

**RADIOACTIVITY BULLETIN**

**ROYAL OBSERVATORY**

**HONG KONG**

**JAN 1972**

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR JANUARY 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. Chin and No. 23 by R.F. Apps. Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park (22°19' North, 114°10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22°18' North, 114°10' East).

15	10	15	16	17	18
16	10	10	17	18	19
17	10	15	18	19	20
18	09	10	22	23	24
19	09	25	20	22	23
20	09	30	21	23	24
21	10	25	22	23	24
22	10	35	23	25	26
23	09	35	24	27	28
24	09	15	23	24	25
25	11	20	25	26	27
26	09	30	27	28	29
27	10	15	24	25	26
28	09	25	23	24	25
29	09	45	24	25	26
30	10	45	24	25	26

Monthly mean 1.37  
Maximum 1.86

## Beta-Radioactivity of Airborne Dust Near the Earth's Surface

Month JANUARY .....

Year 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
DEC 31	09	30	01	09	00	0.14	
01	09	05	02	09	30	NIL	
02	09	35	03	09	00	0.04	
03	09	10	04	09	45	NIL	
04	09	50	05	09	30	NIL	
05	09	35	06	09	30	NIL	
06	09	35	07	10	25	0.22	
07	10	30	08	12	00	0.04	
08	12	05	09	10	10	0.45	
09	10	15	10	10	10	0.24	
10	10	15	11	09	45	0.21	
11	09	50	12	09	00	0.22	
12	09	10	13	08	55	0.68	
13	09	00	14	08	30	2.13	
14	08	35	15	10	00	4.81	
15	10	05	16	10	05	7.86	
16	10	10	17	10	10	5.56	
17	10	15	18	09	05	0.58	
18	09	10	19	09	20	NIL	
19	09	25	20	09	25	0.82	
20	09	30	21	10	00	0.46	
21	10	05	22	10	30	0.95	
22	10	35	23	09	30	2.14	
23	09	35	24	09	30	1.66	
24	09	35	25	11	15	0.69	
25	11	20	26	09	25	0.08	
26	09	30	27	10	10	0.20	
27	10	15	28	09	00	0.16	
28	09	05	29	09	40	0.36	
29	09	45	30	10	00	0.22	
30	10	05	31	09	25	0.41	

Monthly mean 1.01

Maximum 7.86

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month JANUARY ..... Year 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity		Remarks
Start	End	mCi/Km <sup>2</sup>		
DEC 30	JAN 01	NIL		Collecting period 48 hours from 0800 HKST to 0800 HKST Approx.
JAN 01	03	0.01		
03	05	NIL		
05	07	0.18		
07	09	0.26		
09	11	0.37		
11	13	0.21		
13	15	NIL Y		
15	17	0.29		
17	19	0.06		
19 Y	21	0.19		
21 T	23	0.08		
23	25	H 0.54		
25	27	0.06		
27	T 29	0.09		
29	31	NIL		

Monthly mean 0.15

Maximum 0.54

Beta-Radioactivity of Rainwater

Month ..... JANUARY .....

Year ..... 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radio- activity pCi/cm <sup>3</sup>	Remarks
Start	End			
03	04	250	NIL	Collecting period 24 hrs from 0800 H.K. St. time to 0800 H.K. St. tim time approx.
04	05	1036	NIL	

RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

FEB 1972

This bulletin shows the results of the routine observations of the gross beta-activity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and fallout, which are deposited from the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1962 are always and the monthly averages and the average of fall-out rate also have been published in the monthly Bulletin of the Royal Observatory.

# RADIOACTIVITY BULLETIN

The gross beta-activity of fall-out is measured by means of an air window Geiger-Müller counter. The counter is a lead shielded, a probe with lead and an automatic scaler. The counter is calibrated by using a standard <sup>137</sup>Cs source. The gross beta-activity of fall-out is measured for three months of the year. The results are published in the monthly Bulletin of the Royal Observatory.

## ROYAL OBSERVATORY

HONG KONG

FEB 1972

BULLETIN

Date		Time		OF		Remarks
<u>BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG</u>						
<u>FOR FEBRUARY 1972</u>						
<p>This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. Chin and No. 23 by R.F. Apps. Data from April 1965 onwards is published monthly in this bulletin.</p> <p>The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.</p> <p>All samples are collected at the Meteorological Station, King's Park (22°19' North, 114°10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22°18' North, 114°10' East).</p>						
15	09	10	16	09	30	0.18
16	09	25	17	09	30	0.04
17	09	35	18	09	35	0.09
18	09	40	19	10	35	0.03
19	10	40	20	09	10	0.15
20	09	15	21	11	15	0.10
21	11	20	22	09	20	NIL
22	09	25	23	09	25	0.04
23	09	50	24	09	00	0.18
24	09	05	25	10	00	NIL
25	10	05	26	09	55	0.10
26	10	00	27	09	50	0.13
27	09	55	28	09	30	0.17
28	09	55	29	09	35	0.26

Monthly mean     0.14  
 Maximum           0.57

## Beta- Radioactivity of Airborne Dust Near the Earth's Surface

Month February

Year 1972

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	30	01	09	30	0.25	
01	09	35	02	09	30	0.37	
02	09	35	03	10	35	NIL	
03	10	40	04	10	15	NIL	
04	10	20	05	10	15	NIL	
05	10	20	06	09	10	0.23	
06	09	15	07	09	30	NIL	
07	09	35	08	09	55	NIL	
08	10	00	09	09	55	0.97	
09	10	00	10	09	00	0.03	
10	09	05	11	10	00	0.21	
11	10	05	12	10	00	NIL	
12	10	05	13	10	40	0.17	
13	10	45	14	09	55	0.23	
14	10	00	15	09	05	0.16	
15	09	10	16	09	50	0.18	
16	09	55	17	09	50	0.01	
17	09	55	18	09	35	0.09	
18	09	40	19	10	35	0.03	
19	10	40	20	09	10	0.15	
20	09	15	21	11	15	0.10	
21	11	20	22	09	20	NIL	
22	09	25	23	09	45	0.04	
23	09	50	24	09	00	0.18	
24	09	05	25	10	00	NIL	
25	10	05	26	09	55	0.10	
26	10	00	27	09	50	0.13	
27	09	55	28	09	50	0.17	
28	09	55	29	09	35	0.22	

Monthly mean 0.14

Maximum 0.97



## Beta-Radioactivity of Total Deposition (Dry &amp; Wet)

Month:..February. Year:....1972.....

Location of Sampling Point: Lat.22°19' North 114°10' East

Date of Sampling		Amount of Radioactivity mCi/km <sup>2</sup>	Remarks
Start	End		
31	02	0.17	Collecting period 48 hrs from 0800 HKST to 0800 HKST (Approx.)
02	04	NIL	
04	06	NIL	
06	08	0.04	
08	10	0.01	
10	12	0.09	
12	14	0.02	
14	16	0.26	
16	18	0.12	
18	20	0.21	
20	22	NIL	
22	24	0.08	
24	26	0.21	
26	28	0.30	

Monthly mean: 0.11

Maximum: 0.30

## Beta-Radioactivity of Rainwater

Month FEBRUARY .....

Year 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radio- activity pCi/cm <sup>3</sup>	Remarks
Start	End			
05	06	65	NIL	Collecting period 24 hrs. from 0800 HKST to 0800 HKST (Approx.)
08	09	104	0.52	
12	13	120	NIL	
25	27	195	NIL	

RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

NO. 127

This bulletin covers the year 1971. It contains observations of the gross beta-activity of fallout in Hong Kong. From October 1971 onwards, regular measurements of the concentration of particulate and rainfall samples collected from the wet-dry deposition gauge and by Royal Observatory. The data from December 1970 to March 1971 inclusive and the sampling procedure and the details of instrumentation etc. have been published in R.O. Bulletin, Volume 1, No. 1, 1971. Data from April 1971 to March 1972 are included in this bulletin.

# RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

MAR 1972

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR MARCH 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. Chin and No. 23 by R.F. Apps. Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park (22°19' North, 114°10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22°18' North, 114°10' East).

12	09	30	13	03	0.17
13	09	15	14	03	0.17
14	09	30	15	03	0.23
15	10	05	16	03	0.40
16	10	00	17	03	0.20
17	11	05	18	03	0.20
18	07	35	19	03	0.23
19	09	30	20	03	0.25
20	09	05	21	04	0.20
21	05	30	22	04	0.22
22	09	05	23	04	0.20
23	10	00	24	04	0.18
24	05	00	25	04	0.20
25	09	25	26	04	0.23
26	08	10	27	04	0.20
27	08	15	28	04	0.20
28	09	15	29	04	0.18
29	03	05	30	04	0.12
30	08	10	31	04	0.21

## Beta-Radioactivity of Airborne Dust Near the Earth's Surface

Month March .....Year 1972 .....Location of Sampling Point: Lat  $22^{\circ}19'$  North Long  $114^{\circ}10'$  East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
29	09	40	01	10	05	0.35	
01	10	10	02	09	00	0.14	
02	09	05	03	09	20	0.46	
03	09	25	04	09	05	0.49	
04	09	10	05	09	45	0.17	
05	09	50	06	10	00	0.27	
06	10	05	07	09	20	0.18	
07	09	25	08	10	00	0.16	
08	10	05	09	09	40	0.59	
09	09	45	10	09	50	0.15	
10	10	00	11	09	00	0.10	
11	09	05	12	09	25	0.14	
12	09	30	13	09	00	0.01	
13	09	05	14	09	45	0.17	
14	09	50	15	09	55	0.25	
15	10	00	16	09	55	0.43	
16	10	00	17	11	00	0.50	
17	11	05	18	09	30	0.30	
18	09	35	19	09	40	0.25	
19	09	50	20	09	00	0.06	
20	09	05	21	09	25	0.11	
21	09	30	22	09	00	0.02	
22	09	05	23	09	50	0.29	
23	10	00	24	08	55	0.18	
24	09	00	25	09	20	0.06	
25	09	25	26	09	25	0.20	
26	09	30	27	09	10	0.03	
27	09	15	28	09	20	0.38	
28	09	25	29	09	00	0.12	
29	09	05	30	09	10	0.12	
30	09	20	31	09	10	0.37	

Monthly mean 0.22

Maximum 0.59

BETA-RADIOACTIVITY OF TOTAL DEPOSITION (DRY AND WET)

MONTH MARCH ..... YEAR 1972 .....

LOCATION OF SAMPLING POINT: LAT 22°19' North LONG 114°10' East

DATE OF SAMPLING		AMOUNT OF RADIOACTIVITY mCi/km <sup>2</sup>	REMARKS
START	END		
Feb. 28	Mar. 01	0.09	Collecting period 48 hrs from 0800 H.K. St. TIME to 0800 H.K. St. TIME approx.
01	03	0.11	
03	05	0.05	
05	07	0.13	
07	09	0.11	
09	11	0.01	
11	13	0.02	
13	15	NIL	
15	17	0.15	
17	19	0.05	
19	21	0.10	
21	23	0.12	
23	25	NIL	
25	27	0.02	
27	29	0.29	
29	31	0.15	

MONTHLY MEAN: 0.09

MAXIMUM: 0.29

Beta-Radioactivity of Rainwater

Month MARCH .....

Year 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radio- activity pCi/cm <sup>3</sup>	Remarks
Start	End			
10	11	46	NIL	Collecting period 24 hrs from 0800 H.K. St. Time to 0800 H.K. St. Time approx.

INTERNATIONAL JOURNAL OF RADIOACTIVITY

APRIL 1972

RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

APRIL 1972

This Bulletin gives the results of the routine observations of the gross radioactivity of fall-out in Hong Kong. From October 1971 onwards, regular observations of the radioactivity of air-borne dust and rainfall samples collected over the territory have been made by Royal Observatory. The details of the work done in 1971 inclusive and the sampling procedures and the methods of calibration used, have been published in R.O. Technical Notes No. 1 by P. S. WILK and No. 21 by R. S. LEE. Data from April 1972 onwards is published monthly in this bulletin.

The counter used is a Canberra Model 3000, which is a 30 cm diameter 30-iger-cylinder counter, installed in a lead shielded, a probe rail and an automatic scaler, Type 8300 manufactured by Eric Electronic Ltd, England. A thick standard source (cesium-137) is mounted on a turntable and a thick standard source (cesium-137) is mounted on a turntable. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Observatory Station, Klog's Peak (22° 16' North, 114° 10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22° 15' North, 114° 10' East).



BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR APRIL 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. CHIN and No. 23 by R.F. Apps Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park ( $22^{\circ} 19'$  North,  $114^{\circ} 10'$  East), with the exception of rainfall samples which are obtained from the Royal Observatory ( $22^{\circ} 18'$  North,  $114^{\circ} 10'$  East).

Beta-Radioactivity of Airborne Dust Near the Earth's Surface

Month ..... April .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	15	01	09	25	0.17	
01	09	30	02	09	50	0.43	
02	09	55	03	09	55	0.42	
03	10	00	04	09	15	0.03	
04	09	20	05	09	20	NIL	
05	09	25	06	09	30	0.05	
06	09	35	07	09	00	NIL	
07	09	05	08	08	40	0.15	
08	08	50	09	09	00	NIL	
09	09	05	10	09	25	0.08	
10	09	30	11	09	20	0.41	
11	09	25	12	09	40	0.56	
12	09	45	13	10	00	0.20	
13	10	05	14	09	20	0.30	
14	09	25	15	09	05	0.06	
15	09	10	16	09	00	NIL	
16	09	05	17	09	35	0.22	
17	09	40	18	10	10	NIL	
18	10	15	19	09	05	NIL	
19	09	10	20	09	30	1.47	
20	09	35	21	10	15	0.20	
21	10	20	22	09	50	NIL	
22	09	55	23	09	55	0.51	
23	10	00	24	09	35	0.21	
24	09	40	25	10	00	0.85	
25	10	05	26	09	20	0.16	
26	09	30	27	10	15	0.26	
27	10	20	28	09	45	0.43	
28	09	50	29	10	00	0.15	
29	10	05	30	10	55	0.14	

Monthly mean 0.25

Maximum 1.47

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... APRIL ..... Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity	Remarks
Start	End	mCi/Km <sup>2</sup>	
31	02	0.19	
02	04	0.29	Collecting Period
04	06	0.01	48 hrs. from 0800
06	08	NIL	H.K. ST. Time to 0800
08	10	0.04	H.K. ST. Time Approx.
10	12	0.12	
12	14	0.13	
14	16	0.14	
16	18	0.22	
18	20	0.10	
20	22	0.04	
22	24	0.16	
24	26	0.04	
26	28	0.06	
28	30	0.57	

Monthly mean : 0.14  
 Maximum : 0.57

Beta-Radioactivity of Rainwater

Month ..... APRIL ..... Year ..... 1972 .....

Date of Sampling		Amount of Sample Water	Amount of Radioactivity	Remarks
Start	End	cm <sup>3</sup>	pCi/cm <sup>3</sup>	
05	06	1412	NIL	Collecting
06	07	75	NIL	Period 24 hrs
07	08	754	0.02	from 0800 H.
24	25	83	0.61	K.St. Time
29	30	1865	0.02	to 0800 H.K.
				ST. Time
				Approx.

RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

MAY 1972

BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR                      MAY 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. CHIN and No. 23 by R.F. Apps Data from April 1965 onwards is published monthly in this bulletin.

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All samples are collected at the Meteorological Station, King's Park ( $22^{\circ} 19'$  North,  $114^{\circ} 10'$  East), with the exception of rainfall samples which are obtained from the Royal Observatory ( $22^{\circ} 18'$  North,  $114^{\circ} 10'$  East).

## Beta-Radioactivity of Airborne Dust near the Earth's Surface

Month ..... MAY .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	11	00	01	10	10	0.43	
01	10	15	02	09	55	NIL	
02	10	00	03	10	00	0.22	
03	10	05	04	10	15	0.09	
04	10	20	05	09	30	0.29	
05	09	40	06	09	15	NIL	
06	09	20	07	09	10	0.03	
07	09	15	08	09	55	0.25	
08	10	00	09	10	00	0.42	
09	10	05	10	10	15	0.11	
10	10	20	11	10	15	0.15	
11	10	20	12	10	00	0.36	
12	10	05	13	10	25	0.37	
13	10	30	14	10	25	0.46	
14	10	30	15	10	25	0.10	
15	10	30	16	10	10	0.16	
16	10	15	17	09	45	0.44	
17	09	50	18	10	40	0.54	
18	10	45	19	10	00	0.31	
19	10	05	20	10	00	NIL	
20	10	05	21	10	00	0.27	
21	10	05	22	10	00	0.34	
22	10	05	23	10	30	0.59	
23	10	35	24	10	05	0.06	
24	10	15	25	10	15	0.05	
25	10	20	26	09	50	0.05	
26	09	55	27	10	20	0.14	
27	10	25	28	10	10	0.30	
28	10	15	29	10	30	0.01	
29	10	35	30	10	55	NIL	
30	11	00	31	10	00	0.39	

Monthly mean : 0.22

Maximum : 0.59

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... MAY .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity mCi/Km <sup>2</sup>	Remarks
Start	End		
30	02	0.34	
02	04	0.17	Collecting Period 48
04	06	0.04	hrs from 0800 H.K. ST.
06	08	0.28	Time to 0800 H.K. ST.
08	10	Nil	Time Approx.
10	12	0.56	
12	14	0.27	
14	16	0.09	
16	18	0.44	
18	20	Nil	
20	22	0.06	
22	24	0.28	
24	26	0.15	
26	28	0.06	
28	30	0.10	

Monthly mean : 0.19

Maximum : 0.56



## Beta-Radioactivity of Rainwater

Month ..... MAY .....

Year ..... 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity pCi/cm <sup>3</sup>	Remarks
Start	End			
01	02	10	NIL	Collecting period 24 hrs. from 0800 H.K. ST. T. to 0800 H.K. ST. T. Approx.
02	03	2110	0.01	
06	07	134	NIL	*Collecting period 48 hrs.
*07	09	5700	0.01	
09	10	575	0.03	
10	11	8612	0.01	
11	12	1795	0.06	
12	13	140	0.09	
13	14	220	0.12	
16	17	170	0.10	
17	18	340	NIL	
18	19	52	0.44	
19	20	376	NIL	
20	21	1690	0.02	
21	22	32	0.25	
23	24	530	0.01	
27	28	173	NIL	
28	29	290	NIL	
30	31	65	0.54	

BULLETIN

OF

RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR JUNE 1972

RADIOACTIVITY BULLETIN

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.O. CHAN and No. 25 by S.S. APPA DATE from April 1965 onwards is published monthly in this bulletin.

ROYAL OBSERVATORY

HONG KONG

JUNE 1972

The detector used for the beta counting consists of an end window Geiger-Müller counter, shielded in a lead cabinet, a probe unit and an automatic scaler, Type B 535 manufactured by GEC Electronics Ltd, England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period during which the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park (22° 19' North, 114° 10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22° 10' North, 114° 10' East).

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR JUNE 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. CHIN and No. 23 by R.F. Apps Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park (22° 19' North, 114° 10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22° 18' North, 114° 10' East).

## Beta-Radioactivity of Airborne Dust near the Earth's Surface

Month ..... JUNE .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	10	05	01	09	45	0.43	
01	09	50	02	10	10	0.38	
02	10	15	03	10	15	0.13	
03	10	20	04	10	00	NIL	
04	10	05	05	10	30	NIL	
05	10	35	06	10	10	0.03	
06	10	15	07	10	10	0.37	
07	10	15	08	09	50	0.18	
08	09	55	09	10	00	0.22	
09	10	05	10	10	45	0.27	
10	10	50	11	10	20	0.07	
11	10	25	12	11	35	NIL	
12	11	40	13	09	50	NIL	
13	09	55	14	10	30	NIL	
14	10	35	15	10	00	0.02	
15	10	05	16	10	50	0.18	
16	10	55	17	09	40	0.03	
17	09	45	18	09	10	NIL	
18	09	15	19	09	05	NIL	
19	09	10	20	10	30	0.03	
20	10	35	21	10	20	0.06	
21	10	25	22	10	00	0.11	
22	10	05	23	10	45	0.16	
23	10	50	24	10	25	NIL	
24	10	30	25	10	00	0.09	
25	10	05	26	10	40	0.23	
26	10	45	27	10	00	0.05	
27	10	05	28	09	30	0.15	
28	09	35	29	09	50	0.12	
29	09	55	30	11	00	0.14	

Monthly mean : 0.11

Maximum : 0.43

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... JUNE .....

Year ..... 1972 .....

Location of Sampling Point: Lat  $22^{\circ}19'$  North Long  $114^{\circ}10'$  East

Date of Sampling		Amount of Radioactivity mCi/Km <sup>2</sup>	Remarks
Start	End		
30	01	0.17	
01	03	NIL	
03	05	NIL	Collecting Period 48
05	07	0.13	hrs from 0800 H.K. ST.
07	09	0.25	Time to 0800 H.K. ST.
09	11	NIL	Time Approx.
11	13	0.06	
13	15	0.03	
15	17	NIL	
17	19	0.07	
19	21	0.15	
21	23	0.06	
23	25	0.15	
25	27	0.03	
27	29	0.28	

Monthly mean : 0.09  
 Maximum : 0.28

Beta-Radioactivity of Rainwater

Month ..... JUNE .....

Year ..... 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity pCi/m <sup>3</sup>	Remarks
Start	End			
03	04	16	NIL	Collecting period 24 hrs from 0800 H.K.ST. Time to 0800 H.K.ST. Time Approx.
04	05	1590	NIL	
05	06	905	NIL	
09	10	333	NIL	
11	12	744	NIL	
14	16	2987	NIL	
16	17	7500	NIL	
17	18	4400	NIL	
18	19	6500	NIL	

RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

JULY 1972

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR JULY 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. CHIN and No. 23 by R.F. Apps Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park ( $22^{\circ} 19'$  North,  $114^{\circ} 10'$  East), with the exception of rainfall samples which are obtained from the Royal Observatory ( $22^{\circ} 18'$  North,  $114^{\circ} 10'$  East).



Beta-Radioactivity of Airborne Dust near the Earth's Surface

Month ..... JULY ..... Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	11	05	01	09	50	NIL	
01	09	55	02	09	15	0.12	
02	09	20	03	09	55	0.19	
03	10	00	04	09	45	NIL	
04	09	50	05	09	50	NIL	
05	09	55	06	10	00	0.09	
06	10	05	07	09	55	0.10	
07	10	00	08	09	25	0.07	
08	09	30	09	09	30	NIL	
09	09	35	10	09	00	NIL	
10	09	05	11	09	10	0.17	
11	09	15	12	11	05	0.30	
12	11	10	13	09	50	0.22	
13	10	00	14	10	05	0.10	
14	10	10	15	10	25	NIL	
15	10	30	16	10	30	0.02	
16	10	35	17	10	10	0.25	
17	10	15	18	10	15	0.25	
18	10	20	19	09	00	0.13	
19	09	05	20	10	15	0.30	
20	10	20	21	09	55	0.11	
21	10	00	22	10	20	0.07	
22	10	25	23	09	50	0.16	
23	10	00	24	10	00	0.15	
24	10	15	25	09	55	0.17	
25	10	10	26	10	00	NIL	
26	10	05	27	10	00	0.17	
27	10	05	28	09	00	0.33	
28	09	05	29	10	15	0.06	
29	10	20	30	11	00	NIL	
30	11	05	31	11	00	NIL	

Monthly mean : 0.11

Maximum : 0.33

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... JULY

Year ..... 1972

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity mCi/Km <sup>2</sup>	Remarks
Start	End		
29	01	0.03	
01	03	0.15	Collecting period 48
03	05	0.04	hrs. from 0800 H.K. ST.
05	07	0.20	Time to 0800 H.K. ST.
07	09	0.03	Time Approx.
09	11	NIL	
11	13	0.06	
13	15	NIL	
15	17	NIL	
17	19	0.02	
19	21	0.18	
21	23	0.05	
23	25	0.17	
25	27	NIL	
27	29	NIL	
29	31	0.08	

Monthly mean : 0.06  
Maximum : 0.20

## Beta-Radioactivity of Rainwater

Month ..... JULY .....

Year ..... 1972 .....

Date of Sampling		Amount of water sample $\text{cm}^3$	Amount of Radioactivity $\text{pCi/cm}^3$	Remarks
Start	End			
02	03	68	NIL	Collecting period 24 hrs. from 0800 H.K. ST. Time to 0800 H.K. St. Time Approx.
03	04	165	NIL	
04	05	175	NIL	
11	12	1010	NIL	
16	17	57	0.04	
18	19	235	0.13	
20	21	86	0.12	
24	25	2400	0.02	
25	26	330	NIL	
27	28	166	NIL	
30	31	340	0.11	

FOR AUGUST, 1972

**RADIOACTIVITY BULLETIN**

ROYAL OBSERVATORY

HONG KONG

AUGUST 1972

BULLETIN

Location of Sampling Point Lat 22° 19' North Long 114° 10' East

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

Type of Sampling ..... Unit of Radioactivity .....

FOR AUGUST, 1972

Start End Unit of Air

Date Hour Min Date Hour Min

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October, 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. CHIN and No. 23 by R.F. Apps Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Edco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park (22° 19' North, 114° 10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22° 18' North, 114° 10' East).

## Beta-Radioactivity of Airborne Dust near the Earth's Surface

Month ..... AUGUST .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	11	05	01	09	45	NIL	
01	09	50	02	10	30	0.05	
02	10	35	03	10	25	0.24	
03	10	30	04	10	00	0.12	
04	10	05	05	10	05	NIL	
05	10	10	06	09	00	0.09	
06	09	05	07	09	30	0.01	
07	09	35	08	09	10	0.09	
08	09	15	09	10	10	NIL	
09	10	15	10	09	45	NIL	
10	09	50	11	10	00	0.08	
11	10	05	12	10	00	0.19	
12	10	05	13	09	00	NIL	
13	09	05	14	09	50	0.07	
14	09	55	15	09	00	0.22	
15	09	05	16	10	00	0.14	
16	10	05	17	10	20	0.05	
17	10	25	18	10	15	0.08	
18	10	20	19	10	45	NIL	
19	10	50	20	09	15	0.06	
20	09	20	21	10	00	0.03	
21	10	05	22	10	15	NIL	
22	10	20	23	10	25	NIL	
23	10	30	24	10	30	0.18	
24	10	35	25	09	35	0.03	
25	09	40	26	10	00	0.01	
26	10	05	27	10	30	NIL	
27	10	35	28	10	05	NIL	
28	10	10	29	09	50	0.09	
29	09	55	30	10	00	NIL	
30	10	05	31	10	30	NIL	

Monthly mean : 0.06

Maximum : 0.24

## Beta-Radioactivity of Rainwater

Month ..... AUGUST .....

Year ..... 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity pCi/cm <sup>3</sup>	Remarks
Start	End			
31	1	1220	0.01	
1	2	220	NIL	
6	7	42	NIL	
7	8	160	NIL	
8	9	1350	0.02	
9	10	610	NIL	
10	11	1680	0.04	
11	12	1636	0.01	
13	14	450	0.05	
14	15	28	NIL	
18	19	1076	NIL	
19	20	2070	0.01	
20	21	4170	0.01	
21	22	1070	0.01	
26	27	91	NIL	
27	28	787	NIL	
28	29	130	0.12	

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... AUGUST .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity mCi/Km <sup>2</sup>	Remarks
Start	End		
31	02	NIL	Collecting period 48
02	04	0.05	hrs. from 0800 H.K.S.T.
04	06	0.11	T. to 0800 H.K.S.T.
06	08	0.04	Approx.
08	10	NIL	
10	12	0.17	
12	14	0.11	
14	16	NIL	
16	18	0.02	
18	20	NIL	
20	22	0.01	
22	24	NIL	
24	26	NIL	
26	28	NIL	
28	30	NIL	

Monthly mean : 0.03  
 Maximum : 0.17



RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

SEPTEMBER 1972

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR SEPTEMBER 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. CHIN and No. 23 by R.F. Apps Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand seconds each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park ( $22^{\circ} 19'$  North,  $114^{\circ} 10'$  East), with the exception of rainfall samples which are obtained from the Royal Observatory ( $22^{\circ} 18'$  North,  $114^{\circ} 10'$  East).

## Beta-Radioactivity of Airborne Dust near Earth's Surface

Month ..... SEPTEMBER .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	10	35	01	09	55	0.16	
01	10	10	02	09	00	NIL	
02	09	05	03	10	15	NIL	
03	10	20	04	09	30	NIL	
04	09	35	05	10	00	NIL	
05	10	05	06	10	00	NIL	
06	10	05	07	09	50	NIL	
07	09	55	08	10	45	NIL	
08	10	50	09	10	15	0.09	
09	10	20	10	10	30	0.05	
10	10	35	11	09	00	NIL	
11	09	05	12	10	15	0.01	
12	10	20	13	09	40	NIL	
13	09	45	14	10	00	NIL	
14	10	05	15	10	00	0.02	
15	10	05	16	09	50	0.01	
16	09	55	17	09	45	NIL	
17	09	50	18	10	15	NIL	
18	10	20	19	10	30	NIL	
19	10	35	20	09	00	0.04	
20	09	05	21	10	25	NIL	
21	10	30	22	09	40	0.10	
22	09	45	23	09	50	0.08	
23	09	55	24	10	00	NIL	
24	10	05	25	09	55	NIL	
25	10	00	26	10	00	0.05	
26	10	05	27	10	10	0.01	
27	10	15	28	10	00	NIL	
28	10	05	29	10	05	NIL	
29	10	10	30	10	00	0.04	

Monthly mean : 0.02

Maximum : 0.16

## Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... SEPTEMBER .....

Year ..... 1972 .....

 Location of Sampling Point: Lat  $22^{\circ}19'$  North Long  $114^{\circ}10'$  East

Date of Sampling		Amount of Radioactivity mCi/Km <sup>2</sup>	Remarks
Start	End		
30	01	* No Data	Collecting Period 48 Hours from 0800 H.K.
01	03	NIL	
03	05	NIL	ST. Time to 0800 H.K.
05	07	NIL	ST. Time Approx.
07	09	0.11	
09	11	NIL	
11	13	0.16	
13	15	NIL	
15	17	NIL	
17	19	0.03	
19	21	NIL	*Collecting pan being repaired
21	23	0.09	
23	25	NIL	
25	27	NIL	
27	29	0.05	
29	01	NIL	

Monthly mean : 0.03

Maximum : 0.16

Beta-Radioactivity of Rainwater

Month SEPTEMBER .....

Year 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity pCi/cm <sup>3</sup>	Remarks
Start	End			
01	02	28	0.14	Collecting period 24hrs from 0800 H. K.ST.T. to 0800 H.K.ST. T. Approx.
03	04	210	0.04	
05	06	68	NIL	
* 20	22	1520	NIL	* Collecting period 48hrs.
* 22	24	3300	NIL	
24	25	520	NIL	
28	29	180	0.02	
29	30	650	NIL	

MONITORING OF RADIOACTIVITY IN HONG KONG

RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

OCTOBER 1972

This bulletin gives the results of the routine observations of the gross beta radioactivity of precipitation in Hong Kong. From October 1967 onwards, regular measurements of the radioactivity of air borne dust and rainfall samples collected over the island's surface have been made by Royal Observatory. The data from October 1967 to March 1968 inclusive and the monthly averages for the period 1968-71 have been published in R.O. Technical Notes No. 1 by R.O. 1971 and No. 23 by R.O. 1972. From April 1967 onwards the data are available in this Bulletin.

The detector used for the beta counting consists of an end window Geiger-Müller counter with a lead shield, a probe unit and an electronic circuit, from a 1964 design built by Ray Electronics Ltd. In 1968 a more standard source (cesium-137) is used for three sets of one thousand counts each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural decay of the short-lived isotopes will have decayed.

All samples are collected at the Meteorological Station, King's Park (22° 19' North, 114° 10' East) with the exception of rainfall samples which are obtained from the Royal Observatory (22° 19' North, 114° 10' East).

BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR OCTOBER 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. CHIN and No. 23 by R.F. Apps Data from April 1965 onwards is published monthly in this bulletin.

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All samples are collected at the Meteorological Station, King's Park ( $22^{\circ} 19'$  North,  $114^{\circ} 10'$  East), with the exception of rainfall samples which are obtained from the Royal Observatory ( $22^{\circ} 18'$  North,  $114^{\circ} 10'$  East).

Beta-Radioactivity of Airborne Dust near the Earth's Surface

Month ..... OCTOBER .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	10	05	01	10	30	0.02	
01	10	35	02	09	25	0.01	
02	09	30	03	09	00	NIL	
03	09	05	04	10	05	0.06	
04	10	10	05	10	15	0.06	
05	10	20	06	09	40	0.08	
06	09	45	07	09	50	NIL	
07	09	55	08	09	55	0.23	
08	10	00	09	10	25	0.34	
09	10	30	10	10	25	0.06	
10	10	30	11	10	15	0.21	
11	10	20	12	10	15	No Data	Pump U/S
12	10	20	13	10	00	NIL	
13	10	05	14	10	15	0.15	
14	10	20	15	09	30	NIL	
15	09	35	16	10	30	NIL	
16	10	35	17	09	55	NIL	
17	10	00	18	10	25	NIL	
18	10	30	19	10	30	NIL	
19	10	35	20	10	20	NIL	
20	10	25	21	09	00	NIL	
21	09	05	22	09	05	NIL	
22	09	10	23	09	05	NIL	
23	09	10	24	09	30	NIL	
24	09	35	25	09	55	NIL	
25	10	00	26	09	55	0.09	
26	10	00	27	09	50	0.03	
27	09	55	28	09	10	0.04	
28	09	15	29	10	10	NIL	
29	10	15	30	09	00	0.11	
30	09	05	31	09	00	NIL	

Monthly mean : 0.05

Maximum : 0.34



## Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... OCTOBER .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity	Remarks
Start	End	mCi/Km <sup>2</sup>	
29	01	NIL	Collecting period 48 hrs. from 0800 H.K.S.T. to 0800 H.K.S.T. Approx.
01	03	NIL	
03	05	NIL	
05	07	NIL	
07	09	0.10	
09	11	NIL	
11	13	0.07	
13	15	0.09	
15	17	0.10	
17	19	0.02	
19	21	NIL	
21	23	0.02	
23	25	NIL	
25	27	NIL	
27	29	0.01	
29	31	NIL	

Monthly mean : 0.03

Maximum : 0.10

Beta-Radioactivity of Rainwater

Month ..... OCTOBER .....

Year ..... 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity pCi/cm <sup>3</sup>	Remarks
Start	End			
02	03	490	NIL	Collecting
11	12	337	NIL	period 24
17	18	207	NIL	hrs. from
				0800 H.K.ST.
				Time to
				0800 H.K.ST.
				Time Approx.

THE RADIOACTIVITY OF FALL-OUT IN HONG KONG

NOVEMBER 1972

This bulletin gives the results of the routine observations of the gamma late-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory.

RADIOACTIVITY BULLETIN

The data for October 1972 to March 1965 inclusive and the working procedures and the methods of calibration etc. have been published in R.O. Technical Paper No. 25 by P.A. Lynn-Dick.

ROYAL OBSERVATORY

From April 1965 onwards is published monthly in this bulletin.

HONG KONG

The counter used for the beta counting consists of an end window Geiger-Müller counter, lead shield, a probe unit and an electronic module, Type N 530 G manufactured by Ekco Electronics Ltd.

NOVEMBER 1972

A thick sheet of lead (approximately 10 cm) is used for three sets of one thousand per cent week day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park (22° 19' North, 114° 10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22° 19' North, 114° 10' East).

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR NOVEMBER 1973

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. Chin and No. 23 by R.A. Apps Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger-muller counter, shielded in a lead chamber, a probe unit and an automatic scaler, Type N 530 G manufactured by Ekco Electronics Ltd. England. A thick standard source (potassium chloride) is counted for three sets of one thousand second each day to check the stability of the counter. Samples are measured on the fourth day after the end of the collection period when the natural radon, thoron and their daughter products will have decayed.

All samples are collected at the Meteorological Station, King's Park ( $22^{\circ} 19'$  North,  $114^{\circ} 10'$  East), with the exception of rainfall samples which are obtained from the Royal Observatory ( $22^{\circ} 18'$  North,  $114^{\circ} 10'$  East).

## Beta-Radioactivity of Airborne Dust near the Earth's Surface

Month ..... NOVEMBER .....

Year ..... 1972 .....

Location of Sampling Point: Lat  $22^{\circ}19'$  North Long  $114^{\circ}10'$  East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	05	01	09	15	0.20	
01	09	20	02	09	00	0.14	
02	09	05	03	09	50	NIL	
03	09	55	04	09	30	0.02	
04	09	35	05	09	25	0.06	
05	09	30	06	08	40	NIL	
06	08	45	07	09	25	NIL	
07	09	30	08	09	30	0.18	
08	09	35	09	10	00	NIL	
09	10	05	10	09	20	NIL	
10	09	25	11	09	20	NIL	
11	09	25	12	09	40	NIL	
12	09	45	13	09	00	NIL	
13	09	05	14	09	55	NIL	
14	10	00	15	09	00	NIL	
15	09	05	16	10	20	0.04	
16	10	25	17	09	15	0.06	
17	09	20	18	09	20	0.12	
18	09	25	19	08	50	NIL	
19	08	55	20	09	00	0.23	
20	09	05	21	10	10	0.10	
21	10	15	22	09	00	NIL	
22	09	05	23	09	30	NIL	
23	09	35	24	09	00	0.13	
24	09	10	25	09	10	0.05	
25	09	15	26	09	05	NIL	
26	09	10	27	09	30	NIL	
27	09	35	28	09	10	0.03	
28	09	15	29	09	40	0.21	
29	09	45	30	09	30	0.07	

Monthly mean : 0.05

Maximum : 0.23

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month ..... NOVEMBER .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity mCi/Km <sup>2</sup>	Remarks
Start	End		
31	02	0.16	Collecting period 48hrs. from 0800 H.K.ST. Time to 0800 H.K.ST. Time Approx.
02	04	0.03	
04	06	0.03	
06	08	NIL	
08	10	0.07	
10	12	0.28	
12	14	NIL	
14	16	0.04	
16	18	0.04	
18	20	0.11	
20	22	NIL	
22	24	0.21	
24	26	0.01	
26	28	0.02	
28	30	NIL	

Monthly mean : 0.07

Maximum : 0.28

Beta-Radioactivity of Rainwater

Month NOVEMBER .....

Year 1972 .....

Date of Sampling		Amount of Sample Water	Amount of Radioactivity	Remarks
Start	End	cm <sup>3</sup>	pCi/cm <sup>3</sup>	
08	09	2320	NIL	
13	14	150	NIL	
14	16	96	NIL	Collecting period 48 hrs.
18	19	270	NIL	
22	23	175	NIL	
23	24	400	NIL	

THE JOURNAL OF THE ROYAL OBSERVATORY

AND THE MOUNTAINS

RADIOACTIVITY BULLETIN

ROYAL OBSERVATORY

HONG KONG

DECEMBER 1972

The number of stations in the network has increased from 11 to 12 since the last issue. The stations are now located at the following sites: ...



BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR DECEMBER 1972

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1961 onwards, regular measurements of the radioactivity of air-borne dust and rainfall samples collected near the earth's surface have been made by Royal Observatory. The data from October 1961 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Notes No. 1 by P.C. Chin and No. 23 by R.F. Apps. Data from April 1965 onwards is published monthly in this bulletin.

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All samples are collected at the Meteorological Station, King's Park ( $22^{\circ} 19'$  North,  $114^{\circ} 10'$  East), with the exception of rainfall samples which are obtained from the Royal Observatory ( $22^{\circ} 18'$  North,  $114^{\circ} 10'$  East).

Beta-Radioactivity of Airborne Dust near the Earth's Surface

Month ..... DECEMBER .....

Year ..... 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Time of Sampling						Amount of Radioactivity pCi/m <sup>3</sup> of Air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	09	35	01	09	30	NIL	
01	09	35	02	09	30	0.02	
02	09	35	03	09	10	0.17	
03	09	20	04	08	40	NIL	
04	08	45	05	09	15	0.07	
05	09	20	06	09	15	0.15	
06	09	20	07	09	20	0.03	
07	09	25	08	10	05	NIL	
08	10	10	09	09	40	0.01	
09	09	45	10	09	00	0.01	
10	09	05	11	09	35	NIL	
11	09	40	12	09	55	0.13	
12	10	00	13	09	30	NIL	
13	09	35	14	09	00	NIL	
14	09	00	15	09	10	0.13	
15	09	15	16	09	30	0.04	
16	09	35	17	09	00	0.16	
17	09	05	18	09	45	NIL	
18	09	50	19	09	00	NIL	
19	09	05	20	10	00	NIL	
20	10	05	21	09	00	NIL	
21	09	10	22	10	00	0.09	
22	10	05	23	09	00	NIL	
23	09	05	24	09	10	NIL	
24	09	15	25	09	00	0.16	
25	09	05	26	09	30	NIL	
26	09	35	27	09	25	NIL	
27	09	30	28	09	10	NIL	
28	09	15	29	09	40	NIL	
29	09	45	30	09	15	NIL	
30	09	20	31	09	55	NIL	

Monthly mean : 0.04

Maximum : 0.17

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month DECEMBER .....

Year 1972 .....

Location of Sampling Point: Lat 22°19' North Long 114°10' East

Date of Sampling		Amount of Radioactivity	Remarks
Start	End	mCi/Km <sup>2</sup>	
30	02	NIL	Collecting period 48 hrs. from 0800
02	04	NIL	
04	06	0.03	H.K. ST. Time to
06	08	NIL	0800 H.K. ST. Time
08	10	NIL	Approx.
10	12	0.20	
12	14	NIL	
14	16	0.05	
16	18	0.02	
18	20	NIL	
20	22	NIL	
22	24	NIL	
24	26	0.10	
26	28	0.13	
28	30	NIL	

Monthly mean : 0.04

Maximum : 0.20

Beta-Radioactivity of Rainwater

Month ..... DECEMBER .....

Year ..... 1972 .....

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity pCi/cm <sup>3</sup>	Remarks
Start	End			
12	13	57	0.12	Collecting
20	21	329	NIL	period 24 hrs. from
22	23	26	0.81	0800 H.K. ST. Time to
29	30	54	NIL	0800 H.K. ST. Time Approx.