an understanding of this phenomenon.

The ramifications of these effects are very important. The potential for enhancing water supplies over major watersheds by minimal seeding effort appears possible. Suggestions of synoptic scale storm modification are beginning to appear. The negative aspects must also be considered. The current concern with the environmental impact of weather modification will be spread over a larger area and targeting problems with small areas becomes more difficult.

PROJECT DESIGN

The field study of large scale effects of cloud seeding was operated in conjunction with a randomized seeding project in Santa Barbara County which was sponsored by the Naval Weapons Center, China Lake, California. The Navy project was operated by ARI's affiliate company, North American Weather Consultants (NAWC). This cooperative effort benefited both projects economically and scientifically by eliminating duplication of effort. The project areas for both programs are shown in Figure 1.

The Santa Barbara project began in November, 1967 and the Bureau of Reclamation Large Scale Effects field project started in November, 1968. However, since most of the raingages used in the large scale analysis were operated by various government agencies, it was possible to obtain records for the 1967-68 season and extend the statistical analysis back to include all four seasons.

The design of the Navy project has been reported on in some detail (Elliott and Thompson 1968, 1969, 1970, 1971) and will only be summarized in this report. The observation and seeding unit is a convective band. The basic characteristics of convection bands had been determined during three years of intensive three-dimensional storm sampling in this area in the early 1960's (Elliott and Hovind, 1964). Convection bands not only produce most of the storm precipitation in west coast storms, but also contain the strong updrafts and supercooled water conducive to cloud seeding effectiveness. Bands typically lasted about one to one and one half hours at a given station and are spaced about three to four hours apart. An average of three seedable convection bands were identified in each storm.

During the months of November through April, the convective bands were tracked into the test area by means of an upwind telemetered raingage network and a 3cm radar set located at the seeding site on a 3500 foot mountain ridge. When the leading edge of the convective band reached the seeding site, the project meteorologist issued a "GO" command from the control center at the Santa Barbara Airport. The technician at the seeding site then referred to a set of preselected random decisions and either seeded the band or did nothing on the basis of that decision.

The seeded bands were treated by igniting one LW-83 pyrotechnic device every 15 minutes during the time the band was over the seeding site. The LW-83 unit burns for three minutes and produces 400 grams of silver iodide smoke.

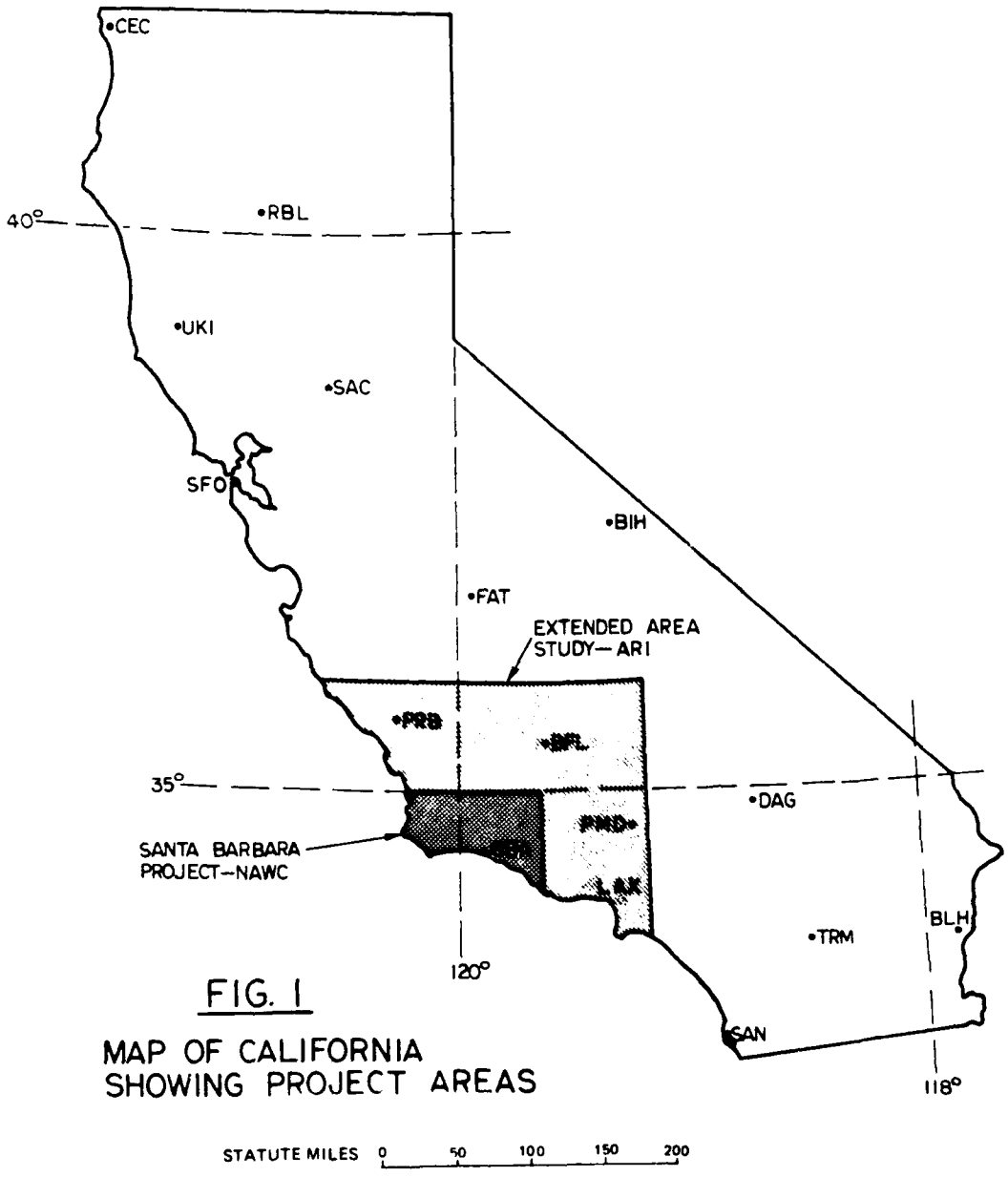


FIG. 1

MAP OF CALIFORNIA
SHOWING PROJECT AREAS

A dense network of recording raingages was available for determining the precipitation patterns produced by the convective bands as they moved through the area. A total of 168 recording gages were used within an area of about 20,000 square miles. Of this total, 45 were installed and operated by ARI and NAWC for the combined project and the remainder were operated by various government agencies. Figure 2 shows the equipment network for the combined projects. Copies of all raingage charts during storm periods were obtained from the respective agencies. Gage locations are shown in Appendix A.

The bands were tracked through the network on the basis of the raingage records. A meteorologist skilled in band analysis and not informed of the randomized seeding decision determined the arrival and departure time of the band at each station and the amount of rain which fell during that interval. When these values were determined for all bands, the seeding decision was revealed and seed/no seed ratios of band precipitation and band duration were computed for each station.

Measurements of the air-mass characteristics were made with a GMD-1 Rawinsonde Receiver at the Santa Barbara Airport and when possible with a RD-65 Rawinsonde unit at Vandenberg Air Force Base. An attempt was made to release one rawinsonde balloon into each band as it passed over the Santa Barbara Airport.

Precipitation samples were collected at eleven sites for analysis of silver content. Precipitation collectors were installed at the sites shown in Figure 2 and a local resident instructed to expose a clean plastic liner when directed by the project meteorologist. The samples were then placed in a freezer and later shipped in dry ice to the Bureau of Reclamation Laboratory in Denver for silver analysis.

The original design of the Navy Project for the 1970-71 season called for a change in seeding mode from the mountain top, point source pyrotechnic seeding used in the three previous seasons to an aerial line source using an acetone-silver iodide-ammonium iodide solution. Arrangements were made with Vandenberg AFB (VBG) to utilize their ARSR surveillance radar and traffic controllers and to fly in the controlled air space just off the coast of VBG. The former primary seeding site on the mountain ridge was to be retained as a backup in case aerial seeding could not be performed. A number of unanticipated problems

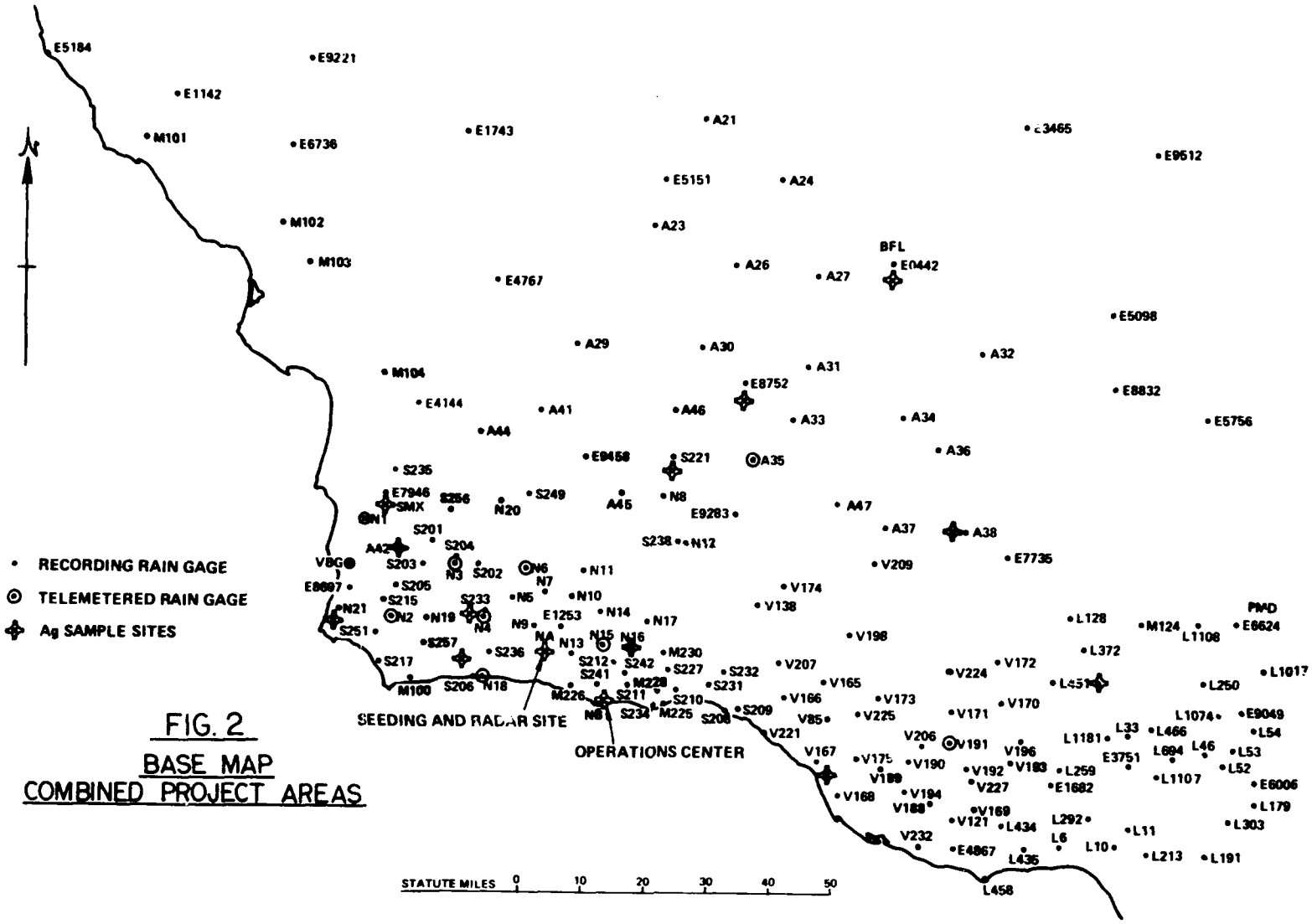


FIG. 2

BASE MAP
COMBINED PROJECT AREAS

occurred which limited the aerial operations to seven rather marginal bands while the bulk of the seeding was conducted in the same manner as the previous three years.

WORK PERFORMED

The 1970-71 field program began November 1, 1970 and continued through April 1971. There were several good seeding opportunities during November and December, but the remainder of the season was relatively dry with only minor seeding opportunities. The storms after mid-December were characterized by cold air masses and generally light precipitation.

A total of 29 bands were declared operational during the 1970-71 season. Twenty-two of these were treated by the ground seeding mode - 13 seeded and nine not seeded; and seven by the aerial seeding mode - three seeded and four not seeded.

After four years of pyrotechnic seeding from a single ground location, a total of 107 bands have been identified and declared operational. Fifty-six of these bands were seeded and 51 not seeded.

MODEL COMPUTATIONS

Rawinsondes were taken just prior to the entrance of the bands into the test area. In order to make quantitative use of this abundant air mass and wind data for elucidating the observed patterns of seeding effect, use was made of the Area of Effect model (Elliott, 1969). This model has been specifically developed for predicting the area of effect due to the seeding of winter storms over an orographic barrier under both stable and unstable air mass conditions. As applied here, only the unstable case is used. The model considers the barrier configuration, the inflowing air mass structure as given by a sounding, and the location, strength, and type of the artificial nuclei source.

The model is steady state and Lagrangian in character. It predicts the movement and dispersion of the nucleant, its entrainment into convection, and the production of ice particles by nucleation, their growth by diffusion and accretion as they ascend in convection, and their drift during fallout from tilted convection columns.

The area of effect model employs a parameterized form of convection; however, a dynamic convection model using the same ice phase nucleation and growth

mechanism is used in a supplementary fashion to predict seeding-produced rise in the top of convection and the updraft which is generated.

The combined models show that in the winter storm convection prevalent in this area, the possibility of overseeding, i.e., a seeding-produced reduction in precipitation through an oversupply of artificial nuclei, is possible in very cold systems. The dynamically-produced rise in cloud top may increase the chance of overseeding with many small ice crystals being ejected from the top of convection.

Figure 3 is an example of the predicted area of effect for a hypothetical case. The quadrilateral enclosed by the solid lines and marked primary area of effect represents the envelope of possible fallout trajectory endpoints (ground interception). The dashed line represents the limits of the ground plume.

Diffusion within the ground plume is assumed to follow the type of plume which observations and laboratory modeling indicate occurs in the rugged terrain around Climax, Colorado (Orgill, 1971). The plume expands vertically and horizontally quite rapidly in the first 5 km, and at a lesser rate thereafter. First entrainment into convection is assumed to occur at 500 sec plume travel distance out from the source. The farthest-out entrainment is assumed to occur at a distance which smoke particles from the first flare could have reached at the time the trailing edge of the band passed by the source.

In some instances the ground plume top rose sufficiently high for seeding to occur within it. This is shown by the hatched area within the plume boundaries in this hypothetical case.

The closest-in fallout from convection (usually the largest and earliest nucleated particles) is calculated to reach the ground at point 1 from the first possible convection tower and at point 2 from the last possible tower. Computations for more towers show that the straight line drawn between 1 and 2 is a fair approximation of the calculated upwind limit of the effect. The farthest-out fallout from convection (usually the particles falling from near convection top) intersect the ground at position 3 (first tower) and position 4 (last tower). This area is designated the primary area.

Radar data indicate that convection in these systems and the precipitation patterns associated with it move about 30° to the right of the mean wind direction between the base and top of convection and at about half its speed. This

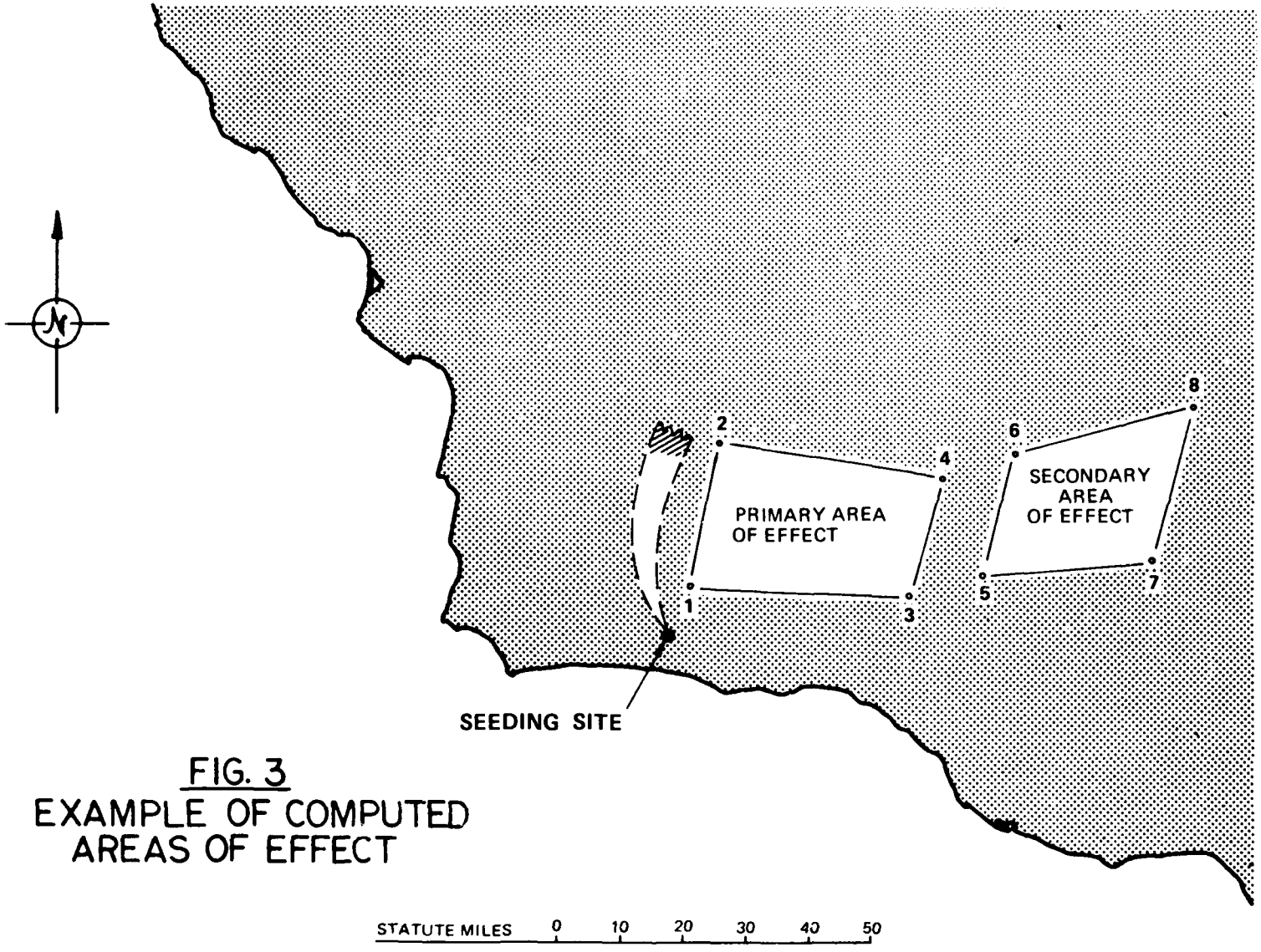


FIG. 3
EXAMPLE OF COMPUTED
AREAS OF EFFECT

behavior conforms to the motion of thunderstorms as discussed by Newton (1959, 1963). In general, it appears that in winter systems observed in western United States, only the shallow small cells move in the direction of the air within which they are embedded. The larger ones move well to the right. The 30° turning is incorporated into the area of effect model predictions.

There remains, however, the possibility that some effect may occur far downwind because the excess of small ice crystals ejected from convection top form an ice anvil which moves rapidly downwind in the environmental wind flow. Seeding-produced cloud top rises would enhance the production of such anvils. As has been shown by Braham and Spyers-Duran (1967), ice crystals have been observed to survive falls of 20,000 feet through relatively dry air from cirrus. The particles they observed were of sufficient concentration to seed cumulus clouds into which they fell, and this appeared to have happened in cases which they observed. It is conceivable that artificially enhanced anvil action produced in the after part of the band, could move forward relative to the band and seed clouds in the forward part, or even in advance of the band. As a check on this possibility, the free fall ballistic trajectories of the most frequent ice particle masses and concentrations calculated to be ejected from convection tops were computed, assuming also their continued growth by accretion in falling through lower cloud forms. The ground interceptions computed in this way are shown for the first and last towers by the positions 5, 6, 7, and 8 linked by the dotted lines in Figure 3. It is seen that this secondary area lies downwind of the primary area of direct effect outlined by points 1, 2, 3, and 4.

Computations along the lines discussed above were made for each seeded band, using as inputs the band soundings and seeding data. The results were composited by drawing an envelope around the individual band areas of effect for all seeded cases. The primary and secondary areas of the various cases overlap, and figures 8, 9, 10 and 16 show separately by dashed line the downwind extension of the envelope produced solely by the secondary effect. The model as employed does not distinguish between the case of a seeding-produced increase in precipitation and the case of a reduction in precipitation. It merely indicates the area where any effect, positive or negative, can be expected.

RESULTS

Precipitation Analysis

Ratios of mean seeded band precipitation to mean not-seeded band precipitation were computed for 168 gages lying over the land area upwind as well as downwind of the seeding source. The band precipitation data at each station were also ranked and the single tail Wilcoxon (Mann-Whitney) U test applied to determine if the seeded sample showed significantly higher ranking than the not-seeded sample. Figures 4, 5, 6 and 7 show the precipitation ratios for each of the four years (1967-68, 1968-69, 1969-70 and 1970-71) that the Santa Barbara field study has been conducted. Each year shows high seed/no seed ratios centered 60 to 90 miles downwind from the seeding source.

While the patterns of the individual years are interesting, the statistical significance of any one year's data is not particularly high. However, when all four years are combined producing a sample of 107 cases, the pattern becomes quite clear and the significance level is very high. This four year ratio map is shown in Figure 8. The direct seeding effect in the primary area shows up as a region extending from the seeding site about 30 miles downwind with precipitation increases of 50% or more during the seeded bands. The large scale effects of seeding are indicated by a very large area with ratios of from 1.50 to over 4.00 extending from north of Bakersfield to the Los Angeles area.

Of the 168 precipitation stations used in this analysis, 60 showed statistically significant differences in the ranks of seeded band precipitation compared to unseeded bands at the 10% level of confidence. Twenty-eight of these stations were significant at the 5% level and four at the 1% level. The statistical test used for this calculation was the non-parametric Wilcoxon (Mann-Whitney) test.

In order to test the likelihood of such a large number of stations achieving significance at those levels, a Binomial Test was applied. This test statistic is given by the following formula:

$$\frac{X - PN}{\sqrt{P(1-P)}\,\sqrt{N}} \qquad (1)$$

where X = number of stations significant at given probability level (P)

P = probability level

N = number of stations in sample

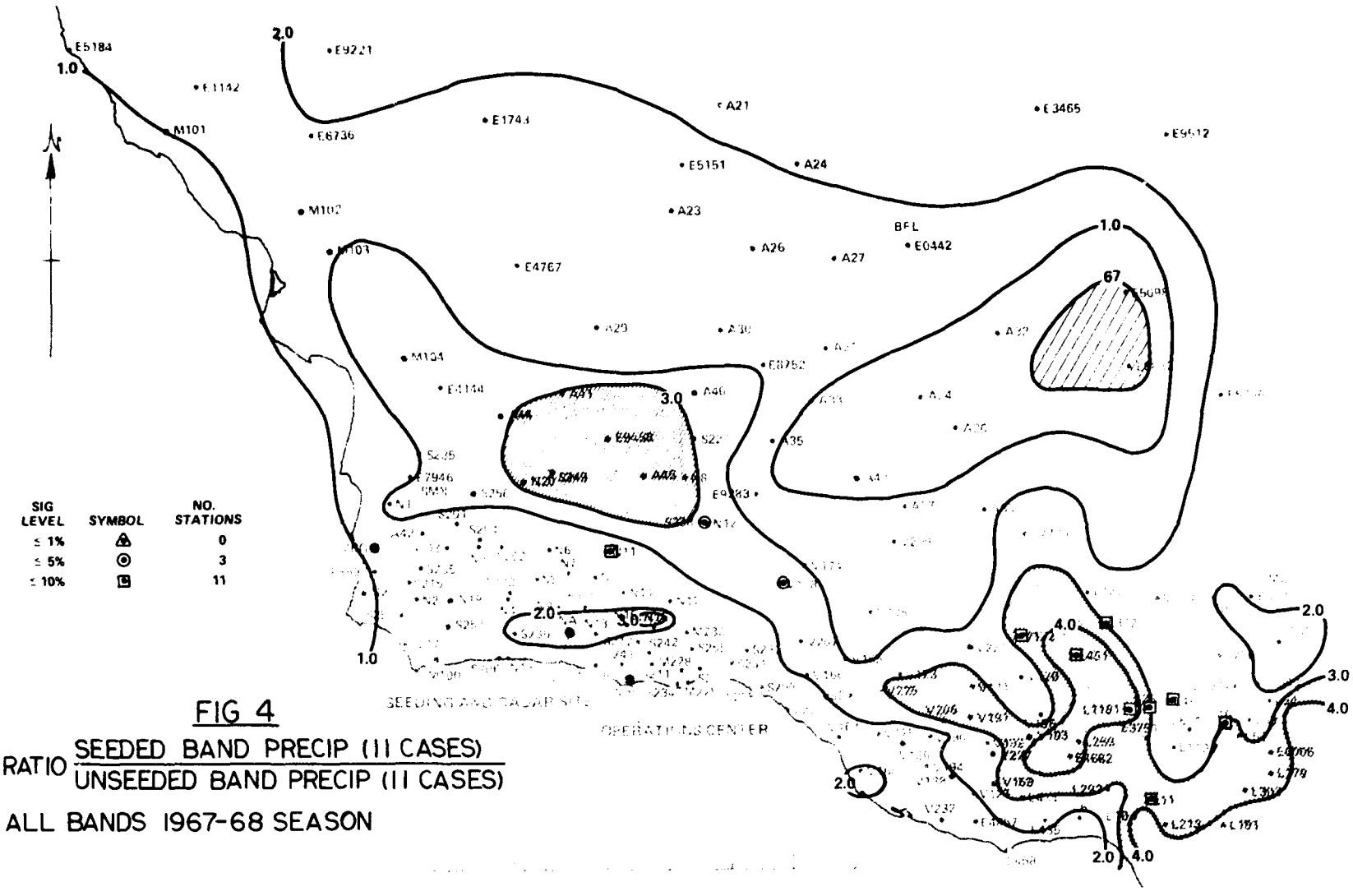


FIG 4

RATIO $\frac{\text{SEEDED BAND PRECIP (11 CASES)}}{\text{UNSEEDED BAND PRECIP (11 CASES)}}$

ALL BANDS 1967-68 SEASON

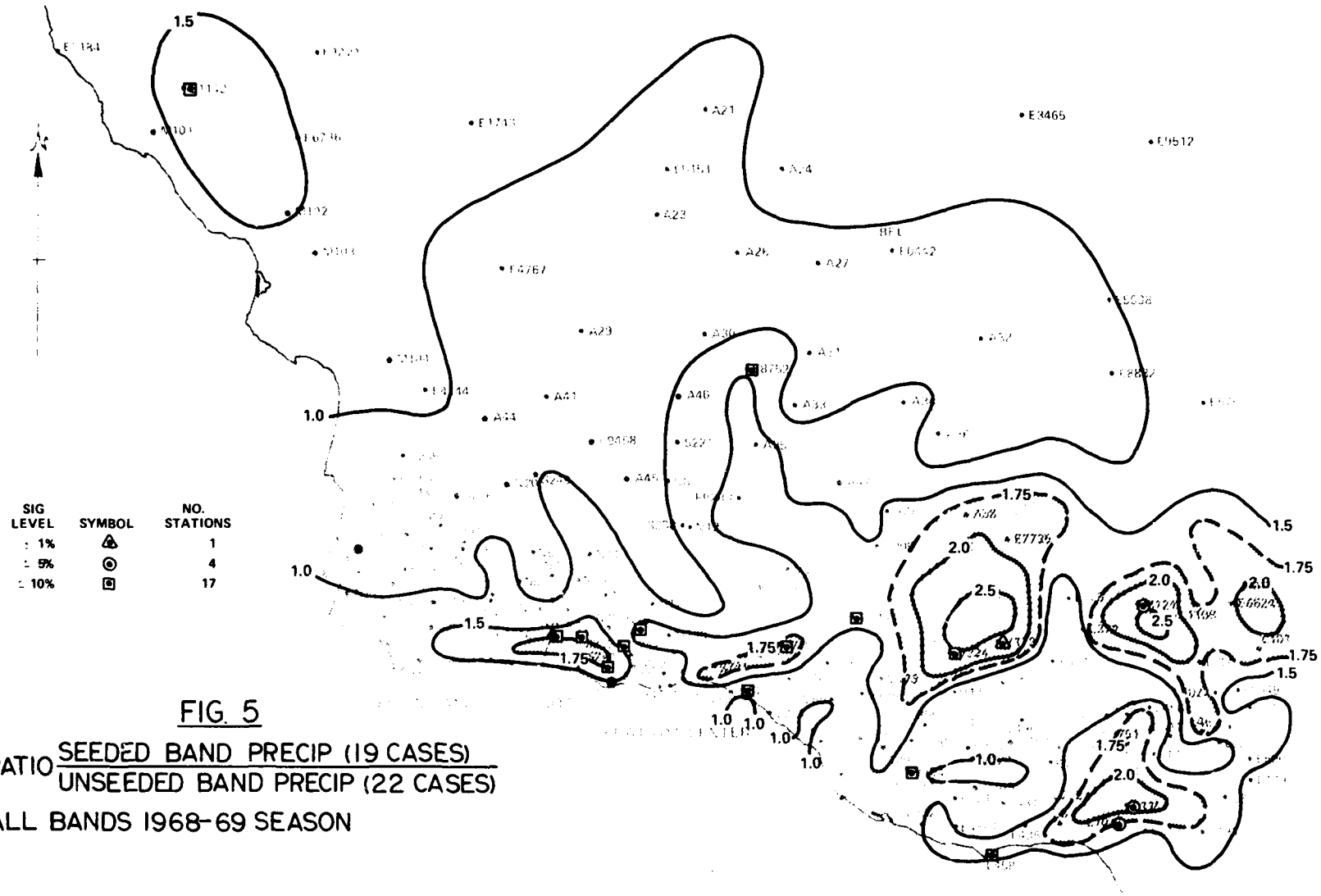


FIG. 5

RATIO $\frac{\text{SEEDED BAND PRECIP (19 CASES)}}{\text{UNSEEDED BAND PRECIP (22 CASES)}}$

ALL BANDS 1968-69 SEASON

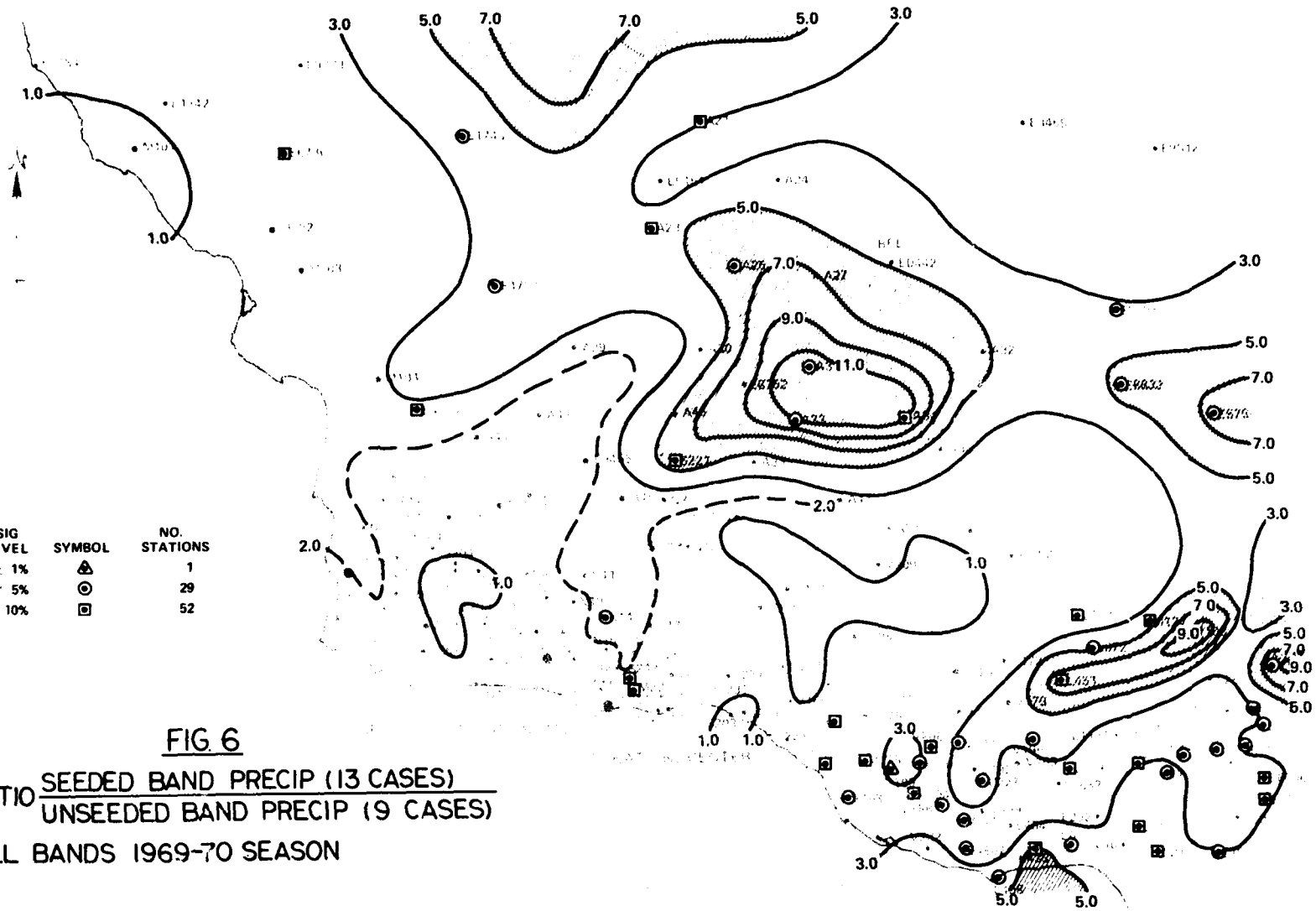


FIG. 6

RATIO $\frac{\text{SEEDED BAND PRECIP (13 CASES)}}{\text{UNSEEDED BAND PRECIP (9 CASES)}}$

ALL BANDS 1969-70 SEASON

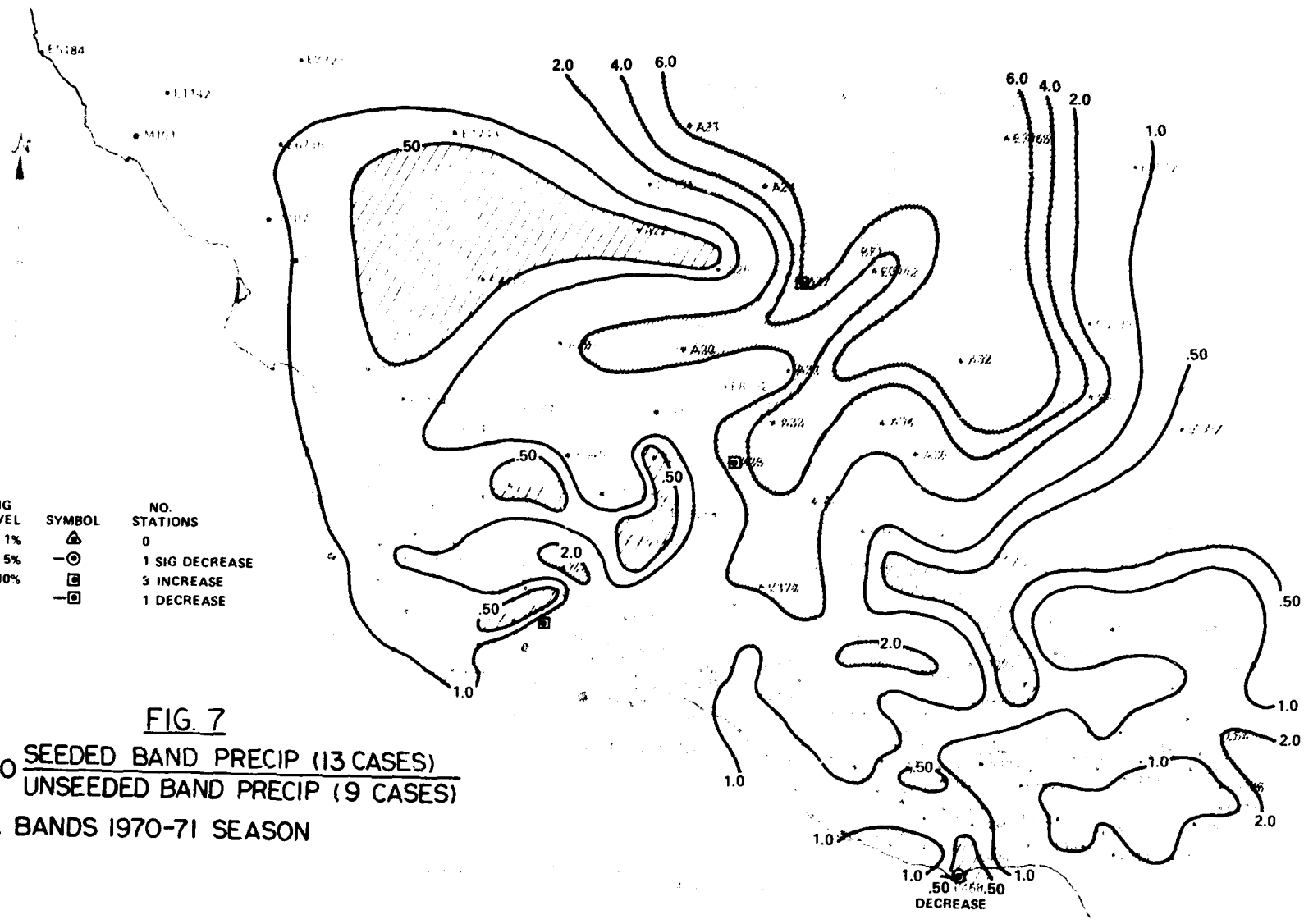


FIG. 7

RATIO $\frac{\text{SEEDED BAND PRECIP (13 CASES)}}{\text{UNSEEDED BAND PRECIP (9 CASES)}}$

ALL BANDS 1970-71 SEASON

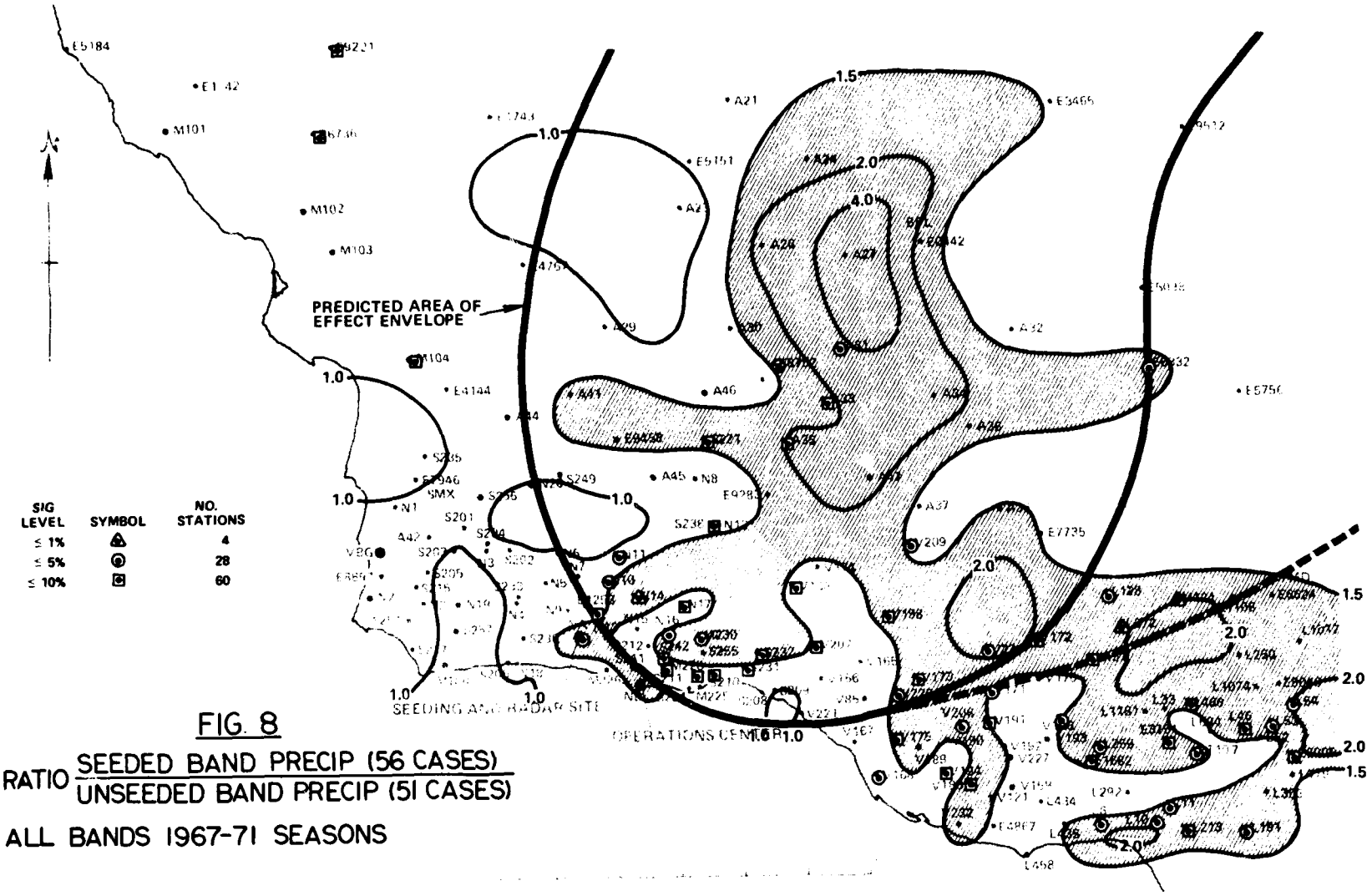


FIG. 8

RATIO $\frac{\text{SEEDED BAND PRECIP (56 CASES)}}{\text{UNSEEDED BAND PRECIP (51 CASES)}}$

ALL BANDS 1967-71 SEASONS

Equation (1) then reduces to the following equations for 10%, 5%, and 1% levels of probability:

10% level $\frac{X - .10N}{.949\sqrt{N}}$

5% level $\frac{X - .05N}{.218\sqrt{N}}$

1% level $\frac{X - .01N}{.099\sqrt{N}}$

If we divide the stations shown in Figure 8 into three zones: The area within the predicted area of effect envelope (including the cirrus fallout extension); the area to the left of the envelope; the area to the right of the envelope, the following test statistics are derived.

Table 1 - Binomial Test Statistics

Prob. Level	Area of Effect		Left of Area		Right of Area	
	N = 73		N = 45		N = 50	
10%	X = 31	2.9	X = 6	0.2	X = 23	2.7
5%	X = 15	6.1	X = 1	-0.9	X = 12	6.1
1%	X = 4	3.9	X = 0	-0.7	X = 0	-0.7

The probability of detecting so many stations significant at the given levels by chance is calculated to be between .002 and .00001 within the predicted area of effect envelope, while the upwind area to the left of the predicted fallout area has only the expected number or less number stations significant at the various levels. The area to the right or south of the area of effect envelope has a highly significant number of stations in the 10% and 5% categories. For example, the probability of observing twelve or more stations significant at the 5% level within this area containing 50 observing stations is less than .00001.

The four year sample of band precipitation was stratified by various meteorological parameters in order to test the effect of each parameter on seeding effectiveness and location. One of the major stratifications has been on the

basis of 500 mb temperatures which are used as an estimate of cloud top temperature since no direct measurements of cloud top height have been available. The dependence of seeding effectiveness on cloud top temperature has been well documented by Grant (1967) and others.

Three different temperature divisions were tested with the warm-cold split occurring at -18°, -20° and -22°C. There was very little difference between the seed/no seed ratios of the bands when the temperature division was made at -18°C. When the division occurred at -20°C however, a significant difference begins to be apparent with the bands with 500 mb temperatures equal to or warmer than -20°C (Figure 9) showing a large area of high seed/no seed ratios in both the primary seeding area and in the area 60-90 miles downwind. In the warm category 70 stations show significance at the 10% level and 38 at the 5% level. The bands with 500 mb temperatures colder than -20°C (Figure 10) show much smaller areas of high seed/no seed ratios and an area with ratios of less than 0.67 (50% less rain from seeded bands) appears about 60 miles north of the seeding site. Contrasted with the warmer category, only one station is significant at the 5% level and nine at the 10% level or less.

When the temperature division is made at -22°C, the contrast becomes even more evident. The seed/no seed precipitation ratios from the bands with 500 mb temperatures of -22°C or warmer (Figure 11) are greater than 1.50 over a very large area and extremely high ratios (over 20:1 at stations A27 and A31) are observed in the San Joaquin Valley. The ranking of the precipitation distributions was significantly different at 92 stations at the 10% level, 64 stations at the 5% level and 17 stations at the 1% level. The bands with 500 mb temperature colder than -22°C (Figure 12) show a rather large area with ratios under 0.67 in the same region where high ratios occurred in the warm category. Most of the higher ratios (over 1.5) occur over the Sierra Mountains more than 120 miles from the seeding site. The Wilcoxon (Mann-Whitney) test showed only one station with a precipitation distribution which was significantly different for seeded and unseeded bands and that station(A44) showed a decrease in precipitation from seeded bands significant at the 1% level. The sample size for that particular station was quite small, however, (six seed, six no seed), so the results may be questionable.

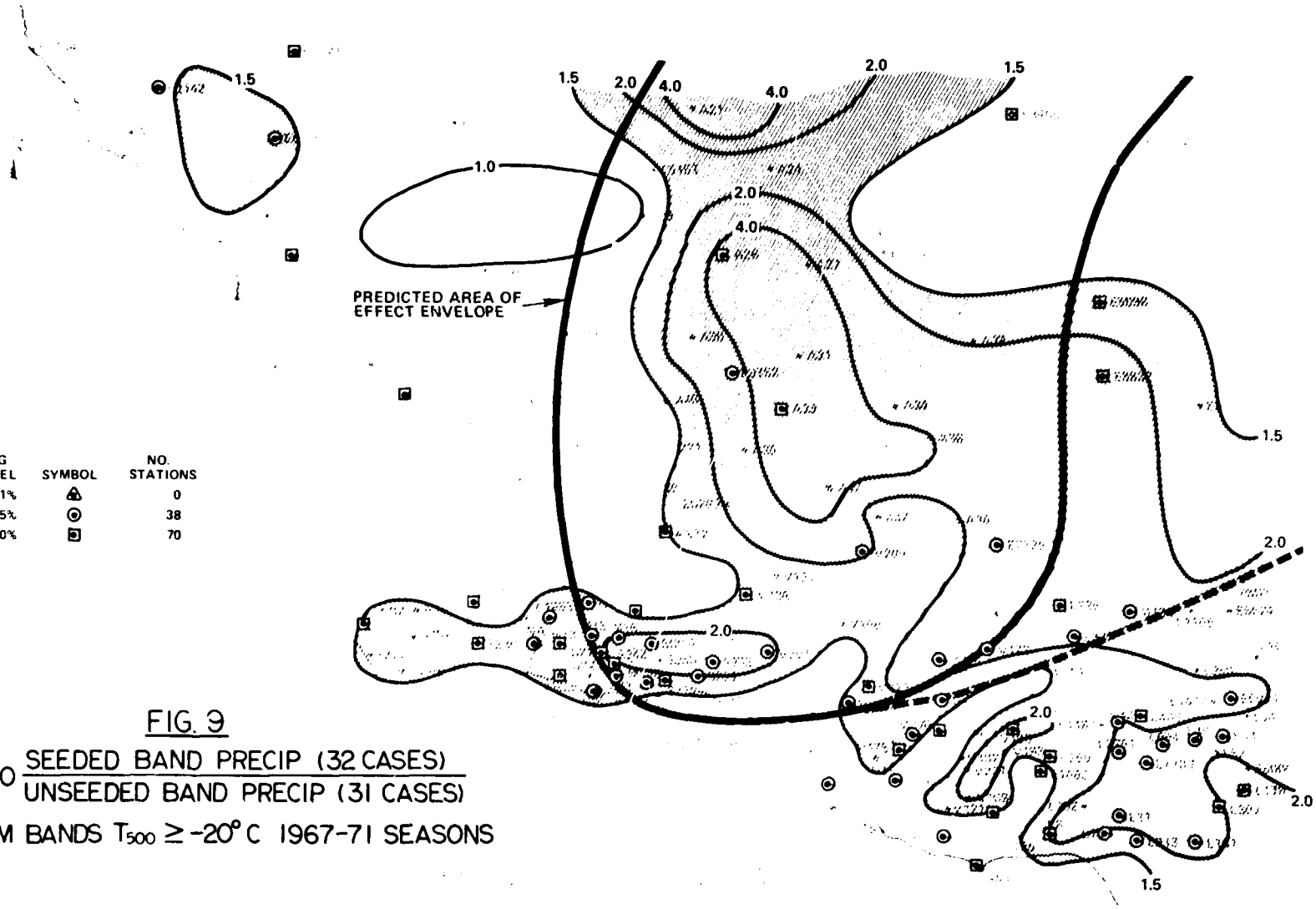


FIG. 9

RATIO $\frac{\text{SEEDED BAND PRECIP (32 CASES)}}{\text{UNSEEDED BAND PRECIP (31 CASES)}}$

WARM BANDS $T_{500} \geq -20°C$ 1967-71 SEASONS

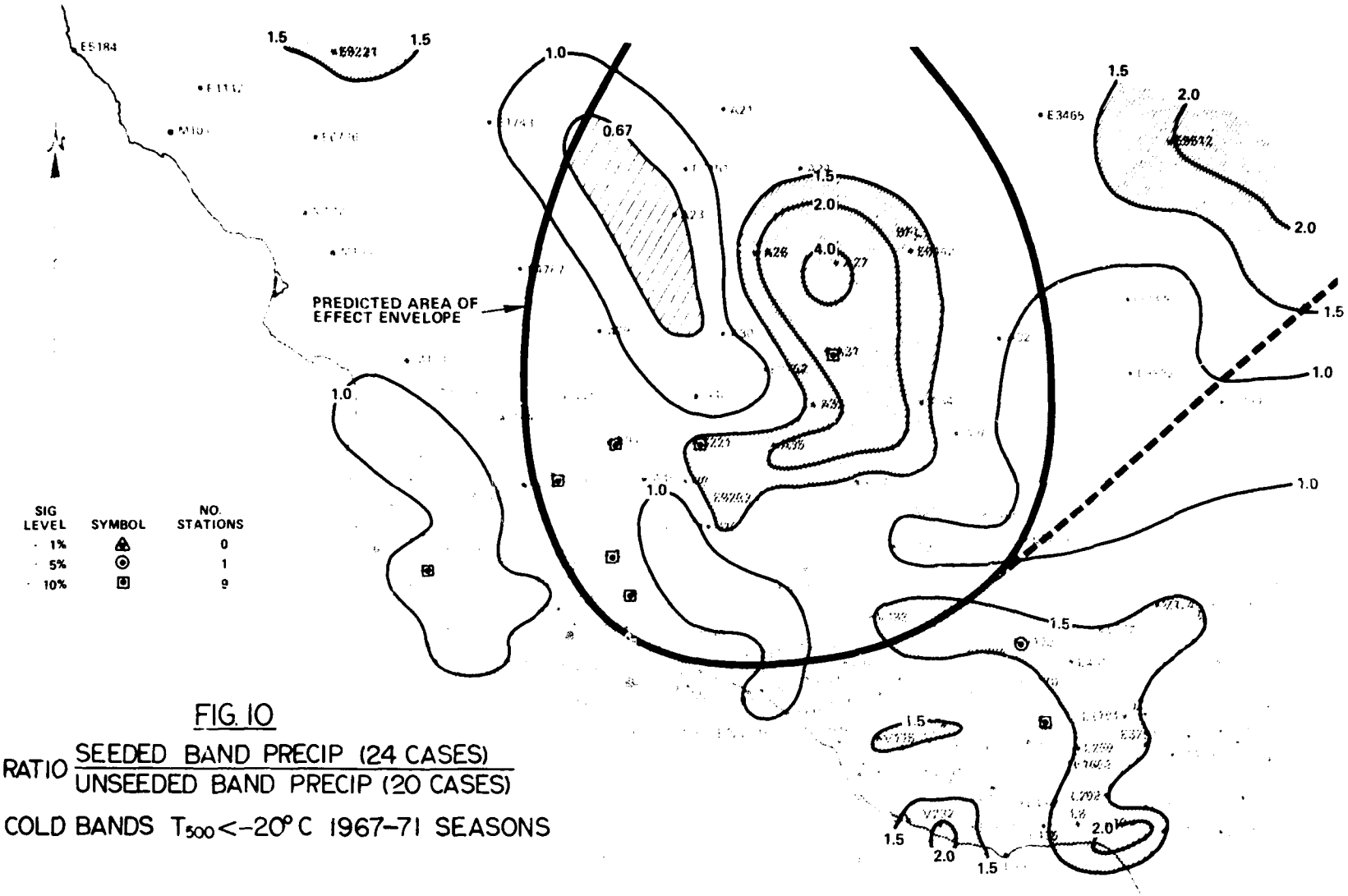


FIG. 10

RATIO $\frac{\text{SEEDED BAND PRECIP (24 CASES)}}{\text{UNSEEDED BAND PRECIP (20 CASES)}}$

COLD BANDS $T_{500} < -20°C$ 1967–71 SEASONS

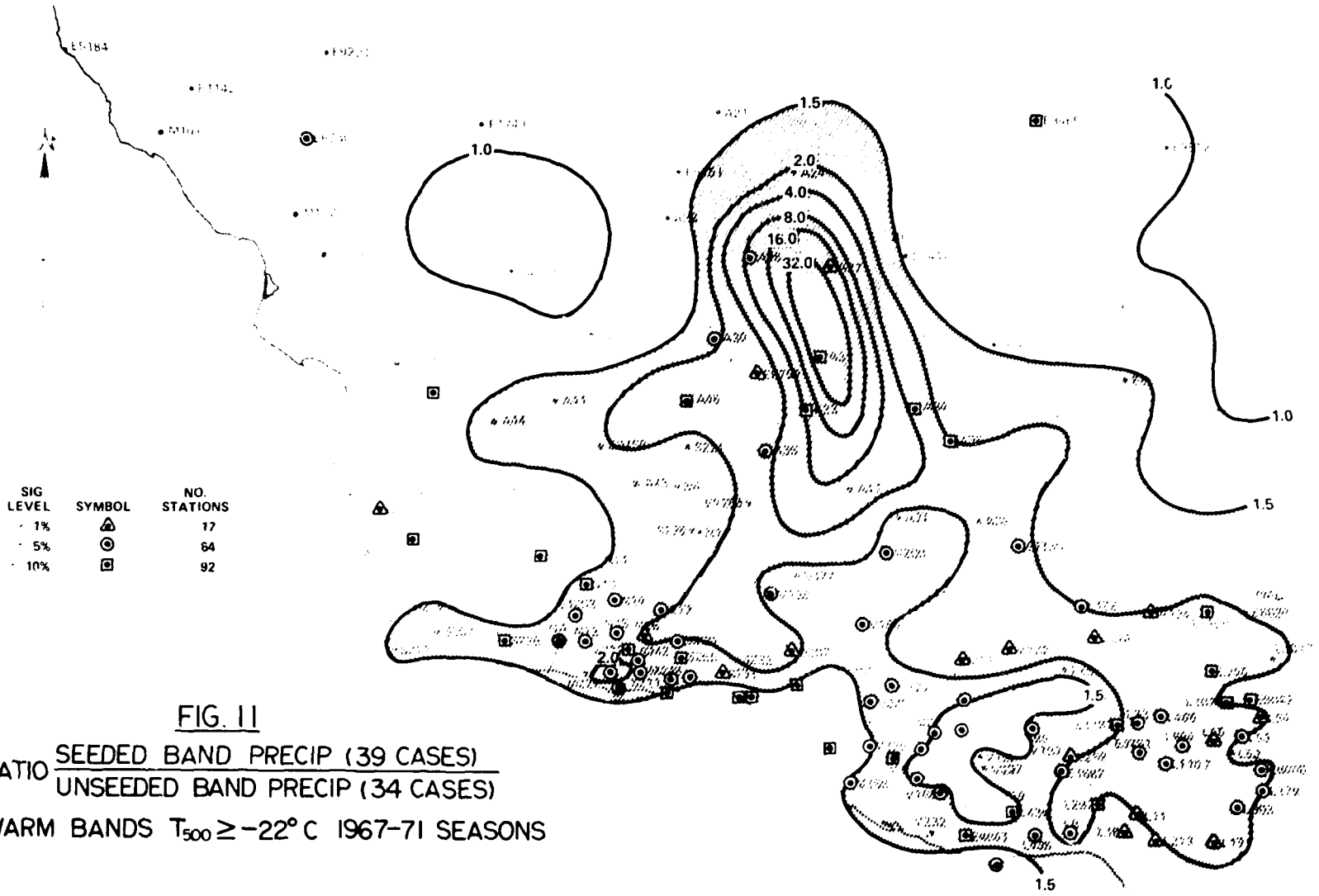


FIG. 11

RATIO $\frac{\text{SEEDED BAND PRECIP (39 CASES)}}{\text{UNSEEDED BAND PRECIP (34 CASES)}}$

WARM BANDS $T_{500} \geq -22°C$ 1967-71 SEASONS

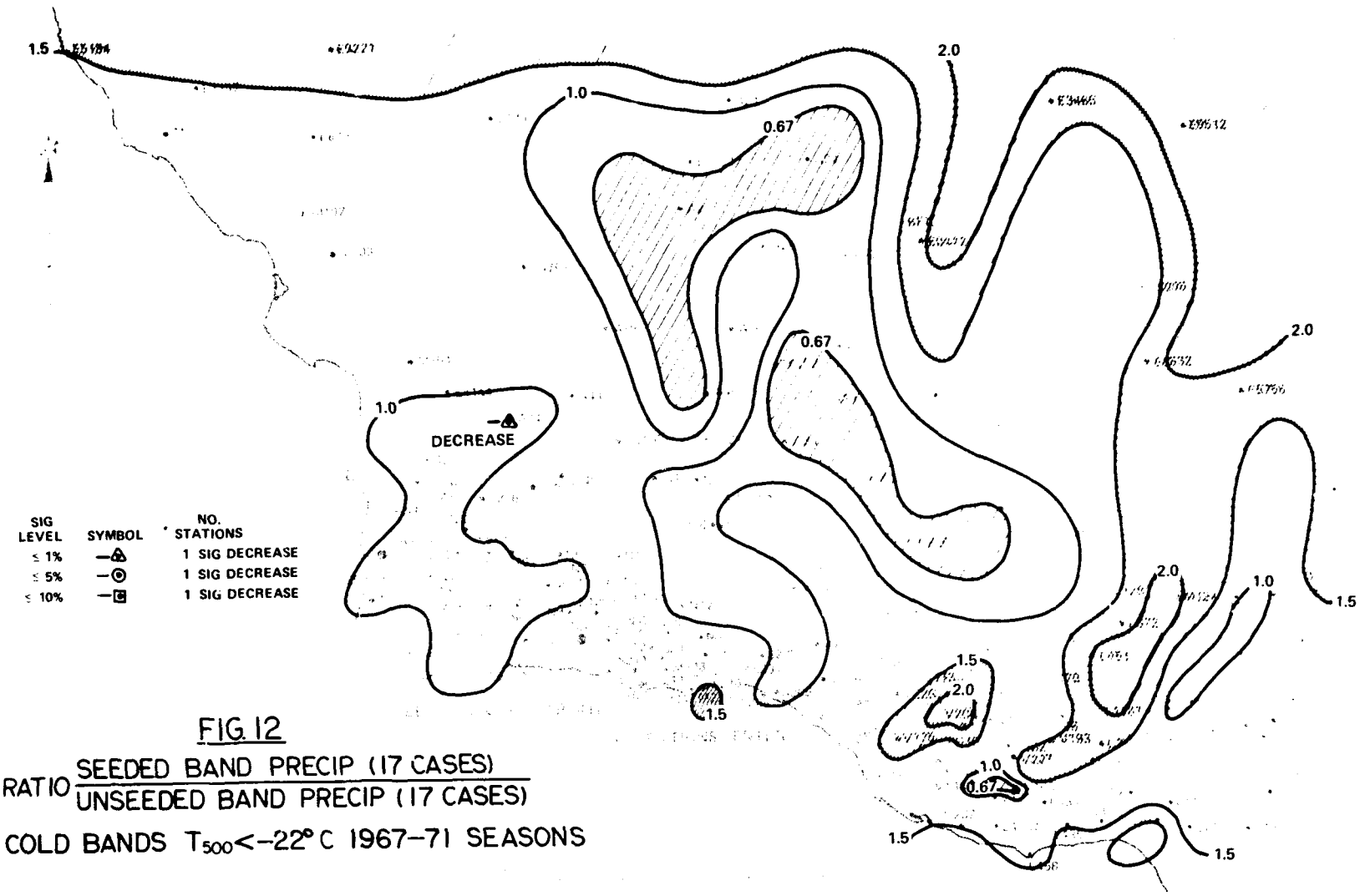


FIG. 12

RATIO $\frac{\text{SEEDED BAND PRECIP (17 CASES)}}{\text{UNSEEDED BAND PRECIP (17 CASES)}}$

COLD BANDS $T_{500} < -22°C$ 1967–71 SEASONS

It would appear that when seeding is done during the coldest storms, the precipitation is decreased due to overseeding. As the system moves further east and new moisture is entrained, the proper mixture of ice crystals and supercooled water is achieved and rainfall is then increased.

Another stratification of the precipitation data was made on the basis of 700 mb wind direction. The 700 mb level is considered representative of the area midway between cloud base and cloud top and is generally believed to be important in steering cell movement. The four year data sample was divided into two approximately equal groups with winds from 150 to 234 degrees assigned to the southerly category and winds from 235 to 290 degrees in the westerly group.

The southerly wind group (Figure 13) shows large areas with ratios over 1.5 especially in the San Joaquin Valley which fits well with the median wind direction for this category. Several rather surprising patterns also appear in Figure 13. The area of high ratios and associated low probabilities in the northwest corner of the map is very difficult to explain since the band has almost always passed these stations when seeding is initiated and then therefore presumably couldn't be effected by the seeding. The general high ratios in the southeast portion of the map is rather surprising with a southerly wind component. The concentrated area of high ratios and significance immediately east of the seeding site is also surprising when compared to those bands with a westerly 700 mb wind as shown in Figure 14. It appears that almost all of the close in seeding effect occurs with a southerly wind component but not in a direction which the wind would carry the nucleant. The major area of high ratios in the westerly wind group appears over the Sierras extending south to the San Gabriel Mountains and is not inconsistent with the median flow. An area of apparent precipitation decrease is located along the west side of the San Joaquin Valley with one station (A45) showing a statistically significant decrease at the 5% level.

Since the aerial seeding mode was used on only seven bands (three seeded and four not seeded), the statistical analysis of the precipitation patterns cannot be considered as significant evidence. However, Figure 15 showing the seed/no seed precipitation ratios for these aerial bands is presented for completeness. A possible area of direct seeding effect is located about 20 miles east of the seeding track. Several high ratio areas are also evident 80 to 100 miles east and northeast of the seeding track.

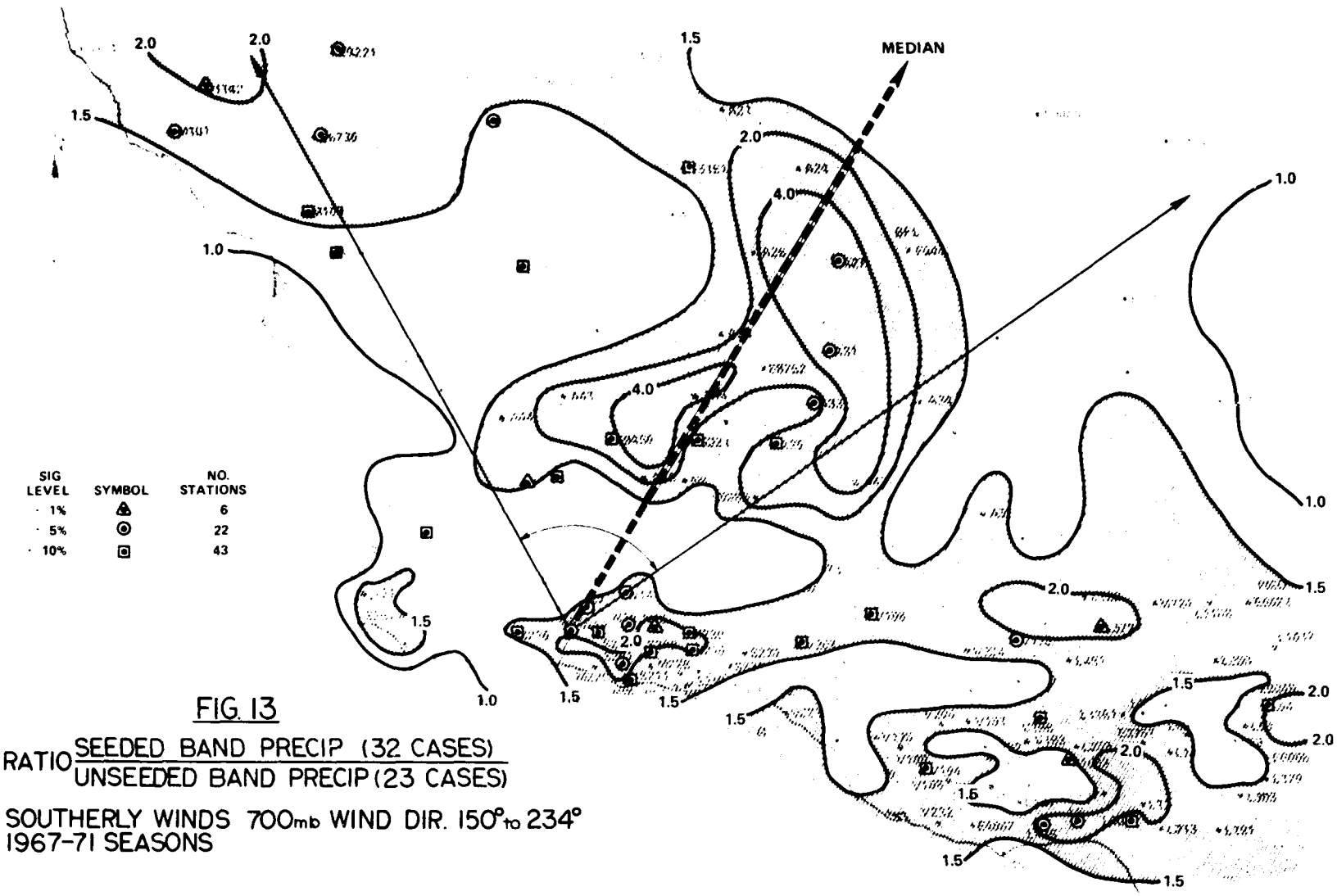


FIG. 13

RATIO $\frac{\text{SEEDED BAND PRECIP (32 CASES)}}{\text{UNSEEDED BAND PRECIP (23 CASES)}}$

SOUTHERLY WINDS 700mb WIND DIR. 150° to 234°
1967-71 SEASONS

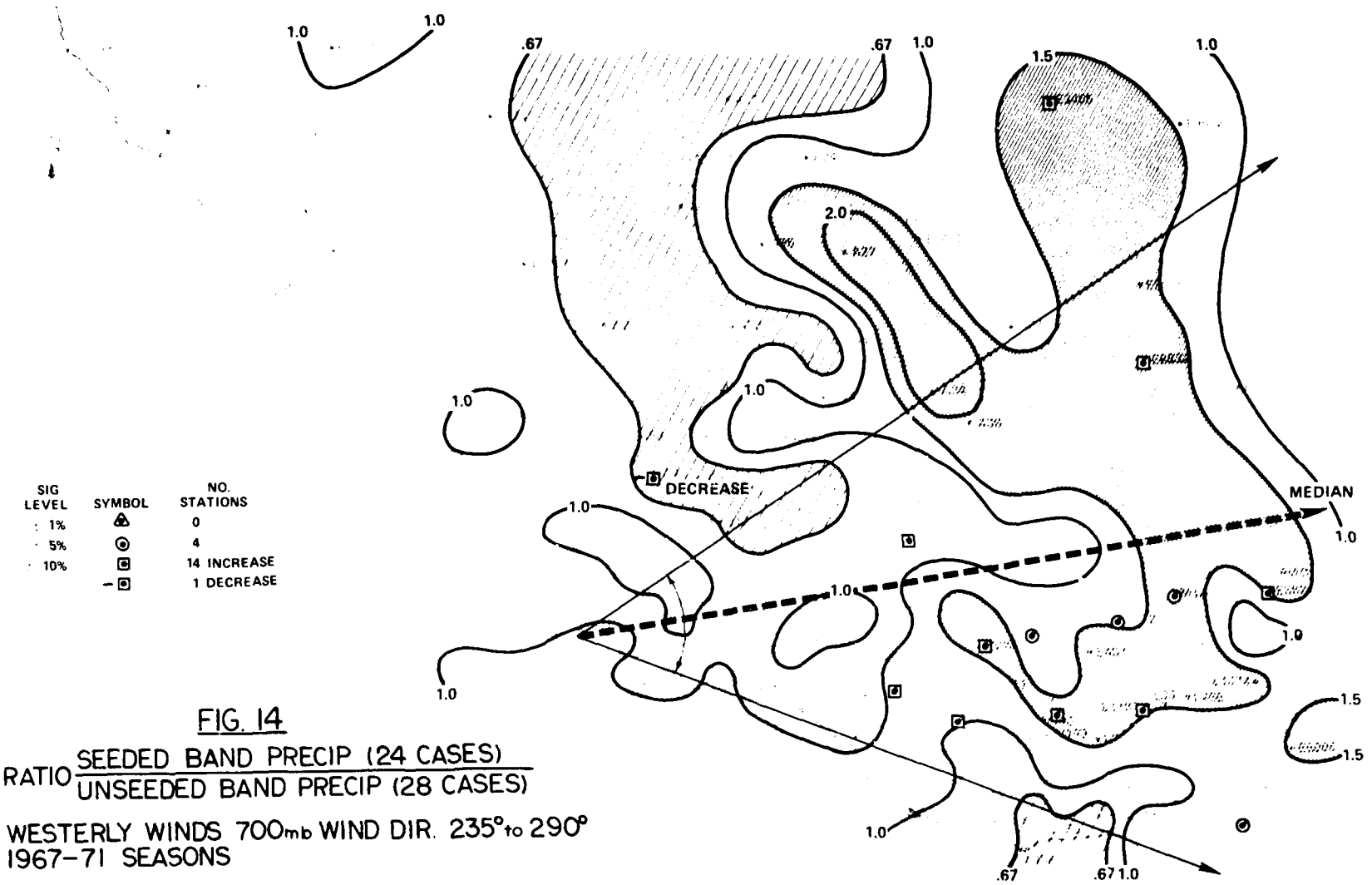


FIG. 14

RATIO $\frac{\text{SEEDED BAND PRECIP (24 CASES)}}{\text{UNSEEDED BAND PRECIP (28 CASES)}}$

WESTERLY WINDS 700mb WIND DIR. 235° to 290°
1967–71 SEASONS

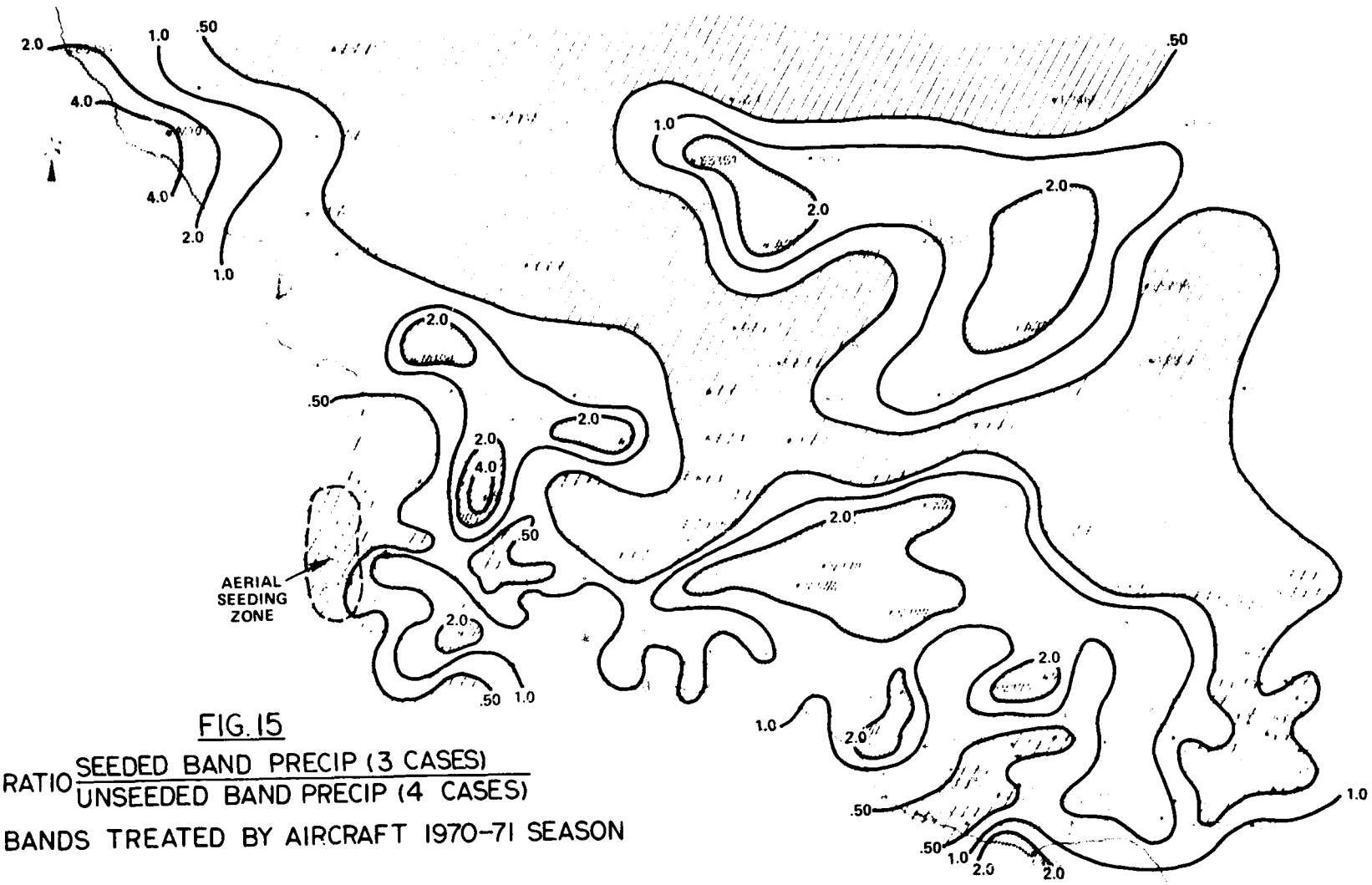


FIG. 15

RATIO $\frac{\text{SEEDED BAND PRECIP (3 CASES)}}{\text{UNSEEDED BAND PRECIP (4 CASES)}}$

BANDS TREATED BY AIRCRAFT 1970-71 SEASON

Band Duration Analysis

The band duration, the elapsed time from the onset of the leading edge of the band at a given point to the passage of the trailing edge at the same point, varies considerably from band to band and from station to station within any band. A statistical analysis was made to determine whether seeding altered the time duration of the band in addition to the precipitation total produced by the band.

Figure 16 depicts the seed/no seed ratio of band duration for all four year's data. Since band duration comes closer to a normal distribution than precipitation data which are notoriously skewed, the ratios in Figure 16 do not show the extreme values found in Figure 8. However, a clear pattern is evident with ratios of over 1.5 in the primary seeding area and large areas of ratios over 1.5 in the extended area. Even more astounding is the large number of stations showing duration distributions which were different and significant at very low probability levels. A total of 98 stations showed distributions significant at the 10% level, 64 at the 5% level and 15 at the 1% level. When we repeat the Binomial Test described in the previous section, the results are quite outstanding, as shown in Table 2.

Table 2. Binomial Test Statistics

Prob. Level	Area of Effect		Left of Area		Right of Area	
	N = 73		N = 45		N = 50	
10%	X = 45	4.65	X = 17	1.96	X = 36	4.62
5%	X = 31	14.68	X = 10	5.30	X = 23	13.30
1%	X = 9	9.78	X = 2	2.33	X = 4	5.00

With test statistics as high as those observed, one can state that the odds against observing so many stations significant at each level is well over a million to one.

CONCENTRATION OF SILVER IN PRECIPITATION

Samples of precipitation were collected during band passage at some stations over the last two seasons. These were sent to the Bureau of Reclamation office for determination of silver content by atomic absorption techniques. During

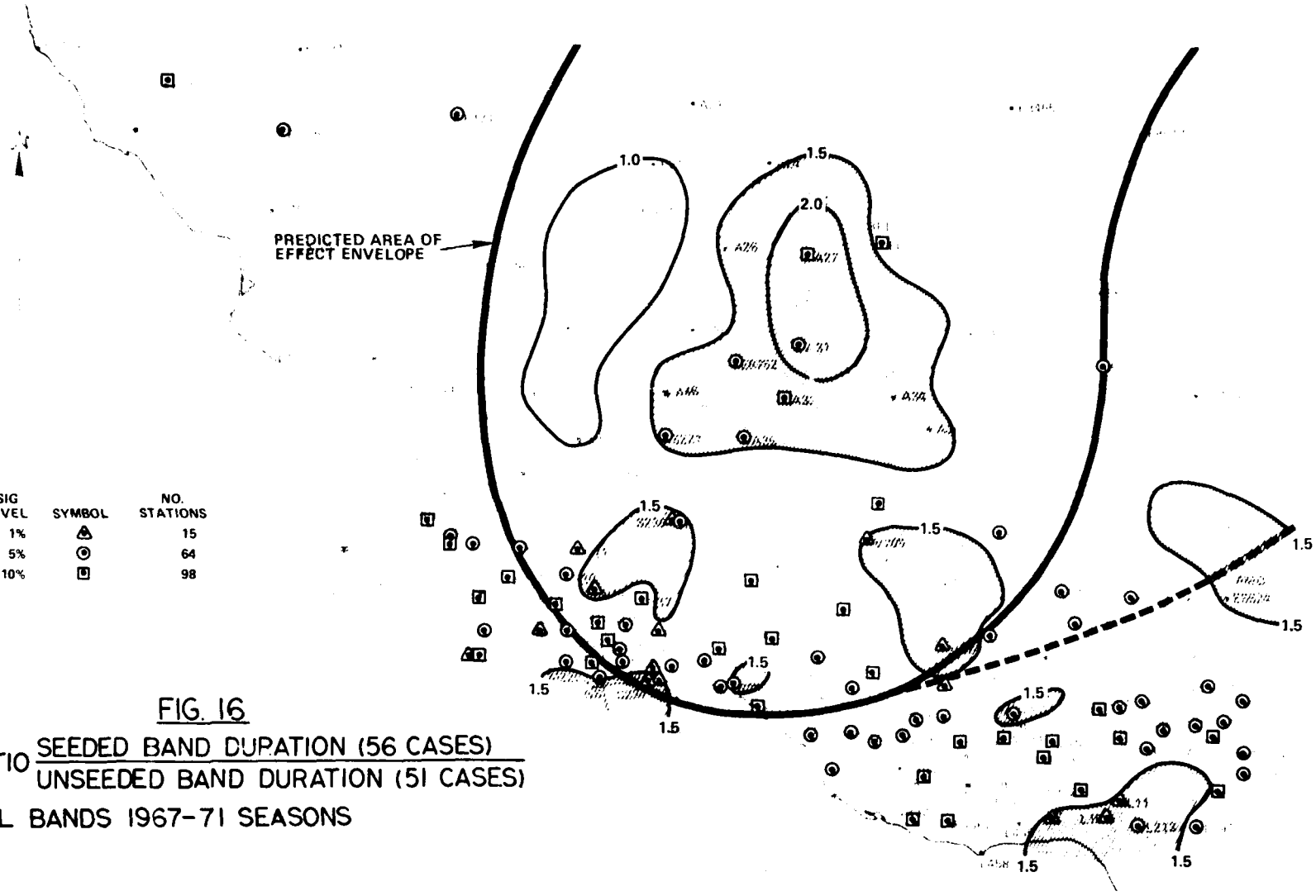


FIG. 16

RATIO $\frac{\text{SEEDED BAND DURATION (56 CASES)}}{\text{UNSEEDED BAND DURATION (51 CASES)}}$

ALL BANDS 1967-71 SEASONS

1969-70, collections were made at four stations, making use of sequential samplers which collected rain samples in plastic bottles every 60 minutes. The samples examined were those best covering the time interval of the seeded or not seeded band passage at each station. During 1970-71, observers made the collections manually following alerts by project control. In each season, immediately following collection, the samples were frozen, then shipped to the Bureau of Reclamation office in Denver for analysis.

Table 3 lists the results of these collections. It was not possible to sample every band, and indeed the number is small for making anything more than a minimal type analysis. Figure 17 shows the silver ratios determined, lumping together the different sets of stations used in each of the two seasons sampled. Also shown in Figure 17 are the seed/no seed precipitation ratios for only those bands and stations which were sampled for silver content. Silver ratios above one tend to lie within the envelope of the all band area of effect or immediately upwind thereof. There is a suggestion that low level plume drift to the west before entrainment may be more important than the model would indicate. The area of high precipitation ratio most noticeable in Figures 9 and 11 lies in a similar region. The high silver ratio at Big Eye, right next to the source, may reflect a large degree of washout of oversize particles in that vicinity.

It is perhaps significant that the two stations in the downwind region lying just to the right of the model's envelope have silver ratios of under one. This suggests that the high precipitation ratios observed in this area are not the direct result of artificially altered microphysical processes.

The corresponding precipitation ratios shown in Figure 17 point out the danger of forming conclusions based on this limited sample. It is apparent that the precipitation ratios bear little resemblance to the patterns shown in earlier figures. The only areas with ratios of over one are in the far upwind, far downwind and south of the seeding site. Little relationship can be found between areas of high silver ratio and high precipitation ratio.

The sample from the aerially seeded bands is too small to provide meaningful results.

EFFECTS OF SEEDING ON OTHER BANDS AND ON BETWEEN-BAND PRECIPITATION

No analysis would be complete without considering the possibility that seeding a given band might affect precipitation in an area much wider than the

TABLE 3-A

CONCENTRATION OF SILVER IN PRECIPITATION

Grams per Mililiter x 10^{-10}

1969-70 Season

Band No.	Date	Seed-S No Seed-NS	Barca Ranch Station A42	Las Cruces 1.5 WNW Station A43	Los Prietos Station N16	NAWC Station NB
1	11/5/69	NS	0.7×10^{-10}	$<0.2 \times 10^{-10}$	$<0.2 \times 10^{-10}$	Msg.
2	11/6/69	S	0.7	1.0	< 0.2	Msg.
3	1/9/70	NS	Msg.	1.6	0.4	Msg.
4	1/9/70	S	Msg.	0.7	1.3	Msg.
5	1/9/70	S	0.8	2.5	1.1	Msg.
5	1/9/70	S	0.3		0.7	Msg.
14	2/28/70	NS			1.5	Msg.
14	2/28/70	NS	0.7	Msg.	0.6	Msg.
14	2/28/70	NS			0.7	Msg.
15	2/28/70	S	0.9	Msg.	0.3	Msg.
16	2/28/70	S	0.7	Msg.	0.5	Msg.
17	3/1/70	NS	0.6	Msg.	Msg.	Msg.
18	3/1/70	S	0.3	Msg.	0.6	Msg.
19	3/1/70	S	0.3	Msg.	0.2	Msg.
22	3/4/70	S	0.9	1.8	0.8	0.9
22	3/4/70	S	1.1	0.9	1.1	1.2
22	3/4/70	S		1.7		
Seed/No seed Ag Ratio:			1.00	1.44	1.12	
Corresponding Seed/No Seed Precip Ratio:			1.16	0.89	0.96	

Rinse Concentrations: 1.0, 0.7, 2.8, 1.7, 1.5, 016

TABLE 3-B

CONCENTRATION OF SILVER IN PRECIPITATION

Grams per Mililiter x 10^{-10}

1970-71 Season

Band No.	Date	No Seed-NS	NAWC NB	VBG N21	New Cuyama N8	Montalvo V167	Gorman A38	Big Eye NA	Taft E8752	Saugus L372	Bakers-field E442	Buellton N4	Santa Maria E7946
Ground													
4	11/28/70	S	5.2					38.0				0.6	
7	11/29/70	S	0.8		0.7	0.5	0.5	8.3	0.5		0.6	5.4	
8	12/2/70	NS	0.4		0.4	1.2		0.8				0.4	
9	12/2/70	S	3.2		3.1			41.0					
11	12/18/70	S	1.8	2.5	0.6	0.5	<0.3	1.7	1.2	0.4		0.9	<0.3
14	12/20/70	NS	0.5		0.9	1.8	<0.3	3.6	1.4	0.6		1.1	
18	2/16/71	S	1.1					290.0				1.0	0.5
20	3/12/71	S	<0.3		0.3	1.2	0.6	8.2	0.5	0.7	0.6	0.5	<0.3
21	4/13/71	S	1.6					15.0					
22	4/14/71	NS	0.5		1.0			12.1	0.5				
Seed/No Seed Ag Ratio:			4.3	-	1.5	0.5	1.6	10.5	0.8	0.9	-	2.3	-
Corresponding Seed/No Seed Precip Ratio:			1.26	-	0.76	0.90	0.76	0.71	0.15	1.17	-	0.36	-
Air													
A1	12/16/70	S	0.4	0.8	2.8			1.4	0.8			<0.3	0.3
A2	12/16/70	S		2.1				1.6				0.3	0.5
A3	12/16/70	NS		0.7									
A6	4/17/71	NS	0.5		0.3			30.0				0.9	0.3
A7	4/17/71	NS					0.6	10.0					
Seed/No Seed Ag Ratio:			0.8	2.1	9.3	-	-	0.1	-	-	-	0.3	1.3
Corresponding Seed/No Seed Precip Ratio:			8.00	0.67	∞	-	-	0.71	-	-	-	0.57	0.33

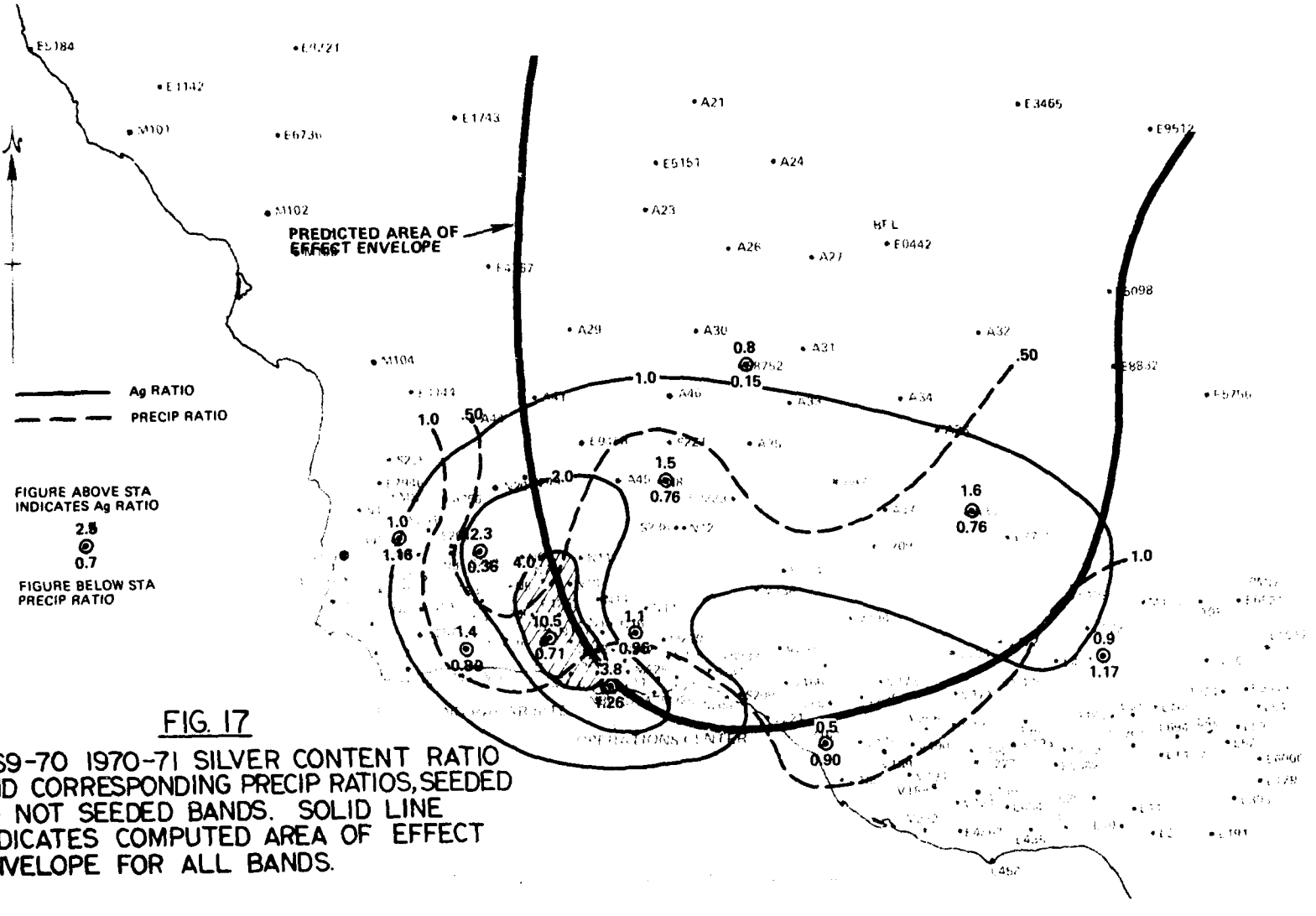


FIG. 17

1969-70 1970-71 SILVER CONTENT RATIO AND CORRESPONDING PRECIP RATIOS, SEEDED TO NOT SEEDED BANDS. SOLID LINE INDICATES COMPUTED AREA OF EFFECT ENVELOPE FOR ALL BANDS.

band itself. The possibility of seeding from artificial cirrus which has moved downwind from the parent band has been mentioned already. There is also the possibility of seeding the area following the band as the low level silver iodide plume drift continues after band passage. Both of these microphysical effects should, on the average, have a positive effect on precipitation.

A mesoscale dynamic effect would be the production of downdrafts far outside of the artificially invigorated segment of the band. In large Great Plains thunderstorms a suppressing effect occurs on convection up to 75 miles from the storm (Schock and Gelhaus, 1971). The average spacing between consecutive convection bands is around 50 miles. These possible microphysical and dynamic effects are summarized in Figure 18.

A statistical analysis to determine the possible interaction between bands was made by computing the ratio of precipitation from bands followed by a seeded band divided by bands followed by an unseeded band without regard as to whether the band in question was seeded or not. These ratios are shown in Figure 19. An interesting pattern is evident with a large portion of eastern Santa Barbara County, Ventura County and Los Angeles County receiving twice as much rainfall when a band is followed by a seeded band as when it is followed by an unseeded band. A total of 37 stations show significantly higher ranks at the 10% level when followed by a seeded band and 22 at the 5% level. The area to the north of this region, however, shows a 50% decrease in rainfall when a band is followed by a seeded band. This area is primarily in the San Joaquin Valley. Nine of these stations have decreased ranks significant at the 10% level.

The area of enhanced precipitation could be due to cirrus seeding as shown in Figure 18, however, it would require an outflow of cirrus well to the right of the cirrus level wind flow. The area of decreased precipitation is more difficult to explain since it is more directly in line with the expected cirrus flow. It may be that in the drier San Joaquin Valley, the subsidence produced by a mesoscale dynamic effect is more pronounced.

Another ratio was calculated comparing bands preceded by a seeded band and those preceded by an unseeded band, again without regard to whether the band used in the analysis was seeded or not. The results of this analysis are shown in Figure 20. In this figure we see an almost complete reversal of the pattern shown in Figure 19. The area of 100% increases in Los Angeles County

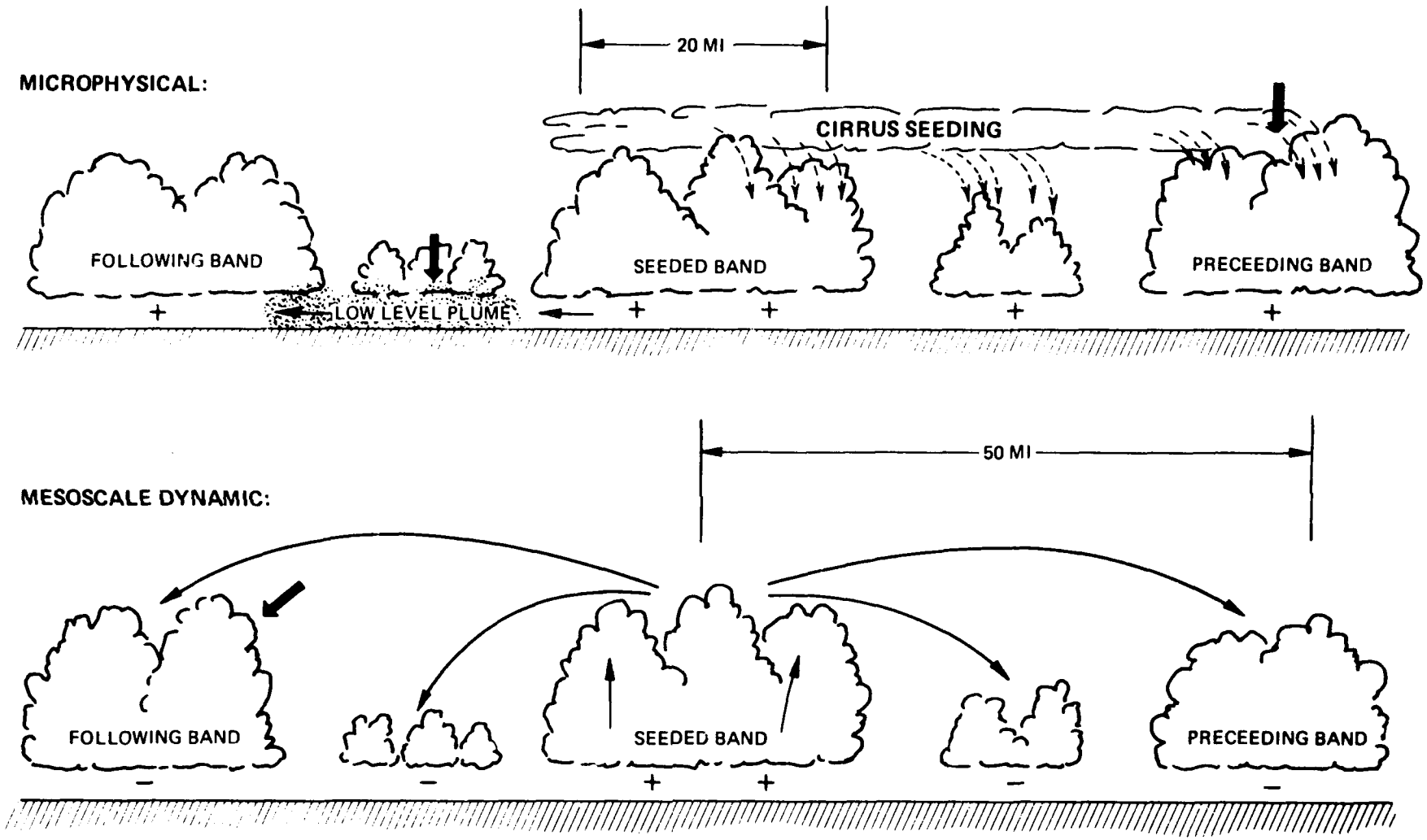


FIG. 18

Possible effects outside of band. The effect on precipitation is denoted by the + or − signs at cloud base. Apparent dominant effect is designated by heavy arrow .

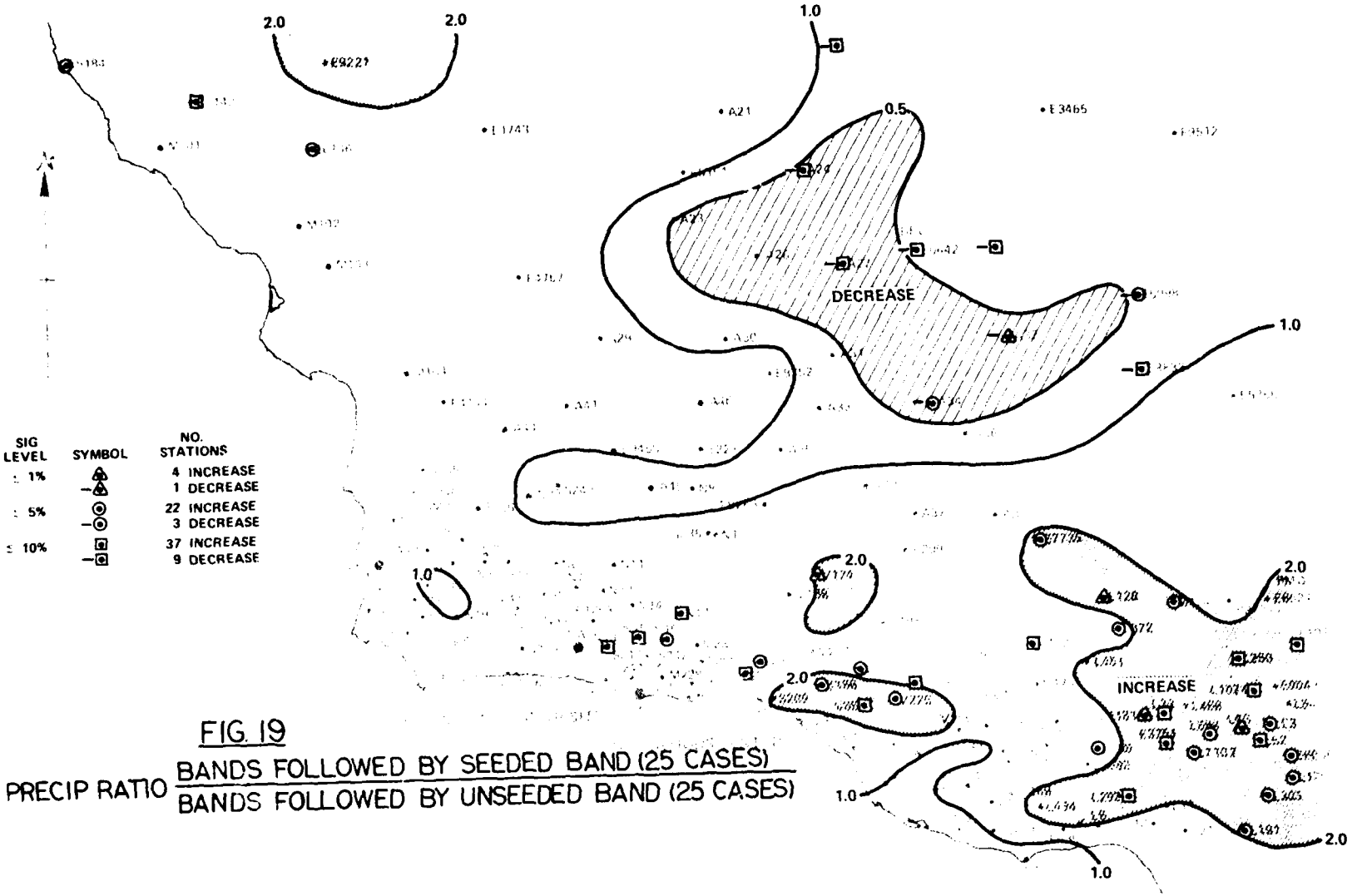


FIG. 19

PRECIP RATIO $\frac{\text{BANDS FOLLOWED BY SEEDED BAND (25 CASES)}}{\text{BANDS FOLLOWED BY UNSEEDED BAND (25 CASES)}}$

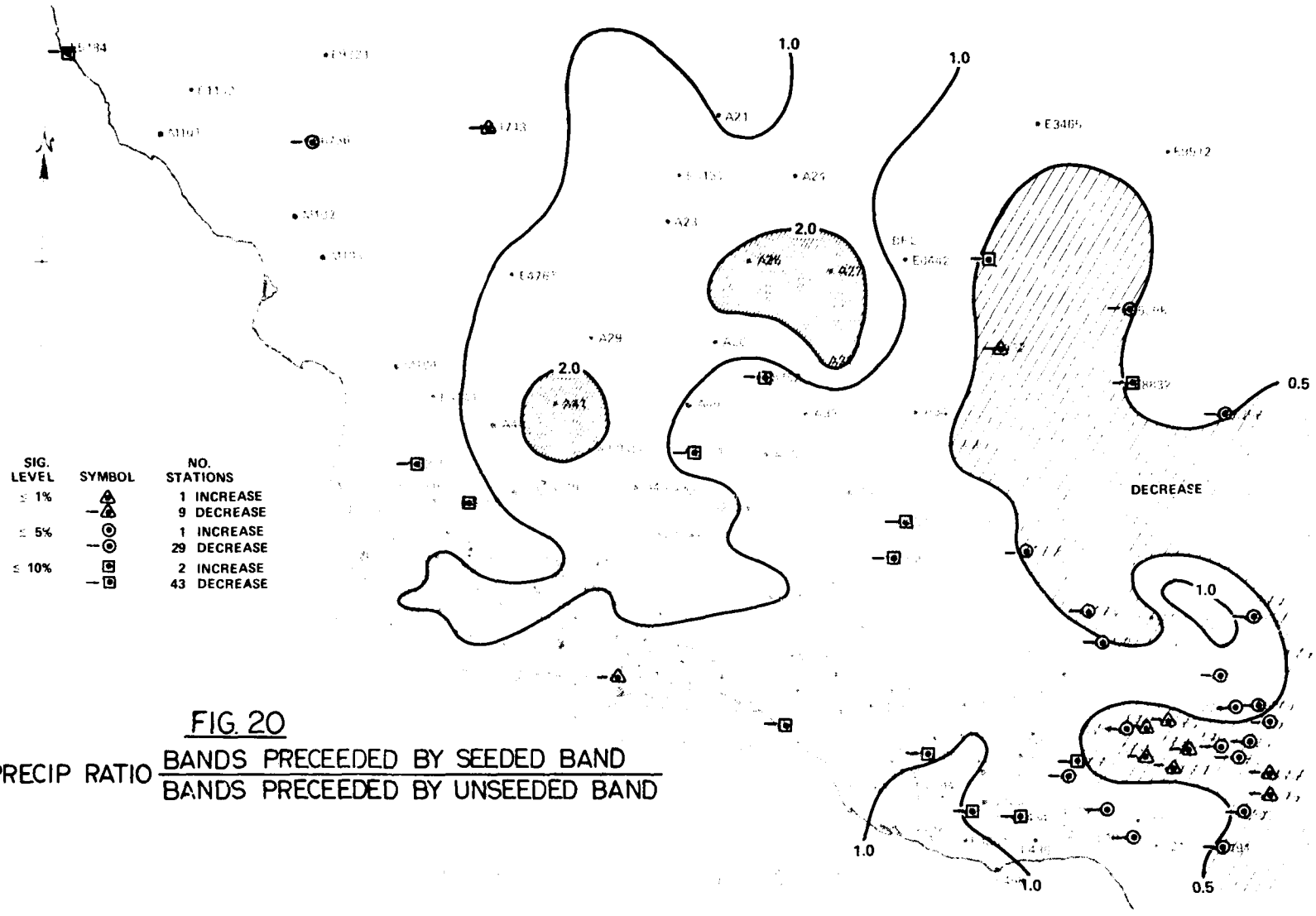


FIG. 20

PRECIP RATIO $\frac{\text{BANDS PRECEEDED BY SEEDED BAND}}{\text{BANDS PRECEEDED BY UNSEEDED BAND}}$

now appears to have 50% less rainfall with a large number of statistically significant stations (43 at the 10% and 29 at the 5% of significance). The area that had decreases in Figure 19 now shows up to 100% increases in Figure 20, although only two stations show statistically significant increases at the 10% level.

The most reasonable explanation of the large area of reduced precipitation is by means of a mesoscale dynamic effect, such as the subsidence indicated in Figure 18. The fact that the decreases appear most prominent in the eastern edge of the base map rather than close in to the seeding source is probably due to the fact that this area represents the average movement of a band in the three hour period that is typically observed between successive bands. To prevent inadvertent bias in the data, the first and last bands of a storm period were omitted from the sample in both Figure 19 and 20. Otherwise, the first band would always be considered as following an unseeded band and the last band would always be counted as preceding an unseeded band.

Between band precipitation is relatively minor and it is difficult therefore to analyze it. Fourteen widely dispersed station records showed little effect with respect to seeding in the preceding or following band, although there was a tendency for higher ranked precipitation in western Santa Barbara County when the preceding band was seeded. This suggests that some low level flow of nucleant may have occurred from the back side of seeded bands into the between band region producing some positive seeding effects there.

Figure 21 is a time versus downwind distance diagram which illustrates diagramatically the apparent band interactions discussed above. In order for the artificial anvil to spread sufficiently fast to seed the downwind band in Ventura and Los Angeles Counties, the speed of the anvil spread relative to the band must be 40-50 mph. This speed is certainly possible in many cases. However, in order to account for the effect along the southernmost fringe of the downwind area, it becomes necessary to invoke a lateral spreading of the freely drifting ice particles because the higher level winds bearing them, although much more westerly than the mean flow within which the convection itself is embedded, never had an angle sufficiently large to account for drift to this fringe. If such a lateral spread does occur, and observations of anvils indicate such is quite common, then this effect, acting on the forward

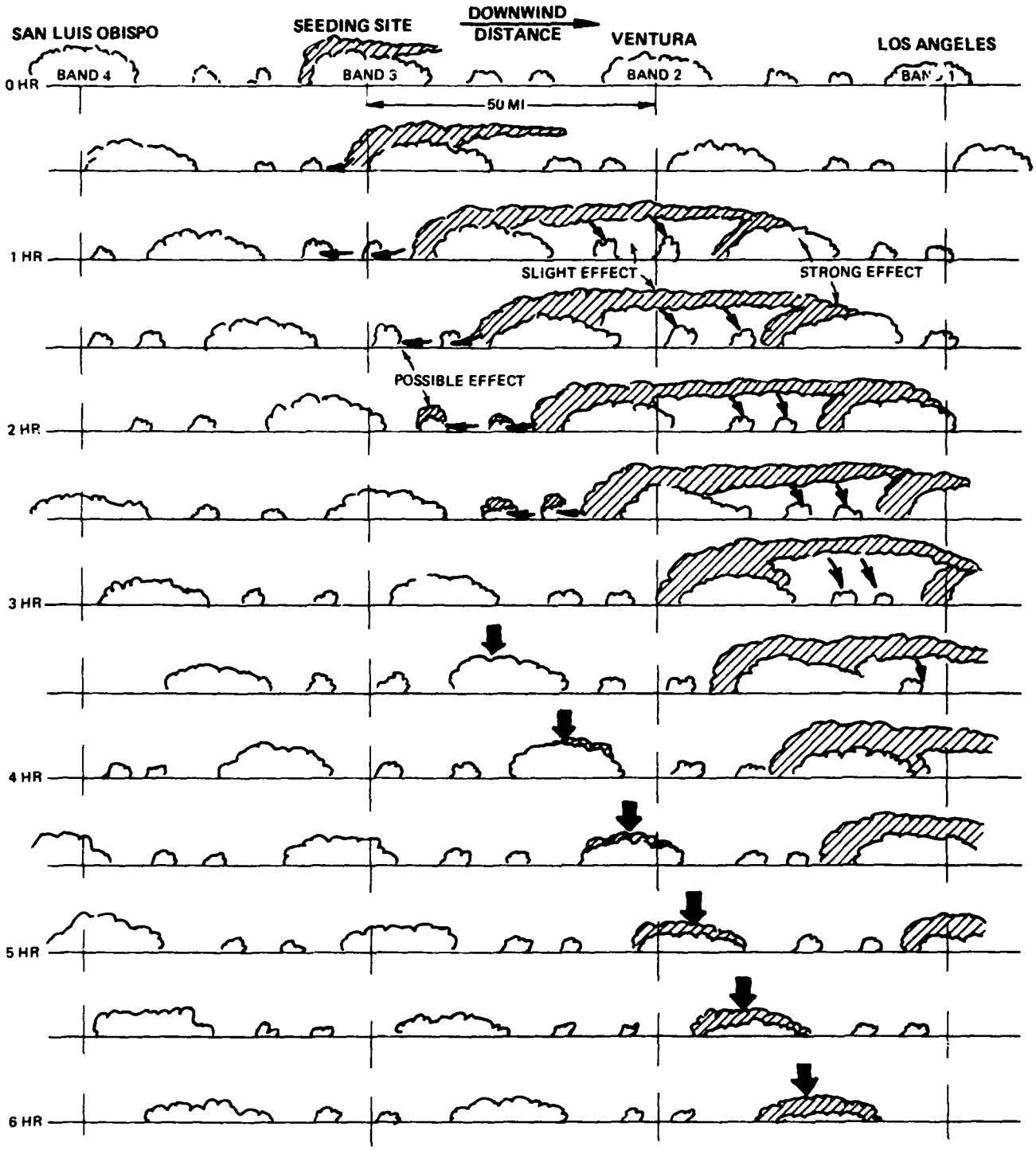


FIG. 21
BAND INTERACTION SUMMARY

portion of a seeded band and issuing from the seeding-enhanced after portion of the band, could account for the main observed downwind effect of band seeding in this southern fringe area.

Seeding Effects on Surface Pressure

The extra heat of condensation produced by the additional precipitation resulting from seeding is sizeable. If we assume this were distributed in the lowest 500 mb of the convection band (essentially below cloud top), then an additional millimeter (.04 inches) of precipitation, a likely figure in a band, would result in a 0.5°C heating effect. If both the added precipitation and added temperature is assumed to be distributed across the band only, then this might be reflected hydrostatically in a 1.8 mb drop in ground level pressure. Compensatory mesoscale redistribution of the air mass would probably preclude the appearance of the full effect at ground level, however, even a fraction of this value would result in an increase in the low level horizontal convergence of air, and of water, into the convection band.

The storm barograms for the Navy station at Pt. Mugu, and for the NWS stations at Sandberg, Santa Barbara, and Bakersfield, were examined and mean band station pressures for all cases, seeded or not seeded, extracted. Since there is a large diurnal pressure variation, the data were stratified into eight time intervals around the local time clock. The results of this analysis are shown in Table 4 which gives the seed-not seeded precipitation ratios and pressure differences for the same bands.

It is apparent that some rather interesting pressure deficits for seeded cases appear in the hours between 0100 and 1300, but at other times, differences are not significant. Curiously, the precipitation ratios are most significant in nearly the same time interval. Since the diurnal changes in pressure and in precipitation run parallel at all four stations, four station averages were calculated and are shown plotted in Figure 22. These curves illustrate the strength of an apparent seeding effect in both pressure and precipitation between the hours of 0100 and 1300 PST. There is little to choose between seeded and not seeded curves from 1300 to 0100 PST. In the not seeded cases the familiar bi-diurnal pressure wave is present and there is a precipitation peak in the evening and early morning hours.

Table 4. Seeded to not seeded station pressure difference, precipitation ratios, and probabilities by time category.

	Time Interval (hours)							
	01-04	04-07	07-10	10-13	13-16	16-19	19-22	22-01
POINT MUGU NAS (NTD)	Precip from gage V168 (Oxnard Airport)							
*Press. Difference (mb)	2.35	-7.49	-3.30	-2.10	0.96	0.50	-1.40	-0.25
**Probability	.286	.009	.184	.258	- .130	- .378	.285	> .10
°Precip Ratio	0.28	1.52	3.91	13.85	1.56	6.19	0.32	3.47
°°Probability	.426	.343	.016	.046	> .10	.292	- .124	.010
SANDBERG (SDB)	Precip from gage E7735 (Sandberg WB)							
*Press. Difference (in)	- .013	- .150	- .089	- .085	.090	- .017	- .036	.050
**Probability	.451	.069	.267	.305	- .120	.387	- .363	> .10
°Precip Ratio	1.20	1.98	2.41	4.06	1.20	0.80	1.89	0.22
°°Probability	- .354	.248	.540	.018	.100	- .250	.418	> .10
SANTA BARBARA AIRPORT (SBA)	Precip from gage NB (NAWC office)							
*Press. Difference (in)	- .023	- .186	- .117	.083	- .077	.094	.052	.014
**Probability	.533	.011	.089	- .092	.111	.177	.184	> .10
°Precip Ratio	1.87	1.77	4.90	2.43	3.20	0.19	0.41	1.62
°°Probability	.500	.527	.144	.015	.177	- .064	- .341	.088
BAKERSFIELD (BFL)	Precip from gage E442 (Bakersfield WB)							
*Press. Difference (in)	- .093	- .104	- .053	- .009	- .025	.029	.045	- .007
**Probability	.141	.141	.314	.571	.500	> .10	> .10	.172
°Precip Ratio	1.24	0.77	1.70	∞	2.00	2.19	0.59	1.95
°°Probability	.426	.500	.473	.214	.402	> .10	> .10	.245

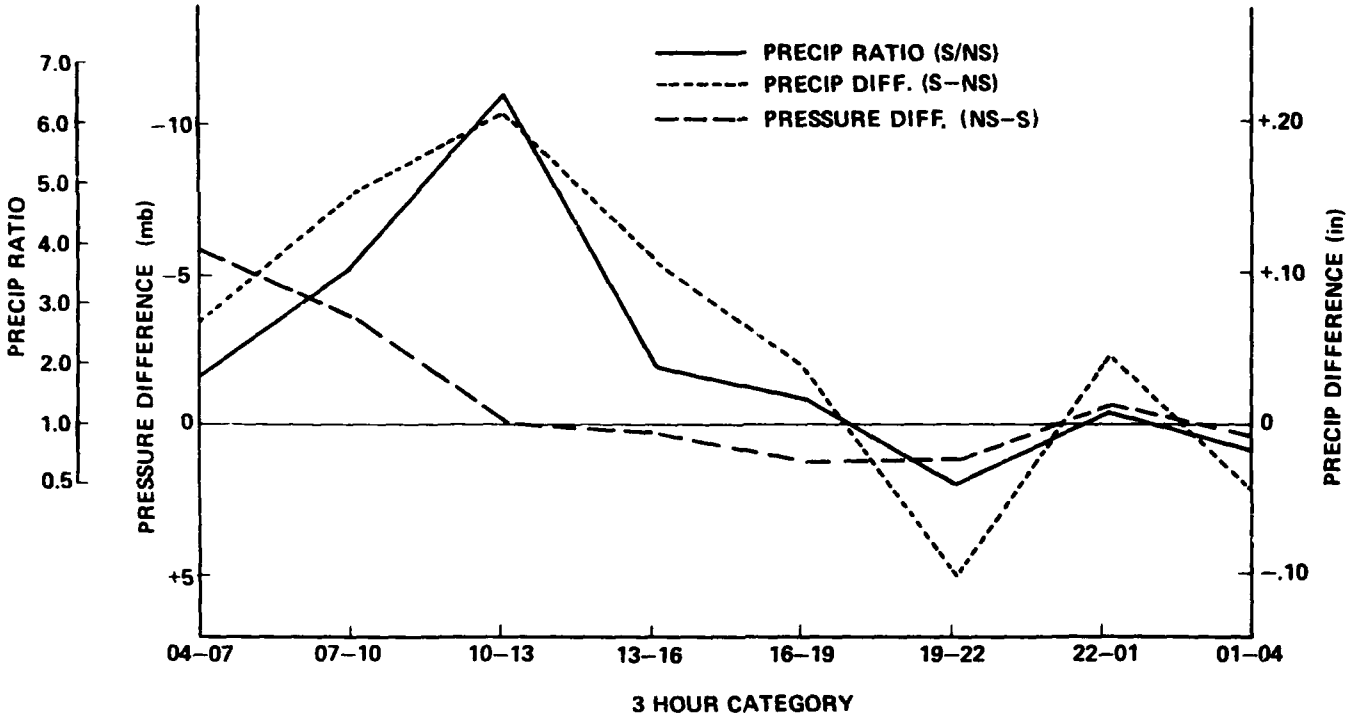
* Pressure Difference, pressure in seeded bands minus not seeded.

** Pressure Probability, positive indicates not seeded pressure greater than seeded.

° Precipitation Ratio, seeded to not seeded.

°° Precipitation Probability, positive indicates seeded precipitation greater than not seeded.

__ Probabilities less than .05 are underlined.



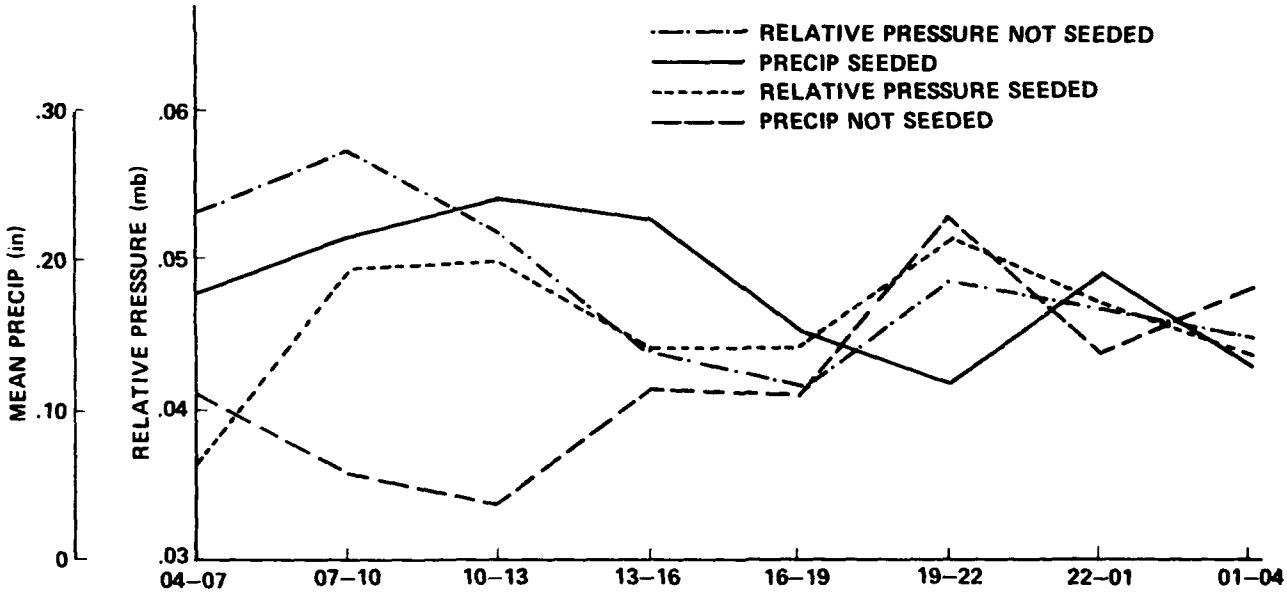


FIG. 22

Diurnal Variations in Seeded and Not Seeded Precipitation and Surface Pressure

This analysis suggests rather strongly that there exists a diurnal variation in the effect of seeding on precipitation over the extended area. The case for a similar diurnal variation in the effect of seeding on station pressure is not so clear cut, but there is a suggestion of its presence.

The occurrence of any diurnal effect of seeding not related directly to the daylight-nighttime breakdown is indeed puzzling. A partition of all 108 stations into daylight (0600-1800) and nighttime (1800-0600) showed no difference in precipitation ratio. Somewhat similar diurnal effects of seeding on precipitation have been in New Mexico (Keyes 1971).

CONCLUSIONS AND RECOMMENDATIONS

The data gathered during four years of seeding convective bands with pyrotechnics at a ground based point source in Santa Barbara County has provided rather conclusive statistical evidence that this seeding has altered the precipitation patterns over a very large area. These changes within the seeded bands are generally in the form of increases in precipitation on the order of 50% to 100% in the primary seeding zone extending from the seeding site to about 30 miles downwind, and increases of more than 100% over a large area 70 or more miles downwind from the seeding source. A non-parametric rank test and a binomial test produce a high level of confidence in the indicated results.

It was also found that the seeding effect was highly temperature dependent with a large number of stations showing decreases in precipitation during the colder storms.

One of the more conclusive findings from a statistical viewpoint is the apparent increase in the time duration of a seeded band at a given point. Whether this increased duration is caused by a widening of the band due to dynamic growth or a slowing of band movement has not been completely determined, but the former appears to be the case.

The possibility of interaction between successive bands and also between a band and its surrounding environment was also studied. There appears to be some evidence that when a band is seeded there will also be an increase in the precipitation in a band preceding it by two to four hours. Conversely, it appears that a seeded band may possibly suppress the rainfall in a band that follows it by two to four hours.

A preliminary study of surface pressure values at the time of band passage through the extended area shows some very interesting possibilities. It

appears that a seeded band may produce a lower surface pressure as it moves through the area, especially if band passage occurs during the morning hours of 0100 to 1300 PST. A check of the diurnal change in seeding effects on band precipitation shows the major seeding produced increases in rainfall also occur during this same general time period.

The physical mechanisms which are occurring as a result of convective band seeding can only be inferred on the basis of rainfall statistics since supporting cloud physics measurements are almost nonexistent. It does appear, however, that we are dealing with a complex seeding response in which both micro-physical and dynamic processes are involved. The fact that the ARI Area of Effect Model does a good job of predicting the location of the primary seeding effect and a sizeable portion of the extended area of effect indicates the microphysical process may be the dominant factor in these regions. However, the existence of a highly significant area of enhanced precipitation in the extended area well to the right of the wind flow at any level within the cloud mass suggests that a dynamic change in band structure might be occurring.

The interaction between bands also appears to have both microphysical and dynamic effects operating. The effect on a preceding band seems most likely to be due to cirrus seeding while the effect on a following band would more likely be due to a subsiding motion in the air mass to counterbalance the increased updraft in the seeded band.

The possible changes in surface pressure when a seeded band passes a station probably is due to the release of heat within the cloud from condensation and/or sublimation. A seeding produced cloud top rise is also most likely involved.

All of the findings cited in this report suggest possibilities of major advances in our understanding and utilizing mesoscale or even synoptic scale storm modification. To date, however, we have only been able to use statistical means to detect these effects and infer the causes thereof. What is urgently needed is an intensive cloud physics investigation to enable us to measure the large scale changes that take place under this seeding mode. We recommend strongly that every effort be expended to start such a program as soon as practicable.

The joint Santa Barbara Project and Large Scale Effects Study is planned to continue for at least two or three years, but with a changed operating

procedure. The seeding mode will be changed from point source, ground based seeding to line source, aerial seeding. The seeding device will be changed from pyrotechnics to an acetone-silver iodide-ammonium iodide jet burner developed at China Lake.

The project design will be changed from randomizing on individual bands to randomizing on 48 hour time blocks. With the new system, all convective bands within a predetermined 48 hour period will either be seeded or not seeded based on one decision. This change will do two things. First, it will enable us to treat all the convective bands within a given storm in the same manner and therefore be able to detect frontal scale changes that may occur when all bands in the frontal zone are treated. Secondly, the 48-hour randomization will enable us to test the effect of seeding on one additional parameter - total storm precipitation, including in band and between band effects.

The Santa Barbara Project will have available improved radar coverage with a M-33 and TPS-1D radars which will enable us to detect changes in echo characteristics, cell movement and cloud tops. The addition of a mini-lab on board the seeding aircraft will provide in cloud measurements in the upwind area and immediately after seeding in the primary area.

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APPENDIX A

PRECIPITATION GAGE LOCATIONS

AEROMETRIC RESEARCH INC. PRECIP GAGES

Gage No.	Name of Station	Lat.	Long.	Approx. Elev.
A21	Kern National Wildlife Refuge	35°45'	119°35'	250
A23	Belridge	35°30'	119°43'	700
A24	Wasco 2W	35°37'	119°22'	330
A26	Buttonwillow	35°25'	119°30'	265
A27	Bakersfield 10W	35°24'	119°15'	350
A29	Soda Lake	35°15'	119°56'	1900
A30	Derby Acres	35°14'	119°35'	1300
A31	Buena Vista Lake	35°11'	119°17'	350
A32	Arvin	35°13'	118°48'	445
A33	Maricopa 3E	35°04'	119°20'	600
A34	Lakeview 4E	35°04'	119°01'	500
A35	Reyes Station	34°59'	119°27'	2950
A36	Wheeler Ridge	35°00'	118°55'	960
A37	Lake of the Woods 3WSW	34°49'	119°04'	6200
A38	Gorman	34°48'	118°51'	3810
A41	New Cuyama 22 WNW, Rinconada Ranch	35°05'	120°03'	1950
A42	Los Alamos 9.5 WNW, Barca Ranch	34°46'	120°26'	310
A44	Buckhorn Canyon, Adams Ranch	35°01'	120°12'	1000
A45	McPherson Peak	34°53'	119°49'	5747
A46	Taft 16WSW, Traver Ranch	35°06'	119°44'	2700
A47	Mt. Abel	34°51'	119°13'	6000

APPENDIX A (CONT'D)

NORTH AMERICAN WEATHER CONSULTANTS PRECIP GAGES

Gage No.	Name of Station	Lat.	Long.	Approx. Elev.
N A	Santa Ynez Pk, 2WNW, El Capitan Lodge	34°32'	120°01'	3500
N B	Goleta 0.5W, No. Am. Weather Consultants	34°26'	119°50'	10
*N 1	Casmalia	34°50'	120°32'	300
*N 2	Lompoc 2S, San Miguelito Canyon	34°37'	120°28'	320
*N 3	Los Alamos Fire Station	34°45'	120°17'	580
*N 4	Buellton 1 SSW	34°36'	120°12'	340
N 5	Los Olivos	34°39'	120°07'	780
*N 6	Los Olivos 7 NNE, Midland School	34°44'	120°05'	1230
N 7	Los Olivos 4 SE, Bar G.O. Ranch	34°40'	120°02'	450
N 8	New Cuyama 4.5 S, Johnston Ranch	34°53'	119°42'	2900
N 9	Santa Ynez 2 SE, Stepping "C" Ranch	34°05'	120°03'	650
N10	Happy Canyon Rd., Running Springs Ranch	34°39'	119°57'	1110
N11	Cachuma Saddle Guard Station	34°44'	119°55'	3040
N12	Santa Barbara Potrero	34°47'	119°39'	5000
N13	Broadcast Peak, KEYT	34°32'	119°57'	4000
N14	Santa Cruz Creek	34°38'	119°52'	1140
*N15	Cachuma Dam 7.5 ESE, Nash-Boulden Ranch	34°33'	119°52'	925
N16	Los Prietos R.S.	34°33'	119°47'	1029
N17	Little Pine Mtn., Happy Hollow G.S.	34°36'	119°45'	3880
*N18	Gaviota-Getty Oil Co.	34°29'	120°12'	175
N19	Lompoc 6.5E, Casper Ranch	34°37'	120°20'	220
N20	Sisquoc 9.5E, Goodchild Ranch	34°53'	120°08'	860
N21	Surf 4S, Vandenberg AFB	34°39'	120°36'	220

MISCELLANEOUS PRECIP GAGES

M100	Bulito Canyon, Hollister Ranch	34°28'	120°21'	130
M101	San Simeon, Hearst Castle State Mon.	35°41'	121°10'	1450
M102	Atascadero 5SW, Upper Toro Creek	35°28'	120°46'	1400
M103	Santa Margarita Booster Station	35°22'	120°38'	1050
M104	Lopez Lake Dam Site	35°11'	120°29'	540
M124	Bouquet Canyon	34°35'	118°22'	3050
M225	Santa Barbara, Sewage Treatment Plant	34°25'	119°41'	5
M226	Goleta 7W, Dos Pueblos Ranch	34°27'	119°57'	110
M228	Riviera Fire Station	34°27'	119°41'	860
M230	Gibralter Dam	34°31'	119°41'	1550

APPENDIX A (CONT'D)

ESSA PRECIP GAGES

Gage No.	Name of Station	Lat.	Long.	Approx. Elev.
E0442	Bakersfield WBAP	34°25'	119°03'	475
E1142	Bryson	35°48'	121°05'	925
E1253	Cachuma Dam	34°35'	119°59'	781
E1682	Chatsworth Reservoir	34°14'	118°37'	906
E1743	Cholame Alley Ranch	35°43'	120°15'	1753
E3465	Glenville Fulton Ranger Station	35°44'	118°40'	3500
E3751	Hansen Dam	34°16'	118°24'	1100
E4144	Huasna	35°06'	120°23'	715
E4767	La Panza Ranch	35°23'	120°10'	1550
E4867	Lechuza Pt. Sta. FC352B	34°05'	118°53'	1600
E5098	Loraine	35°18'	118°26'	2720
E5151	Lost Hills	35°37'	119°41'	285
E5184	Lucia Willow Springs	35°53'	121°27'	355
E5756	Mojave	35°05'	118°10'	2735
E6006	Mt. Wilson FC338B	34°14'	118°04'	5709
E6624	Palmdale	35°35'	118°06'	2596
E6736	Paso Robles 5NW	35°41'	120°45'	1040
E7735	Sandberg Weather Bureau	34°45'	118°44'	4517
E7946	Santa Maria WBAP	34°54'	120°27'	236
E8697	Surf 2ENE	34°41'	120°34'	110
E8752	Taft	35°09'	119°28'	1025
E8832	Tehachapi Airport	35°08'	118°26'	3960
E9049	Tujunga Mill Creek FC470	34°23'	118°05'	4645
E9221	Valleton	35°53'	120°42'	957
E9283	Ventucopa Ranger Station	34°51'	119°29'	2749
E9458	Wasioja-Phoenix Ranch	34°59'	119°54'	2370
E9512	Weldon 1WSW	35°40'	118°18'	2680

APPENDIX A (CONT'D)

L. A. COUNTY FLOOD CONTROL PRECIP GAGES

Gage No.	Name of Station	Lat.	Long.	Approx. Elev.
L 6	Topanga Canyon Patrol Station	34°05'	118°36'	745
L 10	Bel Air Hotel	34°05'	118°27'	585
L 11	Upper Franklin Canyon Reservoir	34°07'	118°25'	867
L 33	Pacoima Dam	34°20'	118°24'	1500
L 46	Big Tujunga Dam	34°18'	118°11'	2315
L 52	Waterman Guard Station	34°16'	118°09'	3300
L 53	Colby's	34°18'	118°07'	3620
L 54	Loomis Range - Alder Creek	34°21'	118°03'	4325
L128	Elizabeth Lake Canyon-Warm Springs	34°36'	118°34'	2075
L179	Bailey Debris Dam	34°10'	118°04'	1180
L191	Los Angeles - Alcazar	34°04'	118°12'	400
L213	Los Angeles - Hancock Park	34°04'	118°21'	175
L250	Acton Camp	34°27'	118°12'	2625
L259	Chatsworth - Twin Lakes	34°17'	118°36'	1275
L292	Encino Reservoir	34°09'	118°31'	1075
L303	Pasadena - Cal Tech	34°08'	118°07'	800
L372	San Francisquito PH No. 2	34°32'	118°31'	1580
L434	Malibu Division Headquarters	34°08'	118°45'	800
L435	Monte Nido	34°05'	118°42'	600
L451	Castaic - Wayside Honor Rancho	34°28'	118°36'	1065
L458	Zuma Canyon Patrol Station	34°01'	118°48'	115
L466	Pacoima Canyon - Dutch Louie Canyon	34°21'	118°21'	3220
L694	Big Tujunga Canyon	34°17'	118°17'	1525
L1017	Little Rock Creek above Dam	34°29'	118°01'	3280
L1074	Little Gleason	34°23'	118°09'	5600
L1107	La Tuna Canyon	34°14'	118°20'	1160
L1108	Leona Valley	34°35'	118°12'	2875
L1181	Schoolhouse Canyon	34°20'	118°27'	1495

APPENDIX A (CONT'D)

VENTURA COUNTY FLOOD CONTROL PRECIP GAGES

Gage No.	Name of Station	Lat.	Long.	Approx. Elev.
V 85	Canada Larga	34°23'	119°14'	1100
V121	Lake Sherwood	34°09'	118°54'	1010
V138	Potrero Seco Guard Station	34°38'	119°26'	4850
V165	Stewart Canyon	34°28'	119°15'	1500
V166	Lake Casitas 1N, Selby Ranch	34°25'	119°21'	750
V167	Hall Canyon	34°17'	119°16'	300
V168	Oxnard Airport	34°12'	119°12'	35
V169	Thousand Oaks	34°10'	118°50'	900
V170	Camulos	34°24'	118°45'	720
V171	Fillmore Fish Hatchery	34°24'	118°53'	450
V172	Piru Canyon	34°31'	118°46'	1150
V173	Ferndale Ranch	34°26'	119°05'	1000
V174	Ozena Ranger Station	34°41'	119°21'	3580
V175	Saticoy Forest Service	34°17'	119°09'	150
V188	Newberry Park	34°11'	118°56'	635
V189	Somis WNW	34°17'	119°04'	455
V190	Somis	34°17'	119°00'	550
*V191	Moorpark, 3NNW	34°19'	118°53'	600
V192	Moorpark, 3SE	34°15'	118°51'	550
V193	Simi	34°16'	118°45'	850
V194	Camarillo	34°12'	119°01'	120
V196	Tapo Canyon	34°20'	118°42'	1500
V198	Piedra Blanca	34°34'	119°10'	3460
V206	Balcom Canyon	34°19'	118°58'	600
V207	Matillija	34°30'	119°23'	1640
V209	Lockwood	34°44'	119°06'	5150
V221	Seacliff	34°21'	119°25'	10
V224	Sespi - Shell Oil	34°29'	118°53'	2300
V225	Wheeler Canyon	34°23'	119°09'	700
V227	Conejo Pump Station	34°15'	118°50'	1030
V232	Deals Flats	34°05'	118°58'	1300

APPENDIX A (CONT'D)

SANTA BARBARA COUNTY FLOOD CONTROL PRECIP GAGES

Gage No.	Name of Station	Lat.	Long.	Approx. Elev.
S201	Los Alamos 5NW, Los Flores Ranch	34°47'	120°20'	640
S202	Los Alamos 4.5E, Confaglia Ranch	34°44'	120°14'	720
S203	Las Alamos 5.5W, Luis Ranch	34°44'	120°22'	1000
S204	Los Alamos Fire Station	34°45'	120°17'	565
S205	Lompoc Fire Station	34°41'	120°27'	300
S206	Gaviota Beach Ranger Station	34°28'	120°14'	30
S208	Carpinteria Fire Station	34°24'	119°31'	10
S209	Carpinteria Reservoir	34°24'	119°29'	400
S210	Cold Springs Debris Basin	34°27'	119°39'	550
S211	County Road Dept. Materials Lab.	34°27'	119°47'	400
S212	San Marcos Summit	34°31'	119°49'	2500
S215	Lompoc Airport	34°39'	120°28'	95
S217	Jalama Beach	34°30'	120°29'	20
S221	New Cuyama 1NNE, Cuyama Ranch	34°59'	119°40'	2170
S231	Doulton Tunnel	34°27'	119°34'	1400
S232	Juncal Dam	34°29'	119°30'	2075
S233	Buellton Fire Station	34°37'	120°12'	375
S234	Santa Barbara Cty. Flood Control	34°25'	119°42'	80
S235	Santa Maria Road Yard	34°57'	120°27'	200
S236	Nojoqui Park Ranger Station	34°32'	120°11'	660
S238	Santa Barbara Potrero	34°47'	119°39'	5000
S241	Goleta 2N, Stubchaer Residence	34°27'	119°53'	100
S242	San Marcos Trout Club	34°29'	119°48'	1000
S249	Manzanita Mountain	34°54'	120°04'	3125
S251	Lompoc 2.5S, Miguelito Springs	34°35'	120°30'	1120
S255	La Cumbre Peak 1E, Graham Ranch	34°30'	119°41'	3500
S256	Sisquoc Fire Station	34°52'	120°17'	440
S257	Las Cruces 7WNW, Rancho San Julian	34°32'	120°20'	640

APPENDIX B

1967-68 BAND CHRONOLOGY

Band No.	Date	Passage at Seeding Site Begin	Passage at Seeding Site End(PST)	No. of Fusees	700 mb Wind Dir/Speed kts	500 mb Temp °C
1	1/27/68	0930	0945	*	230/33	-26.2
2	1/27/68	1030	1130	*	230/33	-26.8
3	1/27/68	1145	1210	*	230/35	-27.0
4	1/27/68	1315	1430	2	230/35	-28.2
5	1/30/68	2000	2230	4	240/35	-20.7
6	1/31/68	0155	0230	*	260/35	-20.0
7	2/12/68	1900	2000	4	170/15	-23.0
8	2/16/68	1600	1625	2	230/24	-18.3
9	2/16/68	1700	1820	*	230/30	-18.1
10	2/16/68	1910	1930	*	260/25	-16.0
11	2/16/68	2300	0030	*	260/25	-15.0
12	2/17/68	0430	0600	*	270/26	-14.3
13	2/17/68	0715	0800	*	270/25	-16.6
14	2/17/68	1045	1200	5	280/25	-16.2
15	3/7/68	2120	2315	6	240/31	-22.3
16	3/8/68	0230	0300	3	240/32	-24.5
17	3/13/68	0230	0600	9	220/28	-21.0
18	3/16/68	1330	1430	*	250/39	-20.8
19	4/1/68	1200	1400	6	245/30	-23.2
20	4/1/68	1500	1530	2	260/29	-27.1
21	4/1/68	1900	1945	1	270/30	-26.2
22	4/1/68	2215	2315	*	270/32	-26.2

* Not seeded.

APPENDIX B

1968-69 BAND CHRONOLOGY

Band No.	Date	Passage at Seeding Site Begin	Passage at Seeding Site End(PST)	No. of Fusees	700 mb Wind Dir/Speed kts	500 mb Temp °C
1	11/14/68	2150	2325	*	285/42	-14.3
2	11/14/68	2350	0040	*	275/57	-15.8
3	11/15/68	0100	0130	3	Westerly	-19.8
4	11/15/68	0350	0430	*	275/44	-19.8
5	12/10/68	1805	1840	2	260/45	-15.5
6	12/10/68	1930	2035	4	240/36	-18.0
7	12/14/68	0555	0700	*	220/54	-15.0
8	12/15/68	2145	2355	10	225/24	-20.3
9	12/24/68	1745	1820	*	240/46	-18.1
10	12/24/68	1915	1950	*	240/39	-16.8
11	1/13/69	1125	1245	4	210/35	-15.0
12	1/13/69	1645	1945	*	215/23	-14.7
13	1/13/69	2030	2215	6	275/20	-16.8
14	1/13/69	2345	0130	*	260/12	-18.5
15	1/18/69	1935	2110	*	230/41	-17.0
16	1/19/69	0440	0640	10	240/39	-16.9
17	1/19/69	0935	1230	11	215/48	-16.7
18	1/19/69	1430	1600	5	222/45	-17.5
19	1/19/69	1630	1710	*	225/45	-17.8
20	1/19/69	1730	1930	*	240/33	-19.0
21	1/20/69	2030	2140	*	200/52	-16.7
22	1/20/69	2330	0150	9	210/62	-14.5
23	1/20/69	0250	0430	5	215/54	-20.2
24	1/24/69	0515	0615	3	245/37	-20.1
25	1/24/69	1040	1140	*	240/37	-18.0
26	1/24/69	1210	1350	7	235/37	-18.1
27	1/24/69	1430	1610	*	235/35	-15.6
28	2/12/69	0035	0200	5	203/13	-20.0
29	2/15/69	0420	0520	*	235/39	-17.7
30	2/15/69	0600	0920	13	220/43	-20.3
31	2/17/69	2215	0100	*	235/15	-24.7
32	2/21/69	1715	2015	*	235/37	-32.0
33	2/23/69	0415	0545	*	240/44	-24.5
34	2/23/69	0600	0950	13	220/44	-23.8
35	2/24/69	1330	1500	*	Southerly	-19.1
36	2/24/69	1525	1600	2	215/55	-14.0
37	2/24/69	1630	1815	*	220/51	-21.3
38	2/24/69	0015	0130	5	230/54	-19.9
39	3/21/69	1105	1210	*	160/21	-19.6
40	4/5/69	1045	1320	12	190/44	-19.9
41	4/5/69	1335	1410	*	195/37	-23.1

* Not seeded.

APPENDIX B

1969-70 BAND CHRONOLOGY

Band No.	Date	Passage at Seeding Site Begin	Passage at Seeding Site End(PST)	Fusees	700 mb Wind Dir/Speed kts	500 mb Temp °C
1	11/5/69	2215	2345	*	238/35	-18.3
2	11/6/69	1030	1245	6	229/24	-20.5
3	1/9/70	0700	0755	*	216/33	-20.4
4	1/9/70	0845	0910	2	190/46	-20.5
5	1/9/70	1120	1255	7	190/49	-19.0
6	1/9/70	1635	1735	*	200/42	-19.6
7	1/11/70	1900	1930	*	260/22	-19.6
8	1/15/70 - 1/16/70	2330	0130	8	270/29	-19.0
9	1/16/70	0350	0515	*	270/41	-12.8
10	1/16/70	0740	0820	*	260/43	-16.5
11	1/16/70	0925	0950	3	260/43	-16.5
12	2/9/70	1410	1520	4	162/43	-22.2
13	2/13/70	1030	1115	4	265/32	-20.2
14	2/27/70 - 2/28/70	2320	0200	*	155/35	-23.0
15	2/28/70	0530	0730	6	175/22	-20.4
16	2/28/70	1030	1145	5	190/35	-20.6
17	3/1/70	0030	0205	*	212/30	-24.6
18	3/1/70	0630	0815	7	155/23	-27.0
19	3/1/70	1220	1345	6	210/22	-26.0
20	3/1/70	1545	1635	*	225/20	-22.8
21	3/1/70	1915	2100	7	250/18	-26.3
22	3/4/70	1300	1700	17	220/52	-25.0

* Not seeded

APPENDIX B

1970-71 BAND CHRONOLOGY

(Ground Seeded)

Band No.	Date	Passage at Seeding Site Begin	Passage at Seeding Site End(PST)	No. of Fusees	700 mb Wind Dir/Speed Kts	500 mb Temp °C
1	11/25/70	1550	1715	4	260/30	-12.0
2	11/26/70	0015	0115	*	251/40	-13.0
3	11/26/70	0135	0225	4	265/38	-14.0
4	11/28/70	0600	0730	4	230/42	-20.0
5	11/28/70	1430	1600	*	210/37	-17.0
6	11/29/70	0155	0445	11	193/54	-20.4
7	11/29/70	0605	0810	7	202/56	-20.7
8	12/2/70	0300	0535	*	240/43	-23.0
9	12/2/70	0635	0700	3	256/49	-23.8
10	12/18/70	0940	1100	3	199/08	-27.0
11	12/18/70	1340	1805	9	197/33	-26.7
12	12/18/70	1815	2035	*	210/35	-26.7
13	12/18/70	2045	2200	*	210/35	-26.0
14	12/20/70	2230	0115	*	257/45	-23.5
15	12/21/70	0330	0440	2	264/34	-28.9
16	12/21/70	0530	0610	2	260/25	-28.1
17	12/21/70	0740	0840	*	258/33	-27.4
18	2/16/71	2145	2335	6	188/22	-26.5
19	2/17/71	0105	0215	*	200/13	-26.1
20	3/12/71	1945	2345	11	258/48	-15.4
21	4/13/71	2320	0205	11	223/22	-22.1
22	4/14/71	0225	0335	*	223/22	-22.1

* Not seeded.

1970-71 BAND CHRONOLOGY

(Aerial Seeded)

Band No.	Date	Passage at Seeding Site Begin	Passage at Seeding Site End(PST)	Treatment	700 mb Wind Dir/Speed kts	500 mb Temp °C
A1	12/16/70	0410	0505	S	268/43	-16.0
A2	12/16/70	0515	0545	S	268/43	-17.9
A3	12/16/70	0555	0700	NS	268/43	-18.0
A4	1/12/71	1300	1330	NS	268/41	-22.8
A5	1/12/71	1435	1530	S	265/33	-24.0
A6	4/17/71	0230	0300	NS	260/58	-21.5
A7	4/17/71	0510	0600	NS	273/46	-22.4

APPENDIX C

Data Summary: Sample Size (N_1-Seeded, N_2-Not Seeded)
S/NS Ratio
Probability (Wilcoxon-Mann Whitney)
(> = greater than .10)

Sta. No.	1967-68 (Fig. 4)				1968-69 (Fig. 5)				1969-70 (Fig. 6)				1970-71 (Fig. 7)			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
A21					5	8	.70	>	12	8	3.22	.056	6	6	.70	>
A23					12	15	.64	>	6	5	4.41	.063	3	2	.46	>
A24					11	13	1.35	>	4	5	4.06	>	13	9	5.19	>
A26					4	3	.86	>	12	8	6.30	.032	5	5	.33	>
A27					3	2	3.20	>	3	3	∞	>	13	9	6.02	.095
A29					15	16	.73	>	12	8	2.55	>	13	9	1.75	>
A30					14	17	.96	>	5	5	3.59	>	13	9	3.13	>
A31					4	5	13.13	>	9	4	∞	.050	12	8	1.73	>
A32					18	19	.81	>	6	4	5.26	>	4	3	∞	>
A33					18	18	.76	>	12	8	12.00	.011	11	8	4.96	>
A34					12	12	1.14	>	12	8	11.08	.069	13	9	2.55	>
A35					12	12	1.60	>	7	4	4.04	>	9	5	3.11	.092
A36					15	16	.79	>	9	4	4.69	>	13	9	2.40	>
A37					17	18	1.55	>	12	8	1.10	>	13	9	1.03	>
A38					10	8	1.94	>	11	8	1.26	>	8	5	1.67	>
A41									8	3	1.74	>	13	9	1.47	>
A42									11	8	1.73	>	13	9	1.27	>
A44													13	9	1.30	>
A45													13	9	1.24	>
A46													13	9	1.42	>
A47													12	8	2.26	>
E442	11	11	1.83	>	19	22	.90	>	13	9	4.92	>	13	9	3.72	>
E1142	8	10	1.47	>	17	17	1.61	.060	13	9	1.18	>	13	9	1.15	>
E1253	10	10	1.85	>	18	19	1.42	>	12	9	1.45	>	13	9	1.44	.065
E1682	11	11	4.17	>	19	22	1.26	>	13	9	2.58	>	13	9	1.05	>
E1743	11	11	1.64	>	19	22	1.03	>	13	9	3.72	.020	10	8	.74	>
E3465	7	2	2.69	>	17	22	1.25	>	5	6	1.71	>	5	2	16.20	>
E3751	11	11	2.93	>	19	22	1.76	>	13	9	3.16	.100	13	9	1.18	>
E4144	10	11	2.27	>	19	21	1.05	>	8	6	2.98	.081	13	9	.64	>
E4767	11	11	1.46	>	15	16	.82	>	12	8	3.69	.042	0	0	0.00	>

Sta. No.	1967-68 (Fig. 4)				1968-69 (Fig. 5)				1969-70 (Fig. 6)				1970-71 (Fig. 7)			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
E4867	11	11	1.78	>	19	22	1.34	>	11	8	2.68	.025	12	8	1.03	>
E5098	10	8	.69	>	19	22	1.01	>	13	9	3.21	.015	13	9	1.72	>
E5151	11	11	1.79	>	18	21	.80	>	12	8	1.62	>	13	9	1.80	>
E5184	11	11	1.43	>	19	22	1.34	>	11	6	1.21	>	7	6	1.28	>
E5756	8	8	2.38	>	19	21	1.21	>	9	6	7.83	.050	8	6	0.00	>
E6006	8	7	3.75	>	14	15	1.56	>	12	8	2.04	.056	8	4	2.27	>
E6624	8	3	∞	>	14	17	2.09	>	13	9	1.21	>	7	6	1.58	>
E6736	9	8	1.96	>	19	22	1.37	>	12	8	2.08	.069	13	9	1.03	>
E7735	11	11	2.34	>	16	20	1.90	>	12	9	1.15	>	11	8	.77	>
E7946	11	11	1.89	>	19	22	.73	>	13	9	1.55	>	13	9	.73	>
E8697	5	6	1.02	>	15	20	.88	>	10	8	1.39	>	3	2	1.40	>
E8752	11	11	1.89	>	19	22	1.47	.064	11	7	8.46	>	13	9	1.31	>
E8832	7	3	.58	>	19	22	.92	>	13	9	5.32	.015	9	5	3.82	>
E9049	9	6	1.41	>	18	19	1.34	>	13	9	2.56	.050	6	3	1.20	>
E9221	7	5	2.52	>	13	18	1.19	>	9	5	2.65	>	9	8	1.41	>
E9283	5	6	1.13	>	14	14	1.62	>					12	9	1.44	>
E9458	6	6	8.00	>	4	4	.35	>	12	9	1.93	>	10	7	1.03	>
E9512	9	11	2.40	>	19	22	1.24	>	12	9	1.90	>	10	8	1.11	>
L6	6	10	1.24	>	14	16	1.93	>	10	8	4.37	.022	8	6	1.05	>
L10	11	11	5.73	>	13	18	1.66	.018	11	7	3.74	>	9	5	.96	>
L11	11	11	3.57	.058	17	20	2.03	.047	13	9	3.40	.095	12	8	1.01	>
L33	11	11	2.27	.092	18	22	1.86	>	13	9	1.38	>	13	9	.92	>
L46	11	11	3.40	.096	19	22	1.84	>	12	9	2.21	.045	11	8	1.07	>
L52	7	6	2.14	>	18	20	1.31	>	11	8	2.32	>				
L53	11	11	2.48	>	19	22	1.60	>	13	9	3.62	.030	13	9	1.87	>
L54	10	8	3.80	>	15	15	1.63	>	12	8	3.96	.032	10	7	2.28	>
L128	11	11	2.11	>	15	16	1.58	>	10	7	2.44	.081	11	8	1.26	>
L179	11	11	3.47	>	17	22	1.08	>	13	9	2.93	.090	12	8	.93	>
L191	11	11	4.23	>	18	19	1.67	>	13	9	3.27	.048	13	9	.98	>
L213	11	11	3.71	>	18	22	1.33	>	13	9	3.70	.090	13	9	1.01	>
L250	9	11	2.44	>	17	18	1.72	>	13	9	2.61	>	9	6	.98	>
L259	11	11	3.91	>	19	22	1.56	>	13	9	2.92	.100	12	8	1.22	>
L292	11	11	2.86	>	18	19	2.01	>	11	8	2.86	>	9	7	.62	>

Sta. No.	1967-68 (Fig. 4) N_1	N_2	Ratio S/NS	Prob.	1968-69 (Fig. 5) N_1	N_2	Ratio S/NS	Prob.	1969-70 (Fig. 6) N_1	N_2	Ratio S/NS	Prob.	1970-71 (Fig. 7) N_1	N_2	Ratio S/SN	Prob.
L303	10	11	3.81	>	19	22	1.60	>	13	9	2.06	>	13	9	1.05	>
L372	11	11	2.98	.096	19	22	1.85	>	11	8	4.72	.020	13	9	1.24	>
L434	11	11	2.64	>	16	17	1.28	>	12	8	2.08	>	12	9	.80	>
L435	11	11	2.22	>	15	21	1.64	>	12	8	5.03	.088	11	8	1.06	>
L451	11	11	4.47	.071	17	18	1.17	>	7	6	8.33	.051				
L458	11	11	1.21	>	18	20	1.55	.069	12	8	3.40	.029	12	9	.46	-.05
L466	11	11	2.74	.100	18	22	1.53	>	13	9	1.76	>	11	7	1.26	>
L694	8	10	1.89	>	19	22	1.50	>	13	8	2.70	.040	13	9	1.13	>
L1017	11	11	1.71	>	16	19	1.92	>	11	7	8.98	.032	12	8	1.01	>
L1074	10	11	2.30	>	15	18	1.56	>	13	9	1.76	>	8	5	1.93	>
L1107	11	11	2.46	>	19	22	1.33	>	11	9	3.59	.016	10	5	.95	>
L1108	8	6	1.80	>	11	11	1.66	>	7	6	10.50	>	11	9	1.32	>
L1181	11	11	4.68	.043	15	20	1.65	>	12	9	1.66	>	7	4	1.56	>
M100													13	9	.84	>
M101	8	10	1.01	>	19	22	1.19	>	7	5	1.69	>	12	8	1.26	>
M102									12	8	1.65	>	13	9	1.14	>
M103	11	11	1.94	>	19	22	1.06	>	13	9	1.59	>	13	9	1.00	>
M104					16	19	1.11	>	10	7	2.52	>	8	6	.65	>
M124	11	11	2.33	>	17	22	2.42	.036	12	8	3.00	.061	13	9	1.16	>
M225	8	10	1.50	>	18	19	1.22	>	12	9	1.34	>	11	8	1.51	>
M226	11	11	1.43	>	16	20	1.49	>	9	8	1.30	>	13	9	1.65	>
M228	11	11	1.60	>	19	22	1.36	>	13	9	1.36	>	12	9	1.21	>
M230	11	11	1.79	>	19	22	1.72	>	13	9	1.71	>	12	8	1.46	>
NA	9	6	2.30	>	17	19	1.87	.059	9	6	1.60	>	13	9	1.38	>
NB	11	11	1.58	>	18	21	1.40	>	13	9	1.63	>	12	9	1.74	>
N1	6	7	2.14	>	19	22	.83	>	13	9	2.03	>	11	8	.74	>
N2	9	7	1.44	>	17	20	1.22	>	13	9	1.75	>	13	9	.90	>
N3	11	11	1.43	>	19	22	.96	>	13	9	.91	>	13	9	1.16	>
N4	9	11	1.36	>	19	22	1.06	>	13	9	1.62	>	11	9	.73	>
N5	10	11	1.66	>	18	.21	.96	>	13	9	1.20	>	12	8	1.22	>
N6	8	10	1.73	>	12	17	.82	>	13	9	1.35	>	11	8	1.48	>
N7	11	11	1.71	>	9	13	.64	>	13	9	1.56	>	5	5	.77	>
N8					14	17	1.40	>	11	9	2.19	>	13	9	1.17	>

Sta. No.	1967-68 (Fig. 4)				1968-69 (Fig. 5)				1969-70 (Fig. 6)				1970-71 (Fig. 7)			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
N9	11	11	1.83	>	19	22	1.12	>	13	9	1.50	>				
N10	7	6	1.47	>	8	11	1.24	>	11	6	1.46	>				
N11	10	8	1.82	.088	19	22	1.17	>	9	4	2.04	>	2	2	2.49	>
N12					18	19	1.44	>	9	4	1.39	>	0	0	0.00	>
N13	10	8	2.16	>	19	22	1.62	.099	13	9	1.29	>	13	9	1.44	>
N14	11	11	1.49	>	17	20	1.21	>	13	9	2.37	.045	13	9	1.62	>
N15	9	6	2.58	>	19	22	1.42	>	13	9	1.58	>	12	8	1.10	>
N16	8	7	3.38	>	14	16	1.82	.078	9	5	1.98	>	13	9	1.38	>
N17	9	7	1.66	>	16	17	1.02	>	11	6	1.37	>	9	4	1.38	>
N18									13	9	1.19	>	11	8	.96	>
N19													13	9	.90	>
N20													13	9	.84	>
N21													6	5	1.17	>
S201	11	11	1.77	>	19	22	.82	>	13	9	1.49	>	13	9	.82	>
S202	7	7	1.35	>	19	22	1.07	>	13	9	.99	>	13	9	1.27	>
S203					19	22	.95	>	13	9	.95	>	13	9	1.02	>
S204	11	11	1.31	>	19	22	.98	>	13	9	.87	>	10	7	.96	>
S205	9	6	1.30	>	17	21	.91	>	12	7	1.20	>	10	7	.90	>
S206	11	10	1.38	>	19	22	1.46	>	12	8	1.37	>	11	7	.91	>
S208	9	10	1.44	>	19	22	1.04	>	11	6	.95	>	12	8	1.08	>
S209	11	11	1.86	>	19	22	1.02	>	13	9	.72	>				
S210	11	11	1.54	>	19	21	1.70	>	13	9	1.31	>	11	8	1.09	>
S211	11	11	1.30	>	19	22	1.26	>	13	8	1.72	.100	12	8	1.73	>
S212	3	5	.46	>	19	22	1.70	.063	12	8	2.00	>	3	4	.39	>
S215					13	14	.99	>	12	7	1.92	>	6	6	.58	>
S217	6	7	1.31	>	19	22	1.32	>	13	9	1.50	>	7	6	1.20	>
S221	11	11	2.53	>	19	22	.96	>	13	9	10.90	.051				
S231	11	11	1.30	>	16	19	1.75	>	12	8	1.26	>	12	9	1.19	>
S232	11	11	1.57	>	18	21	1.73	>	13	9	1.62	>	13	9	1.27	>
S233	11	11	1.65	>	19	22	1.02	>	13	9	1.68	>	13	9	.88	>
S234	11	11	1.65	>	19	22	1.33	>	11	8	2.09	>	13	9	1.07	>
S235	11	11	2.17	>	19	22	.69	>	13	9	1.40	>	13	9	.74	>
S236	11	11	2.50	>	19	22	1.61	>	13	8	1.39	>	13	9	.98	>

Sta. No.	1967-68 (Fig. 4)				1968-69 (Fig. 5)				1969-70 (Fig. 6)				1970-71 (Fig. 7)			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
S238	10	8	2.89	.023	19	22	1.27	>	13	9	1.39	>				
S241	8	7	1.90	>	16	19	1.75	.096					10	7	1.50	>
S242	6	9	1.22	>	19	22	1.49	>	13	9	1.76	.095	5	5	.63	>
S249					15	16	1.17	>	13	9	1.44	>				
S251	11	11	1.30	>	18	19	1.34	>	13	9	1.28	>	7	6	1.12	>
S255									9	7	1.83	>	12	8	1.46	>
S256									8	3	1.53	>	9	6	.76	>
S257													12	8	.74	>
V85	11	10	2.41	>	12	12	.93	>	13	9	1.45	.080	11	8	1.33	>
V121					15	18	1.46	>	13	8	2.80	.050	13	9	.84	>
V138	10	8	2.31	.029	19	22	1.25	>	13	9	1.34	>	8	4	1.66	>
V165	11	11	1.80	>	18	19	1.14	>	13	9	1.01	>	13	9	1.39	>
V166	11	11	2.03	>	19	22	1.28	>	13	8	1.03	>	11	9	1.04	>
V167	11	11	1.58	>	19	22	1.38	>	13	9	1.55	.080	13	9	.71	>
V168	10	11	2.03	>	19	22	1.41	>	13	9	1.22	.019	12	8	.84	>
V169	11	11	3.22	>									11	8	.92	>
V170	5	7	2.44	>	15	15	1.14	>					9	7	1.09	>
V171	11	11	3.26	>	19	22	1.48	>	13	9	1.75	>	7	6	.98	>
V172	11	11	3.71	.079	12	16	2.59	.008	13	9	1.96	>	13	9	1.04	>
V173	11	11	2.56	>	19	22	1.58	>	13	9	2.02	>	13	9	1.11	>
V174	11	11	1.91	>	17	18	1.44	>	10	6	.77	>	9	5	2.40	>
V175	8	10	1.63	>	14	17	1.40	>	10	6	1.81	.100	11	8	1.13	>
V188	11	11	2.00	>					13	9	2.82	.025	13	9	.95	>
V189	11	10	1.89	>					13	9	3.06	.009	13	9	1.08	>
V190	10	8	1.91	>	19	22	1.40	>	13	9	3.54	.035	13	9	.75	>
V191	11	11	3.41	>	19	22	1.27	>	13	9	3.40	.016	13	9	.87	>
V192	11	11	2.09	>	16	19	1.04	>	3	3	3.80	>	13	9	1.01	>
V193					17	20	1.40	>	9	7	2.84	>	6	5	1.03	>
V194	11	11	1.90	>	19	22	1.08	.069	12	8	2.47	.088	11	7	.66	>
V196	6	9	2.66	>	17	20	1.41	>	13	9	3.08	.022	13	9	1.11	>
V198	11	11	1.70	>	12	14	1.62	.068	13	9	1.43	>	13	9	1.91	>
V206	11	11	3.38	>	19	22	1.38	>	13	9	2.38	.085	11	7	1.19	>
V207	11	11	2.48	>	12	15	1.87	.097	11	8	1.31	>	12	9	.88	>

Sta. No.	1967-68 (Fig. 4)				1968-69 (Fig. 5)				1969-70 (Fig. 6)				1970-71 (Fig. 7)			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
V209	10	7	1.48	>	19	21	1.53	.061	13	9	1.32	>	13	9	1.05	>
V221	11	11	1.70	>	18	22	1.37	>	13	9	1.44	>	13	9	.92	>
V224	9	6	2.13	>	9	15	2.51	.100	10	7	1.72	>	2	1	2.34	>
V225	11	11	3.08	>	19	22	1.55	>	11	7	1.65	>	13	9	1.2[illegible]	>
V227									13	9	3.69	.021	7	6	.46	>
V232					15	18	1.59	>	6	6	3.73	>	12	8	1.28	>

APPENDIX C

Data Summary: Sample Size (N_1-Seeded, N_2-Not Seeded)
S/NS Ratio
Probability (Wilcoxon-Mann Whitney)
(> = greater than .10)

	(Fig. 8) 1967-71, All Bands				(Fig. 16)		(Fig. 9) 1967-71, $T_{500} \geq -20°C$				(Fig. 10) 1967-71, $T_{500} < -20°C$			
Sta. No.	N_1	N_2	Ratio S/NS Precip.	Prob.	Ratio S/NS Duration	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
A21	23	22	1.34	>	1.18	>	10	8	6.93	>	13	14	1.33	>
A23	20	22	.79	>	.79	>	17	17	1.00	>	4	5	.62	>
A24	28	27	1.77	>	1.33	>	20	19	1.89	>	8	8	1.30	>
A26	21	16	3.25	>	1.57	>	10	7	4.55	.094	11	9	2.96	>
A27	19	14	7.32	>	2.43	.065	10	6	∞	>	9	8	4.09	>
A29	40	33	1.09	>	.95	>	25	18	1.21	>	15	15	1.08	>
A30	32	31	1.47	>	1.18	>	22	19	2.35	>	10	12	1.00	>
A31	25	17	3.83	.022	5.28	.016	12	7	35.00	>	13	10	2.51	.096
A32	28	26	1.23	>	1.41	>	22	18	2.02	>	6	8	1.01	>
A33	41	34	1.27	.076	1.56	.076	27	20	4.07	.072	14	14	.56	>
A34	35	28	2.21	>	1.54	>	23	17	3.27	>	12	11	1.66	>
A35	28	21	2.49	.059	1.56	.043	19	14	2.75	>	9	7	2.28	>
A36	37	29	1.53	>	1.61	>	22	14	4.06	>	15	15	1.15	>
A37	42	35	1.27	>	1.38	.089	27	21	1.64	>	15	14	1.01	>
A38	29	21	1.56	>	1.15	>	20	14	1.99	>	9	7	1.22	>
A41	21	12	1.54	>	.98	>	7	2	3.83	>	14	10	1.35	>
A42	24	17	1.49	.076	1.22	>	11	7	2.30	>	13	10	1.06	>
A44	13	9	1.30	>	1.20	>	5	2	3.55	>	8	7	.92	>
A45	13	9	1.24	>	1.30	>	5	2	1.83	>	8	7	.81	>
A46	13	9	1.42	>	1.62	>	5	2	∞	>	8	7	.77	>
A47	24	20	2.26	>	1.42	>	5	2	6.31	>	8	9	1.03	>
E442	56	51	1.55	>	1.40	.081	32	31	1.30	>	24	20	1.74	>
E1142	51	45	1.40	>	1.24	.067	30	27	1.46	.050	21	18	1.31	>
E1253	53	47	1.45	.067	1.28	.061	31	27	1.88	.019	22	20	1.10	>
E1682	56	51	1.52	.079	1.30	.054	32	31	1.45	.084	24	20	1.51	>
E1743	53	50	1.19	>	1.30	.043	29	30	1.30	>	24	20	1.06	>
E3465	34	32	1.40	>	1.32	>	24	24	1.44	.097	10	8	1.27	>
E3751	56	51	1.79	.092	1.31	.082	32	31	2.15	.048	24	20	1.50	>
E4144	50	47	1.19	>	1.19	>	30	28	1.30	.051	20	19	1.08	>
E4767	38	35	1.15	>	1.21	>	22	22	1.01	>	16	13	1.25	>
E4867	53	49	1.43	>	1.27	.064	30	30	1.42	.023	23	19	1.42	>

Sta. No.	(Fig. 8) 1967-71, All Bands N_1	N_2	Ratio S/NS Precip.	Prob.	(Fig. 16) Ratio S/NS Duration	Prob.	(Fig. 9) 1967-71, $T_{500} \geq -20°C$ N_1	N_2	Ratio S/NS	Prob.	(Fig. 10) 1967-71, $T_{500} < -20°C$ N_1	N_2	Ratio S/NS	Prob.
E5098	55	48	1.33	>	1.18	>	32	31	1.79	.063	23	17	.88	>
E5151	54	49	1.13	>	1.04	>	30	29	1.44	>	24	20	.86	>
E5184	48	45	1.29	>	1.12	>	26	26	1.25	>	22	19	1.36	>
E5756	44	41	1.18	>	1.10	>	27	27	1.53	>	17	14	.83	>
E6006	42	34	1.94	.074	1.47	.025	27	26	2.12	>	15	8	1.48	>
E6624	42	35	1.68	>	1.63	>	21	20	2.41	>	21	15	1.21	>
E6736	53	47	1.38	.054	1.24	.047	31	30	1.74	.013	22	17	1.03	>
E7735	50	48	1.32	>	1.41	.0217	28	29	2.20	.050	22	19	.85	>
E7946	56	51	.99	>	1.14	>	32	31	1.05	>	24	20	.91	>
E8697	33	36	1.04	>	1.11	>	24	26	1.03	>	9	10	1.05	>
E8752	54	49	1.69	.037	1.64	.038	30	29	3.48	.029	24	20	.92	>
E8832	48	39	1.60	.046	1.38	.034	30	26	2.22	.059	18	13	.95	>
E9049	46	37	1.46	>	1.23	>	28	24	1.65	>	18	13	1.23	>
E9221	39	37	1.46	.067	1.13	>	19	18	1.29	.067	19	19	1.62	>
E9283	31	29	1.56	>	1.28	>	19	18	2.05	>	12	11	1.14	>
E9458	10	7	1.61	>	.95	>	16	17	1.04	>	6	5	2.13	.080
E9512	50	50	1.36	>	1.32	>	29	30	1.19	>	21	20	2.01	
L6	38	40	1.92	.042	1.58	.006	22	25	2.16	.084	16	15	1.66	
L10	44	41	1.93	.021	1.74	.005	25	28	1.76	.015	19	13	2.05	
L11	53	48	1.84	.020	1.64	.003	30	29	2.22	.017	23	19	1.53	
L33	55	51	1.48	>	1.42	.016	31	31	2.37	.034	24	20	1.07	
L46	53	50	1.72	.053	1.44	.016	30	31	2.43	.012	23	19	1.23	
L52	36	34	1.35	>	1.36	.081	22	22	1.64	>	14	12	1.11	
L53	56	51	1.81	.050	1.43	.015	32	31	2.33	.044	24	20	1.39	
L54	47	38	2.09	.028	1.38	.048	27	23	3.26	.023	20	15	1.43	
L128	47	41	1.61	.045	1.34	.026	23	22	2.19	.052	24	19	1.28	
L179	52	50	1.36	>	1.40	.041	30	31	1.30	.084	23	19	1.29	
L191	55	48	1.70	.042	1.45	.039	31	29	2.22	.027	24	19	1.37	
L213	55	51	1.54	.081	1.54	.015	31	31	1.51	.032	24	20	1.49	
L250	48	44	1.62	>	1.25	>	28	26	2.82	>	20	18	1.14	
L259	55	50	1.81	.042	1.31	.053	32	31	1.61	.053	23	19	1.90	
L292	49	45	1.45	>	1.27	.093	28	28	2.18	>	21	17	1.07	
L303	55	51	1.58	>	1.38	.062	32	31	2.01	.097	23	20	1.31	
L372	54	50	1.96	.010	1.43	.016	30	30	2.09	.024	24	20	1.78	

Sta. No.	(Fig. 8) 1967-71, All Bands N_1	N_2	Ratio S/NS Precip.	Prob.	(Fig. 16) Ratio S/NS Duration	Prob.	(Fig. 9) 1967-71, $T_{500} \geq -20°C$ N_1	N_2	Ratio S/NS	Prob.	(Fig. 10) 1967-71, $T_{500} < -20°C$ N_1	N_2	Ratio S/NS	Prob.
L434	51	45	1.26	>	1.23	>	27	25	1.51	.081	24	20	1.08	>
L435	49	48	1.62	>	1.14	>	26	30	1.31	>	23	18	1.73	>
L451	35	35	1.78	.092	1.28	>	23	26	1.48	>	12	9	1.80	>
L458	53	48	1.15	>	1.22	>	29	28	1.25	.079	24	20	1.04	>
L466	53	49	1.60	.099	1.37	.042	31	31	1.97	.059	22	18	1.26	>
L694	53	49	1.53	>	1.41	.043	32	30	2.30	.050	21	19	1.16	>
L1017	50	45	1.74	>	1.33	>	27	26	2.84	>	23	19	1.25	>
L1074	47	43	1.67	>	1.30	.045	28	27	1.88	>	19	16	1.44	>
L1107	51	47	1.59	.042	1.47	.031	30	30	2.22	.034	21	17	1.19	>
L1108	37	32	1.67	>	1.27	>	19	18	2.10	>	18	14	1.35	>
L1181	45	44	1.74	>	1.35	.059	26	29	1.75	>	19	15	1.59	>
M100	13	9	.84	>	1.05	>	5	2	3.18	>	8	7	.62	>
M101	46	45	1.20	>	1.16	>	30	30	1.28	>	16	15	1.04	>
M102	25	17	1.35	>	1.30	>	11	7	1.41	>	14	10	1.27	>
M103	56	51	1.18	.097	1.17	>	32	31	1.21	.072	24	20	1.15	>
M104	37	35	1.21	>	1.15	>	21	19	1.31	>	13	13	1.10	>
M124	53	50	2.01	.008	1.30	.047	30	31	2.30	.015	23	19	1.70	>
M225	49	46	1.36	>	1.46	.005	31	28	1.30	>	18	18	1.45	>
M226	49	48	1.45	>	1.33	.019	28	29	1.57	>	21	19	1.31	>
M228	55	51	1.36	.076	1.41	.003	31	31	1.67	.038	24	20	1.08	>
M230	55	50	1.66	.049	1.42	.004	32	31	2.11	.048	23	19	1.28	>
NA	48	40	1.65	.049	1.35	.008	25	22	2.11	.018	23	18	1.25	>
NB	54	50	1.55	.068	1.44	.021	30	30	1.73	.041	24	20	1.35	>
N1	49	46	1.17	>	1.26	>	31	29	1.14	>	18	17	1.21	>
N2	52	45	1.25	>	1.09	>	30	28	1.57	>	22	17	.94	>
N3	56	51	1.05	>	1.19	.069	32	31	1.10	>	24	20	.98	>
N4	52	51	1.07	>	1.19	>	31	31	1.24	>	21	20	.87	.079
N5	53	49	1.13	>	1.24	.078	31	31	1.22	>	22	18	1.00	>
N6	45	38	1.16	>	1.41	.014	24	27	1.15	>	20	16	1.10	>
N7	38	38	1.10	>	1.21	>	17	20	1.05	>	21	18	1.03	>
N8	38	35	1.33	>	1.32	>	25	20	1.44	>	13	15	1.23	>
N9	43	42	1.26	>	1.24	>	27	29	1.32	>	16	13	1.12	>
N10	26	23	1.50	.037	1.41	.030	15	18	1.48	>	11	5	1.20	>

Sta. No.	(Fig. 8) 1967-71, All Bands N_1	N_2	Ratio S/NS Precip.	Prob.	(Fig. 16) Ratio S/NS Duration	Prob.	(Fig. 9) 1967-71, $T_{500} \geq -20°C$ N_1	N_2	Ratio S/NS	Prob.	(Fig. 10) 1967-71, $T_{500} < -20°C$ N_1	N_2	Ratio S/NS	Prob.
N11	40	36	1.36	.045	1.38	.007	23	24	1.31	>	17	12	1.39	.075
N12	27	23	1.42	>	1.36	.035	20	15	1.49	>	7	8	1.51	>
N13	55	48	1.48	>	1.26	.043	32	31	1.91	.064	23	17	1.00	>
N14	54	49	1.51	.008	1.52	.0005	30	29	1.61	.027	24	20	1.39	.085
N15	53	45	1.38	>	1.26	.055	30	26	1.80	.049	23	19	1.08	>
N16	44	37	1.87	.011	1.34	.020	24	24	2.51	.024	20	13	1.27	>
N17	45	34	1.18	.095	1.18	.093	22	27	1.33	.076	18	12	.99	>
N18	24	17	1.06	>	1.26	.097	11	8	1.41	>	13	9	.86	>
N19	13	9	.90	>	.95	>	5	2	3.56	>	8	7	.66	>
N20	13	9	.84	>	1.05	>	5	2	1.06	>	8	7	.71	>
N21	5	5	1.17	>	.65	>	1	0	0.00	>	5	5	.79	>
S201	56	51	1.08	>	1.29	.055	32	31	1.14	>	24	20	.99	>
S202	52	47	1.11	>	1.25	.031	32	31	1.13	>	20	16	1.05	>
S203	45	40	.98	>	1.18	>	30	25	1.07	>	15	15	.87	>
S204	53	49	1.01	>	1.26	.023	30	30	1.06	>	23	19	.93	>
S205	48	41	1.02	>	1.15	>	26	23	1.23	>	22	18	.82	.075
S206	53	47	1.29	>	1.39	.007	31	30	1.49	>	22	17	1.05	>
S208	51	46	1.08	>	1.36	.038	30	28	1.30	>	21	18	.91	>
S209	43	42	1.00	>	1.52	.014	27	29	1.00	>	16	13	.90	>
S210	54	49	1.46	.066	1.39	.025	30	29	1.67	.067	24	20	1.25	>
S211	55	49	1.45	.087	1.32	.040	32	30	1.85	.031	23	19	1.11	>
S212	37	39	1.52	>	1.29	.051	26	27	1.85	.068	11	12	1.13	>
S215	31	27	1.24	>	1.09	>	20	18	1.42	>	11	9	.95	>
S217	42	43	1.38	>	1.06	>	28	28	1.52	>	14	15	1.20	>
S221	42	40	1.52	.064	1.66	.028	27	29	1.26	>	16	12	1.69	.097
S231	51	47	1.44	.067	1.29	.027	27	27	1.94	.032	24	20	1.11	>
S232	55	50	1.55	.087	1.22	.074	31	31	2.14	.050	24	19	1.10	>
S233	56	51	1.13	>	1.18	.087	32	31	1.26	.066	24	20	.97	>
S234	54	50	1.40	>	1.60	.005	30	31	1.43	>	24	19	1.30	>
S235	56	51	.98	>	1.17	>	32	31	1.04	>	24	20	.89	>
S236	56	50	1.45	>	1.30	.017	32	30	2.01	.081	24	20	1.04	>
S238	36	36	1.35	.075	1.52	.003	27	29	1.58	.087	10	7	.96	>
S241	34	33	1.72	>	1.46	.061	21	22	1.82	.093	13	11	1.53	>
S242	43	45	1.45	.069	1.32	.036	27	29	1.62	.053	16	16	1.25	

Sta. No.	(Fig. 8) 1967-71, All Bands N_1	N_2	Ratio S/NS Precip.	Prob.	(Fig. 16) Ratio S/NS Duration	Prob.	(Fig. 9) 1967-71, $T_{400} \geq -20°C$ N_1	N_2	Ratio S/NS	Prob.	(Fig. 10) 1967-71, $T_{500} < -20°C$ N_1	N_2	Ratio S/NS	Prob.
S249	28	2[illegible]	1.27	>	1.29	>	22	21	1.14	>	6	4	1.97	.072
S251	49	45	1.28	>	1.12	>	27	26	1.49	.097	22	19	1.07	>
S255	12	8	1.60	>	1.20	>	11	7	3.42	>	7	6	1.07	>
S256	9	6	1.12	>	1.03	>	6	1	1.38	>	5	5	1.10	>
S257	12	8	.74	>	1.02	>	5	2	3.33	>	7	6	.51	>
V85	47	39	1.21	>	1.17	>	23	21	1.23	>	24	18	1.19	>
V121	41	35	1.31	>	1.30	>	26	20	1.25	>	15	15	1.46	>
V138	50	43	1.36	.074	1.24	.055	32	31	1.62	.092	18	12	.96	>
V165	55	48	1.22	>	1.32	.029	31	28	1.29	>	24	20	1.14	>
V166	54	50	1.22	>	1.20	>	31	30	1.78	>	23	20	1.24	>
V167	56	51	1.30	>	1.38	.023	32	31	1.44	>	24	20	1.15	>
V168	54	50	1.31	.043	1.47	.029	32	31	1.37	.032	22	19	1.23	>
V169	22	19	1.31	>	1.24	>	5	7	3.31	>	17	12	.96	>
V170	29	29	1.25	>	1.35	>	18	19	1.41	>	11	10	1.07	>
V171	50	48	1.49	.015	1.45	.010	28	29	1.68	.029	22	19	1.29	>
V172	49	45	1.90	.002	1.39	.017	26	29	2.22	.016	23	16	1.52	.043
V173	56	51	1.54	.067	1.24	.078	32	31	1.87	.058	24	20	1.24	>
V174	47	40	1.39	>	1.21	>	28	24	1.66	>	19	16	1.15	>
V175	43	41	1.56	.057	1.39	.021	22	23	1.23	>	21	18	1.75	>
V188	37	29	1.57	.089	1.36	.092	14	14	2.86	>	23	15	1.17	>
V189	37	28	1.78	>	1.41	.081	14	14	2.35	>	23	14	1.44	>
V190	55	48	1.38	>	1.47	.016	32	31	1.50	.063	23	17	1.18	>
V191	56	51	1.44	.087	1.41	.026	32	31	1.42	.095	24	20	1.41	>
V192	43	42	1.15	>	1.45	.053	25	25	1.07	>	18	17	1.21	>
V193	32	32	1.50	>	1.40	.079	21	20	1.62	>	11	12	1.53	>
V194	53	48	1.26	.095	1.25	>	31	30	1.07	.048	22	18	1.38	>
V196	32	27	1.78	.012	1.50	.034	14	14	3.69	.072	18	13	1.28	.097
V198	49	43	1.61	.062	1.30	.084	25	24	1.57	>	24	19	1.65	>
V206	54	49	1.65	.028	1.38	.038	32	31	1.52	.045	22	18	1.70	>
V207	46	43	1.47	.059	1.25	.067	26	28	2.05	.041	20	15	.97	>
V209	55	46	1.32	.020	1.51	.005	32	30	2.07	.021	23	16	.73	>
V221	55	51	1.32	>	1.25	.067	31	31	1.32	>	24	20	1.27	>
V224	30	29	2.04	.015	1.62	.005	15	17	2.59	.028	15	12	1.54	>

Sta. No.	(Fig. 8) 1967-71, All Bands N_1	N_2	Ratio S/NS Precip.	Prob.	(Fig. 16) Ratio S/NS Duration	Prob.	(Fig. 9) 1967-71, $T_{500} \geqslant -20°C$ N_1	N_2	Ratio S/NS	Prob.	(Fig. 10) 1967-71, $T_{500} < -20°C$ N_1	N_2	Ratio S/NS	Prob.
V225	54	49	1.55	.034	1.32	.028	30	29	1.94	.048	24	20	1.23	>
V227	20	15	1.44	>	1.14	>	9	7	2.92	>	11	8	1.24	>
V232	33	32	1.63	>	1.31	.095	24	21	1.42	>	9	11	2.13	>

APPENDIX C

Data Summary: Sample Size (N_1-Seeded, N_2-Not Seeded)
S/NS Ratio
Probability (Wilcoxon-Mann Whitney)
(> = greater than .10)

Sta. No.	(Fig. 11) 1967-71 $T_{500} \geqslant -22°C$				(Fig. 12) 1967-71 $T_{500} < -22°C$				(Fig. 14) 1967-71 Westerly Stratification				(Fig. 13) 1967-71 Southerly Stratification			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
A21	13	10	1.27	>	10	12	1.43	>	6	9	.31	>	17	13	1.50	>
A23	19	18	1.14	>	2	4	.14	>	7	12	.38	>	14	10	1.21	>
A24	22	20	1.99	>	6	7	.31	>	12	15	1.02	>	16	12	2.70	>
A26	12	7	8.36	.045	9	9	1.38	>	8	5	1.41	>	13	11	4.96	>
A27	13	7	25.31	.007	6	7	.78	>	8	5	3.02	>	11	9	10.91	.043
A29	29	20	1.11	>	11	13	1.07	>	14	15	.60	>	26	18	1.35	>
A30	24	21	1.60	.021	8	10	1.27	>	12	17	.63	>	20	14	1.99	>
A31	15	7	53.67	.055	10	10	.87	>	10	6	.66	>	15	11	40.70	.016
A32	23	19	1.34	>	5	7	1.31	>	10	13	1.25	>	18	13	1.10	>
A33	30	21	1.63	.057	11	13	.45	>	15	17	.87	>	26	17	1.42	.020
A34	27	18	2.83	.085	10	11	1.22	>	14	13	3.47	>	23	16	1.70	>
A35	23	15	3.46	.026	5	6	.65	>	10	9	1.48	>	18	12	2.87	.056
A36	26	16	1.89	.090	11	13	1.06	>	12	12	1.86	>	25	17	1.35	>
A37	31	73	1.57	>	11	12	.95	>	16	17	.88	>	26	18	1.29	>
A38	24	15	2.12	>	5	6	.68	>	11	7	1.40	>	18	14	1.68	>
A41	11	3	1.76	>	10	9	1.03	>	8	4	.85	>	13	8	2.24	>
A42	14	8	1.84	.052	10	9	1.06	>	9	8	1.13	>	15	9	1.85	.092
A44	7	3	2.70	>	6	6	.46	.002	6	4	1.07	>	7	5	1.69	>
A45	7	3	1.80	>	6	6	.55	>	6	4	.60	-.072	7	5	3.95	>
A46	7	3	10.82	.092	6	6	.33	>	6	4	.48	>	7	5	7.41	>
A47	6	2	6.44	>	6	6	.57	>	6	4	.72	>	6	4	9.09	>
E442	39	34	1.34	>	17	17	2.13	>	24	28	1.48	>	32	23	1.59	>
E1142	37	29	1.34	>	14	16	1.51	>	20	24	.78	>	31	21	2.08	.009
E1253	37	30	1.68	.019	16	17	1.10	>	22	24	.82	>	31	23	1.69	.036
E1682	39	34	1.58	.029	17	17	1.47	>	24	28	1.39	>	32	23	1.43	.00003
E1743	36	33	1.15	>	17	17	1.29	>	22	27	.70	>	31	23		.032
E3465	27	26	1.38	.069	7	6	1.45	>	13	19	1.71	.086	21	13	1.18	>
E3751	39	34	2.28	.033	17	17	1.29	>	24	28	1.20	>	32	23	1.98	>
E4144	36	31	1.26	.071	14	16	1.06	>	21	26	.96	>	29	21	1.31	>
E4767	27	24	.94	>	11	11	1.78	>	16	19	.77	>	22	16	1.26	.097

Sta. No.	(Fig. 11) 1967-71 $T_{500} \geqslant -22°C$				(Fig. 12) 1967-71 $T_{500} < -22°C$				(Fig. 14) 1967-71 Westerly Stratification				(Fig. 13) 1967-71 Southerly Stratification			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
E4867	36	32	1.53	.096	17	17	1.28	>	23	28	.84	>	30	21	1.73	>
E5098	39	34	1.37	>	16	14	1.23	>	24	28	1.56	>	31	20	1.20	>
E5151	37	32	1.34	>	17	17	.79	>	23	28	.52	>	31	21	1.82	.081
E5184	32	29	1.19	>	16	16	1.52	>	19	23	.93	>	29	22	1.70	>
E5756	32	30	1.02	>	12	11	1.62	>	17	23	1.03	>	27	18	1.01	>
E6006	32	27	2.40	.026	10	7	1.08	>	19	20	1.58	>	23	14	1.81	>
E6624	27	23	1.84	>	15	12	1.50	>	17	19	1.70	.084	25	16	1.53	>
E6736	38	33	1.47	.019	15	14	1.22	>	24	27	.87	>	29	20	1.54	.047
E7735	35	32	2.03	.028	15	16	.74	>	21	25	.87	>	29	23	1.25	>
E7946	39	34	1.02	>	17	17	.92	>	24	28	.78	>	32	23	1.07	>
E8697	28	27	1.11	>	5	9	.78	>	11	22	.84	>	22	14	1.00	>
E8752	37	32	2.71	.009	17	17	.61	>	24	27	.92	>	30	22	2.72	.008
E8832	37	29	1.53	>	11	10	1.84	>	21	22	1.75	.070	27	17	1.43	>
E9049	34	26	1.58	.082	12	11	1.28	>	20	20	1.49	>	26	17	1.30	>
E9221	25	21	1.18	>	13	15	2.16	>	19	19	1.05	>	19	17	1.80	.020
E9283	23	19	2.04	>	8	10	1.24	>	11	18	.49	>	20	11	2.51	>
E9458	21	18	1.84	>	11	8	1.20	>	14	16	.86	>	18	10	3.82	.082
E9512	34	33	1.13	>	16	17	3.08	>	21	28	1.49	>	29	22	1.34	>
L6	27	23	2.45	.016	11	12	1.41	>	11	21	.50	>	27	19	2.46	.043
L10	32	30	1.89	.006	12	11	2.08	>	18	22	1.93	>	26	19	1.78	.072
L11	36	31	2.56	.003	17	17	1.37	>	23	26	.88	>	30	22	2.79	.042
L33	38	34	2.33	.020	17	17	.96	>	24	28	1.22	>	31	23	1.43	>
L46	36	33	2.28	.005	17	17	1.21	>	22	28	1.21	>	31	22	1.66	>
L52	26	24	1.13	>	10	10	2.05	>	15	19	1.38	>	21	15	1.16	>
L53	39	34	1.90	.017	17	17	1.69	>	24	28	1.30	>	32	23	1.82	>
L54	34	26	2.68	.010	13	12	1.36	>	20	21	1.32	>	27	17	2.30	.090
L128	30	25	1.77	.019	17	17	1.44	>	19	21	1.33	>	28	21	1.56	>
L179	36	33	1.54	.035	17	17	1.26	>	24	28	1.05	>	29	22	1.46	>
L191	38	32	2.30	.009	17	16	1.29	>	24	26	1.45	.030	31	22	1.74	>
L213	38	34	1.82	.010	17	17	1.26	>	24	28	1.07	>	31	23	1.87	>
L250	34	29	2.25	.090	14	15	1.11	>	18	22	.90	>	30	22	1.73	>
L259	38	33	2.08	.010	17	17	1.57	>	24	28	1.53	>	31	22	1.86	>

Sta. No.	(Fig. 11) 1967-71 $T_{500} \geqslant -22°C$				(Fig. 12) 1967-71 $T_{500} < -22°C$				(Fig. 14) 1967-71 Westerly Stratification				(Fig. 13) 1967-71 Southerly Stratification			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
L292	34	31	1.76	.090	15	14	1.21	>	22	25	.93	>	27	20	1.61	>
L303	38	34	2.24	.046	17	17	1.18	>	24	28	1.13	>	31	23	1.73	>
L372	37	33	2.19	.006	17	17	1.77	>	24	28	1.45	.049	30	22	2.08	.004
L434	34	28	1.33	.055	17	17	1.19	>	20	22	.59	>	31	23	1.47	>
L435	32	32	1.68	.048	17	16	1.52	>	23	28	.67	>	26	20	2.43	.022
L451	27	28	1.54	>	8	7	2.17	>	16	22	1.67	>	19	13	1.59	>
L458	36	31	1.23	.031	17	17	1.06	>	23	26	.65	>	30	22	1.31	>
L466	38	34	2.05	.030	15	15	1.02	>	24	28	1.57	>	29	21	1.45	>
L694	39	33	2.16	.031	14	16	1.08	>	21	26	.83	>	32	23	1.71	>
L1017	34	29	2.28	>	16	16	1.34	>	21	24	1.11	>	29	21	1.94	>
L1074	34	30	1.93	.062	12	13	1.19	>	19	23	1.58	>	27	20	1.48	>
L1107	36	32	2.42	.011	15	15	1.05	>	23	22	.97	>	28	20	1.69	>
L1108	25	21	2.46	.089	12	11	.96	>	15	14	1.10	>	22	18	2.20	>
L1181	32	31	1.96	.051	13	13	1.42	>	19	25	1.58	.087	26	19	1.60	>
M100	7	3	1.36	>	6	6	.68	>	6	4	1.00	>	7	5	.80	>
M101	35	32	1.15	>	11	13	1.28	>	20	26	.92	>	26	19	1.54	.030
M102	15	8	1.20	>	10	9	1.46	>	10	7	.85	>	15	10	2.40	.100
M103	39	34	1.14	>	17	17	1.29	>	24	28	.97	>	32	23	1.33	.067
M104	24	20	1.19	>	10	12	1.25	>	13	19	.88	>	21	13	1.36	>
M124	37	34	2.01	.004	16	16	2.05	>	21	28	1.78	.034	32	22	1.79	>
M225	37	31	1.29	>	12	15	1.59	>	18	23	1.09	>	31	23	1.44	>
M226	34	32	1.57	>	15	16	1.28	>	21	28	1.00	>	28	20	1.65	>
M228	38	34	1.56	.015	17	17	1.07	>	23	28	.98	>	32	23	1.52	>
M230	38	33	1.91	.017	17	17	1.38	>	24	28	.89	>	31	22	1.92	.052
NA	31	25	1.79	.015	17	15	1.39	>	22	22	1.04	>	26	18	2.01	.024
NB	37	33	1.65	.015	17	17	1.38	>	22	27	1.12	>	32	23	1.67	.074
N1	35	32	1.20	.0005	14	14	1.11	>	21	27	.96	>	28	19	1.25	>
N2	36	31	1.43	>	16	14	1.01	>	22	25	.78	>	30	20	1.48	>
N3	39	34	1.11	>	17	17	.98	>	24	28	.83	>	32	23	1.16	>
N4	37	34	1.19	>	15	17	.81	>	22	28	.70	>	30	23	1.18	>
N5	37	33	1.22	>	16	16	.94	>	24	28	.86	>	30	22	1.30	>

Sta. No.	(Fig. 11) 1967-71 $T_{500} \geqslant -22°C$				(Fig. 12) 1967-71 $T_{500} < -22°C$				(Fig. 14) 1967-71 Westerly Stratification				(Fig. 13) 1967-71 Southerly Stratification			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
N6	30	30	1.22	.095	14	14	1.03	>	20	23	1.12	>	24	21	1.13	>
N7	23	23	1.28	>	15	15	.90	>	16	22	.83	>	22	16	1.29	>
N8	29	22	1.39	>	9	13	1.00	>	13	18	.64	>	25	17	1.67	>
N9	32	31	1.28	>	11	11	1.23	>	18	24	.98	>	25	18	1.22	>
N10	18	18	1.66	.066	8	5	1.11	>	15	16	1.23	>	11	7	1.69	>
N11	29	27	1.26	>	11	9	1.77	>	16	21	1.08	>	24	15	1.33	>
N12	22	16	1.46	>	5	7	1.44	>	8	11	.62	>	19	12	1.44	>
N13	39	34	1.69	.028	16	14	1.06	>	24	28	1.03	>	31	20	1.64	.095
N14	37	32	1.65	.013	17	17	1.28	>	23	27	1.10	>	31	22	1.66	.022
N15	37	29	1.61	.027	16	16	1.11	>	23	24	.76	>	30	21	1.71	.048
N16	30	26	2.70	.003	14	11	1.02	>	21	21	1.08	>	23	16	2.31	.008
N17	33	25	1.31	.041	12	9	.89	>	20	21	1.02	>	25	13	1.15	>
N18	15	9	1.09	>	9	8	1.05	>	8	7	1.10	>	16	10	1.03	>
N19	7	3	1.62	>	6	6	.67	>	6	4	.44	>	7	5	1.40	>
N20	7	3	.99	>	6	6	.46	>	6	4	.54	>	7	5	1.83	.003
N21	1	0	0.00	>	5	5	.79	>	3	2	.78	>	3	3	2.00	>
S201	39	34	1.10	>	17	17	1.05	>	24	28	.91	>	32	23	1.20	>
S202	39	34	1.13	>	13	13	1.08	>	21	27	.83	>	31	20	1.16	>
S203	34	27	1.05	>	11	13	.85	>	17	21	.80	>	28	19	1.04	>
S204	36	32	1.07	>	17	17	.94	>	22	27	.77	>	31	22	1.13	>
S205	32	25	1.13	>	16	16	.83	>	21	22	.82	>	27	19	1.15	>
S206	37	31	1.46	>	16	16	1.04	>	23	25	1.26	>	30	22	1.25	>
S208	35	29	1.19	.057	16	17	1.00	>	20	24	.72	>	31	22	1.22	>
S209	32	31	1.03	.058	11	11	.96	>	18	24	.90	>	25	18	.93	>
S210	37	32	1.47	.032	17	17	1.45	>	22	26	1.04	>	32	23	1.64	>
S211	38	32	1.78	.012	17	17	1.04	>	24	27	.97	>	31	22	1.65	>
S212	28	28	1.66	.064	9	11	1.28	>	13	22	.90	>	24	17	1.49	>
S215	21	18	1.44	>	10	9	.91	>	14	14	.79	>	17	13	1.50	>
S217	32	31	1.52	>	13	13	1.13	>	19	26	.78	>	26	18	1.65	>
S221	32	31	1.45	>	11	11	1.68	>	18	24	.95	>	25	18	1.65	.061
S231	34	30	1.87	.008	17	17	1.05	>	22	27	.88	>	29	20	1.79	>

Sta. No.	(Fig. 11) 1967-71 $T_{500} \geqslant -22°C$				(Fig. 12) 1967-71 $T_{500} < -22°C$				(Fig. 14) 1967-71 Westerly Stratification				(Fig. 13) 1967-71 Southerly Stratification			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
S232	38	34	1.74	.015	17	16	1.29	>	24	28	.93	>	31	22	1.70	>
S233	39	34	1.20	>	17	17	.98	>	24	28	.87	>	32	23	1.17	>
S234	37	34	1.38	.056	17	16	1.44	>	23	28	.99	>	31	22	1.59	>
S235	39	34	1.04	>	17	17	.82	>	24	28	.91	>	32	23	.99	>
S236	39	33	1.66	.095	17	17	1.19	>	24	27	.93	>	32	23	1.58	.093
S238	32	31	1.57	.081	10	8	.88	>	18	24	.96	>	24	15	1.28	>
S241	24	23	2.09	.039	10	10	1.12	>	17	22	.93	>	17	11	2.79	.038
S242	31	30	1.54	.044	12	15	1.35	>	16	25	.79	>	27	20	1.66	.054
S249	24	21	1.16	>	4	4	2.00	>	11	13	.97	>	17	12	1.36	.085
S251	33	29	1.40	>	16	16	1.09	>	20	23	.99	>	29	22	1.43	>
S255	13	17	3.67	.063	8	8	.91	>	10	7	.70	>	11	8	2.62	.063
S256	8	1	1.47	>	9	8	1.05	>	8	4	.81	>	9	5	1.50	>
S257	6	2	2.88	>	6	6	.57	>	6	4	.48	>	6	4	1.11	>
V85	30	23	1.11	>	17	16	1.39	>	18	20	.93	>	29	19	1.24	>
V121	30	22	1.21	>	11	13	1.63	>	14	17	.80	>	27	18	1.40	>
V138	39	34	1.63	.038	11	9	.68	>	22	26	.93	>	28	17	1.32	>
V165	38	31	1.27	>	17	17	1.16	>	23	25	.91	>	32	23	1.31	>
V166	37	33	1.19	.062	17	17	1.28	>	24	27	.82	>	30	23	1.48	>
V167	39	34	1.37	.089	17	17	1.26	>	24	28	.93	>	32	23	1.40	>
V168	39	34	1.52	.012	15	16	1.12	>	22	27	1.12	>	32	23	1.26	>
V169	10	9	2.94	>	12	10	.66	>	11	10	.95	>	11	9	1.48	>
V170	21	21	1.23	>	8	8	1.29	>	9	16	.74	>	20	13	1.27	>
V171	34	32	1.54	.017	16	16	1.45	>	21	26	1.33	.061	29	22	1.44	>
V172	33	31	2.37	.002	16	14	1.22	>	22	24	1.41	.029	27	21	2.04	.012
V173	39	34	1.59	.031	17	17	1.48	>	24	28	1.28	>	32	23	1.43	>
V174	35	27	1.59	>	12	13	1.09	>	21	22	.78	>	26	18	1.47	>
V175	29	26	1.43	.041	14	15	1.81	>	16	22	1.12	>	27	19	1.74	>
V188	21	16	2.86	.039	16	13	.95	>	17	15	1.12	>	20	14	1.71	>
V189	21	15	2.48	.051	16	13	1.38	>	17	14	1.44	>	20	14	1.92	>
V190	39	34	1.58	.028	16	14	1.17	>	24	28	.99	>	31	20	1.46	>
V191	39	34	1.46	.037	17	17	1.44	>	24	28	1.02	>	32	23	1.60	>

Sta. No.	(Fig. 11) 1967-71 $T_{500} \geqslant -22°C$				(Fig. 12) 1967-71 $T_{500} < -22°C$				(Fig. 14) 1967-71 Westerly Stratification				(Fig. 13) 1967-71 Southerly Stratification			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/	Prob.
V192	30	28	1.10	>	13	14	1.28	>	17	22	.98	>	26	20	1.16	>
V193	23	22	1.35	>	9	10	1.74	>	11	15	1.09	>	21	17	1.65	>
V194	37	32	1.39	.011	16	16	1.14	>	24	27	.74	>	29	21	1.73	.099
V196	20	15	2.81	.013	12	12	1.33	>	12	13	1.67	.071	20	14	1.67	.063
V198	32	26	1.82	.023	17	17	1.28	>	21	23	.98	>	28	20	1.80	.081
V206	39	34	1.49	.023	15	15	2.01	>	22	26	1.61	.090	32	23	1.51	>
V207	32	30	2.13	.009	14	13	.84	>	23	24	1.04	>	23	19	1.71	.075
V209	39	32	1.86	.019	16	14	.60	>	24	27	.89	.081	31	19	1.30	>
V221	38	34	1.41	>	17	17	1.24	>	24	28	.80	>	31	23	1.64	>
V224	20	19	2.48	.006	10	10	1.46	>	12	15	2.52	.063	18	14	1.67	>
V225	37	32	1.67	.023	17	17	1.41	>	24	28	1.21	.081	30	21	1.49	>
V227	12	8	1.54	>	8	7	1.46	>	9	8	.72	>	11	7	1.82	>
V232	26	22	1.67	>	7	10	1.77	>	12	18	.79	>	21	14	1.99	>

APPENDIX C

Data Summary: Sample Size (N_1-Seeded, N_2-Not Seeded)
S/NS Ratio
Probability (Wilcoxon-Mann Whitney)
(> = greater than .10)

	(Fig. 19) Bands Followed by Seeding				(Fig. 20) Bands Preceded by eding			
Sta. No.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
A20	18	13	1.40	>	10	22	1.52	>
A21	12	5	2.50	>	4	13	.97	>
A22	18	12	.84	-.095	10	21	1.63	>
A23	10	11	.49	>	8	14	1.48	>
A24	10	10	.34	-.10	8	13	1.16	>
A25	13	11	.49	>	8	17	.79	>
A26	9	6	.39	>	5	9	3.06	>
A27	3	2	.04	-.10	2	3	4.80	>
A28	12	8	.77	-.088	4	15	.27	-.075
A29	18	12	1.47	>	8	22	1.31	>
A30	11	12	.81	>	8	17	1.14	>
A31	8	4	.10	>	5	6	2.85	>
A32	14	12	.47	-.005	8	17	.20	-.009
A33	19	14	.85	>	11	22	.67	>
A34	15	11	.34	-.031	8	18	.71	>
A35	13	9	.98	>	8	14	.95	>
A36	17	9	.98	>	6	19	.49	>
A37	19	13	1.76	>	11	21	.59	-.089
A38	14	9	1.65	>	9	14	.92	>
A39	18	12	1.86	>	8	22	.96	>
A40	0	0	0.00	>	0	0	0.00	>
A41	5	1	5.80	>	2	4	3.21	>
A42	8	4	1.01	>	4	7	.96	>
A43	0	0	0.00	>	0	0	0.00	>
A44	0	0	0.00	>	0	0	0.00	>
A45	0	0	0.00	>	0	0	0.00	>
A46	0	0	0.00	>	0	0	0.00	>
A47	0	0	0.00	>	0	0	0.00	>
NA	19	18	1.53	>	15	22	.86	>
NB	24	24	1.44	>	21	27	.70	>
N1	23	22	1.32	>	19	26	.93	>
N2	23	21	1.60	>	20	23	.79	>
N3	25	25	1.35	>	22	28	.89	>
N4	23	25	1.40	>	21	28	1.12	>
N5	25	24	1.33	>	22	27	1.15	>
N6	19	22	1.53	>	16	24	.83	>
N7	19	19	1.16	>	15	23	1.13	>
N8	18	12	.99	>	10	19	1.38	>
N9	25	25	1.75	>	22	28	.83	>
N10	14	16	1.10	>	15	15	.93	>
N11	21	20	1.51	>	18	23	1.16	>
N12	16	11	1.50	>	9	18	1.23	>
N13	24	23	1.50	.072	20	27	.95	>

Sta. No.	(Fig. 19) Bands Followed by Seeding				(Fig. 20) Bands Preceded by Seeding			
	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
N14	24	23	1.78	>	22	25	1.07	>
N15	24	20	1.07	.076	18	26	.93	>
N16	17	18	1.90	.029	18	17	1.05	>
N17	21	17	2.31	.085	17	21	1.07	>
N18	8	4	1.61	>	4	8	1.41	>
N19	0	0	.91	>	0	0	0.00	>
N20	0	0	0.00	>	0	0	0.00	>
N21	0	0	0.00	>	0	0	0.00	>
S201	25	25	1.16	>	22	28	.94	>
S202	22	22	1.32	>	18	26	.94	>
S203	20	16	1.10	>	13	23	1.15	>
S204	25	25	1.27	>	22	28	.88	>
S205	21	19	.96	>	16	23	.88	>
S206	25	25	1.27	>	22	28	.83	>
S208	23	23	1.77	>	20	26	.82	>
S209	25	25	2.02	>	22	28	.93	>
S210	25	24	1.49	>	22	28	.69	>
S211	25	25	1.37	>	22	28	.81	>
S212	21	21	1.80	>	17	25	.86	>
S215	16	14	1.13	>	13	17	1.05	>
S217	23	22	1.14	>	19	26	.70	>
S221	25	25	1.41	>	22	28	.60	-.074
S225	22	22	1.45	>	18	26	.82	>
S226	22	23	1.26	>	19	26	.64	>
S227	0	0	0.00	>	0	0	0.00	>
S228	25	25	1.34	>	22	28	.73	>
S230	25	25	1.79	>	22	28	.73	>
S231	21	23	1.92	.089	19	26	.60	>
S232	25	24	2.46	.035	22	27	.69	>
S233	25	25	1.51	>	22	28	1.03	>
S234	23	25	1.36	>	22	27	.73	>
S235	25	25	1.45	>	22	28	.59	-.059
S236	25	25	1.74	>	22	28	.76	>
S238	24	23	1.78	>	20	27	1.08	>
S241	14	15	1.25	>	16	13	.52	-.10
S242	22	24	1.35	>	19	27	.89	>
S249	16	15	.98	>	13	18	1.50	.01
S251	24	23	1.37	>	20	27	.94	>
S255	6	3	.73	>	2	7	2.49	>
S256	5	1	.50	>	2	4	3.15	.067
S257	0	0	0.00	>	0	0	0.00	>
L6	17	19	1.45	>	18	19	1.02	>
L10	20	22	1.80	>	20	22	.77	-.031
L11	24	24	1.92	>	22	25	.74	>
L33	25	25	2.41	.074	22	28	.40	-.006
L46	25	25	3.34	.006	22	28	.40	-.015

	(Fig. 19) Bands Followed by Seeding				(Fig. 20) Bands Preceded by Seeding			
Sta. No.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
L52	22	19	3.10	.051	17	24	.40	-.013
L53	25	25	3.25	.018	22	28	.38	-.014
L54	22	17	2.01	>	16	22	.46	-.012
L128	21	19	3.13	.002	16	23	.48	-.013
L179	24	25	2.50	.025	21	27	.33	-.009
L191	25	23	2.34	.025	20	27	.44	-.018
L213	25	25	1.84	>	22	28	.86	>
L250	22	23	2.82	.082	19	26	.53	-.025
L259	25	25	1.69	.041	22	28	.59	-.057
L292	23	22	2.33	.052	20	26	.43	-.033
L303	25	25	2.52	.015	22	28	.44	-.022
L372	24	24	1.61	.041	21	26	.61	-.033
L434	23	21	2.43	>	20	24	.64	-.075
L435	21	24	.96	>	21	26	.83	>
L451	20	22	2.01	>	18	23	.68	>
L458	24	25	.94	>	22	27	1.15	>
L466	25	25	1.65	>	22	28	.41	-.006
L694	23	24	2.53	.020	20	27	.40	-.006
L1017	23	22	2.57	.072	18	26	.54	>
L1074	23	22	1.92	.062	19	27	.58	-.019
L1107	24	24	2.74	.047	21	27	.46	-.006
L1108	14	14	1.22	>	11	16	1.29	>
L1181	22	24	2.00	.003	21	27	.45	-.014
M124	23	25	2.43	.048	21	26	.58	>
V85	22	18	2.17	.075	17	23	.87	>
V121	23	22	1.36	>	19	27	.78	-.097
V138	24	23	1.92	>	20	27	1.10	>
V165	24	23	1.85	.048	20	27	.78	>
V166	25	25	1.62	.050	22	28	.90	>
V167	25	25	1.29	>	22	28	.85	>
V168	25	25	1.07	>	21	28	.94	>
V170	11	14	1.84	>	8	16	.75	>
V171	25	25	1.27	>	22	28	.79	>
V172	20	24	1.94	.062	21	23	1.06	>
V173	25	25	1.72	.090	22	28	.77	>
V174	22	21	3.23	.004	19	23	.71	>
V175	19	19	1.43	>	16	23	.90	>
V188	13	13	2.59	>	13	13	.79	>
V189	13	13	1.98	>	13	13	.59	>
V190	24	23	.97	>	20	27	.77	-.097
V191	25	25	1.09	>	22	28	1.01	>
V192	17	20	1.31	>	16	21	.69	>
V194	25	25	1.13	>	22	28	1.17	>
V196	21	23	1.51	>	19	25	.72	>
V198	20	21	1.52	>	16	24	1.09	>
V206	25	25	1.12	>	22	28	.85	>

	(Fig. 19) Bands Followed by Seeding				(Fig. 20) Bands Preceded by Seeding			
Sta. No.	N_1	N_2	Ratio S/NS	Prob.	N_1	N_2	Ratio S/NS	Prob.
V207	18	23	1.67	>	20	20	1.22	>
V209	24	23	1.84	>	20	27	.79	>
V221	25	25	1.32	>	22	21	.71	-.076
V224	16	13	1.93	>	13	16	.74	>
V225	23	24	1.66	.045	21	26	.84	>
V232	13	12	.52	>	8	18	1.40	>
V233	0	0	0.00	>	0	0	0.00	>
V234	18	13	1.73	>	10	22	.48	-.071
E442	25	25	.92	-.079	22	28	.84	>
E1142	20	21	1.71	.053	18	24	.97	>
E1253	24	22	1.85	>	20	26	.74	>
E1682	25	25	1.69	>	22	28	.53	-.042
E1743	25	25	1.87	>	22	28	.54	-.005
E3465	17	16	.89	>	13	20	.60	>
E3751	25	25	2.13	.052	22	28	.44	-.005
E4144	23	22	1.84	>	20	24	.84	>
E4767	22	22	1.50	>	19	24	1.20	>
E4867	23	25	1.23	>	22	27	1.09	>
E5098	24	23	.57	-.034	20	27	.53	-.038
E5151	24	24	1.04	>	21	27	1.11	>
E5184	24	23	1.36	.029	21	26	.70	-.069
E5756	22	20	1.53	>	17	24	.48	-.033
E6006	18	19	2.76	.046	17	20	.56	-.006
E6624	21	14	2.60	>	13	23	.55	-.023
E6736	24	23	1.89	.038	20	27	.61	-.036
E7735	24	23	2.92	.011	22	24	.48	-.029
E7946	25	25	1.77	>	22	28	.59	>
E8697	19	18	1.01	>	16	23	.95	>
E8752	24	24	1.42	>	21	26	.56	-.055
E8832	23	18	.74	-.089	16	25	.58	-.069
E9049	23	20	1.64	>	18	25	.51	-.017
E9221	19	15	2.10	>	15	18	.94	>
E9283	9	14	1.41	>	8	15	.55	>
E9458	12	12	1.23	>	12	11	1.69	>
E9512	24	25	.78	>	21	28	.66	>
M100	0	0	0.00	>	0	0	0.00	>

APPENDIX D

LISTING OF BAND PRECIPITATION BY STATION AND YEAR

(-1 or blank space indicates missing data)

PRECIPITATION 1967-68

A 21 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 23 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 24 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 26 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 27 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 29 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 30 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.

A 31 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 32 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 33 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 34 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 35 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 36 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 37 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 38 1967-68

-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
-1.	-1.	-1.	-1.	-1.	-1.										

A 41

A 42

A 44

A 45

A 46

A 47

E 442
.00 .01 .08 .04 .00 .04 .00 .00 .00 .02 .00 .10 .08 .01 .00 .05
.18 .10 .44 .01 .15 .05
E1142
.00 .09 .01 .03 .03 .30 .10 .02 .01 .03 .04 .07 .12 .04 .05 .00
.93 .35 -1. -1. -1. -1.
E1253
.01 .14 .15 .10 -1. -1. .04 .00 .00 .02 .20 .23 .05 .03 .02 .20
.78 .23 .82 .01 .03 .07
E1682
.03 .05 .10 .02 .25 .00 .01 .00 .00 .00 .03 .10 .00 .00 .36 .10
.25 .00 .43 .00 .08 .05
E1743
.05 .02 .00 .05 .00 .42 .03 .04 .01 .01 .00 .02 .08 .05 .04 .00
.52 .14 .47 .13 .00 .06
E3465
-1. -1. -1. -1. -1. -1. .00 -1. -1. -1. -1. -1. -1. -1. .25 .03
.15 .00 .70 .15 .13 .15
E3751
.00 .01 .21 .02 .30 .00 .00 .00 .00 .00 .00 .05 .04 .00 .25 .06
.20 .12 .42 .00 .07 .02
E4144
.13 .24 .05 .03 .02 .12 -1. .01 .00 .02 .16 .05 .00 .15 .31 .15
.80 .23 .55 .04 .17 .08
E4767
.06 .18 .05 .04 .01 .11 .02 .02 .00 .03 .09 .10 .00 .00 .03 .00
.27 .05 .55 .00 .04 .00
E4867
.08 .07 .08 .04 .16 .02 .00 .00 .00 .06 .09 .24 .03 .02 .25 .04
.48 .13 .55 .00 .03 .08
E5098
-1. -1. -1. -1. .00 .21 .00 .00 .00 .00 .00 .13 .00 .08 .01 .04
.06 .30 .25 .08 .15 .14
E5151
.00 .05 .05 .02 .00 .04 .04 .04 .00 .00 .00 .07 .08 .00 .02 .04
.15 .00 .30 .00 .00 .05
E5184
.02 .05 .03 .02 .00 .46 .00 .09 .04 .05 .10 .23 .42 .26 .18 .10
1.50 .67 .76 .18 .08 .14
E5756
-1. -1. -1. -1. .00 .00 .04 .00 .02 .00 .00 .06 .00 .00 -1. -1.
.00 .00 .15 .00 .00 .00
E6006
-1. -1. -1. -1. -1. -1. -1. .00 .00 .00 .00 .03 .08 .06 .25 .02
.15 .04 .63 .00 .09 .13
E6624
-1. -1. -1. -1. .00 .00 .00 -1. -1. -1. -1. -1. -1. -1. .07 .02
.00 .00 .25 .00 .03 .00
E6736
-1. -1. -1. -1. .04 .22 -1. .03 .00 .01 .07 .04 .16 .03 .20 .01
.58 .13 .70 .00 .04 .11
E7735
.04 .04 .09 .03 .00 .00 .08 .00 .07 .00 .04 .00 .04 .02 .10 .02
.13 .00 .37 .00 .00 .00

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E7946
  .04  .17  .03  .06  .02  .06  .09  .00  .00  .02  .16  .18  .02  .10  .07  .08
  .89  .21  .51  .00  .01  .08
E8697
  -1.  -1.  .17  .06  -1.  -1.  .02  .00  .00  .02  .16  .34  .17  .05  -1.  -1.
  .60  -1.  -1.  -1.  -1.  -1.
E8752
  .01  .01  .03  .00  .00  .05  .00  .00  .00  .00  .04  .00  .04  .00  .07  .01
  .07  .00  .16  .03  .00  .00
E8832
  -1.  -1.  -1.  -1.  .02  .04  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .06  .13
  .05  .25  .15  .00  .09  .08
E9049
  .04  .14  .18  .06  .11  .02  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .23  .06
  .10  .03  .39  .05  .08  .10
E9221
  .02  .03  .03  .00  .00  .16  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .33  .02
  .50  .22  .70  .07  -1.  -1.
E9283
  -1.  -1.  -1.  -1.  .00  .05  .02  .00  .01  .01  .03  .07  .01  .01  -1.  -1.
  .14  -1.  -1.  -1.  -1.  -1.
E9458
  -1.  -1.  -1.  -1.  -1.  -1.  .05  .00  .00  .05  .05  .04  .00  .04  .50  .40
  .53  .05  -1.  -1.  -1.  -1.
E9512
  .00  .00  .05  .04  .04  .08  .00  .02  .00  .03  .05  .13  .01  .00  -1.  -1.
  .06  .04  .50  .10  .00  .00
L   6
  .00  .25  .10  .02  .13  .02  .00  .00  .00  .00  .03  .15  .00  .00  -1.  -1.
  .26  .00  -1.  -1.  -1.  -1.
L  10
  .00  .11  .18  .08  .18  .01  .00  .00  .00  .00  .00  .00  .00  .00  .83  .00
  .22  .00  .41  .00  .00  .00
L  11
  .00  .16  .16  .04  .17  .00  .02  .00  .00  .00  .00  .09  .01  .00  .46  .02
  .22  .02  .48  .00  .16  .00
L  33
  .04  .06  .19  .04  .27  .02  .01  .00  .00  .00  .00  .06  .02  .02  .24  .30
  .28  .30  .34  .03  .08  .02
L  46
  .00  .09  .30  .05  .15  .00  .01  .00  .00  .00  .00  .02  .00  .00  .32  .04
  .10  .07  .96  .00  .07  .02
L  52
  .02  .07  .23  .09  .10  .00  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  .18  .10  .79  .00  .09  .08
L  53
  .02  .09  .30  .06  .20  .00  .00  .00  .00  .00  .00  .03  .07  .00  .18  .05
  .10  .03  .92  .00  .10  .11
L  54
  -1.  -1.  -1.  -1.  .05  .00  .00  .00  .00  .00  .00  .03  .03  .00  .22  .02
  .06  .02  .47  .02  .11  .12
L 128
  .09  .09  .41  .06  .15  .00  .25  .00  .05  .00  .02  .04  .05  .00  .27  .02
  .32  .10  .57  .11  .04  .00
L 179
  .04  .12  .11  .02  .08  .00  .00  .00  .00  .00  .00  .03  .00  .00  .18  .04
  .10  .02  .58  .00  .18  .02
L 191
  .00  .06  .12  .02  .12  .00  .00  .00  .00  .00  .00  .03  .00  .00  .46  .00
  .18  .08  .38  .00  .15  .02
```

```
L 213
  .00  .11  .24  .01  .14  .01  .00  .00  .00  .00  .00  .08  .CO  .00  .86  .00
  .25  .04  .34  .00  .18  .00
L 250
  .03  .03  .14  .02  .04  .00  .00  .00  .00  .00  .00  .00  .CC  .00  -1.  -1.
  .00  .00  .33  .01  .06  .03
L 259
  .07  .06  .08  .04  .28  .02  .01  .00  .00  .00  .02  .12  .03  .02  .38  .44
  .29  .04  .34  .00  .00  .02
L 292
  .CO  .18  .06  .00  .07  .03  .00  .00  .01  .00  .00  .15  .CO  .00  .28  .00
  .25  .00  .60  .00  .03  .00
L 303
  .00  .10  .14  .04  .12  .00  .00  .00  .00  .00  .00  .00  .CO  .00  .28  .00
  -1.  .04  .40  .00  .13  .00
L 372
  .08  .04  .16  .01  .20  .08  .10  .00  .05  .00  .02  .03  .06  .01  .22  .05
  .30  .00  .55  .05  .06  .00
L 434
  .03  .08  .08  .02  .10  .00  .01  .00  .00  .00  .05  .20  .CO  .CO  .12  .C9
  .36  .00  .54  .00  .00  .03
L 435
  .06  .21  .16  .02  .12  .03  .01  .00  .00  .00  .05  .15  .CC  .CO  .36  .04
  .34  .04  .63  .00  .12  .04
L 451
  .04  .03  .14  .01  .20  .02  .12  .00  .02  .00  .02  .04  .00  .00  .38  .11
  .25  .05  .43  .02  .09  .00
L 458
  .06  .07  .10  .02  .08  .02  .00  .00  .00  .02  .07  .17  .CO  .00  .15  .00
  .26  .10  .25  .00  .00  .02
L 466
  .11  .05  .32  .14  .48  .00  .00  .00  .00  .00  .00  .00  .00  .00  .09  .25
  .24  .20  .42  .00  .27  .01
L 694
  .00  .02  .31  .04  .25  .00  .00  .00  .00  .00  .00  .00  .CC  .CO  .42  .00
  .06  .18  -1.  -1.  -1.  -1.
L1017
  .01  .04  .22  .00  .00  .00  .00  .00  .00  .00  .00  .00  .CC  .00  .07  .00
  .00  .00  .43  .00  .08  .07
L1074
  .12  .12  .15  .05  .25  .04  .01  .00  .00  .00  .00  .04  .02  .00  .25  .05
  -1.  .05  .56  .08  .13  .12
L1107
  .00  .02  .25  .06  .11  .00  .00  .00  .00  .00  .00  .02  .CO  .00  .20  .00
  .19  .10  .48  .00  .04  .05
L1108
  .05  .19  .14  .07  .16  .04  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .18  .00
  .00  .00  .42  .05  .20  .03
L1181
  .00  .07  .15  .03  .29  .00  .00  .00  .00  .00  .00  .05  .05  .00  .31  .30
  .26  .05  .39  .05  .10  .00
M 100


M 101   1967-68
  .00  .22  .00  .06  .06  .42  .10  .03  .02  .04  .11  .28  .43  .25  .15  .15
  .87  .55  -1.  -1.  -1.  -1.
M 102  1967-68
```

```
M 103   1967-68
  .07  .05  .00  .06  .15  .52  .12  .00  .03  .14  .13  .12  .00  .25  .26  .06
 1.03  .48 1.00  .00  .15  .05
M 104   1967-68


M 124
  .14  .11  .20  .09  .12  .03  .02  .00  .03  .00  .02  .00  .07  .01  .29  .06
  .19  .07  .65  .04  .09  .00
M 225   1967-68
  .12  .12  .09  .04  .15  .05  .05  .00  .00  .05  .23  .35  .09  .02  .60  .02
  .48  .03  -1.  -1.  -1.  -1.
M 226   1967-68
  .10  .23  .20  .05  .09  .16  .23  .00  .00  .05  .21  .50  .15  .10  .30  .01
 1.00  .14  .78  .00  .01  .06
M 228   1967-68
  .37  .17  .10  .08  .16  .07  .06  .00  .00  .02  .27  .35  .10  .13  .70  .06
  .50  .03  .58  .00  .15  .03
M 230   1967-68
  .10  .50  .15  .03  .11  .10  .08  .00  .00  .02  .34  .30  .06  .10  .55  .17
  .67  .05 1.24  .08  .04  .10
N   A   1967-68
   05  .27  .15  .05  .18  .10  .10  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .40  .26
 1.05  .30 1.44  .11  .03  .18
N   B   1967-68
  .09  .17  .14  .04  .12  .01  .08  .00  .00  .04  .18  .40  .07  .09  .31  .01
  .80  .13  .50  .00  .03  .02
N   1   1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .01  .20  .24  .05  .07  -1.  -1.
 1.14  .31  .47  .00  .01  .11
N   2   1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  .01  .01  .01  .03  .16  .41  .18  .07  .14  .15
  .76  .17  .74  .08  .00  .10
N   3   1967-68
  .28  .17  .06  .07  .14  .12  .11  .01  .03  .02  .18  .25  .04  .07  .20  .12
  .87  .34  .50  .01  .18  .11
N   4   1967-68
  .01  .30  .14  .01  .08  .03  .11  .00  .00  .02  .14  .39  .12  .08  .07  .10
 1.06  .13  -1.  -1.  .01  .09
N   5   1967-68
  .01  .23  .13  .07  .18  .05  -1.  .01  .01  .07  .16  .29  .06  .06  .10  .10
  .88  .23  .44  .02  .12  .07
N   6   1967-68
  .02  .40  .11  .10  .18  .12  .13  .01  .01  .03  .22  .22  .03  .22  .34  .15
  .86  .28  -1.  -1.  -1.  -1.
N   7   1967-68
  .02  .35  .06  .08  .25  .04  .13  .01  .01  .06  .22  .21  .03  .10  .16  .14
  .77  .28  .31  .05  .32  .08
N   8   1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
N   9   1967-68
  .01  .15  .14  .08  .10  .01  .00  .00  .00  .02  .16  .30  .05  .02  .06  .18
  .74  .15  .72  .02  .00  .06
N  10   1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .01  .01  .04  .25  .26  .05  .14  .17  .25
  -1.  -1.  .31  .04  .30  .10
N  11   1967-68
```

```
  -1.  -1.  -1.  -1.  .33  .12  .19  .01  .02  .01  .30  .32  .10  .25  .41  .45
  .60  .38  .57  .10  .18  .11
N  12  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
N  13  1967-68
  -1.  -1.  -1.  -1.  .22  .12  .08  .00  .00  .04  .21  .48  .11  .14  .50  .28
 1.02  .29 1.22  .19  .08  .13
N  14  1967-68
  .02  .31  .19  .09  .21  .06  .07  .03  .02  .02  .27  .29  .04  .12  .10  .34
  .54  .13  .37  .13  .15  .09
N  15  1967-68
  .07  .35  .17  .12  .05  .04  .03  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .30  .15
  .89  .09 1.21  .06  .01  .01
N  16  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .00  .27  .31  .06  .07  .34  .15
  .81  .07 1.40  .09  .04  .04
N  17  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  .15  .05  .01  .05  .27  .36  .12  .17  .34  .32
  .47  .14  .60  .13  .09  .14
N  18


N  19


N  20


N  21


S 201  1967-68
  .10  .13  .10  .08  .11  .11  .05  .02  .02  .01  .13  .24  .03  .16  .08  .19
  .94  .31  .57  .04  .06  .12
S 202  1967-68
  -1.  -1.  -1.  -1.  .17  .13  .12  .00  .04  .03  .18  .25  .06  .10  .20  .10
  .71  .35  -1.  -1.  -1.  -1.
S 203  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
S 204  1967-68
  .29  .27  .08  .08  .16  .15  .13  .03  .04  .03  .20  .26  .06  .06  .21  .10
  .93  .36  .50  .00  .21  .10
S 205  1967-68
  .20  .11  .08  .00  .18  .18  .05  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .06  .06
  .69  .25  .44  .01  .24  .07
S 206  1967-68
  .04  .22  .02  .00  .30  .25  .23  .00  .00  .04  .15  .41  .15  .09  .10  .05
  .92  -1.  .40  .00  .01  .10
S 208  1967-68
  .08  .02  .20  .01  .17  .02  .06  .00  .00  .02  .27  .23  .10  .05  -1.  -1.
  .28  -1.  .50  .00  .16  .01
S 209  1967-68
  .04  .06  .27  .01  .18  .02  .05  .00  .00  .00  .30  .22  .10  .03  .35  .05
  .27  .00  .76  .00  .23  .03
S 210  1967-68
  .23  .15  .13  .03  .12  .11  .06  .00  .00  .00  .32  .32  .10  .10  .51  .05
```

```
  .40  .00  .72  .05  .13  .05
S 211  1967-68
  .27  .09  .25  .05  .15  .08  .05  .00  .00  .04  .21  .35  .10  .07  .47  .02
  .64  .15  .50  .00  .07  .02
S 212  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  .10  .00  .00  .07  .36  .38  .20  .18  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
S 215  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
S 217  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .10  .37  .19  .CC  .02  -1.  -1.
  .85  .20  .43  .00  .00  .30
S 221  1967-68
  .CO  .03  .05  .02  .00  .04  .07  .02  .04  .02  .01  .03  .04  .03  .09  .08
  .24  .00  .15  .06  .00  .04
S 231  1967-68
  .05  .17  .51  .02  .20  .30  .08  .00  .00  .04  .34  .26  .15  .12  .50  .15
  .37  .05  .83  .06  .12  .02
S 232  1967-68
  .11  .30  .64  .03  .22  .20  .08  .00  .00  .01  .30  .20  .06  .05  .40  .11
  .28  .CO 1.55  .13  .08  .05
S 233  1967-68
  .01  .37  .13  .03  .08  .03  .14  .00  .00  .02  .18  .38  .12  .09  .07  .06
 1.13  .15  .68  .14  .04  .10
S 234  1967-68
  .20  .13  .10  .01  .18  .04  .10  .00  .00  .03  .20  .39  .08  .C5  .5C  .01
  .45  .00  .42  .00  .23  .01
S 235  1967-68
  .10  .23  .01  .06  .00  .03  .12  .00  .01  .05  .13  .15  .01  .28  .25  .14
  .80  .15  .42  .00  .03  .10
S 236  1967-68
  .02  .35  .05  .05  .15  .06  .28  .00  .00  .04  .13  .40  .14  .09  .13  .21
 1.45  .15 1.05  .10  .01  .07
S 238  1967-68
  -1.  -1.  -1.  -1.  .01  .01  .10  .02  .01  .01  .03  .12  .02  .10  .14  .12
  .10  .07  .20  .20  .02  .01
S 241  1967-68
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .05  .20  .50  .05  .15  .35  .02
 1.CO  .12  .54  .00  .05  .05
S 242  1967-68
  .14  .25  .15  .05  .12  .12  .07  .00  .00  .05  .25  .33  .12  .12  -1.  -1.
  .79  -1.  -1.  -1.  -1.  -1.
S 249  1967-68


S 251  1967-68
  .25  .27  .22  .12  .30  .08  .08  .00  .02  .03  .19  .45  .22  .04  .17  .27
  .79  .19  .76  .11  .02  .12
S 255


S 256


S 257


V  85
  .C8  .1C  .12  .00  .12  .02  .00  .00  .00  .03  .20  .15  .04  .00  .48  .02
```

```
  .30  -1.  .75  .05  .27  .01
V 121


V 138
  -1.  -1.  -1.  -1.  .09  .03  .10  .01  .02  .01  .20  .12  .01  .04  .21  .20
  .24  .02  .20  .05  .07  .01
V 165
  .10  .08  .11  .00  .16  .15  .03  .00  .03  .02  .24  .11  .02  .02  .23  .12
  .22  .00  .62  .07  .08  .00
V 166
  .05  .07  .23  .05  .18  .05  .01  .00  .00  .01  .35  .20  .04  .03  .30  .04
  .41  .01  .72  .12  .23  .02
V 167
  .04  .05  .11  .00  .18  .02  .00  .00  .00  .04  .20  .23  .04  .00  .20  .06
  .35  .00  .42  .00  .02  .05
V 168
  .02  .01  .09  .00  .20  .01  .00  .00  .00  .02  .07  .35  .06  .00  .17  -1.
  .82  .09  .31  .01  .00  .10
V 169
  .06  .05  .09  .00  .16  .00  .00  .00  .00  .03  .07  .16  .00  .00  .39  .10
  .42  .00  .52  .00  .05  .05
V 170
  -1.  -1.  -1.  -1.  .24  .05  .00  .00  .00  .00  .10  .10  .00  .00  -1.  -1.
  .30  .06  -1.  -1.  -1.  -1.
V 171
  .06  .05  .17  .00  .23  .02  .03  .00  .00  .00  .07  .15  .00  .00  .29  .14
  .20  .03  .55  .02  .33  .00
V 172
  .07  .04  .14  .07  .10  .07  .05  .00  .00  .00  .05  .05  .00  .00  .28  .05
  .36  .00  .55  .00  .10  .00
V 173
  .20  .10  .10  .02  .12  .06  .02  .00  .00  .00  .15  .08  .02  .00  .21  .07
  .27  .02  .98  .04  .14  .00
V 174
  .10  .08  .13  .03  .03  .05  .00  .01  .03  .00  .09  .05  .00  .00  .10  .06
  .20  .00  .57  .04  .05  .04
V 175
  .08  .07  .07  .04  .20  .04  .00  .00  .00  .04  .17  .21  .02  .00  .22  .09
  .40  .03  -1.  -1.  -1.  -1.
V 188
  .03  .02  .14  .00  .24  .02  .00  .00  .00  .03  .11  .20  .04  .00  .17  .20
  .35  .00  .30  .00  .10  .09
V 189
  .05  .05  .10  .04  .22  .05  .00  .00  .00  .04  .18  .12  .02  .00  .19  .01
  .37  -1.  .47  .00  .01  .02
V 190
  -1.  -1.  -1.  -1.  .19  .00  .00  .00  .00  .02  .13  .17  .00  .00  .21  .00
  .25  .05  .35  .00  .00  .05
V 191
  .03  .03  .17  .00  .24  .02  .00  .00  .00  .00  .08  .09  .00  .01  .33  .02
  .37  .07  .40  .00  .30  .00
V 192
  .03  .01  .13  .00  .25  .00  .00  .00  .00  .04  .10  .12  .00  .00  .36  .14
  .27  .08  .15  .00  .00  .05
V 193
```

```
V 194
  .00  .03  .12  .00  .27  .02  .00  .00  .00  .03  .13  .24  .05  .00  .25  .09
  .40  .05  .34  .00  .00  .04
V 196
  .08  .05  .15  .06  .30  .00  .04  .00  .00  .00  .00  .13  .01  .03  -1.  -1.
  .32  -1.  -1.  -1.  -1.  -1.
V 198
  .12  .17  .20  .07  .16  .11  .01  .00  .09  .01  .28  .11  .02  .00  .16  .08
  .45  .00  .95  .05  .03  .04
V 206
  .02  .03  .11  .02  .17  .00  .00  .00  .00  .00  .08  .10  .00  .00  .21  .03
  .27  .05  .40  .02  .30  .03
V 207
  .16  .15  .32  .17  .13  .12  .05  .01  .02  .02  .29  .13  .03  .01  .33  .10
  .55  .00 1.67  .07  .08  .04
V 209
  -1.  -1.  -1.  -1.  .00  .04  .00  .02  .09  .02  .08  .08  .03  .04  .12  .08
  .25  -1.  .07  .14  .00  .00
V 221
  .02  .03  .12  .04  .12  .01  .04  .00  .00  .04  .24  .26  .04  .04  .28  .03
  .37  .02  .44  .03  .02  .05
V 224
  .18  .10  .20  .04  .10  .09  .11  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .30  .06
  .35  .00  .75  .01  .10  .00
V 225
  .10  .09  .12  .02  .14  .04  .00  .00  .00  .02  .12  .10  .02  .00  .22  .05
  .25  .00  .80  .08  .32  .00
V 227


V 232
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
```

PRECIPITATION 1968-69

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A  21
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .04  .00  .00  .16  .19
  .00  .18  .00  -1.  .54  .14  .00  .06  .07
A  23
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .01  .20  .07  .08  .00  .00
  .01  .40  .11  .14  .06  .05  .02  .00  .01  .05  .09  .04  .00  .00  .47  .08
  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .03
A  24
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .05  .07  .11  .15  .06  .01
  .03  .51  .11  .07  .09  .12  .00  .01  .03  .13  .17  .05  .00  .01  .15  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .00  -1.  -1.
A  26
  -1.  -1.  -1.  -1.  .06  .00  .03  .02  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .04
A  27
  -1.  -1.  -1.  -1.  .02  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .00  .22  .05
A  29
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .02  .06  .13  .05  .12  .04
```

```
  .09  .24  .06  .25  .24  .21  .07  .00  .03  .00  .19  .13  .CC  .CO  .37  .21
  .02  .50  .35  .24  .57  .07  .00  .10  .17
A  30
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .02  .07  .07  .C5  .04  .CO
  .04  .27  .02  .19  -1.  -1.  .07  .00  .00  .00  .14  .07  .CO  .CO  .31  .14
  .CC  .38  .04  .05  .50  .12  .00  .18  .11
A  31
  -1.  -1.  -1.  -1.  .00  .00  .01  .17  .00  .00  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .00  .04  .01
A  32
  -1.  -1.  -1.  -1.  .00  .00  .00  .26  .01  .00  .01  .08  .14  .01  .07  .01
  .00  .10  .05  .03  .00  .06  .00  .03  .01  .00  .05  .00  .CO  .01  .19  .11
  .00  .15  .00  .02  .34  .08  .07  .14  .30
A  33
  -1.  -1.  -1.  -1.  .00  .CO  .00  .29  .00  .00  .00  .07  .13  .04  .01  .CO
  .00  .16  .01  .04  .06  .09  .00  .00  .01  .00  .06  .07  .CO  .00  .32  .12
  .00  .11  .00  .01  .60  .08  -1.  .11  .05
A  34
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .06  .10  .02  .04  .00
  .00  .11  .05  .02  .02  .12  .01  .02  .01  .00  .03  .08  .CO  .00  .08  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .00  .15  .19
A  35
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .00  .04  .14  .01  .02  .CO
 0.00  .13 0.00  .07  .09  .23  .02  .01  .02 0.00  .12  .09 0.CC 0.00-1.00-1.00
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .23  .16
A  36
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .02  .03  .00  .06  .00
  .CO  .11  .03  .00  .02  .10  .00  .04  .03  .00  .04  .15  .C1  .CO  .1C  .13
  .00  .17  .00  .00  .47  .13  .00  .14  .22
A  37
  -1.  -1.  -1.  -1.  .01  .01  .00  .03  .01  .01  .00  .10  .16  .01  .10  .05
  .11  .28  .10  .07  .21  .59  .21  .12  .05  .03  .13  .01  .05  .00  .03  .24
  .C1  .41  .23  .08  .20  .20  .02  -1.  -1.
A  38
  -1.  -1.  -1.  -1.  .00  .00  -1.  -1.  -1.  -1.  .00  .05  .02  .CO  .02  .01
  .C4  .31  .04  .05  .17  .37  .24  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .00  .15  .14
A  41


A  42


A  44


A  45


A  46
```

A 47

E 442

.10	.02	.11	.04	.02	.04	.02	.05	.00	.00	.02	.07	.14	.05	.16	.00
.00	.15	.12	.22	.06	.09	.03	.02	.02	.03	.08	.04	.00	.00	.04	.19
.00	.28	.00	.03	.39	.10	.00	.23	.19							

F1142

-1.	-1.	-1.	-1.	.32	.34	.22	.47	.26	.07	.29	.25	.16	.06	.75	.60
.75	.47	.12	.66	.53	1.15	.13	.05	.13	.07	.05	.10	.09	.38	.10	.54
.22	.89	-1.	-1.	-1.	.10	.00	.39	.10							

E1253

-1.	-1.	-1.	-1.	.02	.12	.04	.20	.02	.03	.10	.27	.12	.05	.17	.11
.40	.75	.22	.39	1.05	1.58	.87	.20	.02	.11	.08	.09	.10	.47	.25	.57
.12	1.37	.87	.35	.95	.10	.10	.87	.53							

E1682

.07	.04	.02	.07	.01	.11	.00	.11	.00	.00	.02	.38	.39	.05	.33	.05
.06	.26	.12	.54	.53	.36	.57	.33	.05	.29	.21	.06	.01	.08	.20	.48
.06	1.15	.20	.05	.35	.08	.05	.18	.09							

E1743

.05	.03	.16	.05	.03	.05	.10	.02	.03	.02	.12	.28	.13	.14	.10	.01
.40	.40	.15	.40	.43	.74	.02	.03	.08	.16	.14	.06	.02	.13	.24	.18
.09	.54	.25	.07	.97	.20	.00	.16	.12							

E3465

.10	.13	.22	.07	-1.	-1.	.02	.19	.06	.05	.11	.24	.24	.06	.27	.05
.12	.49	.15	.16	.11	.30	.05	.17	.18	.27	.35	.01	.02	.12	.14	.24
.20	.55	.39	.15	.54	.06	.00	.46	.20							

E3751

.05	.05	.03	.05	.00	.26	.00	.23	.00	.00	.02	.33	.28	.09	.24	.01
.04	.13	.06	.21	.51	.83	.87	.23	.06	.30	.14	.01	.01	.11	.13	.55
.11	1.24	.21	.08	.47	.26	.04	.30	.13							

E4144

.15	.10	.12	.05	.25	.42	.05	.20	.10	.05	.08	.22	.22	.07	.35	.09
.37	.52	.15	.62	.94	.72	.24	.00	.08	.08	.45	.09	.04	.32	.12	.43
.13	.80	.70	.25	.66	.19	-1.	.48	.25							

E4767

.03	.02	.08	.02	.02	.05	.02	.07	-1.	-1.	.02	.02	.08	.05	.21	.13
.29	.42	.12	.55	-1.	-1.	-1.	-1.	-1.	-1.	-1.	.10	.00	.05	.15	.30
.10	.52	.55	.20	.68	.12	-1.	.12	.14							

E4867

.08	.06	.04	.12	.08	.21	.00	.10	.00	.00	.09	.67	.48	.04	.34	.10
.48	1.50	.66	2.58	.22	.56	.80	.28	.12	.33	.17	.04	.04	.38	.11	.74
.33	2.12	.16	.02	.37	.07	.06	.40	.10							

E5098

.12	.17	.36	.06	.02	.03	.01	.10	.05	.01	.05	.07	.19	.04	.15	.01
.03	.09	.10	.12	.02	.05	.01	.16	.06	.05	.21	.01	.00	.02	.13	.04
.02	.32	.00	.03	.52	.05	.00	.32	.27							

E5151

.13	.01	.10	.00	.00	.01	.03	.00	.00	.00	.08	.17	.10	.15	-1.	-1.
.08	.53	.04	.30	.13	.05	.15	.00	.02	.16	.17	.05	.00	.00	.54	.17
.00	.07	.00	.01	.38	.12	.00	.05	.05							

E5184

.24	.10	.20	.00	.28	.42	.20	.62	.24	.14	.44	.40	.30	.44	.64	.26
.28	.70	.10	.38	.43	.43	.04	.08	.20	.10	.18	.10	.18	1.10	.00	.60
.10	.65	.33	.10	.30	.02	.00	.15	.24							

E5756

.03	.02	.14	.00	.00	.00	-1.	.00	.00	.00	.00	.10	.08	.07	.05	.00
.00	.17	.10	.10	.15	.23	.34	.14	.00	.00	.02	.00	.04	.01	.25	.12
.01	.50	.14	.03	.52	.25	.00	.14	.13							

```
E6006
  -1.  -1.  -1.  -1.  .00  -1.  .00  .25  .00  .00  .00  .58  .58  .24  .15  .10
  .11  .07  .07  .16 1.15 1.46 1.55  .25  .17  .32  .40  .00  .06  .45  .51  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .15  .37  .14
E6624
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .00  .07  .05  .05  .14  .00
  .00  .04  .09  .05  .04  .20  .42  .01  .01  .03  .01  .00  .00  .00  .15  .08
  .00  .50  .05  .06  .16  .24  .00  -1.  -1.
E6736
  .05  .00  .17  .00  .08  .14  .20  .27  .10  .03  .12  .28  .10  .06  .24  .16
  .50  .43  .15  .40  .44 1.00  .03  .00  .05  .02  .02  .05  .05  .36  .09  .43
  .13  .85  .57  .20  .80  .15  .00  .51  .25
E7735
  .03  .04  .00  .02  .00  .00  .00  .04  .00  .00  .02  .08  .05  .03  .02  .08
  .24  .23  .08  .15  .29  .77  .31  -1.  -1.  -1.  -1.  .05  .01  .09  .15  .19
  .09  .50  .20  .19  .45  -1.  .02  .28  .09
E7946
  .27  .16  .04  .07  .06  .11  .05  .20  .05  .03  .09  .17  .13  .02  .33  .03
  .12  .15  .08  .17  .75  .38  .18  .00  .01  .10  .22  .13  .04  .18  .16  .28
  .10  .54  .56  .23  .70  .06  .04  .28  .52
E8697
  .23  .22  .01  .02  .10  .02  .19  -1.  .13  .02  .09  .21  .25  .08  .10  .01
  .11  .10  .09  .22  -1.  -1.  -1.  -1.  .00  .13  .07  .24  .03  .21  .20  .25
  .05  .44  .23  .14  .53  .05  -1.  .20  .30
E8752
  .06  .02  .10  .00  .00  .00  .00  .11  .00  .00  .02  .04  .22  .02  .00  .23
  .00  .14  .04  .04  .13  .22  .10  .00  .03  .01  .09  .09  .00  .00  .36  .15
  .00  .16  .00  .05  .35  .13  .00  .17  .05
E8832
  .13  .12  .25  .03  .00  .04  .00  .10  .00  .00  .02  .05  .11  .01  .10  .01
  .00  .05  .15  .10  .05  .16  .01  .10  .04  .01  .11  .04  .00  .03  .14  .06
  .00  .10  .08  .03  .42  .10  .00  .14  .05
E9049
  .06  .04  .01  .04  .00  .13  .00  .20  .02  .03  .00  .20  .17  .10  .09  .00
  .03  .09  .06  .14  .22  .50  .60  .20  .06  .47  .23  .00  -1.  -1.  -1.  .51
  .07  .75  .45  .19  .60  .35  -1.  .22  .16
E9221
  .05  .05  .19  .02  .05  .07  .18  .16  .07  .00  -1.  -1.  -1.  -1.  .19  .10
  .70  .20  .05  .55  -1.  -1.  -1.  .00  .07  .06  .05  -1.  .00  .15  .15  .38
  .06  .68  .80  .30  .55  .10  .00  -1.  -1.
E9283
  .20  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .04  .08  .01  -1.  .02
  .09  .08  .09  .10  .24  .42  .10  .05  .02  .00  .05  .04  .00  .00  .27  .08
  .00  .64  -1.  -1.  -1.  .13  .00  .31  .11
E9458
  .28  .35  .05  .09  .02  .06  .05  .14  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
E9512
  .09  .05  .37  .09  .03  .02  .00  .00  .12  .10  .10  .16  .17  .03  .21  .02
  .02  .22  .13  .20  .09  .19  .09  .06  .12  .40  .34  .04  .05  .12  .02  .07
  .01  .16  .15  .13  .25  .22  .00  .13  .05
L   6
  .08  .06  .02  .08  .00  .14  .00  .05  .00  .00  -1.  -1.  -1.  -1.  .26  .35
  .70 1.00  .54 1.12  .13  .83 1.05  -1.  -1.  -1.  -1.  .05  -1.  .38  .21  .85
  .38 1.99  .16  .02  .02  .15  .10  -1.  -1.
L  10
  .06  .06  .01  .02  -1.  -1.  .00  .09  .00  .00  .04  .53  .21  .18  .14  .20
```

```
  .20  .39  .35  .84  .04  .56  .68  .40  .05  .18  .35  -1.  .00  .26  .14  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .04  .24  .09
L  11
  .06  .06  .02  .03  .02  .08  .00  .10  .00  .00  .02  .42  .22  .23  .15  .24
  .35  .38  .14  .80  .10  .75  .80  .18  -1.  -1.  -1.  -1.  .00  .29  .15  .60
  .16 1.74  .14  .01  .02  .22  .08  .22  .13
L  33
  .06  .05  .01  .02  .00  .17  .00  .20  .00  .00  .02  .28  .36  .05  .22  .01
  .02  .14  .06  .24  .36  .91 1.04  .22  .06  .32  .21  -1.  .02  .13  .17  .62
  .15 1.40  .25  .11  .45  .30  .04  .30  .42
L  46
  .06  .12  .00  .02  .00  .15  .00  .20  .00  .00  .00  .36  .25  .20  .12  .14
  .15  .12  .05  .13 1.37 1.83 1.72  .19  .09  .50  .25  .00  .00  .25  .39  .35
  .28 2.20  .90  .72 1.00  .65  .05  .45  .26
L  52
  .05  .11  .00  .05  .00  .18  .00  .24  .02  .03  .00  .37  .33  .17  .15  .13
  .14  .08  .03  .12 1.10 1.25 1.48  .23  .10  .41  .30  .00  .02  .24  .48  .62
  .19 1.97  .85  .49 1.88  .66  -1.  -1.  -1.
L  53
  .07  .10  .02  .09  .00  .15  .00  .20  .00  .04  .00  .27  .27  .08  .13  .15
  .05  .05  .03  .16  .98 1.67 1.78  .23  .08  .32  .27  .00  .00  .11  .38  .64
  .30 2.45 1.17  .80 1.75  .70  .03  .40  .19
L  54
  -1.  -1.  -1.  -1.  .00  .12  .00  .16  .00  .00  -1.  -1.  -1.  -1.  .10  .00
  .03  -1.  -1.  -1.  .14  .88 1.16  .15  .10  .26  .23  .00  .00  .04  .09  .74
  .12  .82  .45  .44  .76  .38  .04  .26  .12
L 128
  -1.  -1.  -1.  -1.  .00  .08  .00  .10  .00  .02  .02  .28  .26  .08  .12  .22
  -1.  -1.  -1.  -1.  .41 1.31 1.18  .10  .11  .14  .10  -1.  .04  .52  .32  .30
  .20 1.64 1.00  .60 1.25  .12  -1.  .30  .23
L 179
  .04  .00  .00  .00  .00  .10  .00  .18  .00  .00  .03  .46  .26  .22  .22  .09
  .10  .12  .00  .14  .50  -1.  -1.  .22  .05  .12  .40  .00  .06  .15  .38  .80
  .34 1.72  .64  .07  .47  .44  .01  .42  .11
L 191
  .06  .06  .02  .02  .00  .10  .00  .14  .00  .00  .02  .33  .21  .07  .24  .03
  .04  -1.  -1.  -1.  .17  .54  .51  .20  .04  .08  .20  .00  .02  .20  -1.  .50
  .14 1.12  .16  .00  .11  .15  .05  .18  .07
L 213
  .07  .06  .02  .00  .00  .12  .00  .16  .00  .00  .03  .45  .18  .20  .23  .02
  .08  .17  .10  .82  .13  .42  .76  .22  .02  .08  .36  -1.  .04  .20  .17  .67
  .06 1.07  .04  .00  .00  .15  .02  .16  .09
L 250
  -1.  -1.  -1.  -1.  .00  .05  .00  .05  .00  .00  .00  .06  .05  .09  .10  .00
  .00  .10  .02  .12  .17  .58  .82  .05  .00  .10  .07  .00  -1.  -1.  .06  .30
  .05  .75  .26  .21  .60  .23  .02  .30  .11
L 259
  .05  .04  .02  .08  .00  .13  .00  .12  .00  .00  .02  .35  .37  .05  .28  .12
  .08  .19  .06  .50  .40  .34  .68  .28  .10  .31  .28  .05  .02  .20  .24  .45
  .14 1.48  .18  .04  .16  .08  .06  .18  .05
L 292
  -1.  .10  .02  .05  .00  .07  .00  .08  .00  .00  .00  .32  .38  .06  .18  .15
  .32  -1.  -1.  -1.  .26  .84  .73  .26  .10  .14  .15  .02  .00  .16  .15  .64
  .15 1.92  .16  .05  .40  .19  .06  .16  .10
L 303
  .07  .05  .00  .05  .00  .06  .00  .16  .00  .00  .00  .46  .28  .16  .16  .04
  .07  .14  .05  .22  .32  .84  .90  .20  .02  .12  .36  .00  .05  .14  .34  .68
  .14 1.52  .29  .03  .12  .30  .08  .30  .08
L 372
  .10  .04  .06  .04  .00  .12  .00  .08  .02  .03  .00  .24  .20  .08  .15  .00
```

```
  .07  .26  .12  .28  .22  .44  .92  .18  .04  .17  .10  .06  .00  .11  .24  .52
  .12 1.53  .16  .30  .38  .07  .00  .16  .08
L 434
  -1.  -1.  -1.  -1.  .02  .08  .00  .04  .00  .00  .00  .33  .36  .06  .29  .17
  .28  .51  .27 1.26  .38  .78  .96  -1.  -1.  -1.  -1.  .04  .00  .10  .15  .63
  .18 1.97  .27  .12 1.19  .42  .06  .37  .09
L 435
  .09  .06  .02  .07  .03  .14  .00  .08  .00  .00  -1.  .40  .23  .29  .27  .12
  .38  .84  .40 1.42  -1.  -1.  -1.  .37  .08  .10  .38  -1.  .00  .45  .14  .72
  .23 2.30  .16  .10  .11  .09  .04  .54  .08
L 451
  .05  .06  .02  .05  .00  .15  .00  .05  -1.  -1.  .00  .30  .24  .07  .24  .00
  .03  .05  .11  .31  .20  .49  .63  .21  .02  .17  .14  -1.  .02  .07  .21  .53
  .10 1.05  .23  .12  .43  .10  -1.  -1.  -1.
L 458
  .04  .07  .02  .02  .03  .12  .00  .08  .00  .00  .03  .37  .37  .07  .35  .19
  .17  .92  .22 1.17  .15  .18  .44  .24  .05  .23  .13  .02  -1.  -1.  .00  .44
  .10 1.22  .00  .02  .03  .07  -1.  .20  .05
L 466
  .07  .07  .02  .02  .00  .16  .01  .25  .01  .01  .00  .40  .64  .14  .21  .00
  .05  .18  .05  .28  .60  .85  .70  .15  .09  .36  .30  -1.  .00  .22  .19  .55
  .13 1.15  .41  .24  .64  .38  .07  .28  .25
L 694
  .03  .10  .00  .00  .00  .10  .00  .20  .00  .00  .00  .30  .14  .15  .19  .00
  .02  .07  .05  .07  .43  .98  .95  .18  .06  .35  .13  .00  .00  .07  .30  .77
  .24 1.35  .45  .51  .67  .42  .10  .25  .27
L1017
  .07  .08  .00  .00  -1.  -1.  -1.  -1.  -1.  -1.  .00  .09  .00  .07  .02  .00
  .00  .10  .03  .05  .10  .52  .60  .05  .00  .10  .05  .00  .00  .00  .14  .29
  .02  .73  .25  .25   38  .35  .00  .19  .15
L1074
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .10  .05  .00  .35  .45  .15  .15  .08
  .09  .08  .10  .25  .65 1.07 1.60  .25  .05  .48  .27  .00  .03  .15  .31  .50
  .11  .82  .85  .65  .95  .55  .10  .41  .17
L1107
  .02  .10  .03  .00  .00  .12  .00  .15  .00  .00  .00  .40  .11  .05  .15  .00
  .02  .08  .02  .09  .45  .72  .77  .18  .05  .21  .10  .00  .02  .11  .20  .80
  .10  .96  .35  .23  .40  .45  .35  .25  .18
L1108
  -1.  -1.  -1.  -1.  -1.  -1.  .00  .05  -1.  -1.  -1.  -1.  -1.  -1.  .02  .00
  .00  .15  .05  .32  .12  .35  .30  .05  .04  .05  .05  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  .09  .05  .14  .44  .02  .25  .17
L1181
  .04  .07  .01  .05  -1.  -1.  -1.  -1.  .00  .00  .00  .38  .51  .10  .28  .01
  .08  .20  .05  .32  .45  .60  .80  .24  .12  .45  .37  -1.  -1.  .25  .10  .61
  .29 1.57  .29  .10  .42  .16  .07  .43  .35
M 100


M 101  1968-69
  .13  .06  .13  .07  .60  .67  .18  .30  .46  .25  .28  .45  .20  .15  .55  .43
 1.20  .65  .10 1.15 1.07  .70  .02  .02  .40  .30  .33  .55  .15  .70  .08  .50
  .25  .50  .60  .33  .67  .10  .00  .60  .48
M 102  1968-69
```

```
M 103   1968-69
  .15   .19   .20   .37   .40   .45   .10   .40   .24   .02   .22   .44   .15   .06   .60   .18
  .95  1.00   .35  1.45  1.45   .45   .27   .00   .09   .45   .45   .07   .10   .85   .17   .60
  .25   .87  1.18   .75   .85   .30   .00   .83   .52
M 104   1968-69
  .13   .13   .10   .14   .38   .30   .08   .45   .09   .03   .23   .25   .30   .10   .37   .03
  .35  -1.   -1.   -1.   -1.   -1.   -1.   .00   .20   .20   .55   .03   .03   .47   .16   .48
  .20   .65   .98   .35   .67   .18   .05   .60   .30
M 124
  .07   .09   .08   .04  -1.   -1.   .00   .12   .00   .00   .00   .19   .13   .05   .06   .00
  .08   .30   .08   .23   .27   .71   .83   .12   .03   .15   .03   .05   .00   .05   .16   .07
  .08  2.05   .46   .17   .83   .33   .07   .30   .11
M 225   1968-69
 -1.   -1.   -1.   -1.   .05   .20   .00   .22   .03   .01   .13   .33   .18   .02   .27   .70
  .17   .34   .36  1.05   .38   .93   .05   .20   .08   .22   .18   .06   .08   .40   .28   .67
  .06  1.48   .00   .00   .78   .05   .13   .65   .50
M 226   1968-69
  .13   .17   .08   .07   .00   .18  -1.   .23   .00   .00   .05   .37   .11   .11  -1.   -1.
 -1.   -1.   .30   .30   .30   .41   .08   .25   .05   .32   .13   .10   .10   .78   .12   .62
  .23  1.20   .00   .10   .70   .03   .13   .92   .24
M 228   1968-69
  .12   .18   .05   .06   .00   .25   .00   .30   .04   .01   .14   .41   .22   .05   .24   .37
  .35   .65   .31   .63   .61  1.13   .23   .26   .13   .27   .23   .05   .13   .50   .33   .90
  .05  1.84   .05   .05  1.20   .07   .10   .75   .58
M 230   1968-69
  .25   .16   .14   .10   .00   .23   .00   .20   .01   .02   .06   .50   .20   .05   .22   .33
  .62  1.35   .22   .56  1.09  2.60   .76   .16   .04   .20   .19   .10   .15   .55   .46   .57
  .18  2.56  1.00   .70  1.55   .18   .12   .97   .57
N   A   1968-69
  .17   .13  -1.   -1.   .04   .28   .09   .36   .08   .07   .18   .30   .16   .10   .31   .32
  .92  1.00   .32   .87  1.05  1.74   .86   .25   .05   .22   .23  -1.   .21   .76   .30  -1.
  .23  1.76  -1.   .30  1.15   .09   .19  1.49   .55
N   B   1968-69
  .10  -1.   -1.   .05   .00   .20   .00   .27   .00   .01   .20   .31   .16   .07   .36   .21
  .51   .13   .27   .45   .42   .64   .05   .22   .10   .25   .17   .09   .12   .57   .16   .53
  .05  1.36   .00   .05   .88   .03   .23   .54   .29
N   1   1968-69
  .18   .14   .03   .07   .07   .15   .07   .19   .16   .03   .10   .17   .14   .04   .19   .03
  .11   .06   .05   .15   .67   .20   .10   .00   .01   .09   .15   .26   .02   .19   .09   .27
  .03   .30   .13   .08   .44   .06   .09   .35   .35
N   2   1968-69
  .18   .15   .10   .05   .07   .13   .16   .09   .14   .01   .26   .27   .22   .17   .29   .24
  .80   .28   .07   .28   .58   .49   .09   .03   .01  -1.   -1.   .22  -1.   -1.   .25   .56
  .16   .97   .27   .20   .49   .06   .22   .76   .53
N   3   1968-69
  .21   .22   .08   .13   .05   .12   .06   .26   .07   .01   .04   .26   .13   .11   .25   .17
  .33   .26   .04   .36   .38   .33   .13   .03   .04   .15   .18   .14   .07   .23   .15   .40
  .08   .84   .55   .26   .58   .08   .17   .33   .48
N   4   1968-69
  .23   .21   .09   .04   .03   .12   .14   .25   .06   .04   .06   .34   .11   .14   .24   .31
  .64   .78   .36   .42   .94   .49   .38   .21   .01   .12   .15   .08   .06   .36   .14   .49
  .08   .75   .39   .18   .79   .08   .25   .40   .44
N   5   1968-69
  .21   .27   .10   .06   .07   .12   .07   .37   .02   .04   .03   .27   .10   .08   .24   .26
  .27   .53   .25   .45   .58   .42   .21   .14   .04   .13   .20   .09   .04   .21   .20   .45
  .05   .47   .37   .17   .57   .06   .08  -1.   -1.
N   6   1968-69
  .25   .22   .05   .18   .11   .14   .12   .45   .01   .01   .03   .27   .18   .08  -1.   -1.
 -1.   -1.   -1.   -1.   .60  -1.   -1.   .10   .07   .14   .23  -1.   -1.   -1.   -1.   .55
  .09   .84   .87   .29   .67   .05   .08   .35   .43
```

```
N   7  1968-69
  .18  .17  .07  .02  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .09  .04  .09  .18  .09  .02  .09  .33  .54
  .06  .41  .26  .09  .56  .07  .09  .22  .31
N  8A  1968-69
  .06  .24  .10  .05  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .20  .06
  .04  .30  .20  .33  .25  .34  .91  .04  .03  .06  .19  .11  .01  .11  .22  .20
  .01  .75  .36  .18  .53  .12  .01  .51  .24
N  9A  1968-69
  .21  .21  .09  .04  .04  .11  .06  .25  .00  .09  .05  .17  .10  .07  .18  .17
  .33  .58  .34  .27  .76  .90  .39  .21  .02  .13  .18  .08  .07  .28  .28  .58
  .12  .99  .67  .19  .86  .06  .14  .55  .35
N  10  1968-69
  .22  .19  .08  .05  .04  .11  .07  .26  .01  .09  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .19  .06  .13  .20  -1.  .00  .11  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .13  .31  .34
N  11  1968-69
  .19  .24  .07  .40  .02  .50  .12  .51  .03  .16  .10  .27  .10  .01  .33  .37
  .37 1.24  .43  .93  .64 1.28  .71  .30  .10  .16  .31  .08  .01  .10  .25  .58
  .13  .99 1.23  .43 1.10  .07  .10  .59  .35
N 12A  1968-69
  -1.  -1.  -1.  -1.  .00  .01  .07  .07  .01  .02  .09  .03  .13  .02  .11  .18
  .15  .37  .16  .31  .53  .82  .82  .05  .03  .02  .12  .11  .03  .07  .26  .36
  .01  .56  .45  .18  .49  .10  .00  .56  .14
N  13  1968-69
  .16  .18  .09  .07  .04  .53  .11  .40  .06  .06  .25  .58  .30  .19  .35  .86
 1.51 1.04  .30 1.20 1.12 2.05  .71  .27  .20  .35  .24  .10  .14  .62  .12  .90
  .31 1.82  .66  .24 1.50  .06  .13 1.68  .67
N  14  1968-69
  .23  .20  .11  .06  .03  .14  .05  .25  .03  .04  -1.  -1.  -1.  -1.  .28  .25
  .20  .69  .41  .50  .76  .67  .54  .32  .05  .23  .16  .08  .04  .26  .24  .40
  .07  .81  .45  .16  .59  .09  .09  .42  .45
N  15  1968-69
  .20  .18  .12  .03  .01  .17  .04  .17  .00  .02  .15  .29  .14  .08  .18  .64
  .85  .66  .23 1.10 1.16 1.45  .73  .13  .01  .15  .08  .04  .14  .67  .26  .82
  .37 1.85  .46  .14 1.45  .10  .15 1.42  .55
N  16  1968-69
  .22  .14  .10  .05  .03  .14  .04  .17  .00  .02  .09  .27  .17  .08  .12  .74
  .52  .83  .21  .54 1.23 1.10  .97  .14  .01  .17  .09  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  .14  .95  .68
N  17  1968-69
  .22  .17  .15  .09  .02  .35  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .17  .35
  .34  .55  .12  .61  .83  .84  .36  .18  .05  .20  .08  .14  .07  .23  .19  .70
  .10  .50  .66  .38  .79  .08  .10  .36  .30
N  18


N  19


N  20


N  21
```

```
S 201  1968-69
  .31  .25  .08  .27  .10  .15  .13  .27  .09  .02  .04  .18  .17  .13  .24  .06
  .22  .32  .12  .38  .38  .35  .10  .10  .03  .19  .30  .15  .07  .09  .15  .38
  .11  .72  .30  .19  .52  .05  .20  .22  .51
S 202  1968-69
  .22  .15  .08  .11  .08  .10  .21  .30  .05  .04  .05  .25  .10  .07  .26  .17
  .39  .33  .13  .29  .55  .35  .27  .06  .01  .23  .25  .13  .05  .23  .15  .43
  .10  .98  .57  .18  .50  .13  .08  .43  .50
S 203  1968-69
  .33  .22  .12  .13  .10  .15  .15  .30  .18  .06  .05  .25  .21  .12  .35  .13
  .38  .35  .10  .34  .49  .47  .19  .06  .03  .21  .25  .15  .06  .15  .17  .42
  .05  .67  .28  .16  .42  .08  .41  .33  .40
S 204  1968-69
  .24  .24  .08  .17  .05  .17  .10  .32  .08  .02  .04  .30  .16  .10  .27  .23
  .35  .28  .04  .36  .39  .34  .14  .04  .05  .16  .18  .12  .06  .27  .20  .41
  .10  .88  .54  .29  .55  .08  .17  .32  .52
S 205  1968-69
  .35  .16  .16  .05  .15  .13  .22  .06  .25  .05  .05  .29  .22  .14  .27  .10
  .40  .23  .06  .21  -1.  -1.  -1.  .10  .00  .16  .19  .15  .05  .21  .23  .43
  .13  .54  .33  .13  .45  .07  .18  .40  .37
S 206  1968-69
  .17  .24  .10  .03  .05  .14  .08  .22  .17  .04  .25  .37  .14  .15  .40  .96
  .62  .33  .11  .02  .45  .34  .06  .27  .02  .21  .10  .12  .14  .65  .20  .50
  .10  .59  .00  .00  .50  .04  .27  .67  .50
S 208  1968-69
  .10  .12  .05  .05  .00  .08  .00  .20  .00  .01  .09  .40  .16  .00  .22  .18
  .18  .59  .18 1.43  .48  .79  .12  .30  .10  .21  .12  .05  .10  .36  .46  .67
  .02 1.51  .01  .08 1.10  .02  .03  .40  .40
S 209  1968-69
  .10  .14  .05  .07  .00  .10  .00  .26  .00  .02  .08  .45  .18  .00  .21  .07
  .16  .75  .28 1.81  .62  .83  .15  .28  .02  .16  .20  .03  .10  .33  .25  .73
  .03 1.59  .02  .06  .91  .05  .00  .36  .30
S 210  1968-69
  -1.  .06  .05  .07  .00  .06  .00  .32  .00  .00  .02  .39  .19  .03  .27  .91
  .41  .84  .42 1.00  .59 1.46  .16  .31  .12  .25  .21  .00  .03  .62  .18  .55
  .05 2.23  .05  .08 1.30  .10  .00  .80  .40
S 211  1968-69
  .11  .16  .06  .05  .04  .20  .00  .32  .01  .02  .10  .32  .17  .03  .31  .25
  .37  .28  .31  .74  .45  .75  .05  .20  .05  .25  .19  .10  .11  .40  .14  .71
  .03 1.31  .00  .05  .78  .05  .15  .75  .55
S 212  1968-69
  .24  .25  .11  .10  .04  .27  .06  .43  .00  .02  .22  .53  .28  .14  .44 1.27
 1.31 1.23  .57 1.07 2.17 3.20 1.24  .30  .10  .45  .36  .15  .22  .68  .28  .60
  .15 2.35  .22  .45 1.62  .12  .30 1.50 1.20
S 215  1968-69
  .30  .11  .11  .05  .07  .05  .15  .05  .18  .03  .11  .25  .19  .09  .17  .11
  .38  .25  .05  .19  .47  .34  .03  .17  .00  .08  .07  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
S 217  1968-69
  .21  .16  .08  .05  .11  .13  .38  .25  .19  .02  .34  .30  .17  .10  .42  .51
  .35  .16  .18  .36  .42  .30  .00  .27  .00  .23  .16  .25  .11  .89  .42  .52
  .17  .67  .02  .23  .35  .04  .25  .89  .3
S 221  1968-69
  .13  .08  .11  .00  .00  .00  .00  .15  .00  .00  .04  .16  .10  .02  .02  .02
  .05  .10  .10  .06  .12  .20  .15  .00  .04  .00  .10  .00  .00  .00  .31  .13
  .00  .34  .13  .09  .30  .12  .15  .16  .12
S 231  1968-69
  .17  .17  .07  .10  .00  .24  .02  .36  .05  .02  .13  .48  .14  .02  -1.  -1.
```

```
  -1.  -1.  -1.  -1.  .57 1.85  .15  .30  .10  .32  .25  .05  .10  .39  .44  .95
  .06 2.14  .13  .23  .90  .11  .00  .90  .48
S 232  1968-69
  .19  .18  .10  .09  .04  .20  .00  .20  .04  .05  .06  .49  .25  .00  .17  .47
 1.10 1.72  .70  .98 1.36 3.70 1.10  .25  .07  .21  .15  .03  .15  .48  .35  .73
  .25 3.57  .82  .83 2.95  .15  .05  -1.  -1.
S 233  1968-69
  .29  .25  .10  .05  .06  .16  .20  .28  .10  .04  .08  .43  .17  .15  .34  .32
  .65  .71  .35  .30 1.08  .52  .35  .29  .02  .13  .19  .09  .10  .37  .14  .55
  .11  .84  .45  .16  .78  .12  .20  .38  .42
S 234  1968-69
  .07  .15  .04  .04  .00  .19  .00  .19  .00  .00  .12  .31  .20  .01  .29  .45
  .20  .40  .28  .87  .50  .89  .03  .19  .12  .15  .16  .04  .08  .45  .17  .60
  .05 1.68  .00  .00 1.02  .04  .12  .70  .35
S 235  1968-69
  .38  .14  .06  .14  .10  .20  .05  .20  .04  .03  .03  .27  .21  .19  .29  .05
  .09  .07  .16  .25  .69  .50  .15  .00  .00  .08  .22  .18  .01  .17  .16  .33
  .10  .39  .46  .18  .65  .13  .02  .20  .45
S 236  1968-69
  .20  .14  .06  .05  .08  .14  .08  .33  .12  .02  .41  .43  .13  .12  .26  .88
 1.38  .69  .35  .46  .83  .92  .32  .25  .04  .14  .14  .15  .15 1.30  .20  .85
  .34 1.98  .17  .05 1.37  .08  .44 1.20  .77
S 238  1968-69
  .13  .15  .09  .05  .00  .02  .10  .08  .01  .02  .07  .03  .15  .02  .11  .17
  .20  .37  .17  .33  .56  .91  .77  .09  .04  .01  .13  .09  .03  .08  .40  .40
  .01  .36  .50  .17  .50  .10  .00  .50  .16
S 241  1968-69
  .10  .18  .06  .05  .00  .15  .00  .21  .00  .00  -1.  -1.  -1.  -1.  .40  .41
  .32  .12  .23  .40  .41  .54  .10  .19  .08  .29  .17  .05  .11  .57  .12  .56
  .07 1.07  .00  -1.  -1.  .04  .16  .62  .17
S 242  1968-69
  .19  .20  .08  .07  .00  .35  .00  .24  .00  .00  .16  .44  .16  .09  .39  .55
  .80  .80  .53  .80  .80 1.14  .28  .21  .09  .38  .26  .08  .12  .40  .16  .75
  .07 1.94  .02  .20  .92  .05  .15  .90  .75
S 249  1968-69
  .22  .28  .18  .15  .13  .23  .13  .50  .02  .08  .04  .26  .09  .04  .27  .06
  .26  .33  .20  .33  .75  .42  .35  .08  .03  .08  .11  .13-1.  -1.  -1.  -1.
-1.  -1.  -1.  -1.  -1.  -1.   0.    .43  .14
S 251  1968-69
  -1.  -1.  -1.  -1.  .12  .23  .19  .14  .23  .03  .30  .30  .19  .20  .40  .43
  .75  .28  .07  .35  .62  .60  .09  .09  .02  .16  .10  .30  .12  .68  .28  .60
  .20 1.05  .18  .15  .40  .05  .28 1.00  .65
S 255


S 256


S 257


V  85
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .85  .16
  .23  .57  .29 1.57  .35 1.05  .79  .34  .20  .30  .31  .01  .00  .27  .09  .45
  .05 1.50  .59  .15 1.12  .11  -1.  -1.  -1.
```

```
V 121   1968-69
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  .00  .00  .07  .42  .57  .08  .37  .02
  .23   .70   .43 1.27   .36   .37 1.05   .35  .03  .22  .29  .00  .01  .14  .10  .52
  .22 2.17   .35   .10   .70   .10   .05   .40  .12
V 138
  .14   .01   .00   .15   .01   .07   .00   .19  .04  .06  .06  .22  .18  .00  .16  .10
  .35   .30   .07   .60   .60 1.30   .67   .15  .04  .16  .17  .02  .01  .07  .20  .40
  .04   .36   .60   .23   .70   .08   .00   .41  .15
V 165
  -1.   -1.   -1.   -1.   .01   .11   .00   .22  .01  .10  .08  .54  .42  .00  .29  .30
  .30   .62   .42 1.72   .46 1.18   .48   .26  .13  .25  .25  .00  .09  .28  .12  .43
  .13 1.55   .75   .25   .55   .06   .00   .48  .35
V 166
  .08   .14   .08   .11   .01   .10   .00   .18  .04  .05  .10  .48  .39  .00  .31  .67
  .37   .88   .60 2.00   .57 1.03   .53   .33  .12  .22  .22  .02  .12  .45  .25  .80
  .08 1.82   .30   .13   .60   .11   .00   .58  .39
V 167
  .07   .11   .04   .07   .00   .05   .00   .10  .03  .05  .05  .27  .25  .00  .29  .06
  .05   .36   .17   .71   .15   .40   .40   .15  .05  .15  .15  .00  .03  .28  .06  .44
  .15 1.06   .03   .09   .37   .16   .08   .42  .13
V 168
  .07   .12   .05   .04   .03   .10   .00   .13  .03  .06  .06  .29  .42  .00  .33  .10
  .04   .45   .16   .95   .05   .15   .18   .22  .03  .14  .15  .00  .05  .39  .05  .37
  .10 1.01   .02   .05   .13   .14   .19   .42  .17
V 169


V 170
  -1.   -1.   -1.   -1.   -1.   -1.   .00   .06  -1.  -1.  .00  .51  .37  .10  .29  .00
  .16   .41   .13   .46   .25   .53   .76   .22  .06  .28  .14  .00  .00  .10  -1.  [illegible]
  .27 1.43   .30   .34 1.17   .13   .00   -1.  -1.
V 171
  .05   .10   .07   .06   .00   .15   .00   .08  .03  .08  .07  .52  .47  .09  .29  .03
  .25   .65   .25 1.00   .26   .68   .67   .35  .05  .20  .18  .02  .00  .12  .10  .50
  .18 1.37   .20   .27   .70   .20   .00   .50  .17
V 172
  .04   .05   .08   .04   -1.   -1.   .00   .07  .04  .04  .02  .39  .35  .08  .28  .20
  .58   .52   .16   .51   .32   .95   .77   .22  .14  .18  .15  -1.  -1.  -1.  -1.  -1.
  -1.   -1.   -1.   -1.   -1.   -1.   .00   .53  .06
V 173
  .07   .11   .08   .05   .00   .14   .00   .10  .07  .11  .03  .39  .48  .03  .28  .15
  .40 1.25   .51   .53   .80 1.17 1.65   .29  .17  .18  .22  .00  .01  .28  .02  .50
  .22 1.82 1.10   .55 1.35   .20   .00   .62  .35
V 174
  .07   .19   .03   .02   .00   .02   .00   .18  -1.  -1.  -1.  -1.  -1.  -1.  .12  .15
  .28   .21   .10   .41   .60   .85   .58   .09  .02  .09  .06  .03  .06  .11  .20  .35
  .10 1.25   .31   .20   .64   .21   .00   .34  .15
V 175
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  .05  .08  .07  .37  .35  .00  .30  .16
  .15   .40   .17 1.16   .10   .29   .39   .19  .06  .09  .16  .00  .03  .25  .07  .43
  .13 1.42   .07   .03   .17   .16   .08   -1.  -1.
V 188
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  -1.
V 189
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  -1.
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.   -1.   -1.   -1.   -1.   -1.   -1.   -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
```

```
V 190
  .04  .08  .03  .12  .00  .09  .00  .08  .00  .05  .06  .34  .36  .01  .32  .03
  .24  .70  .25  .98  .10  .22  .23  .18  .06  .24  .17  .00  .00  .16  .05  .42
  .17 1.21  .05  .12  .23  .20  .00  .29  .23
V 191
  .05  .11  .05  .12  .00  .11  .00  .09  .00  .05  .05  .52  .42  .05  .33  .03
  .21  .77  .20 1.05  .26  .30  .55  .18  .10  .34  .16  .02  .03  .15  .09  .44
  .11 1.26  .17  .08  .45  .18  .00  .15  .22
V 192
 -1.  -1.  -1.  -1.  -1.  -1.  .00  .08  .00  .00  .04  .29  .32  .00  .32  .00
  .03  .15  .28 1.05  .26  .34  .40  .20  .03  .26  .19  .00  .00  .14  .10  .47
  .10 1.28  .30  .17  .47  .15  .00  .07  .29
V 193
  .03  .04  .07  .08  .00  .07  .00  .12  .00  .00  .00  .24  .15  .00  .20  .00
  .07  .19  .09  .47  .28  .42  .57  .15  .05  .21  .19  .07 -1.  -1.  .20  .49
  .23 1.40  .10  .03  .32  .07  .00 -1. -1.
V 194
  .04  .05  .05  .07  .06  .13  .00  .10  .00  .00  .12  .35  .20  .01  .34  .02
  .02  .20  .05 1.55  .11  .25  .50  .18  .00  .20  .18  .00  .00  .13  .08  .39
  .11  .95  .10  .05  .05  .10  .00  .27  .30
V 196


V 198
 -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .21  .46  .25  .01  .16  .71
  .83  .85  .46 1.16 -1.  -1.  -1.  .26  .13  .20  .24  .03  .06  .28  .05  .50
  .17 1.76 1.30  .65 -1.  -1.  .00  .89  .28
V 206
  .06  .12  .05  .09  .00  .11  .00  .08  .00  .05  .06  .37  .38  .03  .32  .03
  .35  .62  .40  .96  .14  .23  .37  .22  .06  .25  .18  .00  .03  .15  .07  .40
  .16 1.33  .10  .12  .37  .17  .00  .38  .20
V 207
  .12  .23  .18  .13  .04  .06  .00  .15  .03  .05  .12  .60  .35  .00  .39  .41
 1.34 1.79  .62  .75 -1.  -1.  -1.  .35  .08  .30  .24 -1.  -1.  -1.  -1.  -1.
 -1.  -1.  -1.  -1.  -1.  -1.  .00  .82  .72
V 209
  .07  .03  .05  .10  .00  .05  .00  .07  .02  .01  .06  .05  .15  .00  .07  .11
  .27  .23  .12  .09  .34  .89  .38  .09  .00  .03  .10  .00  .00  .15  .00  .48
  .00  .13  .38  .12  .40  .18 -1.  .33  .12
V 221
  .08  .14  .06  .02  .00  .06  .00  .16  .00  .07  .10  .33  .23  .00  .27  .06
  .04  .47  .23  .81  .15  .65  .11  .21  .15  .21  .18 -1.  .02  .24  .26  .50
  .07 1.18  .00  .00  .15  .07  .10  .42  .28
V 224
  .06  .10  .07  .05 -1.  -1.  .00  .06  .07  .09 -1.  -1.  -1.  -1.  .32 -1.
 -1.  -1.  -1.  -1. 1.01 1.79  .95  .30  .15  .24  .21  .01  .03  .35  .25  .43
 -1.  -1.  -1.  -1.  -1.  -1.  .05  .65  .12
V 225
  .05  .13  .08  .09  .00  .12  .00  .13  .03  .10  .05  .36  .40  .02  .29  .17
  .38 1.30  .47  .97  .57 1.06 1.25  .28  .14  .30  .20  .00  .00  .32  .05  .58
  .14 1.65  .83  .69 1.20  .12  .00  .52  .35
V 227


V 232
 -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .09  .43  .25  .10  .33  .07
```

```
  .17 1.30  .32 1.18  .15  .25  .34  .25  .07  .26  .31  .00  .02  .34  .10  .50
  .20 1.90  .05  .02  .30  .10  .07  .27  .10


PRECIPITATION 1969-70

A  21  1969-70
  -1.  -1.  .00  .00  .00  .00  .00  .00  .02  .01  .01  .50  .01  .08  .00  .26
  .16  .21  .09  .02  .02  .30
A  23  1969-70
  -1.  -1.  .00  .00  .02  .00  .07  .08  .00  .00  .01  .22  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  .04
A  24  1969-70
  -1.  -1.  .00  .00  .09  .01  .00  .00  .03  .00  .04  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
A  26  1969-70
  -1.  -1.  .00  .00  .13  .00  .00  .13  .03  .00  .03  .26  .01  .05  .01  .21
  .00  .03  .00  .03  .03  .20
A  27  1969-70
  -1.  -1.  .00  .00  .16  .00  .00  -1.  -1.  -1.  -1.  .22  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
A  29  1969-70
  -1.  -1.  .00  .00  .12  .08  .02  .00  .00  .09  .05  .35  .01  .01  .12  .34
  .19  .01  .01  .00  .00  .48
A  30  1969-70
  -1.  -1.  .00  .00  .27  .04  .09  .00  .02  .02  .04  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  .30
A  31  1969-70
  -1.  -1.  .00  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .22  .00  .00  .01  .19
  .00  .03  .00  .00  .03  .09
A  32  1969-70
  -1.  -1.  .00  .00  -1.  -1.  .00  .07  .09  .00  .09  .15  .00  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  .40
A  33  1969-70
  -1.  -1.  .00  .00  .06  .00  .00  .02  .00  .00  .02  .13  .00  .03  .01  .19
  .00  .04  .00  .00  .02  .05
A  34  1969-70
  -1.  -1.  .00  .00  .04  .00  .00  .03  .02  .00  .04  .24  .00  .01  .00  .09
  .00  .00  .00  .02  .20  .19
A  35  1969-70
  -1.  -1.  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .48  .00  .12  .06  .29
  .02  .14  .00  .00  .02  -1.
A  36  1969-70
  -1.  -1.  .00  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .27  .00  .07  .02  .13
  .02  .00  .01  .00  .31  .21
A  37  1969-70
  -1.  -1.  .00  .05  .08  .11  .01  .07  .10  .05  .09  .45  .01  .58  .14  .05
  .10  .20  .00  .00  .09  .33
A  38  1969-70
  -1.  -1.  .00  .02  .07  .09  .01  .01  .08  .01  .02  .60  .01  .50  .17  .10
  .11  .29  .00  .00  .09  -1.
A  41
                                                          .19  .03  .06  .17  .51
  .32  .02  .02  .01  .13  .74
A  42
  .50  .55  .03  .01  .18       .01  .31  .13  .12  .22            .15  .67  .32
  .30  .08  .10  .10  .11  .63
A  44
```

A 45

A 46

A 47

```
E0442  1969-70
  .08  .09  .00  .00  .01  .00  .00  .12  .05  .02  .09  .30  .CC  .02  .00  .32
  .00  .01  .00  .01  .04  .30
E1142
  .23  .02  .08  .17  .16  .24  .02  .07  .30  .36  .36  .00  .17  .25  .32  .10
  .24  .07  .43  .05  .26  .88
E1253
  .25  .30  .03  .02  .25  .17  .04  .13  .10  .08  .05  .45  .C5  .65  .55  .51
  .11  .18  .01  .03  .32  -1.
E1682
  .00  .16  .00  .00  .00  .20  .04  .10  .04  .03  .15  .58  .CC  .24  .3C  .15
  .04  .45  .00  .21  .37  .72
E1743
  .15  .03  .00  .00  .09  .05  .00  .05  .07  .02  .09  .33  .05  .08  .25  .39
  .03  .11  .09  .00  .04  .63
E3465
  .00  .28  .00  .05  .06  .13  .00  .69  .50  .35  .32  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
E3751
  .00  .11  .00  .05  .00  .21  .02  .07  .04  .05  .20  .74  .CC  .17  .28  .03
  .00  .50  .00  .19  .22  .90
E4144
  .38  .11  .00  .00  .15  .11  .04  -1.  -1.  -1.  -1.  -1.  .07  .06  .6[illegible]  .68
  .11  .30  -1.  -1.  -1.  .85
E4767
  -1.  -1.  .00  .00  .13  .07  .02  .00  .02  .11  .10  .22  .03  .C3  .12  .34
  .05  .12  .10  .00  .02  .48
E4867
  .04  .30  -1.  -1.  .21  .17  .03  .13  .07  .04  .15 1.24  -1.  .84  .56  .09
  .00  .24  .00  .00  .12 1.34
E5098
  .00  .06  .00  .03  .05  .06  .00  .37  .20  .07  .25  .08  .05  .01  .01  .28
  .01  .05  .03  .03  .20  .30
E5151
  .15  .02  .00  .00  -1.  -1.  .05  .00  .00  .00  .00  .33  .01  .15  .00  .08
  .00  .00  .07  .04  .02  .42
E5184
  .05  .01  .27  .19  .25  .30  -1.  -1.  -1.  -1.  -1.  .00  .15  .30  .3C  .00
  .04  .04  .11  .10  .28 1.02
E5756
  .00  -1.  .00  .00  -1.  -1.  .00  -1.  -1.  -1.  -1.  .03  .CC  .04  .05  .11
  .00  .08  .00  .00  .04  .16
E6006
  .08  .09  .05  .05  .06  .21  .00  .10  .02  .04  .13  .46  .03  -1.  -1.  .48
  .65  .55  .07  .04  .16 1.15
E6624
  .00  .03  .00  .00  .00  .02  .00  .00  .00  .00  .00  .06  .CC  .07  .07  .02
  .00  .07  .00  .15  .09  .08
```

```
E6736
  -1.  -1.  .00  .23  .10  .35  .02  .05  .10  .06  .09  .05  .12  .11  .23  .39
  .05  .13  .19  .12  .10  .85
E7735
  .09  .01  .00  .09  .08  .20  .03  .02  .05  .02  .03  .50  .CC  .53  .32  .20
  .10  .20  .04  .00  .07  -1.
E7946
  .43  .23  .02  .01  .12  .21  .04  .26  .15  .10  .14  .01  .C6  .08  .66  .36
  .24  .14  .06  .02  .06  .78
E8697
  .35  .29  .04  .04  .14  .14  .04  .20  .08  .05  .03  .00  .03  .0S  .3C  .30
  .03  .09  -1.  -1.  -1.  -1.
E8752
  -1.  .07  .00  -1.  -1.  -1.  .01  .00  .02  .00  .06  .30  .0C  .04  .00  .30
  .00  .03  .00  .00  .00  .17
E8832
  .00  .05  .00  .00  .02  .00  .00  .25  .04  .06  .18  .09  .CC  .06  .12  .20
  .00  .05  .00  .00  .17  .10
E9049
  .00  .07  .00  .05  .09  .12  .00  .04  .00  .05  .10  .45  .CC  .25  .25  .15
  .13  .35  .03  .08  .37  .38
E9221
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .06  .10  .1C  -1.  .08  .10  .13  .30
  .00  .04  .15  .13  .31  .75
E9283
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
E9458
  .26  .05  .09  .00  .34  .31  .00  .06  .20  .17  .22  .30  -1.  .05  .22  .73
  .05  .06  .04  .03  .13  .83
E9512
  .00  .07  .00  .00  .09  .08  .00  .12  .18  .09  .11  .07  -1.  .00  .00  .24
  .01  .00  .00  .03  .07  .22
L   6  1969-70
  .07  .25  .00  .04  .11  .41  .07  .11  .02  .05  .08 1.00  -1.  -1.  -1.  -1.
  .07  .40  .02  .00  .11 1.65
L  10  1969-70
  .07  .15  .00  .04  .06  .20  .02  -1.  -1.  -1.  -1.  .54  .CC  .19  .28  .00
  .00  .22  .00  .00  .01 1.52
L  11  1969-70
  .04  .11  .00  .03  .05  .16  .02  .09  .04  .06  .06  .52  .CC  .25  .3C  .01
  .00  .08  .02  .00  .10 1.43
L  33  1969-70
  .00  .15  .00  .03  .02  .24  .00  .07  .05  .04  .15  .92  .CC  .21  .25  .08
  .02  .67  .00 1.30  .35 1.02
L  46  1969-70
  .03  .10  .00  .06  .07  .14  .00  .07  .00  .04  .07  .59  -1.  .21  .60  .26
  .91  .49  .08  .17  .55 1.48
L  52  1969-70
  -1.  -1.  .00  .06  .03  .20  .01  .08  .02  .04  .10  .52  .C0  .32  -1.  .10
  .02  .62  .04  .15  .30  .57
L  53  1969-70
  .05  .10  .00  .05  .04  .22  .00  .08  .02  .03  .08  .70  .02  .25  .74  .21
  .04  .58  .05  .13  .47  .75
L  54  1969-70
  -1.  -1.  .00  .02  .02  .17  .01  .08  .02  .05  .14  .83  .04  .17  .32  .26
  .04  .33  .03  .03  .42  .42
L 128  1969-70
  .00  .03  .00  -1.  .07  .15  .03  -1.  -1.  -1.  -1.  .45  .02  .16  .20  .43
  .17  .34  .07  .30  .22  .99
```

```
L 179  1969-70
  .00  .13  .00  .03  .00  .25  .00  .07  .04  .02  .12  .24  .CO  .20  .51  .57
  .18  .34  .08  .18  .39 1.20
L 191  1969-70
  .00  .06  .00  .03  .00  .06  .00  .08  .02  .02  .C8  .26  .CC  .23  .24  .20
  .14  .22  .00  .00  .24  .81
L 213  1969-70
  .02  .08  .00  .02  .04  .14  .00  .10  .00  .05  .10  .29  .CC  .2C  .24  .CC
  .00  .12  .00  .00  .04 1.16
L 250  1969-70
  .CO  .05  .00  .00  .00  .04  .00  .00  .00  .00  .00  .35  .CC  .20  .15  .04
  .00  .15  .00  .10  .18  .36
L 259  1969-70
  .00  .16  .00  .00  .02  .16  .02  .12  .06  .07  .33  .62  .CC  .20  .31  .17
  .C4  .44  .00  .22  .32  .76
L 292  1969-70
  .05 -1.  .00  .00  .03  .25  .03  .08  .03  .05  .10  .65  .CO -1. -1.  .06
  .17  .10  .01  .03  .22 1.15
L 303  1969-70
  .00  .08  .00  .02  .02  .27  .00  .08  .04  .01  .11  .16  .CC  .40  .31  .25
  .20  .41  .02  .10  .48 1.09
L 372  1969-70
  .00  .06  .00 -1. -1. -1.  .04  .04  .00  .03  .09  .56  .CC  .13  .17  .14
  .01  .36  .08  .18  .17  .86
L 434  1969-70
 -1. -1.  .00  .00  .06  .22  .04  .09  .03  .02  .12  .86  .CC  .46  .65  .28
  .26  .38  .02  .08  .28  .73
L 435  1969-70
  .06  .15  .00  .00  .12  .16  .07  .08  .04  .03  .C8  .80  .CC -1. -1.  .10
  .06  .32  .00  .00  .06 1.46
L 451  1969-70
  .00  .10  .00  .00  .12  .07  .03  .00  .00  .04  .12  .25 -1. -1. -1. -1.
 -1. -1. -1. -1. -1.  .77
L 458  1969-70
 -1. -1.  .00  .03  .17  .15  .05  .09  .02  .02  .11  .79  .CC  .35  .36  .25
  .00  .23  .02  .00  .06  .90
L 466  1969-70
  .CO  .16  .00  .05  .03  .32  .03  .04  .02  .03  .C7  .90  .CC  .23  .28  .C7
  .00  .22  .00  .47  .38  .60
L 694  1969-70
 -1.  .14  .00  .07  .02  .11  .00  .03  .00  .06  .10  .55  .CC  .40  .27  .20
  .00  .28  .01  .05  .18  .87
L1017
  .00  .07  .00 -1. -1. -1. -1.  .00  .00  .00  .00  .30  .CC  .06  .14  .05
  .01  .16  .03  .02  .22  .30
L1074
  .05  .16  .00  .00  .07  .30  .00  .04  .00  .04  .08  .66  .CO  .20  .34  .28
  .42  .35  .14  .23  .36  .67
L1107
  .04  .11  .00 -1. -1.  .11  .00  .04  .03  .04  .11  .37  .CC  .30  .23  .25
  .CO  .20  .04  .02  .27  .75
L1108
  .CO  .03  .00  .00  .00  .04  .00  .00  .00  .00  .CO  .10 -1. -1. -1. -1.
 -1. -1. -1. -1. -1.  .36
L1181
  .C5  .16  .00 -1.  .04  .23  .01  .07  .05  .09  .15  .67  .CC  .36  .26  .C2
  .C8  .16  .00  .34  .28  .86
M 100
```

```
M 101  1969-70
  -1.  -1.  .00  .00  .02  .15  .06  .30  .70  .38  .65  .00  .78  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1. 1.30
M 102  1969-70
  -1.  -1.  .13  .00  .15  .26  .03  .20  .65  .30  .80  .00  .11  .15  .21  .45
  .00  .02  .27  .02  .28 1.33
M 103  1969-70
  .20  .05  .16  .00  .35  .35  .05  .38  .59  .40 1.25  .00  .17  .25  .30  .65
  .12  .19  .55  .17  .14 1.22
M 104  1969-70
  .30  .09  -1.  -1.  -1.  -1.  .05  .13  .25  .25  .55  .00  -1.  .07  .86  .58
  .07  .22  .06  .02  .08 1.07
M 124  1969-70
  .00  .15  .00  .01  .10  .03  .02  .02  .01  .02  .05  .32  .00  .35  .22  .34
  .15  .41  .14  -1.  -1.  .85
M 225  1969-70
  .74  .15  .06  .02  .20  .17  .00  .13  .09  .10  .13  -1.  .10  .68  .09  .65
  .02  .28  .17  .11  .41 1.20
M 226  1969-70
  .34  .33  .10  .07  .39  .26  .04  .19  .14  .15  .25  -1.  -1.  .70  .25  .27
  .15  .11  -1.  -1.  -1.  .88
M 228  1969-70
  .92  .22  .07  .02  .55  .25  .00  .17  .12  .10  .12  .70  .10  .72  .21  .57
  .04  .15  .09  .08  .26 1.36
M 230  1969-70
  .70  .50  .06  .02  .75  .28  .04  .15  .18  .10  .12  .80  .03 1.00  .32  .79
  .10  .57  .02  .02  .30 1.75
N   A  1969-70
  .55  .72  -1.  -1.  -1.  -1.  .04  .14  .10  .04  .07  .22  .08  -1.  -1.  -1.
  .15  .16  .09  .14  .30  .66
N   B  1969-70
  .37  .22  .13  .03  .54  .13  .01  .17  .11  .12  .16  .43  .13  .59  .38  .35
  .25  .13  .06  .01  .20 1.25
N   1  1969-70
  .37  .25  .02  .01  .17  .18  .03  .19  .14  .12  .12  .00  .14  .09  .36  .59
  .10  .13  .06  .00  .15  .91
N   2  1969-70
  .53  .69  .14  .06  .34  .24  .02  .19  .12  .08  .08  .00  .09  .27 1.01  .35
  .17  .13  .24  .18  .17 1.08
N   3  1969-70
  .63  .27  .08  .02  .26  .10  .06  .24  .17  .14  .12  .04  .02  .37  .28  .35
  .43  .08  .19  .10  .08  .77
N   4  1969-70
  .20  .41  .07  .02  .23  .10  .03  .18  .14  .09  .06  .07  .15  .40  .28  .29
  .08  .03  .01  .01  .12  .77
N   5  1969-70
  .23  .38  .05  .01  .22  .13  .04  .25  .13  .18  .11  .12  .03  .49  .22  .41
  .25  .01  .02  .03  .27  .59
N   6  1969-70
  .30  .43  .08  .01  .34  .18  .02  .26  .17  .21  .17  .29  .05  .54  .34  .43
  .22  .07  .04  .09  .20  .91
N   7  1969-70
  .23  .24  .01  .03  .09  .05  .02  .17  .16  .15  .12  .24  .04  .38  .34  .59
  .12  .27  .01  .06  .13  .42
N  8A  1969-70
  .04  .09  .00  .00  .12  .12  .00  .05  .06  .21  .09  .45  .03  .09  .12  .29
  .01  .18  .00  .00  -1.  -1.
N  9A  1969-70
```

```
  .29  .35  .02  .01  .11  .10  .02  .18  .11  .10  .07  .23  .08  .62  .40  .62
  .14  .07  .00  .05  .22  .80
N  10  1969-70
  .15  .35 -1.  -1.  -1.  -1.  -1.  .22  .18  .16  .10  .28  .03  .50  .54  .45
  .07  .23  .02  .03  .20  .50
N  11  1969-70
  .31  .30 -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .41  .17  .35  .63  .77
  .09  .41  .05  .09  .14  .97
N 12A  1969-70
  .10  .04 -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .65  .07  .40  .11  .38
  .08  .20  .01  .08  .11  .49
N  13  1969-70
  .56  .60  .10  .03  .53  .43  .08  .14  .10  .10  .16  .34  .04  .68  .45  .46
  .14  .31  .11  .08  .17  .89
N  14  1969-70
  .16  .53  .01  .00  .19  .13  .00  .41  .18  .19  .08  .49  .07  .52  .42  .83
  .03  .19  .03  .06  .29  .86
N  15  1969-70
  .58  .23  .06  .02  .55  .32  .02  .08  .12  .10  .08  .53  .02  .80  .76  .80
  .08  .29  .07  .08  .22 1.29
N  16  1969-70
  .37  .36 -1.  -1.  -1.  -1.  .00 -1.  -1.  -1.  -1.  .65  .02  .78  .50  .82
  .20  .64  .04  .05  .32 1.63
N  17  1969-70
  .19  .25 -1.  -1.  -1.  -1.  -1.  .32  .16  .15  .14  .37  .09  .40  .36  .58
  .31  .31  .04  .05  .24  .46
N  18
  .35  .45  .23  .08  .34  .34  .04  .15  .13  .12  .17  .08  .12  .53  .21  .36
  .00  .01  .09  .11  .24  .89
N  19


N  20


N  21


S 201  1969-70
  .50  .38  .05  .02  .27  .15  .03  .47  .15  .17  .25  .02  .03  .20  .42  .55
  .28  .10  .35  .21  .08  .80
S 202  1969-70
  .57  .47  .13  .02  .32  .33  .12  .21  .16  .20  .15  .15  .03  .39  .25  .47
  .28  .06  .20  .15  .05  .95
S 203  1969-70
  .79  .47  .04  .03  .33  .33  .05  .34  .20  .25  .22  .02  .08  .18  .45  .73
  .50  .15  .34  .50  .08  .66
S 204  1969-70
  .83  .62  .12  .03  .28  .27  .07  .28  .21  .10  .15  .04  .00  .42  .32  .38
  .47  .09  .20  .12  .11  .79
S 205  1969-70
  .50  .63  .07  .03  .30  .17  .08  .33 -1.  -1.  -1.  .00  .08  .17  .45  .25
  .15  .12  .16  .28  .11  .47
S 206  1969-70
 -1.  -1.  .26  .05  .32  .33  .02  .12  .10  .13  .15  .10  .12  .47  .22  .35
  .00  .03  .14  .07  .36  .88
S 208  1969-70
 -1.  .34  .03  .00  .25  .27  .00 -1.  -1.  -1.  -1.  .55  .08  .36  .29  .41
```

```
 1.00  .14  .00  .21  .25  .95
S 209  1969-70
  .40  .32  .00  .00  .19  .19  .00  .15  .10  .08  .15  .62  .05  .45  .30  .28
 2.25  .08  .00  .14  .39 1.20
S 210  1969-70
 1.04  .20  .07  .01  .42  .28  .00  .20  .13  .10  .15  .59  .05  .71  .25  .72
  .04  .27  .12  .10  .32 1.38
S 211  1969-70
  -1.  .37  .06  .00  .52  .12  .02  .16  .12  .11  .13  .48  .08  .64  .22  .50
  .35  .33  .04  .01  .15 1.02
S 212  1969-70
  -1.  -1.  .10  .03  .86  .42  .05  .09  .20  .13  .14  .46  .07  .90  .87 1.15
  .20  .53  .13  .13  .32 1.74
S 215  1969-70
  -1.  .60  .08  .04  .38  .20  -1.  .43  .12  .12  .04  -1.  .03  .20  .70  .25
  .13  .13  .15  .20  .09  .62
S 217  1969-70
  .87  .50  .35  .15  .66  .32  .02  .11  .10  .12  .09  .01  .16  .37 1.30  .43
  .08  .12  .07  .02  .05 1.23
S 221  1969-70
  .00  .05  .00  .00  .05  .02  .00  .05  .03  .02  .07  .29  .00  .01  .03  .28
 0.    .23 0.   0.    .02  .19
S 231  1969-70
 1.05  .35  -1.  -1.  .32  .23  .00  .17  .15  .09  .17  .50  .00  .62  .40 1.08
  .15  .25  .17  .25  .18 1.20
S 232  1969-70
  .85  .20  .05  .00  .52  .50  .00  .17  .16  .10  .14  .90  .00  .80 1.00 1.45
  .29  .37  .10  .28  .34 1.90
S 233  1969-70
  .25  .42  .09  .04  .30  .08  .05  .21  .14  .09  .06  .07  .16  .48  .45  .40
  .15  .04  .05  .03  .23  .87
S 234  1969-70
  .70  .23  .05  .02  .32  .17  .00  .10  .09  .08  .10  .53  -1.  -1.  -1.  .56
  .03  .12  .02  .12  .33 1.23
S 235  1969-70
  .43  .20  .00  .00  .13  .20  .05  .55  .29  .10  .13  .00  .02  .07  .50  .39
  .26  .10  .01  .00  .05  .74
S 236  1969-70
  -1.  .65  .17  .11  .46  .30  .14  .10  .15  .10  .05  .15  .10  .85  .44  .33
  .08  .03  .05  .07  .27 1.47
S 238  1969-70
  .19  .05  .00  .02  .25  .17  .00  .17  .16  .11  .06  .70  .06  .55  .12  .46
  .14  .30  .04  .09  .15  .45
S 241
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
S 242  1969-70
  .75 1.00  .09  .03  .82  .24  .02  .10  .13  .13  .17  .55  .10  .67  .52  .54
  .32  .48  .16  .03  .40 1.19
S 249  1969-70
  .30  .18 0.    .03  .24  .22  .02  .19  .21  .25  .24  .19  .23  .16  .18  .36
  .10  .10  .24  .18  .17  .65
S 251  1969-70
  .95  .48  .05  .07  .48  .35  .04  .11  .09  .12  .10  .03  .19  .28  .90  .40
  .12  .09  .16  .27  .18 1.00
S 255
            .07  .04  .91  .36  .05  .14  .12  .13  .14  .67  .06 1.02  .43
                 .02  .35 1.42
S 256
                                                        .04  .19  .17  .20  .48
```

```
  .32  .17  .37  .07  .10  .73
S 257


V  85  1969-70
  .20  .15  .00  .15  .10  .13  .02  .13  .04  .08  .11  .85  .C0 1.23  .43  .33
  .C7  .43  .09  .28  .45 1.07
V 121  1969-70
  .C0  .10  .00  .06  .15  .21 -1.  .11  .04  .00  .16  .93  .CC  .60  .42  .19
  .C3  .40  .00  .05  .40 1.31
V 138  1969-70
  .18  .04  .00  .00  .30  .17  .01  .05  .13  .14  .10  .82  .C6  .6C  .37  .67
  .19  .13  .07  .12  .19  .18
V 165  1969-70
  .25  .10  .03  .02  .20  .35  .01  .08  .07  .10  .18  .71  .CC 1.20  .45  .31
  .35  .33  .08  .24  .35 1.00
V 166  1969-70
  .44  .24  .05  .05  .23  .34 -1.  .13  .09  .09  .13  .65  .CC  .80  .66  .34
  .43  .17  .08  .31  .28 1.29
V 167  1969-70
  .20  .21  .05  .05  .19  .10  .03  .18  .05  .08  .25  .75  .CC 1.32  .18  .23
  .C0  .10  .42  .27  .60 1.55
V 168  1969-70
  .02  .15  .03  .07  .45  .19  .02  .19  .05  .04  .25  .75  .07 1.66  .17  .17
  .C0  .07  .00  .00  .40  .81
V 169


V 170
 -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
 -1.  -1.  -1.  -1.  -1.  -1.
V 171  1969-70
  .00  .08  .00  .05  .25  .23  .05  .05  .05  .08  .15  .53  .C0  .35  .29  .20
  .00  .20  .15  .60  .45 1.03
V 172  1969-70
  .C0  .07  .00  .03  .25  .33  .05  .00  .02  .03  .11  .47  .CC  .35  .30  .56
  .C3  .21  .08  .25  .11  .81
V 173  1969-70
  .04  .07  .00  .07  .12  .23  .02  .07  .04  .08  .18  .55  .CC  .68  .43  .62
  .15  .45  .17  .25  .42 1.20
V 174  1969-70
  .22  .02 -1.  -1.  -1.  -1.  -1.  .00  .03  .15  .08  .90  .CC  .95  .44  .37
  .25  .25  .03  .05  .03 -1.
V 175  1969-70
  .C7 -1.  -1.  -1.  -1.  -1.  -1.  .16  .05  .07  .18  .91  .CC 1.10  .22  .12
  .00  .35  .32  .22  .85 1.45
V 188  1969-70
  .00  .09  .01  .00  .02  .04  .00  .11  .04  .05  .17  .82  .03  .71  .41  .35
  .C0  .57  .04  .03  .28  .70
V 189  1969-70
  .C0  .11  .00  .07  .24  .15  .01  .15  .05  .05  .10  .90  .C0  .68  .29  .25
  .C0  .38  .05  .05  .70 1.13
V 190  1969-70
  .C0  .09  .00  .00  .22  .11  .05  .13  .03  .05  .17  .66  .CC  .50  .3C  .C8
  .C0  .35  .02  .03  .70 1.22
V 191  1969-70
  .00  .18  .00  .00  .25  .11  .05  .10  .05  .10  .20  .50  .CC  .3C  .18  .27
  .00  .23  .17  .05  .26  .90
```

```
V 192  1969-70
  .00  .10  .00  .00  .09  .05  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
V 193  1969-70
  -1.  -1.  .00  .00  .00  .07  .00  -1.  -1.  .02  .22  -1.  -1.  .35  .40  .15
  .00  .18  .00  .25  .82  .75
V 194  1969-70
  -1.  -1.  .01  .05  .25  .13  .02  .17  .04  .07  .05  .82  .03  .52  .19  .04
  .00  .20  .00  .05  .23 1.08
V 196  1969-70
  .00  .06  .00  .02  .06  .04  .04  .10  .09  .10  .15  .39  .CC  .31  .31  .17
  .03  .19  .25  .02  .25  .85
V 198  1969-70
  .12  .10  .00  .10  .45  .52  .02  .05  .03  .10  .12  .85  .CC 1.04  .67  .82
  .23  .30  .04  .18  .22  .92
V 206  1969-70
  .00  .04  .00  .00  .20  .10  .05  .12  .04  .06  .21  .56  .CC  .58  .25  .20
  .25  .38  .10  .07  .57 1.27
V 207  1969-70
  .70  .34  .04  .06  .52  .38  .04  .17  .14  .18  .24  .89  .CC 1.22 1.15  .72
  .64  .30  -1.  -1.  -1. 1.63
V 209  1969-70
  .07  .03  .00  .10  .28  .10  .02  .19  .10  .03  .02  .50  .CC  .73  .25  .14
  .10  .18  .00  .00  .13  .37
V 221  1969-70
  .26  .13  .05  .06  .10  .18  .02  .12  .09  .08  .18  .75  .06  .59  .18  .48
  .02  .16  .05  .50  .34 1.10
V 224  1969-70
  .03  .08  .00  .11  .37  .46  .04  -1.  -1.  -1.  -1.  -1.  .CC  .60  .40  .56
  .22  .31  .30  .20  .38 1.29
V 225  1969-70
  .00  .10  -1.  -1.  -1.  -1.  .05  .09  .02  .07  .13  .76  .CC 1.07  .49  .67
  .21  .31  .12  .25  .42 1.25
V 227  1969-70
  .00  .07  .00  .00  .12  .05  .00  .09  .10  .03  .15  .55  .CC  .25  .27  .23
  .04  .38  .03  .07  .32  .67
V 232  1969-70
  .15  .24  .01  .00  .16  .17  .02  .08  .07  .02  .09 1.07  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
```

PRECIPITATION 1970-71

```
A  21  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .00  .CO  .C5  .04  .01
  .00  .02  .00  -1.  .00  .05
A  23  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  .00  .00  .00  .09  .13
A  24  1970-71
  .13  .02  .01  .00  .00  .23  .25  .00  .00  .00  .00  .00  .CO  .03  .02  .CO
  .01  .03  .00  .08  .00  .04
A  26  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .00  .CC  .07  .00  .01
  .02  .02  .00  -1.  -1.  -1.
A  27  1970-71
  .18  .00  .01  .00  .00  .17  .34  .00  .00  .00  .00  .01  .CC  .02  .04  .00
  .C4  .04  .00  .04  .05  .03
A  29  1970-71
```

```
  .14  .00  .01  .00  .00  .55  .18  .07  .10  .00  .00  .00  .04  .35  .11  .11
  .02  .01  .02  .24  .14  .13
A  30  1970-71
  .29  .02  .00  .00  .00  .45  .19  .02  .00  .00  .00  .04  .02  .14  .04  .00
  .00  .08  .01  .07  .10  .02
A  31  1970-71
  .16  .00  .00  .00  .00  .22  .14  .00  .00  .00  .00  .00  .00  .18  .01  .04
  .04  .00  .00  .00  -1.  -1.
A  32  1970-71
 -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .00  .00  .00  -1.  -1.  -1.
 -1.  .01  .00  .14  -1.  -1.
A  33
  .35  .00  .00  .00  .00  .25  .13  .00  .00  .00  .01  .00  .00  .11  .00  .00
  .00  .01  .00
A  34  1970-71
  .38  .01  .00  .00  .00  .08  .23  .00  .00  .00  .00  .02  .00  .03  .00  .01
  .01  .00  .00  .08  .03  .15
A  35
  .12  .04  .14  .00  .00  .28  .20  .05  .00
       .03  .00  .08  .10  .08
A  36  1970-71
  .28  .00  .05  .00  .00  .37  .18  .00  .00  .00  .09  .13  .01  .20  .00  .00
  .00  .00  .00  .24  .28  .09
A  37  1970-71
  .17  .00  .00  .00  .17  .63  .25  .00  .00  .02  .33  .30  .02  .43  .10  .00
  .01  .01  .00  .09  .02  .16
A  38  1970-71
  .17  .00  .00  .00  .27  .63  .27  .00  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.
 -1.  .07  .04  -1.  .01  .12
A  41  1970-71
  .18  .12  .06  .00  .00  .64  .40  .14  .09  .00  .00  .04  .07  .51  .24  .13
  .05  .00  .00  .53  .51  .38
A  42  1970-71
  .19  .09  .07  .08  .00  .39  .09  .13  .09  .09  .17  .24  .06  .44  .13  .27
  .07  .09  .01  .51  .38  .35
A  44  1970-71
  .40  .17  .01  .00  .00  .31  .35  .23  .12  .04  .04  .22  .13  .52  .21  .11
  .10  .03  .01  .79  .60  .22
A  45  1970-71
  .14  .20  .15  .00  .01  .51  .16  .21  .09  .00  .11  .06  .01  .24  .06  .04
  .06  .02  .00  .16  .14  .09
A  46  1970-71
  .18  .00  .00  .00  .00  .42  .20  .05  .00  .01  .07  .03  .01  .44  .09  .01
  .01  .00  .00  .08  .13  .04
A  47  1970-71
  .28  .09  .05  .00  .00 1.03  .32  .06  .00  .00  .15  .11  .00  .34  .11  .03
  .00  .00  .00  .06  -1.  -1.
E 442  1970-71
  .15  .00  .02  .00  .00  .04  .30  .00  .00  .00  .00  .00  .00  .06  .01  .14
  .04  .00  .00  .18  .02  .06
E1142  1970-71
  .14  .35  .06  .26  .05  .54  .30  .20  .15  .10  .75  .15  .00  .82  .04  .00
  .08  .07  .00  .65  .18  .30
E1253
  .23  .14  .25  .20  .08 1.55  .30  .17  .06  .13  .74  .24  .05 1.22  .20  .04
  .06  .41  .14  .27  .37  .18
E1682  1970-71
  .12  .01  .01  .00  .25  .82  .78  .10  .00  .12  .98  .64  .06  .72  .01  .02
```

```
  .06  .18  .02  .33  .20  .49
E1743  1970-71
  -1.  -1.  -1.  -1.  .12  .19  .11  .38  .07  .06  .25  .23  .02  .50  .06  .00
  .03  .08  .00  .30  .27  .22
E3465  1970-71
  -1.  -1.  -1.  .01  .00  .40  .35  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  .05  .02  .00  -1.  -1.
E3751  1970-71
  .17  .03  .02  .00  .30  .83 1.70  .30  .00  .10  .90  .37  .10 1.15  .00  .07
  .07  .10  .06  .47  .20  .30
E4144
  .45  .20  .04  .05  .00  .30  .33  .90  .16  .05  .05  .28  .05  .75  .11  .14
  .10  .00  .00  .65  .28  .54
E4767  1970-71


E4867  1970-71
  .04  .05  .06  .05  .44  .94  .64  .25  .00  .20 1.07 1.08  .08  .50  .16  .01
  .05  .02  .24  .97  -1.  -1.
E5098  1970-71
  .27  .18  .35  .00  .03  .20  .24  .25  .01  .00  .03  .05  .02  .11  .02  .12
  .06  .00  .00  .52  .15  .07
E5151  1970-71
  .20  .05  .00  .00  .00  .61  .24  .00  .00  .00  .04  .02  .03  .25  .00  .00
  .00  .08  .00  .00  .05  .12
E5184  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .28  .30  .09  .04  .83  .04  .08
  .12  .17  .00  .75  .24  .17
E5756  1970-71
  .00  .00  .00  .00  .13  -1.  -1.  -1.  -1.  .00  .00  .00  .00  -1.  -1.  -1.
  -1.  .00  .00  .00  .00  .03
E6006  1970-71
  .15  .07  .05  .00  .37 2.05 1.40  .40  .03  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  .56  .25  .70  -1.  -1.
E6624  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .00  .10  .00  .00  .25  .14  .03
  .00  .00  .00  .19  .00  .00
E6736  1970-71
  .18  .02  .04  .20  .00  .65  .30  .32  .09  .14  .48  .24  .00  .90  .04  .00
  .05  .05  .00  .40  .26  .38
E7735  1970-7
  .13  .00  .00  -1.  .43  .92  .45  -1.  -1.  .06  .58 1.03  .25  .40  .06  .03
  .02  .07  .02  .04  .04  .11
E7946
  .35  .23  .14  .05  .00  .12  .11  .04  .01  .03  .13  .21  .03  .98  .12  .18
  .10  .05  .01  .34  .36  .30
E8697

  .05  .00  .27  .34  .33
E8752
  .17  .00  .00  .00  .00  .38  .10  .00  .00  .00  .00  .00  .00  .40  .03  .00
  .00  .05  .00  .00  .12  .05
E8832  1970-71
  .25  .04  .04  .04  .11  .85  .25  .00  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  .00  .00  .23  .06  .10
E9049  1970-71
  .12  .05  .00  .00  .35  .60  .60  .15  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  -1.  -1.  -1.
E9221  1970-71
  -1.  -1.  -1.  .03  .00  .45  .27  .05  .05  -1.  -1.  .18  .00  .35  .05  .00
```

```
  .05  .05  .00  .39  .22  .32
E9283
  .12  .02  .08  .00  .00  .53  .15  .02  .02  .04  .27  .12  .05  .45  .04  .01
  .04  .10  .01       .00  .00
E9458
  .09  .14  .10  .00  .00  .65  .48  .38  .06  .03  .02  .03  .04  .45  .15  .05
  .07
E9512  1970-71
  .03  .01  .02  -1.  -1.  -1.  -1.  .05  .00  .00  .00  .00  .00  .05  .04  .00
  .05  .00  .00  .20  .00  .05
L   6  1970-71
  -1.  -1.  -1.  .05  .19 1.34 1.55  -1.  -1.  .12  .98 1.13  .08 1.16  .20  .00
  .03  -1.  -1.  -1.  .27  .64
L  10  1970-71
  .04  .00  .00  .04  .19  .14  .74  .24  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  .12  .09  .75  .17  .64
L  11  1970-71
  .04  .00  .00  .08  .17 1.18  .64  .26  .02  .10 1.02  .56  .06 1.24  .16  .03
  .17  .12  .15  .58  -1.  -1.
L  33  1970-71
  .14  .10  .05  .00  .34  .90 1.25  .30  .00  .10 1.12 1.22  .07  .98  .00  .10
  .08  .14  .09  .56  .15  .22
L  46  1970-71
  .15  .04  .02  .00  .27 1.53 1.80  .40  .00  .04  .40  .35  .14 1.50  .14  .08
  .05  .29  .28  -1.  -1.  -1.
L  52  1970-71


L  53  1970-71
  .13  .07  .03  .00  .40 1.70 1.60  .33  .00  .06  .40  .05  .00  .85  .08  .13
  .05  .38  .11  .68  .10  .10
L  54  1970-71
  .13  .02  .02  .00  .23 1.20 1.10  .08  .00  .05  .39  .18  .00  .40  -1.  -1.
  -1.  -1.  -1.  .34  .06  .10
L 128  1970-71
  -1.  -1.  -1.  .00  .44  .90  .85  .25  .00  .08  .34  .18  .13  .82  .25  .05
  .05  .28  .00  .55  .11  .10
L 179  1970-71
  .12  .01  .00  .00  .30  .32 1.08  .32  .00  .00  .62  .64  .03 1.08  .34  .08
  .07  .44  .18  .65  -1.  -1.
L 191  1970-71
  .09  .05  .22  .00  .14  .45  .66  .24  .06  .03  .75  .51  .03  .72  .13  .11
  .11  .20  .18  .46  .08  .30
L 213  1970-71
  .04  .00  .10  .00  .17  .42  .88  .15  .00  .04  .91  .58  .05  .68  .00  .12
  .08  .06  .14  .62  .15  .44
L 250  1970 71
  -1.  -1.  -1.  .00  .19  .57  .89  -1.  -1.  .00  .32  .34  .04  .70  .00  .05
  .03  -1.  -1.  .15  .07  .10
L 259  1970-71
  .14  .01  .04  .00  .30  .60 1.16  .12  .00  .13 1.04  .82  .06  .68  .00  .18
  .10  .10  .00  .44  -1.  -1.
L 292  1970-71
  .07  .00  .00  .03  .27 1.15  -1.  -1.  -1.  .17 1.15 1.13  .10 1.58  .15  .15
  .06  -1.  -1.  -1.  .12  .63
L 303  1970-71
  .12  .02  .00  .00  .22 1.06 1.16  .30  .00  .04  .62  .84  .07 1.00  .32  .18
  .10  .42  .32  .62  .06  .16
```

```
L 372   1970-71
  .16  .02  .26  .00  .38  .36  .68  .13  .00  .04  .98  .46  .15  .64  .19  .02
  .00  .16  .00  .51  .15  .18
L 434   1970-71
  .05  .00  .00  .06  .41 1.05  .90  .18  .00  .31 1.08 1.20  .08 1.15  .10  .04
  .07  .16  .06  -1.  .17  .55
L 435   1970-71
  .06  .02  .00  .02  .38 1.28 1.06  .17  .00  .21 1.13 1.05  .03  .92  .27  .00
  .06  .06  .18  -1.  -1.  -1.
L 451   1970-71


L 458   1970-71
  .04  .02  .00  .02  .40  .47  .40  .24  .00  .11 1.06 1.11  .05  .72  .11  .03
  .12  .00  .35  -1.  .25 1.05
L 466   1970-71
  .14  .10  .07  .00  .44  .92 1.45  .60  .00  -1.  -1.  -1.  -1.  .65  .20  .04
  .06  .12  .09 1.00  .18  .14
L 694   1970-71
  .13  .10  .02  .00  .33 1.10 1.30  .25  .02  .08 1.35  .80  .06 1.00  .00  .03
  .05  .15  .09  .40  .08  .17
L1017   1970-71
  .06  .00  .00  .00  .15  .27  .62  -1.  -1.  .00  .13  .16  .01  .53  .20  .04
  .05  .09  .02  .13  .05  .13
L1074   1970-71
  .12  .10  .03  .00  .34 1.02 1.40  .27  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  .23  .12  .49  .09  .07
L1107   1970-71
  .08  .02  .01  .00  -1.  .90 1.47  -1.  -1.  .13 1.53 1.15  .06 1.16  .05  .02
  .04  -1.  -1.  .43  -1.  -1.
L1108   1970-71
  -1.  .03  .14  .00  .27  .55  .75  .13  .00  .00  .05  .00  .00  .66  .10  .19
  .01  .00  .00  -1.  .00  .00
L1181   1970-71
  .14  .09  .05  .00  .34  .86 1.00  .28  .00  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  .08  .07  -1.  -1.  -1.
M 100   1970-71
  .07  .04  .06  .26  .12  .30  .08  .06  .02  .16  .70 1.03  .06  .46  .07  .11
  .05  .16  .13  .58  .20  .33
M 101   1970-71
  .36  .27  .00  .20  .10  .68  .32  .05  .05  .09  .45  .10  .07  .77  .10  .03
  .10  .07  .05  .50  -1.  -1.
M 102   1970-71
  .52  .43  .05  .11  .00 1.02  .30  .48  .06  .05  .21  .25  .00  .60  .18  .05
  .04  .04  .00  .83  .20  .40
M 103   1970-71
  .45  .30  .28  .08  .00  .65  .45  .80  .10  .21  .45  .19  .04  .90  .28  .03
  .10  .09  .00  .67  .42  .55
M 104   1970-71
  -1.  -1.  -1.  .00  .00  .17  .30  .36  .13  .11  .15  .18  .10  .65  .16  .15
  .07  -1.  -1.  -1.  -1.  -1.
M 124   1970-71
  .15  .21  .20  .00  .35  .47  .72  .13  .02  .06  .33  .07  .07  .77  .10  .02
  .02  .04  .00  .67  .08  .09
M 225
  .04  .15  .03  .02  .05 1.10  .45  .21  .02  .20  .65  .40  .12
  .04  .20  .29  .70  .17  .47
M 226
  .03  .18  .10  .07  .02  .60  .24  .05  .01  .17  .65  .10  .08  .65  .05  .05
  .05  .29  .15  .75  .45  .17
```

```
M 228
        .20  .31  .06  .04 1.35  .50  .32  .01  .25  .62  .37  .17 1.05  .12  .10
  .05  .21  .20  .83  .20  .42
M 230
  .08  .08  .12  .15  .15 3.14  .74  .30  .08  .50 1.47  .67  .15 1.84  .21  .10
  .07  .40  .20  .60
N   A
  .14  .03  .08  .13  .12 1.25  .33  .70  .06  .13  .59  .21  .09  .76  .10  .06
  .05  .31  .10  .77  .51  .18
N   B
        .18  .06  .02  .02  .74  .25  .09  .01  .21  .70  .12  .14  .68  .03  .04
  .05  .30  .20  .99  .46  .16
N   1
  .57  .17  .06  .14                  .04  .00  .02  .20  .21  .13  .82  .18  .14
  .10  .03  .00  .40  .28  .52
N   2
  .12  .01  .06  .37  .07  .47  .04  .31  .10  .19  .56  .40  .11  .88  .03  .09
  .09  .20  .11  .58  .26  .37
N   3
  .27  .02  .20  .05  .03  .23  .08  .39  .08  .08  .40  .35  .02  .60  .03  .17
  .05  .25  .01  .49  .33  .12
N   4
  .10  .06  .20  .09  .03            .33  .01  .07  .31  .18  .02  .72  .05  .07
  .08  .18  .13  .28  .23  .24
N   5
  .11  .02  .09  .02  .01  .64  .11  .12  .01  .03  .28  .14  .04  .67  .10  .08
  .05  .15  .01  .32  .    .
N   6
  .27  .11  .24  .01  .02            .38  .16  .03  .14  .08  .08       .09  .13
  .10  .21  .01  .59  .37  .32
N   7
                                                 .01  .32  .02  .09  .64  .09  .13
  .07                 .35  .35
N  8A
  .11  .10  .14  .00  .00  .54  .38  .13  .03  .00  .06  .19  .01  .50  .03  .09
  .04  .00  .00  .28  .18  .12
N  9A


N  10


N  11

        .21  .02       .61  .31
N 12A


N  13
  .10  .10  .07  .16  .11 1.90  .37  .75  .04  .08  .55  .15  .20  .89  .10  .03
  .02  .28  .11  .94  .42  .10
N  14
  .15  .14  .08  .06  .01 1.21  .61  .23  .09  .23  .49  .22  .04  .69  .26  .10
  .11  .25  .03  .30  .39  .33
N  15
  .12  .03  .07  .06  .02 1.50  .46  .55  .02  .36  .69  .31  .11 1.53  .38  .05
  .07            .48  .48  .22
N  16
```

.13	.07	.04	.05	.03	3.05	.61	.36	.02	.27	.55	.32	.15	1.66	.25	.06
.11	.36	.14	.39	.44	.28										
N 17															
.09	.20	.11	.02	.02	1.13	.51	.41	.06							
	.20		.41	.23	.26										
N 18															
	.12	.14	.18	.17	.27	.08			.19	.55	.36	.04	.67	.12	.09
.02	.16	.26	.79	.28	.53										
N 19															
.11	.02	.05	.09	.09	.45	.07	.11	.00	.18	.35	.28	.15	.58	.04	.07
.13	.25	.07	.28	.20	.22										
N 20															
.37	.50	.19	.00	.00	.35	.45	.31	.15	.01	.11	.09	.00	.81	.16	.14
.13	.04	.00	.41	.37	.43										
N 21															
									.10	.35	.23	.03	.66	.15	.07
.02	.07	.00	.58												
S 201															
.33	.10	.25	.03	.02	.15	.08	.27	.10	.05	.12	.13	.04	.74	.13	.19
.08	.10	.01	.38	.32	.50										
S 202															
.21	.05	.20	.05	.02	.30	.10	.15	.10	.10	.29	.22	.12	.62	.10	.14
.06	.26	.04	.55	.32	.20										
S 203															
.15	.06	.24	.05	.00	.31	.11	.32	.05	.08	.18	.19	.09	.73	.07	.17
.08	.18	.01	.74	.37	.36										
S 204															
			.08	.04	.23	.14	.43	.07	.10	.41	.37	.03	.60	.05	.20
.03	.28	.02	.53												
S 205															
	.01	.04	.11	.00	.27	.08	.08	.06	.07	.20	.28	.07	.55	.06	.12
.05			.32												
S 206															
.07	.10	.07	.16	.18	.19	.05			.21	.55	.47	.05	.72	.10	.08
.01	.15	.17	.80												
S 208															
.03	.10	.03	.00	.08	.70	.33	.23	.03	.15	.49	.22	.13	.70	.05	.03
.05	.35	.22	.60												
S 209															
S 210															
			.05	.05	1.15	.38	.31	.05	.20	.70	.31	.18	1.00	.10	.07
.07	.20	.15	.76	.17	.48										
S 211															
.06	.20	.38	.04	.03	1.85	.38	.13	.05	.28	.60	.23	.12	.75	.06	.04
.07	.15	.16	.50												
S 212															
							.56	.04	.19	.37	.10	.20	1.20		
S 215															
							.13	.02	.11	.26	.28	.08	.50	.06	.10
.07	.08	.02													
S 217															
							.10	.00	.33	1.10	.62	.08	.70	.13	.10
.00			.55	.26	.26										
S 221	1970-71														
S 231															

```
        .15  .39  .10  .06 1.55  .68  .57  .07  .24  .95  .48  .30 1.56  .20  .10
  .07  .43  .17  .87  .30  .34
S 232
  .07  .20  .53  .26  .15 3.02 1.00  .58  .05  .34 1.05  .50  .42 2.30  .33  .07
  .08  .76  .25  .85  .41  .30
S 233
  .10  .04  .13  .13  .07  .56  .10  .29  .00  .15  .31  .18  .02  .75  .05  .05
  .06  .18  .15  .29  .35  .32
S 234
  .03  .11  .09  .00  .04  .92  .50  .15  .00  .18  .60  .35  .12  .75  .02  .04
  .05  .22  .22  .75  .19  .51
S 235
  .48  .26  .08  .04  .00  .18  .16  .07  .00  .03  .07  .19  .04  .80  .13  .16
  .11  .04  .01  .25  .40  .40
S 236
  .04  .04  .10  .40  .27 1.12  .28  .36  .20  .55  .58  .44  .13 1.32  .03  .05
  .03  .60  .38  .58  .27  .43
S 238


S 241
  .09  .20  .40  .02  .02 1.43  .36  .21  .05  .18  .45  .13  .12  .70  .07  .03
  .06
S 242
                                      .35  .06  .22  .47  .17  .12  .92  .20  .06
  .05
S 249


S 251
                                                 .15  .47  .35  .10  .60  .05  .17
  .10  .23  .08  .86  .29  .47
S 255
  .09  .21  .45  .22  .18 2.53  .95  .57  .08  .11 1.07  .37  .31 1.45  .15  .10
  .05  .23  .05 1.00
S 256
  .35  .15  .08  .00                .14  .05  .04  .08  .22  .00  .51  .12  .14
  .10            .42
S 257
  .07  .07  .08  .15  .09  .38  .05  .45  .05  .30  .52  .70  .05  .85  .07  .08
  .02  .25  .15  .65
V  85
                 .04  .25 1.50  .39  .10  .01  .38 1.15  .55  .35 1.00  .15  .00
  .01  .32  .00  .50  .15  .25
V 121  1970-71
  .02  .00  .02  .00  .40 1.10  .77  .17  .00  .18 1.13 1.20  .09 1.12  .13  .08
  .08  .25  .10  .52  .25  .50
V 138
  .02  .02  .10  .08  .31 1.34  .24  .21  .05
                 .21  . 8   10
V 165
  .02  .03  .40  .00  .20 1.70  .45  .19  .02  .15  .97  .45  .14 1.10  .15  .00
  .02  .30  .00  .60  .12  .30
V 166
  .04  .07  .20  .15  .23           .26  .03  .27  .75  .13  .22 1.13  .18  .00
  .05  .66  .02  .58  .20  .29
V 167
  .03  .10  .00  .03  .22  .70  .20  .08  .00  .25  .70  .38  .05 1.00  .00  .05
```

```
  .03  .02  .00  .56  .12  .75
V 168  1970-71
  .02  .00  .00  .10  .43  .56  .20  -1.  -1.  .40 1.05  .82  .05  .48  .01  .10
  .06  .00  .00  .30  .15  .45
V 169  1970-71
  -1.  -1.  -1.  .00  .34 1.25  .97  .07  .00  .18  .95 1.18  .07  .93  .05  .05
  .12  .23  .07  .17  .30  .52
V 170  1970-71
  -1.  -1.  -1.  .00  .48  .60  .65  .07  .00  .22 1.02  .20  .18 1.05  .09  .05
  .02  .23  .05  -1.  -1.  -1.
V 171  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .27 1.12  .85  .15 1.01  .14  .04
  .03  .35  .05  .53  .27  .30
V 172  1970-71
  .07  .00  .10  .04  .52  .83  .33  .08  .00  .15  .45  .00  .25 1.00  .22  .00
  .00  .40  .07  .43  .14  .18
V 173  1970-71
  .05  .05  .20  .02  .34 1.27  .68  .20  .03  .12 1.38  .63  .12 1.25  .08  .00
  .05  .23  .02  .66  .20  .40
V 174
  .00  .01  .04  .05  .24 1.25  .22  .08  .03
       .15  .00  .23  .15  .16
V 175  1970-71
  -1.  -1.  -1.  .02  .30  .57  .32  .08  .02  .32 1.00  .30  .10  .80  .03  .04
  .10  .05  .00  .55  .24  .35
V 188  1970-71
  .03  .02  .04  .00  .31 1.30  .60  .15  .00  .21  .90  .80  .10  .80  .04  .13
  .13  .07  .03  .29  .35  .56
V 189  1970-71
  .04  .07  .03  .00  .35  .90  .44  .07  .00  .20 1.10  .55  .08  .70  .07  .05
  .15  .05  .00  .63  .17  .38
V 190  1970-71
  .04  .07  .03  .00  .32  .80  .62  .24  .01  .12 1.20 1.25  .07  .88  .14  .06
  .15  .09  .07  .45  .21  .43
V 191  1970-71
  .03  .10  .05  .00  .37  .97  .32  .26  .00  .09  .95  .65  .19  .80  .04  .02
  .11  .40  .06  .46  .25  .31
V 192  1970-71
  .05  .04  .02  .00  .21  .55  .40  .05  .00  .19  .95  .72  .06  .50  .09  .10
  .10  .25  .05  .35  .20  .42
V 193  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  .23 1.58  .97  .05  .75  .00  -1.
  -1.  .25  .03  .35  .25  .35
V 194  1970-71
  .00  .00  .00  .00  .05  .40  .20  .04  .00  .13  .60  .70  .05  .63  .03  .05
  .20  -1.  -1.  .32  -1.  -1.
V 196  1970-71
  .15  .06  .07  .00  .18  .80  .66  .10  .00  .17 1.17 1.00  .05  .61  .10  .13
  .11  .20  .05  .65  .26  .55
V 198
  .05  .03  .14  .05  .36 2.25 1.20  .18  .01  .15  .60  .11  .05 1.00  .14  .05
  .02  .22  .03  .30  .20  .16
V 206  1970-71
  .04  .03  .07  .02  .34  .68  .28  .10  .00  .24  .88  .63  .07  -1.  -1.  -1.
  -1.  .12  .09  .57  .23  .42
V 207
  .03  .10  .32  .30  .42 1.40       .23  .02  .36  .40  .35  .39 2.05  .16  .02
  .04  .70  .05  .66  .25  .30
V 209  1970-71
  .15  .02  .00  .08  .31  .80  .30  .00  .03  .05  .21  .07  .03  .70  .10  .01
```

```
  .01  .03  .00  .10  .09  .15
V 221
  .00  .13  .00  .00  .10  .90  .15  .08  .00  .11  .92  .22  .11  .75  .05  .01
  .05  .12  .10  .48  .18  .65
V 224  1970-71
  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.  -1.
  -1.  -1.  -1.  .92  .25  .25
V 225  1970-71
  .03  .01  .05  .04  .35 1.45  .45  .17  .00  .26  .97  .25  .12 1.15  .10  .03
  .00  .16  .00  .60  .12  .37
V 227  1970-71
  .05  .02  .00  -1.  -1.  -1.  -1.  .10  .00  -1.  -1.  -1.  -1.  .52  .00  .08
  .08  .37  .05  -1.  .20  .55
V 232  1970-71
  .01  .08  .02  .04  .42 1.25  .92  .40  .00  .23 1.25  .80  .11  .51  .10  .02
  .08  .09  .10  .85  -1.  -1.
```

APPENDIX E

LIST OF BAND DURATION BY STATION AND YEAR

(-1 or blank space indicates missing data)

BAND DURATION 1967-68

A 21

A 23

A 24

A 26

A 27

A 29

A 30

A 31

A 32

A 33

A 34

A 35

A 36

A 37

A 38

A 41

A 42

```
A  44

A  45

A  46

A  47

E0442  1967-68
  000  015  070  040  000  060  000  000  000  060  000  120  060  015  000  030
  170  075  120  015  085  050
E1142  1967-68
  000  075  015  035  060  120  070  035  015  020  090  110  100  045  030  000
  265  130   -1   -1   -1   -1
E1253  1967-68
  015  060  055  090   -1   -1  045  000  000  030  090  085  045  045  045  045
  195  060  130  015  030  020
E1682  1967-68
  030  015  030  025  180  000  015  000  000  000  090  060  000  000  090  060
  150  000  110  000  075  060
E1743  1967-68
  035  045  000  030  000  130  045  070  015  015  000  030  030  060  045  000
  180  090  150  105  000  060
E3465  1967-68
   -1   -1   -1   -1   -1   -1  000   -1   -1   -1   -1   -1   -1   -1  070  030
  100  000  195  095  105  105
E3751  1967-68
  000  015  055  025  120  000  000  000  000  000  000  060  070  000  100  030
  140  120  090  000  045  040
E4144  1967-68
  060  070  050  040  060  090   -1  015  000  060  105  100  000  090  090  060
  195  090  120  045  075  080
E4767  1967-68
  045  090  045  060  015  105  035  040  000  035  040  105  000  000  045  000
  150  060  135  000  030  000
E4867  1967-68
  040  020  020  020  150  070  000  000  000  090  090  080  020  015  040  030
  170  090  100  000  060  025
E5098  1967-68
   -1   -1   -1   -1  000  120  000  000  000  000  000  070  000  085  015  045
  090  110  150  045  105  120
E5151  1967-68
  000  050  055  030  000  030  055  030  000  000  000  075  035  000  045  045
  185  000  105  000  000  060
E5184  1967-68
```

```
  060  075  040  025  000  120  000  070  030  040  070  130  075  070  070  060
  200  100  140  070  030  050
E5756  1967-68
   -1   -1   -1   -1  000  000  060  000  045  000  000  060  000  000   -1   -1
  000  000  150  000  000  000
E6006  1967-68
   -1   -1   -1   -1   -1   -1   -1  000  000  000  000  040  060  060  080  030
  140  100  140  000  060  070
E6624  1967-68
   -1   -1   -1   -1  000  000  000   -1   -1   -1   -1   -1   -1   -1  075  030
  000  000  090  000  030  000
E6736  1967-68
   -1   -1   -1   -1  060  120   -1  030  000  015  090  120  040  090  080  015
  225  115  120  000  030  060
E7735  1967-68
  045  045  060  030  000  000  060  000  045  000  070  000  040  030  070  030
  165  000  155  000  000  000
E7946  1967-68
  060  085  030  025  045  050  070  000  000  045  115  090  045  075  060  075
  220  120  105  000  015  060
E8697  1967-68
   -1   -1  060  025   -1   -1  075  000  000  030  085  090  040  030   -1   -1
  155   -1   -1   -1   -1   -1
E8752  1967-68
  015  015  045  000  000  045  000  000  000  000  090  000  055  000  085  015
  225  000  135  010  000  000
E8832  1967-68
   -1   -1   -1   -1  060  075   -1   -1   -1   -1   -1   -1   -1   -1  045  060
  080  135  140  000  085  090
E9049  1967-68
  040  045  035  045  150  050  000   -1   -1   -1   -1   -1   -1   -1  090  070
  060  060  140  050  070  100
E9221  1967-68
  030  040  075  000  000  105   -1   -1   -1   -1   -1   -1   -1   -1  045  030
  215  090  135  030   -1   -1
E9283  1967-68
   -1   -1   -1   -1  000  045  030  000  015  015  095  030  015  015   -1   -1
  120   -1   -1   -1   -1   -1
E9458


E9512  1967-68
  000  000  060  045  075  110  000  045  000  050  120  120  015  000   -1   -1
  090  075  150  075  000  000
L   6  1967-68
  000  020  030  030  170  060  000  000  000  000  060  090  000  000   -1   -1
  135  000   -1   -1   -1   -1
L  10  1967-68
  000  020  030  030  150  015  000  000  000  000  000  000  000  000  105  000
  130  000  100  000  000  000
L  11  1967-68
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  000  020  030  040  160  000  025  000  000  000  000  080  015  000  095  030
  125  030  100  000  020  000
L  33  1967-68
  030  020  040  050  160  060  015  000  000  000  000  075  050  055  095  050
  145  110  100  080  045  010
L  46  1967-68
  000  020  045  040  165  000  015  000  000  000  000  070  000  000  085  055
  120  120  115  000  045  030
L  52  1967-68
  020  020  055  050  160  000  000   -1   -1   -1   -1   -1   -1   -1   -1   -1
  135  100  120  000  070  100
L  53  1967-68
  030  020  045  040  160  000  000  000  000  000  000  070  070  000  090  060
  120  070  125  000  050  100
L  54  1967-68
   -1   -1   -1   -1  150  000  000  000  000  000  000  075  055  000  075  050
  120  070  120  025  070  105
L 128  1967-68
  030  025  090  045  120  000  100  000  045  000  055  075  060  000  075  045
  180  070  110  055  050  000
L 179  1967-68
  020  030  050  040  160  000  000  000  000  000  000  070  000  000  090  035
  140  050  100  000  070  040
L 191  1967-68
  000  025  030  030  170  000  000  000  000  000  000  065  000  000  090  000
  120  055  080  000  055  010
L 213  1967-68
  000  020  035  015  165  015  000  000  000  000  000  060  000  000  095  000
  140  060  110  000  060  000
L 250  1967-68
  035  020  045  030  120  000  000  000  000  000  000  000  000  000   -1   -1
  000  000  105  015  045  045
L 259  1967-68
  040  015  035  040  200  060  015  000  000  000  060  080  060  040  070  050
  160  060  080  000  000  040
L 292  1967-68
  000  020  020  000  140  060  000  000  015  000  000  070  000  000  085  000
  140  000  095  000  040  000
L 303  1967-68
  000  030  030  040  180  000  000  000  000  000  000  000  000  000  090  000
   -1  090  100  000  040  000
L 372  1967-68
  040  015  045  015  155  070  080  000  045  000  030  060  060  015  070  050
  180  000  110  020  030  000
L 434  1967-68
  030  030  030  030  160  000  015  000  000  000  090  090  000  000  050  070
  180  000  100  000  000  040
L 435  1967-68
  020  030  045  040  170  090  015  000  000  000  090  080  000  000  060  030
  150  050  110  000  050  040
L 451  1967-68
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  020  020  045  015  155  060  090  000  060  000  060  070  000  000  090  060
  150  120  105  030  035  000
L 458  1967-68
  030  020  035  030  150  060  000  000  000  030  090  090  000  000  045  000
  165  105  090  000  000  045
L 466  1967-68
  035  020  070  070  185  000  000  000  000  000  000  000  000  000  090  060
  180  120  095  000  090  015
L 694  1967-68
  000  020  060  045  175  000  000  000  000  000  000  000  000  000  080  000
  140  165   -1   -1   -1   -1
L1017  1967-68
  015  045  060  000  000  000  000  000  000  000  000  000  000  000  095  000
  000  000  120  000  045  040
L1074  1967-68
  030  030  040  030  150  070  015  000  000  000  000  100  060  000  075  060
   -1  070  135  070  060  070
L1107  1967-68
  000  030  045  050  180  000  000  000  000  000  000  060  000  000  105  000
  150  120  080  000  015  030
L1108  1967-68
  020  040  040  045  150  060   -1   -1   -1   -1   -1   -1   -1   -1  075  000
  000  000  135  030  045  055
L1181  1967-68
  000  025  030  050  150  000  000  000  000  000  000  060  070  000  080  060
  160  120  090  030  080  000
M 100


M 101  1967-68
   00   55   00   40   75  135   60   35   20   95   75  105   90   75  100   45
  250  125   -1   -1   -1   -1
M 102  1967-68


M 103  1967-68
   45   70   00   80  110   90   45   00   20   80  125   95   00   95   70   45
  240   95  135   00   70   60
M 104  1967-68


M 124  1967-68
  065  045  060  060  095  075  060  000  030  000  120  000  045  015  095  090
  150  060  155  030  045  000
M 225  1967-68
  010  020  035  035  135  060  075  000  000  060  085  090  045  030  095  020
  130  070   -1   -1   -1   -1
M 226  1967-68
  040  065  040  055  120  050  090  000  000  060  105  135  060  070  120  015
  145  065  120  000  015  040
M 228  1967-68
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  020  030  025  045  135  060  060  000  000  030  100  090  045  120  110  030
  120  060  120  000  040  060
N 230  1967-68
  060  040  060  060  120  060  090  000  000  060  130  090  060  075  215  030
  180  035  150  030  040  060
N   A  1967-68
  020  060  025  075  150  035  060   -1   -1   -1   -1   -1   -1   -1  115  030
  210  090  120  030  040  060
N   B  1967-68
  025  085  030  040  130  015  035  000  000  030  105  105  060  045  120  015
  240  105  090  000  045  045
N   1  1967-68
   -1   -1   -1   -1   -1   -1   -1  000  000  015  105  080  025  080   -1   -1
  270  085  105  000  015  035
N   2  1967-68
   -1   -1   -1   -1   -1   -1  015  015  015  020  090  090  040  015  060  075
  180  105  120  040  000  015
N   3  1967-68
  105  055  020  030  140  045  100  015  015  035  120  070  040  075  115  060
  180  100  120  015  050  025
N   4  1967-68
  015  070  040  015  110  010  050  000  000  020  090  085  045  060  100  080
  240  060   -1   -1  015  030
N   5  1967-68
  015  090  050  070  155  030   -1  015  015  055  100  070  065  070  060  045
  180  075  115  050  040  030
N   6  1967-68
  010  095  050  075  165  050  080  015  015  020  135  080  020  100  100  060
  180  045   -1   -1   -1   -1
N   7  1967-68
  005  070  040  075  175  050  080  015  015  055  110  075  035  065  090  100
  170  105  120  025  045  035
N   8


N   9  1967-68
  015  060  060  055  110  015  000  000  000  010  085  100  035  025  090  030
  230  060  120  015  000  025
N  10  1967-68
   -1   -1   -1   -1   -1   -1   -1  015  015  040  110  100  040  090  080  120
   -1   -1  125  015  045  035
N  11  1967-68
   -1   -1   -1   -1  170  065  095  015  015  015  110  105  050  120  105  120
  180  140  120  020  055  045
N  12


N  13  1967-68
   -1   -1   -1   -1  180  025  050  000  000  040  120  120  060  090  125  060
  210  120  125  050  010  075
N  14  1967-68
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  015  100  070  060  175  045  060  020  025  020  100  100  010  075  110  080
  140  045  130  020  045  035
N  15  1967-68
  035  090  050  095  135  020  045   -1   -1   -1   -1   -1   -1   -1  100  080
  160  055  185  060  015  015
N  16  1967-68
   -1   -1   -1   -1   -1   -1   -1  000  000  000  115  095  050  070  105  075
  145  025  140  020  040  025
N  17  1967-68
   -1   -1   -1   -1   -1   -1  070  025  015  045  120  100  045  100  085  065
  175  105  150  025  025  070
N  18


N  19


N  20


N  21


S 201  1967-68
  075  045  075  045  170  060  090  060  025  015  120  100  045  090  095  060
  300  105  120  015  045  090
S 202  1967-68
   -1   -1   -1   -1  150  060  060  000  030  075  120  065  045  045  125  045
  240  125   -1   -1   -1   -1
S 203


S 204  1967-68
  095  075  060  040  135  060  120  060  055  060  120  065  060  090  125  120
  240  120  120  000  030  030
S 205  1967-68
  150  030  045  000  120  045  060   -1   -1   -1   -1   -1   -1   -1  060  060
  210  090  120  015  060  090
S 206  1967-68
  030  065  030  000  135  045  075  000  000  060  090  090  045  045  060  030
  240   -1  120  000  015  030
S 208  1967-68
  020  030  045  015  165  045  060  000  000  030  105  075  045  030   -1   -1
  105   -1  120  000  045  015
S 209  1967-68
  020  015  060  015  180  045  030  000  000  000  100  080  045  060  080  030
  090  000  120  000  045  030
S 210  1967-68
  015  015  040  030  130  035  045  000  000  000  120  105  055  065  090  030
  090  000  105  020  030  060
S 211  1967-68
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  050  020  040  035  130  030  060  000  000  030  105  095  055  030  100  015
  150  090  105  000  015  030
S 212  1967-68
   -1   -1   -1   -1   -1   -1  050  000  000  045  120  105  055  090   -1   -1
   -1   -1   -1   -1   -1   -1
S 215


S 217  1967-68
   -1   -1   -1   -1   -1   -1   -1  000  000  075  150  150  000  030   -1   -1
  195  070  105  000  000  035
S 221  1967-68
  000  020  030  025  000  040  045  015  020  030  015  040  025  035  090  060
  240  000  090  040  000  035
S 231  1967-68
  030  020  100  030  165  065  040  000  000  030  115  080  065  120  075  040
  135  045  135  020  030  030
S 232  1967-68
  025  035  105  030  120  075  055  000  000  030  120  090  055  090  090  065
  120  000  130  045  045  045
S 233  1967-68
  015  090  055  030  095  015  060  000  000  015  105  090  045  090  105  030
  240  030  120  015  060  060
S 234  1967-68
  015  010  030  015  140  015  130  000  000  030  140  220  050  060  180  015
  220  000  190  000  065  015
S 235  1967-68
  045  075  015  060  000  035  065  000  015  035  120  090  015  040  045  025
  225  050  090  030  000  035
S 236  1967-68
  030  120  040  030  135  030  150  000  000  045  100  075  045  075  075  060
  240  120  135  050  015  030
S 238  1967-68
   -1   -1   -1   -1  015  015  070  020  015  015  060  055  015  125  125  120
  080  060  100  060  040  015
S 241  1967-68
   -1   -1   -1   -1   -1   -1   -1  000  000  075  080  120  045  030  135  040
  120  090  110  000  030  030
S 242  1967-68
  045  075  045  035  120  075  060  000  000  025  105  115  045  055   -1   -1
  150   -1   -1   -1   -1   -1
S 249


S 251  1967-68
  060  065  045  050  135  075  060  000  030  045  075  095  060  025  065  075
  195  105  120  010  025  015
S 255


S 256
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S 257

V  85  1967-68
  045  025  045  000  125  020  000  000  000  045  120  080  055  000  090  060
  120   -1  125  060  060  015
V 121  1967-68


V 138  1967-68
   -1   -1   -1   -1  120  060  065  015  050  015  135  070  015  070  090  090
  135  060  120  060  080  015
V 165  1967-68
  030  035  035  000  130  075  055  000  045  045  105  070  045  035  065  030
  135  000  125  060  060  000
V 166  1967-68
  030  025  025  025  105  035  015  000  000  015  105  075  045  030  050  010
  150  015  125  015  060  060
V 167  1967-68
  035  015  030  000  120  055  000  000  000  070  115  085  060  000  090  050
  150  000  120  000  060  045
V 168  1967-68
  025  015  035  000  180  015  000  000  000  060  080  100  045  000  075   -1
  180  075  085  015  000  045
V 169
  045  025  035  000  110  000  000  000  000  045  085  070  000  000  070  070
  160  000  090  000  065  020
V 170  1967-68
   -1   -1   -1   -1  155  060  000  000  000  000  065  060  000  000   -1   -1
  150  060   -1   -1   -1   -1
V 171  1967-68
  045  030  045  000  170  065  050  000  000  000  080  065  000  000  095  045
  150  030  110  030  060  000
V 172  1967-68
  045  015  045  030  120  075  065  000  000  000  120  075  000  000  075  060
  180  000  120  000  030  000
V 173  1967-68
  050  020  025  030  120  070  060  000  000  000  120  075  030  000  065  060
  135  060  135  030  080  000
V 174  1967-68
  035  030  060  035  120  120  000  015  090  000  120  065  000  000  090  060
  180  000  180  040  080  060
V 175  1967-68
   40   15   10   20  120   75    0    0    0   45   90   90   30    0   75   45
  135  060   -1   -1   -1   -1
V 188  1967-68
  030  020  020  000  160  060  000  000  000  045  080  090  050  000  075  035
  135  000  080  000  060  020
V 189  1967-68
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  035  020  020  020  180  075  000  000  000  050  080  050  030  000  065  015
  150   -1  120  000  015  030
V 190  1967-68
   -1   -1   -1   -1  165  000  000  000  000  060  080  075  000  000  075  000
  180  030  095  000  000  015
V 191  1967-68
  030  020  045  000  180  075  000  000  000  000  095  090  000  015  070  045
  180  045  090  000  095  000
V 192  1967-68
  035  020  030  000  180  000  000  000  000  090  090  075  000  000  070  060
  155  060  065  000  000  020
V 193


V 194  1967-68
  000  030  030  000  190  075  000  000  000  090  090  120  060  000  090  060
  180  060  120  000  000  060
V 196  1967-68
  045  020  030  035  135  000  030  000  000  000  000  070  015  045   -1   -1
  150   -1   -1   -1   -1   -1
V 198  1967-68
  045  030  060  040  140  075  015  000  060  015  120  090  045  000  070  060
  240  000  120  030  060  060
V 206  1967-68
  030  020  025  015  180  000  000  000  000  000  090  070  000  000  075  050
  150  030  100  020  090  015
V 207  1967-68
  040  030  045  045  160  075  060  015  060  060  120  075  030  015  075  050
  195  000  150  060  060  080
V 209  1967-68
   -1   -1   -1   -1  000  075  000  030  030  070  105  075  060  050  070  060
  100   -1  105  080  000  000
V 221  1967-68
  025  035  030  025  105  015  065  000  000  075  120  090  060  060  090  045
  120  060  100  065  045  060
V 224  1967-68
  030  020  030  030  165  050  065   -1   -1   -1   -1   -1   -1   -1  090  060
  190  000  135  015  040  000
V 225  1967-68
  050  020  035  055  180  060  000  000  000  045  075  075  035  000  060  045
  150  000  125  020  070  000
V 227


V 232


BAND DURATION  1968-69
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A  21  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1  075  000  000  220  155
 000  180  000   -1  165  090  000  095  025
A  23  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1  000  000  015  140  070  070  000  000
 015  080  040  085  090  070  010  000  015  045  075  060  000  000  200  120
  -1   -1   -1   -1   -1   -1  000  000  015
A  24  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1  000  000  065  115  100  090  065  015
 060  080  035  095  040  075  000  015  020  085  085  065  000  015  180   -1
  -1   -1   -1   -1   -1   -1  000   -1   -1
A  26  1968-69
  -1   -1   -1   -1  060  000  060  090   -1   -1   -1   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1  000  000  030
A  27  1968-69
  -1   -1   -1   -1  035  000   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1  000  030  025
A  29  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1  050  095  105  050  065  085
 070  050  020  115  090  055  090  000  055  000  070  085  000  000  220  140
 060  220  165  070  175  060  000  090  050
A  30  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1  000  000  060  085  100  050  075  000
 075  055  010  110   -1   -1  030  000  000  000  070  070  000  000  220  140
 000  270  060  040  140  100  000  100  030
A  31  1968-69
  -1   -1   -1   -1  000  000  015  180  000  000   -1   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1  000  050  015
A  32  1968-69
  -1   -1   -1   -1  000  000  000  145  015  000  015  085  080  015  085  015
 000  025  020  095  000  035  000  020  015  000  050  000  000  015  125  070
 000  135  000  050  130  080  025  055  050
A  33  1968-69
  -1   -1   -1   -1  000  000  000  180  000  000  000  110  110  055  015  000
 000  060  015  065  050  035  000  000  015  000  040  085  000  000  200  070
 000  225  000  015  160  095   -1  100  050
A  34  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1  000  100  090  050  035  000
 000  035  020  030  045  040  015  050  015  000  030  070  000  000  120   -1
  -1   -1   -1   -1   -1   -1  000  060  065
A  35  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1  000  000  000  080  110  015  060  000
 000  075  000  055  060  090  110  015  020  000  070  085  000  000   -1   -1
  -1   -1   -1   -1   -1   -1   -1  120  065
A  36  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1   -1   -1  000  030  045  000  050  000
 000  035  035  000  020  060  000  060  015  000  085  065  015  000  035  075
```

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  000  230  000  000  145  090  000  080  065
A  37  1968-69
   -1   -1   -1   -1  015  015  000  120  015  015  000  105  160  015  090  105
  155  100  030  080  075  165  075  105  040  030  060  015  065  000  075  220
  015  275  130  035  130  095  030   -1   -1
A  38  1968-69
   -1   -1   -1   -1  000  000   -1   -1   -1   -1  000  105  090  000  035  015
  070  090  030  060  085  125  110   -1   -1   -1   -1   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1  000  055  050
A  41


A  42


A  44


A  45


A  46


A  47
   -1   -1   -1   -1   -1   -1  000  150   -1   -1  045  120  135  015   -1  105
  160  070  025  110   -1   -1   -1  060  030  015  075  075  065  000  160   -1
  090  270   -1   -1   -1   -1  125  060  055
E0442  1968-69
  080  030  055  020  030  100  030  190  000  000  090  150  125  105  120  000
  000  060  020  080  055  080  050  030  030  065  095  075  000  000  090  125
  000  255  000  060  150  090  000  055  055
E1142  1968-69
   -1   -1   -1   -1  070  115  050  180  080  040  150  165  095  045  115  175
  085  080  040  135  095  125  120  075  080  095  055  115  055  210  135  240
  080  210   -1   -1   -1  100  000  145  060
E1253  1968-69
   -1   -1   -1   -1  045  120  045  120  065  035  080  180  110  055  090  120
  150  075  045  120  075  145  120  120  050  075  055  105  045  215  195  145
  060  240  135  045  130  060  040  150  055
E1682  1968-69
  040  025  025  045  015  150  000  175  000  000  075  150  180  060  130  105
  120  085  020  090  130  110  150  110  045  090  095  065  015  130  235  160
  075  325  150  055  165  075  060  070  030
E1743  1968-69
  045  030  045  090  050  055  090  120  060  040  085  120  120  075  055  015
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  090  080  045  115  105  120  060  060  045  120  105  085  025  215  235  135
   60  205  150   30  170  100    0  120   65
E3465  1968-69
  120  040  060  030   -1   -1  090  135  075  030  075  150  180  075  090  120
  075  075  030  075  095  120  030  060  075  090  100  015  040  300  150  240
  105  310  150  040  140  075  000  080  060
E3751  1968-69
  075  030  020  045  000  140  000  185  000  000  045  200  180  070  135  015
  155  070  030  100  125  120  120  095  040  090  085  015  015  225  195  155
  090  320  150  075  130  075  020  070  030
E4144  1968-69
  105  025  035  060  070  030  060  185  055  045  080  140  105  065  090  120
  130  070  025  140  110  090  060  000  060  060  105  075  050  235  160  135
  090  205  140  050  155  120   -1  150  060
E4767  1968-69
  060  045  045  045  015  045  075  150   -1   -1  075  135  095  055  075  150
  170  070  030  110   -1   -1   -1   -1   -1   -1   -1  100  000  240  090  150
  080  195  150  045  160  135   -1  105  060
E4867  1968-69
  090  030  035  060  040  115  000  155  000  000  075  145  200  105  120  120
  125  090  030  100  080  130  170  095  050  105  060  050  040  180  300  175
  110  320  130  050  180  080  035  060  040
E5098  1968-69
  090  060  095  060  060  045  015  165  055  015  045  090  145  075  105  015
  060  040  030  110  030  070  015  090  040  080  105  015  000  120  275  090
  135  270  000  045  185  050  000  060  090
E5151  1968-69
  085  015  040  000  000  015  060  000  000  000  090  155  085  110   -1   -1
  085  155  025  120  095  065  075  000  075  090  105  060  000  000  240  170
  000  060  000  015  165  100  000  105  040
E5184  1968-69
  120  040  045  000  065  140  095  170  090  060  140  160  105  100  080  165
  140  090  030  160  115  180  015  090  070  045  080  090  050  220  000  185
   60  185  180   55  175   80    0  115   90
E5756  1968-69
  040  020  025  000  000  000   -1  000  000  000  000  105  090  050  060  000
  000  050  025  075  045  090  150  090  000  000  065  000  060  015  240  165
  015  300  150  055  165  095  000  055  030
E6006  1968-69
   -1   -1   -1   -1  000   -1  000  165  000  000  000  200  160  115  110  105
  150  060  030  105  120  140  150  110  070  090  080  000  050  300  220   -1
   -1   -1   -1   -1   -1   -1  030  050  030
E6624  1968-69
   -1   -1   -1   -1   -1   -1   -1   -1  000  000  000  105  120  060  075  000
  000  055  040  060  075  105  120  015  015  050  015  000  000  000  120  045
  000  330  055  030  120  080  000   -1   -1
E6736  1968-69
  060  000  060  000  060  085  075  150  050  040  120  170  105  090  090  165
  140  080  030  120  105  155  095  000  040  090  090  090  035  200  230  210
   65  210  150   35  160  105    0  150   65
E7735  1968-69
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  050  015  060  060  000  000  000  105  000  000  075  105  130  050  070  110
  155  090  040  100  080  140  120   -1   -1   -1   -1  060  015  180  165  165
  095  310  145  090  160   -1  045  080  045
E7946  1968-69
  125  045  030  040  075  080  060  120  050  050  095  160  130  055  080  120
  140  050  030  130  115  095  060  000  015  060  070  105  035  220  145  115
  100  195  150  045  150  095  075  155  060
E8697  1968-69
  110  035  015  045  060  030  075   -1  060  040  105  170  135  095  050  015
  055  020  015  050   -1   -1   -1   -1  000  060  040  120  045  210  180  090
  075  195  135  035  145  060   -1  135  030
E8752  1968-69
  070  035  050  000  000  000  000  195  000  000  100  095  105  060  000  135
  000  070  015  025  065  075  135  000  040  015  065  075  000  000  200  135
  000  120  000  040  165  105  000  095  035
E8832  1968-69
  120  040  075  030  000  075  000  150  000  000  040  060  120  015  065  015
  000  035  020  050  030  040  015  090  020  015  080  045  000  190  240  070
  000  160  155  035  180  090  000  065  100
E9049  1968-69
  085  050  015  050  000  110  000  180  040  045  000  140  170  080  120  000
  150  050  020  075  130  120  120  110  050  090  100  000   -1   -1   -1  180
  095  310  160  060  130  100   -1  060  060
E9221  1968-69
  080  045  055  045  060  055  105  150  050  000   -1   -1   -1   -1  085  155
  160  065  030  150   -1   -1   -1  000  070  100  090   -1  000  210  250  210
   65  200  150   65  150  105    0    1    1
E9283  1968-69
  120   -1   -1   -1   -1   -1   -1   -1   -1   -1  000  075  140  015   -1  120
  100  065  025  115  080  195  105  030  030  000  060  070  000  000  160  090
  000  245   -1   -1   -1  095  000  075  035
E9458


E9512  1968-69
  090  030  095  080  060  075  000  000  065  075  075  115  190  045  080  110
  045  070  025  080  045  100  095  095  060  090  105  120  045  210  090  195
  015  300  135  065  120  120  000  060  025
L   6  1968-69
  115  030  015  060  000  120  000  100  000  000   -1   -1   -1   -1  105  130
  145  140  030  130  060  075  140   -1   -1   -1   -1  075   -1  225  240  175
  070  300  105  020  075  080  060   -1   -1
L  10  1968-69
  040  030  015  025   -1   -1  000  120  000  000  030  145  145  090  070  150
  110  070  030  080  050  100  155  100  055  105  090   -1  000  220  260   -1
   -1   -1   -1   -1   -1   -1  070  045  025
L  11  1968-69
  120  030  010  050  050  130  000  150  000  000  060  130  150  120  080  150
  155  085  025  105  060  100  155  110   -1   -1   -1   -1  000  220  220  160
  095  315  040  015  080  100  020  030  035
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L  33  1968-69
  110  030  015  045  000  130  000  175  000  000  045  120  185  090  090  015
  160  065  020  085  115  115  150  090  040  090  105   -1  050  220  205  150
  090  330  160  065  150  110  040  055  030
L  46  1968-69
  080  055  000  030  000  120  000  165  000  000  000  135  135  120  105  140
  145  080  025  090  130  135  120  070  050  090  090  000  000  210  200  110
  095  310  155  065  110  110  030  070  045
L  52  1968-69
  055  070  000  035  000  100  000  180  020  020  000  135  200  095  100  110
  120  060  025  085  145  130  140  085  045  095  075  000  070  210  200  130
  080  330  130  070  135  120   -1   -1   -1
L  53  1968-69
  080  065  020  035  000  130  000  180  000  060  000  130  140  090  110  130
  190  045  030  100  150  125  150  105  045  075  080  000  000  205  210  190
  080  305  145  075  125  120  015  050  030
L  54  1968-69
   -1   -1   -1   -1  000  085  000  180  000  000   -1   -1   -1   -1  100  000
  050   -1   -1   -1  145  125  165  090  035  090  085  000  000  180  215  175
  085  295  130  080  150  110  045  070  045
L 128  1968-69
   -1   -1   -1   -1  000  120  000  120  000  060  050  145  185  120  105  150
   -1   -1   -1   -1  075  145  145  100  060  085  115   -1  050  205  270  095
  070  315  180  085  210  085   -1  050  040
L 179  1968-69
  040  000  000  000  000  100  000  145  000  000  060  150  150  100  115  120
  120  065  000  100  115   -1   -1  110  060  060  090   -1  055  200  170  185
  080  280  150  060  110  085  015  060  025
L 191  1968-69
  120  020  020  040  000  090  000  130  000  000  030  120  150  070  120  030
  040   -1   -1   -1  090  090  150  075  025  050  090  000  025  210   -1  190
  025  315  125  000  135  060  020  040  020
L 213  1968-69
  140  025  020  000  000  090  000  120  000  000  060  120  165  140  135  150
  160  070  025  115  095  100  145  075  045  080  100   -1  030  215  210  175
  075  280  045  000  000  070  010  030  025
L 250  1968-69
   -1   -1   -1   -1  000  075  000  075  000  000  000  090  115  105  090  000
  000  075  030  085  125  110  155  045  000  075  080  000   -1   -1  180  165
  070  260  150  055  140  085  015  105  045
L 259  1968-69
  120  030  010  035  000  150  000  175  000  000  030  140  170  080  110  140
  150  095  020  100  125  120  160  090  070  100  090  070  030  190  240  170
  090  330  160  065  150  120  060  070  020
L 292  1968-69
   -1  060  025  040  000  100  000  060  000  000  000  150  150  100  095  130
  125   -1   -1   -1  060  080  140  100  050  090  080  040  000  200  240  180
  085  310  110  030  120  105  060  050  025
L 303  1968-69
  140  030  000  025  000  100  000  130  000  000  000  140  150  110  100  070
  110  065  040  110  120  090  170  100  060  060  100  000  030  200  170  195
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  090  300  110  040  100  090  020  050  020
L 372  1968-69
  110  040  040  040  000  130  000  180  060  040  000  140  170  095  100  000
  150  095  035  120  115  110  135  110  060  090  100  100  000  190  245  165
  070  325  175  080  130  075  000  050  020
L 434  1968-69
   -1   -1   -1   -1  030  115  000  150  000  000  000  150  160  090  130  130
  135  095  015  110  085  130  140   -1   -1   -1   -1  050  000  320  270  180
  080  315  155  025  180  095  025  065  045
L 435  1968-69
  135  035  020  075  040  110  000  115  000  000   -1  120  150  140  120  135
  150  095  020  115   -1   -1   -1  040  050  065  105   -1  000  240  250  170
  080  315  105  025  120  070  015  055  035
L 451  1968-69
  100  035  030  045  000  120  000  120   -1   -1  000  150  110  100  115  000
  030  070  030  120  060  135  150  095  025  080  120   -1  050  135  210  150
  090  375  145  055  155  085   -1   -1   -1
L 458  1968-69
  075  030  025  030  030  095  000  125  000  000  060  135  165  090  150  135
  130  095  020  110  060  060  180  080  070  075  090  045   -1   -1  000  150
  080  320  000  015  020  035   -1  045  030
L 466  1968-69
  095  045  030  040  000  075  015  170  015  015  000  150  190  160  120  000
  135  070  030  090  145  165  160  105  045  085  100   -1  000  210  210  205
  090  310  170  070  155  080  045  075  020
L 694  1968-69
  100  050  000  000  000  075  000  170  000  000  000  150  110  120  120  000
  120  070  080  045  140  140  170  090  045  090  090  000  000  195  210  180
  100  345  150  070  125  075  015  065  030
L1017  1968-69
  095  060  000  000   -1   -1   -1   -1   -1   -1  000  115  000  120  030  000
  000  055  015  085  045  105  165  030  000  075  080  000  000  000  180  115
  060  300  105  080  105  100  000  090  060
L1074  1968-69
   -1   -1   -1   -1   -1   -1   -1   -1  050  060  000  140  160  090  110  130
  155  070  035  095  130  130  150  110  040  080  070  000  060  230  220  160
  080  310  145  070  135  100  040  095  040
L1107  1968-69
  010  050  030  000  000  120  000  155  000  000  000  150  150  120  120  000
  120  085  030  075  150  105  165  095  035  090  070  000  040  225  190  165
  080  330  165  050  130  125  045  050  030
L1108  1968-69
   -1   -1   -1   -1   -1   -1  000  130   -1   -1   -1   -1   -1   -1  075  000
  000  040  030  120  070  105  120  090  080  060  075   -1   -1   -1   -1   -1
   -1   -1  095  040  120  085  030  080  045
L1181  1968-69
  080  055  015  040   -1   -1   -1   -1  000  000  000  130  195  060  110  015
  150  080  020  085  135  090  130  090  050  090  105   -1   -1  195  175  190
  090  320  145  020  160  090  020  050  035
M 100
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M 101   1968-69
  105    50    45    75    65   155    95   165    90   120   140   155    95    75   105   160
  100    80    35   180    90    70    75    60   135    90   100   135    65   230   105   155
  105   150   175    30   165   105     0   165    90
M 102   1968-69


M 103   1968-69
   90    50    35    90    80    75    90   150    70    45   135   165    90    70   105    95
   80   110    35   150   140   120   120     0    50   140   120    50    65   280   195   150
  100   165   160    45   165   120     0   160    95
M 104   1968-69
   85    50    30    95    90    95    75   180    65    40   125   150   105    80   100    75
   80     1     1     1     1     1     1     0    35    75   105    65    50   240   150   165
   85   150   135    45   165   125    30   140    95
M 124   1968-69
  090   050   055   065    -1    -1   000   195   000   000   000   180   120   120   090   000
  150   120   025   120   120   140   165   120   060   105   060   055   000   050   255   105
  075   345   180   055   180   090   075   090   045
M 225   1968-69
   -1    -1    -1    -1   070   100   000   150   075   015   140   195   125   060   100   160
  185   060   025   110   060   170   080   065   035   090   085   100   070   200   190   150
  055   310   000   000   110   050   090   070   055
M 226   1968-69
  090   050   030   060   000   135    -1   150   000   000   095   195   150   120    -1    -1
   -1    -1   030   075   050   090   045   090   040   105   090   075   050   210   175   120
  075   275   000   035   130   075   055   150   035
M 228   1968-69
  110   060   035   040   000   110   000   150   010   015   135   190   140   060   100   140
  170   060   025   105   085   150   105   070   035   100   100   100   060   230   185   160
  040   310   030   025   115   070   070   085   050
M 230   1968-69
  120   050   050   075   000   130   000   180   015   050   120   180   180   060   120   125
  190   120   045   120   090   180   080   075   040   095   090   120   065   240   180   135
  070   330   125   060   130   110   070   120   065
N   A   1968-69
  090   050    -1    -1   040   075   060   135   065   035   080   180   120   105   100   125
  175   090   040   120   070   140   120   060   060   100   100    -1   065   210   195    -1
  090   220    -1   020   195   105   065   165   040
N   B   1968-69
  090    -1    -1   025   000   125   000   105   000   015   080   165   180   115   115   175
  180   070   030   120   075   175   025   070   050   090   090   090   040   210   165   150
  045   280   000   020   150   035   075   085   050
N   1   1968-69
  095   045   030   055   030   085   060   120   080   030   045   150   090   035   060   120
  150   050   020   125   125   080   075   000   015   045   035   135   030   210   125   125
  045   145   135   040   090   090   070   170   030
N   2   1968-69
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  105  060  020  040  050  075  075  090  070  015  100  180  100  075  105  100
  175  075  025  120  115  090  145  050  015   -1   -1  135   -1   -1  200  120
  050  200  120  035  145  065  055  180  050
N   3  1968-69
  105  050  030  075  060  075  055  130  060  015  085  190  105  065  140  120
  145  040  030  105  130  150  120  030  025  055  070  110  075  190  195  110
  060  215  135  050  130  055  085  145  060
N   4  1968-69
  115  060  025  060  040  090  060  135  075  045  060  155  130  130  100  150
  180  075  035  100  135  125  090  080  015  060  050  075  075  215  195  150
  055  195  130  030  105  135  090  140  070
N   5  1968-69
  110  060  020  035  045  075  090  105  025  055  085  170  120  095  110  145
  170  080  030  085  100  180  090  090  010  060  060  090  065  220  195  150
  065  210  135  045  120  070  055   -1   -1
N   6  1968-69
   -1   -1   -1   -1  090   -1   -1  060  035  070  065   -1   -1   -1   -1  165
  075  200  120  055  120  075  045  120  060
  115  060  015  050  070  125  090  150  015  015  075  160  120  170   -1   -1
N   7  1968-69
  105  065  015  040   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1   -1  090  015  045  050  075  065  210  175  165
  075  230  150  050  105  070  075  140  055
N  8A  1968-69
  120  065  040  030   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1  115  120
  060  075  035  130  080  165  130  090  030  095  095  105  015  135  145  130
  015  250  110  040  095  120  015  155  065
N  9A  1968-69
  115  045  020  035  045  125  030  145  000  055  060  190  140  145  090  120
  175  085  040  110  095  135  120  075  005  065  070  060  035  190  195  145
  080  220  145  040  110  035  045  145  055
N  10  1968-69
  110  060  020  065  040  130  065  195  015  060   -1   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1   -1  095  010  080  075   -1  000  185   -1   -1
   -1   -1   -1   -1   -1   -1  085  130  055
N  11  1968-69
  095  065  015  055  020  130  115  210  015  065  120  145  135  015  120  130
  170  080  030  140  080  160  130  095  010  085  060  075  015  210  185  185
  085  215  140  040  125  080  075  125  060
N 12A  1968-69
   -1   -1   -1   -1  000  015  060  160  015  055  170  105  175  060  105  135
  120  070  030  125  090  190  120  075  030  080  075  075  030  140  195  205
  015  260  130  050  110  080  000  140  060
N  13  1968-69
  095  060  015  055  030  130  050  180  045  025  100  175  175  130  095  135
  185  080  035  120  075  145  125  060  055  090  085  090  045  210  200  170
  090  250  130  030  110  050  055  145  060
N  14  1968-69
  115  055  025  045  045  120  045  185  020  010   -1   -1   -1   -1  100  120
  135  075  035  125  075  135  135  095  020  085  075  090  030  240  170  130
  060  245  120  045  110  065  065  110  045
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N  15  1968-69
  095  060  035  075  015  130  030  120  000  025  090  180  165  090  100  135
  165  070  040  130  085  160  090  075  015  065  115  050  045  210  150  195
  105  255  115  035  135  080  050  125  050
N  16  1968-69
  095  045  025  015  045  065  025  120  000  035  100  180  155  125  110  135
  160  065  040  120  080  160  105  090  015  075  110   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1  065  130  060
N  17  1968-69
  115  060  030  040  020  130   -1   -1   -1   -1   -1   -1   -1   -1  090  120
  170  070  030  160  085  155  125  090  010  090  075  090  055  205  155  230
  075  250  130  045  115  085  050  120  060
N  18


N  19


N  20


N  21


S 201  1968-69
  125  045  035  095  060  090  070  170  065  020  090  180  115  085  090  140
  135  060  030  120  150  175  120  150  045  105  105  120  045  180  180  120
  075  195  120  055  140  090  090  135  060
S 202  1968-69
  115  045  030  095  090  120  075  180  065  025  060  160  100  075  085  135
  165  075  020  120  120  210  105  070  015  075  085  095  045  180  210  120
  065  210  145  045  130  160  060  140  060
S 203  1968-69
  120  040  020  055  075  090  070  140  070  030  075  180  115  075  105  140
  150  055  025  075  120  180  130  040  025  050  075  095  075  180  195  100
  075  205  155  045  135  105  110  150  060
S 204  1968-69
  105  050  025  070  050  070  055  170  070  020  090  180  100  120  080  130
  140  055  020  105  130  185  130  045  020  070  070  070  060  210  195  110
  060  230  120  060  120  085  085  145  060
S 205  1968-69
  120  060  030  090  060  090  060  120  080  020  090  170  100  070  085  150
  190  050  030  130   -1   -1   -1  060  000  040  040  090  065  180  200  090
  065  195  150  030  135  090  040  170  065
S 206  1968-69
  080  055  020  030  055  075  045  130  090  020  105  200  145  120  105  190
  110  055  030  090  065  145  075  060  020  075  075  075  050  210  210  130
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  045  225  000  000  150  120  060  150  065
S 208  1968-69
  095  055  035  035  000  090  000  135  000  015  120  195  125  000  120  135
  150  065  030  105  090  150  080  060  050  075  080  045  060  220  195  155
  040  315  015  055  130  030  030  075  045
S 209  1968-69
  090  055  035  025  000  095  000  150  000  030  110  180  120  000  110  135
  135  060  025  105  090  185  120  060  015  075  060  030  045  210  180  140
  055  300  060  025  135  030  000  070  030
S 210  1968-69
   -1  055  020  045  000  060  000  170  000  000  080  175  140  060  120  165
  160  070  025  185  080  155  050  060  030  070  075  000  040  210  090  085
  035  305  070  030  115  060  000  080  045
S 211  1968-69
  080  055  030  060  000  130  000  135  015  030  080  170  130  060  120  145
  190  060  025  120  090  180  045  055  040  070  095  095  060  195  165  135
  050  275  000  020  125  060  060  080  065
S 212  1968-69
  105  065  040  075  060  115  040  180  000  035  090  180  170  090  120  135
  190  090  035  110  090  180  100  095  050  100  090  090  075  200  180  105
  075  300  090  050  160  080  080  135  070
S 215  1968-69
  120  060  020  035  060  090  060  115  090  010  070  180  120  065  070  120
  175  040  020  065  135  180  135  040  000  030  030   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1   -1   -1   -1
S 217  1968-69
  105  045  025  030  070  060  080  130  085  025  090  180  090  095  100  150
  135  045  020  080  145  180  000  075  000  055  060  135  060  205  210  105
  065  205  135  045  150  060  070  170  060
S 221  1968-69
  120  060  060  000  000  000  000  210  000  000  070  150  120  060  120  150
  110  080  050  110  075  105  135  000  060  000  090  090  000  000  160  100
  000  280  110  060  130  090   -1   -1   -1
S 231  1968-69
  115  065  025  085  000  110  040  150  070  030  090  165  140  045   -1   -1
   -1   -1   -1   -1  095  170  080  080  040  105  105  070  085  195  225  180
  060  320  105  060  120  065  000  090  055
S 232  1968-69
  120  060  030  075  045  115  000  165  055  060  085  190  150  000  105  120
  170  090  040  115  090  170  105  050  040  080  080  030  090  180  180  170
  065  330  125  035  140  080  060   -1   -1
S 233  1968-69
  110  060  040  080  080  120  060  135  090  070  070  180  130  120  120  150
  175  070  050  080  145  120  085  090  015  060  060  100  070  205  180  150
  080  220  150  030  110  105  120  120  065
S 234  1968-69
  095  055  025  035  000  100  000  140  000  000  100  170  110  015  115  170
  150  070  020  130  070  190  035  060  050  075  090  075  050  225  130  155
  040  315  000  000  090  075  050  075  050
S 235  1968-69
  120  035  020  050  050  075  050  165  065  020  090  180  090  075  090  105
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  135  020  040  125  105  080  050  000  000  070  090  120  015  195  165  120
  085  190  155  050  155  120  045  120  065
S 236  1968-69
  090  060  030  060  035  090  080  180  105  040  150  180  120  120  105  180
  180  120  030  140  105  110  075  100  035  090  090  120  060  240  075  155
  090  255  150  025  120  110  100  130  075
S 238  1968-69
  075  060  060  080  000  090  080  180  015  040  120  120  180  060  090  120
  150  080  045  150  100  160  115  095  040  015  085  090  030  180  180  120
  015  250  150  030  120  080  000  120  060
S 241  1968-69
  090  050  030  060  000  135  000  155  000  000   -1   -1   -1   -1  115  135
  180  070  025  115  075  115  025  065  035  095  085  060  045  210  135  125
  050  330  000   -1   -1  080  035  095  040
S 242  1968-69
  110  050  030  070  000  150  000  140  000  000  120  180  150  040  140  125
  185  090  020  115  090  150  095  070  045  085  085  090  050  195  180  160
  055  275  060  040  120  045  060  090  065
S 249  1968-69
  100  075  050  090  060  105  090  225  030  060  070  135  060  045  120  100
  175  075  045  150  130  150  075  040  030  030  060  090   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1  000  180  060
S 251  1968-69
   -1   -1   -1   -1  065  075  085  155  070  040  100  180  105  150  110  140
  170  055  030  125  130  090  140  045  015  065  060  135  065  195  200  115
  060  210  120  035  170  070  070  150  065
S 255


S 256


S 257


V  85  1968-69
   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1  125  150
  170  085  045  110  060  135  135  070  080  085  095  015  000  190  245  165
  090  315  130  075  165  075   -1   -1   -1
V 121  1968-69
   -1   -1   -1   -1   -1   -1   -1   -1  000  000  060  080  190  105  110  060
  165  095  030  100  100  115  185  050  040  100  070  000  015  175  240  100
  100  305  140  015  135  100  015  050  040
V 138  1968-69
  090  015  000  120  015  075  000  200  090  105  120  165  155  000  075  120
  180  085  030  140  105  180  135  065  040  075  080  045  020  100  145  110
  060  200  120  075  135  120  120  120  060
V 165  1968-69
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  -1   -1   -1   -1  015  075  000  205  045  075  C90  180  165  CCC  1CC  125
 165  090  030  140  075  155  140  070  070  090  075  000  C40  210  18C  150
 045  315  120  060  130  075  000  060  055
V 166  1968-69
 060  050  045  075  015  050  000  185  060  110  095  180  155  CC0  10C  110
 150  075  050  120  090  150  125  060  085  090  C90  060  C7C  21C  18C  170
 045  325  105  040  150  065  000  060  050
V 167  1968-69
 085  050  015  045  000  060  000  150  070  080  110  165  170  000  105  105
 1C5  090  040  090  055  115  120  030  040  080  045  000  C25  195  075  135
 C80  305  060  065  150  095  060  070  025
V 168  1968-69
 085  050  025  045  C30  110  000  145  050  065  1C5  130  2C5  CCC  075  075
 225  090  030  105  135  085  120  065  060  070  055  000  C30  210  090  125
 075  310  075  065  150  100  035  065  030
V 169


V 170  1968-69
  -1   -1   -1   -1   -1   -1  000  125   -1   -1  CC0  170  14C  115  125  CC0
 165  105  025  100  C80  140  135  105  035  075  075  C00  0CC  195   -1  155
 1C5  330  115  085  165  120  000   -1   -1
V 171  1968-69
 070  050  050  035  000  105  000  125  070  055  090  170  165  C70  125  065
 165  100  020  120  075  135  145  100  040  070  C90  060  CCC  18C  135  180
 090  325  135  065  180  090  000  060  050
V 172  1968-69
 070  045  055  075   -1   -1  000  130  070  055  060  170  15C  080  12C  110
 165  085  030  120  110  130  135  090  060  085  105   -1   -1   -1   -1   -1
  -1   -1   -1   -1   -1   -1  000  100  060
V 173  1968-69
 090  050  040  040  CC0  120  000  125  070  065  105  150  175  045  135  105
 150  085  040  120  085  105  150  075  070  080  C85  000  015  185  120  180
 095  335  155  050  160  075  000  065  065
V 174  1968-69
 090  060  035  040  000  090  000  190   -1   -1   -1   -1   -1   -1  075  120
 180  110  040  100  120  180  140  060  060  075  1C5  045  C3C  12C  165  165
 065  300  120  060  180  090  000  080  060
V 175  1968-69
  -1   -1   -1   -1   -1   -1   -1   -1  070  070  105  165  16C  CC0  12C  120
 145  110  020  115  065  090  115  090  060  075  070  000  04C  195  135  145
 065  335  070  075  120  095  025   -1   -1
V 188


V 189
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v 190   1968-69
  060   045   025   045   000   120   000   130   000   045   060   160   170   015   090   075
  120   090   020   120   055   105   135   065   045   080   050   000   000   200   090   140
  060   310   075   065   165   100   000   055   040
v 191   1968-69
  075   040   055   060   000   110   000   140   000   045   075   165   165   075   110   050
  180   090   015   115   085   150   130   080   055   090   100   075   015   180   120   175
  075   345   135   070   150   085   000   060   050
v 192   1968-69
   -1    -1    -1    -1    -1    -1   000   130   000   000   075   130   180   000   095   000
  090   105   030   090   120   135   140   075   045   090   075   000   000   190   120   170
  090   305   150   075   155   090   000   055   035
v 193
  060   030   075   040   000   105   000   125   000   000   000   135   150   000   080   000
  150   090   015   115   135   135   165   060   060   085   070   055    -1    -1   120   165
  105   310   120   045   140   105   000    -1    -1
v 194   1968-69
  090   060   030   090   045   120   000   150   000   000   075   150   180   015   105   060
  060   105   020   150   070   095   145   075   000   075   065   000   000   150   135   150
  070   330   120   060   075   090   000   075   050
v 196   1968-69


v 198   1968-69
   -1    -1    -1    -1    -1    -1    -1    -1    -1    -1   100   165   150   015   100   120
  165   090   025   105    -1    -1    -1   080   075   080   095   050   040   210   115   165
  070   330   110   045    -1    -1   000   080   040
v 206   1968-69
  080   060   015   035   000   120   000   140   000   045   060   150   165   045   120   060
  150   095   020   110   110   140   145   085   045   080   105   000   050   195   135   195
  085   320   075   070   190   090   000   075   055
v 207   1968-69
  090   060   040   040   025   080   000   150   050   095   075   185   155   000   110   115
  175   090   030   125    -1    -1    -1   075   020   085   080    -1    -1    -1    -1    -1
   -1    -1    -1    -1    -1    -1   020   080   065
v 209   1968-69
  050   050   035   025   000   100   000   150   030   015   070   090   180   000   070   135
  135   080   030   100   080   180   135   100   000   040   060   000   000   220   000   240
  000   170   120   050   130   080    -1   085   040
v 221   1968-69
  085   045   015   020   000   085   000   150   000   060   105   165   125   000   090   070
  090   080   035   090   060   130   100   065   050   090   095    -1   030   195   195   135
  065   315   000   000   135   080   030   065   045
v 224   1968-69
  085   045   035   060    -1    -1   000   135   060   050    -1    -1    -1    -1   090    -1
   -1    -1    -1    -1   090   125   145   090   075   075   075   015   025   190   120   185
   -1    -1    -1    -1    -1    -1   030   075   030
v 225   1968-69
  085   050   020   040   000   120   000   105   050   060   090   150   165   070   120   095
  150   095   030   110   090   120   145   075   035   080   085   000   000   195   180   175
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  065  315  135  070  150  065  000  055  045
V 227


V 232  1968-69
   -1   -1   -1   -1   -1   -1   -1   -1  000  000  090  135  175  100  110  105
  120  095  015  105  070  105  160  080  065  100  065  000  015  195  120  155
  095  290  120  050  165  100  020  050  030


BAND DURATION  1969-70

A  21  1969-70
   -1   -1  000  000  000  000  000  000  035  015  015  145  015  100  000  065
  050  090  035  060  080  210
A  23  1969-70
   -1   -1  000  000  050  000  095  090  000  000  015  100   -1   -1   -1   -1
   -1   -1   -1   -1   -1  015
A  24  1969-70
   -1   -1  000  000  060  015  000  000  045  000  040   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1
A  26  1969-70
   -1   -1  000  000  055  000  000  095  055  000  020  100  015  100  015  080
  000  060  000  060  090  080
A  27  1969-70
   -1   -1  000  000  040  000  000   -1   -1   -1   -1  120   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1
A  29  1969-70
   -1   -1  000  000  055  050  090  000  000  045  060  105  015  015  110  095
  100  015  015  000  000  215
A  30  1969-70
   -1   -1  000  000  065  050  090  000  035  025  040   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1  140
A  31  1969-70
   -1   -1  000  000   -1   -1   -1   -1   -1   -1   -1  115  000  000  015  100
  000  040  000  000  135  080
A  32  1969-70
   -1   -1  000  000   -1   -1  000  100  090  000  090  090  000   -1   -1   -1
   -1   -1   -1   -1   -1  180
A  33  1969-70
   -1   -1  000  000  050  000  000  075  000  000  015  080  000  090  015  085
  000  040  000  000  030  060
A  34  1969-70
   -1   -1  000  000  015  000  000  090  040  000  055  100  000  015  000  125
   -1   -1   -1  055  095  150
A  35  1969-70
   -1   -1  000   -1   -1   -1   -1   -1   -1   -1   -1  080  000  150  085  100
  020  055  000  000  030   -1
A  36  1969-70
   -1   -1  000  000   -1   -1   -1   -1   -1   -1   -1  100  000  130  030  100
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  060  000  015  000  140  180
A  37  1969-70
   -1   -1  000  050  130  080  015  095  050  030  060  100  015  190  105  085
  085  095  000  000  140  235
A  38  1969-70
   -1   -1  000  035  105  065  015  015  060  015  015  160  015  195  070  105
  100  080  000  000  140   -1
A  41  1969-70
   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1  090  075  165  115  110
  105  040  050  015  105  245
A  42  1969-70
  100  130  060  015  120   -1  015  105  105  060  060   -1   -1  130  105  105
  100  070  060  030  060  225
A  44


A  45


A  46


A  47


E0442  1969-70
  050  135  000  000  015  000  000  080  060  025  045  125  000  210  000  110
  000  015  000  015  150  165
E1142  1969-70
  120  060  060  080  120  100  075  090  105  060  070  000  070  180  140  075
  045  040  105  020  090  195
E1253  1969-70
  095  125  060  040  110  065  060  110  080  035  050  080  035  170  100  075
  105  120  015  055  105   -1
E1682  1969-70
  000  140  000  000  000  105  110  080  070  055  055  100  000  195  120  110
  080  090  000  055  135  245
E1743  1969-70
  090  045  000  000  120  075  000  090  070  030  060  105  045  150  115  115
  050  050  075  000  075  245
E3465  1969-70
  000  105  000  030  095  105  000  105  085  070  080   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1
E3751  1969-70
  000  130  000  060  000  105  060  095  075  060  070  150  000  175  135  090
  000  045  000  055  140  255
E4144  1969-70
  150  115  000  000  110  090  060   -1   -1   -1   -1   -1  060  120  120  170
  055  060   -1   -1   -1  230
E4767  1969-70
   -1   -1  000  000  090  070  060  000  055  060  050  065  070  220  125  115
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  060  075  060  000  075  240
E4867  1969-70
  050  150   -1   -1  120  090  070  105  060  050  060  170   -1  130  110  120
  000  060  000  000  040  255
E5098  1969-70
  000  060  000  030  090  075  000  080  075  045  060  095  045  015  015  145
  015  075  045  050  135  170
E5151  1969-70
  145  120  000  000   -1   -1  075  000  000  000  000  100  015  105  000  080
  000  000  035  060  090  130
E5184  1969-70
  100  015  070  090  120  060   -1   -1   -1   -1   -1  000  080  200  120  000
  080  030  080  050  095  195
E5756  1969-70
  000   -1  000  000   -1   -1  000   -1   -1   -1   -1  075  000  075  080  120
  000  060  000  000  045  330
E6006  1969-70
  040  105  060  030  095  100  000  070  050  040  060  115  040   -1   -1  130
  070  180  030  055  155  255
E6624  1969-70
  000  105  000  000  000  105  000  000  000  000  000  100  000  120  090  070
  000  105  000  090  100  140
E6736  1969-70
   -1   -1  000  085  120  080  060  080  080  045  055  030  050  180  120  105
  105  060  075  060  120  225
E7735  1969-70
  070  015  000  045  105  110  065  090  060  045  060  125  000  180  095  135
  090  135  070  000  090   -1
E7946  1969-70
  120  135  030  015  105  080  095  090  125  035  040  015  060  165  120  125
  080  060  080  035  120  240
E8697  1969-70
  090  115  060  035  105  075  045  080  100  040  030  000  030  150  090  110
  050  065   -1   -1   -1   -1
E8752  1969-70
   -1  105  000   -1   -1   -1  015  000  060  000  070  115  000  100  000  085
  000  095  000  000  000  080
E8832  1969-70
  000  075  000  000  075  000  000  100  075  045  060  090  000  180  065  105
  000  060  000  000  135  240
E9049  1969-70
  000  105  000  055  110  080  000  090  000  055  070  130  000  150  130  110
  100  150  030  060  190  330
E9221  1969-70
   -1   -1   -1   -1   -1   -1   -1  000  070  065  065   -1  060  165  110  105
  000  060  050  040  060  220
E9283


E9458
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E9512  1969-70
  000  060  000  000  080  080  000  090  070  060  060  105   -1  CC0  00C  120
  015  000  000  050  090  185
L   6  1969-70
  030  150  000  090  C85  105  090  095  085  045  075  125   -1   -1   -1   -1
  050  C80  035  000  150  280
L  10  1969-70
  060  150  000  055  080  105  065   -1   -1   -1   -1  090  OCC  145  090  000
  0C0  080  000  000  015  260
L  11  1969-70
  035  150  000  060  075  100  070  095  065  040  060  110  OCC  180  120  015
  000  090  030  000  150  260
L  33  1969-70
  000  150  000  050  075  100  000  090  070  050  070  155  OC0  180  125  090
  040  075  000  060  145  270
L  46  1969-70
  060  115  000  060  075  100  000  100  000  060  C75  120   -1  160  115  1CC
  C70  120  060  045  140  275
L  52  1969-70
   -1   -1  000  040  C60  100  015  100  040  075  C70  120  CCC  120   -1  100
  070  130  050  040  100  210
L  53  1969-70
  065  085  000  055  C70  100  000  100  040  060  C60  115  030  110  120  100
  020  140  055  045  150  265
L  54  1969-70
   -1   -1  000  030  070  090  015  100  080  055  055  125  06C  105  115  120
  120  160  065  060  180  275
L 128  1969-70
  000  120  000   -1  105  080  075   -1   -1   -1   -1  125  070  180  120  135
  045  080  045  090  090  255
L 179  1969-70
  000  110  000  050  CC0  100  000  090  090  060  C50  125  CCC  160  130  1CC
  030  105  030  050  140  265
L 191  1969-70
  000  105  000  070  000  110  000  090  040  050  080  095  CCC  180  140  120
  020  070  000  000  155  250
L 213  1969-70
  050  125  000  050  085  090  000  090  000  060  060  095  OC0  175  120  000
  000  100  000  C00  150  260
L 250  1969-70
  000  110  000  000  000  060  000  000  000  000  000  115  000  195  135  090
  000  105  000  075  120  250
L 259  1969-70
  000  140  000  000  080  105  075  095  040  055  080  115  OCC  180  130  120
  090  070  000  070  130  260
L 292  1969-70
  040   -1  000  000  080  085  115  090  080  060  C70  100  OCC   -1   -1  090
  050  040  015  070  130  250
L 303  1969-70
  0C0  120  000  050  075  100  000  090  090  015  07C  125  OCC  175  11C  120
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  040  090  050  065  170  260
L 372  1969-70
  000  120  000   -1   -1   -1  045  090  000  050  060  130  000  160  120  130
  015  075  065  055  110  245
L 434  1969-70
   -1   -1  000  000  095  080  120  080  065  030  060  130  000  180  160  120
  110  045  030  050  080  235
L 435  1969-70
  030  170  000  000  100  090  105  080  090  050  075  140  000   -1   -1  070
  085  080  000  000  060  240
L 451  1969-70
  000  105  000  000  120  070  080  000  000  055  080  145   -1   -1   -1   -1
   -1   -1   -1   -1   -1  250
L 458  1969-70
   -1   -1  000  070  120  085  105  105  045  045  065  150  000  180  120  100
  000  030  030  000  060  200
L 466  1969-70
  000  135  000  060  085  100  070  105  045  040  065  150  000  180  110  120
  000  080  000  065  150  265
L 694  1969-70
   -1  135  000  060  090  080  000  090  000  045  065  145  000  185  090  135
  000  125  015  060  125  240
L1017  1969-70
  000  050  000   -1   -1   -1   -1  000  000  000  000  110  000  150  100  120
  015  110  045  050  120  255
L1074  1969-70
  070  110  000  000  085  100  000  080  000  065  065  115  000  090  120  115
  140  150  070  065  155  275
L1107  1969-70
  090  140  000   -1   -1  065  000  090  080  065  050  135  000  170  120  150
  000  130  060  075  140  260
L1108  1969-70
  000  090  000  000  000  090  000  000  000  000  000  100   -1   -1   -1   -1
   -1   -1   -1   -1   -1  245
L1181  1969-70
  070  160  000   -1  080  090  015  090  050  070  060  100  000  180  120  090
  040  065  000  070  145  240
M 100


M 101  1969-70
   -1   -1    0    0   90  105   75  165   90   60   90    0  170   -1   -1   -1
   -1   -1   -1   -1   -1  270
M 102  1969-70
   -1   -1   60    0  150  110   80  125  130   60  120    0   90  155  140  175
    0   30   50   30   80  265
M 103  1969-70
  135   90   60    0  115   75   90  130  140   60  105    0   90  185  135  155
   95   75  150   30   80  240
M 104  1969-70
  115  120   -1   -1   -1   -1   75  100  150   75  135    0   -1  120  165  155
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   60   50   85   15   90  250
M 124  1969-70
  000  150  000  015  120  065  060  065  015  050  060  185  CCC  18C  12C  060
  110  090  095   -1   -1  240
M 225  1969-70
  115  12C  050  030  110  090  000  080  055  050  060   -1  02C  180  125  065
  030  030  095  050  190  240
M 226  1969-70
  100  135  075  090  110  075  060  100  095  035  065   -1   -1  180  055  055
  065  085   -1   -1   -1  235
M 228  1969-70
  110  125  060  040  120  090  000  090  075  040  055  120  05C  185  11C  070
  020  03C  090  055  105  255
M 230  1969-70
  120  150  060  060  120  095  060  120  060  050  04C  105  045  190  12C  130
  095  090  060  050  170  240
N   A  1969-70
  C90  135   -1   -1   -1   -1  025  105  085  040  085  C70  035   -1   -1   -1
  095  105  085  050  120  240
N   B  1969-70
  100  130  075  040  120  085  015  100  075  035  C70  080  02C  190  105  060
  080  065  085  015  210  235
N   1  1969-70
  100  120  010  015  090  075  035  090  120  065  035  000  05C  165  100  130
  040  050  060  000  115  250
N   2  1969-70
  090  145  055  070  110  085  030  080  090  060  035  C00  04C  185  135  115
  025  100  075  045  110  240
N   3  1969-70
  155  115  045  025  105  085  075  105  110  060  065  075  C1C  18C  13C  085
  100  060  095  030  110  240
N   4  1969-70
  095  105  035  025  080  050  020  090  100  060  015  C85  C3C  180  120  C95
  090  035  015  015  095  235
N   5  1969-70
  075  12C  070  015  110  070  040  105  085  060  060  055  030  180  100  075
  120  015  030  020  120  250
N   6  1969-70
  085  120  060  015  110  070  015  105  085  080  040  060  05C  155  12C  085
  105  045  050  040  120  250
N   7  1969-70
  065  095  015  000  105  080  035  085  085  060  060  060  090  175  145  085
  080  C55  015  035  095  230
N  8A  1969-70
  065  140  000  000  060  065  000  105  065  065  050  110  C25  185  065  C90
  015  095  000  000   -1   -1
N  9A  1969-70
  075  135  045  015  100  070  055  105  080  045  055  C60  035  150  C90  C80
  080  080  000  065  095  240
N  10  1969-70
  080  090   -1   -1   -1   -1   -1  100  085  065  065  075  030  185  12C  080
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  105  055  050  030  120  230
N  11  1969-70
  065  135   -1   -1   -1   -1   -1   -1   -1   -1   -1  080  095  185  130  075
  105  085  075  035  115  235
N 12A  1969-70
  090  100   -1   -1   -1   -1   -1   -1   -1   -1   -1  140  075  200  095  105
  085  105  015  070  155  240
N  13  1969-70
  080  120  075  075  115  075  060  105  075  035  050  065  020  205  120  060
  055  085  085  030  135  235
N  14  1969-70
  090  120  015  000  135  070  000  090  075  060  070  100  085  180  130  090
  100  060  080  025  150  245
N  15  1969-70
  100  060  055  010  135  075  085  105  070  040  060  075  025  180  125  060
  030  085  035  060  150  230
N  16  1969-70
  095  120   -1   -1   -1   -1  000   -1   -1   -1   -1  095  025  185  130  095
  085  070  080  045  130  260
N  17  1969-70
  100  150   -1   -1   -1   -1   -1  120  075  060  070  100  045  185  120  085
  080  060  075  050  140  240
N  18  1969-70
  085  075  090  080  105  105  050  120  100  060  080  065  030  215  075  075
  000  015  095  045  100  235
N  19


N  20


N  21


S 201  1969-70
  120  120  055  030  110  075  040  120  100  070  055  060  035  150  075  110
  090  055  045  030  100  240
S 202  1969-70
  120  120  060  025  105  075  050  095  095  070  075  105  045  180  115  125
  100  050  110  045  120  240
S 203  1969-70
  110  125  060  030  110  100  030  165  095  060  025  070  040  190  165  100
  095  065  065  040  090  245
S 204  1969-70
  135  115  045  030  105  090  020  105  095  050  080  075  000  210  130  090
  095  080  090  035  110  250
S 205  1969-70
  120  125  060  050  120  090  040  105   -1   -1   -1  000  070  180  105  105
  085  060  040  030  080  240
S 206  1969-70
   -1   -1  055  060  110  075  035  110  080  030  060  065  035  180  075  085
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  000  075  120  065  090  250
S 208  1969-70
   -1  135  050  000  125  090  000   -1   -1   -1   -1  105  020  150  100  095
  105  060  000  045  120  240
S 209  1969-70
  120  150  000  000  120  090  000  115  075  035  090  110  045  180  125  070
  105  045  000  050  145  240
S 210  1969-70
  120  120  060  015  120  090  000  110  070  035  065  105  035  180  120  090
  075  045  100  070  120  245
S 211  1969-70
   -1  120  045  000  120  075  060  105  070  050  060  085  035  180  110  065
  110  045  070  015  165  220
S 212  1969-70
   -1   -1  060  030  135  070  050  165  075  040  055  080  045  195  125  075
  090  060  105  060  170  240
S 215  1969-70
   -1  120  060  050  090  090   -1  105  085  085  020   -1  030  195  120  105
  090  060  075  025  120  235
S 217  1969-70
  100  135  065  075  120  065  030  090  070  045  020  015  040  170  135  090
  015  050   -1   -1   -1   -1
S 221  1969-70
  000  100  000  000  040  045  000  100  060  045  040  080  000  015  120  090
  000  085  000  000  090  220
S 231  1969-70
  120  150   -1   -1  120  075  000  115  070  040  060  105  000  185  150  070
  045  055  065  065  120  240
S 232  1969-70
  135  150  060  000  135  060  000  120  075  045  045  115  000  180  155  095
  110  055  055  075  105  245
S 233 1969-70
  090  095  030  060  110  055  020  105  100  070  025  085  030  190  135  085
  095  030  060  060  120  240
S 234  1969-70
  110  135  075  030  120  095  000  090  060  030  030  210   -1   -1   -1  065
  020  020  060  055  300  240
S 235  1969-70
  120  150  000  000  090  050  090  145  120  040  030  000  060  135  115  130
  045  050  015  000  110  240
S 236  1969-70
   -1  130  060  090  100  065  060  110  090  025  030  120  060  180  120  090
  045  050  120  060  090  240
S 238  1969-70
  120  090  000  060  105  065  000  090  070  050  025  135  070   -1   -1   -1
   -1   -1   -1   -1   -1   -1
S 241


S 242  1969-70
  095  135  060  050  135  080  030  100  070  045  055  095  045  185  115  060
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  080  060  120  050  160  255
S 249  1969-70
  110  110  000  030  095  105  060  080  090  060  060  080  095  180  120  100
  105  090  105  075  180  255
S 251  1969-70
  120  130  070  075  120  080  075  105  070  060  035  060  050  190  135  105
  095  055  060  045  120  255
S 255


S 256


S 257


V  85  1969-70
  120  105  000  060  130  075  060  080  060  050  045  125  000  210  100  150
  075  045  055  055  110  240
V 121  1969-70
  000  135  000  060  100  085   -1  090  070  000  075  160  000  180  120  075
  090  075  000  030  120  240
V 138  1969-70
  090  060  000  000  120  105  015  090  060  060  050  150  060  195  120  150
  150  075  060  090  180  120
V 165  1969-70
  105  120  030  060  110  075  015  080  060  045  035  150  000  210  130  150
  105  075  075  065  120  240
V 166  1969-70
  075  150  045  060  130  070   -1  090  060  060  050  125  000  180  125  130
  120  050  080  060  105  240
V 167  1969-70
  035  135  050  090  135  080  025  090  050  050  060  130  000  180  075  145
  000  050  080  090  125  240
V 168  1969-70
  030  090  030  060  130  100  030  115  080  045  065  120  065  165  050  045
  000  060  000  000  155  225
V 169


V 170


V 171  1969-70
  000  120  000  040  130  095  135  090  075  045  070  140  000  175  120  110
  000  080  060  090  155  240
V 172  1969-70
  000  110  000  045  135  090  135  000  075  035  080  135  000  180  105  130
  060  075  070  070  165  225
V 173  1969-70
  035  090  000  060  120  080  105  090  060  060  080  135  000  185  110  115
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  110  105  060  075  155  240
V 174  1969-70
  125  075   -1   -1   -1   -1   -1  000  060  060  060  160  000  240  120  120
  115  090  060  060  135   -1
V 175  1969-70
  030   -1   -1   -1   -1   -1   -1  090  055  060  075  130  000  210  095  075
  000  120  045  045  135  235
V 188  1969-70
  000  135  015  000  120  075  000  100  085  055  060  125  060  185  120  070
  000  065  030  020  100  215
V 189  1969-70
  000  120  000  050  125  075  015  105  090  055  060  165  000  180  105  080
  000  120  090  085  115  235
V 190  1969-70
  000  150  000  000  110  080  095  060  100  055  075  130  000  175  105  090
  000  090  055  040  140  235
V 191  1969-70
  000  120  000  000  135  090  095  090  080  050  075  135  000  120  120  095
  000  060  030  045  185  240
V 192  1969-70
  000  125  000  000  110  090   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1
V 193  1969-70
   -1   -1    0    0    0   75    0   -1   -1   35   90   -1   -1  195  130   85
    0   75    0   70  195  250
V 194  1969-70
   -1   -1  015  045  120  120  095  120  100  060  075  150  060  195  120  075
  000  060  000  045  060  240
V 196  1969-70
  000  085  000  060  120  090  120  090  100  065  055  105  000  180  130  120
  110  075  045  050  160  240
V 198  1969-70
  105  090  000  055  125  075  090  070  050  060  045  135  000  195  120  110
  095  055  030  055  090  245
V 206  1969-70
  000  060  000  000  130  075  105  090  080  055  075  150  000  185  120  030
  060  075  030  040  155  240
V 207  1969-70
  100  120  060  040  125  080  070  150  065  055  045  120  000  205  115  115
  120  070   -1   -1   -1  240
V 209  1969-70
  045  115  000  050  110  075  090  085  075  045  060  095  000  190  095  120
  075  075  000  000  090  240
V 221  1969-70
  105  125  055  070  115  100  060  075  065  045  050  150  040  185  135  075
  060  040  030  045  120  240
V 224  1969-70
  030  120  000  050  135  100  100   -1   -1   -1   -1   -1  000  175  100  105
  095  075  090  050  125  240
V 225  1969-70
  000  135   -1   -1   -1   -1  135  085  060  050  075  135  000  210  110  150
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  120  125  060  070  130  240
V 227  1969-70
    0  135    0    0   85   90    0   75  120   25   65  160    C  18C  135  110
  120   75   60   30  135  240
V 232  1969-70
  060  135  015  000  135  105  075  105  080  055  060  135   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1
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BAND DURATION 1970-71

```
A  21  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1    0    0    0    C   8C   5C   15
    0   30    0   -1    0   60
A  23  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
   -1    0    0   -1  110   90
A  24  1970-71
   75   20   15    0    0  175  110    0    0    0    0    0    C  1C0   20    0
   15   55    0  240    0   70
A  26  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1    0    0    0    0   40    0   15
   40   20    0   -1   -1   -1
A  27  1970-71
   75    0   15    0    0  180  125    0    0    0    0   15    C   90   25    0
   50   95    0   30   70   75
A  29  1970-71
  1C5    0   40    0    0  175  110  165   45    0    0    0   5C  120   75   45
   30   15  105  180  120  135
A  30  1970-71
   95   45    0    0    0  160   95   40    0    0    0   95   50   65   3C    0
    0   90   15  175  110   65
A  31  1970-71
   70    0    0    0    0  170  115    0    0    0    0    0    0   55   15   40
   60    0    0    0   -1   -1
A  32  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1    0    0    0    C   -1   -1   -1
   -1   15    0  180   -1   -1
A  33  1970-71
  100   00   00   00   00  215   85   00   00   00   15   00   CC   35   0C   C0
   C0   60   00
A  34  1970-71
   90   15    0    0    0  170  140    0    0    0    0   30    C   70    0   25
   15    0    0  105  100   90
A  35  1970-71
   95   45   55   00   00  170  115  165   60
        90   00  180   75   60
A  36  1970-71
   85    0   40    0    0  180  145    0    0    0  175  130   15   80    C    0
    0    0    0  170  115   60
A  37  1970-71
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   95    0    0    0   65  180  135    0    0   85  225  140  100  115   45    0
   15   15    0  210   40  110
A  38  1970-71
  105    0    0    0   80  175  105    0    0   -1   -1   -1   -1   -1   -1   -1
   -1   90  110   -1   15  120
A  41  1970-71
   90  115   75   00   00  180  130  155   45   00   00   95   70  180   75   65
   35   00   00  225  175  165
A  42  1970-71
   70   65   75   80   00  215   75  140   30   80  160   85   90  155   65   55
   40   40   30  195  135  150
A  44  1970-71
   95  110   25   00   00  190  120  120   40   90  180  100   90  150   65   75
   50   35   15  230  165  120
A  45  1970-71
   90   75   85   00   15  190  105  150   60   00  160  110   40  160  110   45
   45   60   00  235  150   90
A  46  1970-71
   90   00   00   00   00  190   90  140   00   15  180   65   15  100   30   15
   15   00   00  235  125   80
A  47  1970-71
   75   60   60    0    0  190  120  120    0    0  195  100    0  125   75   50
    0    0    0  260   -1   -1
E 442  1970-71
   65    0   75    0    0  180  165    0    0    0    0    0    0   90   20   85
   30    0    0  240  110  165
E1142  1970-71
   90   90   50  105   25  160  105  175   35   80  220  105    0  155   50    0
   85  130    0  180  135  120
E1253
   60   45   85  135   45  200  125  155   30  100  260  135   50  165   40   35
   50  150  120  250  160  120
E1682  1970-71
  105   30   45    0   85  150  145  115    0   75  225  175   60  195   15   40
   45   90   30  190  125  150
E1743  1970-71
   -1   -1   -1   -1   90  150   90  150   30   85  190   75   45  110   55    0
   60  150    0  220  140  125
E3465  1970-71
   -1   -1   -1   60    0  190  150   -1   -1   -1   -1   -1   -1   -1   -1   -1
   -1   90   60    0   -1   -1
E3751  1970-71
   95   60   45    0   80  140  170  180    0   75  230  120   45  195    0   35
   20  135   50  210  140  125
E4144
  105   75   60   30   00  200  135  180   50   75  180   80   75  165   55   65
   60   00   00  205  135  125
E4767  1970-71


E4867  1970-71
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   55   60   70  100  100  140  135  145    0   80  240  150   6C  180   4C   15
   30   60  105  175   -1   -1
E5098  1970-71
   90   65   50    0   75  180  105  120   45    0  200  120  12C  150   75   90
   70    0    0  245  140   90
E5151  1970-71
   90   35    0    0    0  150  105    0    0    0  18C   75   75   75    C    0
    0   90    0    0  100   45
E5184  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1  100  210   90   45  175   75   6C
   80  110    0  185  120  130
E5756  1970-71
    0    0    0    0   90   -1   -1   -1   -1    0    0    0    0   -1   -1   -1
   -1    0    0    0    0   60
E6006  1970-71
   85   60   50    0   85  170  155  135   25   -1   -1   -1   -1   -1   -1   -1
   -1  125  125  210   -1   -1
E6624  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1    0  190    0    0  120   85   35
    0    0    0  240    0    0
E6736  1970-71
   90   55   50  110    0  135  130  175   45   85  210  105    C  150   6C    0
   40   9C    0  160  155  135
E7735  1970-71
   85    0    0   -1   75  185  135   -1   -1   75  225  160  15C  15C   75   80
   60  135   60  270  110  145
E7946
   90   90  100   70   00  195  105  155   45   75  165   95   75  165   60   75
   6C   8C   30  210   90   9C
E8697

        75   00  210  105  135
E8752
   75   00   00   00   00  170  120   00   00   00   00   00   C0  105   45   00
   00   80   00   00  105   75
E8832  1970-71
   90   85   60   90  100  195  115    0    0   -1   -1   -1   -1   -1   -1   -1
   -1    0    0  230  125   85
E9049  1970-71
   90   75    0    0  130  185  170  200    0   -1   -1   -1   -1   -1   -1   -1
   -1   -1   -1   -1   -1   -1
E9221  1970-71
   -1   -1   -1   60    0  180  115  160   30   -1   -1  105    0  135   45    0
   70  120    0  175  120  135
E9283
   70   60   75   00   00  195   90  145   55   85  220  120   85  200   6C   15
   40   90   60        00   00
E9458
   75   90   65   00   00  165  105  155   40   95  225  115  10C  135   60   60
   60
E9512  1970-71
```

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   60   30   30   -1   -1   -1   -1   65    0    0    0    0    0  105   60    0
   60    0    0  150    0   90
L   6  1970-71
   -1   -1   -1   90   60  155  160   -1   -1   90  235  180   60  195   45    0
   60   -1   -1   -1  105  150
L  10  1970-71
   50    0    0  110   60  150  110  100    0   -1   -1   -1   -1   -1   -1   -1
   -1   80   70  200  120  155
L  11  1970-71
   60    0    0   50   50  135  150  120   15   80  225  140   45  180   50   60
   35   80   90  190   -1   -1
L  33  1970-71
  105   60   60    0   90  185  145  105    0   90  220  140   45  210    0   60
   30   75   80  180  140  125
L  46  1970-71
   90   75   45    0   80  165  170  150    0  100  220  135  120  170   75   55
   50  165   80   -1   -1   -1
L  52  1970-71


L  53  1970-71
   90   70   50    0   80  170  170  175    0  100  215  110    0  185   30   90
   45  165  120  205  140   80
L  54  1970-71
   90   70   40    0   85  165  170  175    0  100  210   80    0  180   -1   -1
   -1   -1   -1  220  150   80
L 128  1970-71
   -1   -1   -1    0   80  210  135  130    0   90  255  150  170  140   70   70
   30  180   -1  235  120  120
L 179  1970-71
   85   60    0    0   80  150  165  130    0    0  220  180   20  180   60   75
   30  120  115  210   -1   -1
L 191  1970-71
   85   55   60    0   80  150  150  100   20   60  230  175   90  170  115   45
   20  100   60  185  100  135
L 213  1970-71
   60    0   60    0   70  120  150  110    0   75  225  175   50  150    0   65
   30   95   75  205  125  115
L 250  1970-71
   -1   -1   -1    0  110  165  195   -1   -1    0  210  175  110  200    0   60
   15   -1   -1  250  120   90
L 259  1970-71
  100   50   55    0   85  155  145  120    0   90  230  180   55  210    0   70
   40   90    0  205   -1   -1
L 292  1970-71
   85    0    0  100   85  150   -1   -1   -1   65  210  180   50  195   50   60
   35   -1   -1   -1  105  165
L 303  1970-71
   90   60    0    0   80  155  165  120    0   80  215  180   50  175   60   90
   35  120  100  210  130  100
L 372  1970-71
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   80   50   35    0   90  170  135   90    0   75  270  140  180  130   70   30
    0  130    0  215  120  150
L 434  1970-71
   50    0    0  100   90  140  165  130    0   85  250  180   55  200   35   55
   45  105   40   -1   80  140
L 435  1970-71
   55   45    0   80  100  150  160  130    0   85  250  190   60  225   60    0
   80   50  150   -1   -1   -1
L 451  1970-71


L 458  1970-71
   75   35    0   80  100  125  135  150    0   80  250  170   75  180   60   45
   45    0  145   -1  105  110
L 466  1970-71
   80   60   60    0  120  180  145  120    0   -1   -1   -1   -1  220  105   55
   30  155   80  205  140  115
L 694  1970-71
   75   60   45    0  110  175  185  105   10   95  235  125   35  175    0   30
   25  120   65  195  135  110
L1017  1970-71
   70    0    0    0   90  140  195   -1   -1    0  205  180   40  180   95   45
   25  120   40  225  155  110
L1074  1970-71
   80   75   45    0  105  145  155  195    0   -1   -1   -1   -1   -1   -1   -1
   -1  150  120  230  160  100
L1107  1970-71
   95   60   30    0   -1  165  150   -1   -1   90  230  145   45  210   30   30
   45   -1   -1  205   -1   -1
L1108  1970-71
   -1   60   65    0  110  175  195  105    0    0   45    0    0  180   35   50
   15    0    0   -1    0    0
L1181  1970-71
  100   70   75    0   90  190  140  110    0   -1   -1   -1   -1   -1   -1   -1
   -1  135   70   -1   -1   -1
M 100  1970-71
   70   55   70   95   75  195  115  195   15   90  240  110   30  195   35   45
   30   70   75  190  100  115
M 101  1970-71
  110  100    0   75   55  175  105  110   50   55  205   90   30  160   60   30
   65  120   90  190   -1   -1
M 102  1970-71
  110  120   45  120    0  190  120  175   70   75  195  115    0  135   75   45
   45   30    0  200  125  160
M 103  1970-71
  110  100   90   90    0  195  130  160   75   85  195   85   55  150   70   30
   45   60    0  210  165  170
M 104  1970-71
   -1   -1   -1    0    0  180  110  150   35   75  165   70   45  140   70   40
   60   -1   -1   -1   -1   -1
M 124  1970-71
```

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    70   90   85    0  100  135  165   90   45  105  260  150  210  190   60   20
    30  120    0  240  130  150
M 225  1970-71
    80   80   90   60   35  180   90  170   35  115  220  130  100
    25   60   85  230  105   70
M 226  1970-71
    60   45  115   60   55  180   90  135   25  110  235  125   80  180   90   35
    20   90   75  205  145   60
M 228
         55   75  110   20  180  110  180   40  125  225  125  120  210   95   75
    20   60   85  230  115  120
M 230  1970-71
    80   65  110  135   30  225  120  130   45   90  240  125  105  195   75   45
    35  115   80  180
N   A  1970-71
    85   60   50   90   85  170  125  155   30   80  265  140   75  165   70   40
    60  110   70  240  165   70
N   B  1970-71
         55   75   45   20  185  110  155   15  120  245  125   90  140  105   25
    15   90   50  255  145   50
N   1  1970-71
   100   90   70   85                 135   00   50  165   85   65  170   65   80
    30   60   00  225  125  100
N   2  1970-71
    75   75   45   60   90  220   95  200   15  105  210  120   90  165   35   70
    45   60   70  195   90  130
N   3  1970-71
    90   55   85   85   20  225   70  170   25   80  210  125   35  215   15   75
    30  120   35  245  145   75
N   4  1970-71
    80   65   45   90   30            170   15  105  200  110   90  195   50   75
    50  110   70  225  125   90
N   5  1970-71
    60   50   85   55   15  200   70  155   15   70  195  105   40  200   50   60
    25  135   30  240
N   6  1970-71
    90  110   95   15   15            160   15   80  185   80   35        35   70
    50  110   40  250  125  110
N   7  1970-71
                                                 15  230  105   55  225   45   60
    35                 145  120
N  8A  1970-71
    70   60   55   00   00  175  105  140   15   00  170  110   15  135   30   55
    20   00   00  250  115  110
N  9A  1970-71


N  10


N  11  1970-71
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        120   35        160   100
N 12A   1970-71

N  13   1970-71
   60    60   35   85   90  185  120  160   25   70  255  115   70  180   65   35
   40   120   65  225  155   60
N  14   1970-71
   90    60   60  115   15  195  125  165   10  110  220  125   55  175   80   70
   50   125   65  225  160  120
N  15   1970-71
   60    60   60   45   70  180  120  145   10  105  220  110   60  185   80   35
   40              250  155  130
N  16   1970-71
   65    65   65   70   60  180  120  135   25  110  230  120   70  180   75   30
   60   100  125  200  160  150
N  17   1970-71
   70    65   65   60   70  180  125  165   10
        105        190  160  115
N  18   1970-71
         50   95   90   90  170  120            120  225   90   30  170   65   25
   20    95   85  185  130  105
N  19   1970-71
   80    70   65   90   50  190  125  185   00   85  175  100   50  225   35   65
   60   100   85  205  100  130
N  20   1970-71
   80    90   30   00   00  170  105  160   30   20  175  105   00  195   40   65
   40    45   00  215  150  155
N  21   1970-71

   60    00  180                                 60  185  105   90  145   75   55
S 201   1970-71
   60    45   65  105   40  215   80  170   20   75  195   90   90  140   60   80
   30    90   15  210  120  120
S 202   1970-71
   70    60   80   90   45  185   75  180   25   75  195  105   70  165   45   70
   35   120   55  240  135  120
S 203   1970-71
   90    90   75  110   00  210   90  175   20   75  180   95  110  145   30   75
   25    60   30  210  130  105
S 204   1970-71
                 75   35  225   80  185   35   90  205  120   45  170   70   75
   30   105   35  230
S 205   1970-71
         40   50  150   00  210  100  195   45   85  195   90  110  165   30   65
   50             205
S 206   1970-71
   80    55   65   75   60  180  125            105  210  115   50  145   60   35
   15    80   60  185
S 208   1970-71
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   80   80   90   00   60  180  110  150   30  120  220  110  100  180   40   80
   25   75   55  210
S 209


S 210  1970-71
                    50   25  180  100  150   15  100  240  125  105  190   90   70
   35   75   80  230   90  110
S 211  1970-71
   75   65   65  120   20  180  125  155   15  120  215  105   80  180   75   60
   25   55   90  250
S 212  1970-71
                                      160   30  105  220  110  100  165

S 215  1970-71
                                      200   30  100  210  110   95  165   25   65
   50   65   55
S 217  1970-71
                                      180   00  110  210  110   85  195   75   60
   00             160   90  105
S 221


S 231  1970-71
         65   70   90   60  180  110  135   40  115  235  135  105  180   80   90
   30  100   60  205  105   85
S 232  1970-71
   80   60   75   70   70  185  140  140   50  100  220  130  225  200   90   90
   45  100   80  225  105   75
S 233  1970-71
   80   60   45   90   30  190   95  150   00   95  205   90   90  220   60   75
   45  115   75  240  135  135
S 234  1970-71
   80   50   90   00   20  180  105  150   00  110  235  130  100  200   85   20
   55   55   75  215  110   75
S 235  1970-71
   90   95  125   45   00  180  105  160   00   65  160   90   60  155   60   75
   45   40   15  235  140  120
S 236  1970-71
   65   60   50   90   90  190  115  180   40  110  200  100   55  155   60   30
   40  135  105  210  120  110
S 238


S 241  1970-71
   65   60   75   60   45  170  180  165   15  120  220  100  100  150   65   30
   25
S 242  1970-71
                                      165   20  105  225  105  105  170   75   30
   25
S 249
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S 251  1970-71
                                                  110  200  120   85  165   40   75
   30   75  110  200  105  145
S 255  1970-71
   70   50   75  130   95  170  120  140   15   85  240  110   90  195   90   90
   50   95   35  200
S 256  1970-71
  110   60   90   00                 135   15   85  180  105   00  150   30   65
   70             225
S 257  1970-71
   75   75   60   90   60  195   90  195   30  120  210  110   70  215   50   70
   20   80   85  200
V  85  1970-71
                  60   75  190  120  150   15  110  235  135  125  180   90   00
   15   85   00  180   85   85
V 121  1970-71
   75    0   60    0   90  145  125  105    0   75  230  165   80  180   55   45
   35   90   90  200  125  110
V 138  1970-71
   30   25   60   60  160  220  120  170   60
                  210  110  105
V 165  1970-71
   70   60   65   00   75  210  120  145   15   90  240  120  120  220   90   00
   30   95   00  195   80  120
V 166  1970-71
   80   80   75  105   75            150   15   85  215  120  135  210   95   00
   35  105   30  210   90  120
V 167  1970-71
   75   70   00   65   75  180  125  120   00   95  225  120   85  165   00   30
   20   75   00  210   75   90
V 168  1970-71
   60    0    0   60   75  150  125   -1   -1  100  240  135   50  150   15   20
   20    0    0  165   95  145
V 169  1970-71
   -1   -1   -1    0   90  160  135  120    0   75  225  165   55  165   30   40
   30  105   75  170  140  120
V 170  1970-71
   -1   -1   -1    0  110  185  140   90    0  105  240  120  105  155   60   50
   45  120   40   -1   -1   -1
V 171  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1  120  230  180   80  185   85   30
   30  110   70  240  145  115
V 172  1970-71
   40    0   60   45   90  195  100  120    0   95  105    0  140  180   75    0
    0  145   70  210  120  135
V 173  1970-71
   55   50   75   60   90  210  160  130   30   70  240  130  130  185   80    0
   45  105  100  190   90  145
V 174  1970-71
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   00   30   60   50  105  225  120  175   50
        105   00  210  120   85
V 175  1970-71
   -1   -1   -1   85   75  170  125  120   30   95  240  115  135  165   25   30
   45   60    0  195  105   65
V 188  1970-71
   60   60   60    0   90  165  120  135    0  105  240  170   85  130   60   60
   45   35   30  195  125  115
V 189  1970-71
   60   60   60    0   90  190  180  120    0   75  240  150   95  150   90   35
   45   60    0  190   90  115
V 190  1970-71
   55   50   60    0   80  180  190  120   15  110  240  115   95  190   75   45
   35   75   60  180  115  105
V 191  1970-71
   40   60   50    0   75  180  160  150    0  110  245  165   90  170   90   20
   30   95   80  210  120  140
V 192  1970-71
   45   45   60    0   75  180  130  120    0  105  235  170   60  150  130   50
   25   90   20  205  125  120
V 193  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1   90  225  165   80  165    0   -1
   -1  135   30  195  135  125
V 194  1970-71
    0    0    0    0   55  175  135  150    0  105  230  150   90  150   45   30
   80   -1   -1  190   -1   -1
V 196  1970-71
  105   60   75    0   95  180  170  100    0   85  230  170   65  165   95   55
   35  120   90  240  150  120
V 198  1970-71
   65   35   70   85   85  200  180  130   15   95  240  120   90  205   80   45
   30  105  135  195  105   60
V 206  1970-71
   35   45   45   20   80  195  150  130    0  120  240  165   70   -1   -1   -1
   -1   85  120  180  110  105
V 207  1970-71
   70   60   60   70   90  190       140   25   95  215  130  120  195   75   20
   40  100   65  210  105  105
V 209  1970-71
   75   40    0   60   70  185  160    0   30   90  225  120   90  160   60   15
   15   75    0  235  110   75
V 221  1970-71
   00   70   00   00   45  180  120  110   00   75  235  125   90  200   65   20
   20   60   65  195   75   90
V 224  1970-71
   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1   -1
   -1   -1   -1  230  135  135
V 225  1970-71
   75   45   60   80   85  165  135  140    0  100  235  135  120  165   60   60
    0   75    0  200   90  155
V 227  1970-71
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