

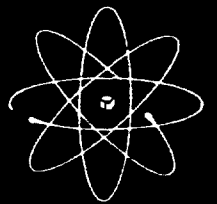
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*health and safety laboratory*

DATA ON THE DEPOSITION OF STRONTIUM 90 DURING 1958

PREPARED FOR THE HEARINGS ON FALLOUT BEFORE  
THE JOINT COMMITTEE ON ATOMIC ENERGY.

*April 20, 1959*



**UNITED STATES ATOMIC ENERGY COMMISSION**  
NEW YORK OPERATIONS OFFICE

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DATA ON THE DEPOSITION OF STRONTIUM-90  
DURING 1958

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May 5 - 8, 1959

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April 20, 1959

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UNITED STATES ATOMIC ENERGY COMMISSION  
New York, N. Y.

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This report summarizes the data available from the Health and Safety Laboratory on the deposition of Strontium-90 during 1958. The data thus serve to bring up to date HASL-42, "Environmental Contamination from Weapons Tests", which included data through the end of 1957.

This report includes not only information developed at the Health and Safety Laboratory but analyses performed by analytical contractors. A considerable amount of the information will be made part of other reports submitted to the Joint Committee for their consideration.

Some of the analyses reported here were completed after the issuance of the last quarterly supplement to HASL-42 and will not be otherwise published until the next supplement. The policy on data publication has been to include all material available at the time of preparation of these quarterly supplements, or a report such as the present one.

The deposition of Strontium-90 may be described in two ways: one is the rate of fallout, usually on the basis of monthly collections and the other is the cumulative deposition based on soil analyses. These two methods are considered supplementary since none of the monthly pot collections were started early enough to allow valid estimates of the accumulated deposit. On the other hand, difficulties in the sampling and analysis of soils prevent use of soil data for short term rate measurements.

#### Monthly Collection Networks

Monthly collections of fallout have been made for a period of several years using stainless steel pots. The network reporting results for 1958 is mapped in Fig. 1. The stations are also listed in Table 1.

In order to expand the collecting network, an improved device consisting of a plastic funnel and ion exchange column has been developed. Through the cooperation of Dr. Lester Machta of the U. S. Weather Bureau, an additional 22 sites were put into operation in February of 1959. These are shown superimposed on the pot network in Fig. 2, and listed in Table 2. Negotiations are under way to further expand the funnel network outside the United States and to substitute funnels for existing pots.

### Precipitation Collections

Collection and analysis of individual rainfalls or other precipitations have been made at three sites. The first of these stations has been in operation since 1955 at Pittsburgh, Pa., and two others in Westwood, N.J., and Richmond, Cal., were initiated in 1958. The available data from these three stations for 1958 are listed in Tables 4, 5, and 6.

The results of these analyses have been subject to numerous interpretations and no additional interpretation will be attempted here.

### Soil Analyses

Two sets of data are available on the Strontium-90 content of soils. The first network includes 17 sites in the United States where sampling and analysis have been carried out by HASL personnel. These sites have been sampled annually in October and results for 1955, 1956, and 1957 were included in HASL-42. The locations are shown in Fig. 3 and those analyses available at this time for 1958 samples are listed in Table 7. Additional results should be ready before the Congressional Hearings and will be listed in an addendum to be furnished about the first of May.

The second is a series of samples collected by Dr. Lyle T. Alexander of the U. S. Department of Agriculture at selected sites throughout the world. These samples have been analyzed at the Health and Safety Laboratory and the results of the two most recent collections are mapped in Figs. 4 and 5. The interpretation of these results will be presented in a separate report by Dr. Alexander.

In any program that depends heavily on the quality of chemical analysis, it is desirable to know the reliability of the analytical data. As a test of quality, samples have been submitted to the HASL analysts by Dr. Alexander, identified only by the sample number. A considerable group of these were submitted as blind duplicates and form a good

check on reproducibility of samples where the identity is not known. Table 8 lists a series of results of such tests.

Summary of Pot Data

The interpretation of fallout data has always been complicated by the introduction of fresh fission products into the atmosphere. This has prevented clean-cut separation of debris from individual tests or even series of tests.

Three major test series have been reported for 1958, the U.S.S.R. series in the spring and fall and the U.S. series in the summer. As a typical example of the data in Table 3, the complete results for the HASL pot station in New York City are plotted in Fig. 6. This figure indicates an increased rate of fallout during 1958 compared to previous years.

The high variability of all fallout sampling and analysis requires smoothing by grouping of data. As an example of the patterns produced by such smoothing, Fig. 7 summarizes the Strontium-90 pot data for 1958 grouped by quarter of the year and by 20° latitude bands. The four quarters consistently show a maximum in the 30-50°N band and a minimum in the equatorial region. It should be noted that the numbers of stations in the five bands are 11, 9, 2, 8, and 6. Therefore, the equatorial region may be less reliable than the other four bands. The southern hemisphere maximum is in the 10-30°S band rather than the most

*Since we will  
try something  
like!*

southerly, and unfortunately stations are not available above 50° in either hemisphere.

In the latitude bands measured, the total Strontium-90 fallout for 1958 would be estimated as 0.76 megacuries. Because of the heavy injections during 1958, it is not possible to use this as a measure of stratospheric depletion. If an extended period free of tests continues, such rates should be readily determined. It should be pointed out, however, that the rate found would not necessarily reflect past rates. The stratospheric depletion rate is not a basic physical constant, but may be a function of the characteristics of the tests producing the stratospheric burden.

It is possible to roughly estimate the age of fission products by the use of isotopic ratios such as the  $\text{Sr}^{89}/\text{Sr}^{90}$  or  $\text{Ba}^{140}/\text{Sr}^{90}$  because of the difference in yields and half-lives. The  $\text{Ba}^{140}/\text{Sr}^{90}$  ratio is only valuable for fairly fresh debris and is measured in precipitation samples. The  $\text{Sr}^{89}/\text{Sr}^{90}$  ratio has been calculated for the pot stations in Table 3, and the grouped data are plotted in Fig. 7.

The most obvious features are,

1. None of the differences between bands are extremely marked.
2. The average age of the debris is greater in the southern hemisphere.
3. After the U.S. summer tests, the average age of the debris is lowest in the equatorial band.

### Tungsten Data

During the U.S. summer tests in the Pacific, Tungsten-185 was produced. This nuclide has a half-life of 74 days and furnishes a tracer for this particular test series. The available analyses of pot samples are included in Table 3.

In order to compare total Tungsten-185 fallout at various times, the activity has been extrapolated back to an arbitrary date, June 1, 1958. This also allows addition of results for several months on a sound basis. These extrapolated values, grouped by latitude band for the months available, are shown in Table 9.

For the months (September, October, November) when all bands have data, the totals indicate low Tungsten-185 fallout in the equatorial and the 10-30°S bands, about one-fourth to one-third of that found in the other three bands.

In addition, the data indicate the extrapolated Tungsten-185 fallout to be approximately equal for each of the five months. This is perhaps surprising and may be an artificial indication caused by the grouping.

The total Tungsten-185 deposition, extrapolated to June 1, 1958, may be estimated as 18 megacuries between 50°N and 50°S. By January 1, 1959, this would have decayed to about 2.5 megacuries.

The mean monthly  $W^{185}/Sr^{90}$  ratios are listed in Table 10. Considering the same three months as above, it is notable that,

1. The southernmost band shows a markedly lower ratio than the other bands.
2. The maximum ratio appears in the equatorial band.
3. In the three northernmost bands, two peaks appear, in September and November.

The end of this period should represent stratospheric fallout, as tropospheric material should be very low by October and November. Interpretation of the data and the indications noted is largely a meteorological problem and will not be attempted here.

Table 1

LIST OF POT STATIONS ACTIVE DURING 1958

United States

Birmingham, Alabama  
Richmond, California  
W. Los Angeles, California  
Coral Gables, Florida  
AEC Lab, Coconut Island, Oahu, Hawaii  
Gartley Hall, University of Hawaii, Oahu, Hawaii  
Lemont, Illinois  
Louisville, Kentucky  
Westwood, New Jersey  
New York, New York  
Tulsa, Oklahoma  
Pittsburgh, Pennsylvania  
Vermillion, South Dakota  
Houston, Texas  
Salt Lake City, Utah  
Seattle, Washington

Australia

Adelaide  
Brisbane  
Darwin  
Melbourne  
Perth  
Sydney  
Townsville

Austria

Klagenfurt  
Vienna

Brazil

Itaici, State of Sao Paulo  
Nova Friburgo, State of Rio  
Sao Jose dos Campos, State of Sao Paulo

Chile

Santiago

Colombia

Bogota

Table 1 (Contd.)

Japan

Hiroshima  
Nagasaki

Kenya

Kikuyu

Pakistan

Karachi

Senegal

Dakar

Southern Rhodesia

Salisbury

Taiwan

Tainan  
Taipai  
Taifung

Tasmania

Hobart

Thailand

Bangkok

Union of South Africa

Durban  
Pretoria

Table 2

LIST OF FUNNEL STATIONS STARTED IN FEBRUARY 1959

United States

Anchorage, Alaska  
Barrow, Alaska  
Cold Bay, Alaska  
Juneau, Alaska  
San Francisco, California  
Denver, Colorado  
Hilo, Hawaii  
Mauna Loa, Hawaii  
International Falls, Minnesota  
Columbia, Missouri  
Helena, Montana  
Williston, North Dakota  
Medford, Oregon  
Columbia, South Carolina  
Dallas, Texas  
El Paso, Texas  
Houston, Texas  
Green Bay, Wisconsin  
Silver Hill, Maryland

Outside United States

Canton Island  
Truk  
Wake

Table 3

POT ANALYSES 1958

United States Sites

Alabama, Birmingham  
California, Richmond  
California, West Los Angeles  
Florida, Coral Gables  
Hawaii, Oahu, AEC Lab, Coconut Island  
Hawaii, Oahu, Gartley Hall, University of Hawaii  
Hawaii, Oahu, Weather Station, Coconut Island  
Illinois, Lemont  
Kentucky, Louisville  
New Jersey, Westwood  
New York, New York  
Oklahoma, Tulsa  
Pennsylvania, Pittsburgh  
South Dakota, Vermillion  
Texas, Houston  
Utah, Salt Lake City  
Washington, Seattle

Outside United States Sites

Australia, Adelaide  
Australia, Brisbane  
Australia, Darwin  
Australia, Melbourne  
Australia, Perth  
Australia, Sydney  
Australia, Townsville  
Austria, Kalgenfurt  
Austria, Vienna  
Brazil, Itaipu, State of Sao Paulo  
Brazil, Nova Friburgo, State of Rio  
Brazil, Sao Jose dos Campos, State of Sao Paulo  
Chile, Santiago  
Colombia, Bogota  
Japan, Hiroshima  
Japan, Nagasaki  
Kenya, Kikuyu  
Pakistan, Karachi  
Senegal, Dakar  
Southern Rhodesia, Salisbury  
Taiwan, Tainan  
Taiwan, Taipei  
Taiwan, Taitung  
Tasmania, Hobart  
Thailand, Bangkok  
Union of South Africa, Durban  
Union of South Africa, Pretoria

Weather Stations - "Bravo", "Charlie", "Delta", "Echo"

MONTHLY FALLOUT COLLECTIONS

Alabama, Birmingham

milliouries per square mile  
at midpoint of sampling period

Sampling Period	Sr90	Sr89	W185
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1957 April through December

1958 January	0.66 ± 0.03	11.4 ± 1.4	
February	0.24 ± 0.01	3.4 ± 0.5	
March	0.38 ± 0.02	6.4 ± 0.7	
April	1.67 ± 0.05	24.4 ± 0.18	
May	1.17 ± 0.05	20.7 ± 0.7	
June	0.65 ± 0.04	24.5 ± 0.5	
July	2.11 ± 0.02	88.77 ± 0.11	
August	1.06 ± 0.04	46.74 ± 0.47	
September	0.49 ± 0.03	19.1 ± 0.6	48.8 ± 2.4
October	0.26 ± 0.02	6.75 ± 0.26	6.34 ± 0.76
November	0.60 ± 0.03	29.1 ± 0.9	19.8 ± 0.9
December	1.09 ± 0.13	59.3 ± 1.3	20.9 ± 0.8

1959 January sample started first week April '59

Sr99/Sr90 at Sampling Midpoint	no W185 ml2 on 6-1-58	W185 Sr90 on 6-1-58	Cumulative no Sr90 ml2	ppt'n. in inches
17			5.45 ± 0.12	3.42
12			6.11 ± 0.12	5.14
16			6.35 ± 0.13	3.03
14			6.73 ± 0.13	3.51
15			8.40 ± 0.13	2.33
38			9.56 ± 0.14	3.10
42			10.21 ± 0.14	6.79
44			12.32 ± 0.14	1.98
39	131.9 ± 6.5	269	13.87 ± 0.15	5.74
26	22.6 ± 2.7	87	14.13 ± 0.15	2.31
48	96.6 ± 4.4	161	14.73 ± 0.15	3.38
50	139 ± 5	127	15.82 ± 0.20	1.29

MONTHLY FALLOUT COLLECTIONS

California, West Los Angeles  
 millicrouries per square mile  
 at midpoint of sampling period

Sampling Period	Sr90	Sr89	W185
1956 December through 1957 December			
1958 January	0.44 ± 0.02	7.2 ± 0.9	
February	0.90 ± 0.05	11.5 ± 1.0	
March	1.30 ± 0.08	33.6 ± 3.1	
April	1.50 ± 0.00	13.4 ± 0.2	
May	0.05 ± 0.03	2.4 ± 0.5	
June	0.10 ± 0.01	0.40 ± 0.04	
July	0.160 ± 0.003	0.37 ± 0.04	
August	0.08 ± 0.01	2.70 ± 0.07	
September	0.08 ± 0.03	2.30 ± 0.31	5.74 ± 0.48
October	0.15 ± 0.02	5.90 ± 0.26	4.16 ± 0.46
November	0.11 ± 0.02	3.88 ± 0.16	2.18 ± 0.25
December	0.07 ± 0.02	1.45 ± 0.12	

1959 January  
 sample started first week April '59

no W185 mi2 on 6-1-58	no Sr90 mi2 on 6-1-58	Cumulative no Sr90 mi2	ppt'n. in inches
		4.94 ± 0.10	1.49
		5.37 ± 0.10	6.26
		6.28 ± 0.11	5.25
		7.58 ± 0.13	2.04
		9.08 ± 0.13	0.01
		9.13 ± 0.14	trace
		9.23 ± 0.14	trace
		9.39 ± 0.14	0.02
		9.46 ± 0.14	0.03
		9.54 ± 0.14	0.32
		9.69 ± 0.14	trace
		9.80 ± 0.15	0.01
194	15.5 ± 1.3		
99	14.9 ± 1.6		
96	10.6 ± 1.2		
89	6.2 ± 0.8		

Sr89/Sr90 at Sampling Midpoint	no W185 mi2 on 6-1-58	no Sr90 mi2 on 6-1-58
14		
11		
24		
9		
48		
4		
2		
36		
29		
39		
35		
21		

MONTHLY FALLOUT COLLECTIONS

California, Richmond	millieuries per square mile at midpoint of sampling period		Sr-89 W185	Sr-89/Sr-90 at Sampling Midpoint	no W185 ml 2 on 6-1-58	W185 Sr-90 on 6-1-58	Cumulative no Sr-90 ml 2	ppt'n. in limboc
	Sr-90	Sr-89						
1958 3/20-4/3/58	4.47 ± 0.07	69.5 ± 7.9	20				3.74 ± 1.04	6.64
	3.00 ± 0.05	75.0 ± 5.9	25				4.11 ± 1.04	2.57
4/3-4/30/58	0.38 ± 0.01	6.07 ± 0.04	16				4.18 ± 1.04	0.80
	0.36 ± 0.01	4.06 ± 0.07	11				4.65 ± 1.05	0.47
May	0.33 ± 0.01	6.7 ± 0.2	20		0.313 ± 0.009	1.5	4.70 ± 1.06	0
	0.42 ± 0.01	6.8 ± 0.2	16		0.281 ± 0.017	2.3	4.91 ± 1.06	0
June	0.21 ± 0.00	1.28 ± 0.03	6		2.39 ± 0.03	52		
	0.12 ± 0.00	1.47 ± 0.02	12		2.39 ± 0.03	39		
July	0.046 ± 0.003	0.88 ± 0.02	19		3.39 ± 0.06	170		
	0.062 ± 0.003	0.92 ± 0.01	15		2.88 ± 0.06	137		
August	0.020 ± 0.001	0.537 ± 0.008	27					
	0.021 ± 0.001	0.543 ± 0.009	26					



MONTHLY FALLOUT COLLECTIONS

Hawaii, Oahu, Cartley Hall, Univ. of Hawaii

Sampling Period	militicuries per square mile at midpoint of sampling period		Sr <sup>90</sup> /Sr <sup>90</sup> at Sampling Midpoint	no W185 ml <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml <sup>2</sup>	Ppt'n. in inches
	Sr <sup>90</sup>	Sr <sup>89</sup>					
1957 June through January 6, 1958							
1958 January	0.71 ± 0.03	10.5 ± 1.4	15			2.81 ± 0.10	3.30
February	0.36 ± 0.02	4.1 ± 0.6	11			3.52 ± 0.10	2.62
March	1.33 ± 0.08	28.3 ± 3.3	21			3.88 ± 0.11	17.75
April	0.84 ± 0.02	12.8 ± 0.5	15			5.21 ± 0.13	1.39
May	1.15 ± 0.04	10.0 ± 0.4	9			6.05 ± 0.13	2.37
June	1.21 ± 0.05	2.13 ± 0.76	2			7.20 ± 0.14	1.76
July	0.07 ± 0.01	3.9 ± 0.11	57			8.41 ± 0.15	3.42
August	0.70 ± 0.03	37.13 ± 0.65	54			8.48 ± 0.15	7.69
September	0.73 ± 0.04	18.7 ± 0.6	26	71.4 ± 3.2	98	9.18 ± 0.15	1.48
October	1.56 ± 0.05	3.17 ± 0.22	2.0	102.5 ± 3.9	66	9.91 ± 0.16	4.57
November	0.49 ± 0.03	22.4 ± 0.8	46	37.7 ± 3.2		11.47 ± 0.16	0.77
December	1.12 ± 0.12	56.6 ± 1.2	51			11.96 ± 0.17	3.30
1959 January		19.4 ± 0.4		162 ± 3		13.08 ± 0.20	

\* Data reported by collection.

MONTHLY FALLOUT COLLECTIONS

Hawaii, Oahu, Weather Station, Coconut Island  
millicuries per square mile  
at midpoint of sampling period

<u>Sampling Period</u>	<u>Sr90</u>	<u>Sr89</u>	<u>W185</u>	<u>Sr89/Sr90 at Sampling Midpoint</u>	<u>mo W185 ml<sup>2</sup> on 6-1-58</u>	<u>W185 Sr90 on 6-1-58</u>	<u>Cumulative mo Sr90 ml<sup>2</sup></u>	<u>ppt'n. in inches</u>
1957 July through January 6, 1958								
1958 January	0.22 ± 0.01	3.4 ± 0.6	15				3.93 ± 0.02	1.76
February	0.70 ± 0.05	6.2 ± 1.2	9				4.15 ± 0.02	2.83
March	1.65 ± 0.08	23.4 ± 1.3	14				4.85 ± 0.05	15.41
April	0.90 ± 0.02	15.9 ± 0.3	18				6.50 ± 0.10	1.28
May	1.02 ± 0.04	7.1 ± 0.4	7				7.40 ± 0.10	1.85
June	0.08 ± 0.02	0.14 ± 0.01	2				8.42 ± 0.11	1.58
July	1.16 ± 0.04	52.0 ± 0.5	45				9.50 ± 0.11	3.29
August	0.51 ± 0.05	23.35 ± 0.36	46				9.66 ± 0.12	5.55
September	0.53 ± 0.03	16.6 ± 0.6	31	10.4 ± 0.7	28.1 ± 1.9	53	10.17 ± 0.13	2.36
October	0.89 ± 0.04	21.3 ± 0.5	24	6.57 ± 0.99	23.5 ± 2.1	26	10.70 ± 0.13	8.45
November	0.46 ± 0.04	17.6 ± 0.7	38				11.59 ± 0.14	1.50
December	1.48 ± 0.11	62.7 ± 1.1	42				12.05 ± 0.15	4.32
1959 January							13.53 ± 0.18	5.43
February								5.00

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Illinois, Lemont Sampling Period	milliuries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	no W185 ml <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml <sup>2</sup>	ppt'n. in limbs
	Sr <sup>89</sup>	W185					
1956 December through December 19, 1957			10			5.94 ± 0.07	1.45
1958 January	0.30 ± 0.00	3.0 ± 0.4				6.24 ± 0.07	0.33
February	lost						1.64
March	0.57 ± 0.05	13.5 ± 0.9	24			6.81 ± 0.09	3.12
April	0.79 ± 0.03	16.1 ± 0.5	20			7.60 ± 0.09	6.43
May	4.87 ± 0.03	61.2 ± 2.0	13			12.47 ± 0.10	4.74
June	0.09 ± 0.01	1.15 ± 0.04	13			12.56 ± 0.10	2.51
July	3.67 ± 0.10	23.2 ± 0.4	6			16.23 ± 0.14	1.86
August	0.33 ± 0.04	13.5 ± 0.9	41			16.56 ± 0.15	2.12
September	0.76 ± 0.03	28.1 ± 0.8	37	53.2 ± 2.5	70	17.32 ± 0.15	1.58
October	1.04 ± 0.07	56.1 ± 2.3	54	40.9 ± 2.0	40	18.36 ± 0.16	0.57
November	2nd milk middle of April '59						
December	Not started first week April '59						
1959 January							

MONTHLY FALLOUT COLLECTIONS

Kentucky, Louisville

Sampling Period	milliouries per square mile at midpoint of sampling period		Sr <sup>89</sup> / Sr <sup>90</sup> at Sampling Midpoint	no W185 ml <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	Sr <sup>89</sup>					
1958 9/18-10/1	0.24 ± 0.02 0.26 ± 0.01	3.95 ± 0.08 3.68 ± 0.07	16 14			0.25 ± 0.01	2.83
October	0.52 ± 0.017 0.41 ± 0.015	10.56 ± 0.11 10.82 ± 0.11	20 26			0.715 ± 0.09	1.65
November	0.61 ± 0.02 0.71 ± 0.02	11.48 ± 0.18	19 —			1.375 ± 0.11	2.77
December	0.58 ± 0.02 0.60 ± 0.02	23.82 ± 0.19 24.10 ± 0.19	41 40			1.965 ± 0.11	1.19
1959 January	2.10 ± 0.03 2.28 ± 0.03	95.65 ± 0.29 97.83 ± 0.29	46 43			4.155 ± 0.17	5.51
February	1.63 ± 0.03 1.54 ± 0.03	47.86 ± 0.19 52.79 ± 0.21	29 34			5.745 ± 0.18	2.76

MONTHLY FALLOUT COLLECTIONS

New Jersey, Westwood

Sampling Period	millinuries per square mile at midpoint of sampling period		Sr <sup>89</sup> / Sr <sup>90</sup>	Sr <sup>89</sup> / Sr <sup>90</sup> at Sampling Midpoint	no W185 ml <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml <sup>2</sup>	ppt's. in inches
	Sr <sup>90</sup>	Sr <sup>89</sup>						
1957 August through December								
1958 January	1.15 ± 0.02						4.78 ± 0.15	6.42
	1.91 ± 0.02						6.31 ± 0.71	
February	0.46 ± 0.01						7.04 ± 0.81	
	1.00 ± 0.02						8.06 ± 0.81	4.92
March	0.99 ± 0.02						9.79 ± 0.82	6.38
	1.02 ± 0.02						12.60 ± 1.04	3.98
April	1.61 ± 0.04	45.6 ± 0.3	28				13.65 ± 1.04	1.90
	1.85 ± 0.04	32.1 ± 0.3	17				14.76 ± 1.04	2.78
May	2.66 ± 0.03	30.1 ± 0.3	11				15.87 ± 1.06	4.31
	2.95 ± 0.03	34.2 ± 0.3	12				16.48 ± 1.06	2.66
June	1.06 ± 0.03	10.5 ± 0.3	10				18.12 ± 1.06	4.72
	1.03 ± 0.02	15.3 ± 0.2	15				19.50 ± 1.06	3.46
July	1.10 ± 0.02	42.4 ± 0.4	38				20.29 ± 1.06	1.08
	1.11 ± 0.02	45.8 ± 0.4	41					
August	1.21 ± 0.03	26.3 ± 1.1	21					
	1.01 ± 0.03	24.2 ± 1.0	24					
September	0.67 ± 0.02	19.42 ± 0.29	29					
	0.73 ± 0.02	18.40 ± 0.20	25					
October	1.67 ± 0.03	73.77 ± 0.48	44					
	1.61 ± 0.03	83.38 ± 0.44	52					
November	1.38 ± 0.02	53.50 ± 0.28	39					
	1.38 ± 0.02	53.11 ± 0.28	38					
December	0.76 ± 0.03	25.74 ± 0.19	34					
	0.82 ± 0.02	24.65 ± 0.16	30					

MONTHLY FALLOUT COLLECTIONS

New York, New York

Sampling Period	milliourines per square mile at midpoint of sampling period		Sr-90 at Sampling Midpoint	no W185 mi <sup>2</sup> on 6-1-58	W185 Sr-90 on 6-1-58	Cumulative no Sr-90 mi <sup>2</sup>	ppt'n. in inches
	Sr-90	Sr-89					
2-1-54 to 12-31-57						39.27 ± 0.75	
1958 January	1.20 ± 0.05 1.37 ± 0.05		21 17			40.52 ± 0.75	3.79
February	1.23 ± 0.07		13			41.75 ± 0.75	2.98
March	0.94 ± 0.07 0.84 ± 0.07		16 18			42.64 ± 0.75	3.19
April	1.52 ± 0.42(1)		10.5 ± 6(3)			44.17 ± 0.86	6.14
May	2.70 ± 0.07 2.57 ± 0.06	5.29 ± 0.52 4.60 ± 0.46	11 10			46.80 ± 0.86	3.25
June	1.84 ± 0.06 1.67 ± 0.05	5.04 ± 0.46 4.95 ± 0.46	11 12			48.55 ± 0.86	2.55
July	1.58 ± 0.29(2)	16.9 ± 2.0(2)	11			50.13 ± 0.91	3.68
August	0.60 ± 0.05(1)	11.5 ± 2.2(1)	20			50.73 ± 0.91	2.36
September	0.65 ± 0.11(1)	14.94 ± 0.65 17.64 ± 0.27	28 ± 1(3)			51.38 ± 0.92	4.44
October	1.06 ± 0.33(1)	38.01 ± 0.67 48.25 ± 0.58	53 ± 15(3)			52.44 ± 0.97	5.46
November	0.98 ± 0.21(1)	18.05 ± 0.48 26.53 ± 0.42	29 ± 11(3)			53.31 ± 1.00	1.85
December	1.77 ± 0.48(1)	71.7 ± 0.8 70.5 ± 0.9	46 45				1.25
1959 1/13-1/30	1.19 ± 0.13(1)	27.9 ± 0.4 31.9 ± 0.5	23 30				

(1) Four analyses.  
 (2) Three analyses.  
 (3) Two Sr-89 analyses.

MONTHLY FALLOUT COLLECTIONS

Oklahoma, Tulsa Sampling Period	milliouries per square mile at midpoint of sampling period		Sr-89/ Sr-90	Sr-89/ Sr-90 at Sampling Midpoint	no W185 mi <sup>2</sup> on 6-1-58	W185 Sr-90 on 6-1-58	Cumulative no Sr-90 mi <sup>2</sup>	ppt'n. in inches
	Sr-90	W185						
1958 January	0.35 ± 0.02	5.3 ± 0.7	15				0.35 ± 0.02	1.78
February	0.40 ± 0.02	3.0 ± 0.3	8				0.75 ± 0.03	0.86
March	2.29 ± 0.06	22.7 ± 1.0	10				3.04 ± 0.07	6.14
April	2.84 ± 0.15	34.2 ± 1.1	12				5.88 ± 0.16	4.64
May	2.22 ± 0.67	20.1 ± 0.7	9				8.10 ± 0.69	3.44
June	1.47 ± 0.05	22.1 ± 0.72	15				9.57 ± 0.69	3.08
July	1.92 ± 0.05	169.2 ± 1.03	88				11.49 ± 0.69	3.33
August	1.05 ± 0.03	55.46 ± 0.45	53				12.54 ± 0.69	3.58
September	0.90 ± 0.03	32.7 ± 0.9	36		120 ± 4	133	13.44 ± 0.69	3.61
October	0.20 ± 0.02	4.59 ± 0.35	23		61.1 ± 2.1	306	13.64 ± 0.69	0.21
November	0.47 ± 0.02	3.86 ± 0.23	8				14.11 ± 0.69	1.39
December	0.57 ± 0.03	26.0 ± 1.0	46				14.68 ± 0.69	0.82

MONTHLY FALLOUT COLLECTIONS

Pennsylvania, Pittsburgh

Sampling Period	milliCuries per square mile at midpoint of sampling period		Sr-90 at sampling midpoint	no W185 on 6-1-58	W185 Sr-90 on 6-1-58	Cumulative no Sr90 ml2	ppt'n. in inches
	Sr-90	Sr-89					
1957 July 3 through December 31							
1958 January	0.57 ± 0.03 0.57 ± 0.03	4.4 ± 0.7 4.3 ± 0.5	7 7	---	---	2.07 ± 0.21	3.40
February	0.29 ± 0.02 0.33 ± 0.03	3.5 ± 0.5 4.2 ± 0.5	12 12	---	---	2.95 ± 0.21	1.00
March	0.41 ± 0.02 0.42 ± 0.02	5.3 ± 0.6 5.1 ± 0.5	12 12	---	---	3.36 ± 0.21	3.36
April	1.20 ± 0.09 0.54 ± 0.54	19.6 ± 2.0 7.7 ± 1.3	15 13	---	---	4.23 ± 0.50	3.87
May	0.76 ± 0.04 0.73 ± 0.04	8.4 ± 0.8 9.7 ± 0.8	11 13	<2.30 1.35 ± 0.43	<3 2	4.98 ± 0.51	3.87
June	2.28 ± 0.14 2.15 ± 0.12	34. ± 3. 36 ± 3	15 17	7.65 ± 0.93 9.05 ± 0.93	3 4	7.19 ± 0.52	3.00
July	1.89 ± 0.09 2.16 ± 0.12	96 ± 8 90 ± 6	51 42	111 ± 4 111 ± 4	59 51	9.22 ± 0.56	8.47
August	1.44 ± 0.08 1.47 ± 0.12	43 ± 4 40 ± 3	30 27	73.7 ± 2.7 75.1 ± 2.7	51 51	10.67 ± 0.57	5.33
September	0.59 ± 0.03 0.59 ± 0.03	18.3 ± 0.8 15.9 ± 0.7	31 27	51.9 ± 2.7 43.2 ± 1.9	88 73	11.26 ± 0.57	4.34
October	0.48 ± 0.02 0.49 ± 0.02	16.7 ± 0.7 14.2 ± 0.8	35 29	62.5 ± 2.9 lost	130 ---	11.74 ± 0.57	3.13
November	0.66 ± 0.04 0.62 ± 0.03	24.8 ± 2.0 24.7 ± 1.2	38 40	39.5 ± 2.0 54.1 ± 2.9	60 67	12.38 ± 0.57	
December	0.65 ± 0.03 0.67 ± 0.03	19.5 ± 1.8 19.0 ± 0.8	30 28	27.6 ± 1.5 32.9 ± 1.5	42 49	13.04 ± 0.57	
1959 January	1.38 ± 0.06 1.12 ± 0.05	34.5 ± 1.2 34.0 ± 1.8	25 30	47.5 ± 2.5 98.3 ± 3.3	34 88	14.29 ± 0.57	4.01

MONTHLY FALLOUT COLLECTIONS

South Dakota, Vermillion

Sampling Period	milliuries per square mile at midpoint of sampling period		Sr-89/Sr-90 at sampling midpoint	no W185 mi <sup>2</sup> on 6-1-58	W185/Sr-90 on 6-1-58	Cumulative no Sr-90 mi <sup>2</sup>	ppt'n. in inches
	Sr-90	Sr-89					
1957 April through December							
January	0.08 ± 0.01	1.39 ± 0.4	17			9.18 ± 0.19	0.22
February	0.38 ± 0.02	5.5 ± 0.5	13			9.26 ± 0.19	2.13
March	0.20 ± 0.01	2.79 ± 0.3	13			9.64 ± 0.19	0.52
April	2.54 ± 1.00	31.0 ± 1.0	12			12.38 ± 0.19	3.15
May	2.28 ± 0.06	36.0 ± 1.0	16			14.66 ± 0.21	1.65
June	0.16 ± 0.02	0.87 ± 0.04	5			14.82 ± 0.21	1.09
July	2.42 ± 0.08	75.94 ± 1.39	31			17.24 ± 0.22	4.47
August	0.50 ± 0.02	24.60 ± 0.50	49			17.74 ± 0.22	0.19
September	0.29 ± 0.02	12.5 ± 0.4	43	14.8 ± 2.4	51	18.03 ± 0.23	0.88
October	0.06 ± 0.01	1.37 ± 0.15	23	10.4 ± 1.4	173	18.09 ± 0.23	0
November	0.74 ± 0.04	34.8 ± 1.0	47	56.6 ± 2.4	76	18.83 ± 0.23	0.94
December	0.21 ± 0.03	7.82 ± 0.32	37	26.1 ± 5.5	124	19.04 ± 0.23	0.07

1959 January sample started first week April '59

MONTHLY FALLOUT COLLECTIONS

Texas, Houston	Sampling Period	milliouries per square mile at midpoint of sampling period		Sr89	Sr89/Sr90 at sampling midpoint	no W185 on 6-1-58	W185/Sr90 on 6-1-58	Cumulative no Sr90 mi <sup>2</sup>	ppt'n. in inches
		Sr90	W185						
1958 May		0.37 ± 0.01	---	3.6 ± 0.1	10	---	---	0.38 ± 0.01	1.55
		0.38 ± 0.02	---	3.4 ± 0.2	9	---	---	1.08 ± 0.32	2.10
June		0.67 ± 0.03	lost	15.6 ± 0.3	23	22.7 ± 1.1	31	1.63 ± 0.52	1.94
		0.74 ± 0.02	20 ± 1	18.7 ± 0.3	23	84.8 ± 1.5	137	2.24 ± 0.52	6.44
July		0.62 ± 0.02	56 ± 1	41.0 ± 0.7	66	83.3 ± 1.5	174		
		0.48 ± 0.02	55 ± 1	31.5 ± 0.5	66	168 ± 2	275		
8-1 to 9-8		0.61 ± 0.02	80 ± 1	32 ± 1	53	173 ± 4	284		
		0.61 ± 0.02	82 ± 2	37 ± 1	61				

Utah, Salt Lake City

MONTHLY FALLOUT COLLECTIONS

Sampling Period	milliCuries per square mile at midpoint of sampling period		Sr <sup>90</sup> / Sr <sup>90</sup>	Sr <sup>89</sup> / Sr <sup>90</sup> at sampling midpoint	no W <sup>185</sup> mi <sup>2</sup> on 6-1-58	W <sup>185</sup> / Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> mi <sup>2</sup>	ppt'n. in Inches
	Sr <sup>90</sup>	Sr <sup>89</sup>						
1956 December through 1957 December								
1958 January	0.70 ± 0.05	10.7 ± 1.0		15			13.06 ± 0.19	0.87
February	1.10 ± 0.04	13.9 ± 1.7		13			13.76 ± 0.19	2.20
March	1.47 ± 0.08	16.5 ± 0.4		32			14.86 ± 0.20	2.19
April	2.10 ± 0.05	26.9 ± 0.3		13			16.33 ± 0.22	2.92
May	1.30 ± 0.06	15.8 ± 0.8		12			18.43 ± 0.22	0.30
June	0.28 ± 0.02	3.26 ± 0.20		12			19.73 ± 0.23	0.04
July	0.060 ± 0.003	6.44 ± 0.35		107			20.01 ± 0.23	0.05
August	0.71 ± 0.11	31.55 ± 0.64		44			20.07 ± 0.23	0.25
September							20.78 ± 0.26	0.25
October	0.10 ± 0.03	4.68 ± 0.32	3.34 ± 0.48	47	11.9 ± 1.7	119		trace
November	0.25 ± 0.02	4.04 ± 0.18		16				1.13
12/12-1/12/59	3.07 ± 0.15	131 ± 2	16.0 ± 0.4	43	107 ± 3	35		0.54

1959 January sample started first week April '59

MONTHLY FALLOUT COLLECTIONS

Australia, Darwin	milliCuries per square mile at midpoint of sampling period		Sr-89/ Sr-90	Sr-89/Sr-90 at Sampling Midpoint	no W185 mi <sup>2</sup> on 6-1-58	W185/ Sr-90 on 6-1-58	Cumulative no Sr-90 mi <sup>2</sup>	ppt'n. in inches
	Sr-90	W185						
1958 July	0.43 ± 0.01	5.71 ± 0.11	13			0.43 ± 0.01	0.12	
August	0.04 ± 0.01	0.91 ± 0.18	23	6.86 ± 1.64	172	0.47 ± 0.01	0.01*	
September	1.24 ± 0.04	53.2 ± 1.3	43	3.8 ± 1.3	3		0	
October	0.26 ± 0.02	6.34 ± 0.32	24	23.7 ± 1.9	91		5.07	
November	0.27 ± 0.02	20.6 ± 0.7	76	25.6 ± 1.5	95		7.16*	
December		5.40 ± 0.31		36.0 ± 2.1				

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Australia, Melbourne

Sampling Period	milliouries per square mile at midpoint of sampling period		Sr <sup>89</sup> / Sr <sup>90</sup> at Sampling Midpoint	no W185 / mi <sup>2</sup> on 6-1-58	W185 / Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> / mi <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	Sr <sup>89</sup>					
1958 June	0.08 ± 0.01	0.20 ± 0.05	3			0.08 ± 0.01	
July	0.05 ± 0.01	1.07 ± 0.06	21			0.13 ± 0.01	
August	0.18 ± 0.01	2.22 ± 0.40	12	6.3 ± 1.8	17	0.31 ± 0.02	3.19*
September	0.24 ± 0.02	6.64 ± 0.32	28	11.5 ± 0.8	48	0.55 ± 0.03	3.12
October	0.45 ± 0.03	8.92 ± 0.33	20	27.4 ± 1.4	61	1.00 ± 0.04	3.90
November	2nd milk by middle of April '59						
December	sample started first week April '59						
1959 January	sample not started 1st week April '59						

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Australia, Perth Sampling Period	milliouries per square mile at midpoint of sampling period		Sr 89/ Sr 90	Sr 89/ Sr 90 at sampling Midpoint	no W185 mi2 on 6-1-58	W185 Sr 90 on 6-1-58	Cumulative no Sr 90 mi2	ppt'n. in inches
	Sr 90	Sr 89						
1958 6/11-7/1	0.093 ± 0.003	0.83 ± 0.4	9				0.093 ± 0.003	16.38
July	0.156 ± 0.001	2.40 ± 0.06	15		10.4 ± 1.6	58	0.249 ± 0.003	2.66*
August	0.18 ± 0.01	7.18 ± 1.44	40		14.2 ± 1.7	43	0.43 ± 0.01	0.20
September	0.33 ± 0.02	10.2 ± 0.4	31		5.5 ± 1.3	50	0.76 ± 0.02	2.73
October	0.11 ± 0.02	2.23 ± 0.27	20		14.0 ± 1.7	127	0.87 ± 0.03	0.39
November	0.11 ± 0.02	1.90 ± 0.17	17		16.2 ± 1.9		0.98 ± 0.06	0.49*
December		2.88 ± 0.34						
1959 January		2.44 ± 0.28						

sample not started 1st week April '59

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Australia, Sydney	Sampling Period	milliCuries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	no W185 ml 2 on 6-1-58	W185/Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml <sup>2</sup>	ppt'n. in inches
		Sr <sup>90</sup>	W185					
1958	6/3-7/1	0.34 ± 0.02	0.32 ± 0.08	1			0.34 ± 0.02	1.17
	July	0.26 ± 0.01	6.06 ± 0.13	23	21.0 ± 2.0	18	0.60 ± 0.02	3.71*
	August	0.44 ± 0.02	19 ± 1	43	4.1 ± 1.9	16	1.04 ± 0.03	1.17
	September	0.25 ± 0.02	(-) 0.47 ± 0.13	--	16.4 ± 1.2	68	1.29 ± 0.04	2.34
	October	0.24 ± 0.02	6.13 ± 0.28	26	19.1 ± 1.8	91	1.53 ± 0.04	0.78
	November	0.21 ± 0.02	3.17 ± 0.19	15	24.2 ± 2.9		1.74 ± 0.04	5.84*
	December		3.63 ± 0.43					

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Australia, Townsville	Sampling Period	milliouries per square mile at midpoint of sampling period		Sr <sup>90</sup> at Sampling Midpoint	no W185 mi <sup>2</sup> on 6-1-58	W185 / Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> / mi <sup>2</sup>	ppt'n. in inches
		Sr <sup>90</sup>	W185					
1958	6/6-7/1	0.25 ± 0.01	3.93 ± 0.04	16			0.25 ± 0.01	0
	July	0.10 ± 0.01	0.43 ± 0.02	4			0.35 ± 0.01	0.07*
	August	0.07 ± 0.02	0.90 ± 0.13	13	7.18 ± 1.64	103	0.42 ± 0.02	0.23
	September	lost						0.12
	October	0.06 ± 0.03	1.14 ± 0.34	19	24.1 ± 1.7			1.17
	November	2nd milk by middle of April '59						3.19*
	December				16.0 ± 2.3			
1959	January							

sample not started first week April '59

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Australia, Brisbane	millicuries per square mile at midpoint of sampling period		Sr89/Sr90 at sampling midpoint	mc W185 m <sup>2</sup> on 6-1-58	W185 Sr90 on 6-1-58	Cumulative mc Sr90 m <sup>2</sup>	ppt'r in inches
	Sr90	W185					
1958 June	0.053 ± 0.008	2.25 ± 0.07	42			0.053 ± 0.03	0
July	0.011 ± 0.001	0.00 ± 0.004	--	9.2 ± 2.0	58	0.064 ± 0.03	1.65*
August	0.16 ± 0.01	7.39 ± 0.54	46	16.2 ± 1.6	56	0.227 ± 0.033	1.95
September	0.29 ± 0.02	8.72 ± 0.36	30	84.6 ± 2.5	90	0.517 ± 0.039	1.56
October	0.95 ± 0.04	58.4 ± 1.3	61			1.417 ± 0.056	1.56
November	2nd milk middle of April '59						
December	sample started first week April '59						

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Australia, Adelaide	milliouries per square mile at midpoint of sampling period		Sr <sup>89</sup> / Sr <sup>90</sup>	Sr <sup>89</sup> / Sr <sup>90</sup> at sampling midpoint	mc W185 ml on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative mc Sr <sup>90</sup> ml <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	W185						
1958 6/6-7/1	0.036 ± 0.011	0.66 ± 0.04	18				0.04 ± 0.01	3.12
July	0.16 ± 0.01	2.22 ± 0.06	24		17.7 ± 2.0	54	0.20 ± 0.02	1.17
August	0.33 ± 0.02	14.8 ± 0.9	45	8.65 ± 0.98	19.5 ± 1.2	38	0.53 ± 0.02	2.35*
September	0.50 ± 0.03	8.95 ± 0.39	18	7.23 ± 0.44	40.0 ± 1.8	56	1.03 ± 0.04	3.00*
October	0.71 ± 0.04	13.0 ± 0.4	18	11.2 ± 0.5			1.74 ± 0.05	2.34
November	0.21 ± 0.03	2.88 ± 0.25	14				1.95 ± 0.06	0.25
December				2.41 ± 0.78				

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Washington, Seattle Sampling Period	millicuries per square mile at midpoint of sampling period		Sr <sup>90</sup> / Sr <sup>90</sup>	Sr <sup>89</sup> / Sr <sup>90</sup> at sampling midpoint	no W185 ml on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml	ppt'n. in inches
	Sr <sup>90</sup>	W185						
1958 4/18-30	0.51 ± 0.01	7.45 ± 0.15		15			0.51 ± 0.01	1.34
May	2.12 ± 0.06	12.3 ± 0.36		6			2.63 ± 0.06	0.92
June	0.57 ± 0.05	14.75 ± 0.40		26			3.20 ± 0.08	0.72
July	0.040 ± 0.003	0.16 ± 0.04		4			3.24 ± 0.08	trace
8/1-9/3	0.158 ± 0.014	1.22 ± 0.05		8			3.40 ± 0.08	0.32
September	0.50 ± 0.03	24.6 ± 0.7	87.4 ± 6.6	49	236 ± 18	472	3.90 ± 0.08	1.47
October	0.64 ± 0.03	30.8 ± 0.7	7.77 ± 0.56	48	27.8 ± 2.0	43	4.04 ± 0.09	3.12
November	sample lost at site							6.53
December	1.62 ± 0.09	202 ± 3	9.50 ± 0.35	125	55.9 ± 2.1	35		5.51
1959 January			16.4 ± 0.5		126 ± 4			

MONTHLY FALLOUT COLLECTIONS

Austria, Klagenfurt

Sampling Period	milliouries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	mc W185 mi <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative mc Sr <sup>90</sup> mi <sup>2</sup>	ppt's. in inches
	Sr <sup>90</sup>	W185					
1957 August through December							
1958 January	0.13 ± 0.01	3.1 ± 0.4	24			1.90 ± 0.06	2.73
February	0.17 ± 0.02	1.6 ± 0.2	10			2.03 ± 0.06	2.34
March	1.15 ± 0.05	33 ± 0.7	29			2.20 ± 0.07	1.56
April	1.26 ± 0.06	23 ± 1.0	18			3.35 ± 0.08	1.56
May	0.49 ± 0.03	8.7 ± 0.3	18			4.61 ± 0.11	1.56
June						5.10 ± 0.11	8.19
July	3.51 ± 0.12	19.34 ± 0.72	6				5.07
August	2.28 ± 0.06	62.0 ± 1.8	27	71.2 ± 3.1	31		6.63
September	0.80 ± 0.04	20.7 ± 0.8	26	71.4 ± 2.7	89		2.73
October	0.66 ± 0.03	14.4 ± 0.5	22	41.4 ± 0.1	63		3.12
November	0.46 ± 0.02	23.7 ± 0.7	52	39.0 ± 2.1	85		3.90
December		5.22 ± 0.40		34.8 ± 2.7			3.51

MONTHLY FALLOUT COLLECTIONS

Austria, Vienna

Sampling Period	milliouries per square mile at midpoint of sampling period		Sr-89/Sr-90 at Sampling Midpoint	mc W185 mi <sup>2</sup> on 6-1-58	W185 Sr-90 on 6-1-58	Cumulative mc Sr-90 mi <sup>2</sup>	ppt'n. in inches
	Sr-90	Sr-89					
1957 June through December							
1958 January	0.16 ± 0.01	4.0 ± 0.5	25			4.14 ± 0.11	1.17
February	0.27 ± 0.02	3.9 ± 0.7	14			4.30 ± 0.11	2.34
March	0.35 ± 0.01	5.4 ± 0.2	15			4.57 ± 0.11	2.73
April	0.71 ± 0.05	12.7 ± 0.9	18			5.63 ± 0.12	
May	0.692 ± 0.034	11.5 ± 0.4	17			6.32 ± 0.12	0.78
June	3.13 ± 0.08	2.8 ± 0.4	1			9.45 ± 0.15	5.85
July	1.07 ± 0.03	13.29 ± 0.45	12			10.52 ± 0.15	1.95
August	1.64 ± 0.09	37.2 ± 1.6	20	74.1 ± 3.7	40	12.36 ± 0.18	3.90
September	0.02 ± 0.02	8.26 ± 0.38	413	4.1 ± 2.2	76	12.38 ± 0.18	0.78
October	0.76 ± 0.04	24.6 ± 0.8	34	46.4 ± 2.9	61	13.14 ± 0.18	2.73
November	0.48 ± 0.04	20.1 ± 0.7	42	28.0 ± 1.1	58	13.62 ± 0.18	1.17
December				46.1 ± 3.5			2.73
						6.92 ± 0.53	

MONTHLY FALLOUT COLLECTIONS

Sampling Period	Brazil, Itaipu, State of São Paulo milliourcs per square mile at midpoint of sampling period		Sr <sup>89</sup> / Sr <sup>90</sup>	Sr <sup>89</sup> / Sr <sup>90</sup> at Sampling Midpoint	no W185 mi <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> mi <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	W185						
1958 August	0.262 ± 0.019	14.1 ± 1.2	16.3 ± 1.0	62			0.262 ± 0.019	
September								
October	0.50 ± 0.03	6.35 ± 1.67	16.4 ± 0.6	33	22.7 ± 6.0	45	0.76 ± 0.04	
November	0.36 ± 0.03	3.52 ± 0.33	25.4 ± 1.0	71	14.0 ± 1.3	39	1.12 ± 0.05	



MONTHLY FALLOUT COLLECTIONS

Brazil, São José dos Campos, State of São Paulo

millicuries per square mile  
at midpoint of sampling period

Sampling Period	at midpoint of sampling period		Sr90/Sr90 at Sampling Midpoint	mc W185 m <sup>2</sup> on 6-1-58	W185 Sr90 on 6-1-58	Cumulative mc Sr90 m <sup>2</sup>	ppt'n. in inches
	Sr90	W185					
1958 July	0.12 ± 0.02	6.1 ± 1.0	24	9.4 ± 1.5	78		
August							
September		14.5 ± 1.2		39.1 ± 3.2			
October	0.62 ± 0.03	7.34 ± 0.80	59	26.2 ± 2.9	42		
November	0.48 ± 0.03	9.39 ± 0.50	20				

MONTHLY FALLOUT COLLECTIONS

Chile, Santiago

Sampling Period	milliouries per square mile at midpoint of sampling period		Sr <sup>89</sup> / Sr <sup>90</sup>	Sr <sup>89</sup> / Sr <sup>90</sup> at Sampling Midpoint	no W185 ml <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	W185						
1958 June								4.29
July	0.13 ± 0.01	6.90 ± 0.13		53				
August	0.58 ± 0.03	35.8 ± 1.4	17.9 ± 1.1	62	36.5 ± 2.2	63		
September	0.09 ± 0.02	3.06 ± 0.28	1.40 ± 0.11	34	3.8 ± 0.3	42		0.39
October	0.27 ± 0.03	8.88 ± 0.47	7.94 ± 0.49	33	28.4 ± 1.8	105		0
November	0.18 ± 0.02	3.54 ± 0.25		20				0.39
December			0.14 ± 0.41		0.93 ± 2.73			0

MONTHLY FALLOUT COLLECTIONS

Columbia, Bogota

milliouries per square mile  
at midpoint of sampling period

Sampling Period	Sr90	Sr89	Sr89/Sr90 at Sampling Midpoint	mc W185 mi <sup>2</sup> on 6-1-58	W185 Sr90 on 6-1-58	Cumulative mc Sr90 mi <sup>2</sup>	ppt'n. in inches
1958 January	0.04 ± 0.01	0.49 ± 0.1	12			0.10 ± 0.02	0.35
February	0.04 ± 0.01	0.58 ± 0.2	15			0.14 ± 0.02	0.61
March	0.12 ± 0.01	0.46 ± 0.04	4			0.26 ± 0.02	1.79
April	0.025 ± 0.02	0.82 ± 0.29	33			0.29 ± 0.03	2.89
May	0.12 ± 0.01	1.55 ± 0.10	13			0.41 ± 0.03	1.05
June	0.02 ± 0.03	2.66 ± 0.04	133 †			0.43 ± 0.03	
July	0.10 ± 0.01	4.40 ± 0.11	43	19.1 ± 1.4	96	0.53 ± 0.10	
August	0.20 ± 0.02	18.4 ± 0.6	92	8.1 ± 1.3	14	0.73 ± 0.12	
September	0.06 ± 0.02	4.31 ± 0.32	72	20.4 ± 1.5	227 †	0.79 ± 0.13	
October	0.09 ± 0.02	3.75 ± 0.34	116 †			0.88 ± 0.13	
November	0.10 ± 0.02	4.38 ± 0.27	144			0.98 ± 0.13	
December							

sample not started first week April '59

MONTHLY FALLOUT COLLECTIONS

Japan, Hiroshima

Sampling Period	millicuries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	no W185 ml <sup>2</sup> on 6-1-58	no W185 Sr <sup>90</sup> on 6-1-58	Cumulative no Sr <sup>90</sup> ml <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	W185					
1956 August through December 1957							
1958 January	0.24 ± 0.04	5.4 ± 0.7	23			5.80 ± 0.12	2.65
February	0.25 ± 0.01	2.9 ± 0.3	12			6.04 ± 0.13	2.95
March	0.92 ± 0.06	10.5 ± 1.0	11			6.29 ± 0.13	4.88
April	3.37 ± 0.02	36.0 ± 0.9	10			7.21 ± 0.14	10.49
May	1.06 ± 0.06	14.1 ± 0.8	14			10.58 ± 0.14	3.74
June	0.64 ± 0.02	6.69 ± 0.24	11			11.64 ± 0.15	3.98
July	0.43 ± 0.02	0.000 ± 0.003	--			12.28 ± 0.15	6.90
August	2.66 ± 0.07	44.9 ± 0.6	17			12.71 ± 0.15	9.87
September	0.42 ± 0.03	22.0 ± 0.7	52	71.6 ± 3.0	63	15.37 ± 0.17	3.59
October	0.79 ± 0.03	37.8 ± 0.9	48	3.7 ± 1.0	5	15.79 ± 0.17	4.88
November	0.71 ± 0.04	5.85 ± 0.37	8			16.58 ± 0.17	2.38
December	0.57 ± 0.08	35.6 ± 0.8	62			17.29 ± 0.18	1.95

1959 January sample started first week April '59

MONTHLY FALLOUT COLLECTIONS

Japan, Nagasaki

Sampling Period	millicrouries per square mile at midpoint of sampling period		Sr-90/Sr-90 at Sampling Midpoint	mc W185 / ml <sup>2</sup> on 6-1-58	W185 / Sr-90 on 6-1-58	Cumulative mc Sr-90 / ml <sup>2</sup>	ppt'n. in inches
	Sr-90	Sr-89					
1956 August through December 1957						7.90 ± 0.15	
1958 January	0.60 ± 0.05	9.9 ± 1.5	16			8.50 ± 0.16	2.50
February	0.55 ± 0.03	6.0 ± 0.8	11			9.05 ± 0.16	2.77
March	1.13 ± 0.06	15.8 ± 1.2	14			10.18 ± 0.17	5.38
April	2.52 ± 0.07	38.7 ± 1.2	15			12.70 ± 0.19	14.94
May	1.75 ± 0.06	7.2 ± 0.7	4			14.45 ± 0.20	7.29
June	0.88 ± 0.11	30.6 ± 1.1	35			15.33 ± 0.23	5.93
July	2.10 ± 0.05	180.7 ± 0.9	86			17.43 ± 0.23	1.33
August	0.50 ± 0.03	29.9 ± 0.6	60			17.93 ± 0.23	14.27
September	0.26 ± 0.03	13.5 ± 0.5	52	46.8 ± 3.0	180	18.19 ± 0.24	2.77
October	0.55 ± 0.03	24.0 ± 0.7	44	45.0 ± 2.1	82	18.74 ± 0.24	6.67
November	0.61 ± 0.03	29.3 ± 0.9	48	35.7 ± 2.2		19.35 ± 0.24	2.11
December		25.1 ± 0.8		167.3 ± 5.3			3.86
1959 January		13.6 ± 0.6		113.3 ± 5.0			

MONTHLY FALLOUT COLLECTIONS

Kenya, Kibuyu

Sampling Period	millicuries per square mile at midpoint of sampling period		Sr-89/Sr-90 at Sampling Midpoint	no W185 ml/2 on 6-1-58	W185/Sr-90 on 6-1-58	Cumulative no Sr-90 ml/2	ppt'n. in inches	
	Sr-90	Sr-89						W185
1957 January through December						1.30 ± 0.07		
1958 January	0.03 ± 0.01	0.71 ± 0.35	24			1.33 ± 0.07	0.90*	
February	0.14 ± 0.03	1.64 ± 0.21	12			1.47 ± 0.08	5.46*	
March	0.22 ± 0.01	1.08 ± 0.04	5			1.69 ± 0.08	3.41*	
April	0.13 ± 0.01	0.75 ± 0.16	6			1.82 ± 0.08	4.79*	
May	0.90 ± 0.05	4.92 ± 0.06	5			2.72 ± 0.10	11.82*	
June	0.22 ± 0.01	6.6 ± 0.2	30			2.94 ± 0.10		
July	0.26 ± 0.01	12.6 ± 0.2	48			3.20 ± 0.10		
August	0.13 ± 0.01	3.1 ± 0.1	24			3.33 ± 0.10		
September	0.07 ± 0.05	3.50 ± 0.91	50	9.7 ± 1.2	139	3.40 ± 0.11		
October	0.25 ± 0.02	6.46 ± 0.23	26	9.8 ± 1.2	39	3.65 ± 0.11		
November	0.15 ± 0.03	5.48 ± 0.27	37	14.3 ± 2.6		3.80 ± 0.11		
December	2nd milk middle of April '59							2.54*
1959 January	sample not started first week April '59							

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Pakistan, Karachi

Sampling Period	millicuries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	mc W185 on 6-1-58	W185/Sr <sup>90</sup> on 6-1-58	Cumulative mc Sr <sup>90</sup> /mi <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	W185					
1958 February	0.02 ± 0.01	0.91 ± 0.18	45			0.02 ± 0.01	0.39
March	0.07 ± 0.00	0.28 ± 0.02	40			0.09 ± 0.01	0
April	0.13 ± 0.01	0.50 ± 0.03	4			0.22 ± 0.01	0
May	0.39 ± 0.01	0.96 ± 0.03	3			0.61 ± 0.02	0
June	0.07 ± 0.01	0.92 ± 0.05	13			0.68 ± 0.02	0
July	0.29 ± 0.02	15.4 ± 1.0	53	8.2 ± 1.5	7	0.97 ± 0.03	
August	0.15 ± 0.04	4.70 ± 0.57	31			1.12 ± 0.05	
September	0.56 ± 0.03	34.2 ± 0.8	61			1.68 ± 0.06	
October	0.06 ± 0.01	0.93 ± 0.24	16			1.74 ± 0.06	
November	0.04 ± 0.02	0.35 ± 0.16	9			1.78 ± 0.06	0
December		11.1 ± 0.7		74.0 ± 4.7			0.04



NORTHELY FALLOUT COLLECTIONS

Southern Rhodesia, Salisbury

milliouries per square mile  
at midpoint of sampling period

Sampling Period	Sr90	Sr89	W185
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1957 November through December			
1958 January	0.10 ± 0.01	0.39 ± 0.13	
February	0.04 ± 0.01	0.23 ± 0.05	
March	0.02 ± 0.01	0.13 ± 0.03	
April	0.16 ± 0.01	2.82 ± 0.02	
May	0.55 ± 0.04		
June	0.02 ± 0.003	0.19 ± 0.02	
July	0.02 ± 0.003	0.27 ± 0.03	
August	0.05 ± 0.004	0.000 ± 0.004	
September	0.17 ± 0.02	12.1 ± 0.4	9.23 ± 0.56
October	0.43 ± 0.03	13.6 ± 0.8	9.81 ± 0.61
November	0.35 ± 0.04	4.28 ± 0.21	10.1 ± 0.4
December	0.41 ± 0.03	3.82 ± 0.24	8.18 ± 0.35

1959 January sample not started first week April '59

Sr89/Sr90 at Sampling Midpoint	mc W185 / mi <sup>2</sup> on 6-1-58	W185 / Sr90 on 6-1-58	Cumulative mc Sr90 / mi <sup>2</sup>	Ppt'n. in inches
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4			0.21 ± 0.02	5.87
5			0.31 ± 0.02	8.98
7			0.35 ± 0.02	0.57
18			0.37 ± 0.03	1.87
			0.53 ± 0.03	trace
9			1.08 ± 0.05	
14			1.10 ± 0.05	
			1.12 ± 0.05	
			1.17 ± 0.05	
71	24.9 ± 1.5	146	1.34 ± 0.05	
32	35.0 ± 2.2	81	1.77 ± 0.06	
12	40.4 ± 1.6	115	2.12 ± 0.07	
9	54.5 ± 2.3	133	2.53 ± 0.08	4.67

MONTHLY FALLOUT COLLECTIONS

Taiwan, Tainan Sampling Period	millicuries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	mc W185 mi <sup>2</sup> on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative mc Sr <sup>90</sup> mi <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	W185					
1958 January	0.03 ± 0.01	0.75 ± 0.14	25			0.03 ± 0.01	0.86
February	0.07 ± 0.01	0.87 ± 0.12	12			0.10 ± 0.01	0.77
March	0.19 ± 0.02	1.91 ± 0.19	10			0.29 ± 0.02	3.49
April	0.05 ± 0.00	0.62 ± 0.01	12			0.34 ± 0.02	0.15
May	0.412 ± 0.024	23.8 ± 0.56	58			0.75 ± 0.03	4.92
June	0.22 ± 0.02	10.3 ± 0.6	47			0.97 ± 0.04	3.74
July	1.01 ± 0.02	66.0 ± 0.4	65			1.98 ± 0.04	28.21
August	0.30 ± 0.01	3.0 ± 0.1	10	18.6 ± 1.1	50	2.28 ± 0.05	
September	0.37 ± 0.02	18.4 ± 0.5	50	8.9 ± 1.4	890 †	2.65 ± 0.05	
October	± 0.02	1.58 ± 2.84	158 †	0.24 ± 0.20	24 †	2.66 ± 0.05	
November	~2	1.10 ± 2.48	110 †	66.6 ± 6.7		2.67 ± 0.05	
December		10.0 ± 1.0		10.3 ± 1.7			
		1.24 ± 0.20					

† Data reported by station.

MONTHLY FALLOUT COLLECTIONS

<u>Taiwan, Taipei</u>	<u>Sr90</u>	<u>Sr89</u>	<u>milliCuries per square mjd</u> <u>at midpoint of sampling period</u>	<u>Sr89/Sr90</u> <u>at Sampling</u> <u>Midpoint</u>	<u>mc W185</u> <u>ml<sup>2</sup></u> <u>on 6-1-58</u>	<u>W185</u> <u>Sr90</u> <u>on 6-1-58</u>	<u>Cumulative</u> <u>mc Sr90</u> <u>ml<sup>2</sup></u>	<u>ppt'n. in</u> <u>inches</u>
1958 February	0.15 ± 0.01	1.4 ± 0.2		9			0.15 ± 0.01	9.57*
March	0.10 ± 0.01	1.4 ± 0.02		14			0.25 ± 0.01	5.40*
April	0.57 ± 0.01	6.3 ± 0.3		11			0.82 ± 0.02	2.24*
May	0.31 ± 0.03	11.4 ± 0.3		37			1.13 ± 0.03	4.13*
June	1.01 ± 0.03	34.6 ± 0.7		34			2.14 ± 0.04	8.49*
July	0.07 ± 0.01	22.9 ± 0.3		327 ?			2.21 ± 0.05	20.43*
August	0.57 ± 0.02	22.3 ± 0.3		51	50.5 ± 1.9	220	3.01 ± 0.05	7.02
September	0.23 ± 0.02	10.8 ± 0.4	18.7 ± 0.7	47	59.3 ± 2.1	74	3.81 ± 0.06	3.51
October	0.80 ± 0.03	43.4 ± 1.2	16.6 ± 0.6	54	83.9 ± 2.4	74	4.94 ± 0.13	1.95
November	1.13 ± 0.12	149.7 ± 1.3	17.2 ± 0.5	44	107.1 ± 2.9	53	6.95 ± 0.20	5.85
December	2.01 ± 0.15	63.2 ± 1.4	18.2 ± 0.5	32	115.8 ± 4.1			
1959 January			13.9 ± 0.5					

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Taiwan, Taibung

Sampling Period	millieuries per square mile at midpoint of sampling period		Sr99/Sr90 at Sampling Midpoint	mc W185 m12 on 6-1-58	W185 Sr90 on 6-1-58	Cumulative mc Sr90 m12	ppt'n. in inches
	Sr90	Sr89					
1958 April	0.22 ± 0.01	2.29 ± 0.13	10			0.22 ± 0.01	1.17
May	0.184 ± 0.023	4.6 ± 0.2	25			0.40 ± 0.02	6.86
June	0.57 ± 0.06	32.1 ± 1.0	56			0.97 ± 0.07	4.30
July	0.45 ± 0.02	23.4 ± 0.3	51			1.42 ± 0.07	15.73
August	0.07 ± 0.004	0.04 ± 0.02	1			1.49 ± 0.07	
September	0.22 ± 0.02	8.86 ± 0.46	40	72.2 ± 4.6	328	1.71 ± 0.07	
October				23.9 ± 1.5	298		
November	0.08 ± 0.02	3.97 ± 0.21	50				
December	2nd milk by middle of April '59						
1959 January				37.5 ± 3.4			

\* Data reported by stations.

MONTHLY FALLOUT COLLECTIONS

Tasmania, Hobart	Sampling Period	milliCuries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	mo W185 m12 on 6-1-58	W185 Sr <sup>90</sup> on 6-1-58	Cumulative mo Sr <sup>90</sup> m12	ppt'n. in inches
		Sr <sup>90</sup>	W185					
1958	6/13-7/1	0.08 ± 0.02	0.17 ± 0.03	2.2			0.08 ± 0.02	
	July	1.07 ± 0.10	0.000 ± 0.004	32	8.4 ± 2.1	42	1.15 ± 0.10	
	August	0.20 ± 0.01	6.51 ± 0.42	24	5.4 ± 0.7	68	1.35 ± 0.10	
	September	0.08 ± 0.02	1.96 ± 0.19	14	7.3 ± 0.8	21	1.43 ± 0.10	
	October	0.34 ± 0.02	4.69 ± 0.25	15			1.77 ± 0.11	
	November	0.29 ± 0.03	4.45 ± 0.31		45.3 ± 0.3			5.14
	December		6.80 ± 0.39					

MONTHLY FALLOUT COLLECTIONS

Thailand, Bangkok	Sampling Period	milli-curies per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	mc W185 m <sup>2</sup> on 6-1-58	mc Sr <sup>90</sup> m <sup>2</sup> on 6-1-58	ppt'n. in inches
		Sr <sup>90</sup>	W185				
1957 March through December							
1958 January	0.12 ± 0.01	0.95 ± 0.14	8			0.58 ± 0.04	1.56
February		sample lost in transit	5			0.54 ± 0.04	0.12
March	0.04 ± 0.00	0.12 ± 0.02	44			0.58 ± 0.05	0.12
April	0.04 ± 0.03	1.68 ± 0.03	17			0.63 ± 0.06	1.56
May	0.05 ± 0.03	0.93 ± 0.37	79			0.80 ± 0.06	7.02
June	0.17 ± 0.01	33.4 ± 0.1	86			1.20 ± 0.06	6.63
July	0.40 ± 0.02	31.3 ± 1.0	144			1.43 ± 0.06	12.48
August	0.228 ± 0.016	10.1 ± 0.6			17.9 ± 1.7	1.47 ± 0.07	12.48
September	0.04 ± 0.02	1.84 ± 0.33	46		46.8 ± 2.5	1.59 ± 0.07	6.97
October	0.12 ± 0.02	5.82 ± 0.29	48		6.9 ± 1.2	1.61 ± 0.07	0.48
November	0.02 ± 0.02	1.15 ± 0.53	57		22.2 ± 4.8		0
December							

\* Data reported by station.

MONTHLY FALLOUT COLLECTIONS

Union of South Africa, Durban

Sampling Period	millicuries per square mile at midpoint of sampling period		Sr <sup>89</sup> /Sr <sup>90</sup> at Sampling Midpoint	mc W185 on 6-1-58	W185 on 6-1-58	Cumulative mc Sr <sup>90</sup> /mi <sup>2</sup>	ppt'n. in inches
	Sr <sup>90</sup>	W185					
1957 June through December							
1958 January	0.02 ± 0.01	✓ 0.03	< 5			1.27 ± 0.05	9.75
February	0.16 ± 0.01	0.29 ± 0.07	16			1.47 ± 0.05	10.53
March	0.09 ± 0.01	0.19 ± 0.09	2			1.56 ± 0.05	11.48
April	0.46 ± 0.05	0.71	2			2.02 ± 0.08	11.11
May	0.91 ± 0.05					2.93 ± 0.10	9.75
June	0.34 ± 0.003	1.31 ± 0.16	34			2.97 ± 0.10	9.75
July	0.14 ± 0.02	1.59 ± 0.19	4			3.41 ± 0.10	9.78
August	0.02 ± 0.002	0.28 ± 0.02	15			3.43 ± 0.10	9.78
September	0.40 ± 0.02	3.65 ± 0.29	32	9.9 ± 0.8	25	3.83 ± 0.10	11.12
October	0.38 ± 0.02	6.03 ± 0.54	16	21.8 ± 1.9	57	4.21 ± 0.11	11.17
November	0.60 ± 0.03	37.2 ± 0.7	14	181 ± 3	62	4.81 ± 0.11	11.29
December	0.60 ± 0.03	5.17 ± 0.33	11	30.4 ± 2	51	5.41 ± 0.11	11.29

MONTHLY FALLOUT COLLECTIONS

<u>Union of South Africa, Pretoria</u>		<u>milliouries per square mile</u>		<u>Sr90</u>		<u>Sr89</u>		<u>W185</u>		<u>Sr89/Sr90</u>		<u>mc W185</u>		<u>W185</u>		<u>Cumulative</u>		<u>ppt'n. in</u>		
<u>at midpoint of sampling period</u>		<u>at midpoint of sampling period</u>		<u>Sr90</u>		<u>Sr89</u>		<u>W185</u>		<u>at Sampling</u>		<u>ml2</u>		<u>on 6-1-58</u>		<u>mc Sr90</u>		<u>inches</u>		
<u>Sampling</u>	<u>Period</u>									<u>Midpoint</u>										
1957	July through December																			
1958	January	0.10 ± 0.01	0.29 ± 0.14							29							0.99 ± 0.03	0.53		
	February	0.06 ± 0.01	0.18 ± 0.05							3							1.09 ± 0.03	1.03		
	March	0.11 ± 0.00	0.32 ± 0.04							3							1.15 ± 0.03	1.13		
	April	0.17 ± 0.06	0.50 ± 0.61							3							1.26 ± 0.03	3.32		
	May	0.49 ± 0.04	-----														1.43 ± 0.07	3.39		
	June	0.02 ± 0.003	0.65 ± 0.02							38							1.92 ± 0.08	0.52		
	July	0.051 ± 0.004	1.98							39							1.34 ± 0.02	0.04		
	August	0.01 ± 0.02	1.94 ± 2.42							194 †							1.99 ± 0.06	0		
	September	0.39 ± 0.04	35.5 ± 1.5							60							2.00 ± 0.08	0		
	October	0.86 ± 0.04	28.8 ± 1.0							194 †							2.59 ± 0.09	1.35		
	November	0.36 ± 0.02	6.28 ± 0.33							33							3.45 ± 0.10	0.54		
	December									17							3.81 ± 0.10	1.29		
	2nd milk by middle of April '59																			
1959	January																			
	February																			
	sample not started 1st week April '59																			

\* Data reported by station.

Strontium 90 in Fallout Collected at Sea

56° 30' N, 51° 00' W (Station "Bravo")

Sampling Period	milliuries per square mile at midpoint of sampling period		Sr99/Sr90 at sampling midpoint	mc W185 mi <sup>2</sup> on 6-1-58	W185/Sr90 on 6-1-58	ppt'n. in inches
	Sr90	Sr89				

2-25-58	sample received at HASL but not accounted for					
3-5-58	no samples received at HASL for this period					
6-4, 8, 10-12	3.23 ± 0.21	37.6 ± 1.3	12			
6-17-58	no samples received at HASL for this period					
6-22-58	0.67 ± 0.02	2.11 ± 0.11				
7-14-58	no samples received at HASL for this period					
8-9-58	0.16 ± 0.09	6.35 ± 0.07	40			
8-14-58	0.27 ± 0.02	4.4 ± 0.2	16			
8-25-58	0.30 ± 0.12	5.00 ± 2.16	17			
8-28-58	0.11 ± 0.03	2.28 ± 0.04	21	10.0 ± 2.4	91	
9-15-58	0.01 ± 0.01	(- ) 0.64 ± 0.45	--	128.0 ± 5.7	12,800 ± 16	
9-27-58	0.11 ± 0.01	2.10 ± 0.15	19	1.8 ± 2.7		
9-28-58	no samples received at HASL for this period					
10-6-58	0.12 ± 0.02	3.63 ± 0.20	30	8.2 ± 1.4	68	
11-4-58	no samples received at HASL for this period					
11-18-58	0.09 ± 0.05	4.02 ± 0.70	45			
11-22-58	0.13 ± 0.06	4.41 ± 0.83	34			
11-25-58	no samples received at HASL for this period					
12-1-58	0.13 ± 0.03	5.61 ± 0.36	43			
12-8-58						
12-28-58						
1-5-59	in process					

1-5-59	no samples received at HASL for this period					
1-12-59	in process					
2-20-59						
3-3-59	in process					



Strontium 90 in Fallout Collected at Sea

44° 00' N, 41° 00' W (Station "Delta")

Sampling Period	millicuries per square mile at midpoint of sampling period		Sr-89 W185	Sr-89/Sr-90 at sampling midpoint	mc W185 mi <sup>2</sup> on 6-1-58	ppt'n. in inches 6-1-58
	Sr90	W185				
6-2-58	0.10 ± 0.05	1.2 ± 0.4		12		
6-16-58	1.46 ± 0.02	10.0 ± 0.4		7		
7-7-58	no samples received at HASL for this period					
7-17-58	0.04 ± 0.01	0.01 ± 0.01		0.3		
7-18-58	no samples received at HASL for this period					
7-20-58	0.27 ± 0.01	4.98 ± 0.09		18		
8-1-58	no samples received at HASL for this period					
8-19-58	0.02 ± 0.02	0.38 ± 0.024		19	5.0 ± 1.9	250
9-29-58	0.01 ± 0.01	0.43 ± 0.73		43	8.1 ± 2.4	810
10-10-58	0.04 ± 0.02	2.71 ± 0.33		68	48.6 ± 2.1	1215
10-13-58	0.03 ± 0.02	2.41 ± 0.23		68	5.8 ± 1.5	193
10-16-58	0.35 ± 0.03	45.6 ± 1.5		130		
10-20-58	0.15 ± 0.04	5.05 ± 0.30		32		
10-31-58	0.37 ± 0.04	11.1 ± 0.4		30	10.5 ± 1.6	28
11-1-58	0.21 ± 0.03	14.4 ± 0.5		68	16.2 ± 2.1	77
11-9-58	0.35 ± 0.06	10.2 ± 0.5		9	17.4 ± 1.4	50
11-10-58	sample counted					
11-21-58	0.07 ± 0.02	2.87 ± 0.24		41	2.3 ± 3.2	33
11-26-58	sample counted					
12-1-58						
12-2-58						
12-8-58						
12-17-58						
12-22-58						
1-4-59						
1-5-59	in process					
1-12-59		0.09 ± 0.22				
1-17-59	no samples received at HASL for this period					
1-18-59		1.42 ± 0.64				
2-3-59	in process					
2-11-59						
2-23-59	in process					

Strontium 90 in Fallout Collected at Sea

35° 00' N, 148° 00' W (Station "Echo")

Sampling Period	milliuries per square mile at midpoint of sampling period		Sr89 at sampling midpoint	Sr89/Sr90 at sampling midpoint	mc W185 on 6-1-58	W185/Sr90 on 6-1-58	Ppt'n. in inches
	Sr90	W185					
5-2-58	sample received at HASL but not accounted for						
5-24-58	0.11 ± 0.05	0.76 ± 0.14	7				
6-14-58	0.07 ± 0.01	0.32 ± 0.05	5				
7-5-58	0.40 ± 0.02	3.5 ± 0.07	9				
7-7-58	no samples received at HASL during this period						
7-17-58	0.11 ± 0.01	3.9 ± 0.3	4				
7-24-58	no samples received at HASL during this period						
8-16-58	0.05 ± 0.01	2.1 ± 0.4	39				
9-7-58	0.07 ± 0.04	3.58 ± 0.62	51	17			
9-13-58	no samples received at HASL during this period	1.21 ± 0.71					
9-15-58	0.05 ± 0.04	1.36 ± 0.75	27	20			
9-26-58	no samples received at HASL during this period	0.98 ± 0.58					
9-30-58	0.19 ± 0.03	6.36 ± 0.35	33				
10-18-58	0.07 ± 0.03	4.08 ± 0.61	58				
10-22-58	0.45 ± 0.04	42.0 ± 1.7	93	109			
11-1-58	no samples received at HASL during this period						
11-3-58	0.15 ± 0.02	7.78 ± 0.26	52				
11-7-58	0.10 ± 0.02	5.69 ± 0.30	57				
11-8-58	no samples received at HASL during this period	0.74 ± 0.34					
11-29-58	sample received at HASL but not accounted for						
12-20-58	no samples received at HASL during this period						
12-21-58	no samples received at HASL during this period						
12-23-58	in process						
12-26-58	no samples received at HASL during this period						
12-26-58	no samples received at HASL during this period						
12-29-58	in process						
1-4-59		0.66 ± 0.33					65
1-4-59	in process						9.7 ± 1.5 3.5 ± 1.6

Table 4

PRECIPITATION COLLECTIONS - Pittsburgh, Pennsylvania

Collector Area: 2.58 ft<sup>2</sup>

At End of Sampling Period

Sampling Period from to	At End of Sampling Period						Cumulative mc Sr90/mi <sup>2</sup>	ppt'n. in inches
	mc Sr89 mi <sup>2</sup>	mc Ba140 mi <sup>2</sup>	mc Sr90 mi <sup>2</sup>	Sr89 Sr90	Ba140 Sr90			
1958								
12-29-57	1-2	0.49 ± 0.06 0.49 ± 0.10	0.12 ± 0.03 0.06 ± 0.02	0.051 ± 0.003 0.052 ± 0.004	9.7 9.4	2.4 1.2	23.88 ± 0.17	0.13
1-2	1-3	±0.02 ±0.03	±0.005 ±0.007	0.008 ± 0.002 0.006 ± 0.002			---	trace
1-3	1-8	0.16 ± 0.02 0.18 ± 0.03	0.11 ± 0.01 0.15 ± 0.02	0.014 ± 0.003 0.015 ± 0.003	11 13	7.9 10	23.90 ± 0.17	0.04
1-8	1-16	1.02 ± 0.15 0.98 ± 0.10	±0.04 ±0.06	0.059 ± 0.006 0.066 ± 0.004	15 15		23.97 ± 0.17	1.61
1-16	1-18	0.13 ± 0.02 0.13 ± 0.03	0.05 ± 0.01 0.05 ± 0.01	0.014 ± 0.004 ±0.008	9.6	3.8	23.98 ± 0.17	0.01
1-18	1-23	2.00 ± 0.19 2.14 ± 0.39	0.17 ± 0.04 0.09 ± 0.03	0.148 ± 0.008 0.139 ± 0.008	13 15	1.2 0.6	24.13 ± 0.17	0.48
1-23	1-26	2.82 ± 0.39 3.07 ± 0.34	0.29 ± 0.03 0.28 ± 0.03	0.239 ± 0.011 0.200 ± 0.011	12 15	1.2 1.4	24.35 ± 0.17	0.90
1-26	1-28	0.44 ± 0.04 0.49 ± 0.06	0.10 ± 0.01 0.10 ± 0.01	0.031 ± 0.002 0.035 ± 0.004	14 14	3.1 2.7	24.38 ± 0.17	0.15
1-28	1-31	0.39 ± 0.03 0.42 ± 0.04	±0.01 0.05 ± 0.02	0.030 ± 0.003 0.032 ± 0.002	13 13	1.7	24.41 ± 0.17	0.08
1-31	2-3	0.18 ± 0.02 0.18 ± 0.03	0.02 ± 0.01 ±0.01	0.023 ± 0.002 0.020 ± 0.002	7.6 9.2	0.9	24.43 ± 0.17	0.04

Table 4 - Cont'd.

PRECIPITATION COLLECTIONS - Pittsburgh, Pennsylvania - Cont'd.

Collector Area: 2.58 ft<sup>2</sup>

Sampling Period from to	At End of Sampling Period						Ba 110 no Sr <sup>90</sup> /mi <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Cumulative no Sr <sup>90</sup> /mi <sup>2</sup>	ppt'n. in inches
	no Sr <sup>89</sup> mi <sup>2</sup>	no Ba 110 mi <sup>2</sup>	no Sr <sup>90</sup> mi <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Ba 110 Sr <sup>90</sup>					
1958										
2-3	2-6	1.22 ± 0.10 0.83 ± 0.15	0.11 ± 0.02 0.07 ± 0.02	0.106 ± 0.005 0.075 ± 0.004	12 11	1.0 0.9	24.52 ± 0.17	0.12		
2-6	2-8	1.36 ± 0.29 1.12 ± 0.34	0.07 ± 0.03 0.04	0.105 ± 0.005 0.115 ± 0.006	13 9.7	0.6	24.63 ± 0.17	0.21		
2-8	2-17	0.29 ± 0.03 0.32 ± 0.02	0.05 0.03	0.028 ± 0.003 0.031 ± 0.002	10 10		24.66 ± 0.17	0.24		
2-17	2-24	0.25 ± 0.04 0.24 ± 0.05	0.02 0.02	0.030 ± 0.003 0.028 ± 0.003	8.5 8.6		24.69 ± 0.17	dry		
2-24	2-27	0.73 ± 0.15 1.02 ± 0.10	0.02 0.01	0.065 ± 0.005 0.087 ± 0.004	11 12		24.77 ± 0.17	0.32		
2-27	3-1	0.21 ± 0.02 0.23 ± 0.06	0.004 0.004	0.014 ± 0.002 0.020 ± 0.002	14 11		24.78 ± 0.17	0.07		
3-1	3-10	0.29 ± 0.02 0.26 ± 0.04	0.04 0.02	0.033 ± 0.003 0.020 ± 0.003	8.8 8.5		24.82 ± 0.17	dry		
3-10	3-15	1.75 ± 0.29 1.61 ± 0.29	0.18 ± 0.04 0.16 ± 0.03	0.166 ± 0.012 0.145 ± 0.014	10 11	1.1 1.1	24.97 ± 0.17	0.45		
3-15	3-18	0.13 ± 0.02 0.15 ± 0.02	0.30 ± 0.07 0.72 ± 0.07	0.018 ± 0.003 0.014 ± 0.004	7.2 11	1.7 5.3	24.99 ± 0.17	0.12		
3-18	3-22	0.85 ± 0.07 0.92 ± 0.10	0.51 ± 0.07 0.81 ± 0.09	0.098 ± 0.005 0.096 ± 0.005	8.7 9.6	5.2 8.4	25.08 ± 0.17	0.42		

Table 4 - Cont'd.

PRECIPITATION COLLECTIONS - Pittsburgh, Pennsylvania - Cont'd.

Collector Area 2.58 ft<sup>2</sup>

Sampling Period from 1958	Sampling Period to	At End of Sampling Period						Cumulative no Sr90/ml <sup>2</sup>	ft' d. in inches
		no Sr90 ml <sup>2</sup>	no Ba140 ml <sup>2</sup>	no Sr90 ml <sup>2</sup>	Sr90 Sr90	Ba140 Sr90			
3-22	3-26	1.36 ± 0.24 1.51 ± 0.19	0.70 ± 0.08 0.75 ± 0.08	0.150 ± 0.008 0.150 ± 0.008	9.1 10	4.7 5.0	25.23 ± 0.17	0.70	
3-26	4-2	0.92 ± 0.10 1.26 ± 0.12	1.51 ± 0.34 1.41 ± 0.12	0.050 ± 0.003 0.053 ± 0.004	18 24	30 27	25.29 ± 0.17		
4-2	4-6	1.22 ± 0.15 0.97 ± 0.15	1.51 ± 0.15 1.26 ± 0.12	0.093 ± 0.005 0.068 ± 0.004	13 14	17 19	25.37 ± 0.17		
4-6	4-8	5.25 ± 0.49 5.20 ± 0.39	6.04 ± 0.49 5.84 ± 0.44	0.34 ± 0.02 0.33 ± 0.02	15 16	18 18	25.71 ± 0.17		
4-8	4-12	6.91 ± 0.68 6.04 ± 0.63	5.79 ± 0.49 5.70 ± 0.39	0.50 ± 0.03 0.52 ± 0.03	14 12	12 11	26.22 ± 0.17		
4-12	4-19	0.21 ± 0.04 0.14 ± 0.02	0.85 ± 0.07 0.40 ± 0.03	0.012 ± 0.002 0.014 ± 0.002	16 10	67 30	26.23 ± 0.17		
4-19	4-22	3.31 ± 0.49 3.46 ± 0.58	2.14 ± 0.15 2.43 ± 0.19	0.288 ± 0.021 0.219 ± 0.011	12 16	7.7 11	26.48 ± 0.17		
4-22	4-24	0.34 ± 0.07 0.35 ± 0.08	0.26 ± 0.02 0.20 ± 0.02	0.031 ± 0.003 0.033 ± 0.004	11 11	8.6 6.3	26.52 ± 0.17		
4-24	4-28	2.29 ± 0.24 2.43 ± 0.29	1.16 ± 0.08 1.43 ± 0.12	0.206 ± 0.012 0.209 ± 0.012	11 12	5.7 6.8	26.72 ± 0.17		
4-28	4-29	4.50 ± 0.79 3.89 ± 0.88	1.44 ± 0.12 1.41 ± 0.13	0.35 ± 0.02 0.38 ± 0.02	13 10	4.2 3.7	27.09 ± 0.16		

Table 4 - Cont'd.

PRECIPITATION COLLECTIVES - Pittsburgh, Pennsylvania - Cont'd.

Collection Area: 2.58 ft<sup>2</sup>

1958	Sampling Period from to	At Midpoint of Sampling Period										Cumulative mc Sr90 ml <sup>2</sup>	ppt'n. in inches
		mc Sr89 ml <sup>2</sup>	mc Ba110 ml <sup>2</sup>	mc W185 ml <sup>2</sup>	mc Sr90 ml <sup>2</sup>	Sr89 Sr90	Ba110 Sr90	mc Sr90 ml <sup>2</sup>	mc Sr90 ml <sup>2</sup>	Sr89 Sr90	Ba110 Sr90		
	4-29 5-4	4.77 ± 0.44 4.29 ± 0.34	1.23 ± 0.16	<0.172 <0.061	0.38 ± 0.02 0.40 ± 0.02	12.6 10.7	3.2	27.46 ± 0.18				1.5 1.5	
	5-4 5-5	1.20 ± 0.12 1.17 ± 0.10	0.35 ± 0.04	<0.487 <0.070	0.092 ± 0.006 0.086 ± 0.005	13.0 13.6	3.9	27.55 ± 0.18				0.20 0.20	
	5-5 5-8	6.57 ± 0.58 6.14 ± 0.49	1.70 ± 0.19	<0.557 <0.103	0.42 ± 0.02 0.41 ± 0.02	15.6 15.0	4.0	27.96 ± 0.18				1.09 1.09	
	5-8 5-10	2.29 ± 0.20 2.58 ± 0.19	0.64 ± 0.10	<0.061 <0.061	0.195 ± 0.015 0.185 ± 0.012	11.7 13.9	3.3	28.15 ± 0.18				0.23 0.23	
	5-10 5-13	0.34 ± 0.11 0.24 ± 0.02	0.06 ± 0.02	<0.139 <0.139	0.024 ± 0.002 0.013 ± 0.002	14.2 18.5	2.5	28.17 ± 0.18				-- --	
	5-13 5-17	4.33 ± 0.58 3.74 ± 0.39	---	<0.054 <0.069	0.42 ± 0.02 0.33 ± 0.02	10.3 11.3	--	28.55 ± 0.18				0.21	
	5-17 5-19	4.77 ± 0.44 4.29 ± 0.34	---	<0.041 <0.149	0.195 ± 0.02 0.151 ± 0.01	24.5 28.4	--	28.72 ± 0.18				trace trace	
	5-19 5-24	1.20 ± 0.12 1.17 ± 0.09	---	<0.042 <0.060	0.41 ± 0.02 0.40 ± 0.04	2.9 2.9	--	29.12 ± 0.18				0.23 0.23	
	5-24 5-28	1.98 ± 0.15 2.07 ± 0.12	0.91 ± 0.20 0.49 ± 0.15	<0.067 <0.944	0.151 ± 0.01 0.199 ± 0.02	1.3 1.0	6.0 2.5	29.30 ± 0.18				0.41 0.41	
	5-28 6-2	5.1 ± 0.6 3.6 ± 0.3	3.3 ± 0.3 4.8 ± 1.2	<0.93 2.12 ± 0.35	0.253 ± 0.015 0.224 ± 0.025	20 16	13 21	29.54 ± 0.19				0.72 0.72	
	6-2 6-6	1.34 ± 0.13 0.92 ± 0.12	1.0 ± 0.2 ---	1.05 ± 0.24 0.93 ± 0.18	0.061 ± 0.009 0.043 ± 0.008	22 21	16 lost	29.59 ± 0.19				0.10 0.10	
	6-6 6-10	1.08 ± 0.12 ---	2.3 ± 0.3 ---	0.61 ± 0.22 ---	0.079 ± 0.006 lost	14 lost	29 lost	29.67 ± 0.19				0.11 0.11	
	6-10 6-13	2.46 ± 0.16 2.53 ± 0.16	---	0.62 ± 0.16 0.72 ± 0.22	0.127 ± 0.010 0.131 ± 0.010	19 19	lost lost	29.80 ± 0.19				0.22 0.22	
	6-13 6-19	2.07 ± 0.18 2.66 ± 0.16	2.7 ± 0.4 2.9 ± 0.4	0.49 ± 0.20 0.52 ± 0.21	0.224 ± 0.018 0.244 ± 0.021	9.2 11	12 12	30.03 ± 0.19				0.70 0.70	
	6-19 6-20	2.58 ± 0.20 2.45 ± 0.20	1.05 ± 0.15 0.70 ± 0.10	1.06 ± 0.23 0.42 ± 0.17	0.210 ± 0.010 0.188 ± 0.010	12 13	5.0 3.7	30.23 ± 0.19				0.65 0.65	

Table 4 - Cont'd.

PRECIPITATION COLLECTIONS - Pittsburgh, Pennsylvania - Cont'd.

Collector Area: 2.58 ft<sup>2</sup>

1958	Sampling Period from to	At Midpoint of Sampling Period										Cumulative mo Sr <sup>90</sup> /mi <sup>2</sup>	ppt'n. in inches
		mo Sr <sup>89</sup> mi <sup>2</sup>	mo Ba <sup>140</sup> mi <sup>2</sup>	mo W <sup>185</sup> mi <sup>2</sup>	mo Sr <sup>90</sup> mi <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Ba <sup>140</sup> Sr <sup>90</sup>	mo Sr <sup>90</sup> /mi <sup>2</sup>		ppt'n. in inches			
6-20	6-22	2.20 ± 0.20 1.93 ± 0.18	<0.5 <0.3	0.73 ± 0.17 <0.23	0.175 ± 0.010 0.194 ± 0.015	12 9.9	<2.8 <1.5	30.41 ± 0.19		0.16 0.16			
6-22	6-23	1.00 ± 0.12 1.29 ± 0.10	0.35 ± 0.15 <0.2	<0.28 <0.10	0.106 ± 0.006 0.118 ± 0.010	9.4 8.7	3.3 <1.4	30.54 ± 0.19		0.12 0.12			
6-23	6-24	0.55 ± 0.09 0.64 ± 0.06	<0.3 <0.3	0.18 ± 0.17 0.19 ± 0.16	0.062 ± 0.003 0.080 ± 0.006	8.9 8.0	<4.8 <3.8	30.61 ± 0.19		0.05 0.05			
6-24	6-26	2.20 ± 0.20 2.59 ± 0.30	2.6 ± 0.3 2.3 ± 0.3	<0.68 <0.38	0.114 ± 0.006 0.117 ± 0.007	19 22	23 20	30.73 ± 0.19		0.17 0.17			
6-26	7-3	0.22 ± 0.03 0.34 ± 0.04	<0.10 0.16 ± 0.06	<0.38 <0.37	0.019 ± 0.003 0.026 ± 0.003	12 13	<5.3 6.1	30.75 ± 0.19		dry dry			
7-3	7-7	6.8 ± 0.5 8.3 ± 1.0	10.3 ± 0.8 11.0 ± 0.8	2.56 ± 0.37 3.04 ± 0.37	0.296 ± 0.030 0.292 ± 0.020	23 28	35 38	31.01 ± 0.19		1.15 1.15			
7-7	7-8	0.27 ± 0.04 0.35 ± 0.04	<0.12 0.61 ± 0.10	<0.57	0.013 ± 0.002 0.016 ± 0.003	21 22	<9.2 38	31.06 ± 0.19		0.2 0.2			
7-8	7-11	9.7 ± 0.7 11.6 ± 1.4	16.0 ± 1.5 24.5 ± 2.0	1.40 ± 0.21 1.57 ± 0.24	0.214 ± 0.015 0.298 ± 0.015	39.8 56.6	65.6 95.0	31.31 ± 0.24		1.25 1.25			
7-11	7-12	2.44 ± 0.24 2.56 ± 0.20	4.3 ± 0.4 4.2 ± 0.4	0.81 ± 0.22 0.73 ± 0.17	0.067 ± 0.010 0.060 ± 0.004	36.4 42.7	64.2 70.0	31.37 ± 0.24		0.26 0.26			
7-12	7-14	4.2 ± 0.4 4.0 ± 0.4	6.1 ± 0.4 6.1 ± 0.5	2.19 ± 0.37 2.07 ± 0.24	0.097 ± 0.007 0.076 ± 0.006	43 53	63 80	31.46 ± 0.25		0.28 0.28			
7-14	7-15	5.8 ± 0.6 6.2 ± 0.6	6.3 ± 0.5 8.9 ± 0.7	4.16 ± 0.49 4.63 ± 0.49	0.132 ± 0.007 0.111 ± 0.006	43 56	48 80	31.58 ± 0.25		0.78 0.78			
7-15	7-16	4.5 ± 0.4 3.9 ± 0.4	7.1 ± 0.5 7.3 ± 0.5	2.02 ± 0.37 2.61 ± 0.37	0.056 ± 0.004 0.058 ± 0.003	80 67	127 126	31.64 ± 0.25		0.29 0.29			
7-16	7-21	2.42 ± 0.22 1.87 ± 0.18	7.9 ± 1.5 4.8 ± 0.6	2.73 ± 0.37 2.38 ± 0.37	0.048 ± 0.004 0.056 ± 0.004	50.4 33.4	164.6 85.7	31.69 ± 0.25		trace trace			
7-21	7-22	11.8 ± 1.0 12.5 ± 1.4	15.3 ± 1.4 11.7 ± 1.0	11.02 ± 1.04 11.37 ± 1.22	0.190 ± 0.010 0.200 ± 0.010	62.1 62.5	80.5 58.5	31.89 ± 0.25		0.88 0.88			
7-22	7-23	3.2 ± 0.3 3.1 ± 0.3	3.6 ± 0.3 3.6 ± 0.3	3.54 ± 0.44 4.17 ± 0.58	0.055 ± 0.003 0.060 ± 0.003	58 52	65 60	31.94 ± 0.25		0.35 0.35			

Table 4 - Cont'd.

PRECIPITATION COLLECTIONS - Pittsburgh, Pennsylvania - Cont'd.

Collector Area: 2.58 ft<sup>2</sup>

At Midpoint of Sampling Period

1958	Sampling Period from to	At Midpoint of Sampling Period										Cumulative no Sr <sup>90</sup> /ml <sup>2</sup>	Ba <sup>140</sup> Sr <sup>90</sup>	Pft'n. in inches
		no Sr <sup>89</sup> ml <sup>2</sup>	no Ba <sup>140</sup> ml <sup>2</sup>	no W <sup>185</sup> ml <sup>2</sup>	no Sr <sup>90</sup> ml <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Ba <sup>140</sup> Sr <sup>90</sup>	no Sr <sup>90</sup> ml <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Ba <sup>140</sup> Sr <sup>90</sup>	Cumulative no Sr <sup>90</sup> /ml <sup>2</sup>			
7-23	7-24	4.2 ± 0.5 4.4 ± 0.5	2.5 ± 0.2 3.7 ± 0.3	6.06 ± 0.65 6.23 ± 0.57	0.150 ± 0.008 0.180 ± 0.010	28 24	17 20	32.11 ± 0.25	0.40 0.40					
7-24	7-25	0.58 ± 0.06 0.62 ± 0.06	0.35 ± 0.04 0.40 ± 0.08	0.66 ± 0.16 1.97 ± 0.22	0.026 ± 0.003 0.019 ± 0.002	22 33	13 21	32.13 ± 0.25	0.03 0.03					
7-25	7-29	11.5 ± 0.9 11.2 ± 0.8	11.5 ± 0.8 12.7 ± 0.8	0.53 ± 0.16 0.52 ± 0.16	0.173 ± 0.010 0.159 ± 0.008	66 70	66 80	32.30 ± 0.25	1.40 1.40					
7-29	7-30	1.86 ± 0.16 2.08 ± 0.20	2.05 ± 0.18 2.50 ± 0.23	1.52 ± 0.30 1.95 ± 0.32	0.057 ± 0.005 0.076 ± 0.010	32.6 27.4	36.0 33.0	32.36 ± 0.25	0.25 0.25					
7-30	7-31	7.2 ± 0.6 5.9 ± 0.5	6.0 ± 0.4 6.8 ± 0.5	5.28 ± 0.52 6.06 ± 0.54	0.205 ± 0.010 0.189 ± 0.010	35 31	29 36	32.56 ± 0.25	1.13 1.13					
7-31	8-1	2.56 ± 0.24 2.41 ± 0.20	2.4 ± 0.2 2.9 ± 0.3	1.43 ± 0.16 1.49 ± 0.17	0.041 ± 0.003 0.039 ± 0.003	62 62	58 74	32.60 ± 0.25	0.37 0.37					
8-1	8-3	5.5 ± 0.4 5.5 ± 0.5	4.7 ± 0.3 4.7 ± 0.4	6.07 ± 0.36 3.96 ± 0.26	0.149 ± 0.007 0.131 ± 0.007	37 42	32 36	32.74 ± 0.25	1.88 1.88					
8-3	8-7	1.89 ± 0.18 2.18 ± 0.23	1.76 ± 0.16 1.82 ± 0.16	1.45 ± 0.18 1.21 ± 0.16	0.076 ± 0.008 0.078 ± 0.005	24.9 27.9	23.2 23.3	32.82 ± 0.25	0.17 0.17					
8-7	8-8	7.4 ± 0.5 7.0 ± 0.6	4.5 ± 0.4 4.3 ± 0.4	4.38 ± 0.24 2.72 ± 0.19	0.34 ± 0.02 0.32 ± 0.02	21.8 21.9	13.2 13.4	33.15 ± 0.25	1.17 1.17					
8-8	8-12	2.66 ± 0.28 2.86 ± 0.28	2.68 ± 0.22 2.68 ± 0.24	1.48 ± 0.17 0.96 ± 0.15	0.061 ± 0.004 0.063 ± 0.005	43.6 45.4	44.0 42.5	33.21 ± 0.25	0.09 0.09					
8-12	8-14	0.77 ± 0.15 0.79 ± 0.10	0.64 ± 0.07 0.61 ± 0.08	0.42 ± 0.13 <0.24	0.022 ± 0.005 0.018 ± 0.005	35.0 43.9	29.1 33.9	33.23 ± 0.25	0.04 0.04					
8-14	8-15	2.62 ± 0.35 2.36 ± 0.30	1.91 ± 0.16 2.05 ± 0.17	0.35 ± 0.13 lost	0.078 ± 0.006 0.063 ± 0.005	33.6 34.2	24.5 29.7	33.30 ± 0.25	0.13 0.13					
8-15	8-16	3.64 ± 0.32 3.79 ± 0.30	2.17 ± 0.21 1.90 ± 0.23	0.34 ± 0.14 0.55 ± 0.18	0.098 ± 0.008 0.097 ± 0.008	37.1 39.1	22.1 13.6	33.40 ± 0.25	0.17 0.17					
8-16	8-17	0.16 ± 0.07 0.24 ± 0.03	0.19 ± 0.10 <0.12	0.58 ± 0.13 <0.24	0.012 ± 0.005 0.015 ± 0.004	13.3 16.0	15.8 100	33.41 ± 0.25	trace trace					
8-17	8-21	1.92 ± 0.18 1.42 ± 0.12	1.32 ± 0.20 0.73 ± 0.15	0.96 ± 0.17 1.29 ± 0.17	0.067 ± 0.004 0.061 ± 0.005	28.7 23.3	19.7 12.0	33.48 ± 0.25	0.12 0.12					
8-21	8-22	1.53 ± 0.20 1.71 ± 0.12	1.07 ± 0.16 1.8 ± 0.9	1.34 ± 0.15 0.67 ± 0.15	0.067 ± 0.004 0.062 ± 0.004	22.8 27.6	16.0 29.0	33.51 ± 0.25	0.11 0.11					

Table 4 - Cont'd.

PRECIPITATION COLLECTIONS - Pittsburgh, Pennsylvania - Cont'd.

Collector Area 2.58 ft<sup>2</sup>

Sampling Period		At Midpoint of Sampling Period								Cumulative		ppt'n. in inches
from	to	mo Sr <sup>89</sup> mi <sup>2</sup>	mo Ba <sup>110</sup> mi <sup>2</sup>	mo W <sup>185</sup> mi <sup>2</sup>	mo Sr <sup>90</sup> mi <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Ba <sup>110</sup> Sr <sup>90</sup>	mo Sr <sup>90</sup> mi <sup>2</sup>				
1958	8-22	4.48 ± 0.30	2.9 ± 1.1	1.71 ± 0.15	0.151 ± 0.055	29.7	19.2	33.68 ± 0.25	0.95			
	8-25	3.94 ± 0.75	3.4 ± 1.1	1.73 ± 0.15	0.131 ± 0.012	30.1	26.0					
	8-25	3.02 ± 0.10	lost	4.15 ± 0.25	0.123 ± 0.022	24.6	--	33.80 ± 0.25	0.13			
	9-2	3.41 ± 0.35	lost	1.61 ± 0.15	0.119 ± 0.024	28.7	--					
	9-2	3.08 ± 0.15	1.4 ± 0.2	2.26 ± 0.10	0.115 ± 0.007	26.8	12.2	33.93 ± 0.25	0.64			
	9-5	3.69 ± 0.28	1.9 ± 0.6	2.77 ± 0.15	0.131 ± 0.006	28.2	14.5					
	9-7	1.76 ± 0.10	0.9 ± 0.3	1.63 ± 0.16	0.068 ± 0.007	25.9	13.2	33.99 ± 0.25	0.44			
	9-7	1.82 ± 0.10	1.3 ± 0.3	2.42 ± 0.18	0.055 ± 0.004	33.1	23.6					
	9-7	0.20 ± 0.06	lost	0.43 ± 0.08	<0.020	7.10	--	34.00 ± 0.25	0			
	9-14	0.23 ± 0.08	lost	0.75 ± 0.15	<0.010	7.23	--					
	9-14	1.06 ± 0.09	0.30 ± 0.10	1.29 ± 0.13	0.040 ± 0.004	26.5	7.5	34.05 ± 0.25	0.20			
	9-16	1.11 ± 0.07	0.32 ± 0.11	1.77 ± 0.14	0.058 ± 0.005	19.1	5.5					
	9-16	1.28 ± 0.08	0.37 ± 0.10	1.03 ± 0.12	0.041 ± 0.003	32.0	9.0	34.10 ± 0.25	0.35			
	9-17	0.82 ± 0.06	0.33 ± 0.08	lost	0.054 ± 0.006	15.2	6.1					
	9-17	0.34 ± 0.04	0.09 ± 0.04	0.36 ± 0.10	0.018 ± 0.004	18.9	5.0	34.12 ± 0.25	0.08			
	9-18	0.32 ± 0.04	<0.06	lost	0.011 ± 0.003	29.1	<5.5					
	9-18	1.56 ± 0.10	0.43 ± 0.11	2.97 ± 0.18	0.041 ± 0.004	38.0	10.5	34.16 ± 0.25	1.08			
	9-21	1.73 ± 0.15	0.51 ± 0.15	2.29 ± 0.20	0.051 ± 0.006	33.9	10.0					
	9-21	0.37 ± 0.04	lost	0.15 ± 0.08	0.020 ± 0.005	18.5	--	34.18 ± 0.25	0.08			
	9-22	0.37 ± 0.04	lost	0.59 ± 0.08	0.019 ± 0.007	19.5	--					
	9-22	4.81 ± 0.35	2.39 ± 0.51	2.75 ± 0.23	0.164 ± 0.009	29	15	34.34 ± 0.25	1.14			
	9-27	4.52 ± 0.20	1.18 ± 0.35	5.02 ± 0.28	0.155 ± 0.010	29	8					
	9-27	1.39 ± 0.07	0.36 ± 0.10	1.31 ± 0.12	0.063 ± 0.009	22	6	34.41 ± 0.25	0.33			
	10-1	1.42 ± 0.12	0.58 ± 0.12	1.24 ± 0.15	0.067 ± 0.007	21	9					
	10-1	0.26 ± 0.06	0.61 ± 0.14	2.83 ± 0.20	0.020 ± 0.004	13	31	34.42 ± 0.25	dry			
	10-11	0.23 ± 0.03	0.17 ± 0.05	2.38 ± 0.20	0.014 ± 0.002	16	12					
	10-11	0.78 ± 0.10	3.47 ± 0.30	1.20 ± 0.12	0.054 ± 0.003	22.9	102.1	34.46 ± 0.25	0.04			
	10-18	1.30 ± 0.12	3.37 ± 0.20	1.43 ± 0.20	0.033 ± 0.003	39.4	102.1					
	10-18	2.39 ± 0.25	5.6 ± 0.4	1.84 ± 0.25	0.076 ± 0.006	31	74	34.52 ± 0.25	0.08			
	10-23	1.95 ± 0.12	5.0 ± 0.3	2.49 ± 0.28	0.056 ± 0.012	35	89					



Table 4 - Cont'd.

PRECIPITATION COLLECTIONS - Pittsburgh, Pennsylvania - Cont'd.

Collector Area: 2.58 ft<sup>2</sup>

Sampling Period from to	At Midpoint of Sampling Period						Cumulative mc Sr90/mi <sup>2</sup>	ppt'n. in inches
	mc Sr89 mi <sup>2</sup>	mc Ba110 mi <sup>2</sup>	mc W185 mi <sup>2</sup>	mc Sr90 mi <sup>2</sup>	Sr89 Sr90	Ba110 Sr90		
11-29 12-4	2.75 ± 0.13	1.93 ± 0.18	1.45 ± 0.13	0.074 ± 0.009	37	26	35.92 ± 0.25	0.26
	4.07 ± 0.20	2.53 ± 0.11	1.82 ± 0.14	0.130 ± 0.016	31	19		
12-4 12-6	5.10 ± 0.09	2.95 ± 0.24	2.78 ± 0.21	0.141 ± 0.007	36	21	36.00 ± 0.25	0.25
	2.11 ± 0.22	1.27 ± 0.09	1.09 ± 0.14	0.069 ± 0.005	31	18		
12-6 12-9	2.76 ± 0.18	2.12 ± 0.10	1.28 ± 0.12	0.081 ± 0.005	34	26	36.10 ± 0.25	0.13
	4.96 ± 0.35	3.23 ± 0.45	2.14 ± 0.16	0.116 ± 0.013	42	27		
12-9 12-14	1.01 ± 0.06	0.56 ± 0.08	1.51 ± 0.12	0.044 ± 0.008	23	13	36.15 ± 0.25	0.18
	0.92 ± 0.06	0.45 ± 0.06	1.41 ± 0.13	0.053 ± 0.006	17	8		
12-14 12-17	0.93 ± 0.15	0.48 ± 0.04	1.56 ± 0.12	0.029 ± 0.004	32	17	36.18 ± 0.25	trace
	0.74 ± 0.09	0.47 ± 0.06	1.23 ± 0.13	0.031 ± 0.004	24	15		
12-17 12-20	3.88 ± 0.17	1.31 ± 0.09	1.86 ± 0.12	0.091 ± 0.011	43	14	36.28 ± 0.25	0.21
	3.77 ± 0.18	1.06 ± 0.09	1.85 ± 0.12	0.108 ± 0.010	35	10		
12-20 12-23	3.57 ± 0.18	0.75 ± 0.08	0.97 ± 0.09	0.082 ± 0.007	44	9	36.37 ± 0.25	0.11
	2.89 ± 0.13	0.65 ± 0.06	1.29 ± 0.11	0.097 ± 0.004	30	7		
12-23 12-31	0.74 ± 0.07	0.18 ± 0.04	1.15 ± 0.11	0.023 ± 0.003	32	8	36.39 ± 0.25	dry
	0.73 ± 0.09	0.11 ± 0.04	1.15 ± 0.11	0.022 ± 0.004	33	5		

1958

Table 5

PRECIPITATION COLLECTIONS - Westwood, New Jersey

At Midpoint of Sampling Period

1958	Sampling Period from to	no Sr <sup>90</sup> mi <sup>2</sup>	no Sr <sup>89</sup> mi <sup>2</sup>	no Ba <sup>140</sup> mi <sup>2</sup>	Sr <sup>89</sup> Ba <sup>140</sup> Sr <sup>90</sup>	Cumulative no Sr <sup>90</sup> /mi <sup>2</sup>	Precipitation in inches
2-4	2-10	0.013 ± 0.002 0.049 ± 0.002	0.111 ± 0.006 0.442 ± 0.009	0.075 ± 0.060 0.293 ± 0.018	8.5 9.0	0.031 ± 0.025	0.754
2-10	2-17	0.015 ± 0.002 0.007 ± 0.002	0.024 ± 0.022 0.009 ± 0.004	≤ 0.011 ≤ 0.011	1.6 1.3	0.042 ± 0.026	0.149
2-17	2-25	0.005 ± 0.002 0.012 ± 0.002	≤ 0.020 0.024 ± 0.004	0.007 0.018 ± 0.003	< 4.0 2.0	0.050 ± 0.026	0.000
2-25	2-28	0.256 ± 0.014 0.439 ± 0.006	4.278 ± 0.063 5.58 ± 0.009	0.492 ± 0.025 0.374 ± 0.008	13 13	0.398 ± 0.133	0.188
2-28	3-1	0.010 ± 0.027 ≤ 0.002	0.080 ± 0.015 0.099 ± 0.004	0.027 ± 0.003 0.004 ± 0.002	8.0 —	0.404 ± 0.133	0.005
3-1	3-3	0.026 ± 0.003 0.064 ± 0.002	0.275 ± 0.006 0.707 ± 0.010	0.046 ± 0.005 0.055 ± 0.009	10 11	0.449 ± 0.136	0.139
3-3	3-4	0.033 ± 0.009	0.522 ± 0.042	0.034 ± 0.008	16	0.482 ± 0.136	0.600
3-4	3-10	0.010 ± 0.002 ≤ 0.002	0.013 ± 0.009 0.019 ± 0.007	≤ 0.005 ≤ 0.011	1.3 —	0.488 ± 0.136	0.000
3-10	3-15	0.230 ± 0.009 0.285 ± 0.011	2.77 ± 0.05 3.56 ± 0.06	0.846 ± 0.030 4.337 ± 0.062	12 12	0.746 ± 0.141	1.409
3-15	3-20	0.0552 ± 0.005 0.0784 ± 0.0026	0.453 ± 0.018 0.877 ± 0.017	0.537 0.666 ± 0.121	8.2 11	0.812 ± 0.142	0.529
3-20	3-21	0.117 ± 0.003 0.085 ± 0.003	1.44 ± 0.03 1.187 ± 0.025	1.18 0.773 ± 0.077	12 14	0.913 ± 0.144	0.559

Table 5 - Cont'd.

PRECIPITATION COLLECTIONS - Westwood, New Jersey

Sampling Period from to	no Sr <sup>90</sup> /ml <sup>2</sup>		no Sr <sup>90</sup> /ml <sup>2</sup>		At Midpoint of Sampling Period no Ba <sup>137</sup> /ml <sup>2</sup>		no Sr <sup>90</sup> /ml <sup>2</sup>		no Sr <sup>90</sup> /ml <sup>2</sup>		Precipitation in inches
	no Sr <sup>90</sup> /ml <sup>2</sup>	±	no Sr <sup>90</sup> /ml <sup>2</sup>	±	no Ba <sup>137</sup> /ml <sup>2</sup>	±	no Sr <sup>90</sup> /ml <sup>2</sup>	±	no Sr <sup>90</sup> /ml <sup>2</sup>	±	
1958 3-21	0.005	± 0.002	0.036	± 0.007	0.005	± 0.007	7.2	—	3.0	—	0.031
3-22	0.005	± 0.002	0.043	± 0.0045	0.0267	± 0.0073	—	—	—	—	0.031
3-22	0.0259	± 0.0024	0.434	± 0.01	0.260	—	17	—	10	—	0.020
3-25	0.0248	± 0.0045	0.386	± 0.0044	0.452	—	16	—	18	—	0.020
3-25	0.113	± 0.003	1.87	± 0.02	—	0.585	16	—	—	—	0.290
3-27	0.128	± 0.003	2.17	± 0.03	1.414	± 0.198	17	—	11	—	0.290
3-27	0.0708	± 0.0021	1.56	± 0.02	1.74	—	22	—	24	—	0.300
3-27	0.0848	± 0.0026	2.09	± 0.02	1.71	—	25	—	20	—	0.300
3-31	0.023	± 0.003	0.915	± 0.014	1.79	± 0.179	40	—	78	—	0.190
3-31	0.0292	± 0.0026	1.08	± 0.01	1.57	—	37	—	53	—	0.190
4-1	0.444	± 0.015	13.1	± 0.1	16.5	—	30	—	37	—	1.949
4-1	0.421	± 0.015	12.4	± 0.1	20.5	—	29	—	48	—	1.949
4-7	0.011	± 0.002	1.566	± 0.013	2.97	± 0.30	142	—	270	—	0.349
4-7	0.020	± 0.002	0.831	± 0.012	1.18	± 0.12	41	—	59	—	0.349
4-8	0.446	± 0.055	11.3	± 0.1	16.0	—	25	—	36	—	1.329
4-8	0.212	± 0.004	7.12	± 0.08	2.070	± 0.163	34	—	9.8	—	1.329
4-14	0.069	± 0.008	0.865	± 0.023	1.06	± 0.11	12	—	15	—	0.020
4-14	0.034	± 0.003	1.101	± 0.012	2.05	± 0.20	32	—	60	—	0.020
4-21	0.009	± 0.003	0.208	± 0.010	0.445	± 0.092	23	—	49	—	0.010
4-21	0.032	± 0.004	0.257	± 0.016	0.264	± 0.019	8.0	—	8.2	—	0.010
4-24	0.168	± 0.005	2.862	± 0.025	1.140	± 0.015	17	—	6.8	—	0.600
4-24	0.282	± 0.007	3.021	± 0.031	1.101	± 0.081	11	—	3.9	—	0.600
4-28	0.327	± 0.008	5.705	± 0.040	1.087	—	17	—	11	—	1.439
4-28	0.201	± 0.006	4.628	± 0.031	2.224	± 0.028	23	—	11	—	1.439

Table 5 - Cont'd.

PRECIPITATION COLLECTIONS - Westwood, New Jersey

Sampling Period from to	At Midpoint of Sampling Period										Precipitation in inches
	no Sr <sup>90</sup> mi <sup>2</sup>	no Sr <sup>89</sup> mi <sup>2</sup>	no Ba <sup>140</sup> mi <sup>2</sup>	no W <sup>185</sup> mi <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Ba <sup>140</sup> Sr <sup>90</sup>	Cumulative no Sr <sup>90</sup> /mi <sup>2</sup>				
1958 4-28	0.036 ± 0.004 0.058 ± 0.004	0.324 ± 0.013 0.250 ± 0.018	0.322 ± 0.039 0.162 ± 0.026		9.0 4.3	8.9 2.8	2.552 ± 0.254			0.020	
4-29	0.216 ± 0.006 0.158 ± 0.005	4.642 ± 0.032 3.276 ± 0.025	1.733 ± 0.057 1.325 ± 0.044		21 21	8.0 8.4	2.738 ± 0.257			1.129	
4-30	0.308 ± 0.006 0.272 ± 0.010	4.518 ± 0.031 4.371 ± 0.034	2.397 ± 0.046 2.385 ± 0.042		15 16	7.8 8.8	3.028 ± 0.258			0.900	
5-5	0.045 ± 0.017 0.296 ± 0.049	0.685 ± 0.051 4.397 ± 0.033	1.313 ± 0.023 1.707 ± 0.005		15 15	29 5.7	3.199 ± 0.313			0.439	
5-6	0.281 ± 0.005 0.174 ± 0.005	4.816 ± 0.104 3.226 ± 0.031	1.424 ± 0.062 1.299 ± 0.018		17 18	5.1 7.4	3.426 ± 0.320			0.949	
5-8	0.200 ± 0.011 0.279 ± 0.006	2.987 ± 0.089 5.516 ± 0.056	0.624 ± 0.018 1.981 ± 0.020	50.015 50.037	15 20	3.1 7.1	3.666 ± 0.327			0.500	
5-12	0.612 ± 0.008 0.564 ± 0.007	9.720 ± 0.051 6.189 ± 0.057	2.304 ± 0.028 1.551 ± 0.019	50.011 50.033	16 11	3.8 2.8	4.254 ± 0.329			0.320	
5-16	0.070 ± 0.004 0.073 ± 0.004	0.808 ± 0.016 0.676 ± 0.017	0.188 ± 0.010 0.229 ± 0.011	50.031 50.053	12 9.3	2.7 3.1	4.326 ± 0.329			0.059	
5-19	0.100 ± 0.004 0.079 ± 0.004	1.472 ± 0.018 1.333 ± 0.017	0.456 ± 0.015 0.421 ± 0.013	0.41 ± 0.02 0.13 ± 0.02	15 17	4.6 5.3	4.415 ± 0.329			0.149	
5-20	0.127 ± 0.005 0.119 ± 0.004	1.310 ± 0.015 1.141 ± 0.014	0.344 ± 0.012 0.251 ± 0.010	50.070 50.049	10 9.6	2.7 2.1	4.538 ± 0.329			0.030	
5-21	0.142 ± 0.009 0.127 ± 0.010	1.354 ± 0.074 1.823 ± 0.060	0.348 ± 0.018 0.260 ± 0.017	50.043 50.032	9.5 14	2.4 2.0	4.672 ± 0.329			0.059	

Table 5 - Cont'd.

PRECIPITATION COLLECTIONS - Westwood, New Jersey

Sampling Period from 1950	At Midpoint of Sampling Period										Precipitation in inches
	mc Sr <sup>90</sup> ml <sup>2</sup>	mc Sr <sup>89</sup> ml <sup>2</sup>	mc Ba <sup>140</sup> ml <sup>2</sup>	mc W <sup>185</sup> ml <sup>2</sup>	Sr <sup>89</sup> Ba <sup>140</sup>	Sr <sup>90</sup> Ba <sup>140</sup>	Cumulative mc Sr <sup>90</sup> /ml <sup>2</sup>				
5-23	0.729 ± 0.012	1.946 ± 0.029	1.494 ± 0.040	0.80 ± 0.02	2.7	2.0	5.378 ± 0.331			0.900	
5-26	0.682 ± 0.011	2.107 ± 0.026	1.629 ± 0.021	0.47 ± 0.02	3.1	2.4					
5-26	0.079 ± 0.008	0.228 ± 0.008	0.239 ± 0.013	0.20 ± 0.02	2.9	3.0	5.464 ± 0.331			0.049	
5-29	0.092 ± 0.008	0.268 ± 0.007	0.319 ± 0.012	0.18 ± 0.01	2.9	3.5					
5-29	0.024 ± 0.004	0.131 ± 0.006	0.310 ± 0.026	0.23 ± 0.03	5.4	13	5.488 ± 0.331			0.010	
6-3	0.025 ± 0.006	0.128 ± 0.007	0.292 ± 0.022	0.22 ± 0.03	5.1	12					
6-3	0.168 ± 0.014	2.305 ± 0.109	3.607 ± 0.105	1.25 ± 0.05	14	21	5.710 ± 0.340			0.12	
6-10	0.277 ± 0.014	2.213 ± 0.115	2.848 ± 0.082	1.09 ± 0.03	8.0	10					
6-10	0.133 ± 0.012	3.01 ± 0.07	1.663 ± 0.033	1.32 ± 0.03	23	12	5.839 ± 0.340			0.19	
6-11	0.124 ± 0.023	2.752 ± 0.176	1.841 ± 0.031	1.39 ± 0.07	22	15					
6-11	0.040 ± 0.006	1.059 ± 0.052	0.705 ± 0.021	0.62 ± 0.03	26	18	5.893 ± 0.340			0.045	
6-12	0.068 ± 0.005	1.122 ± 0.044	0.785 ± 0.029	0.54 ± 0.02	16	12					
6-12	0.143 ± 0.003	2.902 ± 0.046	2.71 ± 0.27	1.19 ± 0.04	20	19	6.034 ± 0.340			0.15	
6-14	0.138 ± 0.014	3.129 ± 0.083	2.27 ± 0.23	1.12 ± 0.03	23	16					
6-14	0.181 ± 0.015	0.890 ± 0.09	0.461 ± 0.046	0.30 ± 0.02	4.9	2.5	6.256 ± 0.345			0.68	
6-19	0.263 ± 0.013	1.53 ± 0.08	0.481 ± 0.04	0.32 ± 0.02	5.8	1.8					
6-19	0.151 ± 0.003	2.075 ± 0.038	0.582 ± 0.013	0.18 ± 0.01	14	3.8	6.428 ± 0.347			0.72	
6-23	0.194 ± 0.003	2.114 ± 0.042	0.560 ± 0.018	0.60 ± 0.02	11	2.9					
6-23	0.103 ± 0.005	2.486 ± 0.046	2.155 ± 0.036	0.27 ± 0.01	24	21	6.538 ± 0.347			0.50	
6-27	0.118 ± 0.003	2.440 ± 0.041	2.780 ± 0.056	0.38 ± 0.01	21	24					
6-27	0.021 ± 0.002	0.489 ± 0.030	0.851 ± 0.019	0.34 ± 0.01	23	14	6.552 ± 0.347			0.00	
7-3	50.009	0.356 ± 0.024	0.635 ± 0.014	0.27 ± 0.02							
7-3	0.211 ± 0.004	6.550 ± 0.055	11.716 ± 0.056	0.94 ± 0.01	31	56	6.727 ± 0.351			0.92	
7-7	0.138 ± 0.009	4.929 ± 0.047	8.430 ± 0.050	0.68 ± 0.01	36	61					

Table 5 - Cont'd.

PRECIPITATION COLLECTIONS - Westwood, New Jersey

At Midpoint of Sampling Period

1958	Sampling Period from to	mo Sr90 mi <sup>2</sup>	mo Sr89 mi <sup>2</sup>	mo Ba140 mi <sup>2</sup>	mo Ni65 mi <sup>2</sup>	Sr89 Sr90	Ba140 Sr90	Cumulative mo Sr90/mi <sup>2</sup>	ppt'ns. in inches
	8-15	0.249 ± 0.007 0.268 ± 0.007	7.08 ± 0.29 7.60 ± 0.31	3.42 ± 0.15 3.39 ± 0.14	5.35 ± 0.01 3.96 ± 0.05	28.4 28.4	13.7 12.6	8.00 ± 0.35	0.76 0.76
	8-18	0.058 ± 0.003 0.064 ± 0.003	1.37 ± 0.06 1.81 ± 0.07	0.93 ± 0.04 1.06 ± 0.05	lost lost	23.6 28.3	16.0 16.6	8.06 ± 0.35	0.05 0.05
	8-23	0.114 ± 0.004 0.122 ± 0.004	4.22 ± 0.17 4.52 ± 0.18	2.32 ± 0.10 2.34 ± 0.10	6.12 ± 0.01 5.76 ± 0.01	37.0 37.0	20.4 19.2	8.18 ± 0.36	1.38 1.38
	8-25	0.015 ± 0.004 0.022 ± 0.004	0.20 ± 0.02 0.17 ± 0.02	0.30 ± 0.03 0.32 ± 0.02	3.13 ± 0.04 3.48 ± 0.04	13.6 7.9	20.2 14.5	8.20 ± 0.36	-- --
	9-4	0.101 ± 0.004 0.099 ± 0.004	2.96 ± 0.12 2.59 ± 0.10	0.93 ± 0.04 0.94 ± 0.04	5.07 ± 0.08 5.68 ± 0.06	29.3 26.2	9.2 9.5	8.30 ± 0.36	0.69 0.69
	9-8	0.018 ± 0.003 0.014 ± 0.002	0.46 ± 0.03 0.51 ± 0.03	0.26 ± 0.03 0.28 ± 0.03	lost 2.33 ± 0.04	25.8 36.2	14.3 19.5	8.31 ± 0.36	0.03 0.03
	9-10	0.133 ± 0.007 0.139 ± 0.006	4.51 ± 0.18 4.26 ± 0.17	1.38 ± 0.06 1.38 ± 0.09	9.06 ± 0.10 11.2 ± 0.1	33.9 30.6	10.4 9.9	8.45 ± 0.36	1.72 1.72
	9-18	0.083 ± 0.006 0.076 ± 0.004	1.99 ± 0.08 1.86 ± 0.07	0.44 ± 0.02 0.85 ± 0.05	5.56 ± 0.07 4.67 ± 0.06	24.0 24.4	5.3 11.1	8.53 ± 0.36	0.64 0.64
	9-22	0.133 ± 0.005 0.123 ± 0.004	3.58 ± 0.04 3.44 ± 0.03	0.84 ± 0.004 1.55 ± 0.05	lost lost	26.9 27.9	6.3 12.6	8.66 ± 0.36	0.64 0.64
	9-27	0.057 ± 0.003	1.65 ± 0.02	0.21 ± 0.01	lost	29.2	3.6	8.71 ± 0.36	0.14 0.14
	9-30	0.140 ± 0.004 0.139 ± 0.005	3.13 ± 0.04 3.30 ± 0.04	5.42 ± 0.15 1.44 ± 0.06	6.06 ± 0.08 5.97 ± 0.08	22.3 23.7	38.7 10.3	8.85 ± 0.36	1.03 1.03
	10-2	0.029 ± 0.005 0.055 ± 0.008	0.27 ± 0.03 0.31 ± 0.04	1.47 ± 0.14 2.17 ± 0.11	1.67 ± 0.01 2.22 ± 0.02	9.1 5.6	50.3 39.2	8.90 ± 0.36	0.02 0.02
	10-10	0.027 ± 0.007 0.044 ± 0.004	0.60 ± 0.02 0.79 ± 0.02	1.58 ± 0.04 2.56 ± 0.12	1.53 ± 0.02 1.21 ± 0.02	22.0 17.7	57.8 57.9	8.93 ± 0.36	0.04 0.04
	10-14	0.043 ± 0.003	2.19 ± 0.02	lost due to defect in collection pot 6.69 ± 0.10	lost	51.4	157.0	8.98 ± 0.36	0.09 0.09
	10-15	0.023 ± 0.003 0.020 ± 0.003	0.35 ± 0.01 0.40 ± 0.03	2.98 ± 0.15 2.79 ± 0.09	lost lost	15.3 19.7	129.5 139.5	9.00 ± 0.36	dry dry

Table 5 - Cont'd.

PRECIPITATION COLLECTIONS - Westwood, New Jersey

Sampling Period from to	At Midpoint of Sampling Period										Cumulative no Sr-90/mi <sup>2</sup>	Ppt'ns. in Inches	
	no Sr-90 mi <sup>2</sup>	no Sr-89 mi <sup>2</sup>	no Ba-140 mi <sup>2</sup>	no Sr-90 mi <sup>2</sup>	no Sr-90 mi <sup>2</sup>	no Sr-90 mi <sup>2</sup>	no Sr-90 mi <sup>2</sup>	no Sr-90 mi <sup>2</sup>	no Sr-90 mi <sup>2</sup>	no Sr-90 mi <sup>2</sup>			
1958													
10-22	0.121 ± 0.005	3.57 ± 0.02	4.09 ± 0.07	4.92 ± 0.02	lost	lost	29.5	33.8	33.8	9.14 ± 0.36	1.59		
	0.173 ± 0.005	5.21 ± 0.02	4.92 ± 0.02			6.52 ± 0.04	30.1	28.4	28.4		1.59		
10-23	0.616 ± 0.006	36.4 ± 0.5	156 ± 1	156 ± 1	13.9 ± 0.1	-----	59.0	253.2	253.2	9.76 ± 0.36	2.40		
10-27	0.067 ± 0.004	3.95 ± 0.05	17.3 ± 0.5	17.3 ± 0.5	1.26 ± 0.02	1.26 ± 0.02	58.9	258.2	258.2	9.83 ± 0.36	0.09		
	0.077 ± 0.004	3.56 ± 0.04	13.3 ± 0.2	13.3 ± 0.2	1.38 ± 0.01	1.38 ± 0.01	16.2	172.8	172.8		0.09		
10-29	0.275 ± 0.006	12.6 ± 0.1	32.3 ± 0.3	27.9 ± 0.1	5.73 ± 0.02	6.29 ± 0.05	45.8	117.0	117.0	10.10 ± 0.36	0.72		
	0.267 ± 0.006	12.2 ± 0.1	27.9 ± 0.1		6.29 ± 0.05		45.6	104.4	104.4		0.72		
11-3	0.245 ± 0.005	8.40 ± 0.07	22.9 ± 0.3	22.9 ± 0.3	5.61 ± 0.04	6.75 ± 0.04	34.2	93.4	93.4	10.12 ± 0.36	0.32		
	0.233 ± 0.004	8.33 ± 0.07	18.6 ± 0.2	18.6 ± 0.2	6.75 ± 0.04		35.7	79.8	79.8		0.32		
11-10	0.453 ± 0.014	16.4 ± 0.1	40.5 ± 0.4	40.5 ± 0.4	6.68 ± 0.05	6.68 ± 0.05	36.2	89.4	89.4	10.24 ± 0.36	0.70		
	0.333 ± 0.006	16.8 ± 0.1	38.0 ± 0.3	38.0 ± 0.3	8.01 ± 0.04	8.01 ± 0.04	50.4	114.1	114.1		0.70		
11-18	0.021 ± 0.003	0.66 ± 0.02	1.43 ± 0.03	1.43 ± 0.03	0.99 ± 0.01	0.99 ± 0.01	31.5	68.7	68.7	10.26 ± 0.36	0.09		
	0.025 ± 0.003	0.80 ± 0.02	1.53 ± 0.03	1.53 ± 0.03	0.70 ± 0.003	0.70 ± 0.003	31.7	60.7	60.7		0.09		
11-19	0.131 ± 0.004	4.16 ± 0.05	6.54 ± 0.10	6.54 ± 0.10	3.00 ± 0.02	3.00 ± 0.02	32	50	50	10.39 ± 0.37	0.12		
	0.127 ± 0.003	4.28 ± 0.05	5.65 ± 0.11	5.65 ± 0.11	3.08 ± 0.03	3.08 ± 0.03	34	44	44		0.12		
11-26	0.564 ± 0.006	18.5 ± 0.1	19.1 ± 0.1	19.1 ± 0.1	16.9 ± 0.10	16.9 ± 0.10	33	34	34	10.93 ± 0.37	2.30		
	0.520 ± 0.006	20.1 ± 0.01	20.7 ± 0.2	20.7 ± 0.2	17.1 ± 0.10	17.1 ± 0.10	39	40	40		2.30		
12-1	0.115 ± 0.004	5.25 ± 0.05	4.95 ± 0.08	4.95 ± 0.08	3.27 ± 0.03	3.27 ± 0.03	36	34	34	11.08 ± 0.37	0.68		
	0.162 ± 0.004	5.36 ± 0.04	4.59 ± 0.08	4.59 ± 0.08	3.83 ± 0.03	3.83 ± 0.03	33	28	28		0.68		
12-4	0.087 ± 0.003	3.17 ± 0.03	3.35 ± 0.11	3.35 ± 0.11	2.39 ± 0.02	2.39 ± 0.02	37	39	39	11.17 ± 0.37	0.16		
	0.096 ± 0.003	3.11 ± 0.03	2.23 ± 0.09	2.23 ± 0.09	1.84 ± 0.04	1.84 ± 0.04	32	23	23		0.16		
12-6	0.066 ± 0.007	2.91 ± 0.04	2.78 ± 0.05	2.78 ± 0.05	1.84 ± 0.02	1.84 ± 0.02	44	42	42	11.26 ± 0.37	0.20		
	0.095 ± 0.003	3.20 ± 0.04	2.63 ± 0.10	2.63 ± 0.10	1.71 ± 0.02	1.71 ± 0.02	34	28	28		0.20		
12-10	0.027 ± 0.003	1.11 ± 0.02	1.39 ± 0.13	1.39 ± 0.13	1.38 ± 0.03	1.38 ± 0.03	44	52	52	11.29 ± 0.37	0.02		
	0.045 ± 0.004	1.16 ± 0.03	1.09 ± 0.10	1.09 ± 0.10	1.10 ± 0.03	1.10 ± 0.03	27	25	25		0.02		
12-15	50.0042	0.31 ± 0.01	0.43 ± 0.04	0.43 ± 0.04	0.46 ± 0.26	0.46 ± 0.26	273	2102	2102	11.29 ± 0.37	dry		
	50.0045	0.29 ± 0.02	0.60 ± 0.08	0.60 ± 0.08	0.26 ± 0.01	0.26 ± 0.01	265	2133	2133		dry		
12-23	0.110 ± 0.004	3.50 ± 0.03	1.47 ± 0.04	1.47 ± 0.04	1.00 ± 0.01	1.00 ± 0.01	32	13	13	11.40 ± 0.37	0.22		
	0.105 ± 0.004	3.59 ± 0.03	1.27 ± 0.03	1.27 ± 0.03	0.84 ± 0.01	0.84 ± 0.01	34	12	12		0.22		

Table 6

## PRECIPITATION COLLECTIONS - Richmond, California

Sampling Period from to	At Midpoint of Sampling Period						Ba 110 Sr 90	Ba 110 Sr 90	Cumulative mc Sr 90/ml <sup>2</sup>	ppt'n. in inches
	mc Sr 90 mi <sup>2</sup>	mc Sr 89 mi <sup>2</sup>	mc Ba 110 mi <sup>2</sup>	Sr 89 Sr 90	Ba 110 Sr 90	Ba 110 Sr 90				
1958										
3-20	3-21	1.328 ± 0.094 0.270 ± 0.006	8.72 ± 0.28 12.88 ± 0.15	61.05 ± 0.15 75.05 ± 0.65	11 16	76 94		1.597 ± 0.265	1.16 1.16	
3-21	3-24	0.441 ± 0.010 0.416 ± 0.008	6.84 ± 0.12 9.51 ± 0.16	67.25 ± 0.75 102.05 ± 1.0	16 23	152 245		2.453 ± 0.268	2.45 2.45	
3-24	3-26	0.044 ± 0.002 0.047 ± 0.003	0.989 ± 0.018 0.983 ± 0.037	3.24 ± 0.06 3.66 ± 0.14	21 21	74 78		2.544 ± 0.271	0.06 0.06	
3-26	3-28	0.104 ± 0.005 0.176 ± 0.006	1.51 ± 0.03 1.51 ± 0.03	5.97 ± 0.10 7.42 ± 0.13	14 8.5	57 42		2.824 ± 0.289	0.40 0.40	
3-28	4-1	0.460 ± 0.007 0.559 ± 0.012	12.56 ± 2.03 14.36 ± 2.36	35.4 ± 0.25 38.7 ± 0.60	27 26	77 69		3.842 ± 0.311	2.58 2.58	
4-1	4-4	1.012 ± 0.018 0.900 ± 0.016	7.12 ± 0.13 16.77 ± 0.20	32.4 ± 0.4 29.97 ± 0.33	7.0 19	32 33		4.798 ± 0.331	1.84 1.84	
4-4	4-7	0.386 ± 0.008 0.351 ± 0.007	4.71 ± 0.08 5.16 ± 0.09	10.30 ± 0.16 14.22 ± 0.22	12 15	26 40		5.166 ± 0.332	0.73 0.73	
4-7	4-14	0.0070 ± 0.0005 0.0078 ± 0.0006	0.008 ± 0.003 0.117 ± 0.004	0.38 ± 0.02 0.84 ± 0.03	12 15	54 106		5.173 ± 0.332	dry dry	
4-14	4-21	0.0027 ± 0.0002 0.0038 ± 0.0003	0.043 ± 0.002 0.042 ± 0.002	0.20 ± 0.01 0.17 ± 0.01	16 11	74 45		5.176 ± 0.332	dry dry	
4-21	4-28	0.0035 ± 0.0004 0.0042 ± 0.0003	0.041 ± 0.002 0.047 ± 0.002	0.12 ± 0.01 0.27 ± 0.01	12 11	34 64		5.180 ± 0.332	dry dry	
4-28	5-5	0.0051 ± 0.0002 0.0038 ± 0.0002	0.053 ± 0.002 0.059 ± 0.002	0.094 ± 0.003 0.070 ± 0.002	10 10	18 18		5.185 ± 0.332	dry dry	

Table 6 - Cont'd.

PRECIPITATION COLLECTIONS - Richmond, California - Cont'd.

Sampling Period from to	At Midpoint of Sampling Period										Cumulative mo Sr90/mi <sup>2</sup>	ppt'n. in inches	
	no Sr90 mi <sup>2</sup>	no Sr89 mi <sup>2</sup>	no Ba110 mi <sup>2</sup>	no W185 mi <sup>2</sup>	Sr89 Sr90	Ba110 Sr90	no Sr90 mi <sup>2</sup>	no Ba110 mi <sup>2</sup>	no Sr89 mi <sup>2</sup>	no W185 mi <sup>2</sup>			
1958													
5-5	0.062 ± 0.002	0.72 ± 0.02	0.26 ± 0.01	0.037 ± 0.007	11.6	4.3						5.249 ± 0.332	dry
	0.065 ± 0.002	0.69 ± 0.02	0.27 ± 0.01	0.039 ± 0.002	10.6	4.2							dry
5-12	0.005 ± 0.0002	0.11 ± 0.01	0.60 ± 0.02	lost	20.4	11.1						5.190 ± 0.332	dry
	0.005 ± 0.0002	0.11 ± 0.01	0.65 ± 0.02	lost	20.4	120.4							dry
5-19	0.266 ± 0.005	6.7 ± 0.1	6.1 ± 0.3	2.43 ± 0.08	25.2	22.9						5.559 ± 0.337	dry
	0.353 ± 0.010	6.1 ± 0.2	7.6 ± 0.2	2.30 ± 0.05	17.3	21.5							dry
5-24	0.020 ± 0.001	0.082 ± 0.002	0.066 ± 0.004	0.141 ± 0.002	4.1	3.3						5.576 ± 0.337	0.80
	0.014 ± 0.001	0.081 ± 0.002	0.076 ± 0.004	0.184 ± 0.002	5.8	5.4							0.80
6-2	0.092 ± 0.002	1.04 ± 0.02	0.29 ± 0.01	lost	11.3	3.2						5.670 ± 0.337	0.43
	0.095 ± 0.002	1.12 ± 0.02	0.31 ± 0.01	lost	11.8	3.3							0.43
6-9	0.039 ± 0.001	0.373 ± 0.002	0.21 ± 0.01	2.20 ± 0.02	12.9	5.3						5.726 ± 0.338	0.64
	0.072 ± 0.002	0.355 ± 0.005	0.18 ± 0.01	0.83 ± 0.01	4.9	2.5							0.64
6-13	0.010 ± 0.001	0.143 ± 0.002	0.100 ± 0.005	0.043 ± 0.007	14.3	10.0						5.738 ± 0.338	dry
	0.014 ± 0.001	0.166 ± 0.002	0.110 ± 0.005	4.9 ± 0.04	11.9	7.9							dry
6-20	0.010 ± 0.001	0.097 ± 0.002	0.156 ± 0.005	0.092 ± 0.008	9.7	15.6						5.748 ± 0.338	dry
	0.010 ± 0.001	0.128 ± 0.002	lost	lost	12.8	—							dry
6-24													
6-27													
7-3	0.009 ± 0.001	0.039 ± 0.001	0.052 ± 0.002	0.136 ± 0.006	4.3	5.3						5.75 ± 0.34	dry
	0.005 ± 0.001	0.045 ± 0.001	0.073 ± 0.002	0.203 ± 0.009	9.2	13.9							dry
7-5	0.0136 ± 0.0005	0.274 ± 0.002	0.95 ± 0.02	lost	20.1	69.8						5.77 ± 0.34	dry
	0.0141 ± 0.0005	0.396 ± 0.008	1.64 ± 0.02	lost	28.0	116.3							dry
7-11													
7-18	0.019 ± 0.001	0.243 ± 0.008	0.228 ± 0.005	lost	12.7	12.0						5.79 ± 0.34	dry
	lost	lost	lost	lost	—	—							dry

Table 6 - Cont'd.

PRECIPITATION COLLECTIONS - Richmond, California - Cont'd.

At Midpoint of Sampling Period

Sampling Period from to	At Midpoint of Sampling Period										Cumulative mo Sr90/ml2	ppt'n. in inches	
	mo Sr90 ml2	mo Sr89 ml2	mo Ba140 ml2	mo #185 ml2	Sr89 Sr90	Ba140 Sr90	mo Ba140 ml2	mo #185 ml2	mo Sr89 ml2	mo Sr90 ml2			
1958													
7-18 to 7-25	0.0138 ± 0.0005 0.0138 ± 0.0005	0.254 ± 0.002 0.252 ± 0.002	0.65 ± 0.01 0.45 ± 0.01		18.4 18.2	47.1 32.6					5.80 ± 0.34	dry dry	
7-25 to 8-1	0.081 ± 0.004 0.069 ± 0.003	0.60 ± 0.01 0.63 ± 0.01	0.570 ± 0.005 0.660 ± 0.005		7.4 9.1	7.0 9.5					5.88 ± 0.34	dry dry	
8-1 to 8-8	0.007 ± 0.001 0.005 ± 0.001	0.087 ± 0.004 0.082 ± 0.004	0.158 ± 0.002 0.123 ± 0.005		12.4 16.4	22.5 26.4					5.89 ± 0.34	dry dry	
8-8 to 8-15	0.024 ± 0.002 0.044 ± 0.003	0.030 ± 0.006 0.032 ± 0.005	0.171 ± 0.005 0.158 ± 0.005	0.029 lost	1.2 0.7	7.1 3.6					5.92 ± 0.34	dry dry	
8-15 to 8-22	0.036 ± 0.002 0.044 ± 0.004	0.338 ± 0.005 0.269 ± 0.010	0.46 ± 0.02 0.48 ± 0.02	0.64 ± 0.01 0.65 ± 0.02	9.4 6.1	12.8 10.9					5.96 ± 0.34	dry dry	
8-22 to 8-29	0.005 ± 0.001 0.005 ± 0.001	0.088 ± 0.005 0.085 ± 0.004	0.074 ± 0.002 0.084 ± 0.002		17.6 17.0	14.8 16.8					5.97 ± 0.34	dry dry	
8-29 to 9-6	<0.001 0.001 ± 0.001	0.087 ± 0.002 0.089 ± 0.002	0.064 ± 0.002 0.118 ± 0.002	0.583 ± 0.013 0.412 ± 0.007							5.97 ± 0.34	dry dry	
9-6 to 9-13	0.028 ± 0.001 0.021 ± 0.001	0.63 ± 0.02 0.64 ± 0.02	<0.64 <0.49	1.55 ± 0.05 1.67 ± 0.06	22.5 30.4	<22.8 <23.3					5.99 ± 0.34	dry dry	
9-13 to 9-20	0.006 ± 0.001 0.005 ± 0.001	0.023 ± 0.002 0.029 ± 0.002	0.024 ± 0.001 0.031 ± 0.001	0.34 ± 0.02 0.35 ± 0.02	3.8 5.8	4.0 6.2					6.00 ± 0.34	dry dry	
9-20 to 9-23	0.016 ± 0.001 0.014 ± 0.001	0.25 ± 0.01 0.26 ± 0.01	0.09 ± 0.01 0.09 ± 0.01	0.85 ± 0.02 0.76 ± 0.02	15.6 18.5	5.6 6.4					6.02 ± 0.34	0.05 0.05	
9-23 to 9-30	0.002 ± 0.001 0.001 ± 0.001	0.030 ± 0.002 0.026 ± 0.001	0.016 ± 0.001 0.017	0.087 ± 0.002 0.148 ± 0.005							6.02 ± 0.34	dry dry	
9-30 to 10-7	0.006 ± 0.001 0.004 ± 0.001	0.028 ± 0.001 0.026 ± 0.001	0.14 ± 0.01 0.13 ± 0.01	0.24 ± 0.01 0.28 ± 0.01	4.7 6.5	23 32					6.02 ± 0.34	dry dry	

Table 6 - Cont'd.

PRECIPITATION COLLECTIONS - Richmond, California - Cont'd.

Sampling Period from to	At Midpoint of Sampling Period							Ba M40 Sr90	Cumulative mc Sr90/ml <sup>2</sup>	ppt's. in inches
	mc Sr90 ml <sup>2</sup>	mc Sr89 ml <sup>2</sup>	mc Ba M40 ml <sup>2</sup>	mc N185 ml <sup>2</sup>	Sr90 Sr89	Ba M40 Sr90	Sr90 ml <sup>2</sup>			
1958										
10-7	0.003 ± 0.001 0.005 ± 0.001	0.029 ± 0.002 0.074 ± 0.018	0.028 ± 0.002 0.026	0.44 ± 0.01 0.37 ± 0.01	10 25	9	6.02	dry dry		
10-14	0.02 ± 0.01 0.02 ± 0.01	0.60 ± 0.01 0.54 ± 0.01	1.47 ± 0.06 1.10 ± 0.03	0.40 ± 0.01 0.54 ± 0.02	30 27	74 55	6.04	0.17 0.17		
10-20	0.003 ± 0.001 0.005 ± 0.001	0.075 ± 0.002 0.086 ± 0.002	0.76 ± 0.01 1.30 ± 0.02	0.220 ± 0.005 0.204 ± 0.005	25 17	253 260	6.05	dry dry		
10-27	0.004 ± 0.001 0.007 ± 0.001	0.105 ± 0.002 0.088 ± 0.002	1.33 ± 0.01 1.63 ± 0.03	0.41 ± 0.02 lost	26 12	332 232	6.05	dry dry		
11-3	0.005 ± 0.003	0.36 ± 0.01	0.73 ± 0.03 0.92 ± 0.03	0.243 ± 0.002 0.243 ± 0.002	72	146	6.06	0.04 0.04		
11-10	0.008 ± 0.003 0.019 ± 0.006	0.26 ± 0.01 0.24 ± 0.01	0.73 ± 0.03 0.42 ± 0.02	0.26 ± 0.01 0.25 ± 0.01	32 13	91 22	6.07	dry dry		
11-17	0.014 ± 0.001 0.012 ± 0.001	0.128 ± 0.005 0.105 ± 0.004	0.338 ± 0.005 0.182 ± 0.005	0.233 ± 0.012 0.174 ± 0.011	9 9	24 15	6.08	dry dry		
11-24	0.008 ± 0.001 0.013 ± 0.001	0.156 ± 0.004 0.151 ± 0.005	0.268 ± 0.005 0.248 ± 0.010	0.238 ± 0.002 0.274 ± 0.002	20 12	34 19	6.09	trace trace		
12-1	0.002 ± 0.001 0.005 ± 0.001	0.080 ± 0.006 0.124 ± 0.003	0.095 ± 0.002 0.087 ± 0.002	0.14 ± 0.01 0.16 ± 0.01	40 25	48 17	6.10	dry dry		
12-8	0.001 ± 0.001 0.005 ± 0.001	0.071 ± 0.002 0.051 ± 0.002	0.077 ± 0.002 0.046 ± 0.002	0.13 ± 0.01 0.12 ± 0.01	10	9	6.10	dry dry		
12-15	0.087 ± 0.006 0.089 ± 0.007	2.39 ± 0.04 2.73 ± 0.05	1.44 ± 0.03 1.52 ± 0.03	0.63 ± 0.02 1.16 ± 0.04	27 31	16 17	6.18	0.62 0.62		

Table 6 - Cont'd.

PRECIPITATION COLLECTIONS - Richmond, California - Cont'd.

Sampling Period from to	At Midpoint of Sampling Period										Cumulative mc Sr <sup>90</sup> /ml <sup>2</sup>	ppt'n. in inches	
	mc Sr <sup>90</sup> ml <sup>2</sup>	mc Sr <sup>89</sup> ml <sup>2</sup>	mc Ba <sup>110</sup> ml <sup>2</sup>	mc W <sup>185</sup> ml <sup>2</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	Ba <sup>110</sup> Sr <sup>90</sup>	Sr <sup>89</sup> Sr <sup>90</sup>	W <sup>185</sup> ml <sup>2</sup>	mc Sr <sup>90</sup> ml <sup>2</sup>	mc Sr <sup>90</sup> ml <sup>2</sup>			
1958													
12-22 to 12-29	0.190 ± 0.012 0.165 ± 0.011	6.60 ± 0.06 6.34 ± 0.06	2.5 ± 0.1 2.7 ± 0.1	0.93 ± 0.02 1.04 ± 0.02	35 38	13 16			6.36		1.15 1.15		
12-29 to 1-7-59	0.629 ± 0.021 0.665 ± 0.021	25.8 ± 0.2 24.4 ± 0.2	7.54 ± 0.12 7.88 ± 0.13	3.99 ± 0.15 4.40 ± 0.17	41 37	12 12			7.01		1.68 1.68		
1-7 to 1-13	0.42 ± 0.04 0.39 ± 0.01	15.8 ± 0.1 15.8 ± 0.1	3.89 ± 0.08 4.19 ± 0.05	2.42 ± 0.08 2.68 ± 0.10	38 40	9 11			7.42		2.01 2.01		
1-13 to 1-20	0.021 ± 0.001 0.021 ± 0.002	0.320 ± 0.016 0.306 ± 0.016	0.152 ± 0.005 0.218 ± 0.006	1.34 ± 0.05 1.22 ± 0.05	15 14	7 10			7.44		dry dry		
1-20 to 1-26	0.259 ± 0.009 0.240 ± 0.008	7.22 ± 0.04 7.14 ± 0.04	1.09 ± 0.04 1.10 ± 0.04	2.94 ± 0.06 3.76 ± 0.07	28 30	4 4			7.69		0.54 0.54		
1-26 to 1-28	0.065 ± 0.008 0.050 ± 0.007	1.09 ± 0.02 1.09 ± 0.02	0.125 ± 0.005 0.130 ± 0.005	0.263 ± 0.013 0.214 ± 0.011	17 22	2 3			7.75		0.19 0.19		
1-28 to 2-4	0.034 ± 0.002 0.031 ± 0.002	0.429 ± 0.020 0.494 ± 0.023	0.102 ± 0.002 0.114 ± 0.002	1.87 ± 0.08 1.75 ± 0.08	13 16	3 4			7.78		trace trace		
2-4 to 2-9	0.008 ± 0.001 0.005 ± 0.001	0.058 ± 0.003 0.061 ± 0.002	<0.011 <0.010	0.167 ± 0.008 1.145 ± 0.007	7 12				7.79		dry dry		

Table 7  
1958 U. S. SOIL ANALYSES

Sampled by HASL personnel and sent directly to Beltsville for preparation. Allquots were sent to HASL as blind duplicates. Seventeen locations were sampled and at six locations two sites were sampled.

<u>Site</u>	<u>mc Sr<sup>90</sup></u> <u>ml<sup>2</sup></u>	<u>rate</u> <u>Inch of rain *</u>	
Binghamton	42	0.19	
Des Moines	84 57	0.55	<i>X in error</i>
Rapid City	74 70	0.77	
Jacksonville	36	0.12	
Atlanta	37	0.14	
Memphis	37	0.11	
Los Angeles	16	0.25	
Grand Junction	39	0.75	

\* Precipitation values used were mean of 1953-58.

Note:- Results for remaining fifteen sites will be available about May 1, and blind duplicates for all sites one week later.

Table 8

REPRODUCIBILITY OF SOIL ANALYSES

Blind Duplicates - 1958 U. S. Soils

<u>Beltsville #</u>	<u>d/m Sr<sup>90</sup></u> <u>kg Soil</u>
592	63 ± 2
5961	65 ± 5
598	52 ± 3
5947	56 ± 3
5919	549 ± 7
5950	574 ± 8
5921	491 ± 8
5978	494 ± 8
5922	38 ± 2
5953	40 ± 2
5924	58 ± 3
5944	53 ± 3
5925	697 ± 25
5960	681 ± 8
5926	46 ± 3
5967	47 ± 3
5931	295 ± 5
5964	282 ± 6
5932	26 ± 3
5972	21 ± 3
5933	181 ± 5
5943	162 ± 6
5936	57 ± 3
5968	49 ± 3
5937	471 ± 7
5966	434 ± 6

Error term - one standard deviation due to counting.

Table 8 (Contd.)

Blind Duplicates - 1958 U. S. Soils (Contd.)

<u>Beltsville #</u>	<u>d/m/ Sr<sup>90</sup> / kg Soil</u>
5938	35 + 3
5981	38 + 2
5941	480 + 8
5971	477 + 17

Blind Duplicates - 1958 Foreign Soils

56453	16 + 3
58306	15 + 3
	18 + 3 } *
58308	236 + 7
	247 + 8 } *
58816	231 + 6
	237 + 6 } *
58220	75 + 5
	75 + 5 } *
581042	73 + 3

\* duplicate analyses.

Error term - one standard deviation due to counting.

Table 9

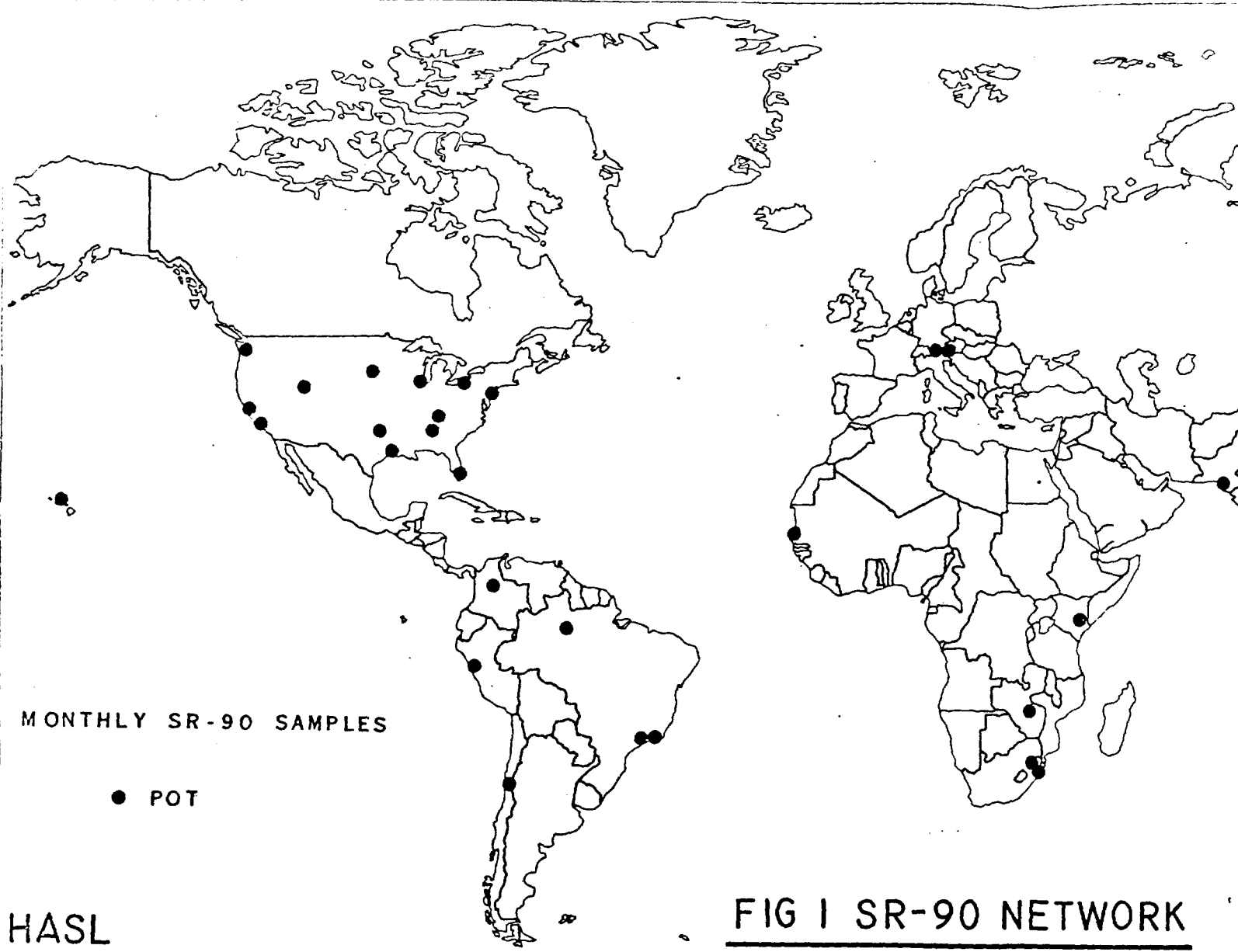
MEAN mc/mi<sup>2</sup> AS OF JUNE 1, 1958

<u>Latitude Band</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
30° - 50° N	73	65	33	61	74
10° - 30° N	-	64	43	40	68
10°N - 10°S	19	9	15	14	-
10° - 30° S	8	26	38	65	34
30° - 50° S	16	10	21	16	20

Table 10

MEAN RATIO AS OF JUNE 1, 1958

<u>Latitude Band</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
30° - 50° N	68	125	58	98	70
10° - 30° N	-	145	72	95	44
10°N - 10°S	119	150	88	117	-
10° - 30° S	73	49	70	162	68
30° - 50° S	50	40	60	80	-



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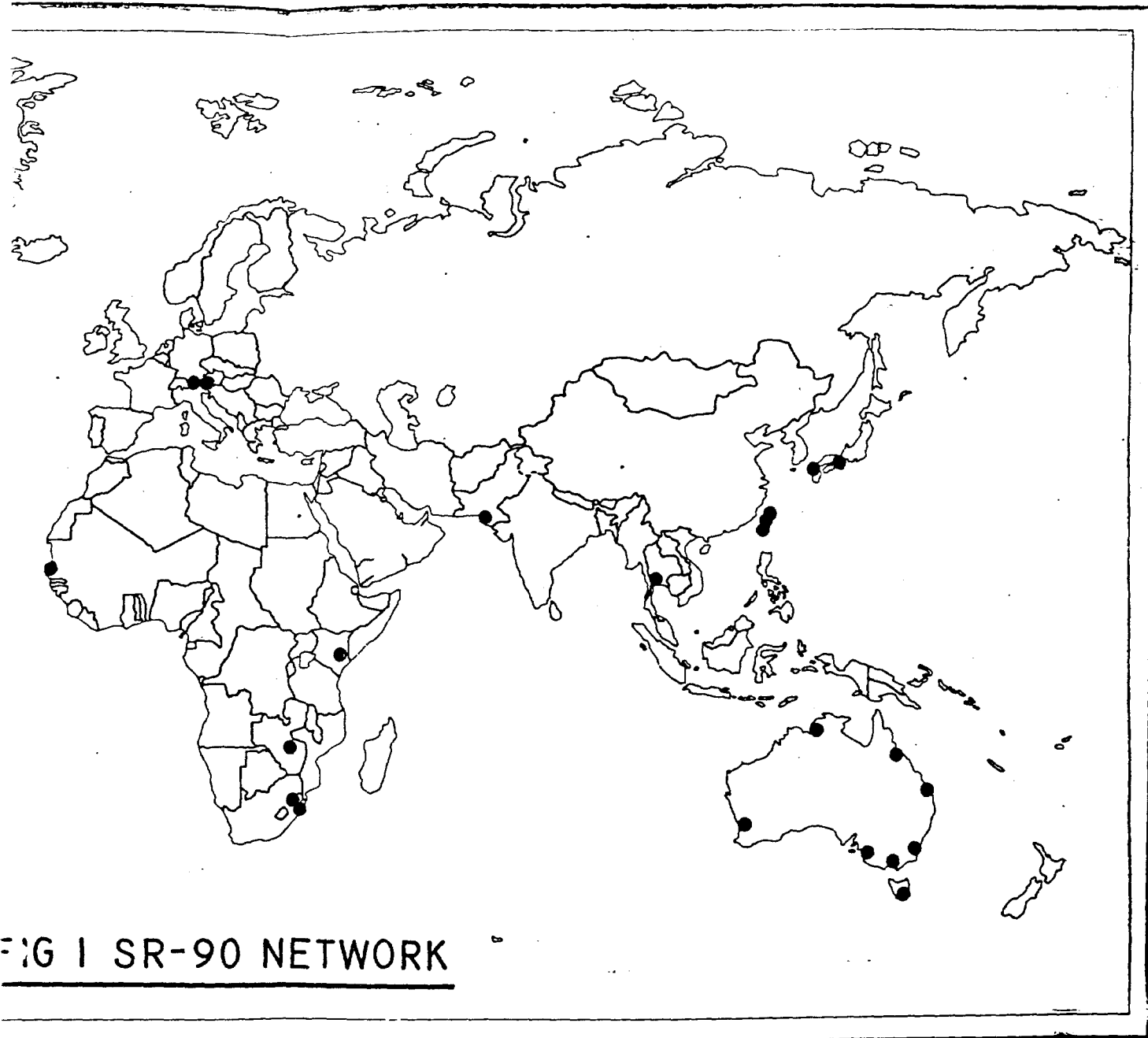
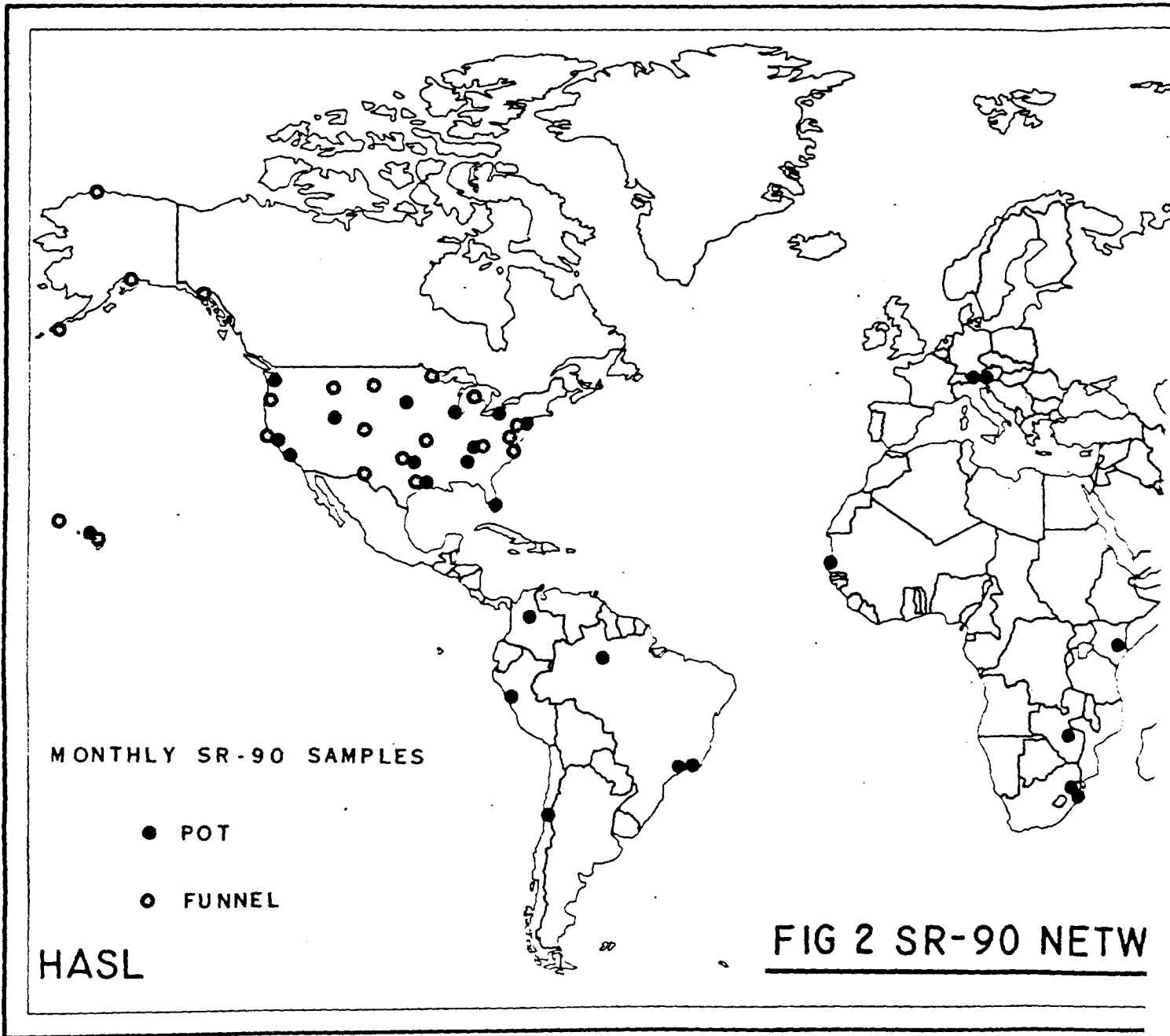


FIG 1 SR-90 NETWORK



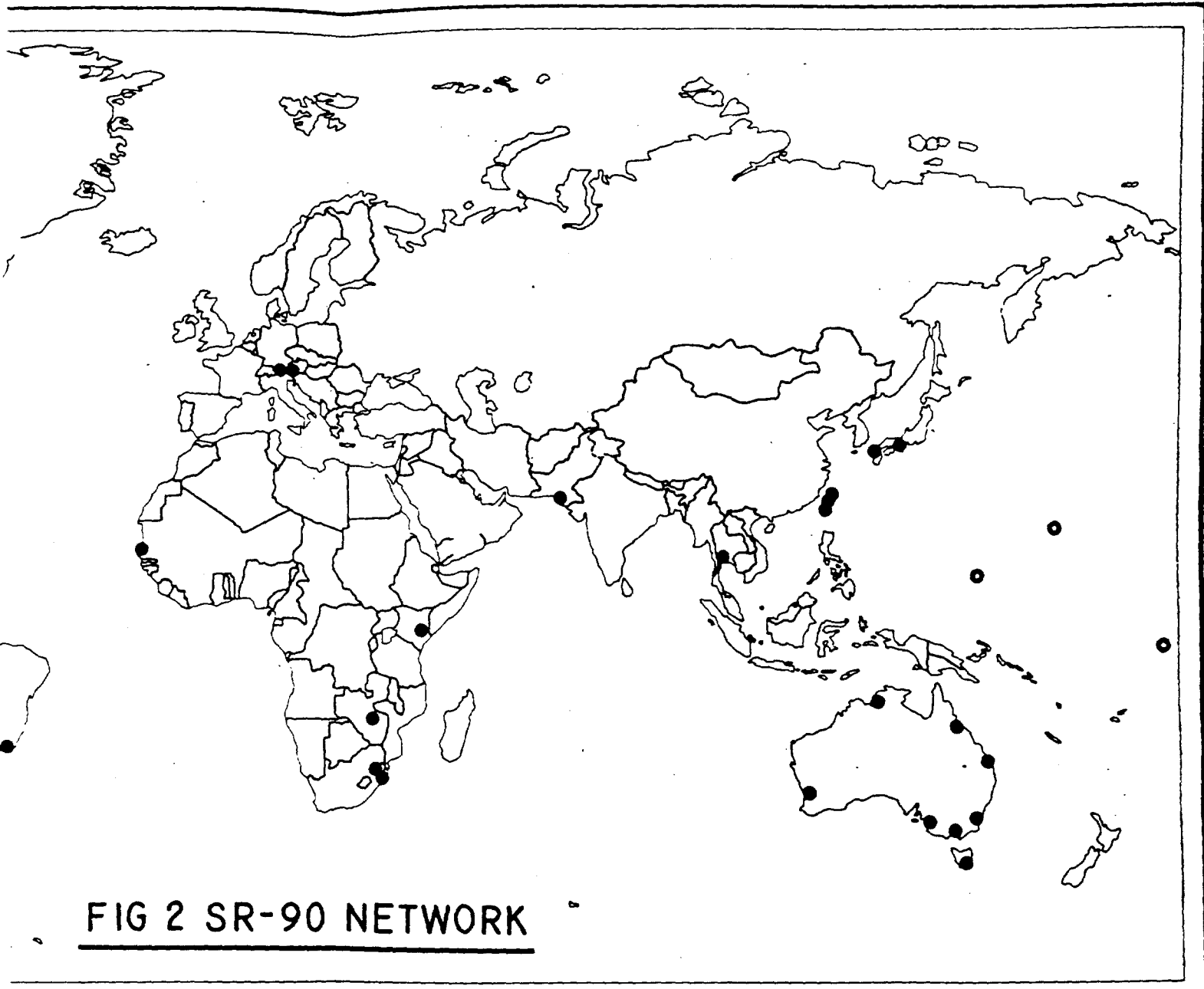


FIG 2 SR-90 NETWORK

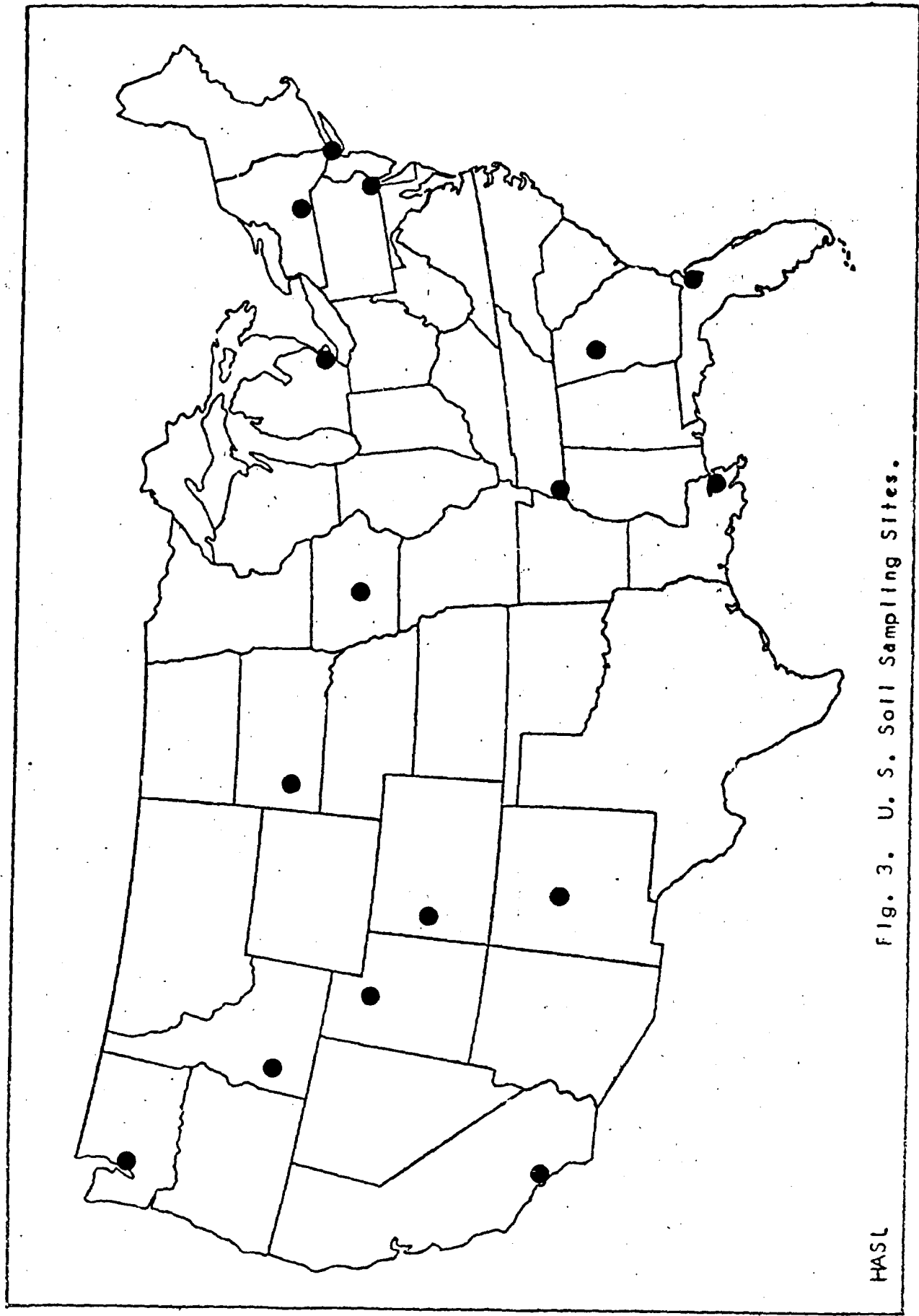
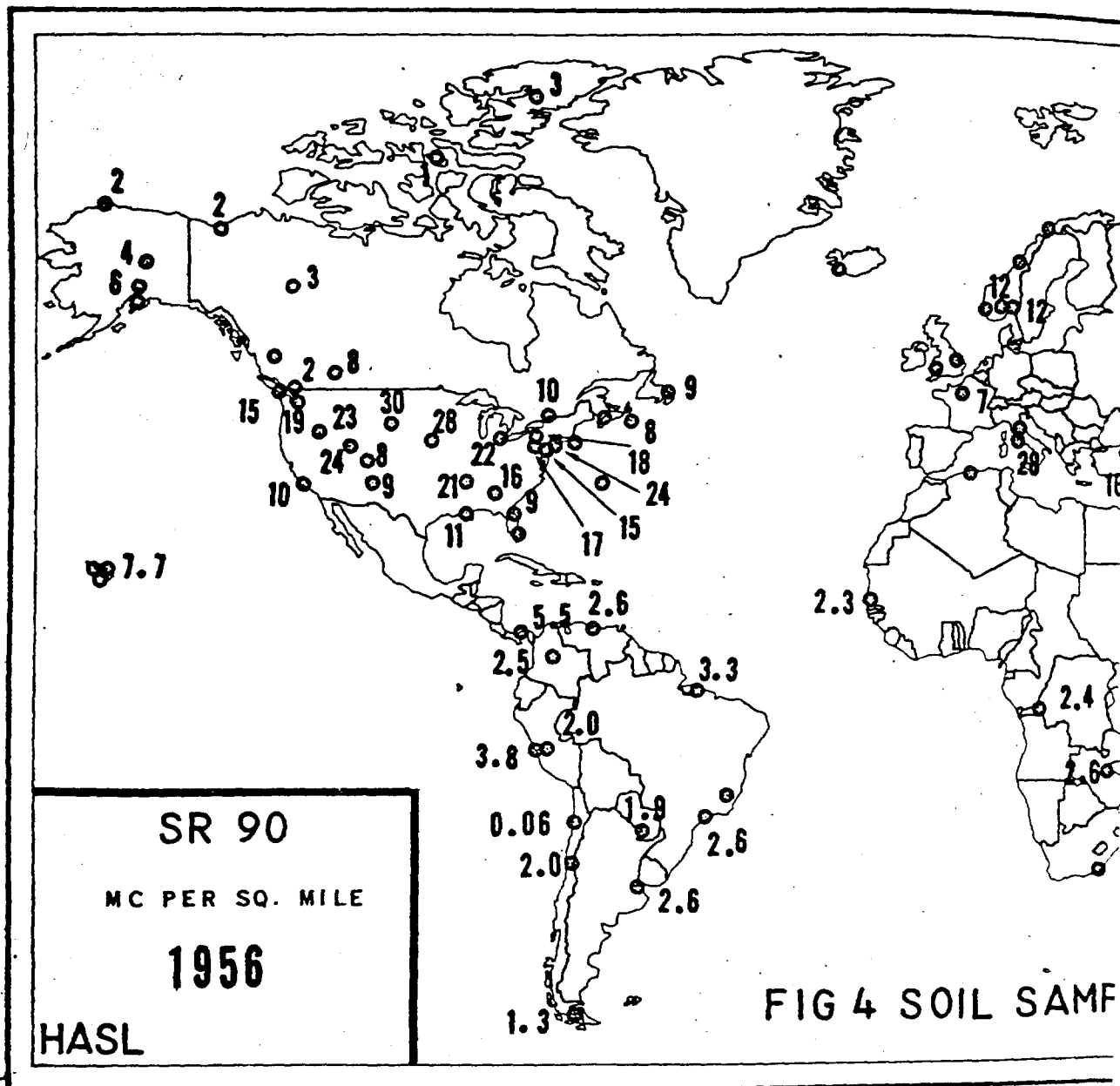


Fig. 3. U. S. Soil Sampling Sites.

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1959

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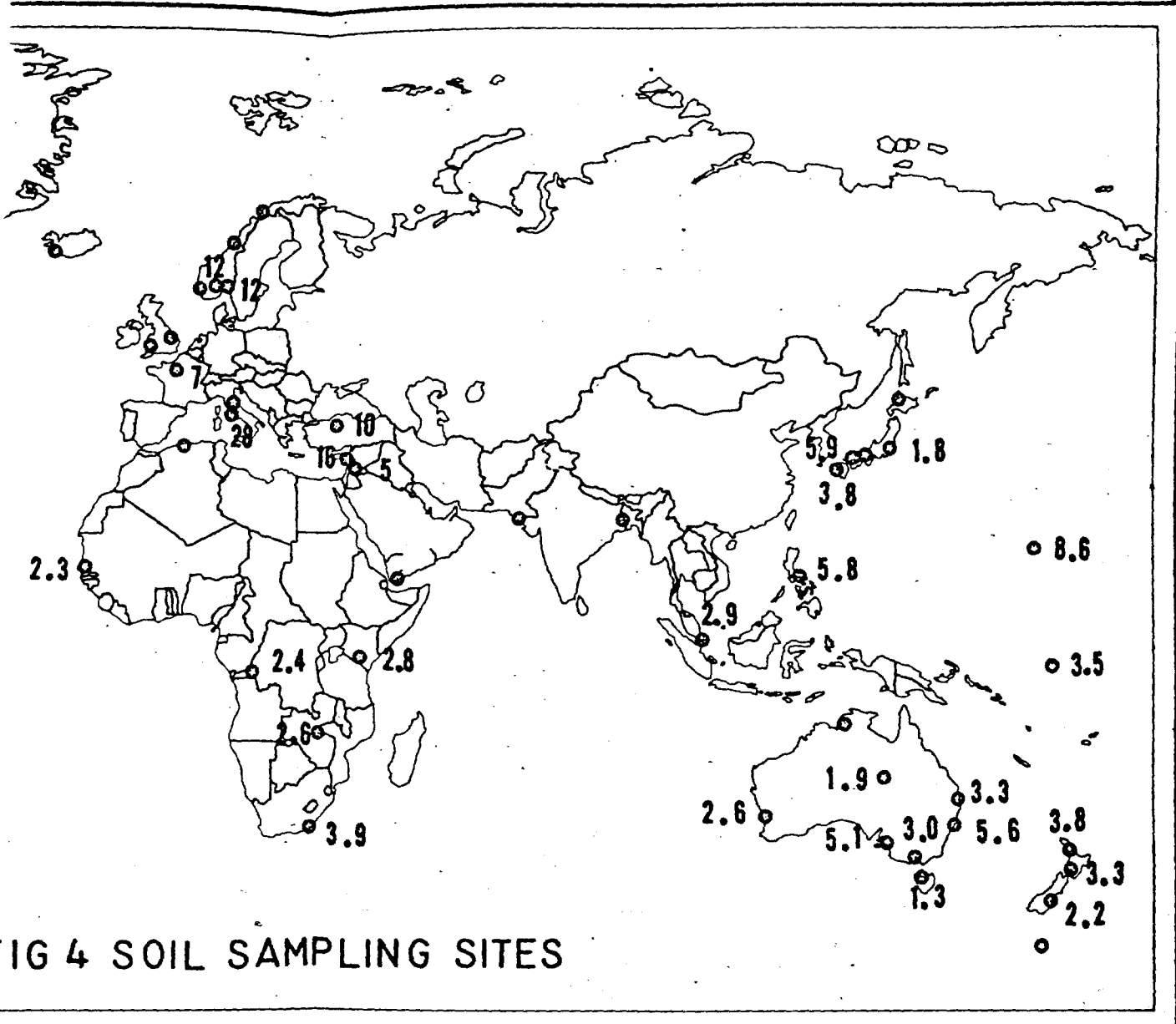
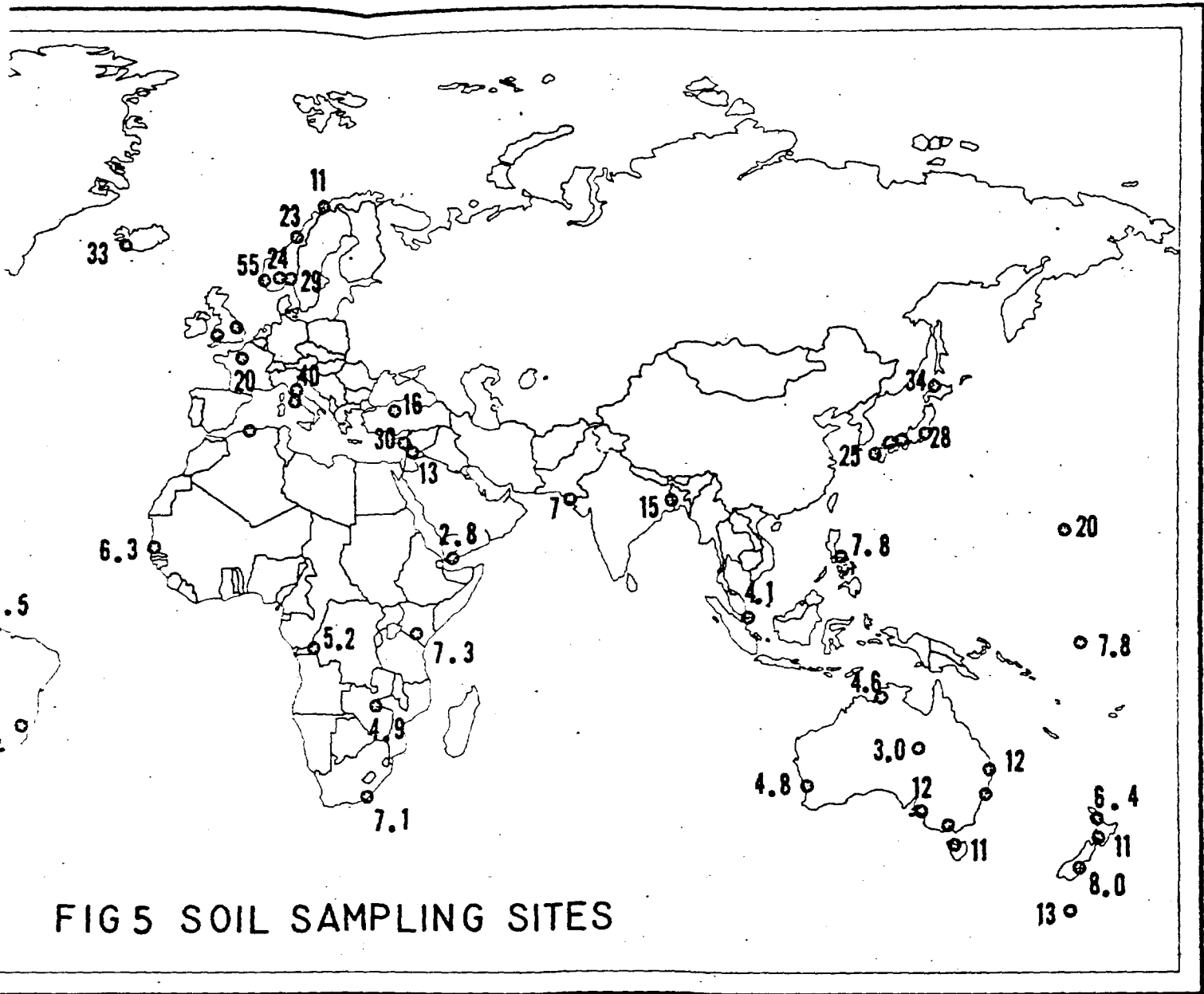
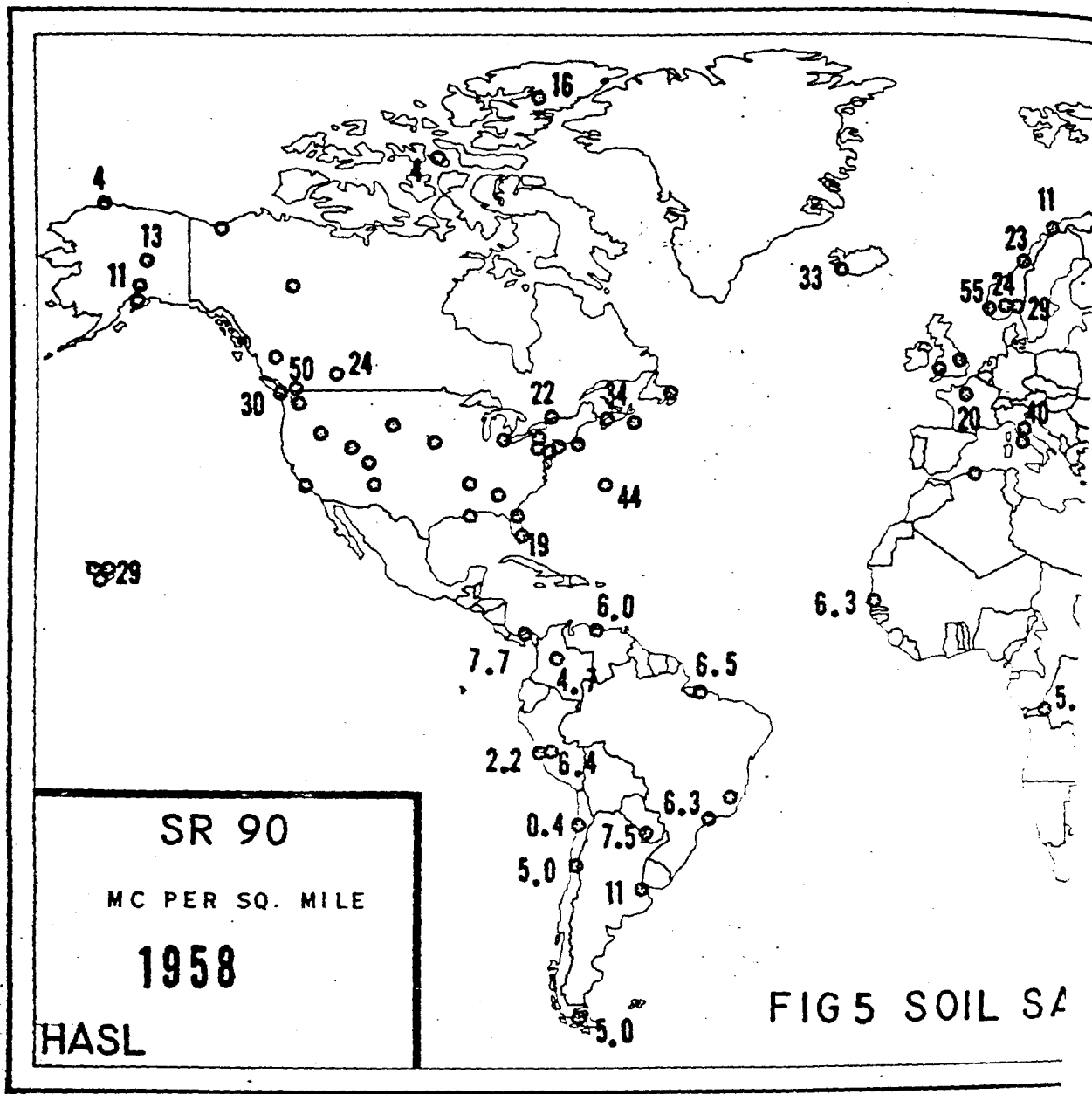
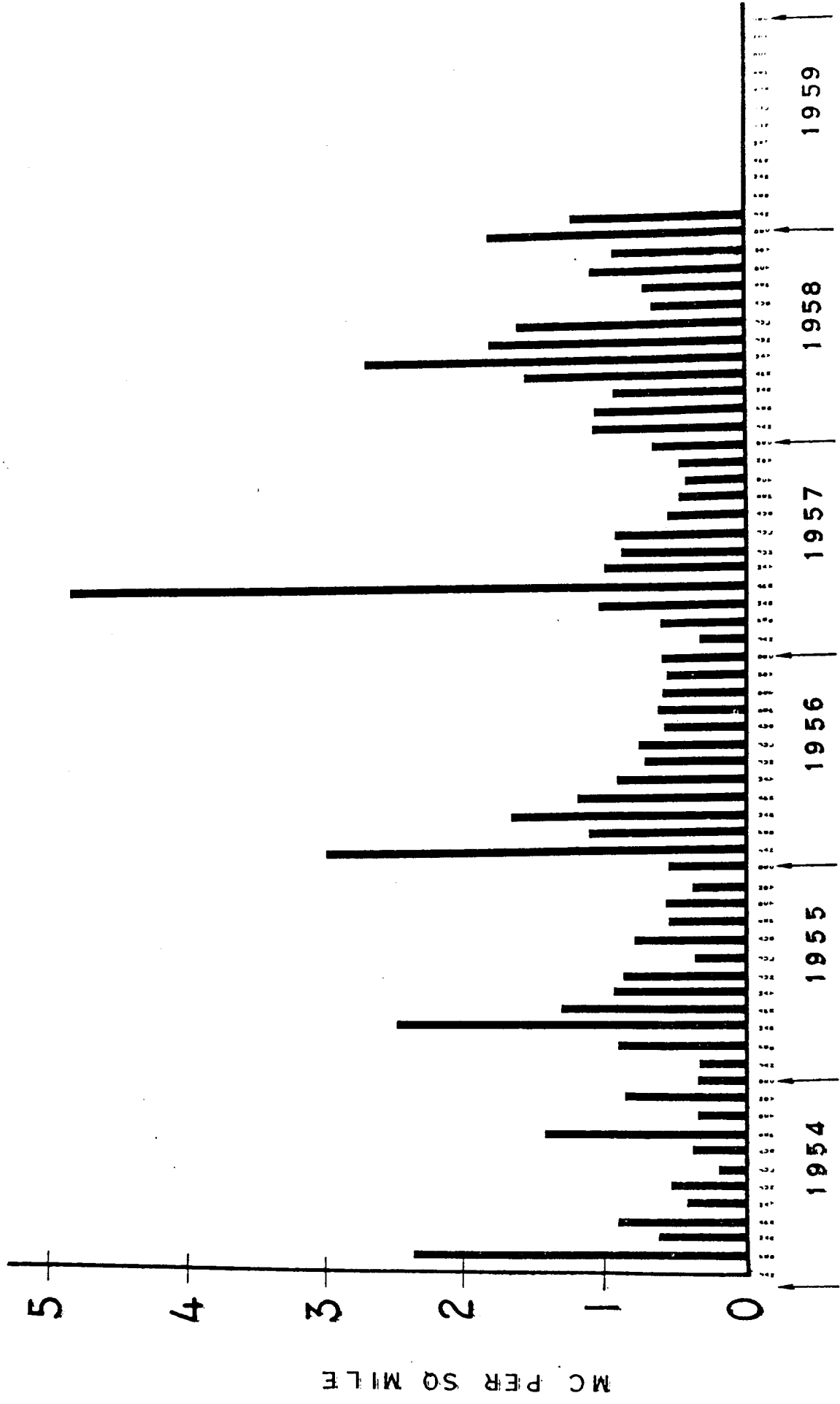


FIG 4 SOIL SAMPLING SITES

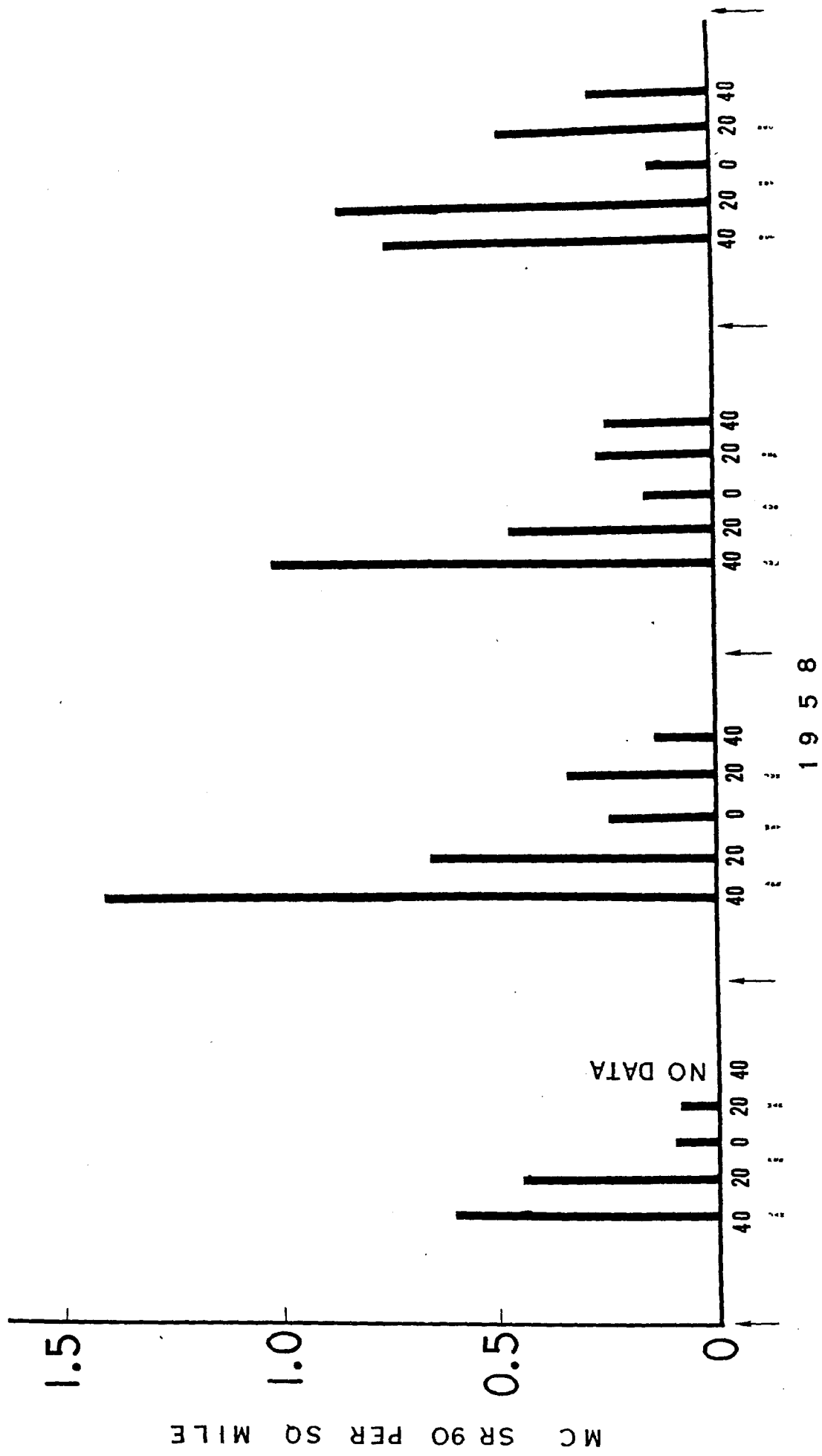


1959

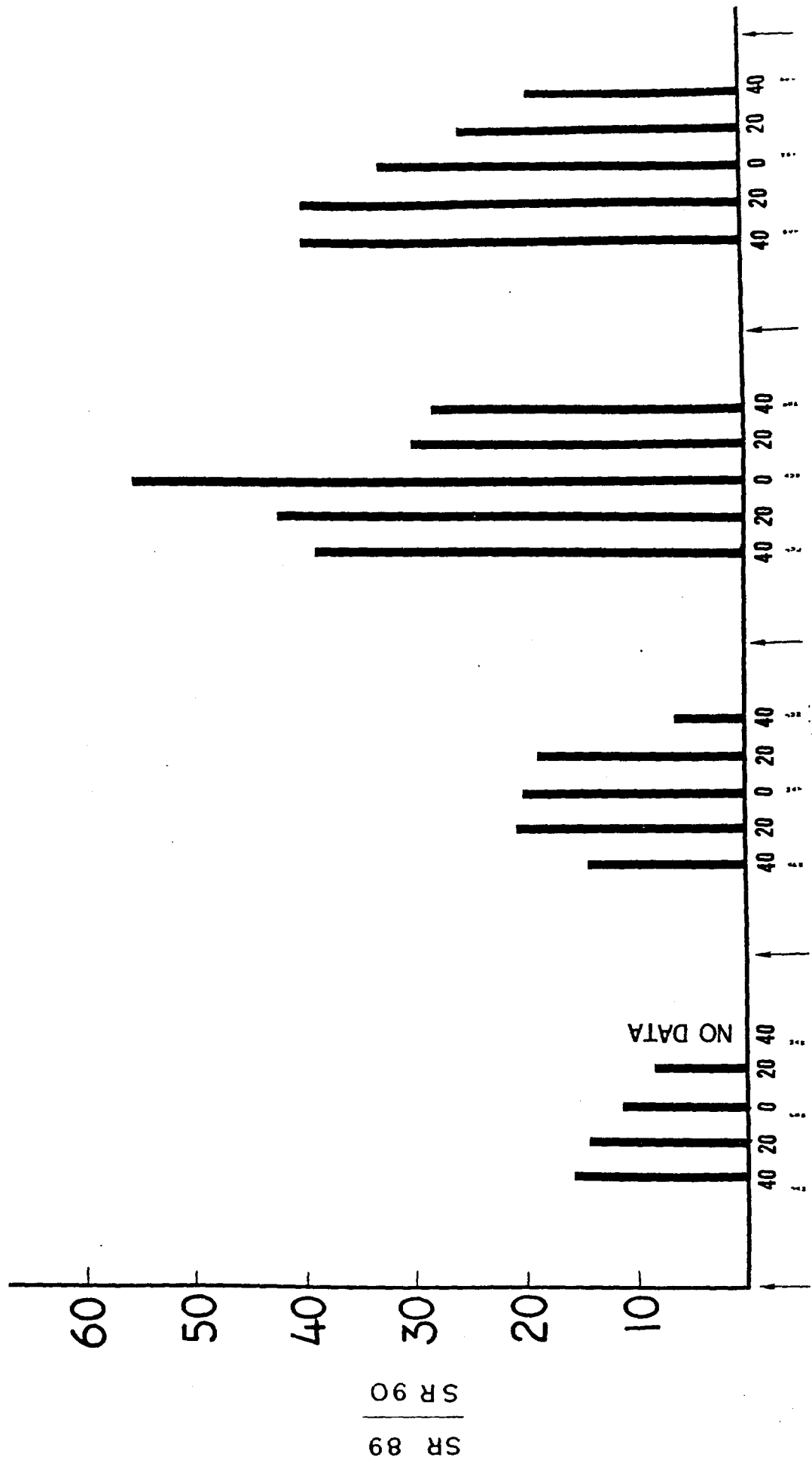




HASL FIG 6 MONTHLY SR 90 NEW YORK CITY



HASL FIG 7 QUARTERLY SR 90 DEPOSITION BY 20° LATITUDE BANDS - '58 POTS



HASL <sup>89</sup> SR 90 RATIOS BY 20° LATITUDE BANDS 1958 POTS