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1. Alba, A. Fernando; Beltran, Virgilio; Brody, T. A.; Lezama, Hugh; Moreno, A.; Tejera, M. A. and Vazquer, B. PRELIMINARY INFORMATION ON STUDIES OF RADIOACTIVE RAIN. Revista Mexicana de Fisica 5, 153-66 (1956)

   Data on radioactive rain, which were obtained by the gummed leaf method and by collection in a free surface of water are presented. The experimental methods are described. Some conclusions are obtained on the relative efficiency of the two methods and their relations to atmospheric precipitation.

2. Allen, J. S.
   A-BOMB FALLOUT IN NORTHERN WEST VIRGINIA. West Virginia University Bulletin, Series 56, 55-57 (1957).

3. Anderson, Ernest C.; Schuch, Robert L.; Fisher, William R.; and Langham, W. RADIOACTIVITY OF PEOPLE AND FOODS. Science 125, 1273-78 (1957).

   Measurements of the Cs^{137} content of people and of foodstuffs indicate that this nuclide is unlikely to be a decisive factor in the long-term hazards from weapons testing and reactor waste disposal. The amount of Cs^{137} now present in the population of the United States averages 0.006 microcurie and shows no marked dependence on geographic location. The average radiation dose received from Cs^{137} is one-twentieth of that received from natural radiopotassium and 1 percent of the average total dose from all natural sources. Because of the short biological half-life of cesium of about 140 days, it does not accumulate in the body as does Sr^{90}. The study of the distribution of Cs^{137} is being continued to furnish information on the mechanisms of the fallout process and provide a measure of the rate of fallout and of stratospheric storage.

4. Armagnac, Alden P.
   WILL BOMB DUST ENDANGER YOUR HEALTH? Popular Science 170, 163-67, 256, 258, and 260 (1957).

16. Cockcroft, John
RADIOACTIVE POLLUTION FROM NUCLEAR EXPLOSIONS.
Smokeless Air 27, 192-94 (Summer 1955).

Because it produces 100 to 1000 times more radioactiv material than an atomic bomb, the hydrogen bomb is th most important source of radioactive material. If a hydrogen bomb is exploded on the ground millions of tons of soil, ranging in size from 0.02 in diameter down to 0.001 inches, will be mixed with the radioactive products, the larger particles settling near the scene of the blast, and the remainder dispersing in the stratosphere - above 50,000 feet. In the case of an air burst practically all of the radioactivity will go into the stratosphere and from there deposite uniformly. The author calculates that the contribution of radioactivity from weapons test is small, considerably less than the radiation exposure receive from natural sources of radioactivity, if the tests continue at the present level. However, in the case of a full scale hydrogen bomb war with 1000 times the present number of hydrogen bombs exploded, the hemisphere contamination would correspond to a dose of about 25 r which could be damaging to future generations. Operation of nuclear plants for power, althou sources of large amounts of radiation can be controll to minimize the radiation levels to the population. The major source of such contamination, radioactive wastes, can be handled through separation of the more hazardous strontium and cesium from the bulk of the wastes, storage of the residue for about 10 years followed by controlled release, and utilization of th separated cesium and strontium as by-product material pending development of more satisfactory methods of handling and disposal.

17. Comar, C. L.; Trum, Bernard F.; Kuhn, U. S. G.; Wasserman, R. H.; Nold, M. M.; and Schooley, J. C.
THYROID RADIOACTIVITY AFTER NUCLEAR WEAPONS TESTS.
Science 126, 16-19 (1957).

25. FEWER TORNADOES IN AREAS OF THE ATOMIC CLOUDS. U. S. News and World Report. 106 and 108 (April 29, 1955).

26. Garrigue, Hubert
RADIOACTIVITY OF AIR AND PRECIPITATIONS. Comptes Rendus 243, 584-5 (1956) (In French).

Since May 31, 1956, all the precipitations at the summit of the Puy-de-Dome, have been contaminated with artificial radioactive products. The flight survey of June 15 confirms these results.

27. Honda, M.
A PROPOSED METHOD OF ANALYSIS OF RADIOACTIVE SUBSTANCES IN RAIN WATER. Japan Analyst 3, 368 (1954).

Ion exchange, using Amberlite IR-120 and Dowex 50 cation exchange resins, is proposed as a method of analysis of radioactive substances in rain water.

28. Hunter, C. G.
RADIATION INJURIES IN ATOMIC WAREFARE WITH STRESS ON FALLOUT. Canadian Medical Association Journal 76, 394-401 (1957).

29. Jacobs, Paul
CLOUDS FROM NEVADA; A SPECIAL REPORT ON THE AEC'S WEAPONS-TESTING PROGRAM. The Reporter 16, 10-29 (1957).

30. Kellogg, W. W.; Rapp, R. R.; and Greenfield, S. M.
CLOSE-IN FALLOUT. Journal Meteorology 14, 1-8 (1957).

The phenomenon of radioactive fallout from an atomic explosion is described, and a quantitative technique for determining the distribution of radioactive material on the ground is developed. The primary factors which must be considered are wind field, yield and height of burst, and particle-size distribution. Certain parameters which enter directly into a fallout determination are given quantitatively, such as the altitude and size of the atomic cloud (as a function of explosion yield and atmospheric stability) and particle fall-rates (as a function of altitude and particle size). Two hypothetical fallout patterns for a one-megation explosion, computed on a high-speed digital computer are presented,
(continued)

30. Kellogg, W. W., et al
showing the large effect which the wind has in determining the character of the fallout. The meteorological problems associated with a fallout prediction are discussed.

31. Kimura, Kenjiro
ANALYSIS OF RADIOACTIVE FALLOUT OF THE ATOMIC BOMB EXPLOSION ON BIKINI. Radioisotopes (Japan) 3, 1-4 (1954).

The radioactive fallout was found to contain 55.2, 7.0, 11.8, and 26.0% of CaO, MgO, CO_2, and H_2O, respectively, the chief constituent being $Ca(OH)_2$. The electric-spark method of analysis showed the presence of Al, Fe, and Si in addition to Ca and Mg. Its decay curve followed $I = ct^{-1.37}$, where I represents radioactivity, t, time since the explosion took place, March 1, 1954, and c, const. Its specific activity measured on April 23, 1954, was 0.37 mc./g. Radioactive nuclei identified by March 26 were Sr^{89}, Sr^{90}, Y^{91}, Sr^{95}, Nb^{95m}, Nb^{95}, Ru^{103}, Rh^{106}, Te^{129m}, Te^{129}, Te^{132}, I^{131}, I^{132}, Ba^{140}, Ce^{141}, Ce^{144}, Pr^{143}, Pr^{144}, Nd^{147}, Pm^{147}, S^{35}, Ca^{45}, U^{237}, and Pu^{239}.

32. Kimura, Kenjiro
INTRODUCTION TO SPECIAL COLLECTION OF PAPERS. ANALYSIS OF THE BIKINI ASH. Japan Analyst 3, 333-4 (1955).

The incident of the Bikini ashes and the fishing boat is reported. Experiences on the boat are recorded, and fallout analyses are compared with those of Nagasaki and Hiroshima.

33. Kimura, Kenjiro; Ikeda, Nagao; Kimura, Kan; Kawanishi, H.; and Kimura, M. RADIOCHEMICAL ANALYSIS OF THE BODY OF THE LATE MR. KUBOYAMA. Radioisotopes (Japan) 4, 22-7 (1956).

Analyses were carried out of various organs of Mr. Kuboyama 200 days after he had exposed himself to radiation of the atomic bomb explosion on Bikini Atoll, March, 1954. By ion-exchange chromatography, the presence of the following nuclides was indicated: Ce^{144} and Pr^{144} in the bone (I) (20 x 10^{-12} counts/g. fresh wt.). Liver (II), and Kidneys (III); Zr^{95} and Nb^{95} in II and III; Ru^{106}, Rh^{106}, Te^{129m}, and Te^{129} in I, III, and muscles; and Sr^{89}, Sr^{90}, and Y^{90} in I, II, and III. Activities found in these organs were decidedly higher than those found in the control samples obtained from individuals who died of other than the so-called radiation sickness. Radiation dose received by the bones of Mr Kuboyama was calculated to be approximately 8 r.e.p.

34. Kulp, J. Laurence; Eckelmann, Walter R.; and Schulert, Arthur R. STRONTIUM-90 IN MAN. Science 125, 219-225 (Feb. 8, 1957).

The world-wide average strontium-90 content of man was about 0.12 micromicrocurie per gram of calcium (/10,000 of the maximum permissible concentration) in the fall of 1955. A few values of high as 10 times the average have been obtained. This value is in accord with the predicted value based on fall-out measurements and fractionation through the soil-plant-milk-human chain. With the present burden of strontium-90, this average level should rise to 1 or 2 micromicrocuries of strontium-90 per gram of calcium.

35. Langham, Wright H.; and Anderson, Ernest C. STRONTIUM-90 AND SKELETAL FORMATION. Science 126, 205-6 (1957).

36. Lapp, Ralph
INTERVIEW BY MIKE WALLACE. ABC Television Network Sunday, June 9, 1957. 15p.

37. Lapp, Ralph
STRONTIUM LIMITS IN PEACE AND WAR. Bulletin of the Atomic Scientists 12, no. 8, 287-9 and 320 (1956).

38. Lapp, Ralph; Kulp, J. L.; Eckelmann, W. R.; and Schulert, A. R. STRONTIUM-90 IN MAN. Science 125, 933-4 (1957).

Biological hazards from fallout Sr^{90} following nuclear explosions are discussed.

39. Lewis, E. B.
LEUKEMIA AND IONIZING RADIATION. Science 125, 965-972 (1957).

40. Libby, Willard F.
DEGREE OF HAZARD TO HUMANITY FROM RADIOACTIVE FALLOUT FROM NUCLEAR WEAPONS TESTS. (A letter from Dr. Libby to Dr. Schweitzer). Bulletin of the Atomic Scientists 12, 206-7 (1957).

41. Libby, Willard F.
RADIOACTIVE FALLOUT.

Remarks prepared by Dr. Willard F. Libby, Commissioner, U. S. Atomic Energy Commission for delivery before the spring meeting of the American Physical Society, Washington, D. C., April 26, 1957.

42. Libby, Willard F.
WHAT THE ATOM CAN DO TO YOU AND FOR YOU. U. S. News and World Report 64-70 and 73-77 (May 17, 1957).

43. Machta, L.; and List, R. J.
STRONTIUM-90 MAIN HAZARD. Science News Letter 71, 214 (1957).

44. Machta, L.; and List, R. J.
WORLD-WIDE TRAVEL OF ATOMIC DEBRIS. Science 124, 474-7 (1956).

The dispersal of radioactive airborne particles from two nuclear tests in the Pacific Proving Grounds of the AEC was traced by counting the activity on sheets of gummed film exposed at stations located throughout the world. A series of maps illustrate the fallout dispersal pattern at various times following the test shots. The effects of prevailing meteorological conditions on fallout dispersal and deposition are discussed.

45. METEOROLOGICAL ASPECTS OF ATOMIC RADIATION. Science 124, 105-12 (1956).

Bomb energy, detonation altitude, and atmospheric conditions have significant influences on the mechanism, rate, and pattern of fallout. These variables are discussed. Also considered is the possibility of an intolerable Kr^{85} concentration in the atmosphere from nuclear power plants.

46. Moloney, William C.
LEUKEMIA IN SURVIVORS OF ATOMIC BOMBING. New England Journal of Medicine 253, 88-90 (1955).

47. Muller, Hermann J.
AFTER EFFECTS OF NUCLEAR RADIATION. American Society of Safety Engineers 1, 42-8 (1956).

48. Nagasawa, Kakuma; Kawashiro, Iwao; Kawamura, Shoichi; Takenaka, Yusuki; and Nishizaki, Sasao.
RADIOCHEMICAL STUDIES ON RADIOCONTAMINATED RICE CROPPED IN NIIGATA PREFECTURE IN 1954. Bulletin of the National Hygienic Laboratory, Tokyo no. 73, 187-90 (1955).

Radioactivity of various parts of rice seeds cropped in 1954 was detd. and compared with that of 1953. Radioactivity due to K^{40} was established as total count of the ash and was subtracted for correction. None of rice seeds in 1953 showed excess radioactivity. With the seeds in 1954 the following results were obtained: unhulled rice 3-6 c.p.m./g; chaff 3-6 c.p.m./2 g; unpolished rice 0-0.3 c.p.m./8 g.; polished rice 0; rice bran 0. This radioactivity is thought to come from the rain, adherent to the chaff, but not from soil contamination.

55. Natanson, G. L.
RADIOACTIVE AEROSOLS. Uspekhi Khimii 25, 1429-45 (1956) (In Russian).

Tabulations are given presenting various published data on safe atmospheric concentrations of various radioactive and non-radioactive aerosols. Methods of determination of active aerosol concentrations and dispersion as well as the technical applications of "labeled" aerosols are discussed. The effect of atomic explosions are analyzed considering the "nominal" atomic bomb based on U^{235} and Pu^{232} equivalent to 20,000 tons of TNT.

56. Pace, F. C.
EFFECTS OF ATOMIC BOMB RADIATIONS ON HUMAN FOOD. Canadian Journal of Public Health 47, 113-141 (1956).

The increase in energy release of atomic weapons has increased the hazard of atomic radiation to food. Products of atomic explosions are probably similar regardless of size. Of the energy released, blast energy accounts for one-half, heat flash for one-third, initial nuclear radiation for one-twentieth, and residul radiation (potential fallout) about one-tenth. Radioactive elements may enter man by inhalation, by open wounds, or by ingestion of contaminated food. Food can become contaminated by direct fallout on unprotected food or through metabolic assimilation by plants or animals. Dust-proof containers and undamaged cans provide protection from the first hazard. Cans, etc., should be washed before opening. Other food could be cleaned and used if subsequent monitoring indicated that the fallout material had been removed.

57. Patterson, R. L.; and Blifford, I. H.
ATMOSPHERIC CARBON-14. Science 126, 26-28 (1957).

58. Pinke, A. S.
LIMITATION OF FISSIONABLE MATERIAL IN WEAPONS. Bulletin of the Atomic Scientists 13, 177-8 (1957).

59. Poling, James
BOMB-DUST RADIATION. Better Homes and Gardens 35, no. 5, 71, 172, 174, 179, and 182-3 (1957).

60. Russell, w. L.
SHORTENING OF LIFE IN THE OFFSPRING OF MALE MICE EXPOSED TO NEUTRON RADIATION FROM AN ATOMIC BOMB. National Academy of Sciences, Proceedings 43, 324-329 (1957).

61. Romney, E. M.; Neel, J. W.; Nishita, H.; Olafson, J. H.; and Larson, K. H. PLANT UPTAKE OF Sr^{90}, Y^{91}, Ru^{106}, Ca^{137}, and Ce^{144} FROM SOILS. Soil Science 83, 369-376 (1957).

62. Saal, Herbert
WHAT IS THIS STRONTIUM 90 BUSINESS? American Milk Review 18, 30, 32 and 34 (1956).

63. Saiki, Masamichi
ON THE RADIOELEMENTS OF FISHES CONTAMINATED BY THE NUCLEAR BOMB TEST. Japan Analyst 7, no. 7, 443-9 (1957).

64. Sandor, Szalay and Denes, Berenyi
OBSERVATIONS OF UNUSUAL RADIOACTIVITY IN PRECIPITATIONS WHICH FELL IN BEBRECEN BETWEEN APRIL 22 - DECEMBER 31, 1952. Budapest, Magyar Todomanyos Akademia. 13p. (1955) (In Hungarian).

It is suggested that radioactive fallout may be useful for the meteorological study of the movement of air masses, if an international organization records fission fragment concentration after atomic test explosions.

65. Schumann, G.
ARTIFICIALLY RADIOACTIVE PRODUCTS IN THE ATOMSPHERE. Zeitschrift fur Angewandte Physik 8, 361-4 (1956).

The by-product activity arising from atom bomb test was investigated in Heidelberg by a filtration method during March, 1953. The measurement of the activity on the filter was accomplished by a cylindrical β-counter. The decay was proportional to $t^{-}(1 + x)$, where x is of the order of magnitude of 0.1, and thus approaches t^{-1}. The time of explosion can be determined by extrapolation of the reciprocal activity as a function of time.

66. Setter, L. R.; Wagee, G. R.; and Straub, C. P.
ANALYSIS OF RADIOACTIVITY IN SURFACE WATERS. PRACTICAL LABORATORY METHODS.

Presentation at the 84th Annual Meeting of the American Public Health Association before the Engineering and Sanitation, Laboratory, and Occupational Health Sections at Atlantic City, New Jersey. 20:. (Nov. 16, 1956).

67. Sievert, R. M.; Gustafsson, S.; and Sylander, C. G.
INCREASE IN γ-RADIATION FROM POWDERED MILK AND BEEF. 1953-56. Nature 178, 854-5 (1956).

Samples of powdered milk and beef preserved during the years 1953 to 1956 were examined for the presence of γ-radiation. The higher γ-radiation found in the last year was attributed to an increase in fission products. Data are compared with measurements on a series of children.

68. Smirnov, N. S.
ON THE EFFECTS OF ATOMIC EXPLOSIONS ON THE CONDITIONS IN THE ATMOSPHERE. Izvestiya Akademii Nau Soyuza Sovetskikh Sotsialisticheskikh Respublik. Seriya Fizicheskaya. 1227-31 (1956) (In Russian).

Effects of atomic bomb explosions on the increase in the atmospheric radioactivity and its influence on the weather has been reviewed.

69. Stanley, Charles W. and Kruger, Paul
DETERMINATION OF Sr 90 ACTIVITY IN WATER ION-EXCHANGE CONCENTRATION. Nucleonics 14, 114-18 (Nov. 1956).

It appears that Sr^{90} can be used as a measure of the fission product contamination of water. A very sensitive method of water analysis of $Sr^{90} - Y^{90}$ using ion exchange concentration with selective elution of Y^{90} is described. Low-level techniques are employed to count the Y^{90} which reflects the concentration of Sr^{90}. Twenty-six liters of city tap water were concentrated and found to contain $3.10 + 0.21 \times 10^{-4}$ dpm/ml of Sr^{90}. If interferring activities are present, the Sr^{90} can be eluted and radiochemical separation performed.

70. Sugiura, Y. and Kanazawa, T.
RADIOACTIVE FALLOUT COLLECTED IN TOKYO ON NOVEMBER 26, 1955. Meteorology and Geophysics, Tokyo 7, 128-35 (1956).

A large nuclear weapon test by Russia was reported November 23, 1955 as having occurred the previous day. Rain water and fallout samples taken in Tokyo before and after the 22nd indicated the test had produced a secondary fallout from some previous explosion. Rain water of the 21st and fallout of the 29th had radioactive content of 13 days half-life; fallout of the 26th, rain of the 27th 3 days half-life. Sample of the 26th consisted of 15 mg. of sooty material giving nearly 2000 counts/min. at that time.

71. Tajima, Eizo and Doke, Tadayoshi
RADIOACTIVE IN THE OPEN AIR. Kagaku (Science) 26, 124-9 (1956).

A review of radioactive dust.

72. Tanidazawa, M. and Ishihara, T.
RADIOACTIVE ELEMENTS FOUND IN PLANTS CONTAMINATED BY RADIOACTIVE RAIN. Radioisotopes (Japan) 3, no. 1, 21-2 (1954).

Ashes obtained from contaminated trifolium repens, astragalus sinicus, and rumex japonicus were studied. The precipitate obtained by treating the acidic solution of the ash with H_2S followed by Fe ++ in the presence of NH_3 and NH_4Cl contained Y, Sr, and the rare earth elements.

73. Thomas, Harold Allen
THE PUBLIC HEALTH IMPLICATIONS OF RADIOACTIVE FALLOUT IN WATER SUPPLIES. American Journal of Public Health and the Nations Health 46, 1266-74 (1956).

Significant increases in radioactivity in Massachusetts streams occurred only when precipitation took place through r dioactive air masses. During the period from November 1951 to June 1953, there were 24 detonations, only five were followed by fallout extensive enough to raise the radioactivity above natural levels. The maximum observed in any sample was about 3×10^{-7} microcuries per ml. of total beta activity at three days after fission.

74. Turekian, Karl and Kulp, J. Laurence
STRONTIUM CONTENT OF HUMAN BONES. Science 124, 405-7 (1956).

Marked regional differences in the Sr content of human bones were observed as a result of the analyses of 277 human bones from a world-wide sampling. The % Sr/% Ca x 10^3 ratio was determined on bones ashed at 8000° for 12-24 hours. This ratio was not affected by bone type, age, or sex. Bones from Brazil and Liberia had high average ratios, Denmark, Italy and Japan, intermediate average ratios, and Cologne, Switzerland, and Bonn low average ratios (1.33, 1.25, 0.89, 0.71, 0.70, 0.36, 0.35, and 0.35 respectively). Analyses of bones of 9 other regions were also reported.

75. U. S. Department of Agriculture
RADIOACTIVE FALLOUT ON THE FARM. Farmer's Bulletin no. 2107. Washington, U. S. Government Printing Office, 1957. 16p. $0.10.

76. U. S. Federal Civil Defense Administration
FALLOUT DEBRIS DEPOSITION. FCD 1.3:11-31. Washington, U. S. Government Printing Office, 1957. $0.25.

77. Warren, Shields
ANTI-PERSONNEL EFFECTS OF NUCLEAR WEAPONS. Confluence 4, no. 2, 131-8 (1956).

78. Weiss, Herbert V. and Shipman, W. H.
BIOLOGICAL CONCENTRATION BY KILLER CLAMS OF COBALT-60 FROM RADIOACTIVE FALLOUT. Science 125, 695 (1957).

In 2 specimens of Tridacna Gigas recovered from the shores of Rongelap Island 2 years after the March, 1954, nuclear detonation, readily detectable amounts of both β- and γ-radiation were present. The activity was attributable to Co^{60} (I) to the extent of 63 and 85% of the gross γ-activity. As it is not a component of fission products, it is assumed that it was induced from an environmental precursor possibly Co^{59}, by the neutron flux accompanying the detonation. It was not detected in samples collected one year after the detonation; this points to an enormous concentrating capacity of Tridacna gigas.

79. World Federation of Scientific Workers. UNMEASURED HAZARDS. London, World Federation of Scientific Workers. 40p. (1956)

80. World Health Organization (United Nations) GENETIC EFFECTS OF RADIATION. Press Release, WHO/11, (March 13, 1957) 3p.

81. Yamada, Kinjiro; Tozawa, Harumi; Amano, Keishi; and Takase, Akira. STUDIES ON THE RADIOACTIVITY IN CERTAIN PELAGIC FISH. III. SEPARATION AND CONFIRMATION OF Zn^{65} IN THE MUSCLE TISSUE OF A SKIPJACK. Bulletin of the Japanese Society of Scientific Fisheries 20, no. 10, 921-26 (1955).

Ashed sample of the muscle tissue of skipjack, which were caught by "Shunkotsu-Maru" on June 19th near Bikini Atoll was used for the present study. Ion exchanger method, using Dowex 50, was applied to separate radioactive elements with 0.2 N HCl, 0.5% oxalic acid and 5% annonium citrate (pH 3.53, 4.18, 4.60, 5.02, 5.63 and 6.42) as the eluents. Elution curve of the ashed muscle is shown in Figure 1. Appreciable amounts of cathionic radioactive elements were separated by 0.5% oxalic and by 5% annonium citrate at the pH of 4.18 and also anionic radioactive elements were obtained by 0.2N HCl. As the fraction, which can be withdrawn by annonium citrate as pH 4.18, was proved the most active; futher analysis was undertaken according to the scheme cited in Figures 2 and 5. In addition to these chemical separation, absorption curve of this specimen with tin foil was examined simultaneously (Figure 3) and thus the radioactive Zn^{65} was confirmed to be present in the fish muscle. Although it was difficult to detect radioactivity in rare-earth and alkaline-earth groups in the muscle tissue, attempts are being made for more precise examination.

82. Yamazaki, Fumio and Kakehi, K. ESTIMATE OF RADIATION DOSES RECEIVED BY THE INDIVIDUALS ABOARD A CONTAMINATED FISHING BOAT. Radioisotopes (Japan) 3, no. 1, 4-6 (1954).

A dose was estimated to be 120 r. in 24 hours or 270 r. in 13 days when calculated according to $t^{-1.2}$; or 240 r. in 24 hours or 440 r. in 13 days when calculated according to $t^{-1.4}$, observed value of decay, and supposing exposure to the radiation began 6 hours after the explosion had occurred on Bikini.

83. Yano, N.
RADIOACTIVE DUST IN THE AIR. Papers Meteorology and Geophysics (Tokyo) 7, no. 1, 34-41 (1956).

An electric precipitator is used to collect dust in the air because its collection efficiency for radioactive substances is up to 10 times that of the impactor of filter-paper types. About 10 cu. m. of air is filtered during 5 hours, and the trapped dust is measured more than 24 hours after collection to avoid the influences of naturally active substances. The average radioactivity of the air is approximately 10^{-16} c./cc. During the period of observation 4 peaks occurred. The dates and maximum levels of artificial activity, respectively, are November 4-10, 1954, 1.2 x 10^{-7} uc./l.; April 11-13, 1955, 4.3 x 10^{-8} uc./l.; November 25-8, 1955, maximum unknown; and March 22-5, 1956, 1.- x 10^{-7} uc./l. The presumed dates and places of detonation corresponding to the peaks are October 31, 1954 northwest of Japan; March 29, 1955, Nevada, U. S. A.; November 22, 1955, near L. Baikal, U. S. S. R.; and March 13-15, 1956 unknown.

84. Yatazawa, Michihiko and Yamazaki, Yoshio
ABSORPTION OF FISSION PRODUCTS BY PLANTS (PART V) ABSORPTION OF GROSS FISSION PRODUCTS. Soil and Plant Food 2, 158-163 (1956).

85. Yatazawa, Michihiko
RADIOACTIVE CONTAMINATION OF PLANTS IN JAPAN COVERED WITH RAIN-OUT FROM H-BOMB DETONATIONS IN MARCH-MAY 1954 AT BIKINI ATOLL, MARSHALL ISLAND. (PART II) RADIOACTIVE ELEMENTS OF CONTAMINATED PLANTS. Soil and Plant Food 1, 23-4 (1955).

Following a fallout estimated at 0.2 microcurie/l. Trifolium repens, Astragalus sinicus, and Rumex japonicus were harvested and analyzed for radioactivity. Most of the radioactivity (2300 - 4700 counts/min./50 g. plant ash) was associated with oxalate precipitate. A small amount of activity in the Zn group is attributed to Zn^{65} produced by reaction Zn^{64} (n,γ) from Zn employed in the mechanical parts of the bomb. Sr-Ba radioactivity was 0.1 that of the rare earth group. Distribution of the radioactive elements was nearly the same as that found on the No. 5 Fukuryu-Maru.

END