

**RADIOACTIVITY BULLETIN**

**ROYAL OBSERVATORY**

**HONG KONG**

*Jan 1967*

BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR JANUARY, 1967.

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: January

Year: 1967

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

Time of Sampling						Amount of Radioactivity $\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	17	01	09	30	0.27	
01	09	33	02	09	12	0.22	
02	09	15	03	08	40	3.26	New debris from the 5th Chinese nuclear test
03	08	45	04	09	20	9.89	
04	09	25	05	09	10	5.79	
05	09	15	06	09	05	4.99	
06	09	10	07	08	55	2.15	
07	09	00	08	08	35	0.45	
08	09	00	09	09	10	0.45	
09	09	15	10	09	00	0.02	
10	09	05	11	09	05	0.25	
11	09	05	12	09	05	--	No result
12	09	20	12	13	20	--	No result
12	13	20	14	15	00	--	No result
14	15	05	15	08	58	2.60	
15	09	00	16	09	30	5.27	
16	09	35	17	09	00	2.00	
17	09	05	18	09	00	1.03	
18	09	05	19	09	10	0.36	
19	09	15	20	09	00	0.02	
20	09	05	21	08	35	Nil	
21	09	00	22	08	20	0.32	
22	08	25	23	09	00	Nil	
23	09	05	24	09	00	0.69	
24	09	05	25	09	10	0.40	
25	09	15	26	08	50	0.06	
26	08	55	27	08	45	0.39	
27	08	50	28	08	30	0.47	
28	08	35	29	09	45	0.22	
29	09	50	30	09	25	0.20	
30	09	30	31	09	15	0.21	

Monthly mean

1.50

Maximum

9.89

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month: January

Year: 1967

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	1	0.15	Collecting period 48 hrs. From 0800 to 0800 HKST approx.
1	3	0.14	
3	5	0.32	
5	7	0.20	
7	9	0.10	
9	11	Nil	
11	13	0.28	
13	15	0.54	
15	17	1.60	
17	19	0.37	
19	21	0.01	
21	23	0.13	
23	25	0.27	
25	27	0.10	
27	29	0.06	
29	31	0.08	

Monthly mean                      0.27

Maximum                              1.60

Beta-Radioactivity of Rainwater

Month: January

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity $\mu$ Ci/cm <sup>3</sup>	Remarks
Start	End			
23	24	23	2.67	Collecting period 24 hrs. From 0800 to 0800 HKST approx.
24	25	52	0.24	

**RADIOACTIVITY BULLETIN**

**ROYAL OBSERVATORY**

**HONG KONG**

Feb. 1967

BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR FEBRUARY, 1967.

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 : February

Year: 1967

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

Time of Sampling						Amount of Radioactivity $\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	20	01	09	00	0.11	
01	09	05	02	09	00	0.11	
02	09	05	03	09	15	0.05	
03	09	18	04	08	55	0.24	
04	09	00	05	09	15	0.33	
05	09	20	06	09	00	0.12	
06	09	05	07	09	10	0.77	
07	09	15	08	09	15	1.03	
08	09	20	09	09	20	0.63	
09	09	25	10	09	25	0.48	
10	09	30	11	09	40	0.16	
11	09	45	12	09	05	0.22	
12	09	10	13	09	45	0.15	
13	09	50	14	09	00	0.25	
14	09	05	15	09	00	0.41	
15	09	05	16	09	25	0.48	
16	09	30	17	09	10	0.63	
17	09	15	18	08	55	0.64	
18	09	00	19	09	00	0.47	
19	09	05	20	08	55	0.49	
20	09	00	21	08	55	0.47	
21	09	00	22	09	15	0.36	
22	09	20	23	09	10	0.29	
23	09	15	24	09	00	0.19	
24	09	05	25	09	25	0.19	
25	09	30	26	08	45	0.18	
26	08	50	27	09	25	0.22	
27	09	30	28	09	30	0.43	

Monthly mean

0.36

Maximum

1.03

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : February Year: 1967

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	2	0.04	Collecting period 48 hours from 0800 HKST to 0800 HKST approx.
2	4	Nil	
4	6	Nil	
6	8	0.30	
8	10	0.14	
10	12	0.19	
12	14	0.14	
14	16	0.18	
16	18	0.02	
18	20	0.20	
20	22	0.17	
22	24	0.14	
24	26	0.08	
26	28	0.23	

Monthly mean 0.13

Maximum 0.30

Beta-Radioactivity of Rainwater

Month : February Year : 1967

Date of Sampling		Amount of Sample water cm <sup>3</sup>	Amount of Radioactivity µCi/cm <sup>3</sup>	Remarks
Start	End			
1	2	140	Nil	Collecting 24 hours from 0800 HKST to 0800 HKST approx.
7	8	301	0.96	
9	10	191	0.08	
24	25	58	Nil	
27	28	191	0.20	



BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR March 1967

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 Report No. 1. Data from April 1965 onwards is published monthly in this bulletin.

**RADIOACTIVITY BULLETIN**

The counter used for the beta counting consists of an end window Geiger-Müller tube, a probe unit and an automatic scaler, type 100 manufactured by Elico 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 fallout period when the natural radon, thoron and their daughter products will have decayed.

**ROYAL OBSERVATORY**

**HONG KONG**

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).

*March 1967*

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

BULLETIN

Month : March

OF

Year : 1967

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

Long 114° 10' East

FOR March 1967

Date	Time of Sampling	Amount of Radioactivity	Remarks
<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>			
28	09 13	09 26	1.01
01	09 15	09 05	0.56
02	09 08	08 50	0.27
03	08 55	08 50	0.82
04	08 55	09 45	0.87
05	09 50	09 15	0.05
06			
07			
08			
09			
10			
11			No result pump U/S
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Monthly mean

0.47

Maximum

1.01

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

Month : March

Year : 1967

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

Time of Sampling						Amount of Radioactivity		Remarks
Start			End			$\mu\mu\text{Ci}/\text{m}^3$ of air		
Date	Hour	Min	Date	Hour	Min			
28	09	35	01	09	10	0.08	0.47	Collecting Period 48 hours from 0800 HST to 0800 HST approx.
01	09	15	02	09	15	NIL	0.77	
02	09	20	03	09	00	0.10	0.75	
03	09	05	04	08	50	0.38	0.39	
04	08	55	05	08	50	0.10	0.17	
05	08	55	06	08	55	0.14	0.04	
06	09	00	07	09	10	NIL	0.92	
07	09	15	08	09	00	NIL	0.59	
08	09	05	09	09	30	0.11	0.74	
09	09	35	10	08	40	0.08	0.60	
10	08	43	11	09	00	0.01	0.57	
11	09	05	12	09	00	0.01	--	No result pump U/S
12	09	05	13	09	50	0.24	0.51	
13	09	55	14	09	00	0.10	0.98	
14	09	05	15	09	00	0.38	0.82	
15	09	05	16	09	35	0.38	0.26	
16	09	40	17	09	50		0.89	
17	09	55	18	08	55		0.26	
18	09	00	19	08	55		0.10	
19	09	00	20	09	05		0.12	
20	09	10	21	09	05		0.26	
21	09	10	22	08	45	1967	0.12	
22	08	50	23	09	40		NIL	
23	09	45	24	08	30		NIL	
24	08	35	25	09	10		0.33	
25	09	13	26	09	10		1.01	
26	09	15	27	09	05		0.56	Collecting Period 24 hours from 0800 HST to 0800 HST approx.
27	09	08	28	08	50		0.27	
28	08	55	29	08	50	0.1	0.82	
29	08	55	30	09	45		0.87	
29	08	55	30	09	45		0.87	
30	09	50	31	09	15		0.05	

Monthly mean

0.47

Maximum

1.01

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : March

Year : 1967

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		
28	2	0.08	Collecting Period 48 hours from 0800 HKST to 0800 HKST approx.
2	4	NIL	
4	6	0.10	
6	8	0.38	
8	10	0.10	
10	12	0.14	
12	14	0.05	
14	16	NIL	
16	18	NIL	
18	20	0.11	
20	22	0.08	
22	24	0.01	
24	26	0.24	
26	28	0.01	
28	30	0.17	

Monthly mean 0.10

Maximum 0.38

Beta-Radioactivity of Rainwater

Month : March

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity $\mu\text{Ci/cm}^3$	Remarks
Start	End			
28	1	240	0.13	Collecting Period 24 hours from 0800 HKST to 0800 HKST Approx.

BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR April 1967

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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, all made 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. The natural radon, thoron and their daughter products are not measured.

**ROYAL OBSERVATORY**  
**HONG KONG**

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

*April 1967*

Month : April

Year : 1967

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

## BULLETIN

OF

## BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR April 1967

Date	Start Hour	End Hour	Count	Rate (c/s)	Remarks
31					<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 (<math>22^{\circ} 19'</math> North, <math>114^{\circ} 10'</math> East), with the exception of rainfall samples which are obtained from the Royal Observatory (<math>22^{\circ} 18'</math> North, <math>114^{\circ} 10'</math> East).</p>
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					<p>Pump stopped for 3 hours</p>
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					<p>Pump stopped for 18 hours Air Pump overhauled</p>
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					0.22
01					0.13

Monthly mean

0.20

Maximum

1.33

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

Month : April

Year : 1967

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

Time of Sampling						Amount of Radioactivity $\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	20	01	08	40	NIL	
01	08	42	02	09	35	No Result	
02	09	38	03	09	30	0.74	
03	09	35	04	08	50	0.52	Pump stopped for 3 hours
04	08	55	05	09	00	NIL	
05	09	03	06	09	25	0.54	
06	09	28	07	09	05	0.21	
07	09	08	08	09	10	0.25	
08	09	15	09	08	55	0.37	
09	09	00	10	09	05	0.09	
10	09	10	11	09	25	0.66	
11	09	28	12	09	20	NIL	
12	09	25	13	09	40	NIL	Pump stopped for 18 hours Air Pump overhauled
13			14			No Result	
14			15			No Result	
15	11	00	16	09	20	0.22	
16	09	25	17	09	45	0.04	
17	09	50	18	09	40	NIL	
18	09	45	19	09	10	NIL	
19	09	15	20	09	25	NIL	
20	09	30	21	09	10	0.01	
21	09	15	22	09	20	1.33	
22	09	25	23	08	55	NIL	
23	09	00	24	09	50	NIL	
24	09	55	25	09	30	NIL	
25	09	35	26	09	00	NIL	
26	09	05	27	09	31	NIL	
27	09	35	28	09	25	NIL	
28	09	28	29	09	28	0.22	
29	09	31	30	09	35	0.13	

Monthly mean

0.20

Maximum

1.33

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : April

Year : 1967

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	01	0.20	Collecting Period 48 hours from 0800 HKST to 0800 HKST (Approx.)
01	03	NIL	
03	05	NIL	
05	07	0.21	
07	09	0.21	
09	11	0.14	
11	13	0.08	
13	15	0.16	
15	17	0.13	
17	19	0.18	
19	21	0.15	
21	23	0.10	
23	25	0.05	
25	27	0.07	
27	29	0.07	

Monthly mean 0.12

Maximum 0.21

Beta-Radioactivity of Rainwater

Month : April

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity μCi/cm <sup>3</sup>	Remarks
Start	End			
31	01	603	NIL	Collecting Period 24 hours from 0800 HKST to 0800 HKST ( approx.)
01	02	4228	0.03	
02	03	2084	NIL	
03	04	295	0.04	
04	05	95	NIL	
05	06	11	0.63	
18	19	214	NIL	
28	29	152	0.11	



BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR May 1967

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 **RADIOACTIVITY BULLETIN** Data from April

**RADIOACTIVITY BULLETIN**

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**ROYAL OBSERVATORY**

**HONG KONG**

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 collected at the Royal Observatory (22° 18' North, 114° 10' East).

*May 1967*

BULLETIN

Month : May

OF

Year : 1967

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

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

FOR May 1967

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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Date	Remarks
30	
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	
15	
16	
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20	
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22	
23	
24	
25	
26	
27	
28	
29	
30	

Monthly mean 0.13

Maximum 0.37

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

Month : May

Year : 1967

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

Time of Sampling						Amount of Radioactivity μCi/m <sup>3</sup> of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	09	40	01	09	37	0.02	
01	09	40	02	09	25	NIL	
02	09	30	03	09	40	0.15	
03	09	45	04	10	00	0.19	
04	10	05	05	09	35	0.06	
05	09	40	06	09	30	NIL	
06	09	33	07	09	55	0.15	
07	10	00	08	10	00	NIL	
08	10	05	09	09	25	0.21	
09	09	30	10	09	05	0.04	
10	09	10	11	09	08	0.02	
11	09	11	12	09	35	0.21	
12	09	40	13	09	25	NIL	
13	09	30	14	09	10	0.04	
14	09	15	15	09	30	0.05	
15	09	35	16	09	00	NIL	
16	09	05	17	09	00	0.35	
17	09	05	18	09	10	NIL	
18	09	15	19	09	06	0.26	
19	09	08	20	09	30	0.33	
20	09	35	21	09	30	NIL	
21	09	35	22	09	25	0.16	
22	09	30	23	09	25	0.05	
23	09	30	24	09	05	NIL	
24	09	10	25	09	00	0.37	
25	09	05	26	09	50	0.17	
26	09	55	27	09	09	0.23	
27	09	11	28	09	35	NIL	
28	09	40	29	09	25	0.28	
29	09	30	30	09	30	0.27	
30	09	35	31	09	35	0.31	

Monthly mean

0.13

Maximum

0.37

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : May

Year : 1967

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	0.07	Collecting Period 48 hours from 0800 H.K.St.Time to 0800 H.K.St.Time (approx.)
01	03	0.33	
03	05	0.05	
05	07	0.49	
07	09	0.08	
09	11	0.08	
11	13	0.02	
13	15	0.16	
15	17	0.13	
17	19	0.05	
19	21	NIL	
21	23	0.03	
23	25	0.18	
25	27	0.11	
27	29	0.09	
29	31	0.19	

Monthly mean 0.13

Maximum 0.49

Beta-Radioactivity of Rainwater

Month : May

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity $\mu\text{Ci/cm}^3$	Remarks
Start	End			
04	05	52	0.29	Collecting Period 24 hours from 0800 H.K.St. Time to 0800 H.K.St.Time (Approx.)
25	26	223	0.10	
26	27	33	0.10	
27	28	347	0.02	

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR June 1967

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 **RADIOACTIVITY BULLETIN** Data from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger **RADIOACTIVITY BULLETIN** probe unit and an auto **ROYAL OBSERVATORY** 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 **HONG KONG** 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, 104° 10' East) with the exception of rainfall samples which are collected from Royal Observatory (22° 18' North, 104° 10' East).

*June 1967*

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

BULLETIN

Month : June

Year : 1967

OF

Location: BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG 114° 10' East

FOR June 1967

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).

Monthly mean

Maximum

0.12

1.30

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

Month : June

Year : 1967

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

Time of Sampling						Amount of Radioactivity μCi/m <sup>3</sup> of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	40	01	09	50	0.03	
01	09	55	02	09	05	0.20	
02	09	10	03	09	15	0.89	
03	09	20	04	09	15	NIL	
04	09	17	05	09	20	0.06	
05	09	25	06	09	00	NIL	
06	09	10	07	09	15	0.29	
07	09	18	08	09	50	0.46	
08	09	55	09	09	40	NIL	
09	09	45	10	09	25	NIL	
10	09	30	11	09	55	0.20	
11	09	57	12	09	45	0.12	
12	09	48	13	09	40	0.19	
13	09	45	14	09	00	0.27	
14	09	10	15	09	30	0.22	
15	09	35	16	09	35	NIL	
16	09	40	17	09	01	NIL	
17	09	03	18	09	10	0.27	
18	09	15	19	09	20	0.17	
19	09	25	20	09	00	NIL	
20	09	05	21	09	40	0.15	
21	09	45	22	08	40	NIL	
22	08	50	23	09	00	NIL	
23	09	00	24	09	30	0.30	
24	09	35	25	10	02	0.04	
25	10	05	26	09	00	1.00	
26	09	05	27	08	30	0.11	
27	08	35	28	08	45	0.05	
28	08	50	29	09	30	0.29	
29	09	35	30	09	05	0.17	

Monthly mean                      0.18

Maximum                              1.00

\* Collecting Period 48 hours

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : June

Year : 1967

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	0.08	Collecting Period 48 hours from 0800 H.K.St. Time to 0800 H.K.St. Time (Approx.)
02	04	0.16	
04	06	0.15	
06	08	0.25	
08	10	0.01	
10	12	NIL	
12	14	0.13	
14	16	0.03	
16	18	0.08	
18	20	0.01	
20	22	0.17	
22	24	0.06	
24	26	0.10	
26	28	0.50	
28	30	0.40	

Monthly mean 0.14

Maximum 0.50

Beta-Radioactivity of Rainwater

Month : June

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity $\mu\text{Ci/cm}^3$	Remarks
Start	End			
* 31	02	476	0.17	Collecting Period 24 hours from 0800 H.K.St. Time to 0800 H.K.St. Time (Approx)  * Collecting Period 48 hours
02	03	3781	0.01	
03	04	1042	NIL	
05	06	57	0.02	
08	09	839	0.01	
09	10	1587	NIL	
17	18	120	0.13	
18	19	3	NIL	
25	26	69	NIL	
26	27	586	0.06	
27	28	1296	0.03	
29	30	703	0.12	



BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR July 1967

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. CHEN and No. 23 by R.F. Apps. Data from April

## RADIOACTIVITY 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, manufactured by Ekco Electronics Ltd. The counter is calibrated with a <sup>137</sup>Cs (cesium chloride) source. The counter is checked 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 have decayed.

## ROYAL OBSERVATORY

## HONG KONG

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).

July 1967

Beta-Radioactivity BULLETIN Dust Near the Earth's Surface

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR July 1967

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).

Monthly mean

0.11

Maximum

0.49

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

Month : July Year : 1967

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

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

Time of Sampling						Amount of Radioactivity μCi/m <sup>3</sup> of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	09	15	01	09	05	0.27	
01	09	10	02	09	25	0.13	
02	09	30	03	09	20	0.16	Collecting Period
03	09	25	04	09	10	0.05	25 hours from
04	09	15	05	09	15	0.08	0800 H.K.St. Time
05	09	20	06	09	15	0.31	to 0800 H.K.St.
							Time (Approx.)
06	09	20	07	09	15	0.25	
07	09	19	08	09	15	NIL	
08	09	20	09	09	40	0.14	
09	09	45	10	09	37	0.01	
10	09	40	11	09	45	0.34	
11	09	50	12	10	11	0.08	
12	10	14	13	09	10	0.14	
13	09	14	14	09	40	0.06	
14	09	45	15	09	03	NIL	
15	09	05	16	09	30	0.13	
16	09	35	17	09	20	NIL	
17	09	25	18	09	15	0.23	
18	09	20	19	10	00	0.04	
19	10	05	20	09	41	0.22	
20	09	44	21	09	11	NIL	
21	09	14	22	09	07	0.06	
22	09	10	23	09	00	0.01	
23	09	03	24	09	30	NIL	
24	09	35	25	09	30	0.02	
25	09	35	26	09	15	0.01	
26	09	18	27	09	45	0.14	
27	09	50	28	09	35	0.49	
28	09	38	29	09	08	0.03	
29	09	11	30	09	07	0.12	
30	09	10	31	09	15	0.02	

Monthly mean 0.11  
 Maximum 0.49

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : July

Year : 1967

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	0.30	Collecting Period 48 hours from 0800 H.K.St.Time to 0800 H.K.St. Time (Approx.)
02	04	0.26	
04	06	0.28	
06	08	0.11	
08	10	0.07	
10	12	0.03	
12	14	0.03	
14	16	0.10	
16	18	0.11	
18	20	0.12	
20	22	0.15	
22	24	0.15	
24	26	NIL	
26	28	0.11	
28	30	0.03	

Monthly mean 0.12

Maximum 0.30

Beta-Radioactivity of Rainwater

Month : July

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity μCi/cm <sup>3</sup>	Remarks
Start	End			
30	01	1003	0.04	Collecting Period 24 hours from 0800 H.K.St.Time to 0800 H.K.St. Time (Approx)
01	02	370	0.06	
02	03	341	0.06	
07	08	9	1.72	
13	14	1535	NIL	
24	25	123	NIL	
28	29	23	0.22	

BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR August 1967

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 1964 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Note No. 10. Data from April 1965 onwards is published monthly in this bulletin.

**RADIOACTIVITY 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 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 month, the natural radon, thoron and their daughter products will have decayed.

**ROYAL OBSERVATORY**

**HONG KONG**

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

*August 1967*

Beta-Radioactivity of **BULLETIN** Dust Near the Earth's Surface  
 Month : August OF Year : 1967  
**BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG**  
 Location of Sampling Point : Lat.  $22^{\circ} 19'$  North Long  $114^{\circ} 10'$  East  
 FOR August 1967

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).

Monthly mean 0.10  
 Maximum 0.43

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : August

Year : 1967

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

Month : August

Year : 1967

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

Time of Sampling						Amount of Radioactivity $\mu\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	18	01	09	20	0.20	
01	09	25	02	09	00	0.09	
02	09	10	03	09	20	0.09	
03	09	25	04	09	55	0.36	
04	09	58	05	09	30	NIL	
05	09	33	06	09	30	0.34	
06	09	32	07	09	25	0.22	
07	09	28	08	09	05	NIL	
08	09	08	09	09	25	NIL	
09	09	30	10	09	30	0.20	
10	09	40	11	09	05	NIL	
11	09	10	12	09	38	0.05	
12	09	41	13	09	45	0.05	
13	09	50	14	09	20	0.01	
14	09	25	15	09	00	0.01	
15	09	05	16	09	05	NIL	
16	09	08	17	09	20	NIL	
17	09	25	18	09	35	NIL	
18	09	40	19	09	00	NIL	
19	09	03	20	09	45	0.11	
20	09	47	21	09	20	0.06	
21	09	25	22	09	25	No Data	
22	09	35	23	08	30	0.02	
23	08	35	24	09	05	NIL	
24	09	08	25	09	50	0.09	
25	09	53	26	09	30	0.02	
26	09	35	27	09	34	0.19	
27	09	37	28	09	15	0.17	
28	09	18	29	09	05	0.43	
29	09	08	30	09	15	0.04	
30	09	15	31	09	10	0.34	

Monthly mean 0.10

Maximum 0.43

Beta-Radioactivity of Total Deposition ( Dry and Wet )

Month : August

Year : 1967

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	01	0.18	*Collecting Period 48 hours from 0800 H.K.St.Time to 0800 H.K.St.Time (Approx.)
01	03	NIL	
03	05	0.17	
05	07	0.01	
07	09	0.03	
09	11	NIL	
11	13	0.11	
13	15	0.11	
15	17	0.02	
17	19	NIL	
19	21	1.31	
21	23	0.06	
23	25	0.02	
25	27	0.15	
27	29	0.19	
29	31	0.06	

Monthly mean

0.15

Maximum

1.31

Beta-Radioactivity of Rainwater

Month : August

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity μCi/cm <sup>3</sup>	Remarks
Start	End			
01	02	331	0.08	*Collecting Period 24 hours from 0800 H.K.St. Time to 0800 H.K.St. Time (Approx.)
02	03	1105	0.01	
03	04	104	0.02	
09	10	331	0.01	
10	11	784	0.01	
11	12	933	0.01	
12	13	1989	NIL	
13	14	1542	0.02	
14	15	499	0.06	
15	16	454	NIL	
16	17	2360	NIL	
17	18	1055	NIL	
20	21	757	0.05	
21	22	5002	0.01	
22	23	520	0.05	



BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR September 1967

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 **RADIOACTIVITY BULLETIN** Data from April 1965 onwards is published in this bulletin.

The counter used for the beta counting consists of an end window Geiger-Müller counter, a probe unit and an automatic scaler by Elico Electronics Ltd. England. A thin 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 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), the exception of rainfall samples which are collected from the Royal Observatory (22° 18' North, 114° 10' East).

*Sept. 1967*

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR September 1967

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).

Date	Hour	Activity	Remarks
08	09	05	0.14
09	09	05	
17	08	55	No result
18	10	18	
22	09	05	0.15
23	09	20	0.03
24	09	05	Nil
25	09	14	0.15
26	09	25	Nil
27	09	35	Nil
28	09	25	0.07
29	09	05	0.04

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

Month : September

Year : 1967

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

Time of Sampling						Amount of Radioactivity $\mu\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	15	01	09	10	0.11	
01	09	13	02	09	10	0.16	
02	09	15	03	09	20	0.19	
03	09	25	04	09	05	0.12	
04	09	08	05	09	25	NIL	
05	09	30	06	09	40	0.21	
06	09	45	07	09	35	0.07	
07	09	38	08	09	00	0.06	
08	09	05	09	09	00	0.14	
09	09	05	10	09	40	0.14	
10	09	45	11	09	00	0.06	
11	09	05	12	09	00	0.10	
12	09	05	13	09	55	0.88	
13	09	58	14	09	20	0.26	
14	09	25	15	09	15	0.13	
15	09	18	16	09	10	0.08	
16	09	15	17	08	50	No Result	Air pump out of order.
17	08	55	18	10	00	No Result	
18	10	05	19	09	20	0.15	
19	09	25	20	09	20	0.11	
20	09	22	21	10	05	0.47	
21	10	10	22	09	00	0.14	
22	09	05	23	09	15	0.15	
23	09	20	24	09	00	0.03	
24	09	05	25	09	11	NIL	
25	09	14	26	09	20	0.16	
26	09	25	27	09	30	NIL	
27	09	35	28	09	20	NIL	
28	09	25	29	09	00	0.07	
29	09	05	30	09	30	0.04	

Monthly mean 0.14

Maximum 0.88

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month : September

Year : 1967

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	0.14	Collecting period 48 hours from 0800 H.K. St. Time to 0800 H.K. St. Time. (Approx.)
02	04	0.06	
04	06	0.11	
06	08	0.04	
08	10	0.04	
10	12	0.01	
12	14	0.04	
14	16	0.03	
16	18	0.09	
18	20	0.16	
20	22	0.13	
22	24	0.13	
24	26	0.11	
26	28	0.08	
28	30	NIL	

Monthly mean 0.08

Maximum 0.16

Beta-Radioactivity of Rainwater

Month : September Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity μ μ Ci/cm <sup>3</sup>	Remarks
Start	End			
05	06	894	0.04	Collecting period 24 hrs from 0800 H.K. St. Time to 0800 H.K. St. Time (Approx.)
06	07	1513	0.01	
12	13	1050	0.03	
24	25	65	0.13	
25	26	166	NIL	

BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR October 1967

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1964 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 1964 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical **RADIOACTIVITY BULLETIN** from April 1965 onwards is published monthly in this bulletin.

The counter used for the beta counting consists of an end window Geiger unit and an automatic unit by Elec 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 counted on the fourth day after the end of the fallout. 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). The collection of rainfall samples which are collected from the Royal Observatory (22° 18' North, 114° 10' East).

*Oct. 1967*

Beta-Radioactivity of Airborne Dust Near the Earth's Surface  
 Month : October Year : 1967  
 Location of Sampling Point Lat 22° 19' North Long 114° 10' East

BULLETIN

Time of Sampling		OF		Amount of		Remarks
Start						
Date	Hour	Min	Date	FOR	Min	October 1967
30	09					
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

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).

Monthly mean 0.28  
 Maximum 0.45

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

Month : October

Year : 1967

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

Time of Sampling						Amount of Radioactivity $\mu\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	09	35	01	09	25	0.45	
01	09	27	02	09	10	0.35	
02	09	13	03	09	10	0.38	
03	09	12	04	09	15	0.19	
04	09	20	05	09	40	NIL	
05	09	45	06	09	25	0.29	
06	09	30	07	09	10	0.15	
07	09	17	08	09	20	0.17	
08	09	23	09	09	35	0.24	
09	09	40	10	09	05	NIL	
10	09	10	11	09	03	0.24	
11	09	05	12	09	40	0.24	
12	09	45	13	09	40	0.37	
13	09	45	14	09	30	0.21	
14	09	33	15	09	14	0.21	
15	09	18	16	09	10	NIL	
16	09	14	17	09	05	0.15	
17	09	10	18	09	00	0.06	
18	09	05	19	09	45	0.11	
19	09	48	20	09	30	0.15	
20	09	35	21	09	06	0.13	
21	09	09	22	09	04	0.04	
22	09	45	23	09	30	NIL	
23	09	35	24	09	20	0.38	
24	09	25	25	09	10	NIL	
25	09	20	26	09	10	0.29	
26	09	15	27	09	05	0.36	
27	09	07	28	09	12	0.22	
28	09	15	29	09	25	NIL	
29	09	35	30	09	00	0.26	
30	09	05	31	09	04	0.14	

Monthly mean 0.28

Maximum 0.45

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month : October

Year : 1967

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	0.08	Collecting period 48 hours from 0800 H.K. St. Time to 0800 H.K. St. Time (Approx.)
02	04	0.23	
04	06	0.20	
06	08	0.25	
08	10	0.21	
10	12	NIL	
12	14	0.15	
14	16	0.13	
16	18	0.01	
18	20	0.13	
20	22	0.01	
22	24	0.30	
24	26	0.14	
26	28	0.14	
28	30	0.12	

Monthly mean 0.22

Maximum 0.30

Beta-Radioactivity of Rainwater

Month : October

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity μ μ Ci/cm <sup>3</sup>	Remarks
Start	End			
06	07	243	0.65	Collecting period 24 hrs from 0800 H.K. St. Time to 0800 H.K. St. Time. (Approx.)
14	15	364	0.01	



BULLETIN  
OF  
BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
FOR November 1967

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1964 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 1964 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical Note No. 10. Data from April 1965 onwards is published monthly in this bulletin.

## RADIOACTIVITY BULLETIN

The counter used for the beta counting consists of an end window Geiger-müller counter, a lead shield, a probe unit and an automatic scaler, all supplied by Ekco Electronics Ltd, England. A thick standard source (potassium chloride) is counted 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 month so that the natural radon, thoron and their daughter products will have decayed.

## ROYAL OBSERVATORY

## HONG KONG

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).

Nov. 1967

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR November 1967

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° 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: November

Year: 1967

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

Time of Sampling						Amount of Radioactivity $\mu\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
31	09	45	01	09	45	0.17	
01	09	50	02	09	05	0.21	
02	09	25	03	09	00	0.16	
03	09	05	04	09	00	0.18	
04	09	03	05	09	30	0.10	
05	09	45	06	09	35	0.11	
06	09	38	07	09	00	NIL	
07	09	05	08	09	40	0.11	
08	09	45	09	09	25	0.18	
09	09	30	10	09	05	NIL	
10	09	05	11	09	01	0.04	
11	09	03	12	09	05	NIL	
12	09	08	13	09	00	0.26	
13	09	00	14	09	30	0.24	
14	09	33	15	09	10	0.07	
15	09	15	16	09	45	0.16	
16	09	50	17	09	30	0.16	
17	09	35	18	09	03	0.12	
18	09	04	19	09	00	0.13	
19	09	05	20	09	00	NIL	
20	09	05	21	09	00	0.25	
21	09	05	22	09	00	0.13	
22	09	05	23	09	05	NIL	
23	09	15	24	09	50	0.12	
24	09	55	25	09	00	0.31	
25	09	05	26	09	05	NIL	
26	09	10	27	09	00	0.11	
27	09	10	28	09	00	0.09	
28	09	08	29	09	00	0.13	
29	09	10	30	09	00	0.13	

Monthly mean 0.12

Maximum 0.31

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month : November

Year : 1967

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	01	0.10	Collecting period 48 hrs from 0800 H.K. St. Time to 0800 H.K. St. Time (Approx.)
01	03	0.11	
03	05	0.09	
05	07	0.24	
07	09	0.23	
09	11	0.09	
11	13	0.45	
13	15	0.08	
15	17	0.16	
17	19	0.10	
19	21	0.07	
21	23	0.13	
23	25	0.17	
25	27	0.03	
27	29	0.03	

Monthly mean 0.14

Maximum 0.45

Beta-Radioactivity of Rainwater

Month : November

Year : 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity μ Ci/cm <sup>3</sup>	Remarks
Start	End			
06	07	50	NIL	Collecting period 24 hrs from 0800 H.K. St. Time to 0800 H.K. St. Time. (Approx.)
07	08	557	0.10	
10	11	260	NIL	
11	12	32	0.70	
15	16	100	0.13	

BULLETIN

OF

BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG

FOR December 1967

This bulletin gives the results of the routine observations of the gross beta-radioactivity of fall-out in Hong Kong. From October 1964 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 1964 to March 1965 inclusive and the sampling procedures and the methods of calibration etc. have been published in R.O. Technical

# RADIOACTIVITY BULLETIN

from April 1965 onwards.

## ROYAL OBSERVATORY

## HONG KONG

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

*Dec 1967*

Beta-Radioactivity of Airborne Dust near the Earth's Surface  
 Month : December Year : 1967  
 Location of Sampling : 22° 19' North, 114° 10' East

BULLETIN  
 OF  
 BETA-RADIOACTIVITY OF FALL-OUT IN HONG KONG  
 FOR December 1967

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° 19' North, 114° 10' East), with the exception of rainfall samples which are obtained from the Royal Observatory (22° 18' North, 114° 10' East).

Date	Hour	Sample No.	Activity	Remarks
23	09	25	0.24	
24	09	26	0.28	
25	09	27	0.55	
26	09	28	0.73	
27	09	29	1.21	
28	09	30	0.21	

Monthly total 0.33  
 Maximum 1.21

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

Month : December

Year: 1967

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

Time of Sampling						Amount of Radioactivity $\mu\mu\text{Ci}/\text{m}^3$ of air	Remarks
Start			End				
Date	Hour	Min	Date	Hour	Min		
30	09	05	01	09	00	0.30	
01	09	05	02	09	50	0.34	
02	09	55	03	09	45	0.31	
03	09	48	04	09	40	0.19	
04	09	45	05	09	00	0.66	
05	09	05	06	09	07	0.10	
06	09	10	07	09	05	0.06	
07	09	10	08	09	05	0.24	
08	09	10	09	08	55	0.12	
09	09	00	10	09	50	0.25	
10	09	55	11	09	30	0.17	
11	09	35	12	09	05	0.26	
12	09	10	13	09	00	NIL	
13	09	05	14	09	10	0.62	
14	09	13	15	09	15	0.43	
15	09	20	16	09	05	0.34	
16	09	10	17	09	10	0.67	
17	09	15	18	09	45	0.22	
18	09	50	19	09	45	0.18	
19	09	48	20	09	00	0.36	
20	09	05	21	09	00	0.05	
21	09	05	22	09	10	0.25	
22	09	13	23	09	30	0.05	
23	09	35	24	09	05	0.09	
24	09	10	25	09	00	0.24	
25	09	05	26	09	05	0.28	
26	09	10	27	09	45	0.31	
27	09	49	28	09	00	0.53	
28	09	05	29	09	00	0.73	
29	09	05	30	09	10	1.21	
30	09	13	31	09	08	0.71	

Monthly mean 0.33

Maximum 1.21

Beta-Radioactivity of Total Deposition (Dry and Wet)

Month: December

Year: 1967

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		
29	01	0.11	Collecting period 48 hrs. from 0800 H.K.St. Time to 0800 H.K. St. Time. (Approx.)
01	03	0.17	
03	05	0.18	
05	07	0.07	
07	09	0.28	
09	11	0.05	
11	13	NIL	
13	15	0.26	
15	17	0.07	
17	19	0.13	
19	21	0.22	
21	23	0.01	
23	25	0.16	
25	27	0.13	
27	29	0.15	
29	31	0.20	

Monthly mean 0.14

Maximum 0.28

Beta-Radioactivity of Rainwater

Month: December

Year: 1967

Date of Sampling		Amount of Sample Water cm <sup>3</sup>	Amount of Radioactivity $\mu\mu$ Ci/cm <sup>3</sup>	Remarks
Start	End			
27	28	10.0	NIL	Collecting period 24 hrs from 0800 HK St. Time to 0800 H.K. St. Time. (Approx.)