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Emergency Monitoring of Environmental Radiation and Atmospheric Radionuclides at Nuclear Science Research Institute, JAEA Following the Accident of Fukushima Daiichi Nuclear Power Plant

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Due to the accident at the Fukushima Daiichi Nuclear Power Plant caused by the 2011 off the Pacific coast of Tohoku Earthquake, the emergency environmental radiation monitoring was conducted at the Nuclear Science Research Institute, Japan Atomic Energy Agency (JAEA). This report provides the monitoring results of ambient gamma-ray dose rate and atmospheric radioactivity concentration until the beginning of June 2011.

Some anthropogenic radionuclides including Cs-134, Cs-137, I-131, I-132, Te-132 and Xe-133 were detected in the air samples. After 15 March 2011 the atmospheric radioactivity concentrations varied corresponding with the ambient gamma-ray dose rates.

Keywords: Fukushima Accident, Ambient Gamma-ray Dose Rate, Atmospheric Radionuclide, Radioactive Cesium, Radioactive Iodine

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原子力科学研究所における福島第一原子力発電所事故下での環境放射線及び大気中放射性核種の緊急時モニタリング

日本原子力研究開発機構
東海研究開発センター 原子力科学研究所　放射線管理部

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（2012 年 4 月 25 日受理）

2011 年東北地方太平洋沖地震によってもたらされた福島第一原子力発電所事故に伴い，原子力科学研究所では，緊急時環境放射線モニタリングを実施した。本報告書は，2011 年 6 月上旬までのモニタリングで得られた結果を提供する。

空気試料からは Cs-134，Cs-137，I-131，I-132，Te-132，Xe-133 などの人工放射性核種が検出された。2011 年 3 月 15 日以降，空間ガンマ線量率に連動して，大気中放射性物質濃度が変化した。

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1. Introduction

At 14:46, 11 March 2011, the 2011 off the Pacific coast of Tohoku Earthquake (the center of the earthquake: latitude 38.10 N, longitude 142.86 E and depth 24km) occurred, which generated a large tsunami that attacked the Pacific coast of East Japan. The tsunami affected the Fukushima Daiichi Nuclear Power Plant (F1-NPP: 37.42 N, 141.03 E) [1]. The impacts developed into a severe accident of the plant, which caused massive release of radioactive materials into the atmosphere.

The area of Ibaraki prefecture including the Nuclear Science Research Institute (NSRI), Japan Atomic Energy Agency (JAEA) has been affected by radioactive materials released from F1-NPP. NSRI is located in Tokai-mura, Ibaraki prefecture, about 120 km south of F1-NPP (Figure 1: 36.45 N, 140.60 E) [1]. Gamma-ray dose rate is continuously monitored at NSRI, and an additional monitoring of atmospheric radionuclides was started on 15 March 2012. This report serves the results of the monitoring of gamma-ray dose rate and atmospheric radionuclides. In this report, time is written in the Japan Standard Time (JST = Coordinated universal time (UTC) + 9), except otherwise noted.

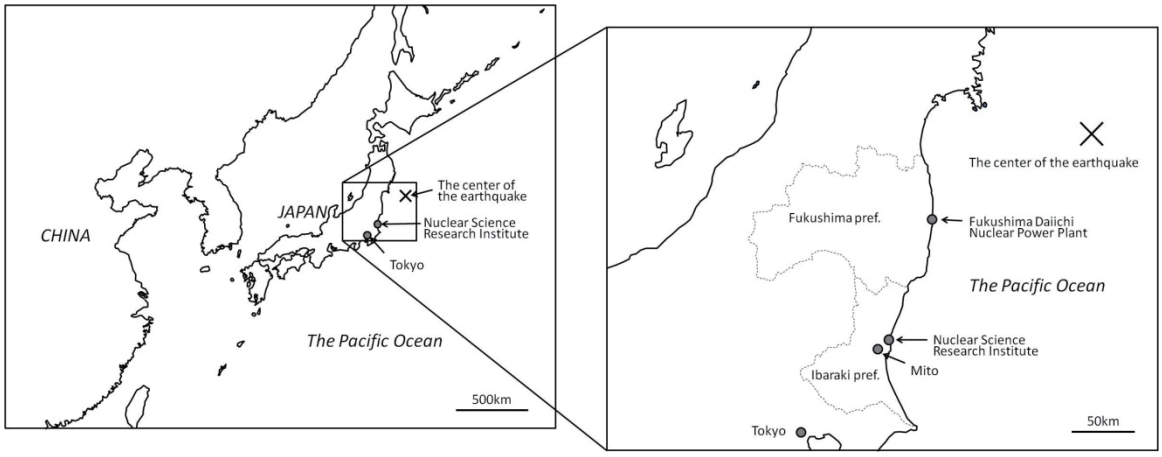

Figure 1 Location of Nuclear Science Research Institute, JAEA

2. Method and Instrument

2.1 Gamma-ray Dose Rate at Monitoring Sites

Gamma-ray dose rate is monitored at Monitoring Posts (MP) and Monitoring Stations (MS) with NaI(Tl) scintillation detectors. The detectors of MP are located at 2.7 m above ground level and those of MS at 1.5 m. MS are equipped with airborne dust samplers. Precipitation is observed at the meteorological observatory on the premises of NSRI. The layout of the monitoring sites is shown in Figure 2.1-1.

Just after the earthquake monitoring of gamma-ray dose rate was stopped in most of the monitoring sites because of a power failure caused by the earthquake. Exceptionally, the monitoring of gamma-ray dose rate was continued on the premises of NSRI, at MP No.11 (MP-11), MP-17 and MP-19, by electricity generated by emergency generators of these posts. Commercial electricity supply was recovered on 13, and somewhere on 14 March, at the monitoring sites outside the premises of NSRI. Electricity supply was recovered on 17 March at the monitoring sites on the premises except MS-1 where the recovery was on 19 March . The meteorological observation was recovered on 17 March.

2.2 Emergency Monitoring of Atmospheric Concentrations of Radionuclides

2.2.1 Sampling

The emergency monitoring of atmospheric concentrations of radionuclides was conducted from 01:25, 15 March to 09:00, 6 June. The radionuclides in the atmosphere were sampled with paper filter HE-40TA and activated carbon filter CHC-50, the products of Toyo Roshi Co., Ltd. The diameter of these filters is 60mm. The effective collecting diameter of HE-40TA is 50mm, and that of CHC-50 is 48mm or 50mm. For the sampling of radionuclides in the atmosphere HE-40TA is laid on CHC-50. HE-40TA collects radioactive aerosols, and CHC-50 captures volatile radioiodines with 50L/min flow rate. Sampling times and sampling volume are shown in Table 2.2-1.

The samplings of the sample numbers from #1 through #36 were conducted with a diaphragm pump equipped in a monitoring vehicle, which was parked in front of MP-11. The sampling was conducted, when the gamma-ray dose rate increased. After the sample #37, the sampling was conducted continuously with the equipment in MS-1 (Table 2.2-1). The diagrams of the filter holder equipped in the monitoring vehicle and MS-1 are shown in Figure 2.2-1, as Type 1 and Type 2, respectively.

2.2.2 Radionuclides Analysis

(a) Measurement

The radionuclides collected on the filters were quantified by gamma-ray spectroscopy with a germanium semiconductor detector (Ge detector). The measurement time was set at 6,000 seconds. The quantified radionuclides were cesium-134 (Cs-134), cesium-136 (Cs-136), cesium-137 (Cs-137), iodine-131 (I-131), iodine-132 (I-132), iodine-133 (I-133) and tellurium-132 (Te-132). It was assumed that the collecting

efficiency of HE-40TA was 100% and that of CHC-50 as well. The gross iodine concentration is the sum of volatile iodine concentration and aerosol iodine concentration, which were measured independently. Technetium-99m (Tc-99m), tellurium-129m (Te-129m), tellurium-129 (Te-129) and xenon-133 (Xe-133) were also detected (Table 2.2-2). Xe-133 could not be quantified. The chemical forms of these sampled materials are not identified.

The specifications of the germanium detector system are shown in Table 2.2-3.

(b) Background counts of the Ge detector

The inherent background counts of the Ge detector in the shielding were determined by the measurement for 200,000 seconds in December 2010. In this emergency monitoring, clean HE-40TA filters were measured before each sample, and their measurements were regarded as background counts. The background counts were subtracted from the sample measurements after sample #17, since it was suspected that the inside of the lead shield of the Ge detector was contaminated by air-borne radionucludes from F1-NPP.

(c) Correction for radioactive decay

The term in which radionuclides on a sampling filter decay can be divided into three categories: (I) sampling term, (II) storage term, and (III) measuring term. In the estimation of activity, measurements should be compensated for these terms. During the early period of our monitoring the decay compensation was not applied. During later period, (I), (II) ,or (III) were considered as shown in Table 2.2-1.

It was assumed that Te-132 and I-132 was in radioactive equilibrium, and activity of I-132 was compensated with the half life of Te-132. Coincidence-sum effect of gamma ray of Cs-134 was corrected in estimation of Cs-134 activity [2)].

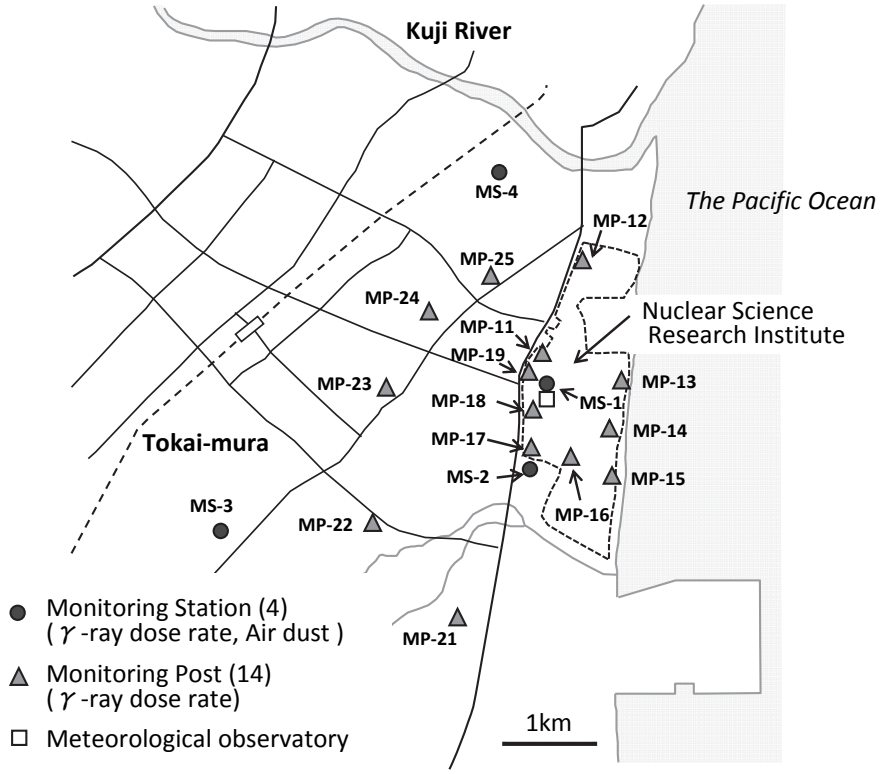

Figure 2.1-1 Monitoring sites

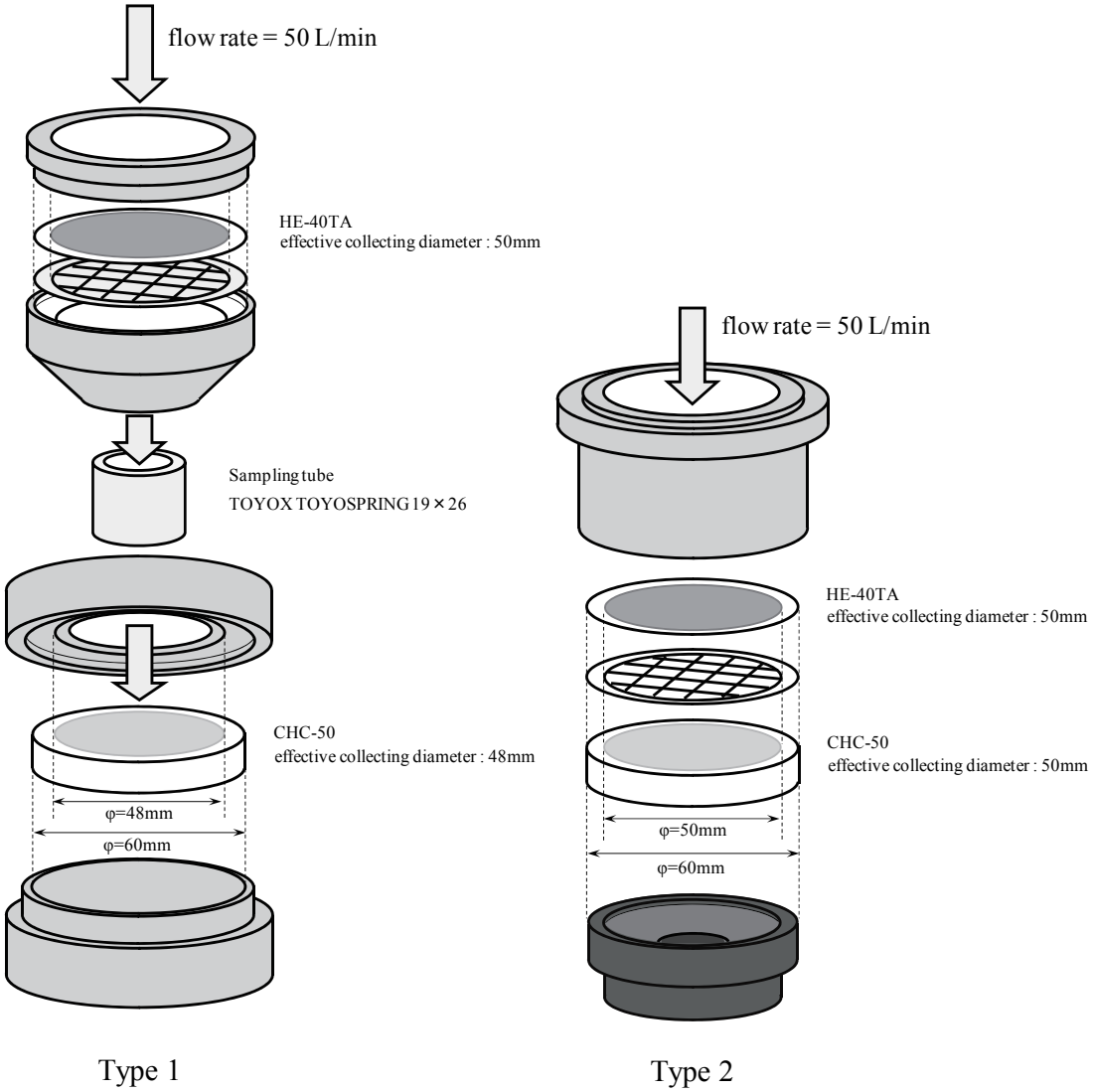

Figure 2.2-1 Diagrams of the filter holders for the emergency sampling

Table 2.2-1 Sampling and analysis

Sample Number	Sampling Time Start		Sampling Time End		Length hour : min	Flow Rate L/min	Volume m^3	Measurement Time (Start Time) CHC-50	Measurement Time (Start Time) HE-40TA	Length s	Decay Compensation
1	15-Mar	1:25 -	15-Mar	1:45	0:20	50	1 *	3/15 2:42	3/15 2:28	6,000	Not conducted
2		1:55 -		2:15	0:20	50	1 *	3/15 3:26	3/15 3:06	6,000	Not conducted
3		2:25 -		2:45	0:20	50	1 *	3/15 3:56	3/15 3:40	6,000	Not conducted
4		2:55 -		3:15	0:20	50	1 *	3/15 4:39	3/15 4:23	6,000	Not conducted
5		3:25 -		3:45	0:20	50	1 *	3/15 5:04	3/15 4:52	6,000	Not conducted
6		3:55 -		4:15	0:20	50	1 *	3/15 5:29	3/15 5:17	6,000	Not conducted
7		4:25 -		4:45	0:20	50	1 *	3/15 5:56	3/15 5:43	6,000	Not conducted
8		4:55 -		5:15	0:20	50	1 *	3/15 6:24	3/15 6:11	6,000	Not conducted
9		5:25 -		5:45	0:20	50	1 *	3/15 6:49	3/15 6:36	6,000	Not conducted
10		5:55 -		6:15	0:20	50	1 *	3/15 7:18	3/15 7:05	6,000	Not conducted
11		6:25 -		6:45	0:20	50	1 *	3/15 7:46	3/15 7:33	6,000	Not conducted
12		6:55 -		7:15	0:20	50	1 *	3/15 8:21	3/15 8:06	6,000	Not conducted
13		7:25 -		7:45	0:20	50	1 *	3/15 8:33	3/15 8:45	6,000	Not conducted
14		7:55 -		8:15	0:20	50	1 *	3/15 8:57	3/15 9:19	6,000	Not conducted
15		8:25 -		8:45	0:20	50	1 *	3/15 9:46	3/15 9:58	6,000	Not conducted
16		8:55 -		9:15	0:20	50	1 *	3/15 10:12	3/15 10:23	6,000	Not conducted
17	16-Mar	6:05 -	16-Mar	6:25	0:20	50	1 *	3/16 6:53	3/16 6:40	6,000	I, II, III
18		6:35 -		6:55	0:20	50	1 *	3/16 7:33	3/16 7:19	6,000	I, II, III
19		7:05 -		7:25	0:20	50	1 *	3/16 7:47	3/16 8:00	6,000	I, II, III
20		7:35 -		7:55	0:20	50	1 *	3/16 8:19	3/16 8:31	6,000	I, II, III
21		8:35 -		8:55	0:20	50	1 *	3/16 9:04	3/16 9:16	6,000	I, II, III
22		15:35 -		15:55	0:20	50	1 *	3/16 16:14	3/16 16:26	6,000	I, II, III
23	17-Mar	10:30 -	17-Mar	10:50	0:20	50	1 *	3/17 11:00	3/17 11:13	6,000	I, II, III
24		16:15 -		16:35	0:20	50	1 *	3/17 17:02	3/17 17:13	6,000	I, II, III
25	18-Mar	10:35 -	18-Mar	10:55	0:20	50	1 *	3/18 11:07	3/18 11:18	6,000	I, II, III
26		16:00 -		16:20	0:20	50	1 *	3/18 16:37	3/18 16:49	6,000	I, II, III
27	19-Mar	10:15 -	19-Mar	10:35	0:20	50	1 *	3/20 12:39	3/20 12:52	6,000	I, II, III
28		16:10 -		16:30	0:20	50	1 *	3/20 13:30	3/20 13:42	6,000	I, II, III
29	20-Mar	10:07 -	20-Mar	10:27	0:20	50	1 *	3/20 11:29	3/20 11:41	6,000	I, II, III
30		10:35 -		10:55	0:20	50	1 *	3/20 11:52	3/20 12:04	6,000	I, II, III
31		11:35 -		11:55	0:20	50	1 *	3/20 12:15	3/20 12:27	6,000	I, II, III
32		12:35 -		12:55	0:20	50	1 *	3/20 13:06	3/20 13:18	6,000	I, II, III
33	21-Mar	3:45 -	21-Mar	4:05	0:20	50	1 *	3/21 4:39	3/21 4:51	6,000	I, II, III
34		4:45 -		5:05	0:20	50	1 *	3/21 5:26	3/21 5:37	6,000	I, II, III
35		5:45 -		6:05	0:20	50	1 *	3/21 6:13	3/21 6:25	6,000	I, II, III
36		6:45 -		7:05	0:20	50	1 *	3/21 7:12	3/21 7:24	6,000	I, II, III
37		11:15 -		12:00	0:45	50	2.3	3/21 12:28	3/21 12:40	6,000	I, II, III
38		12:10 -		21:00	8:50	50	26.4	3/22 10:59	3/22 11:11	6,000	I, II, III
39		21:10 -	22-Mar	9:00	11:50	50	35.5	3/22 11:24	3/22 11:36	6,000	I, II, III
40	22-Mar	9:10 -		21:00	11:50	50	35.6	3/23 9:43	3/23 9:57	6,000	I, II, III
41		21:10 -	23-Mar	9:00	11:50	50	35.6	3/23 10:09	3/23 10:22	6,000	I, II, III
42	23-Mar	9:10 -		21:00	11:50	50	35.9	3/24 9:55	3/24 10:07	6,000	I, II, III
43		21:10 -	24-Mar	9:00	11:50	50	36.2	3/24 10:18	3/24 10:29	6,000	I, II, III
44	24-Mar	9:10 -		21:00	11:50	50	35.6	3/25 10:06	3/25 10:19	6,000	I, II, III
45		21:10 -	25-Mar	9:00	11:50	50	35.5	3/25 10:32	3/25 10:45	6,000	I, II, III
46	25-Mar	9:10 -		21:00	11:50	50	35.6	3/26 10:07	3/26 10:20	6,000	I, II, III
47		21:10 -	26-Mar	9:00	11:50	50	35.4	3/26 10:36	3/26 10:49	6,000	I, II, III
48	26-Mar	9:10 -		21:00	11:50	50	35.5	3/27 9:53	3/27 10:08	6,000	I, II, III
49		21:10 -	27-Mar	9:00	11:50	50	35.5	3/27 10:20	3/27 10:31	6,000	I, II, III
50	27-Mar	9:10 -		21:00	11:50	50	35.6	3/28 9:54	3/28 10:09	6,000	I, II, III
51		21:10 -	28-Mar	9:00	11:50	50	35.5	3/28 10:21	3/28 10:33	6,000	I, II, III
52	28-Mar	9:10 -		21:00	11:50	50	35.3	3/29 9:51	3/29 10:04	6,000	I, II, III
53		21:10 -	29-Mar	9:00	11:50	50	35.5	3/29 10:18	3/29 10:30	6,000	I, II, III
54	29-Mar	9:10 -		21:00	11:50	50	35.1	3/30 9:48	3/30 10:01	6,000	I, II, III
55		21:10 -	30-Mar	9:00	11:50	50	34.9	3/30 10:13	3/30 10:26	6,000	I, II, III
56	30-Mar	9:10 -		21:00	11:50	50	35.3	3/31 9:46	3/31 9:57	6,000	I, II, III
57		21:10 -	31-Mar	9:00	11:50	50	35.5	3/31 10:10	3/31 10:23	6,000	I, II, III
58	31-Mar	9:10 -		21:00	11:50	50	35.5	4/1 9:48	4/1 10:00	6,000	I, II, III
59		21:10 -	1-Apr	9:00	11:50	50	35.5	4/1 10:13	4/1 10:25	6,000	I, II, III
60	1-Apr	9:10 -		21:00	11:50	50	35.5	4/2 9:46	4/2 10:00	6,000	I, II, III
61		21:10 -	2-Apr	9:00	11:50	50	35.0	4/2 10:13	4/2 10:25	6,000	I, II, III
62	2-Apr	9:10 -		21:00	11:50	50	34.9	4/3 9:36	4/3 9:48	6,000	I, II, III
63		21:10 -	3-Apr	9:00	11:50	50	35.3	4/3 10:00	4/3 10:21	6,000	I, II, III
64	3-Apr	9:10 -		21:00	11:50	50	35.5	4/4 9:44	4/4 9:56	6,000	I, II, III
65		21:10 -	4-Apr	9:00	11:50	50	35.5	4/4 10:09	4/4 10:21	6,000	I, II, III
66	4-Apr	9:10 -		21:00	11:50	50	35.5	4/5 9:51	4/5 10:03	6,000	I, II, III
67		21:10 -	5-Apr	9:00	11:50	50	35.4	4/5 10:17	4/5 10:32	6,000	I, II, III
68	5-Apr	9:10 -		21:00	11:50	50	35.5	4/6 9:44	4/6 9:58	6,000	I, II, III
69		21:10 -	6-Apr	9:00	11:50	50	35.5	4/6 10:20	4/6 10:38	6,000	I, II, III
70	6-Apr	9:10 -		21:00	11:50	50	35.5	4/7 9:55	4/7 10:07	6,000	I, II, III
71		21:10 -	7-Apr	9:00	11:50	50	35.5	4/7 10:22	4/7 10:37	6,000	I, II, III

Note 1: In the column “Volume”, the values accompanying with * were obtained by multiplying a sampling time length by a flow rate, the others were measured with a mass flow meter.

Note 2: In the column “Decay compensation”, (I) represents a sampling term, (II) - a storage term, and (III) - a measuring term. See 2.2.2 (c).

Table 2.2-1 Sampling and analysis — (continued)

72	7-Apr	9:10	-	8-Apr	9:00	23:50	50	71.1	4/8 9:55	4/8 10:07	6,000	I, II, III
73	8-Apr	9:10	-	9-Apr	9:00	23:50	50	71.5	4/9 9:52	4/9 10:05	6,000	I, II, III
74	9-Apr	9:10	-	10-Apr	9:00	23:50	50	71.3	4/10 9:18	4/10 10:02	6,000	I, II, III
75	10-Apr	9:10	-	11-Apr	9:00	23:50	50	70.4	4/11 9:59	4/11 10:13	6,000	I, II, III
76	11-Apr	9:10	-	12-Apr	9:00	23:50	50	70.4	4/12 9:39	4/12 9:52	6,000	I, II, III
77	12-Apr	9:10	-	13-Apr	9:00	23:50	50	71.5	4/13 9:54	4/13 10:05	6,000	I, II, III
78	13-Apr	9:10	-	14-Apr	9:00	23:50	50	71.3	4/14 9:58	4/14 10:14	6,000	I, II, III
79	14-Apr	9:10	-	15-Apr	9:00	23:50	50	71.3	4/15 10:18	4/15 10:33	6,000	I, II, III
80	15-Apr	9:10	-	16-Apr	9:00	23:50	50	71.4	4/16 9:46	4/16 9:58	6,000	I, II, III
81	16-Apr	9:10	-	17-Apr	9:00	23:50	50	71.5	4/17 9:54	4/17 10:06	6,000	I, II, III
82	17-Apr	9:10	-	18-Apr	9:00	23:50	50	71.0	4/18 9:41	4/18 9:53	6,000	I, II, III
83	18-Apr	9:10	-	19-Apr	9:00	23:50	50	70.3	4/19 9:53	4/19 10:05	6,000	I, II, III
84	19-Apr	9:10	-	20-Apr	9:00	23:50	50	70.7	4/20 9:43	4/20 9:55	6,000	I, II, III
85	20-Apr	9:10	-	21-Apr	9:00	23:50	50	73.0	4/21 9:43	4/21 9:55	6,000	I, II, III
86	21-Apr	9:10	-	22-Apr	9:00	23:50	50	70.2	4/22 9:48	4/22 9:59	6,000	I, II, III
87	22-Apr	9:10	-	23-Apr	9:00	23:50	50	70.4	4/24 9:35	4/24 9:47	6,000	I, II, III
88	23-Apr	9:10	-	24-Apr	9:00	23:50	50	70.6	4/24 9:59	4/24 10:12	6,000	I, II, III
89	24-Apr	9:10	-	25-Apr	9:00	23:50	50	71.5	4/25 9:42	4/25 9:54	6,000	I, II, III
90	25-Apr	9:10	-	2-May	9:00	167:50	50	505.0	5/2 9:50	5/2 10:07	6,000	II, III
91	2-May	9:10	-	9-May	9:00	167:50	50	504.0	5/9 9:58	5/9 10:09	6,000	II, III
92	9-May	9:10	-	16-May	9:00	167:50	50	498.0	5/16 9:42	5/16 9:54	6,000	II, III
93	16-May	9:10	-	23-May	9:00	167:50	50	497.0	5/23 10:00	5/23 10:15	6,000	II, III
94	23-May	9:10	-	30-May	9:00	167:50	50	502.0	5/30 9:49	5/30 10:01	6,000	II, III
95	30-May	9:10	-	6-Jun	9:00	167:50	50	504.0	6/6 9:50	6/6 10:02	6,000	II, III

Table 2.2-2 Radionuclides observed in the samples

Nuclide	Half-life	Decay type	%	Gamma ray energy keV	Gamma ray abundance %
Cs-134	2.06 y	β^-	100	604.7	97.6
				795.9	85.4
Cs-136	13.16 d	β^-	100	818.5	99.7
				1048.1	79.7
				340.6	46.8
Cs-137	30.0 y	β^-	100	661.6	85
I-131	8.04 d	β^-	100	364.5	81.2
I-132	2.30 h	β^-	100	667.7	98.7
				772.6	76.2
I-133	20.9 h	β^-	100	529.5	86
Te-132	78.2 h	β^-	100	228.2	88.2
Te-129m	33.6 d	IT	65	696	3.1
		β^-	35		
Te-129	69.6 m	β^-	100	459.5	7.4
Tc-99m	6.02 h	IT	100	140.5	89.6
Xe-133	5.25 d	β^-	100	81	37.1

Table 2.2-3 Specifications of the germanium detector system

Ge detector:
Detector model No.: GMX-40195-S
Detector type: n-type coaxial
Crystal dimensions: 58.8 mm in diam., 79.8 mm in length
Relative efficiency: 43%
Resolution (FWHM) at 1.33 MeV: 1.76 keV
Shielding:
110 mm lead, 50 mm iron plus 5 mm copper shield

3. Data

3.1 Gamma-ray Dose Rate and Precipitation

The trends of gamma-ray dose rate at the selected monitoring sites are shown in Figure 3.1-1(a), (b) and (c). The observed values of gamma-ray dose rate of all monitoring sites, and the rainfall are shown in Table 3.1-1(a) and (b). The largest value among the monitoring sites was observed at MP-19, and relatively low value was observed at MP-23.

In Tokai-mura, some radioactive plumes attributed to the F1-NPP accident were observed on and after 15 March. The gamma-ray dose rate began to increase around 01:00, 15 March. The largest values of gamma-ray dose rate at each monitoring site were recorded around 08:00, 15 March (the First Peak). The maximum of 10-minute value was 5947 nGy h^{-1} at 08:20 at MP-19, and of one-minute value was 6045 nGy h^{-1} at 08:11 at MP-19. The gamma-ray dose rate decreased rapidly after the peak.

After the First Peak, the gamma-ray dose rate increased again around 06:00, 16 March (the Second Peak). This peak was smaller than that of 15 March. Around 12:00, 20 March, relatively small peak was observed (the Third Peak).

Around 05:00, 21 March, the second largest peak was recorded (the Fourth Peak). The decrease of the gamma-ray dose rate after this peak was slower than that of 15 March. There was a precipitation from around 05:00, 21 March to around 04:00, 23 March intermittently. From 14 through 16 March, our precipitation observation had not been recovered yet. The precipitation observations at some JMA's (Japan Meteorological Agency [3]) observatories near Tokai-mura suggest that there should be no rainfall in Tokai-mura from 14 through 15 March. In the early hours of 16 March, a light rain was observed at these JMA's observatories.

From 22 through 23 March, the gamma-ray dose rate fluctuated with relatively narrow amplitude (the Fifth Peak). After 24 March, the gamma-ray dose rate is decreasing gradually without any standout peaks.

By the end of June, the gamma-ray dose rate had decreased to twice that of the before-accident level (Table 3.1.2) at some sites. While the gamma-ray dose rate at MP-19 had gradually decreased, it still remained twentieth that of the before-accident level.

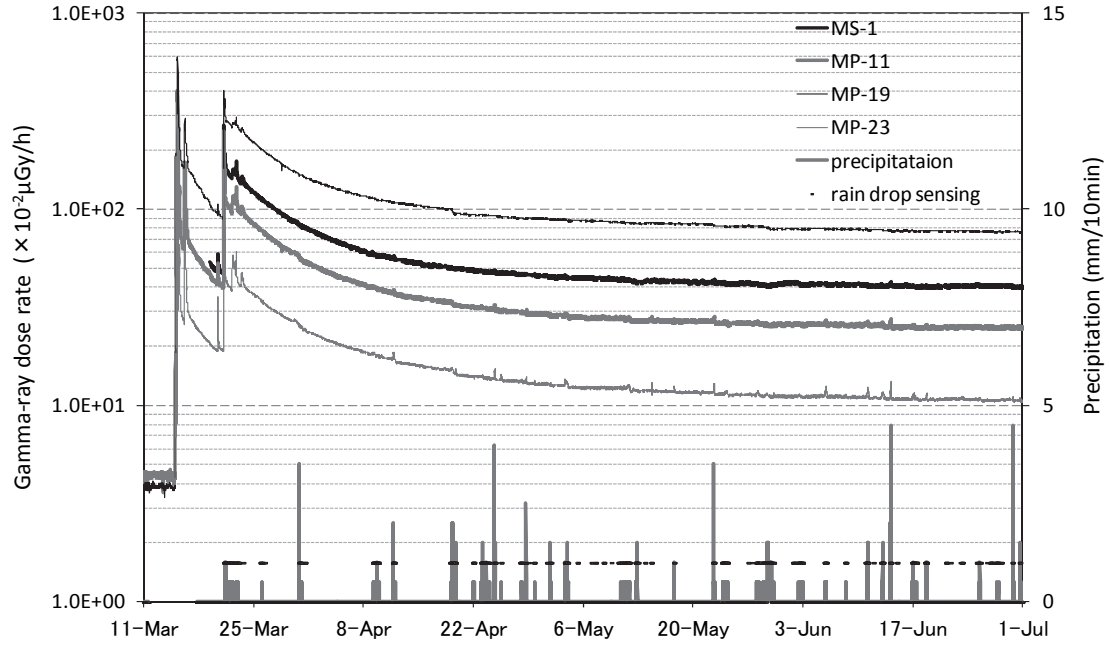

Figure 3.1-1(a) Gamma-ray dose rates (10-minute average) and 10-minute precipitation

Note :Measurement of precipitation was stopped until around 18:00, 17 March 2011 because of a power failure.

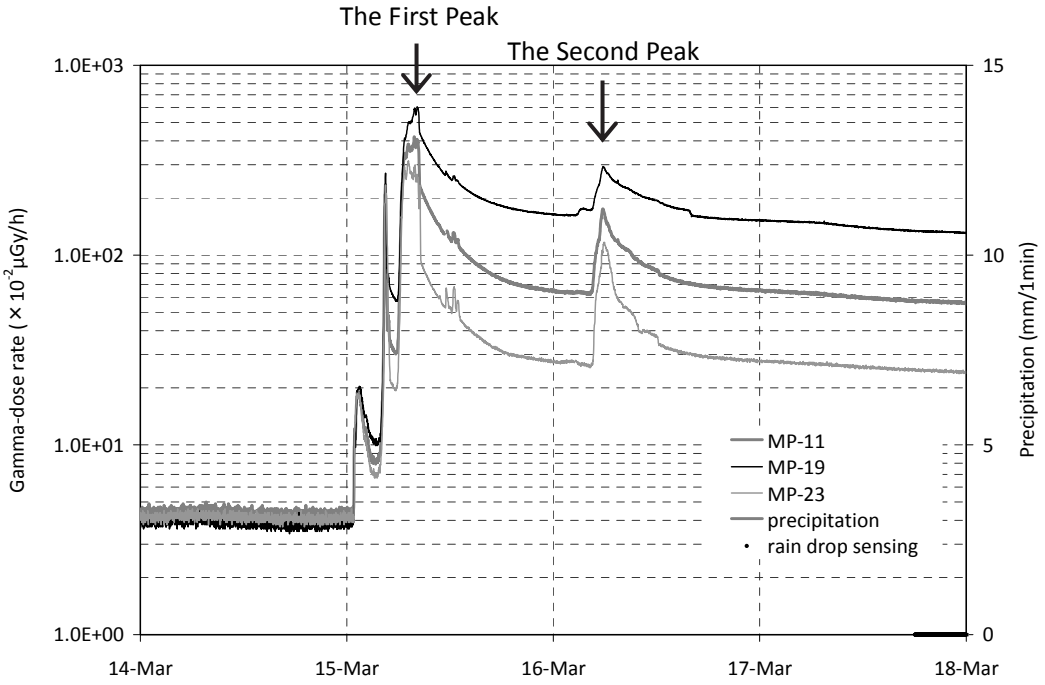

Figure 3.1-1(b) Gamma-ray dose rates (one-minute average) and one-minute precipitation from 14 to 18 March 2011

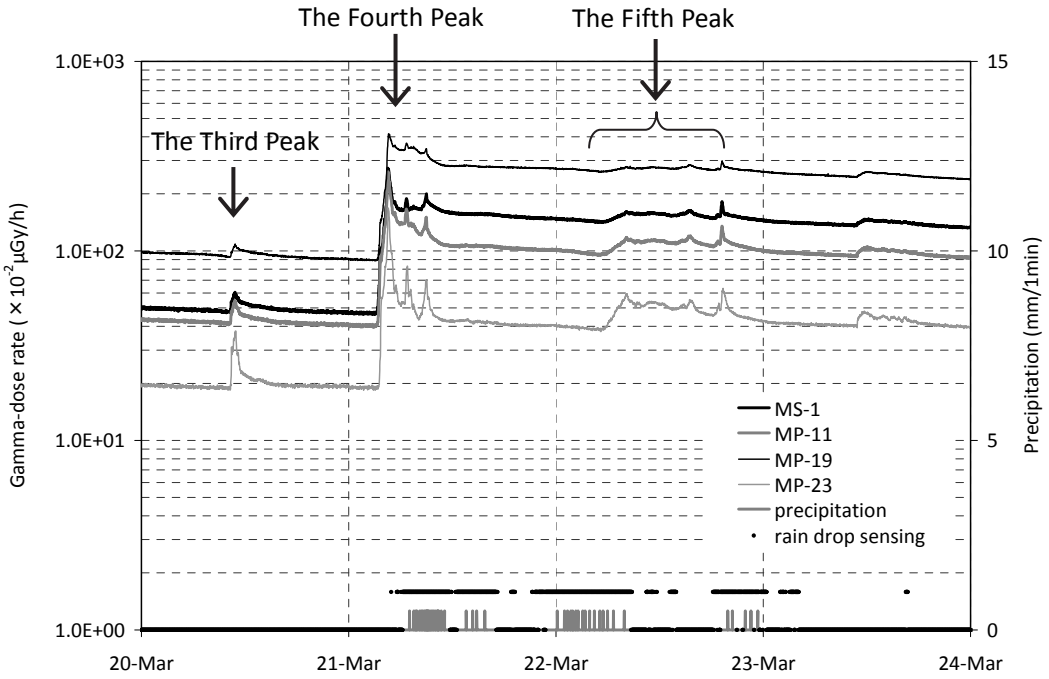

Figure 3.1-1(c) Gamma-ray dose rates (one-minute average) and one-minute precipitation from 20 to 24 March 2011

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011.

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci.	Rain sensing
																				$\times 10^{-2}$μGy/h		mm/h	*
2011	03	10	01	3.9	3.8	3.8	5.1	4.5	3.9	4.0	4.4	3.8	3.3	3.7	3.9	3.9	3.9	4.2	4.2	4.5	3.8	0.0	0
2011	03	10	02	3.9	3.8	3.7	5.1	4.5	3.9	4.0	4.4	3.8	3.3	3.6	3.9	3.9	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	10	03	3.9	3.8	3.7	5.1	4.5	3.9	4.0	4.4	3.8	3.3	3.7	3.9	3.9	3.9	4.2	4.1	4.5	3.8	0.0	0
2011	03	10	04	3.9	3.8	3.8	5.1	4.5	3.9	4.0	4.4	3.8	3.3	3.6	3.9	3.9	4.0	4.2	4.1	4.5	3.8	0.0	0
2011	03	10	05	3.9	3.8	3.8	5.1	4.5	3.9	4.0	4.4	3.8	3.4	3.7	3.9	3.9	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	10	06	3.9	3.8	3.8	5.1	4.5	3.9	4.0	4.4	3.8	3.3	3.7	3.9	3.9	3.9	4.2	4.2	4.5	3.8	0.0	0
2011	03	10	07	3.9	3.8	3.8	5.1	4.4	3.8	4.0	4.4	3.8	3.3	3.7	3.9	3.8	3.9	4.2	4.1	4.5	3.8	0.0	0
2011	03	10	08	3.9	3.8	3.7	5.1	4.4	3.8	3.9	4.4	3.8	3.3	3.6	3.9	3.8	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	10	09	3.8	3.7	3.7	5.1	4.4	3.8	3.9	4.3	3.8	3.3	3.6	3.9	3.7	3.8	4.2	4.1	4.5	3.7	0.0	0
2011	03	10	10	3.9	3.8	3.7	5.1	4.4	3.8	3.9	4.3	3.8	3.3	3.6	3.8	3.7	3.8	4.2	4.1	4.5	3.8	0.0	0
2011	03	10	11	3.8	3.7	3.8	5.1	4.4	3.9	3.9	4.3	3.8	3.3	3.6	3.9	3.8	3.8	4.2	4.1	4.5	3.8	0.0	0
2011	03	10	12	3.8	3.7	3.7	5.1	4.4	3.8	3.9	4.3	3.8	3.3	3.6	3.8	3.7	3.8	4.2	4.1	4.5	3.8	0.0	0
2011	03	10	13	3.9	3.8	3.7	5.1	4.4	3.9	3.9	4.3	3.8	3.3	3.6	3.9	3.7	3.8	4.2	4.1	4.5	3.7	0.0	0
2011	03	10	14	3.8	3.8	3.7	5.1	4.4	3.8	3.9	4.3	3.8	3.2	3.6	3.8	3.7	3.8	4.1	4.1	4.6	3.7	0.0	0
2011	03	10	15	3.8	3.7	3.7	5.1	4.4	3.8	3.8	4.3	3.8	3.2	3.6	3.9	3.8	3.8	4.1	4.1	4.6	3.7	0.0	0
2011	03	10	16	3.9	3.8	3.7	5.1	4.3	3.8	3.9	4.3	3.8	3.2	3.6	3.8	3.7	3.8	4.2	4.1	4.5	3.7	0.0	0
2011	03	10	17	3.8	3.8	3.7	5.1	4.4	3.8	3.9	4.3	3.8	3.3	3.6	3.8	3.7	3.8	4.2	4.1	4.6	3.7	0.0	0
2011	03	10	18	3.8	3.7	3.7	5.1	4.4	3.8	3.9	4.3	3.7	3.3	3.6	3.8	3.7	3.8	4.2	4.1	4.5	3.7	0.0	0
2011	03	10	19	3.8	3.8	3.7	5.1	4.3	3.8	3.9	4.4	3.8	3.3	3.6	3.8	3.8	3.8	4.1	4.1	4.5	3.7	0.0	0
2011	03	10	20	3.8	3.8	3.7	5.1	4.4	3.8	3.9	4.3	3.7	3.2	3.6	3.9	3.7	3.8	4.1	4.1	4.5	3.7	0.0	0
2011	03	10	21	3.8	3.8	3.7	5.1	4.4	3.8	3.9	4.3	3.8	3.3	3.6	3.8	3.7	3.9	4.2	4.0	4.5	3.7	0.0	0
2011	03	10	22	3.8	3.8	3.7	5.1	4.4	3.8	3.9	4.3	3.8	3.3	3.6	3.8	3.8	3.9	4.2	4.1	4.6	3.7	0.0	0
2011	03	10	23	3.9	3.8	3.8	5.2	4.4	3.9	3.9	4.3	3.7	3.3	3.6	3.9	3.8	3.8	4.2	4.1	4.5	3.8	0.0	0
2011	03	10	24	3.9	3.8	3.7	5.1	4.4	3.9	4.0	4.4	3.8	3.3	3.7	4.0	3.8	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	11	01	3.9	3.8	3.8	5.2	4.5	3.9	3.9	4.4	3.9	3.3	3.7	3.9	3.9	3.9	4.2	4.2	4.5	3.8	0.0	0
2011	03	11	02	4.0	3.9	3.8	5.2	4.5	3.9	4.0	4.5	3.8	3.3	3.7	3.9	3.9	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	11	03	3.9	3.8	3.8	5.1	4.5	3.9	4.0	4.4	3.8	3.3	3.7	3.9	3.9	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	11	04	3.9	3.8	3.8	5.2	4.5	3.9	4.0	4.5	3.8	3.3	3.6	3.9	3.9	3.9	4.2	4.1	4.5	3.8	0.0	0
2011	03	11	05	3.9	3.9	3.8	5.2	4.5	3.9	4.0	4.5	3.9	3.3	3.7	4.0	3.9	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	11	06	3.9	3.9	3.8	5.2	4.5	3.9	4.0	4.4	3.8	3.4	3.7	4.0	3.9	4.0	4.2	4.2	4.6	3.8	0.0	0
2011	03	11	07	4.0	3.9	3.8	5.3	4.5	4.0	4.1	4.5	3.8	3.4	3.7	4.0	3.9	4.0	4.3	4.2	4.6	3.8	0.0	0
2011	03	11	08	4.0	3.9	3.8	5.2	4.5	3.9	4.0	4.4	3.9	3.4	3.7	3.9	3.9	3.9	4.3	4.2	4.6	3.9	0.0	0
2011	03	11	09	3.9	3.8	3.8	5.2	4.5	3.9	4.0	4.4	3.9	3.4	3.7	3.9	3.8	3.9	4.2	4.2	4.6	3.8	0.0	0
2011	03	11	10	3.9	3.8	3.7	5.2	4.4	3.9	3.9	4.4	3.8	3.3	3.6	4.0	3.8	3.9	4.2	4.1	4.6	3.8	0.0	0
2011	03	11	11	3.9	3.8	3.8	5.2	4.4	3.9	3.9	4.4	3.8	3.3	3.6	3.9	3.8	3.8	4.2	4.2	4.6	3.8	0.0	0
2011	03	11	12	3.9	3.8	3.8	5.1	4.4	3.8	3.9	4.4	3.8	3.3	3.6	3.9	3.8	3.8	4.2	4.1	4.6	3.8	0.0	0
2011	03	11	13	3.9	3.8	3.8	5.1	4.4	3.8	3.9	4.3	3.8	3.2	3.6	3.9	3.8	3.8	4.2	4.1	4.5	3.8	0.0	0
2011	03	11	14	3.9	3.8	3.7	5.1	4.4	3.9	4.0	4.3	3.8	3.3	3.6	3.9	3.8	3.8	4.2	4.2	4.5	3.8	0.0	0
2011	03	11	15	3.9	3.8	3.8	5.1	4.3	3.9	3.9	4.3	3.8	3.3	3.6	3.8	3.7	3.8	4.2	4.1	4.5	3.8	0.0	0
2011	03	11	16	----	----	----	----	4.4	----	----	----	----	----	3.6	----	3.7	----	----	----	----	----	----	----
2011	03	11	17	----	----	----	----	4.4	----	----	----	----	----	3.6	----	3.7	----	----	----	----	----	----	----
2011	03	11	18	----	----	----	----	4.4	----	----	----	----	3.4	3.6	3.9	3.8	----	----	----	----	----	----	----
2011	03	11	19	----	----	----	----	4.4	----	----	----	----	3.4	3.7	3.9	3.8	----	----	----	----	----	----	----
2011	03	11	20	----	----	----	----	4.4	----	----	----	----	3.4	3.6	3.9	3.8	----	----	----	----	----	----	----
2011	03	11	21	----	----	----	----	4.4	----	----	----	----	3.4	3.6	3.9	3.8	----	----	----	----	----	----	----
2011	03	11	22	----	----	----	----	4.4	----	----	----	----	3.3	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	11	23	----	----	----	----	4.4	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	11	24	----	----	----	----	4.4	----	----	----	----	3.4	3.7	3.9	3.8	----	----	----	----	----	----	----
2011	03	12	01	----	----	----	----	4.4	----	----	----	----	3.4	3.7	3.9	3.9	----	----	----	----	----	----	----
2011	03	12	02	----	----	----	----	4.5	----	----	----	----	3.3	3.6	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	03	----	----	----	----	4.4	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	04	----	----	----	----	4.5	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	05	----	----	----	----	4.5	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	06	----	----	----	----	4.5	----	----	----	----	3.4	3.8	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	07	----	----	----	----	4.5	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	08	----	----	----	----	4.5	----	----	----	----	3.4	3.8	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	09	----	----	----	----	4.5	----	----	----	----	3.4	3.8	4.0	4.0	----	----	----	----	----	----	----
2011	03	12	10	----	----	----	----	4.5	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	11	----	----	----	----	4.5	----	----	----	----	3.4	3.7	3.9	3.9	----	----	----	----	----	----	----
2011	03	12	12	----	----	----	----	4.4	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	13	----	----	----	----	4.5	----	----	----	----	3.4	3.7	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	14	----	----	----	----	4.4	----	----	----	----	3.4	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	12	15	----	----	----	----	4.4	----	----	----	----	3.4	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	12	16	----	----	----	----	4.4	----	----	----	----	3.4	3.7	----	3.8	----	----	----	----	----	----	----
2011	03	12	17	----	----	----	----	4.4	----	----	----	----	3.4	3.6	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	18	----	----	----	----	----	----	----	----	----	----	3.7	4.0	3.8	----	----	----	----	----	----	----
2011	03	12	19	----	----	----	----	----	----	----	----	----	----	3.7	3.9	3.8	----	----	----	----	----	----	----
2011	03	12	20	----	----	----	----	4.4	----	----	----	----	----	3.6	4.0	3.9	----	----	----	----	----	----	----
2011	03	12	21	----	----	----	----	4.4	----	----	----	----	----	3.6	----	3.9	----	----	----	----	----	----	----
2011	03	12	22	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	12	23	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	12	24	----	----	----	----	4.5	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	13	01	----	----	----	----	4.5	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	13	02	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	13	03	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	13	04	----	----	----	----	4.5	----	----	----	----	----	3.7	----	4.0	----	----	----	----	----	----	----
2011	03	13	05	----	----	----	----	4.5	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	13	06	----	----	----	----	4.5	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	13	07	----	----	----	----	4.4	----	----	----	----	----	3.7	----	4.0	----	----	----	----	----	----	----
2011	03	13	08	----	----	----	----	4.5	----	----	----	----	----	3.8	----	3.9	----	----	----	----	----	----	----
2011	03	13	09	----	----	----	----	4.5	----	----	----	----	----	3.8	----	4.0	----	----	----	----	----	----	----
2011	03	13	10	----	----	----	----	4.5	----	----	----	----	----	3.7	4.1	3.9	----	----	----	----	----	----	----
2011	03	13	11	----	----	----	----	4.3	----	----	----	----	----	3.7	4.1	3.9	----	----	----	----	----	----	----
2011	03	13	12	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.8	----	----	----	----	----	----	----
2011	03	13	13	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.9	----	----	----	----	----	----	----
2011	03	13	14	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.8	----	----	----	----	----	----	----
2011	03	13	15	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.8	----	----	----	----	----	----	----
2011	03	13	16	----	----	----	----	4.4	----	----	----	----	----	3.7	----	3.8	3.8	3.6	----	----	----	----	----
2011	03	13	17	----	----	----	----	4.4	----	----	----	----	----	3.6	----	3.8	3.9	4.2	----	----	----	----	----
2011	03	13	18	----	----	----	----	4.4	----	----	----	----	----	3.6	----	3.8	3.9	4.2	----	----	----	----	----
2011	03	13	19	----	----	----	----	4.3	----	----	----	----	----	3.6	----	3.8	3.9	4.2	----	----	----	----	----
2011	03	13	20	----	----	----	----	4.4	----	----	----	----	----	3.6	----	3.8	3.9	4.2	----	----	----	----	----
2011	03	13	21	----	----	----	----	4.4	3.4	----	----	----	----	3.6	----	3.8	3.9	4.2	----	----	----	----	----
2011	03	13	22	----	4.0	3.9	----	4.4	3.9	----	----	----	----	3.7	----	3.8	3.9	4.2	4.1	----	----	----	----
2011	03	13	23	----	3.9	3.8	----	4.4	3.9	----	----	----	----	3.7	----	3.9	3.9	4.3	4.2	----	----	----	----
2011	03	13	24	----	3.9	3.8	----	4.4	3.9	----	----	----	----	3.7	----	3.9	4.0	4.3	4.2	----	----	----	----

Note 1: "----" represents lack of data.

Note 2: In the column *, "1" is recorded when the rain sensor detected a raindrop.

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011— (continued)

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci	Rain sensing
																				$\times 10^{-2}$μGy/h		mm/h	*
2011	03	14	01	----	3.9	3.8	----	4.5	3.9	----	----	----	----	3.7	----	3.9	3.9	4.3	4.2	----	----	----	----
2011	03	14	02	----	3.9	3.8	----	4.4	4.0	----	----	----	----	3.8	----	3.9	4.0	4.3	4.2	----	----	----	----
2011	03	14	03	----	3.9	3.8	----	4.4	3.9	----	----	----	----	3.7	----	3.9	4.0	4.2	4.2	----	----	----	----
2011	03	14	04	----	3.9	3.9	----	4.5	4.0	----	----	----	----	3.8	----	4.0	4.0	4.3	4.2	----	----	----	----
2011	03	14	05	----	4.0	3.8	----	4.5	4.0	----	----	----	----	3.8	----	4.0	4.0	4.3	4.2	----	----	----	----
2011	03	14	06	----	3.9	3.9	----	4.5	4.0	----	----	----	----	3.8	----	4.0	4.1	4.3	4.2	----	----	----	----
2011	03	14	07	----	4.0	3.9	----	4.5	4.0	----	----	----	----	3.8	----	4.0	4.0	4.3	4.3	----	----	----	----
2011	03	14	08	----	4.0	3.9	----	4.6	4.1	----	----	----	----	3.8	----	4.0	4.0	4.4	4.3	----	----	----	----
2011	03	14	09	----	3.9	3.9	----	4.5	4.0	----	----	----	----	3.8	----	3.9	4.0	4.3	4.3	----	----	----	----
2011	03	14	10	----	3.9	3.8	----	4.5	4.0	----	----	----	----	3.7	----	3.9	4.0	4.3	4.2	----	----	----	----
2011	03	14	11	----	3.9	3.8	----	4.5	4.0	----	----	----	----	3.7	----	3.9	3.9	4.3	4.2	----	----	----	----
2011	03	14	12	----	3.8	3.8	----	4.4	4.0	----	----	----	----	3.7	----	3.8	3.8	4.3	4.2	----	----	----	----
2011	03	14	13	----	3.8	3.7	----	4.4	3.9	----	----	----	----	3.7	----	3.8	3.8	4.2	4.1	----	----	----	----
2011	03	14	14	----	3.8	3.7	----	4.4	3.9	----	----	----	----	3.7	----	3.8	3.9	4.2	4.1	----	----	----	----
2011	03	14	15	----	3.8	3.7	----	4.4	3.9	----	----	----	----	3.6	----	3.8	3.9	4.1	4.1	----	----	----	----
2011	03	14	16	----	3.8	3.6	----	4.3	3.8	----	----	----	----	3.6	----	3.8	3.9	4.1	4.1	----	----	----	----
2011	03	14	17	----	3.8	3.6	----	4.3	3.8	----	----	----	----	3.6	----	3.8	3.8	4.1	4.0	----	----	----	----
2011	03	14	18	----	3.8	3.7	5.3	4.3	3.8	----	----	----	----	3.6	----	3.8	3.8	4.1	4.1	4.6	3.7	----	----
2011	03	14	19	----	3.8	3.6	5.2	4.4	3.8	----	----	----	----	3.6	----	3.8	3.8	4.1	4.1	4.5	3.7	----	----
2011	03	14	20	----	3.8	3.6	5.2	4.3	3.8	----	----	----	----	3.6	----	3.8	3.9	4.2	4.1	4.5	3.7	----	----
2011	03	14	21	----	3.8	3.7	5.2	4.3	3.8	----	----	----	----	3.6	----	3.8	3.8	4.2	4.1	4.5	3.7	----	----
2011	03	14	22	----	3.8	3.7	5.2	4.3	3.8	----	----	----	----	3.6	----	3.8	3.8	4.1	4.1	4.5	3.7	----	----
2011	03	14	23	----	3.9	3.7	5.2	4.4	3.9	----	----	----	----	3.6	----	3.9	3.9	4.1	4.1	4.5	3.8	----	----
2011	03	14	24	----	3.9	3.7	5.3	4.4	3.9	----	----	----	----	3.7	----	3.8	3.9	4.2	4.2	4.6	3.8	----	----
2011	03	15	01	----	5.1	4.2	7.0	5.5	5.3	----	----	----	----	5.0	----	4.9	4.9	5.3	5.2	5.7	5.3	----	----
2011	03	15	02	----	16.5	15.0	15.2	16.3	14.9	----	----	----	----	17.6	----	17.6	17.4	17.4	15.8	14.5	15.9	----	----
2011	03	15	03	----	10.3	9.7	10.1	10.2	8.8	----	----	----	----	10.6	----	12.6	11.1	10.3	8.8	8.7	8.9	----	----
2011	03	15	04	----	8.4	7.6	9.4	8.6	7.6	----	----	----	----	8.7	----	10.6	8.6	8.3	7.2	7.6	7.5	----	----
2011	03	15	05	----	58.3	66.1	139.1	73.9	91.9	----	----	----	----	72.8	----	92.2	40.1	61.1	85.2	92.6	110.2	----	----
2011	03	15	06	----	28.8	22.8	48.1	32.4	34.2	----	----	----	----	32.2	----	60.8	21.5	24.6	20.9	26.2	34.2	----	----
2011	03	15	07	----	221.5	140.9	231.5	229.2	220.1	----	----	----	----	246.7	----	282.5	201.2	186.8	183.8	175.5	224.2	----	----
2011	03	15	08	----	370.3	241.5	324.9	377.3	327.3	----	----	----	----	399.0	----	**522.7**	358.0	309.2	280.8	255.9	326.5	----	----
2011	03	15	09	----	258.0	165.1	220.1	284.5	224.4	----	----	----	----	267.9	----	481.2	227.7	190.1	167.0	151.9	205.8	----	----
2011	03	15	10	----	175.7	84.0	116.7	180.4	133.9	----	----	----	----	173.0	----	355.0	160.4	100.2	74.4	67.4	104.7	----	----
2011	03	15	11	----	146.3	70.0	98.3	148.4	111.5	----	----	----	----	143.1	----	300.0	135.5	82.6	61.7	55.8	87.2	----	----
2011	03	15	12	----	130.4	63.1	90.6	130.2	99.9	----	----	----	----	125.8	----	266.8	120.9	73.8	56.2	51.2	79.6	----	----
2011	03	15	13	----	121.4	62.3	89.1	122.0	96.2	----	----	----	----	116.7	----	251.2	113.8	70.7	56.7	52.7	79.2	----	----
2011	03	15	14	----	107.7	53.1	72.9	104.5	80.3	----	----	----	----	100.9	----	228.8	101.6	59.5	44.4	40.3	63.2	----	----
2011	03	15	15	----	98.1	47.1	66.9	94.3	73.2	----	----	----	----	90.8	----	212.4	92.7	52.9	39.7	36.3	57.1	----	----
2011	03	15	16	----	91.6	43.7	62.5	86.9	67.7	----	----	----	----	83.4	----	200.4	86.7	48.5	36.5	33.5	52.9	----	----
2011	03	15	17	----	86.2	40.7	58.8	80.8	63.3	----	----	----	----	77.6	----	191.3	82.0	45.0	33.8	31.0	49.1	----	----
2011	03	15	18	----	82.3	38.7	56.3	76.6	60.0	----	----	----	----	73.4	----	184.6	78.5	42.4	32.0	29.5	46.5	----	----
2011	03	15	19	----	79.2	37.1	54.3	73.2	57.7	----	----	----	----	70.2	----	179.1	75.8	40.5	30.5	28.2	44.7	----	----
2011	03	15	20	----	77.0	36.2	53.0	70.7	55.8	----	----	----	----	67.9	----	174.8	73.8	39.2	29.7	27.4	43.4	----	----
2011	03	15	21	----	75.2	35.4	52.1	68.9	54.7	----	----	----	----	66.2	----	171.4	72.2	38.3	29.1	27.0	42.3	----	----
2011	03	15	22	----	73.8	34.7	51.3	67.4	53.6	----	----	----	----	64.5	----	168.7	71.0	37.5	28.6	26.6	41.6	----	----
2011	03	15	23	----	72.7	34.3	50.4	66.3	52.6	----	----	----	----	63.6	----	166.7	70.0	37.0	28.1	26.2	40.9	----	----
2011	03	15	24	----	71.7	33.7	49.8	65.2	51.9	----	----	----	----	62.5	----	164.9	69.1	36.3	27.7	25.8	40.3	----	----
2011	03	16	01	----	70.7	33.4	49.3	64.3	51.1	----	----	----	----	61.7	----	163.2	68.3	35.9	27.3	25.5	39.8	----	----
2011	03	16	02	----	70.3	33.4	49.2	63.8	50.9	----	----	----	----	61.2	----	162.2	68.0	35.8	27.5	25.6	39.7	----	----
2011	03	16	03	----	70.4	33.6	48.9	63.7	50.9	----	----	----	----	61.0	----	163.3	68.8	35.7	27.4	25.5	39.6	----	----
2011	03	16	04	----	74.5	33.5	48.5	63.3	51.4	----	----	----	----	58.9	----	174.5	73.8	34.5	26.5	24.3	38.5	----	----
2011	03	16	05	----	86.4	36.4	57.5	73.9	62.3	----	----	----	----	70.7	----	183.3	86.2	41.4	33.7	32.1	49.0	----	----
2011	03	16	06	----	151.8	84.4	116.8	143.2	123.7	----	----	----	----	146.8	----	257.8	146.3	99.3	88.5	79.7	115.3	----	----
2011	03	16	07	----	143.1	91.0	109.7	138.8	113.8	----	----	----	----	136.3	----	263.1	145.3	99.7	92.6	77.7	101.4	----	----
2011	03	16	08	----	122.3	65.0	82.2	116.8	93.0	----	----	----	----	111.9	----	239.1	123.5	70.4	59.9	49.8	74.0	----	----
2011	03	16	09	----	113.9	56.6	75.1	107.2	86.6	----	----	----	----	102.2	----	225.7	114.0	63.0	52.5	43.8	66.8	----	----
2011	03	16	10	----	105.3	46.5	66.4	96.6	77.2	----	----	----	----	92.7	----	213.3	105.9	55.8	45.9	38.9	59.0	----	----
2011	03	16	11	----	98.3	44.6	61.0	89.2	72.0	----	----	----	----	85.3	----	202.6	98.8	50.0	39.6	32.7	52.3	----	----
2011	03	16	12	----	94.7	43.6	58.8	85.1	69.0	----	----	----	----	81.5	----	196.5	94.3	48.2	38.3	32.3	50.9	----	----
2011	03	16	13	----	89.6	39.2	55.1	79.5	64.4	----	----	----	----	75.4	----	188.9	89.0	43.6	34.1	28.5	46.6	----	----
2011	03	16	14	----	86.6	37.9	52.9	75.6	60.5	----	----	----	----	71.7	----	181.0	85.8	41.8	32.1	26.7	43.8	----	----
2011	03	16	15	----	84.5	36.9	51.7	73.0	58.5	----	----	----	----	69.5	----	175.9	83.7	40.5	31.1	26.1	42.8	----	----
2011	03	16	16	----	82.9	36.3	51.0	71.3	57.2	----	----	----	----	67.7	----	172.1	82.0	39.6	30.4	25.6	41.8	----	----
2011	03	16	17	----	81.5	35.7	50.3	69.9	56.0	----	----	----	----	66.3	----	160.5	80.4	38.9	29.8	25.1	41.1	----	----
2011	03	16	18	----	80.6	35.3	50.0	68.8	55.1	----	----	----	----	65.3	----	158.5	79.3	38.3	29.2	24.9	40.5	----	----
2011	03	16	19	----	79.7	34.9	49.5	68.0	54.4	----	----	----	----	64.5	----	157.1	78.6	37.9	28.9	24.7	39.7	----	----
2011	03	16	20	----	79.0	34.6	49.1	67.2	53.9	----	----	----	----	63.8	----	155.7	77.8	37.7	28.7	24.5	39.2	----	----
2011	03	16	21	----	78.3	34.2	48.7	66.6	53.4	----	----	----	----	63.2	----	154.8	77.0	37.3	28.4	24.2	38.8	----	----
2011	03	16	22	----	77.7	34.0	48.5	66.1	53.0	----	----	----	----	62.8	----	154.1	76.6	37.0	28.2	24.1	38.5	----	----
2011	03	16	23	----	77.2	33.8	48.1	65.6	52.6	----	----	----	----	62.5	----	153.3	76.1	36.7	27.9	24.0	38.2	----	----
2011	03	16	24	----	76.7	33.6	47.8	65.3	52.4	----	----	----	----	61.9	----	152.6	75.5	36.5	27.8	23.9	38.0	----	----
2011	03	17	01	----	76.2	33.5	47.5	64.9	52.1	----	----	----	----	61.7	----	152.2	75.2	36.4	27.6	23.7	37.7	----	----
2011	03	17	02	----	75.8	33.2	47.3	64.6	51.8	----	----	----	----	61.4	----	151.5	74.8	36.2	27.5	23.6	37.4	----	----
2011	03	17	03	----	75.4	32.9	47.1	64.1	51.6	----	----	----	----	61.0	----	151.0	74.4	35.9	27.3	23.6	37.3	----	----
2011	03	17	04	----	75.0	32.8	46.9	63.9	51.3	----	----	----	----	60.8	----	150.3	74.0	35.7	27.2	23.5	37.0	----	----
2011	03	17	05	----	74.6	32.6	46.6	63.4	51.0	----	----	----	----	60.3	----	149.5	73.5	35.4	27.0	23.3	36.8	----	----
2011	03	17	06	----	74.3	32.4	46.3	63.1	50.8	----	----	----	----	60.1	----	149.1	73.2	35.3	26.9	23.3	36.6	----	----
2011	03	17	07	----	73.8	32.2	46.0	62.7	50.5	----	----	----	----	59.8	----	148.4	72.7	35.1	26.7	23.1	36.4	----	----
2011	03	17	08	----	73.2	32.2	45.8	62.2	50.3	----	----	----	----	59.5	----	147.3	72.1	34.9	26.6	23.0	36.2	----	----
2011	03	17	09	----	72.5	31.8	45.3	61.6	49.9	----	----	----	----	59.0	----	145.6	71.3	34.6	26.4	22.8	36.1	----	----
2011	03	17	10	----	71.8	31.6	45.0	61.1	49.3	----	----	----	----	58.5	----	143.9	70.7	34.3	26.2	22.5	35.8	----	----
2011	03	17	11	----	71.2	31.3	44.6	60.5	49.0	----	----	----	----	58.0	----	142.3	70.2	34.0	26.0	22.3	35.6	----	----
2011	03	17	12	----	70.4	31.1	44.3	60.0	48.5	----	----	----	----	57.8	114.6	140.9	69.9	33.8	25.8	22.1	35.3	----	----
2011	03	17	13	----	70.1	31.0	44.0	59.5	48.1	----	----	----	----	57.6	113.2	139.4	69.3	33.6	25.6	22.1	35.1	----	----
2011	03	17	14	----	69.6	30.7	43.9	59.0	47.8	----	----	----	----	56.9	----	138.4	68.7	33.3	25.5	21.8	34.9	----	----
2011	03	17	15	----	69.2	30.5	43.5	58.7	47.4	----	----	----	----	55.3	----	137.2	68.4	33.1	25.3	21.7	34.7	----	----
2011	03	17	16	----	68.9	30.4	43.3	58.3	47.1	----	----	----	----	55.8	----	136.4	68.0	33.0	25.2	21.4	34.3	----	----
2011	03	17	17	----	68.4	30.2	43.1	58.0	46.8	72.6	73.7	----	----	55.2	----	135.4	67.4	32.8	25.0	21.5	34.2	----	----
2011	03	17	18	----	67.9	30.0	42.8	57.6	46.5	71.3	72.6	----	63.2	53.8	108.6	134.6	66.5	32.6	24.9	21.4	34.0	----	----
2011	03	17	19	----	67.6	29.8	42.6	57.3	46.3	70.4	71.5	69.9	63.0	54.4	105.7	133.7	66.0	32.5	24.8	21.4	33.7	0.0	0
2011	03	17	20	----	67.2	29.7	42.4	57.1	46.0	70.1	70.9	68.3	62.3	53.9	104.4	133.2	65.9	32.4	24.6	21.2	33.6	0.0	0
2011	03	17	21	----	67.1	29.6	42.3	57.0	45.8	69.8	70.6	67.3	61.7	53.8	103.6	132.9	65.6	32.2	24.6	21.2	33.5	0.0	0
2011	03	17	22	----	66.8	29.4	42.2	56.7	45.7	69.4	70.4	66.8	61.3	53.5	102.9	132.5	65.3	32.2	24.4	21.1	33.3	0.0	0
2011	03	17	23	----	66.5	29.3	41.8	56.4	45.5	69.1	69.9	66.3	61.1	53.2	102.3	132.0	65.0	32.0	24.4	21.1	33.2	0.0	0
2011	03	17	24	----	66.1	29.1	41.7	56.1	45.3	68.8	69.5	66.0	60.8	53.0	101.8	131.3	64.6	31.9	24.2	20.9	32.9	0.0	0

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011 — (continued)

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci	Rain sensing
																				$\times 10^{-2}$μGy/h		mm/h	*
2011	03	18	01	----	65.7	29.0	41.5	55.9	45.0	68.4	69.2	65.7	60.5	52.7	101.0	130.6	64.2	31.7	24.1	20.9	32.7	0.0	0
2011	03	18	02	----	65.4	28.8	41.3	55.5	44.8	68.1	68.8	65.3	60.0	52.4	100.7	129.9	63.9	31.6	24.0	20.8	32.6	0.0	0
2011	03	18	03	----	65.0	28.7	41.1	55.3	44.6	67.9	68.5	65.0	59.8	52.2	100.1	129.3	63.6	31.4	23.8	20.7	32.4	0.0	0
2011	03	18	04	----	64.8	28.5	41.0	55.1	44.5	67.4	68.4	64.7	59.6	52.0	99.7	129.1	63.2	31.3	23.7	20.6	32.2	0.0	0
2011	03	18	05	----	64.4	28.4	40.8	54.7	44.3	67.0	67.8	64.5	59.3	51.7	99.0	128.5	63.0	31.1	23.6	20.5	32.1	0.0	0
2011	03	18	06	----	64.1	28.3	40.6	54.5	44.1	66.7	67.4	64.1	59.0	51.4	98.5	127.9	62.6	31.0	23.6	20.5	32.0	0.0	0
2011	03	18	07	----	63.6	28.2	40.4	54.2	43.8	66.3	67.1	63.7	58.6	51.1	98.1	127.0	62.4	30.8	23.5	20.4	31.9	0.0	0
2011	03	18	08	----	63.2	28.1	40.1	53.9	43.7	66.0	66.6	63.3	58.2	50.9	97.3	126.3	61.6	30.7	23.3	20.3	31.6	0.0	0
2011	03	18	09	----	62.8	27.8	39.9	53.6	43.4	65.3	66.2	62.7	57.7	50.6	96.6	125.1	61.1	30.5	23.3	20.2	31.5	0.0	0
2011	03	18	10	----	62.2	27.7	39.6	53.1	43.1	64.9	65.7	62.2	57.4	50.1	96.1	123.7	60.6	30.3	23.2	20.0	31.3	0.0	0
2011	03	18	11	----	61.6	27.5	39.4	52.7	42.8	64.3	65.2	61.9	57.0	49.7	95.2	122.7	60.2	30.1	23.0	19.9	31.3	0.0	0
2011	03	18	12	----	61.0	27.4	39.1	52.2	42.5	63.6	64.7	61.5	56.9	49.5	94.7	121.7	59.7	29.9	22.8	19.7	31.0	0.0	0
2011	03	18	13	----	60.7	27.2	38.8	51.9	42.2	63.0	64.4	60.9	56.6	49.1	94.2	120.7	59.3	29.7	22.7	19.6	30.9	0.0	0
2011	03	18	14	----	60.5	27.1	38.6	51.6	41.9	62.4	64.0	60.4	56.0	48.8	93.6	119.3	58.9	29.5	22.5	19.4	30.6	0.0	0
2011	03	18	15	----	60.1	26.8	38.3	51.2	41.6	61.7	63.5	59.8	55.6	48.5	92.8	118.1	58.1	29.4	22.5	19.3	30.5	0.0	0
2011	03	18	16	----	59.8	26.3	37.8	50.8	41.4	61.2	63.1	59.2	55.2	48.3	92.3	117.3	57.7	29.1	22.3	19.1	30.3	0.0	0
2011	03	18	17	----	59.4	26.0	37.5	50.4	41.1	60.7	62.6	58.7	54.7	48.0	91.6	116.5	57.2	29.0	22.2	19.0	30.1	0.0	0
2011	03	18	18	----	59.2	25.8	37.3	50.1	40.9	60.6	62.5	58.6	54.5	47.6	91.1	115.9	56.9	28.9	22.1	18.9	29.9	0.0	0
2011	03	18	19	----	58.9	25.7	37.2	50.0	40.6	60.4	61.9	58.3	54.4	47.3	90.7	115.5	56.9	28.8	22.0	18.8	29.8	0.0	0
2011	03	18	20	----	58.6	25.6	37.1	49.8	40.4	60.3	61.7	58.2	54.1	47.2	90.2	115.1	56.7	28.7	21.9	18.8	29.6	0.0	0
2011	03	18	21	----	58.3	25.5	37.0	49.6	40.4	60.3	61.5	58.1	54.0	46.9	89.9	114.8	56.6	28.6	21.9	18.8	29.5	0.0	0
2011	03	18	22	----	58.2	25.5	36.9	49.4	40.2	59.9	61.3	57.8	53.8	46.8	89.7	114.3	56.6	28.6	21.8	18.8	29.4	0.0	0
2011	03	18	23	----	58.0	25.3	36.7	49.3	40.1	59.9	61.1	57.7	53.6	46.6	89.3	113.9	56.5	28.4	21.7	18.7	29.3	0.0	0
2011	03	18	24	----	57.7	25.3	36.5	49.1	39.9	59.7	60.9	57.6	53.4	46.5	88.9	113.6	56.2	28.3	21.6	18.6	29.2	0.0	0
2011	03	19	01	----	57.5	25.1	36.5	49.0	39.8	59.7	60.6	57.4	53.0	46.3	88.8	113.3	56.0	28.3	21.6	18.6	29.1	0.0	0
2011	03	19	02	----	57.3	25.1	36.4	48.8	39.7	59.3	60.4	57.2	52.9	46.0	88.3	112.8	55.8	28.2	21.5	18.5	29.0	0.0	0
2011	03	19	03	----	57.0	24.9	36.1	48.5	39.6	59.1	60.1	57.1	52.6	45.9	87.9	112.5	55.7	28.1	21.4	18.5	28.9	0.0	0
2011	03	19	04	----	56.8	24.9	36.0	48.4	39.4	58.9	59.8	56.9	52.4	45.8	87.5	112.1	55.5	28.0	21.4	18.4	28.7	0.0	0
2011	03	19	05	----	56.6	24.7	35.8	48.1	39.2	58.5	59.6	56.6	52.2	45.6	87.3	111.7	55.3	27.8	21.2	18.3	28.6	0.0	0
2011	03	19	06	----	56.2	24.6	35.6	47.9	39.1	58.4	59.3	56.4	52.0	45.3	86.7	111.2	55.1	27.7	21.1	18.3	28.4	0.0	0
2011	03	19	07	----	56.1	24.5	35.5	47.8	39.0	58.0	59.0	56.1	51.6	45.2	86.5	110.6	54.9	27.6	21.2	18.2	28.4	0.0	0
2011	03	19	08	----	55.8	24.4	35.4	47.5	38.7	57.7	58.8	55.8	51.5	44.9	86.1	109.9	54.5	27.5	21.0	18.1	28.4	0.0	0
2011	03	19	09	----	55.4	24.3	35.0	47.2	38.6	57.4	58.4	55.5	51.4	44.8	85.4	109.1	54.2	27.4	21.0	18.0	28.2	0.0	0
2011	03	19	10	----	54.9	24.1	34.9	46.8	38.3	56.9	57.9	54.9	51.0	44.6	84.9	107.9	53.7	27.2	20.8	17.9	28.1	0.0	0
2011	03	19	11	----	54.3	23.9	34.6	46.4	38.0	56.3	57.4	54.2	50.6	44.2	84.2	106.6	53.2	27.0	20.7	17.8	27.8	0.0	0
2011	03	19	12	53.4	53.7	23.8	34.4	46.0	37.8	55.9	57.0	53.8	50.4	43.8	83.6	105.5	52.8	26.8	20.6	17.6	27.7	0.0	0
2011	03	19	13	52.8	53.2	23.6	34.2	45.8	37.4	55.4	56.6	53.5	50.1	43.7	82.7	104.4	52.6	26.6	20.5	17.5	27.6	0.0	0
2011	03	19	14	52.1	52.7	23.5	33.9	45.4	37.2	55.1	56.4	53.1	49.8	43.5	82.3	103.4	52.3	26.4	20.4	17.4	27.5	0.0	0
2011	03	19	15	51.6	52.6	23.4	33.7	45.1	36.9	54.7	55.8	52.8	49.5	43.2	81.7	102.6	52.1	26.3	20.2	17.4	27.3	0.0	0
2011	03	19	16	51.4	52.2	23.1	33.4	45.0	36.5	54.6	55.8	52.5	49.3	42.8	81.4	102.0	51.8	26.2	20.1	17.1	27.2	0.0	0
2011	03	19	17	51.0	51.9	23.0	33.3	44.7	36.2	53.8	55.2	52.0	48.9	42.7	80.8	100.8	51.4	26.0	20.0	17.1	27.0	0.0	0
2011	03	19	18	51.0	51.9	22.9	33.1	44.3	36.0	53.5	55.0	51.5	48.4	42.3	80.0	99.7	51.0	25.9	20.0	17.1	26.8	0.0	0
2011	03	19	19	51.1	51.9	23.0	33.2	44.1	35.9	53.4	54.6	51.4	48.2	42.1	79.6	99.3	50.9	25.9	19.9	17.1	26.7	0.0	0
2011	03	19	20	50.9	51.6	22.9	33.2	43.9	35.8	53.3	54.5	51.4	48.1	42.0	79.2	99.0	50.7	25.8	19.8	17.1	26.7	0.0	0
2011	03	19	21	50.7	51.5	22.7	33.1	43.8	35.7	53.3	54.3	51.3	48.0	41.9	79.0	98.6	50.6	25.7	19.7	17.0	26.6	0.0	0
2011	03	19	22	50.5	51.2	22.7	33.0	43.7	35.6	53.0	54.1	51.2	47.6	41.7	78.7	98.4	50.2	25.6	19.7	17.0	26.5	0.0	0
2011	03	19	23	50.4	51.2	22.7	33.0	43.5	35.5	52.9	53.9	50.9	47.3	41.5	78.4	98.2	50.2	25.6	19.7	16.9	26.3	0.0	0
2011	03	19	24	50.1	50.9	22.6	32.8	43.4	35.4	52.7	53.9	50.9	47.2	41.3	78.4	98.1	49.8	25.6	19.6	16.9	26.3	0.0	0
2011	03	20	01	49.9	50.8	22.5	32.7	43.3	35.3	52.5	53.6	50.6	47.0	41.3	78.0	98.2	49.9	25.5	19.5	16.8	26.2	0.0	0
2011	03	20	02	49.8	50.6	22.4	32.6	43.2	35.1	52.5	53.4	50.5	46.9	41.2	77.6	97.7	49.7	25.4	19.5	16.8	26.1	0.0	0
2011	03	20	03	49.6	50.4	22.4	32.4	43.0	35.1	52.1	53.2	50.4	46.8	40.9	77.5	97.4	49.5	25.3	19.4	16.7	25.9	0.0	0
2011	03	20	04	49.4	50.3	22.2	32.3	42.9	34.8	51.9	53.0	50.1	46.5	40.8	77.3	97.2	49.3	25.2	19.4	16.7	25.8	0.0	0
2011	03	20	05	49.2	50.0	22.1	32.2	42.6	34.7	51.9	52.8	49.9	46.3	40.6	76.9	96.9	49.0	25.2	19.3	16.6	25.7	0.0	0
2011	03	20	06	49.0	49.9	22.0	32.0	42.5	34.6	51.7	52.7	49.8	46.0	40.4	76.6	96.6	48.9	25.0	19.2	16.6	25.6	0.0	0
2011	03	20	07	48.8	49.6	22.0	32.0	42.3	34.4	51.4	52.4	49.7	45.8	40.3	76.3	96.3	48.7	25.0	19.2	16.6	25.5	0.0	0
2011	03	20	08	48.6	49.4	21.8	31.8	42.1	34.3	51.2	52.2	49.4	45.8	40.2	76.0	95.9	48.5	24.9	19.1	16.5	25.5	0.0	0
2011	03	20	09	48.4	49.2	21.8	31.6	42.0	34.2	50.9	51.8	49.1	45.8	40.0	75.3	95.0	48.2	24.8	19.0	16.3	25.4	0.0	0
2011	03	20	10	47.9	48.6	21.7	31.4	41.6	33.8	50.4	51.4	48.7	45.3	39.8	74.8	93.9	47.7	24.5	19.0	16.2	25.3	0.0	0
2011	03	20	11	53.7	53.8	29.7	41.6	47.7	41.5	56.2	56.4	53.8	50.7	46.4	81.1	99.8	53.5	33.6	27.7	24.9	35.1	0.0	0
2011	03	20	12	54.2	53.8	29.3	37.6	47.2	39.6	55.4	56.4	53.8	51.5	46.3	82.9	101.5	55.2	32.6	24.6	21.6	31.7	0.0	0
2011	03	20	13	52.0	51.5	25.4	34.9	44.8	37.3	52.9	54.3	51.4	49.5	43.7	80.2	98.8	52.3	28.9	21.4	18.9	28.7	0.0	0
2011	03	20	14	51.0	50.5	24.5	34.1	43.8	36.4	51.9	53.2	50.3	48.3	42.7	78.4	97.1	51.0	27.9	20.8	18.3	28.0	0.0	0
2011	03	20	15	50.1	50.1	23.8	33.3	43.0	35.5	51.0	52.4	49.5	47.4	41.8	77.1	95.7	50.1	27.0	20.2	17.7	27.2	0.0	0
2011	03	20	16	49.4	49.5	23.2	32.8	42.2	35.0	50.3	51.7	48.7	46.7	41.0	75.9	94.6	49.3	26.3	19.7	17.3	26.6	0.0	0
2011	03	20	17	48.8	49.2	22.9	32.5	42.0	34.8	49.9	51.3	48.4	46.0	40.6	75.2	93.6	48.9	26.1	19.5	17.1	26.3	0.0	0
2011	03	20	18	48.5	48.9	22.7	32.3	41.7	34.5	49.6	51.0	48.0	45.7	40.2	74.7	93.0	48.5	25.9	19.4	17.0	26.1	0.0	0
2011	03	20	19	48.2	48.6	22.5	32.2	41.4	34.3	49.3	50.7	47.6	45.3	40.1	74.3	92.4	48.2	25.7	19.5	17.0	25.9	0.0	0
2011	03	20	20	48.0	48.4	22.5	32.1	41.2	34.2	49.2	50.3	47.5	45.2	39.9	74.0	91.8	47.9	25.8	19.4	17.0	25.9	0.0	0
2011	03	20	21	47.8	48.2	22.4	32.1	41.1	34.2	49.1	50.1	47.2	44.9	39.7	73.7	91.3	47.7	25.6	19.3	17.0	25.8	0.0	0
2011	03	20	22	47.7	48.2	22.4	32.0	41.1	34.1	49.1	50.1	47.2	44.9	39.6	73.5	91.2	47.7	25.6	19.4	17.0	25.9	0.0	0
2011	03	20	23	47.6	48.0	22.2	31.8	40.9	34.0	49.0	49.9	47.2	44.8	39.5	73.4	91.0	47.5	25.5	19.3	17.0	25.7	0.0	0
2011	03	20	24	47.4	47.7	22.2	31.7	40.8	33.8	48.8	49.8	47.1	44.5	39.4	73.0	90.8	47.2	25.4	19.3	16.9	25.6	0.0	0
2011	03	21	01	47.1	47.4	21.9	31.5	40.5	33.7	48.5	49.6	46.8	44.2	39.1	72.5	90.2	46.9	25.1	19.0	16.7	25.3	0.0	0
2011	03	21	02	47.0	47.3	21.8	31.5	40.4	33.5	48.3	49.4	46.7	44.2	39.0	72.3	89.8	46.7	25.1	19.0	16.8	25.3	0.0	0
2011	03	21	03	47.0	47.2	21.8	31.3	40.3	33.4	48.1	49.4	46.7	44.2	39.0	72.1	89.6	46.7	25.1	19.0	16.7	25.2	0.0	0
2011	03	21	04	74.5	76.5	26.0	39.2	66.6	56.7	94.8	88.9	90.5	77.2	68.7	99.9	118.4	74.9	42.1	31.7	29.2	44.2	0.0	0
2011	03	21	05	203.4	211.9	82.1	101.2	185.9	141.8	267.6	259.7	278.9	231.9	205.8	250.4	313.8	231.3	141.3	106.7	89.6	129.0	0.0	1
2011	03	21	06	173.8	163.8	63.9	67.5	149.0	93.4	208.8	219.6	235.9	186.4	147.9	242.3	350.5	196.3	90.5	62.8	53.9	78.2	0.0	0
2011	03	21	07	170.4	160.8	58.9	73.4	145.4	95.4	198.5	212.7	228.1	183.6	142.3	235.5	349.2	187.3	82.8	60.7	55.5	79.4	0.0	1
2011	03	21	08	168.1	152.2	57.1	72.5	133.8	90.1	171.5	196.9	201.0	169.6	123.1	230.4	346.9	181.3	67.4	51.5	48.0	69.9	2.0	1
2011	03	21	09	173.6	157.0	56.5	72.1	129.3	88.1	166.1	189.2	188.4	160.7	121.9	228.9	331.5	190.5	67.3	51.9	48.4	68.9	2.5	1
2011	03	21	10	176.5	157.2	61.9	76.9	121.3	81.9	150.3	173.8	171.2	154.2	119.0	219.1	307.4	188.4	64.8	51.5	47.4	67.6	3.5	1
2011	03	21	11	165.1	145.1	54.6	67.0	110.5	74.0	139.6	161.8	159.6	141.1	107.8	203.5	287.6	177.7	57.8	43.9	40.0	58.9	2.5	1
2011	03	21	12	159.8	140.0	52.8	64.8	106.9	71.7	135.6	157.7	155.4	136.4	104.4	197.6	281.2	174.2	56.1	42.7	39.0	57.0	0.5	1
2011	03	21	13	157.6	138.8	52.1	64.4	106.1	71.6	135.1	157.2	155.0	135.7	104.1	196.5	280.7	174.3	55.9	42.7	39.1	57.0	0.0	1
2011	03	21	14	156.7	139.4	52.1	65.6	106.6	72.6	134.8	158.0	155.0	136.2	104.8	196.5	281.9	172.6	53.8	43.0	39.4	57.7	0.5	1
2011	03	21	15	156.3	139.0	51.8	66.5	106.2	73.1	133.3	157.3	153.7	135.1	103.5	196.0	280.1	174.3	54.8	42.2	38.4	57.4	1.0	1
2011	03	21	16	156.3	138.6	51.4	68.1	106.0	73.9	132.9	156.4	152.6	134.6	103.0	194.8	278.0	169.8	54.5	42.1	38.2	57.5	0.5	1
2011	03	21	17	155.7	138.1	50.7	68.2	105.8	74.3	132.8	156.4	152.7	134.9	102.9	193.9	278.1	172.3	51.8	41.8	38.0	57.8	0.0	1
2011	03	21	18	153.9	136.4	49.7	67.0	104.6	73.0	131.7	155.6	151.9	133.7	101.8	192.1	276.8	171.2	53.5	41.2	37.5	56.7	0.0	0
2011	03	21	19	152.3	135.1	48.9	65.9	103.5	72.2	131.2	154.3	151.0	132.4	101.1	191.0	275.8	170.3	53.0	40.8	37.1	55.9	0.0	1
2011	03	21	20	151.2	134.3	48.8	65.3	102.9	71.6	130.9	153.5	150.6	131.7	100.8	190.2	275.4	169.9	52.9	40.6	37.2	55.7	0.0	0
2011	03	21	21	150.2	133.3	48.5	64.9	102.3	71.2	130.2	152.6	149.9	130.7	100.4	189.1	274.7	169.3	52.8	40.6	37.1	55.4	0.0	0
2011	03	21	22	149.2	132.4	48.2	64.8	101.8	70.9	129.8	151.9	149.2	129.9	99.9	188.2	273.9	168.8	52.7	40.5	37.1	55.1	0.0	1
2011	03	21	23	148.6	132.1	48.3	64.5	101.4	70.8	129.1	151.2	148.3	129.8	99.5	187.6	273.4	167.6	52.6	40.5	37.1	55.1	0.0	1
2011	03	21	24	148.3	131.5	48.4	64.6	101.4	70.8	128.4	150.4	147.3	129.2	99.3	186.6	272.6	166.8	52.4	40.5	37.1	55.1	0.0	1

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011 — (continued)

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci	Rain sensing
																				$\times 10^{-2}$μGy/h		mm/h	*
2011	03	22	01	147.1	130.8	48.2	63.9	100.7	70.0	126.8	148.9	145.8	127.9	98.0	186.0	271.0	165.3	51.8	40.0	36.5	54.4	1.0	1
2011	03	22	02	146.5	130.5	47.9	63.5	99.8	69.4	124.7	147.1	143.4	126.4	96.6	184.0	270.9	164.4	51.3	39.7	36.1	53.8	1.5	1
2011	03	22	03	145.7	130.2	47.9	63.1	98.6	68.5	122.8	145.3	141.1	124.7	95.5	182.3	268.9	163.7	51.1	39.5	35.8	53.4	1.0	1
2011	03	22	04	144.3	129.3	47.5	62.3	97.1	67.5	120.9	143.3	139.1	123.0	94.1	180.1	266.4	162.9	50.5	39.0	35.4	52.7	1.5	1
2011	03	22	05	143.0	128.2	47.0	61.9	96.0	66.7	119.7	141.8	137.5	121.5	93.0	178.6	263.8	162.4	50.0	38.6	35.1	52.2	0.5	1
2011	03	22	06	142.8	128.1	47.1	63.1	96.3	67.4	119.4	141.6	137.1	121.3	92.8	178.9	262.4	162.2	50.3	39.2	35.9	53.0	1.5	1
2011	03	22	07	147.3	132.2	50.6	69.5	101.7	73.9	124.1	145.6	140.9	126.8	98.0	183.2	266.2	165.3	54.2	44.7	40.1	58.6	0.5	1
2011	03	22	08	153.9	137.9	56.3	80.2	109.5	83.1	130.9	152.7	147.6	135.6	105.2	190.1	271.5	170.2	60.3	52.4	46.2	66.5	0.5	1
2011	03	22	09	158.8	141.8	62.1	84.8	114.5	88.1	133.6	156.8	151.2	143.0	110.4	194.9	274.7	172.7	62.9	55.5	47.6	69.8	0.0	0
2011	03	22	10	156.7	139.4	59.1	82.2	111.8	85.2	131.5	154.2	148.9	140.5	108.3	193.0	272.6	170.4	59.4	52.0	44.6	67.0	0.0	0
2011	03	22	11	157.2	140.3	58.6	81.0	112.7	85.5	134.2	156.2	151.5	141.4	109.7	195.2	274.3	172.1	60.4	52.5	44.8	67.4	0.0	1
2011	03	22	12	157.6	141.1	59.6	80.4	113.4	85.6	135.9	157.3	153.7	142.5	111.1	196.4	275.8	173.5	61.5	53.2	45.5	67.4	0.0	0
2011	03	22	13	156.1	140.0	58.3	77.8	112.0	83.4	134.4	156.2	153.2	140.9	110.1	195.5	274.1	172.7	60.7	51.8	44.1	65.7	0.0	0
2011	03	22	14	153.7	138.0	56.4	75.2	109.8	81.3	132.3	154.0	150.8	138.6	107.6	192.8	271.9	170.3	58.8	49.7	42.4	63.6	0.0	1
2011	03	22	15	156.3	140.8	56.5	75.9	112.2	83.5	136.4	157.4	155.2	141.5	110.9	195.9	274.8	172.7	60.7	50.8	43.8	65.5	0.0	0
2011	03	22	16	160.2	145.6	58.5	78.2	116.4	86.2	141.4	162.2	159.7	146.6	115.7	201.8	280.8	177.3	63.2	52.6	45.9	68.2	0.0	0
2011	03	22	17	154.3	138.7	56.1	73.6	110.4	80.5	133.0	154.5	151.3	139.5	108.7	195.0	273.8	170.1	58.8	48.3	41.8	63.1	0.0	0
2011	03	22	18	150.7	135.4	54.0	71.3	107.3	78.2	129.4	150.9	147.5	135.4	105.6	190.1	269.1	166.9	56.7	46.4	40.4	60.9	0.0	0
2011	03	22	19	151.1	137.2	54.2	71.8	108.1	79.1	132.4	153.5	152.7	137.4	107.3	190.1	268.7	169.7	58.2	47.7	41.5	62.1	0.0	1
2011	03	22	20	161.3	145.7	60.2	79.8	118.0	88.9	141.5	162.9	161.3	148.5	118.5	202.9	280.8	177.8	66.7	55.4	47.6	70.6	0.5	1
2011	03	22	21	153.0	137.5	55.4	72.6	108.9	80.0	128.9	152.3	149.3	138.4	107.3	194.0	271.9	169.0	57.9	47.3	40.0	61.3	0.5	1
2011	03	22	22	150.1	134.6	53.1	70.2	105.8	77.3	125.1	148.3	144.5	133.8	103.2	189.5	267.5	165.3	55.2	45.0	38.2	58.9	0.5	1
2011	03	22	23	147.6	132.5	52.2	68.8	103.2	75.0	121.7	144.8	140.3	130.2	100.1	186.0	265.7	163.3	54.0	43.9	37.6	57.4	0.5	1
2011	03	22	24	145.7	130.9	51.3	67.7	101.0	73.3	118.8	142.2	137.5	127.2	97.8	182.9	262.7	161.5	52.9	43.0	36.7	56.3	0.5	1
2011	03	23	01	144.0	129.3	50.6	66.7	99.5	72.0	117.2	140.5	135.5	125.4	96.2	180.4	260.0	159.8	52.0	42.2	36.3	55.4	0.0	0
2011	03	23	02	142.7	127.9	50.0	65.9	98.6	71.0	116.2	139.2	134.3	124.1	95.2	178.3	257.9	159.0	51.4	41.7	36.0	54.7	0.0	1
2011	03	23	03	141.8	126.8	49.7	65.7	98.0	70.7	115.6	138.4	133.6	123.2	94.7	177.3	256.3	158.2	51.0	41.6	35.8	54.4	0.0	0
2011	03	23	04	141.0	126.1	49.5	65.4	97.6	70.3	115.0	137.7	133.0	122.6	94.1	176.3	255.2	157.3	50.8	41.4	35.7	54.2	0.0	1
2011	03	23	05	140.2	125.0	49.0	65.0	97.1	69.9	114.5	137.2	132.4	122.0	93.6	175.0	253.5	156.7	50.5	41.1	35.6	53.9	0.0	0
2011	03	23	06	139.6	124.2	48.7	64.6	96.6	69.5	114.4	136.5	131.9	121.2	93.4	174.4	252.3	155.8	50.2	40.9	35.4	53.6	0.0	0
2011	03	23	07	138.9	123.8	48.6	64.3	96.0	69.3	114.4	136.0	131.7	120.5	93.2	173.7	251.3	155.2	50.1	40.8	35.2	53.3	0.0	0
2011	03	23	08	138.4	123.2	48.4	64.2	95.6	69.0	114.1	135.6	131.4	120.1	92.9	172.8	249.9	154.1	49.9	40.8	35.3	53.2	0.0	0
2011	03	23	09	137.6	122.6	48.2	64.0	95.3	68.8	113.7	135.1	130.8	119.7	92.6	171.9	248.5	152.9	49.7	40.7	35.0	53.1	0.0	0
2011	03	23	10	137.2	122.1	48.5	63.6	94.7	68.6	112.8	134.2	130.3	119.6	92.2	171.2	247.5	152.2	49.5	40.5	34.8	53.0	0.0	0
2011	03	23	11	137.1	121.9	48.3	64.0	94.6	69.1	112.9	134.8	130.8	120.0	92.4	171.0	246.4	152.2	49.6	40.7	35.3	53.3	0.0	0
2011	03	23	12	143.9	128.7	53.2	70.8	101.9	75.2	121.7	143.6	140.0	128.6	100.1	178.4	256.1	158.1	55.6	46.5	40.8	60.3	0.0	0
2011	03	23	13	145.2	129.6	53.8	69.4	102.9	74.9	122.3	145.3	141.4	131.2	101.4	180.0	259.6	159.3	56.1	45.4	39.9	59.3	0.0	0
2011	03	23	14	143.9	128.5	53.1	68.8	101.6	73.9	120.6	143.6	139.8	129.4	100.2	178.7	257.3	157.6	55.1	44.6	39.3	58.5	0.0	0
2011	03	23	15	143.1	127.9	52.8	68.5	100.7	----	120.0	142.4	138.7	128.5	99.5	177.4	255.4	156.9	54.7	44.2	38.8	58.0	0.0	0
2011	03	23	16	142.0	126.9	52.3	67.8	99.8	----	118.8	140.9	137.2	127.0	98.6	176.3	253.4	155.6	54.3	43.9	38.2	57.5	0.0	0
2011	03	23	17	141.2	126.0	51.7	67.4	98.9	----	118.3	140.0	136.2	126.1	97.9	174.8	251.6	154.5	53.6	43.5	37.8	57.0	0.0	0
2011	03	23	18	139.1	124.2	50.6	65.8	97.3	----	116.5	137.9	134.1	123.8	96.0	172.6	248.7	153.0	52.3	42.2	37.0	55.6	0.0	0
2011	03	23	19	137.6	122.6	49.7	64.7	96.0	----	114.6	135.8	131.9	121.9	94.2	170.9	246.5	151.3	51.3	41.4	36.1	54.3	0.0	0
2011	03	23	20	136.4	121.3	49.1	64.1	94.7	----	113.2	134.5	130.4	120.6	93.2	169.4	244.7	150.5	50.7	40.9	35.5	53.6	0.0	0
2011	03	23	21	135.3	120.4	48.7	63.6	94.1	----	112.0	133.5	129.3	119.6	92.2	168.0	243.3	149.5	50.1	40.6	35.4	53.1	0.0	0
2011	03	23	22	134.4	119.7	48.2	63.1	93.4	----	111.2	132.5	128.4	118.5	91.5	167.1	241.9	149.1	49.8	40.2	35.2	52.6	0.0	0
2011	03	23	23	133.9	118.8	47.9	62.7	92.8	----	110.6	131.4	127.6	117.9	90.8	166.3	240.8	148.8	49.3	40.0	34.9	52.2	0.0	0
2011	03	23	24	133.0	118.4	47.6	62.2	92.3	----	110.1	130.5	126.8	117.1	90.4	165.2	239.7	147.7	49.1	39.8	34.8	51.9	0.0	0
2011	03	24	01	132.5	117.7	47.3	62.0	91.9	----	109.4	129.9	126.2	116.3	89.8	164.6	238.7	147.1	48.8	39.6	34.6	51.6	0.0	0
2011	03	24	02	131.9	117.2	47.1	61.7	91.4	----	108.9	129.3	125.5	115.6	89.1	163.9	237.6	146.7	48.5	39.5	34.3	51.4	0.0	0
2011	03	24	03	131.3	116.7	47.0	61.4	90.9	----	108.5	128.6	125.0	115.2	88.9	163.1	236.8	146.0	48.4	39.2	34.3	51.1	0.0	0
2011	03	24	04	130.9	116.2	46.7	61.1	90.8	----	108.0	128.2	124.3	114.7	88.5	162.6	236.5	145.6	48.2	39.1	34.1	50.9	0.0	0
2011	03	24	05	130.2	115.8	46.6	60.9	90.5	----	107.7	127.7	124.0	114.3	88.1	162.1	236.0	144.8	48.0	38.9	34.0	50.6	0.0	0
2011	03	24	06	129.8	115.2	46.2	60.7	90.2	----	107.3	127.3	123.5	113.8	87.7	161.1	235.0	144.4	47.7	38.8	33.9	50.5	0.0	0
2011	03	24	07	129.4	114.8	46.1	60.3	89.8	----	107.0	126.8	123.0	113.6	87.6	160.6	234.2	143.9	47.6	38.7	33.7	50.4	0.0	0
2011	03	24	08	128.8	114.4	46.2	60.2	89.4	----	106.2	126.3	122.8	112.8	87.3	160.1	233.2	143.2	47.4	38.5	33.6	50.2	0.0	0
2011	03	24	09	128.4	113.8	45.8	59.9	89.0	----	105.7	125.8	122.2	112.8	87.1	159.3	231.4	142.5	47.3	38.5	33.4	50.0	0.0	0
2011	03	24	10	127.8	113.4	45.6	59.6	88.5	----	105.2	125.1	121.4	112.1	86.6	158.9	229.4	142.3	47.0	38.3	33.3	49.9	0.0	0
2011	03	24	11	127.3	112.8	45.6	59.4	88.2	----	104.6	124.7	120.9	111.5	86.3	158.0	228.2	141.6	46.8	38.2	33.1	49.5	0.0	0
2011	03	24	12	126.8	112.5	45.2	59.3	87.7	----	104.2	123.9	120.5	111.3	86.0	157.4	226.9	140.7	46.7	38.1	32.9	49.4	0.0	0
2011	03	24	13	126.5	112.3	45.0	59.0	87.1	----	103.8	123.6	119.9	110.9	85.7	156.8	226.0	139.4	46.5	37.9	32.8	49.3	0.0	0
2011	03	24	14	126.1	111.7	45.1	58.9	87.0	----	103.2	123.0	119.6	110.5	85.6	156.2	225.2	138.3	46.3	37.8	32.8	49.3	0.0	0
2011	03	24	15	125.5	111.3	45.1	58.7	86.7	----	102.6	122.8	119.0	110.2	85.0	155.6	224.4	137.7	46.2	37.6	32.5	49.1	0.0	0
2011	03	24	16	125.2	111.0	44.8	58.7	86.3	----	102.2	122.6	118.4	109.7	84.8	154.9	223.9	137.5	46.0	37.6	32.5	48.9	0.0	0
2011	03	24	17	124.7	110.6	44.7	58.5	86.0	----	102.2	122.0	117.8	109.4	84.6	154.5	223.3	136.8	45.9	37.4	32.3	48.6	0.0	0
2011	03	24	18	124.4	110.4	44.7	58.3	85.9	----	102.0	121.5	117.7	109.2	84.3	154.1	222.6	136.8	45.8	37.5	32.4	48.7	0.0	0
2011	03	24	19	124.0	110.0	44.5	58.2	85.6	----	101.6	121.3	117.4	108.5	84.0	153.5	221.9	136.8	45.7	37.3	32.3	48.6	0.0	0
2011	03	24	20	123.7	109.7	44.3	57.9	85.5	----	101.3	120.8	117.0	108.2	83.7	153.2	221.7	137.0	45.6	37.2	32.2	48.3	0.0	0
2011	03	24	21	123.3	109.3	44.2	57.6	85.3	----	101.0	120.5	116.8	107.8	83.6	152.9	221.0	137.2	45.5	37.1	32.0	48.2	0.0	0
2011	03	24	22	123.0	108.9	44.1	57.6	85.0	----	100.6	120.1	116.4	107.4	83.2	152.4	220.7	136.7	45.4	37.0	32.0	47.9	0.0	0
2011	03	24	23	122.7	108.6	43.9	57.4	84.6	----	100.4	119.8	116.0	107.2	83.0	151.8	219.9	136.0	45.2	36.9	32.0	47.7	0.0	0
2011	03	24	24	122.3	108.3	43.7	57.1	84.6	----	100.3	119.3	115.6	106.9	82.5	151.5	219.7	135.8	45.1	36.9	32.0	47.5	0.0	0
2011	03	25	01	121.8	107.9	43.7	56.9	84.3	----	100.0	118.9	115.3	106.4	82.4	150.8	218.9	135.4	45.0	36.7	31.9	47.2	0.0	0
2011	03	25	02	121.5	107.5	43.5	56.8	84.1	----	99.8	118.7	115.1	105.8	82.3	150.7	218.6	135.1	44.8	36.6	31.7	47.1	0.0	0
2011	03	25	03	121.0	107.2	43.4	56.6	83.7	----	99.4	118.3	114.8	105.6	82.1	150.1	218.2	134.8	44.7	36.5	31.6	47.0	0.0	0
2011	03	25	04	120.6	107.0	43.1	56.4	83.5	----	99.1	117.8	114.3	105.4	81.8	149.3	218.0	134.1	44.5	36.4	31.6	46.8	0.0	0
2011	03	25	05	120.2	106.6	43.1	56.1	83.4	----	98.7	117.4	113.7	104.9	81.6	149.2	217.5	134.0	44.4	36.3	31.6	46.6	0.0	0
2011	03	25	06	119.9	106.2	42.8	56.0	83.1	----	98.4	117.0	113.3	104.8	81.3	148.3	217.0	133.4	44.3	36.1	31.5	46.5	0.0	0
2011	03	25	07	119.5	106.0	42.8	55.7	82.9	----	98.1	116.7	113.1	104.4	81.0	148.2	216.3	133.0	44.1	36.0	31.3	46.3	0.0	0
2011	03	25	08	119.1	105.6	42.7	55.6	82.7	----	97.9	116.4	113.1	104.2	81.0	147.5	215.4	132.2	44.0	36.1	31.3	46.1	0.0	0
2011	03	25	09	118.7	105.3	42.5	55.4	82.1	----	97.6	116.0	112.5	103.9	80.7	147.2	214.4	131.0	43.8	35.9	31.3	46.2	0.0	0
2011	03	25	10	118.4	105.0	42.6	55.5	81.9	----	97.1	115.6	112.0	103.9	80.7	146.6	213.1	131.3	43.8	36.0	31.3	46.4	0.0	0
2011	03	25	11	118.3	104.5	42.8	55.7	81.8	----	97.1	115.3	112.1	103.9	80.7	146.4	211.9	131.0	44.0	36.2	31.3	46.7	0.0	0
2011	03	25	12	118.1	104.1	42.6	55.4	81.7	----	96.6	115.4	111.8	103.5	80.6	146.0	211.2	130.4	43.7	36.1	31.2	46.5	0.0	0
2011	03	25	13	117.7	103.7	42.4	55.1	81.3	----	95.9	114.9	111.4	103.5	80.4	145.5	210.0	129.4	43.6	35.8	31.0	46.4	0.0	0
2011	03	25	14	117.4	103.6	42.3	55.0	80.9	----	95.7	114.5	111.0	103.0	80.1	145.2	209.0	129.1	43.5	35.7	30.9	46.0	0.0	0
2011	03	25	15	117.0	103.5	42.0	54.7	80.6	----	95.4	113.9	110.4	102.4	79.7	144.5	208.1	128.9	43.2	35.5	30.8	45.9	0.0	0
2011	03	25	16	116.4	103.1	41.7	54.6	80.2	----	94.8	113.4	110.2	102.2	79.2	143.8	207.2	127.9	42.9	35.3	30.6	45.6	0.0	0
2011	03	25	17	116.0	102.7	41.6	54.2	79.8	----	94.4	112.7	109.6	101.7	78.9	143.4	206.5	127.6	42.7	35.1	30.3	45.4	0.0	0
2011	03	25	18	115.5	102.4	41.2	54.1	79.6	----	94.0	112.4	108.9	101.3	78.5	143.1	205.8	127.6	42.6	34.9	30.2	45.2	0.0	0
2011	03	25	19	115.1	101.8	41.0	53.9	79.4	----	93.8	112.2	108.6	100.7	78.2	142.5	205.4	127.1	42.5	34.9	30.2	45.0	0.0	0
2011	03	25	20	114.6	101.5	40.9	53.8	79.2	----	93.5	111.7	108.1	100.5	78.0	141.7	204.4	127.1	42.4	34.8	30.0	44.8	0.0	0
2011	03	25	21	114.3	101.1	40.8	53.6	78.9	----	93.3	111.4	108.0	100.0	77.6	141.4	204.0	127.2	42.2	34.7	29.9	44.5	0.0	1
2011	03	25	22	114.1	100.8	40.6	53.2	78.6	----	92.7	111.1	107.3	99.4	77.4	141.1	203.4	126.6	42.0	34.4	29.6	44.4	0.0	1
2011	03	25	23	113.5	100.4	40.2	52.9	78.4	----	91.9	110.4	106.7	99.2	76.5	140.4	202.7	125.3	41.5	34.0	29.4	43.7	0.0	1
2011	03	25	24	113.1	100.0	40.0	52.5	78.0	----	91.7	110.3	106.5	98.8	76.2	139.9	202.1	124.9	41.2	33.8	29.2	43.4	0.0	0

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011 — (continued)

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci	Rain sensing
																				$\times 10^{-2}$μGy/h		mm/h	*
2011	03	26	01	112.8	99.7	39.8	52.3	77.6	----	91.6	109.9	106.3	98.6	76.1	139.8	201.8	124.6	41.2	33.7	29.1	43.3	0.0	0
2011	03	26	02	112.7	99.7	39.9	52.5	77.6	----	91.7	109.7	106.3	98.9	76.1	139.5	201.9	124.6	41.3	33.9	29.3	43.5	0.0	0
2011	03	26	03	112.4	99.4	39.7	52.3	77.5	----	91.4	109.5	105.9	98.5	76.2	139.4	201.4	124.3	41.2	33.8	29.1	43.3	0.0	1
2011	03	26	04	112.2	99.3	39.9	52.6	77.7	----	91.1	109.6	105.8	98.0	76.1	139.2	201.1	124.0	41.3	34.0	29.4	43.4	0.5	1
2011	03	26	05	111.8	98.9	39.6	52.0	77.2	----	90.5	108.8	105.3	97.8	75.6	138.4	200.6	123.6	40.8	33.6	29.1	43.1	0.0	0
2011	03	26	06	111.1	98.4	39.3	51.6	76.7	----	90.0	108.2	104.8	97.2	74.9	138.0	199.9	123.3	40.6	33.2	28.8	42.7	0.0	0
2011	03	26	07	110.7	98.1	39.2	51.3	76.4	----	89.6	108.0	104.5	96.9	74.8	137.6	199.5	122.8	40.5	33.1	28.7	42.4	0.0	0
2011	03	26	08	110.4	97.8	39.1	51.2	76.2	----	89.4	107.8	104.2	96.7	74.7	137.2	198.9	122.2	40.4	33.0	28.6	42.4	0.0	0
2011	03	26	09	110.2	97.5	39.2	51.1	76.0	----	89.6	107.4	104.0	96.5	74.6	136.8	198.4	121.7	40.3	33.0	28.5	42.3	0.0	0
2011	03	26	10	109.7	97.0	39.2	51.1	75.8	----	89.4	107.1	103.6	96.2	74.3	136.5	197.8	121.7	40.3	32.9	28.4	42.3	0.0	0
2011	03	26	11	109.4	96.5	39.1	51.0	75.5	----	88.8	106.6	103.3	96.2	74.1	136.0	196.8	121.7	40.1	32.8	28.4	42.3	0.0	0
2011	03	26	12	109.1	96.6	39.0	50.9	75.1	----	88.6	106.3	103.0	95.8	74.0	135.4	196.1	121.4	40.0	32.7	28.3	42.0	0.0	0
2011	03	26	13	108.9	96.5	38.9	50.7	74.9	----	88.3	106.0	102.4	95.5	73.7	134.9	195.1	120.9	39.9	32.6	28.1	41.8	0.0	0
2011	03	26	14	108.7	96.4	38.8	50.6	74.6	----	88.0	105.5	102.0	95.2	73.5	134.4	193.9	120.3	39.7	32.5	28.0	41.6	0.0	0
2011	03	26	15	108.0	96.0	38.5	50.5	74.4	----	87.7	105.1	101.9	94.7	73.4	134.0	193.0	120.2	39.6	32.4	27.9	41.5	0.0	0
2011	03	26	16	107.7	95.5	38.3	50.3	74.1	----	87.3	104.7	101.2	94.3	73.0	133.3	192.5	119.8	39.4	32.3	27.9	41.3	0.0	0
2011	03	26	17	107.7	95.3	38.0	50.2	73.7	----	86.9	104.2	100.7	94.1	72.7	132.8	192.0	119.6	39.3	32.2	27.6	41.1	0.0	0
2011	03	26	18	107.4	94.9	37.9	50.0	73.5	----	86.4	103.9	100.5	93.7	72.4	132.3	191.2	119.0	39.2	32.0	27.6	41.0	0.0	0
2011	03	26	19	106.9	94.7	37.7	49.9	73.2	----	86.4	103.7	100.3	93.5	72.2	132.0	190.6	118.7	39.0	32.1	27.7	40.8	0.0	0
2011	03	26	20	106.7	94.3	37.7	49.7	73.0	----	86.0	103.4	99.9	92.9	71.9	131.6	190.0	118.2	38.9	31.9	27.6	40.7	0.0	0
2011	03	26	21	106.2	94.0	37.5	49.5	72.9	----	85.8	103.1	99.6	92.6	71.7	131.2	189.8	118.1	38.8	31.8	27.5	40.5	0.0	0
2011	03	26	22	106.0	93.8	37.4	49.3	72.7	----	85.5	103.0	99.6	92.4	71.5	130.9	189.4	117.5	38.8	31.7	27.5	40.3	0.0	0
2011	03	26	23	105.6	93.5	37.4	49.2	72.5	----	85.1	102.5	99.1	92.0	71.2	130.3	189.0	117.4	38.6	31.7	27.5	40.2	0.0	0
2011	03	26	24	105.4	93.3	37.3	49.1	72.4	----	85.1	102.2	98.8	91.8	70.9	130.1	188.6	117.1	38.5	31.6	27.5	40.1	0.0	0
2011	03	27	01	105.0	93.1	37.1	49.0	72.1	----	85.0	102.2	98.7	91.4	70.9	129.8	188.4	117.0	38.4	31.6	27.3	39.9	0.0	0
2011	03	27	02	104.7	92.8	37.1	48.8	72.0	----	84.8	101.7	98.4	91.2	70.7	129.3	188.0	116.6	38.4	31.5	27.3	39.8	0.0	0
2011	03	27	03	104.5	92.4	37.0	48.6	71.9	----	84.5	101.4	98.1	91.1	70.6	129.0	187.5	116.3	38.2	31.3	27.3	39.7	0.0	0
2011	03	27	04	104.2	92.1	37.0	48.6	71.6	----	84.4	101.1	97.9	90.9	70.4	128.6	187.4	116.0	38.1	31.2	27.2	39.6	0.0	0
2011	03	27	05	103.9	91.8	36.8	48.4	71.4	----	84.2	100.9	97.8	90.5	70.3	128.4	187.4	115.6	37.9	31.2	27.1	39.4	0.0	0
2011	03	27	06	103.7	91.7	36.7	48.3	71.3	----	83.8	100.6	97.5	90.2	70.2	128.0	187.0	115.4	37.9	31.1	27.0	39.2	0.0	0
2011	03	27	07	103.3	91.3	36.6	48.1	70.9	----	83.5	100.3	97.2	89.9	69.9	127.5	186.5	114.9	37.8	31.0	26.9	39.2	0.0	0
2011	03	27	08	102.9	91.2	36.5	47.9	71.0	----	83.4	100.1	96.8	89.8	69.7	127.4	186.1	114.7	37.7	31.0	26.9	39.2	0.0	0
2011	03	27	09	102.8	90.7	36.3	47.8	70.7	----	83.2	99.8	96.5	89.8	69.5	126.9	185.5	114.3	37.5	30.9	26.8	39.1	0.0	0
2011	03	27	10	102.3	90.5	35.9	47.6	70.4	----	83.0	99.5	96.2	89.7	69.4	126.9	184.4	114.1	37.5	30.8	26.6	39.2	0.0	0
2011	03	27	11	102.0	89.7	35.8	47.5	70.3	----	82.6	99.2	96.1	89.4	69.1	126.3	183.5	114.0	37.3	30.8	26.4	39.2	0.0	0
2011	03	27	12	102.0	89.2	35.8	47.3	70.0	----	82.2	99.0	95.8	89.0	68.9	126.0	182.8	113.5	37.3	30.7	26.6	39.0	0.0	0
2011	03	27	13	101.6	89.2	35.7	47.2	69.6	----	81.8	98.8	95.5	88.8	68.7	125.5	182.2	113.0	37.1	30.7	26.5	38.9	0.0	0
2011	03	27	14	101.4	89.3	35.6	47.1	69.5	----	81.7	98.4	95.2	88.7	68.6	125.2	181.6	113.0	37.0	30.5	26.4	38.8	0.0	0
2011	03	27	15	101.0	89.2	35.5	47.0	69.3	----	81.3	98.2	94.7	88.5	68.3	125.0	181.0	112.7	36.8	30.5	26.4	38.7	0.0	0
2011	03	27	16	100.8	89.0	35.4	47.0	69.0	----	81.1	97.9	94.5	88.0	68.2	124.9	180.6	112.5	36.8	30.4	26.1	38.5	0.0	0
2011	03	27	17	100.5	88.8	35.4	46.9	68.9	----	80.8	97.7	94.4	87.9	68.1	124.3	180.0	112.3	36.7	30.3	26.0	38.4	0.0	0
2011	03	27	18	100.3	88.6	35.3	46.6	68.8	----	80.5	97.4	94.0	87.7	67.7	124.0	179.7	111.9	36.6	30.2	26.0	38.3	0.0	0
2011	03	27	19	99.9	88.3	35.1	46.6	68.6	----	80.2	97.2	93.7	87.3	67.4	123.6	179.1	111.7	36.6	30.1	25.9	38.1	0.0	0
2011	03	27	20	99.6	88.2	35.0	46.4	68.5	----	80.1	96.5	93.5	86.8	67.3	123.3	178.8	111.3	36.4	30.0	25.9	38.0	0.0	0
2011	03	27	21	99.4	87.8	34.9	46.3	68.3	----	80.0	96.3	93.2	86.8	67.1	122.6	178.4	111.0	36.3	30.0	25.9	37.9	0.0	0
2011	03	27	22	99.0	87.7	34.8	46.2	68.2	----	79.7	96.3	93.1	86.6	66.9	122.5	178.1	111.0	36.2	30.0	25.9	37.8	0.0	0
2011	03	27	23	98.9	87.5	34.7	46.1	67.9	----	79.6	96.2	92.7	86.2	66.7	122.1	177.7	110.7	36.2	29.8	25.8	37.6	0.0	0
2011	03	27	24	98.6	87.2	34.7	46.1	67.7	----	79.4	95.8	92.6	86.1	66.5	121.8	177.5	110.1	36.0	29.8	25.8	37.6	0.0	0
2011	03	28	01	98.3	87.0	34.6	45.8	67.6	----	79.4	95.5	92.3	86.0	66.4	121.7	177.1	110.0	36.0	29.8	25.8	37.4	0.0	0
2011	03	28	02	98.2	86.7	34.6	45.7	67.5	----	79.4	95.2	92.2	85.7	66.1	121.6	176.8	109.7	35.9	29.6	25.7	37.4	0.0	0
2011	03	28	03	97.8	86.6	34.4	45.6	67.2	----	78.9	95.3	92.0	85.5	66.0	121.1	176.5	109.7	35.9	29.6	25.7	37.3	0.0	0
2011	03	28	04	97.6	86.4	34.3	45.5	67.2	----	78.8	94.8	91.9	85.1	65.9	120.9	176.3	109.4	35.8	29.5	25.7	37.3	0.0	0
2011	03	28	05	97.4	86.1	34.3	45.3	67.0	----	78.7	94.7	91.5	85.1	65.8	120.6	175.6	108.9	35.6	29.5	25.5	37.2	0.0	0
2011	03	28	06	97.1	85.9	34.1	45.3	66.8	----	78.3	94.2	91.3	84.7	65.5	120.0	175.3	108.8	35.6	29.4	25.6	37.0	0.0	0
2011	03	28	07	96.8	85.7	34.1	45.1	66.7	----	78.0	94.0	91.1	84.4	65.5	120.0	175.5	108.4	35.5	29.3	25.4	36.9	0.0	0
2011	03	28	08	96.6	85.5	34.0	45.0	66.5	----	78.1	93.7	91.0	84.1	65.3	119.7	174.8	107.9	35.3	29.2	25.5	36.9	0.0	0
2011	03	28	09	96.2	85.2	33.9	44.8	66.2	----	78.1	93.5	90.9	83.9	65.2	119.1	174.1	107.0	35.2	29.2	25.4	36.8	0.0	0
2011	03	28	10	95.9	84.7	33.9	44.7	65.9	----	77.8	93.3	90.6	84.2	65.2	118.7	172.8	106.8	35.1	29.1	25.4	36.8	0.0	0
2011	03	28	11	95.4	84.0	34.0	44.6	65.7	----	76.3	93.1	90.3	83.8	65.0	118.6	172.1	106.5	35.1	29.0	25.3	36.7	0.0	0
2011	03	28	12	95.4	83.6	33.7	44.4	65.6	----	76.6	92.8	90.0	83.5	64.9	118.3	171.3	106.1	34.8	29.0	25.3	36.7	0.0	0
2011	03	28	13	95.4	83.5	33.5	44.2	65.3	----	76.3	92.5	89.6	83.5	64.7	118.0	170.8	105.5	34.7	29.0	25.2	36.5	0.0	0
2011	03	28	14	95.0	83.4	33.5	44.1	63.6	----	76.1	92.3	89.4	83.2	64.6	117.5	170.3	105.3	34.5	28.9	25.1	36.4	0.0	0
2011	03	28	15	94.9	83.7	33.3	44.1	64.7	----	75.9	91.9	89.3	83.1	64.1	117.1	168.9	104.9	34.5	28.9	25.0	36.4	0.0	0
2011	03	28	16	94.7	83.7	32.9	44.0	64.6	----	75.6	91.6	88.8	82.7	63.9	116.7	162.3	104.4	34.3	28.7	25.0	36.3	0.0	0
2011	03	28	17	94.1	83.4	32.2	43.8	64.3	----	75.5	91.5	88.4	82.4	63.8	116.4	168.0	104.5	34.2	28.6	24.9	36.2	0.0	0
2011	03	28	18	93.9	83.1	32.2	43.7	64.2	----	75.3	91.3	88.3	82.2	63.6	116.0	167.4	104.5	34.1	28.5	24.8	35.9	0.0	0
2011	03	28	19	93.7	82.9	32.1	43.6	64.1	----	75.2	91.2	88.0	81.9	63.4	115.9	166.9	104.5	34.1	28.4	24.7	35.8	0.0	0
2011	03	28	20	93.3	82.7	32.0	43.5	64.0	----	75.1	91.0	87.7	81.7	63.3	115.8	166.7	104.4	34.0	28.4	24.6	35.7	0.0	0
2011	03	28	21	93.3	82.4	31.9	43.4	64.0	----	74.7	90.7	87.7	81.5	63.2	115.6	166.3	104.2	33.9	28.4	24.5	35.7	0.0	0
2011	03	28	22	93.1	82.4	31.8	43.3	63.8	----	74.8	90.5	87.4	81.1	63.0	115.3	166.1	104.4	34.0	28.3	24.6	35.5	0.0	0
2011	03	28	23	92.8	82.1	31.8	43.2	63.8	----	74.4	90.3	87.2	81.0	62.8	115.3	165.7	104.1	33.9	28.2	24.5	35.5	0.0	0
2011	03	28	24	92.6	81.9	31.7	43.1	63.6	----	74.4	90.1	87.1	80.8	62.7	114.8	165.8	103.9	33.7	28.2	24.5	35.2	0.0	0
2011	03	29	01	92.4	81.8	31.6	42.9	63.4	----	74.2	90.0	86.8	80.6	62.5	114.6	165.3	103.8	33.7	28.2	24.5	35.2	0.0	0
2011	03	29	02	92.1	81.6	31.6	42.9	63.4	----	74.1	89.7	86.8	80.3	62.4	114.5	165.2	103.4	33.6	28.1	24.4	35.1	0.0	0
2011	03	29	03	92.0	81.4	31.5	42.8	63.2	----	74.0	89.5	86.6	80.1	62.3	114.1	165.0	103.3	33.6	28.0	24.4	35.0	0.0	0
2011	03	29	04	91.7	81.3	31.4	42.6	63.0	----	73.9	89.4	86.5	80.1	62.1	114.0	164.8	103.2	33.6	28.0	24.3	35.0	0.0	0
2011	03	29	05	91.6	81.0	31.4	42.5	62.9	----	73.5	89.2	86.3	80.0	62.0	113.7	164.5	103.0	33.5	28.0	24.3	34.9	0.0	0
2011	03	29	06	91.3	80.8	31.3	42.4	62.7	----	73.6	89.0	86.2	79.6	61.9	113.3	164.0	102.7	33.4	27.8	24.3	34.8	0.0	0
2011	03	29	07	91.1	80.7	31.5	42.3	62.7	----	73.5	88.6	86.0	79.3	61.7	113.3	163.7	102.4	33.3	27.8	24.3	34.7	0.0	0
2011	03	29	08	90.9	80.5	31.4	42.2	62.5	----	73.2	88.5	86.0	79.3	61.8	112.8	163.1	102.0	33.2	27.8	24.3	34.7	0.0	0
2011	03	29	09	90.6	80.3	31.3	42.1	62.3	----	73.3	88.5	85.7	79.5	61.6	112.5	162.5	101.2	33.1	27.8	24.2	34.7	0.0	0
2011	03	29	10	90.3	79.8	31.2	42.0	62.0	----	72.8	88.1	85.4	79.3	61.6	112.2	161.9	101.0	33.0	27.7	24.2	34.7	0.0	0
2011	03	29	11	89.9	79.3	31.1	41.9	61.8	----	72.4	88.0	85.3	79.0	61.4	111.9	161.4	100.9	32.9	27.7	24.2	34.6	0.0	0
2011	03	29	12	89.4	78.7	31.1	41.8	61.6	----	72.1	87.8	85.1	79.2	61.4	111.9	160.8	100.9	32.8	27.5	24.1	34.5	0.0	0
2011	03	29	13	89.2	78.4	31.0	41.6	61.6	----	71.7	87.6	84.9	79.0	61.1	111.4	160.1	100.3	32.7	27.5	24.1	34.5	0.0	0
2011	03	29	14	89.3	78.3	30.8	41.3	61.3	----	71.8	87.2	84.6	78.6	61.1	111.3	159.6	100.0	32.7	27.4	24.0	34.4	0.0	0
2011	03	29	15	89.1	78.4	30.8	41.3	61.1	----	71.4	87.0	84.4	78.3	60.8	111.0	159.2	99.5	32.4	27.3	24.0	34.2	0.0	0
2011	03	29	16	88.8	78.3	30.7	41.1	60.9	----	71.3	86.5	83.8	78.0	60.6	110.6	159.1	99.3	32.4	27.3	23.9	34.2	0.0	0
2011	03	29	17	88.8	78.5	30.6	41.1	60.7	----	71.3	86.5	83.6	77.9	60.4	110.1	158.7	99.1	32.3	27.2	23.8	34.1	0.0	0
2011	03	29	18	88.7	78.5	30.3	41.1	60.4	----	71.1	86.2	83.3	77.7	60.1	109.7	158.0	99.3	32.2	27.1	23.6	34.0	0.0	0
2011	03	29	19	88.4	78.3	30.3	41.1	60.5	----	70.9	85.9	83.2	77.6	60.1	109.7	158.1	99.3	32.1	27.1	23.6	33.9	0.0	0
2011	03	29	20	88.2	78.0	30.2	41.0	60.5	----	70.8	85.7	83.1	77.3	60.0	109.5	157.9	99.4	32.1	27.0	23.5	33.8	0.0	0
2011	03	29	21	87.9	77.9	30.1	40.8	60.3	----	70.5	85.6	82.8	76.9	59.7	109.1	157.8	99.2	32.0	27.0	23.5	33.6	0.0	0
2011	03	29	22	87.7	77.7	30.1	40.8	60.1	----	70.4	85.5	82.6	76.8	59.5	109.0	157.7	99.2	32.0	26.9	23.4	33.5	0.0	0
2011	03	29	23	87.6	77.6	30.1	40.7	60.2	----	70.4	85.3	82.5	76.7	59.5	109.0	157.5	99.3	32.0	26.8	23.3	33.4	0.0	0
2011	03	29	24	87.3	77.3	30.0	40.5	60.0	----	70.2	85.4	82.4	76.2	59.4	108.7	157.4	99.1	31.9	26.8	23.4	33.4	0.0	0

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011 — (continued)

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci	Rain sensing
																				$\times 10^{-2}$μGy/h		mm/h	*
2011	03	30	01	87.2	77.3	30.0	40.5	59.9	----	70.0	85.0	82.2	76.2	59.3	108.4	156.8	98.8	31.8	26.8	23.2	33.4	0.0	0
2011	03	30	02	87.0	77.1	29.9	40.4	59.9	----	70.1	84.7	82.3	76.1	59.2	108.2	156.6	98.5	31.8	26.8	23.2	33.3	0.0	0
2011	03	30	03	86.9	77.0	29.9	40.4	59.8	----	70.0	84.8	82.1	76.1	59.0	108.3	156.6	98.4	31.8	26.9	23.3	33.2	0.0	0
2011	03	30	04	86.8	77.1	30.0	40.6	59.9	----	69.9	85.0	82.2	76.1	59.2	108.3	156.4	98.7	32.0	27.1	23.5	33.4	0.0	0
2011	03	30	05	86.7	76.9	29.9	40.4	59.8	----	70.0	84.8	82.1	76.0	59.3	108.1	156.2	98.3	31.9	26.9	23.4	33.3	0.0	0
2011	03	30	06	87.1	77.5	30.1	40.6	60.2	----	70.4	85.2	82.5	76.5	59.7	108.4	156.5	98.8	32.2	27.2	23.6	33.8	0.0	0
2011	03	30	07	86.5	76.9	30.0	40.4	59.8	----	70.2	84.7	82.2	75.9	59.2	107.6	155.9	97.9	32.0	27.1	23.5	33.4	0.0	0
2011	03	30	08	86.6	76.8	30.0	40.3	59.9	----	70.2	84.8	82.2	76.0	59.2	107.5	155.4	97.8	31.9	27.1	23.6	33.6	0.0	0
2011	03	30	09	86.3	76.6	30.0	40.4	59.6	----	69.2	84.3	82.0	75.8	59.1	107.6	155.0	97.1	31.8	27.0	23.6	33.5	0.0	0
2011	03	30	10	86.5	76.3	29.8	40.4	59.6	----	68.7	84.1	82.0	76.1	59.2	107.4	154.7	97.2	31.7	26.9	23.6	33.6	0.0	0
2011	03	30	11	86.3	76.1	29.6	40.2	59.5	----	69.2	84.4	81.9	76.1	59.4	107.1	154.4	97.4	31.7	26.9	23.6	33.5	0.0	0
2011	03	30	12	86.0	75.7	29.7	40.0	59.5	----	68.7	84.2	81.6	76.1	59.3	107.1	154.0	97.5	31.7	26.9	23.6	33.5	0.0	0
2011	03	30	13	85.7	75.4	29.5	39.9	59.4	----	67.9	84.0	81.5	75.8	59.1	106.5	153.4	97.3	31.4	26.7	23.5	33.2	0.0	0
2011	03	30	14	85.2	75.0	29.2	39.5	58.9	----	67.4	83.5	80.9	75.2	58.6	106.1	152.9	96.9	31.1	26.5	23.2	33.0	0.0	0
2011	03	30	15	84.9	75.0	29.2	39.2	58.6	----	67.3	83.2	80.4	74.9	58.3	105.9	152.5	96.5	31.0	26.3	23.1	32.6	0.0	0
2011	03	30	16	84.6	75.1	28.9	39.1	58.4	----	67.8	82.9	80.0	74.7	58.0	105.5	151.9	96.3	30.8	26.1	23.0	32.4	0.0	0
2011	03	30	17	84.6	75.0	28.8	39.0	58.2	----	67.6	82.6	79.9	74.6	57.8	105.3	151.8	96.2	30.8	26.1	23.0	32.3	0.0	0
2011	03	30	18	84.5	75.0	28.7	38.9	57.9	----	67.4	82.5	79.8	74.3	57.6	104.9	151.5	96.1	30.7	26.0	22.9	32.3	0.0	0
2011	03	30	19	84.2	74.7	28.8	39.0	58.0	----	67.4	82.4	79.7	74.3	57.5	104.7	151.6	95.9	30.7	26.0	22.7	32.2	0.0	0
2011	03	30	20	83.4	74.7	28.7	38.9	56.7	----	65.6	81.3	78.2	72.8	56.0	104.0	149.3	94.8	30.3	25.4	22.1	31.7	7.0	0
2011	03	30	21	83.5	74.8	28.7	38.8	56.1	----	64.9	80.5	77.3	71.9	55.4	103.4	148.8	94.3	30.2	25.2	21.8	31.4	0.0	0
2011	03	30	22	83.3	74.5	29.0	38.6	56.0	----	64.6	80.7	77.0	71.5	55.3	103.6	148.8	94.2	30.4	25.3	21.7	31.3	0.5	1
2011	03	30	23	83.4	74.6	29.3	39.1	56.3	----	64.5	80.4	76.9	71.6	55.5	103.5	149.0	94.1	30.5	25.6	22.0	31.7	0.5	1
2011	03	30	24	83.0	74.3	28.9	38.6	56.0	----	64.0	80.1	76.5	71.2	55.0	103.0	148.9	93.7	30.1	25.3	21.7	31.2	0.5	1
2011	03	31	01	82.7	74.1	28.5	38.1	55.7	----	63.9	80.0	76.2	71.0	54.6	103.0	148.8	93.5	29.8	24.9	21.3	30.8	0.0	0
2011	03	31	02	82.5	73.9	28.3	37.9	55.4	----	63.8	79.6	76.3	70.9	54.5	102.6	148.7	93.4	29.6	24.7	21.2	30.6	0.0	1
2011	03	31	03	82.6	74.1	28.8	38.4	55.7	----	63.7	79.8	76.4	71.1	54.6	102.6	148.7	93.4	29.9	25.1	21.5	31.0	1.5	0
2011	03	31	04	82.7	74.3	28.7	38.4	55.8	----	64.1	80.0	76.4	71.0	54.8	102.9	148.8	93.4	29.9	25.2	21.6	31.1	0.5	0
2011	03	31	05	82.3	73.9	28.3	38.0	55.3	----	63.8	79.6	76.0	70.6	54.5	102.5	148.3	93.2	29.7	24.9	21.3	30.8	0.0	0
2011	03	31	06	81.9	73.5	27.9	37.4	55.0	----	63.2	79.2	75.6	70.2	53.8	102.0	147.8	92.8	29.2	24.4	20.8	30.2	0.0	0
2011	03	31	07	81.5	73.1	27.7	37.3	54.8	----	63.0	78.8	75.4	69.9	53.5	101.8	147.2	92.5	29.0	24.2	20.7	30.0	0.0	0
2011	03	31	08	81.6	73.0	27.6	37.2	54.6	----	63.0	78.8	75.4	69.6	53.6	101.6	147.0	92.5	28.9	24.2	20.8	30.0	0.0	0
2011	03	31	09	81.4	73.0	27.8	37.1	54.5	----	62.8	78.6	75.4	69.5	53.6	101.1	146.6	92.3	29.0	24.3	20.7	29.9	0.0	0
2011	03	31	10	81.2	72.9	27.8	37.1	54.3	----	62.7	78.5	75.3	69.7	53.5	100.9	146.1	92.1	28.9	24.3	20.8	30.1	0.0	0
2011	03	31	11	81.2	72.5	27.8	37.0	54.3	----	63.0	78.3	75.3	69.8	53.6	101.0	145.6	92.0	28.9	24.3	20.8	30.0	0.0	0
2011	03	31	12	81.3	72.2	27.7	37.0	54.1	----	62.8	78.4	75.3	69.7	53.5	101.0	145.4	91.9	28.9	24.3	20.7	30.0	0.0	0
2011	03	31	13	81.0	72.0	27.6	36.9	54.2	----	62.2	78.2	75.1	69.7	53.6	100.7	145.3	91.9	28.8	24.3	20.7	30.1	0.0	0
2011	03	31	14	81.0	72.1	27.7	37.0	54.4	----	61.6	78.2	75.2	69.8	53.6	100.8	145.1	92.0	28.8	24.4	20.9	30.2	0.0	1
2011	03	31	15	81.2	72.4	27.9	37.3	54.5	----	62.6	78.3	75.3	69.9	53.9	100.8	144.8	92.0	28.9	24.5	21.0	30.3	0.0	0
2011	03	31	16	80.8	72.4	27.5	37.0	54.2	----	62.4	78.0	74.9	69.5	53.5	100.4	144.6	91.7	28.7	24.2	20.7	30.1	0.0	0
2011	03	31	17	80.7	72.2	27.3	36.6	53.8	----	61.4	77.5	74.5	69.2	53.2	100.0	144.3	91.2	28.5	24.0	20.5	29.8	0.0	0
2011	03	31	18	80.3	72.0	27.1	36.5	53.5	----	61.0	77.5	74.4	69.0	52.8	99.5	144.1	91.1	28.4	23.9	20.4	29.6	0.0	0
2011	03	31	19	80.1	71.8	27.0	36.6	53.4	----	60.9	77.5	73.9	68.8	52.7	99.5	144.0	90.9	28.4	23.8	20.2	29.5	0.0	0
2011	03	31	20	79.9	71.7	26.9	36.5	53.4	----	60.6	77.3	73.9	68.5	52.5	99.4	143.9	90.9	28.4	23.8	20.2	29.3	0.0	0
2011	03	31	21	79.8	71.6	26.8	36.4	53.3	----	60.6	77.1	73.8	68.3	52.6	99.2	143.8	90.6	28.3	23.7	20.2	29.4	0.0	0
2011	03	31	22	79.6	71.3	26.8	36.3	53.2	----	60.6	76.9	73.7	68.3	52.5	99.1	143.7	90.4	28.3	23.8	20.2	29.3	0.0	0
2011	03	31	23	79.5	71.3	26.7	36.3	53.4	----	60.3	76.9	73.5	68.2	52.2	99.0	143.7	90.0	28.3	23.8	20.1	29.3	0.0	0
2011	03	31	24	79.4	71.1	26.7	36.2	53.2	----	60.4	76.7	73.4	68.1	52.2	98.9	143.5	89.9	28.2	23.7	20.1	29.3	0.0	0
2011	04	01	01	79.2	71.0	26.6	36.1	53.1	----	60.3	76.5	73.3	67.9	52.0	98.5	143.4	89.7	28.2	23.7	20.1	29.1	0.0	0
2011	04	01	02	79.0	70.8	26.6	36.0	52.9	----	60.0	76.4	73.1	67.8	51.8	98.3	143.3	89.8	28.1	23.7	20.0	29.1	0.0	0
2011	04	01	03	78.9	70.8	26.6	35.9	52.8	----	60.0	76.4	73.1	67.7	51.8	98.3	143.1	89.3	28.1	23.5	20.0	29.0	0.0	0
2011	04	01	04	78.7	70.6	26.6	35.9	52.8	----	60.0	76.4	72.9	67.3	51.7	98.2	142.6	89.3	28.0	23.6	20.0	28.9	0.0	0
2011	04	01	05	78.5	70.5	26.4	35.9	52.7	----	59.8	76.1	72.8	67.1	51.5	97.9	142.3	89.2	28.0	23.5	20.0	28.9	0.0	0
2011	04	01	06	78.4	70.3	26.5	35.8	52.6	----	59.6	75.8	72.8	67.2	51.4	97.9	142.3	89.1	27.9	23.4	20.0	28.8	0.0	0
2011	04	01	07	78.3	70.2	26.3	35.6	52.6	----	59.6	75.8	72.6	67.0	51.5	97.6	142.1	89.0	27.8	23.4	19.9	28.8	0.0	0
2011	04	01	08	78.3	70.1	26.4	35.6	52.4	----	59.7	75.8	72.7	66.9	51.5	97.4	141.7	89.0	27.8	23.4	20.0	28.8	0.0	0
2011	04	01	09	78.0	69.9	26.5	35.7	52.3	----	59.1	75.7	72.7	67.1	51.5	97.1	141.4	88.6	27.7	23.4	19.9	28.8	0.0	0
2011	04	01	10	77.9	69.4	26.4	35.5	52.1	----	58.7	75.3	72.5	66.9	51.5	97.0	140.2	88.5	27.6	23.3	20.0	28.7	0.0	0
2011	04	01	11	77.8	68.9	26.2	35.4	51.8	----	59.4	75.3	72.3	66.9	51.5	96.6	139.6	88.4	27.6	23.2	20.0	28.8	0.0	0
2011	04	01	12	77.7	68.8	26.1	35.3	51.8	----	59.0	75.2	72.3	66.8	51.4	96.6	139.3	88.1	27.5	23.3	19.9	28.8	0.0	0
2011	04	01	13	77.7	68.7	26.2	35.3	51.7	----	58.6	75.1	72.0	66.9	51.2	96.6	139.4	88.0	27.5	23.2	19.9	28.7	0.0	0
2011	04	01	14	77.6	68.7	26.1	35.3	51.6	----	58.4	74.9	71.9	66.7	51.0	96.2	139.0	87.9	27.3	23.2	19.9	28.7	0.0	0
2011	04	01	15	77.5	68.8	26.1	35.2	51.5	----	58.4	74.7	71.7	66.5	50.9	96.0	138.7	87.7	27.3	23.2	19.8	28.6	0.0	0
2011	04	01	16	77.4	68.9	26.1	35.2	51.3	----	59.2	74.6	71.5	66.4	50.8	95.9	138.6	87.4	27.3	23.1	19.8	28.5	0.0	0
2011	04	01	17	77.4	69.1	26.1	35.2	51.2	----	59.4	74.4	71.3	66.4	50.8	95.9	138.3	87.2	27.3	23.1	19.8	28.6	0.0	0
2011	04	01	18	77.0	68.9	26.0	35.2	51.1	----	59.0	74.3	71.2	66.3	50.5	95.4	138.2	87.3	27.1	23.0	19.7	28.4	0.0	0
2011	04	01	19	76.8	68.8	26.0	35.1	51.2	----	59.0	74.2	70.9	66.0	50.4	95.5	138.3	87.4	27.1	22.9	19.6	28.4	0.0	0
2011	04	01	20	76.6	68.7	26.0	35.0	51.2	----	59.0	74.2	71.0	65.6	50.5	95.2	138.5	87.1	27.1	22.9	19.6	28.3	0.0	0
2011	04	01	21	76.6	68.6	25.9	35.0	51.1	----	58.9	74.1	70.7	65.6	50.3	95.1	138.7	87.0	27.1	22.9	19.5	28.2	0.0	0
2011	04	01	22	76.3	68.4	25.8	34.9	50.9	----	58.8	74.0	70.7	65.5	50.1	95.0	138.5	87.1	27.0	22.8	19.4	28.1	0.0	0
2011	04	01	23	76.2	68.3	25.8	34.8	50.9	----	58.6	73.9	70.4	65.3	50.1	95.0	138.4	86.9	26.9	22.8	19.4	28.1	0.0	0
2011	04	01	24	76.1	68.1	25.8	34.7	50.9	----	58.6	73.7	70.4	65.3	50.0	94.8	138.2	86.9	27.0	22.7	19.4	28.1	0.0	0
2011	04	02	01	76.1	68.1	25.7	34.7	50.7	----	58.4	73.6	70.3	64.9	50.0	94.6	138.2	86.6	26.9	22.7	19.4	27.9	0.0	0
2011	04	02	02	75.8	67.9	25.7	34.7	50.7	----	58.3	73.3	70.2	64.7	49.9	94.3	137.9	86.5	26.9	22.7	19.3	27.9	0.0	0
2011	04	02	03	75.7	67.8	25.7	34.5	50.7	----	58.3	73.3	70.3	64.7	49.7	94.5	137.7	86.4	26.9	22.7	19.3	27.9	0.0	0
2011	04	02	04	75.5	67.7	25.6	34.5	50.5	----	58.0	73.1	70.0	64.7	49.7	94.5	137.6	86.3	26.8	22.7	19.2	27.8	0.0	0
2011	04	02	05	75.4	67.6	25.5	34.4	50.4	----	58.0	73.2	69.9	64.6	49.5	94.1	137.5	86.2	26.7	22.6	19.3	27.6	0.0	0
2011	04	02	06	75.1	67.6	25.5	34.4	50.3	----	58.0	73.0	69.8	64.5	49.5	94.0	137.3	86.0	26.7	22.6	19.2	27.6	0.0	0
2011	04	02	07	75.2	67.3	25.5	34.3	50.3	----	57.9	72.8	69.8	64.4	49.4	93.9	136.8	85.7	26.7	22.5	19.2	27.6	0.0	0
2011	04	02	08	75.0	67.1	25.4	34.2	50.3	----	57.9	72.9	69.7	64.4	49.5	93.7	136.8	85.7	26.6	22.5	19.2	27.6	0.0	0
2011	04	02	09	74.9	67.0	25.4	34.2	50.1	----	57.8	72.7	69.7	64.4	49.4	93.6	136.9	85.6	26.5	22.5	19.2	27.6	0.0	0
2011	04	02	10	74.7	66.7	25.1	34.1	50.1	----	57.6	72.6	69.8	64.3	49.4	93.4	136.5	85.6	26.4	22.5	19.2	27.6	0.0	0
2011	04	02	11	74.6	66.8	25.1	34.0	50.0	----	57.6	72.6	69.6	64.3	49.3	93.4	136.4	85.4	26.4	22.5	19.3	27.6	0.0	0
2011	04	02	12	74.3	66.4	25.0	34.0	50.0	----	57.5	72.4	69.4	64.3	49.3	93.3	135.7	85.4	26.4	22.4	19.2	27.5	0.0	0
2011	04	02	13	74.2	66.1	25.0	34.0	50.0	----	57.4	72.3	69.3	64.0	49.2	93.0	135.5	85.2	26.4	22.5	19.2	27.5	0.0	0
2011	04	02	14	74.2	65.9	24.8	33.8	49.9	----	57.2	72.1	69.1	64.1	49.1	92.9	135.4	85.2	26.2	22.4	19.1	27.5	0.0	0
2011	04	02	15	74.0	66.0	24.7	33.8	49.8	----	57.1	71.9	68.9	63.8	48.9	92.7	135.0	85.0	26.2	22.3	19.1	27.4	0.0	0
2011	04	02	16	73.8	65.8	24.7	33.7	49.5	----	57.0	71.9	68.8	63.8	48.7	92.6	134.6	85.2	26.2	22.2	19.1	27.4	0.0	0
2011	04	02	17	73.8	66.0	24.6	33.5	49.4	----	56.9	71.8	68.7	63.5	48.6	92.5	134.6	84.8	26.0	22.1	19.0	27.3	0.0	0
2011	04	02	18	73.8	66.1	24.7	33.6	49.3	----	56.8	71.6	68.4	63.2	48.6	92.3	134.1	84.7	26.0	22.1	18.9	27.2	0.0	0
2011	04	02	19	73.8	66.1	24.6	33.5	49.2	----	56.6	71.3	68.2	63.2	48.3	92.1	134.1	84.5	25.9	22.0	18.9	27.2	0.0	0
2011	04	02	20	73.4	65.9	24.5	33.5	49.1	----	56.4	71.2	68.1	63.1	48.3	91.8	134.2	84.4	25.9	22.0	18.8	27.1	0.0	0
2011	04	02	21	73.2	65.7	24.5	33.5	48.9	----	56.5	71.3	68.2	62.9	48.2	91.7	134.2	84.2	25.9	22.0	18.8	26.9	0.0	0
2011	04	02	22	73.1	65.7	24.5	33.4	49.0	----	56.3	71.0	68.1	62.9	48.0	91.4	134.0	84.3	25.8	21.9	18.7	26.9	0.0	0
2011	04	02	23	73.1	65.6	24.5	33.3	48.9	----	56.2	71.0	67.8	62.4	48.2	91.4	133.9	84.2	25.8	21.9	18.6	26.8	0.0	0
2011	04	02	24	73.0	65.4	24.4	33.3	48.7	----	56.2	70.7	67.7	62.4	48.0	91.4	133.5	83.9	25.8	21.8	18.6	26.9	0.0	0

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011 — (continued)

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci	Rain sensing
																				$\times 10^{-2}$μGy/h		mm/h	*
2011	04	03	01	72.9	65.3	24.3	33.2	48.8	----	56.0	70.5	67.7	62.3	47.9	91.0	133.4	83.8	25.7	21.8	18.6	26.7	0.0	0
2011	04	03	02	72.7	65.2	24.3	33.2	48.7	----	55.9	70.5	67.5	62.2	47.8	91.0	133.3	83.5	25.6	21.8	18.5	26.7	0.0	0
2011	04	03	03	72.4	65.1	24.3	33.1	48.6	----	55.8	70.4	67.4	62.2	47.6	90.8	133.0	83.4	25.6	21.8	18.5	26.6	0.0	0
2011	04	03	04	72.4	65.0	24.2	33.0	48.4	----	55.6	70.3	67.5	62.1	47.7	90.8	132.9	83.4	25.5	21.7	18.5	26.6	0.0	0
2011	04	03	05	72.2	64.8	24.2	33.0	48.3	----	55.6	70.2	67.3	62.0	47.5	90.7	133.0	83.2	25.5	21.7	18.5	26.5	0.0	0
2011	04	03	06	72.1	64.7	24.1	32.9	48.3	----	55.5	70.0	67.2	61.9	47.4	90.4	132.8	82.9	25.4	21.6	18.5	26.4	0.0	0
2011	04	03	07	72.0	64.6	24.2	32.9	48.2	----	55.5	69.9	67.0	61.8	47.4	90.2	132.6	82.8	25.4	21.6	18.4	26.4	0.0	0
2011	04	03	08	71.9	64.5	24.1	32.8	48.1	----	55.4	69.8	67.1	61.7	47.2	90.1	132.4	82.8	25.4	21.6	18.4	26.4	0.0	0
2011	04	03	09	71.8	64.5	24.0	32.7	48.1	----	55.3	69.7	67.0	61.5	47.1	90.0	132.2	82.8	25.3	21.5	18.4	26.4	0.0	0
2011	04	03	10	71.7	64.4	23.9	32.7	48.0	----	55.4	69.8	67.0	61.5	47.2	89.9	132.0	82.5	25.3	21.5	18.4	26.1	0.0	0
2011	04	03	11	71.7	64.1	23.9	32.6	48.1	----	55.1	69.8	66.8	61.4	47.1	89.8	131.7	82.5	25.3	21.5	18.4	25.2	0.0	0
2011	04	03	12	71.5	64.2	23.8	32.6	47.9	----	55.0	69.6	66.7	61.5	47.2	90.0	131.5	82.4	25.2	21.5	18.4	24.6	0.0	0
2011	04	03	13	71.4	64.1	23.8	32.6	47.8	----	55.0	69.5	66.7	61.3	47.0	89.8	131.2	82.3	25.2	21.5	18.4	24.4	0.0	0
2011	04	03	14	71.4	64.0	23.8	32.5	47.8	----	54.7	69.5	66.6	61.4	47.0	89.6	131.0	82.0	25.1	21.4	18.3	24.4	0.0	0
2011	04	03	15	71.3	63.8	23.7	32.4	47.8	----	54.7	69.2	66.5	61.3	47.0	89.3	131.0	82.2	25.1	21.3	18.3	24.4	0.0	0
2011	04	03	16	71.1	63.9	23.7	32.4	47.7	----	54.7	69.2	66.3	61.1	46.9	89.3	130.9	82.0	25.0	21.3	18.3	24.4	0.0	0
2011	04	03	17	71.0	63.7	23.7	32.5	47.6	----	54.6	69.1	66.2	61.0	46.7	89.3	130.6	81.8	24.9	21.2	18.3	24.2	0.0	0
2011	04	03	18	70.9	63.6	23.6	32.4	47.6	----	54.4	68.9	66.0	60.7	46.6	89.1	130.6	81.7	24.8	21.3	18.2	24.2	0.0	0
2011	04	03	19	70.7	63.4	23.5	32.3	47.4	----	54.4	68.8	66.0	60.5	46.5	88.9	130.3	81.8	24.8	21.3	18.2	24.1	0.0	0
2011	04	03	20	70.6	63.5	23.6	32.2	47.2	----	54.4	68.7	66.0	60.5	46.4	88.6	129.9	81.9	24.9	21.3	18.2	24.0	0.0	0
2011	04	03	21	70.5	63.3	23.5	32.1	47.2	----	54.2	68.7	65.7	60.5	46.4	88.4	129.9	81.7	24.8	21.2	18.2	24.0	0.0	0
2011	04	03	22	70.3	63.2	23.4	32.1	47.2	----	54.1	68.7	65.8	60.3	46.3	88.4	129.9	81.5	24.8	21.2	18.1	24.0	0.0	0
2011	04	03	23	70.3	63.2	23.5	32.0	47.2	----	54.1	68.4	65.7	60.1	46.3	88.4	129.6	81.2	24.8	21.2	18.1	24.0	0.0	0
2011	04	03	24	70.1	63.1	23.4	32.0	47.0	----	53.9	68.3	65.5	60.1	46.2	88.3	129.5	81.3	24.7	21.2	18.1	24.0	0.0	0
2011	04	04	01	70.0	62.8	23.4	32.0	47.0	----	53.9	68.1	65.5	60.0	46.1	88.1	129.6	81.2	24.7	21.1	18.1	24.0	0.0	0
2011	04	04	02	69.9	62.9	23.4	32.0	46.9	----	53.9	68.1	65.3	59.9	46.0	87.8	129.5	81.2	24.7	21.1	18.0	23.8	0.0	0
2011	04	04	03	69.7	62.7	23.3	31.9	46.8	----	53.7	68.1	65.2	59.9	46.0	88.0	129.5	80.9	24.6	21.1	18.0	23.8	0.0	0
2011	04	04	04	69.6	62.6	23.2	31.7	46.7	----	53.6	68.0	65.2	59.8	45.9	87.7	128.9	80.8	24.6	21.0	17.9	23.7	0.0	0
2011	04	04	05	69.5	62.5	23.1	31.7	46.7	----	53.7	67.9	65.1	59.7	45.8	87.6	128.8	80.7	24.5	21.0	18.0	23.7	0.0	0
2011	04	04	06	69.5	62.5	23.2	31.6	46.7	----	53.5	67.9	65.1	59.7	45.7	87.4	128.6	80.6	24.5	20.9	18.0	23.7	0.0	0
2011	04	04	07	69.3	62.3	23.3	31.6	46.6	----	53.4	67.7	65.1	59.4	45.7	87.4	128.4	80.5	24.4	20.9	17.9	23.6	0.0	0
2011	04	04	08	69.2	62.4	23.2	31.5	46.6	----	53.5	67.6	65.0	59.4	45.6	87.1	128.2	80.5	24.3	20.9	17.9	23.6	0.0	0
2011	04	04	09	69.0	62.2	23.2	31.5	46.3	----	53.3	67.4	64.9	59.4	45.5	86.8	127.8	80.4	24.2	20.8	17.9	23.6	0.0	0
2011	04	04	10	69.1	61.9	23.1	31.5	46.2	----	53.3	67.3	64.8	59.3	45.5	86.8	127.2	80.4	24.3	20.8	17.9	23.6	0.0	0
2011	04	04	11	68.9	61.5	23.1	31.4	46.1	----	53.0	67.2	64.9	59.2	45.6	87.0	126.9	80.3	24.2	20.9	18.0	23.5	0.0	0
2011	04	04	12	68.9	61.3	23.0	31.4	46.0	----	53.0	67.1	64.8	59.3	45.5	86.8	126.8	80.1	24.2	20.8	17.9	23.5	0.0	0
2011	04	04	13	69.0	61.4	23.0	31.3	45.9	----	52.9	66.9	64.5	59.1	45.5	86.5	126.7	80.0	24.1	20.7	17.8	23.6	0.0	0
2011	04	04	14	68.8	61.7	22.9	31.2	45.9	----	52.9	66.9	64.5	59.3	45.3	86.5	126.7	80.1	24.1	20.7	17.8	23.5	0.0	0
2011	04	04	15	68.6	61.5	22.9	31.2	45.6	----	52.9	66.9	64.3	59.1	45.2	86.3	126.1	80.1	24.0	20.7	17.8	23.5	0.0	0
2011	04	04	16	68.4	61.5	23.0	31.2	45.6	----	52.7	66.9	64.2	58.7	45.0	86.1	126.1	80.0	23.9	20.6	17.8	23.3	0.0	0
2011	04	04	17	68.3	61.4	22.9	31.2	45.5	----	52.6	66.6	64.0	58.7	45.0	86.0	126.0	79.7	23.8	20.6	17.8	23.3	0.0	0
2011	04	04	18	68.3	61.3	22.8	31.1	45.7	----	52.4	66.5	64.0	58.6	44.9	85.7	125.7	79.5	23.8	20.5	17.6	23.3	0.0	0
2011	04	04	19	68.1	61.3	22.7	31.1	45.6	----	52.4	66.3	63.7	58.3	44.7	85.8	125.8	79.5	23.8	20.6	17.6	23.2	0.0	0
2011	04	04	20	68.0	61.2	22.6	31.1	45.6	----	52.3	66.3	63.6	58.2	44.7	85.7	126.0	79.5	23.7	20.5	17.6	23.1	0.0	0
2011	04	04	21	67.9	61.1	22.6	31.0	45.5	----	52.1	66.3	63.6	58.2	44.8	85.7	126.0	79.1	23.8	20.5	17.6	23.1	0.0	0
2011	04	04	22	67.8	61.0	22.5	31.0	45.5	----	52.2	66.2	63.5	58.1	44.5	85.7	126.1	79.2	23.8	20.5	17.5	23.0	0.0	0
2011	04	04	23	67.6	61.0	22.5	31.0	45.4	----	52.0	66.1	63.4	58.1	44.4	85.4	125.9	79.2	23.7	20.4	17.5	22.9	0.0	0
2011	04	04	24	67.6	60.8	22.5	30.8	45.4	----	51.9	66.1	63.5	58.1	44.4	85.4	125.8	78.8	23.7	20.4	17.5	23.0	0.0	0
2011	04	05	01	67.5	60.8	22.5	30.8	45.5	----	51.9	66.0	63.3	57.9	44.3	85.2	125.8	78.9	23.6	20.4	17.5	22.9	0.0	0
2011	04	05	02	67.6	60.6	22.5	30.8	45.3	----	51.9	65.9	63.3	57.8	44.2	85.1	125.5	78.9	23.6	20.4	17.5	23.0	0.0	0
2011	04	05	03	67.2	60.6	22.5	30.7	45.2	----	51.8	65.7	63.2	57.6	44.2	85.1	125.2	78.7	23.6	20.3	17.5	22.9	0.0	0
2011	04	05	04	67.3	60.5	22.4	30.7	45.1	----	51.7	65.6	63.0	57.6	44.2	84.9	125.1	78.7	23.6	20.3	17.5	22.8	0.0	0
2011	04	05	05	67.2	60.4	22.4	30.7	45.0	----	51.7	65.6	62.9	57.4	44.1	84.7	125.1	78.5	23.5	20.3	17.4	22.7	0.0	0
2011	04	05	06	67.0	60.4	22.3	30.7	45.1	----	51.7	65.5	63.0	57.3	44.0	84.7	125.2	78.4	23.5	20.2	17.4	22.8	0.0	0
2011	04	05	07	67.0	60.2	22.3	30.6	45.1	----	51.8	65.5	63.0	57.4	44.1	84.5	124.9	78.5	23.5	20.3	17.5	22.8	0.0	0
2011	04	05	08	66.8	60.3	22.3	30.5	45.0	----	51.5	65.5	63.1	57.4	44.1	84.4	124.7	78.4	23.4	20.3	17.4	22.8	0.0	0
2011	04	05	09	66.7	60.1	22.4	30.4	44.6	----	51.6	65.3	63.0	57.3	44.1	84.3	124.2	78.4	23.4	20.2	17.5	22.8	0.0	0
2011	04	05	10	66.6	59.8	22.4	30.4	44.5	----	51.5	65.3	62.9	57.4	44.1	84.3	123.7	78.3	23.4	20.2	17.5	22.8	0.0	0
2011	04	05	11	66.4	59.4	22.4	30.3	44.4	----	51.4	65.2	62.9	57.1	44.0	84.1	123.6	78.2	23.3	20.3	17.6	22.8	0.0	0
2011	04	05	12	66.7	59.3	22.3	30.3	44.3	----	51.2	65.2	62.9	57.2	44.0	83.9	123.3	78.2	23.3	20.1	17.5	22.8	0.0	0
2011	04	05	13	66.6	59.3	22.2	30.2	44.2	----	51.1	64.9	62.7	57.3	43.8	83.9	123.1	77.9	23.3	20.2	17.4	22.8	0.0	0
2011	04	05	14	66.5	59.3	22.2	30.2	44.2	----	51.1	65.0	62.6	57.3	43.9	83.9	123.0	77.7	23.2	20.2	17.4	22.7	0.0	0
2011	04	05	15	66.4	59.4	22.1	30.2	44.3	----	51.1	64.9	62.4	57.1	43.8	83.7	122.8	77.8	23.2	20.1	17.4	22.6	0.0	0
2011	04	05	16	66.4	59.5	22.1	30.2	44.0	----	50.9	64.6	62.2	57.0	43.6	83.6	122.8	77.6	23.1	20.0	17.3	22.7	0.0	0
2011	04	05	17	66.0	59.6	22.0	30.0	44.0	----	51.0	64.5	62.1	56.9	43.5	83.4	122.6	77.5	23.1	20.0	17.4	22.6	0.0	0
2011	04	05	18	65.9	59.5	22.0	30.0	44.1	----	50.9	64.7	62.0	56.8	43.4	83.3	122.6	77.3	22.9	19.9	17.3	22.5	0.0	0
2011	04	05	19	65.8	59.3	21.8	29.9	44.2	----	50.7	64.6	61.9	56.6	43.3	83.2	122.7	77.4	23.0	19.9	17.2	22.5	0.0	0
2011	04	05	20	65.7	59.2	21.8	29.9	44.1	----	50.6	64.3	61.8	56.4	43.2	83.0	122.7	77.2	22.9	19.9	17.2	22.5	0.0	0
2011	04	05	21	65.7	59.1	21.7	29.9	44.1	----	50.6	64.4	61.7	56.4	43.1	83.1	122.7	77.3	22.9	19.8	17.2	22.4	0.0	0
2011	04	05	22	65.5	59.1	21.7	29.9	44.0	----	50.4	64.4	61.6	56.2	43.1	83.1	122.6	77.4	22.9	19.9	17.1	22.3	0.0	0
2011	04	05	23	65.4	59.0	21.6	29.8	44.1	----	50.4	64.2	61.7	56.0	43.1	82.9	122.6	77.3	22.9	19.8	17.1	22.3	0.0	0
2011	04	05	24	65.4	59.0	21.7	29.8	44.0	----	50.4	64.0	61.4	56.0	43.0	82.8	122.3	77.0	22.9	19.8	17.1	22.4	0.0	0
2011	04	06	01	65.3	58.9	21.6	29.7	43.9	----	50.3	64.1	61.5	55.9	43.0	82.8	122.4	76.9	22.8	19.9	17.1	22.3	0.0	0
2011	04	06	02	65.2	58.8	21.7	29.7	43.8	----	50.3	63.9	61.5	56.0	43.0	82.8	122.5	76.8	22.9	19.8	17.1	22.2	0.0	0
2011	04	06	03	65.1	58.7	21.6	29.7	43.8	----	50.3	63.9	61.4	56.0	42.9	82.5	122.4	76.8	22.9	19.7	17.1	22.2	0.0	0
2011	04	06	04	64.9	58.6	21.6	29.7	43.8	----	50.2	63.9	61.4	55.6	42.9	82.6	122.4	76.6	22.8	19.8	17.0	22.1	0.0	0
2011	04	06	05	64.9	58.5	21.5	29.6	43.7	----	50.1	63.8	61.3	55.6	42.8	82.5	122.0	76.6	22.7	19.8	17.0	22.1	0.0	0
2011	04	06	06	64.8	58.6	21.5	29.5	43.7	----	50.1	63.7	61.3	55.5	42.7	82.3	121.9	76.4	22.8	19.7	17.0	22.0	0.0	0
2011	04	06	07	64.7	58.4	21.5	29.6	43.7	----	50.1	63.7	61.3	55.4	42.8	82.3	121.7	76.4	22.7	19.7	17.0	22.1	0.0	0
2011	04	06	08	64.8	58.4	21.5	29.5	43.6	----	50.1	63.8	61.3	55.6	42.7	82.2	121.6	76.5	22.6	19.7	17.0	22.1	0.0	0
2011	04	06	09	64.7	58.3	21.5	29.4	43.4	----	50.2	63.6	61.3	55.7	42.7	82.1	121.2	76.4	22.6	19.7	17.0	22.2	0.0	0
2011	04	06	10	64.6	58.1	21.7	29.4	43.4	----	49.8	63.5	61.4	55.6	42.9	81.9	120.8	76.4	22.6	19.7	17.0	22.2	0.0	0
2011	04	06	11	64.0	57.6	21.6	29.3	43.4	----	50.0	63.5	61.2	55.8	42.8	81.8	120.6	76.5	22.5	19.7	17.1	22.1	0.0	0
2011	04	06	12	63.7	57.4	21.4	29.2	43.3	----	49.7	63.4	61.2	55.8	42.8	81.8	120.2	76.2	22.5	19.6	17.0	22.1	0.0	0
2011	04	06	13	63.7	57.3	21.3	29.1	43.3	----	49.6	63.4	61.0	55.7	42.5	81.8	120.3	76.2	22.4	19.7	17.0	22.1	0.0	0
2011	04	06	14	63.6	57.1	21.3	29.1	43.2	----	49.7	63.2	60.9	55.4	42.6	81.5	120.2	76.1	22.4	19.6	17.0	22.1	0.0	0
2011	04	06	15	63.5	57.2	21.2	29.0	43.2	----	49.5	63.3	60.8	55.2	42.5	81.4	120.0	75.9	22.3	19.4	16.9	22.0	0.0	0
2011	04	06	16	63.5	57.2	21.2	28.9	43.1	----	49.3	63.3	60.5	55.1	42.4	81.4	119.8	75.9	22.3	19.4	16.9	22.0	0.0	0
2011	04	06	17	63.6	57.3	21.2	28.8	42.9	----	49.2	63.0	60.4	55.1	42.2	81.2	119.7	75.8	22.3	19.4	16.9	22.0	0.0	0
2011	04	06	18	63.5	57.4	21.2	28.8	42.8	----	49.3	63.0	60.3	55.1	42.1	80.9	119.6	75.8	22.2	19.3	16.9	21.9	0.0	0
2011	04	06	19	63.6	57.5	21.2	28.9	42.8	----	49.4	62.9	60.3	55.0	42.0	80.9	119.7	75.8	24.9	19.4	16.8	21.8	0.0	0
2011	04	06	20	63.6	57.5	21.3	28.9	43.0	----	49.2	62.9	60.2	54.8	42.0	80.9	119.4	75.6	25.5	19.4	16.8	21.8	0.0	0
2011	04	06	21	63.7	57.6	21.2	28.8	42.8	----	49.2	62.8	60.1	54.7	41.9	81.1	119.6	75.6	24.3	19.3	16.7	21.7	0.0	0
2011	04	06	22	63.4	57.4	21.2	28.9	42.7	----	49.0	62.6	59.8	54.8	41.8	80.7	119.7	75.5	22.3	19.3	16.7	21.6	0.0	0
2011	04	06	23	63.3	57.2	21.2	28.8	42.8	----	49.0	62.4	60.0	54.6	41.9	80.6	119.5	75.4	22.2	19.3	16.7	21.6	0.0	0
2011	04	06	24	63.3	57.1	21.2	28.7	42.7	----	48.9	62.4	60.0	54.4	41.8	80.6	119.5	75.3	22.1	19.2	16.7	21.6	0.0	0

Table 3.1-1(a) Gamma-ray dose rate (one-hour average) and one-hour precipitation from 10 March through 10 April 2011 — (continued)

YEAR	MON	DAY	HOUR	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25	Preci	Rain sensing
																				$\times 10^{-2}$ μGy/h		mm/h	*
2011	04	07	01	63.2	57.0	21.1	28.8	42.6	----	48.9	62.3	59.7	54.2	41.6	80.5	119.6	75.2	22.0	19.3	16.7	21.6	0.0	0
2011	04	07	02	63.2	57.1	21.1	28.7	42.7	----	48.8	62.3	59.8	54.0	41.7	80.4	119.5	75.3	22.1	19.3	16.6	21.6	0.0	0
2011	04	07	03	63.1	57.0	21.2	28.7	42.6	----	48.7	62.2	59.7	54.1	41.6	80.5	119.5	75.1	22.1	19.2	16.6	21.6	0.0	0
2011	04	07	04	62.9	57.0	21.0	28.7	42.5	----	48.8	62.1	59.7	54.0	41.5	80.3	119.3	75.1	22.0	19.2	16.6	21.6	0.0	0
2011	04	07	05	62.8	56.9	21.0	28.6	42.4	----	48.6	62.1	59.8	53.9	41.5	80.3	119.2	74.8	22.0	19.2	16.6	21.5	0.0	0
2011	04	07	06	62.7	56.8	21.1	28.6	42.4	----	48.6	62.0	59.6	54.1	41.3	80.3	119.1	74.7	22.0	19.2	16.6	21.5	0.0	0
2011	04	07	07	62.8	56.7	21.0	28.5	42.2	----	48.5	61.9	59.6	54.1	41.3	80.2	119.0	74.9	22.0	19.2	16.6	21.4	0.0	0
2011	04	07	08	62.7	56.8	21.0	28.5	42.2	----	48.5	62.0	59.6	54.1	41.4	80.0	118.8	74.9	21.9	19.1	16.6	21.4	0.0	0
2011	04	07	09	62.6	56.9	20.9	28.5	42.2	----	48.5	61.8	59.4	53.9	41.4	79.8	118.5	74.6	21.8	19.1	16.6	21.4	0.0	0
2011	04	07	10	62.6	56.7	20.9	28.4	42.1	----	48.6	61.8	59.4	54.0	41.3	79.7	118.1	74.6	21.8	19.1	16.6	21.4	0.0	0
2011	04	07	11	62.4	56.4	20.9	27.8	42.0	----	48.5	61.8	59.4	54.1	41.5	79.8	117.9	74.6	21.8	19.1	16.7	21.4	0.0	0
2011	04	07	12	62.1	56.1	20.8	27.7	42.0	----	48.4	61.7	59.5	53.9	41.4	79.6	117.6	74.5	21.8	19.1	16.7	21.3	0.0	0
2011	04	07	13	61.8	55.8	20.8	27.6	42.0	----	48.4	61.6	59.2	54.0	41.4	79.5	117.6	74.7	21.7	19.0	16.7	21.4	0.0	0
2011	04	07	14	61.6	55.6	20.7	27.6	42.0	----	48.3	61.6	59.3	53.8	41.3	79.6	117.6	74.5	21.6	19.0	16.6	21.4	0.0	0
2011	04	07	15	61.3	55.8	20.7	27.5	41.9	----	48.3	61.6	59.2	53.9	41.3	79.5	117.3	74.6	21.6	19.1	16.6	21.4	0.0	0
2011	04	07	16	61.2	55.6	20.6	27.4	41.9	----	48.2	61.6	59.0	53.6	41.2	79.4	117.2	74.4	21.6	19.0	16.6	21.3	0.0	0
2011	04	07	17	61.2	55.6	20.7	27.3	41.8	----	48.1	61.7	59.0	53.4	41.2	79.3	117.1	74.5	21.5	18.9	16.5	21.3	0.0	0
2011	04	07	18	61.1	55.6	20.3	27.2	41.8	----	48.1	61.4	58.8	53.4	41.1	78.9	116.8	74.4	22.7	18.9	16.5	21.2	0.0	0
2011	04	07	19	61.1	55.7	20.3	27.2	41.7	----	48.0	61.3	58.6	53.4	41.0	79.0	116.8	74.3	26.2	18.9	16.4	21.2	0.0	0
2011	04	07	20	61.2	55.7	20.3	27.3	41.8	----	47.8	61.3	58.7	53.2	40.8	79.0	116.9	74.3	22.5	18.8	16.4	21.2	0.0	0
2011	04	07	21	61.3	55.8	20.3	27.3	41.7	----	47.8	61.2	58.6	53.0	40.8	78.9	116.8	73.9	22.2	18.8	16.3	21.1	0.0	0
2011	04	07	22	61.3	55.9	20.4	27.3	41.6	----	47.8	61.0	58.4	53.1	40.8	78.8	116.8	74.0	21.4	18.8	16.3	21.1	0.0	0
2011	04	07	23	61.4	55.9	20.4	27.2	41.6	----	47.7	61.0	58.4	53.0	40.8	78.7	117.2	73.8	21.3	18.8	16.3	21.0	0.0	0
2011	04	07	24	61.4	55.9	20.3	27.3	41.6	----	47.6	60.9	58.3	52.8	40.7	78.6	117.1	73.8	21.2	18.8	16.2	20.9	0.0	0
2011	04	08	01	61.4	55.7	20.3	27.2	41.5	----	47.5	60.8	58.3	52.9	40.7	78.6	116.9	73.9	21.3	18.7	16.2	20.9	0.0	0
2011	04	08	02	61.3	55.5	20.3	27.2	41.5	----	47.5	60.8	58.4	52.9	40.5	78.5	117.0	73.5	21.3	18.7	16.2	20.8	0.0	0
2011	04	08	03	61.2	55.7	20.3	27.2	41.5	----	47.3	60.7	58.2	52.9	40.4	78.5	116.9	73.4	21.3	18.7	16.3	20.9	0.0	0
2011	04	08	04	61.1	55.4	20.2	27.1	41.5	----	47.3	60.6	58.2	52.7	40.4	78.2	116.7	73.6	21.3	18.7	16.2	20.8	0.0	0
2011	04	08	05	61.0	55.5	20.2	27.1	41.4	----	47.3	60.4	58.1	52.6	40.4	78.3	116.6	73.5	21.2	18.7	16.2	20.8	0.0	0
2011	04	08	06	61.0	55.4	20.2	27.1	41.3	----	47.3	60.6	58.2	52.7	40.4	78.3	116.5	73.5	21.2	18.6	16.2	20.8	0.0	0
2011	04	08	07	61.0	55.5	20.2	27.0	41.2	----	47.2	60.5	58.1	52.6	40.4	78.2	116.5	73.3	21.2	18.6	16.1	20.8	0.0	0
2011	04	08	08	60.7	55.3	20.1	27.1	41.0	----	47.2	60.1	58.1	52.7	40.4	78.0	116.4	73.1	21.1	18.6	16.2	20.8	0.0	0
2011	04	08	09	60.4	55.0	20.1	26.9	40.6	----	47.1	59.9	57.9	52.6	40.3	77.8	116.1	72.9	21.1	18.5	16.2	20.8	0.0	0
2011	04	08	10	60.2	54.9	20.1	26.8	40.5	----	46.9	59.6	57.8	52.6	40.3	77.5	115.4	72.8	21.1	18.5	16.3	20.8	0.0	0
2011	04	08	11	59.9	54.7	20.0	26.9	40.4	----	46.8	59.5	57.7	52.4	40.2	77.3	115.1	72.8	21.1	18.6	16.3	20.7	0.0	0
2011	04	08	12	59.8	54.5	19.9	26.8	40.3	----	46.7	59.4	57.7	52.4	40.1	77.0	115.1	72.6	21.0	18.5	16.2	20.7	0.0	0
2011	04	08	13	59.7	54.4	19.8	26.7	40.1	----	46.6	59.3	57.4	52.3	40.1	76.9	114.9	72.6	20.9	18.5	16.1	20.7	0.0	0
2011	04	08	14	59.6	54.3	19.7	26.7	39.9	----	46.5	59.3	57.2	52.1	39.9	76.9	114.7	72.5	20.9	18.4	16.0	20.6	0.0	0
2011	04	08	15	59.6	54.2	19.7	26.6	40.0	----	46.4	59.3	57.1	52.1	39.9	76.9	114.5	72.4	20.9	18.3	16.1	20.6	0.0	0
2011	04	08	16	59.6	54.4	19.7	26.6	40.0	----	46.2	59.1	57.0	52.1	39.9	76.6	114.3	72.2	20.8	18.3	16.0	20.5	0.0	0
2011	04	08	17	59.7	54.3	19.6	26.6	39.9	----	46.1	59.1	56.9	52.0	39.8	76.8	114.3	72.1	20.8	18.4	16.0	20.5	0.0	0
2011	04	08	18	59.6	54.4	19.5	26.6	40.1	----	46.1	58.9	56.9	52.0	39.8	76.5	114.0	71.9	20.8	18.3	16.0	20.5	0.0	0
2011	04	08	19	59.5	54.4	19.3	26.5	40.1	----	46.0	59.1	56.8	52.0	39.6	76.4	114.2	72.0	20.7	18.3	16.0	20.4	0.0	0
2011	04	08	20	59.6	54.4	19.5	26.4	40.2	----	46.0	59.1	56.8	51.9	39.7	76.5	114.3	71.8	20.8	18.3	15.9	20.5	0.0	0
2011	04	08	21	59.5	54.2	19.6	26.5	40.1	----	45.8	59.0	56.6	52.0	39.5	76.4	114.4	71.7	20.7	18.2	15.9	20.5	0.0	0
2011	04	08	22	59.5	54.1	19.5	26.5	40.0	----	45.9	58.8	56.7	51.7	39.5	76.4	114.2	71.9	20.7	18.2	15.8	20.3	0.0	0
2011	04	08	23	59.5	54.2	19.5	26.4	40.0	----	45.9	58.8	56.5	51.7	39.6	76.4	113.8	71.6	20.6	18.1	15.8	20.3	0.0	0
2011	04	08	24	59.5	54.2	19.5	26.4	40.0	----	45.9	58.6	56.5	51.7	39.5	76.3	113.8	71.4	20.6	18.2	15.8	20.3	0.0	0
2011	04	09	01	59.6	54.2	19.5	26.5	40.1	----	45.8	58.7	56.6	51.8	39.5	76.3	113.8	71.6	20.6	18.2	15.9	20.4	0.0	0
2011	04	09	02	59.9	54.6	19.7	26.7	40.4	----	46.1	59.0	57.0	52.0	39.9	76.5	114.2	71.8	20.9	18.5	16.1	20.6	0.0	0
2011	04	09	03	60.3	54.7	19.8	26.8	40.5	----	46.1	59.0	56.9	52.1	39.8	76.5	114.4	71.7	20.9	18.5	16.1	20.6	0.0	0
2011	04	09	04	59.9	54.4	19.6	26.6	40.2	----	45.8	58.7	56.7	51.8	39.5	76.2	114.2	71.7	20.6	18.2	16.0	20.3	0.0	0
2011	04	09	05	59.7	54.3	19.5	26.4	40.1	----	45.8	58.4	56.5	51.5	39.3	76.3	113.8	71.3	20.5	18.2	15.9	20.3	0.0	1
2011	04	09	06	59.6	54.3	19.5	26.5	40.0	----	45.8	58.4	56.6	51.6	39.4	76.3	114.0	71.3	20.5	18.2	15.9	20.3	0.0	1
2011	04	09	07	59.7	54.4	19.7	26.6	40.1	----	45.8	58.4	56.7	51.7	39.4	76.1	113.8	71.3	20.6	18.3	15.9	20.4	0.0	1
2011	04	09	08	59.6	54.4	20.0	26.7	40.3	----	45.6	58.4	56.6	51.8	39.6	76.0	113.8	71.5	20.8	18.4	16.1	20.5	0.5	1
2011	04	09	09	59.2	54.3	19.9	26.6	40.2	----	45.3	58.2	56.2	51.3	39.3	75.7	113.5	71.7	20.9	18.4	16.2	20.5	1.5	1
2011	04	09	10	59.1	54.1	19.8	26.4	40.0	----	44.9	57.8	56.0	50.9	39.0	75.4	113.4	71.5	20.6	18.4	16.2	20.4	0.5	1
2011	04	09	11	58.9	53.8	19.5	26.1	39.7	----	44.7	57.7	55.9	50.5	38.8	75.1	113.2	71.3	20.4	18.1	16.0	20.1	0.0	1
2011	04	09	12	58.8	53.9	19.5	26.1	39.7	----	44.7	57.8	55.8	50.7	38.8	75.0	113.0	71.3	20.4	18.1	16.0	20.1	0.5	1
2011	04	09	13	58.6	53.7	19.4	26.0	39.6	----	44.5	57.6	55.6	50.6	38.6	74.9	112.8	71.4	20.3	18.0	15.9	20.0	0.0	1
2011	04	09	14	58.6	53.5	19.4	25.8	39.5	----	44.3	57.5	55.4	50.5	38.4	74.8	112.4	71.2	20.2	17.9	15.7	19.9	0.0	1
2011	04	09	15	58.4	53.5	19.3	25.8	39.4	----	44.2	57.3	55.2	50.3	38.3	74.8	112.6	71.0	20.1	17.8	15.7	19.8	0.0	0
2011	04	09	16	58.3	53.3	19.3	25.6	39.3	----	44.2	57.2	55.2	50.1	38.2	74.6	112.3	70.8	20.0	17.8	15.6	19.7	0.5	1
2011	04	09	17	58.1	53.4	19.6	25.9	39.5	----	44.2	57.1	55.2	50.2	38.3	74.4	111.9	71.0	20.1	18.0	15.8	20.1	2.5	1
2011	04	09	18	58.1	53.4	19.7	26.1	39.4	----	44.1	57.0	55.1	50.3	38.3	74.2	111.6	70.9	20.2	18.1	15.9	20.0	1.5	1
2011	04	09	19	57.9	53.3	19.5	25.9	39.2	----	43.9	56.8	54.9	50.2	38.2	74.0	111.3	70.8	20.0	17.9	15.8	19.9	1.0	1
2011	04	09	20	57.9	53.3	19.4	25.6	39.0	----	43.8	56.8	54.7	50.1	38.1	73.9	111.1	70.6	20.0	17.9	15.8	19.8	0.5	1
2011	04	09	21	57.9	53.3	19.5	25.8	39.0	----	43.7	56.8	54.7	50.1	38.1	74.0	111.1	70.8	20.1	17.9	15.8	19.8	1.0	1
2011	04	09	22	57.9	53.4	19.7	26.0	39.1	----	43.9	56.8	54.8	50.0	38.2	73.9	111.2	70.7	20.2	18.0	15.8	20.0	0.5	1
2011	04	09	23	57.9	53.3	19.5	25.9	39.0	----	43.9	56.5	54.8	49.9	38.1	73.8	111.1	70.6	20.1	18.0	15.7	19.9	0.5	1
2011	04	09	24	57.8	52.9	19.3	25.8	38.9	----	43.8	56.5	54.6	49.7	37.9	73.6	110.9	70.4	20.0	17.8	15.5	19.7	0.0	0
2011	04	10	01	57.7	52.8	19.0	25.4	38.7	----	43.6	56.2	54.4	49.5	37.5	73.6	110.6	70.2	19.6	17.5	15.3	19.4	0.0	0
2011	04	10	02	57.8	52.9	19.1	25.4	38.8	----	43.8	56.5	54.6	49.6	37.8	73.7	110.8	70.2	19.8	17.6	15.4	19.5	0.0	0
2011	04	10	03	57.9	52.9	19.0	25.3	38.7	----	43.7	56.4	54.6	49.6	37.7	73.7	110.8	70.4	19.7	17.6	15.3	19.4	0.0	0
2011	04	10	04	57.7	52.9	19.0	25.2	38.7	----	43.8	56.5	54.7	49.6	37.6	73.6	111.0	70.3	19.6	17.6	15.3	19.4	0.0	0
2011	04	10	05	57.9	53.0	19.1	25.6	38.9	----	44.0	56.6	54.7	49.7	37.8	73.9	111.0	70.3	19.7	17.7	15.4	19.7	0.0	0
2011	04	10	06	58.0	53.2	19.2	25.6	39.0	----	44.0	56.8	54.9	49.7	38.0	74.0	111.2	70.4	19.9	17.8	15.5	19.7	0.0	0
2011	04	10	07	58.1	53.3	19.4	25.6	39.1	----	44.2	57.0	55.2	49.8	38.1	74.2	111.4	70.6	19.9	18.0	15.6	19.8	0.0	0
2011	04	10	08	57.9	53.0	19.3	25.5	39.0	----	44.1	56.8	55.1	49.8	38.0	74.2	111.2	70.6	20.0	17.9	15.5	19.6	0.0	0
2011	04	10	09	57.9	52.9	19.2	25.4	39.0	----	44.0	56.8	55.1	50.0	38.0	74.0	111.3	70.4	19.8	17.7	15.4	19.6	0.0	0
2011	04	10	10	58.2	52.8	19.1	25.3	39.0	----	44.1	56.9	55.1	50.0	38.0	74.1	111.2	70.4	19.7	17.7	15.4	19.6	0.0	0
2011	04	10	11	58.0	52.3	19.0	25.2	38.7	----	43.9	56.8	55.0	49.9	37.8	73.7	111.0	70.1	19.6	17.6	15.3	19.5	0.0	0
2011	04	10	12	57.9	52.4	19.0	25.1	38.8	----	43.9	56.7	54.9	50.0	37.8	73.8	110.9	70.3	19.6	17.6	15.3	19.4	0.0	0
2011	04	10	13	58.0	52.4	19.0	25.2	38.7	----	43.9	56.8	55.0	50.0	37.7	73.7	110.8	70.2	19.6	17.5	15.2	19.5	0.0	0
2011	04	10	14	57.9	52.4	18.9	25.1	38.7	----	43.9	56.6	54.9	49.9	37.8	73.6	110.8	70.1	19.5	17.5	15.3	19.4	0.0	0
2011	04	10	15	57.9	52.4	18.9	25.1	38.7	----	43.8	56.6	54.9	49.8	37.7	73.5	110.8	70.0	19.6	17.5	15.3	19.4	0.0	0
2011	04	10	16	57.9	52.6	18.8	25.0	38.5	----	43.8	56.5	54.8	49.7	37.6	73.7	110.7	69.8	19.5	17.5	15.3	19.3	0.0	0
2011	04	10	17	58.0	52.6	18.6	25.1	38.6	----	43.7	56.5	54.7	49.7	37.5	73.5	110.6	69.9	19.5	17.5	15.2	19.3	0.0	0
2011	04	10	18	57.9	52.6	18.4	25.1	38.5	----	43.7	56.5	54.5	49.7	37.6	73.5	110.6	69.9	19.5	17.4	15.2	19.3	0.0	0
2011	04	10	19	57.6	52.6	18.4	25.0	38.5	----	43.7	56.4	54.4	49.7	37.3	73.5	110.5	69.9	19.4	17.4	15.1	19.3	0.0	0
2011	04	10	20	57.7	52.6	18.4	25.0	38.5	----	43.7	56.3	54.5	49.7	37.4	73.3	110.4	69.8	19.5	17.4	15.2	19.3	0.0	0
2011	04	10	21	57.5	52.5	18.4	25.0	38.4	----	43.6	56.2	54.3	49.7	37.5	73.3	110.4	69.7	19.5	17.4	15.2	19.2	0.0	0
2011	04	10	22	57.5	52.4	18.4	25.0	38.4	----	43.4	56.2	54.4	49.6	37.4	73.1	110.3	69.6	19.3	17.4	15.1	19.2	0.0	0
2011	04	10	23	57.4	52.4	18.3	25.0	38.4	----	43.5	56.1	54.4	49.5	37.2	73.0	110.3	69.5	19.4	17.4	15.1	19.2	0.0	0
2011	04	10	24	57.4	52.4	18.3	25.0	38.3	----	43.5	56.1	54.4	49.3	37.2	73.1	110.1	69.6	19.3	17.4	15.1	19.2	0.0	0

Table 3.1-1(b) Gamma-ray dose rate (one-day average) from 11 April through 30 June 2011

YEAR	MON	DAY	MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25
																			×10^{-2}μGy/h	
2011	04	11	56.8	51.9	18.6	25.1	38.0	----	43.2	55.7	54.0	49.0	37.2	72.5	109.1	69.2	19.4	17.5	15.2	19.3
2011	04	12	55.4	50.8	17.7	23.8	36.6	----	41.5	53.7	52.0	47.1	35.4	70.7	107.3	67.3	18.2	16.5	14.2	18.1
2011	04	13	54.5	50.0	17.4	23.5	36.1	----	41.0	53.2	51.4	46.4	35.0	69.9	106.0	66.6	17.9	16.3	14.0	17.7
2011	04	14	53.7	49.3	17.0	23.1	35.7	----	40.4	52.4	50.7	45.8	34.5	68.9	104.7	65.9	17.6	16.1	13.9	17.1
2011	04	15	52.7	48.6	16.7	22.7	35.1	----	39.8	51.8	50.0	45.1	34.0	68.1	103.5	65.2	17.2	15.9	13.7	16.7
2011	04	16	51.8	47.8	16.3	22.0	34.7	----	39.1	51.2	49.3	44.5	33.5	67.4	102.3	64.5	16.9	15.6	13.4	16.4
2011	04	17	51.4	47.3	15.9	21.1	34.1	----	38.5	50.4	48.7	43.7	32.8	66.4	101.3	63.5	16.6	15.3	13.3	16.1
2011	04	18	50.8	46.9	15.8	20.9	33.7	----	38.1	49.9	48.5	43.2	32.5	65.8	100.3	63.3	16.4	15.3	13.2	15.9
2011	04	19	50.1	45.7	15.7	20.2	32.8	----	36.2	48.5	46.7	41.6	31.2	63.9	96.8	60.7	15.8	14.9	12.9	15.4
2011	04	20	49.7	44.8	14.9	19.2	31.9	----	34.8	47.3	45.1	40.3	30.0	62.6	94.5	58.7	14.9	14.2	12.3	14.6
2011	04	21	49.4	44.5	14.7	19.1	31.8	----	34.6	46.9	44.8	40.1	29.8	62.1	93.7	58.4	14.8	14.1	12.2	14.5
2011	04	22	48.8	44.0	14.7	18.9	31.5	----	34.1	46.5	44.3	39.7	29.5	61.6	93.2	58.0	14.7	14.0	12.1	14.4
2011	04	23	48.2	43.7	14.7	18.7	31.3	----	33.5	46.2	43.8	39.4	29.1	61.1	93.1	57.5	14.5	13.9	12.0	14.2
2011	04	24	48.0	43.4	14.5	18.7	31.1	----	33.1	45.8	43.5	39.1	28.9	60.8	92.7	57.0	14.4	13.8	11.9	14.2
2011	04	25	47.5	43.1	14.2	18.3	30.4	----	32.6	45.0	42.8	38.4	28.3	60.0	91.6	56.3	14.0	13.5	11.6	13.8
2011	04	26	47.2	43.0	14.1	18.3	30.2	----	32.4	44.8	42.6	38.2	28.2	59.8	90.9	56.2	13.9	13.4	11.5	13.6
2011	04	27	46.9	42.8	14.0	18.2	30.1	----	32.2	44.7	42.3	38.2	28.1	59.6	90.3	55.5	13.8	13.3	11.4	13.6
2011	04	28	46.6	42.5	13.9	18.1	29.7	----	31.4	44.1	41.7	37.8	27.8	59.2	89.8	54.6	13.7	13.2	11.4	13.4
2011	04	29	46.2	42.1	13.6	18.0	29.4	----	31.0	43.7	41.3	37.2	27.2	58.6	89.8	54.2	13.4	13.0	11.2	13.2
2011	04	30	45.9	41.9	13.5	17.8	29.3	----	31.0	43.5	41.2	37.0	27.1	58.4	89.6	54.0	13.3	12.9	11.1	13.1
2011	05	01	45.7	41.9	13.4	17.8	29.1	----	30.7	43.3	40.8	36.9	27.0	58.1	89.1	53.7	13.3	12.8	11.1	13.1
2011	05	02	45.2	41.5	13.1	17.2	28.7	----	30.2	42.6	40.3	36.5	26.6	57.5	88.4	53.0	13.0	12.7	10.9	12.8
2011	05	03	45.4	41.7	13.3	17.3	28.9	----	30.3	42.6	40.4	36.5	26.7	57.4	88.3	52.8	13.2	12.8	11.1	13.0
2011	05	04	44.6	41.0	12.9	16.6	28.2	----	29.6	41.9	39.7	35.7	25.9	56.6	87.4	52.2	12.7	12.4	10.7	12.4
2011	05	05	44.9	41.2	12.9	16.7	28.2	----	29.7	41.8	39.8	35.7	25.9	56.6	87.5	52.0	12.7	12.3	10.6	12.3
2011	05	06	44.7	41.0	12.8	16.6	28.0	----	29.6	41.7	39.8	35.5	25.8	56.4	87.1	51.8	12.6	12.3	10.6	12.3
2011	05	07	44.5	40.8	12.8	16.5	28.0	----	29.5	41.7	39.6	35.4	25.8	56.4	87.0	51.8	12.6	12.3	10.6	12.3
2011	05	08	44.3	40.6	12.8	16.6	28.0	----	29.5	41.7	39.5	35.4	25.8	56.4	86.8	51.6	12.6	12.3	10.6	12.3
2011	05	09	44.3	40.5	12.6	16.6	27.9	----	29.4	41.5	39.3	35.4	25.7	56.2	86.2	50.8	12.5	12.2	10.6	12.3
2011	05	10	44.1	40.5	12.7	16.7	27.9	----	29.4	41.5	39.3	35.4	25.8	56.2	85.8	50.9	12.5	12.3	10.6	12.3
2011	05	11	43.8	40.4	12.9	16.7	27.8	----	28.9	41.0	38.9	35.1	25.5	55.6	85.4	50.3	12.6	12.3	10.7	12.3
2011	05	12	42.9	40.1	12.6	16.1	27.1	----	28.1	40.2	38.2	34.2	24.7	54.7	84.7	49.6	12.1	11.9	10.4	11.9
2011	05	13	42.7	39.7	12.4	15.9	27.1	----	28.1	40.2	38.1	34.2	24.7	54.6	84.5	49.4	12.0	11.8	10.3	11.8
2011	05	14	43.1	40.0	12.5	16.0	27.3	----	28.4	40.4	38.3	34.4	24.9	54.9	85.1	49.4	12.1	11.9	10.3	11.9
2011	05	15	43.1	39.7	12.4	15.8	27.2	----	28.4	40.3	38.2	34.3	24.9	54.9	85.0	49.3	12.0	11.8	10.2	11.8
2011	05	16	43.1	39.7	12.3	15.9	27.1	----	28.3	40.3	38.1	34.3	24.9	54.7	84.6	49.2	12.0	11.8	10.2	11.8
2011	05	17	43.0	39.7	12.4	15.9	27.0	----	28.2	40.1	37.9	34.2	24.7	54.5	84.3	49.0	12.0	11.8	10.2	11.8
2011	05	18	42.8	39.6	12.3	15.7	26.9	----	28.0	40.0	37.8	33.9	24.5	54.3	84.3	48.8	11.8	11.6	10.1	11.7
2011	05	19	42.8	39.7	12.3	15.8	27.0	----	28.1	40.0	37.8	34.0	24.6	54.4	84.2	48.8	11.9	11.6	10.1	11.7
2011	05	20	42.7	39.6	12.3	15.9	27.0	----	28.1	40.1	37.8	34.0	24.7	54.4	84.2	48.9	11.9	11.6	10.1	11.7
2011	05	21	42.7	39.6	12.2	15.8	27.1	----	28.1	40.1	37.7	34.0	24.7	54.4	84.0	48.8	11.9	11.6	10.1	11.7
2011	05	22	42.8	39.6	12.4	16.0	27.0	----	27.8	39.7	37.5	33.8	24.6	54.0	83.0	48.3	11.9	11.7	10.2	11.7
2011	05	23	42.3	39.2	12.1	15.5	26.4	----	27.3	39.1	37.1	33.2	23.9	53.2	81.9	47.6	11.6	11.4	9.9	11.3
2011	05	24	41.9	39.0	12.1	15.5	26.2	----	26.8	38.7	36.8	32.9	23.7	52.6	81.4	47.4	11.6	11.4	10.0	11.3
2011	05	25	41.9	38.9	11.9	15.5	26.2	----	27.0	38.9	36.8	32.9	23.7	52.8	81.8	47.5	11.5	11.3	9.8	11.2
2011	05	26	42.2	39.0	12.0	15.6	26.3	----	27.1	38.9	36.8	33.0	23.8	53.0	81.9	47.3	11.5	11.3	9.8	11.2
2011	05	27	42.1	38.9	11.9	15.7	26.3	----	27.1	38.9	36.8	33.0	23.9	53.0	81.9	47.4	11.5	11.3	9.8	11.2
2011	05	28	41.5	38.7	12.0	15.6	26.2	----	26.6	38.6	36.4	32.7	23.7	52.6	81.6	47.1	11.5	11.3	9.8	11.3
2011	05	29	40.9	38.4	12.0	15.2	25.8	----	25.9	38.0	35.9	32.3	23.2	51.9	80.4	46.3	11.4	11.2	9.8	11.1
2011	05	30	41.4	38.5	11.9	15.1	25.9	----	26.1	38.1	36.0	32.3	23.2	51.8	79.1	45.7	11.2	11.2	9.7	11.0
2011	05	31	42.1	38.8	11.9	15.3	25.9	----	26.2	38.1	36.1	32.3	23.3	51.9	79.3	45.7	11.2	11.1	9.7	10.9
2011	06	01	42.2	38.8	11.9	15.5	25.9	18.3	26.2	38.1	36.2	32.3	23.3	51.8	79.4	45.7	11.3	11.1	9.7	11.0
2011	06	02	41.9	38.6	11.9	15.5	25.9	18.3	25.9	37.9	35.9	32.2	23.2	51.5	79.2	45.6	----	11.1	9.7	11.0
2011	06	03	41.3	38.3	11.8	15.2	25.8	18.2	25.7	37.7	35.6	32.0	23.1	51.3	79.2	45.6	----	11.1	9.6	10.9
2011	06	04	41.6	38.5	11.9	15.2	26.1	18.3	26.0	38.0	35.8	32.2	23.4	51.7	79.6	45.5	----	11.1	9.6	11.0
2011	06	05	41.7	38.6	12.1	15.4	26.2	18.5	26.1	38.1	35.8	32.4	23.6	51.8	79.6	45.6	----	11.3	9.8	11.2
2011	06	06	41.2	38.3	12.0	15.1	25.9	18.3	25.8	37.7	35.5	32.0	23.3	51.4	79.1	45.3	----	11.2	9.7	11.0
2011	06	07	41.5	38.4	11.9	15.2	25.8	18.3	25.9	37.7	35.5	32.1	23.3	51.4	79.1	45.3	----	11.1	9.6	11.0
2011	06	08	41.4	38.4	11.9	15.3	25.7	18.2	25.7	37.6	35.3	31.9	23.1	51.2	78.9	45.1	----	11.1	9.6	10.9
2011	06	09	41.4	38.4	11.7	15.1	25.7	18.2	25.7	37.6	35.3	31.9	23.1	51.0	79.0	45.2	----	11.0	9.5	10.9
2011	06	10	41.4	38.4	11.8	15.2	25.8	18.2	25.8	37.6	35.4	32.0	23.2	51.0	78.8	45.3	----	11.1	9.6	10.9
2011	06	11	41.0	38.1	11.9	15.2	25.9	18.2	25.4	37.3	35.1	31.8	23.1	50.5	78.4	45.0	----	11.1	9.7	11.0
2011	06	12	40.9	38.1	11.7	15.0	25.8	18.0	25.4	37.3	35.0	31.6	22.9	50.4	78.6	44.9	----	10.9	9.5	10.8
2011	06	13	40.7	38.0	11.8	15.0	25.5	18.0	25.3	37.0	34.9	31.6	22.8	50.0	77.9	44.6	----	11.0	9.6	10.8
2011	06	14	40.8	37.9	11.7	15.1	25.4	18.1	25.2	36.9	34.7	31.5	22.8	49.8	77.6	44.4	----	11.0	9.6	10.9
2011	06	15	40.8	37.9	11.6	14.9	25.2	17.8	25.1	36.8	34.6	31.3	22.6	49.7	77.7	44.3	----	10.8	9.4	10.6
2011	06	16	40.9	38.0	11.7	15.0	25.3	17.9	25.2	36.9	34.7	31.4	22.7	49.7	77.8	44.3	----	10.8	9.4	10.6
2011	06	17	40.3	37.7	11.7	15.0	25.1	17.8	24.8	36.5	34.3	31.1	22.5	49.2	77.1	44.1	----	10.9	9.5	10.7
2011	06	18	40.4	37.6	11.6	14.9	25.1	17.7	24.7	36.6	34.2	31.0	22.4	49.3	77.3	44.0	----	10.8	9.4	10.5
2011	06	19	40.3	37.6	11.6	14.9	25.1	17.6	24.6	36.5	34.1	30.9	22.3	49.2	77.5	43.9	----	10.7	9.3	10.5
2011	06	20	40.4	37.7	11.5	15.0	25.1	17.7	24.8	36.6	34.2	30.9	22.4	49.3	77.4	44.0	----	10.7	9.3	10.5
2011	06	21	40.5	37.8	11.6	15.0	25.1	17.8	24.9	36.7	34.2	31.0	22.5	49.4	77.4	44.1	----	10.8	9.3	10.6
2011	06	22	40.7	38.0	11.7	15.1	25.2	17.9	25.0	36.8	34.3	31.2	22.7	49.5	77.3	44.1	----	10.8	9.4	10.6
2011	06	23	40.7	38.1	11.7	15.2	25.3	17.9	25.1	36.8	34.3	31.2	22.8	49.6	77.4	44.1	----	10.8	9.4	10.6
2011	06	24	40.7	38.1	11.5	15.1	25.2	17.8	25.0	36.8	34.2	31.2	22.7	49.6	77.4	44.0	----	10.7	9.3	10.5
2011	06	25	41.0	37.8	11.6	15.0	25.2	17.8	24.7	36.5	34.0	31.0	22.5	49.3	77.1	43.7	----	10.7	9.3	10.5
2011	06	26	40.8	37.7	11.6	14.9	25.1	17.7	24.6	36.4	33.7	30.8	22.3	49.2	77.0	43.6	----	10.6	9.2	10.4
2011	06	27	40.7	37.6	11.6	14.4	25.0	17.7	24.5	36.3	33.6	30.7	22.3	49.1	76.6	43.5	----	10.6	9.2	10.4
2011	06	28	40.6	37.7	11.7	14.2	25.1	17.8	24.6	36.4	33.7	30.8	22.4	49.1	76.7	43.7	----	10.7	9.3	10.5
2011	06	29	40.6	37.7	11.6	14.1	25.2	17.8	24.6	36.5	33.7	30.8	22.5	49.1	76.8	43.8	----	10.7	9.3	10.5
2011	06	30	40.3	37.6	11.6	14.1	25.1	17.6	24.4	36.3	33.4	30.6	22.3	48.9	76.6	43.7	----	10.6	9.3	10.4

Table 3.1-2 Statistics of gamma-ray dose rate (10-minute average) in 2010; before the accident

Unit: $\times 10^{-2}$ μGy/h

		MS-1	MS-2	MS-3	MS-4	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16	MP-17	MP-18	MP-19	MP-21	MP-22	MP-23	MP-24	MP-25
Annual	Average	3.97	3.88	3.81	5.18	4.48	3.93	4.02	4.46	3.89	3.39	3.70	3.91	3.86	3.93	4.27	4.20	4.58	3.85
	3σ	0.69	0.66	0.76	0.89	0.73	0.72	0.78	0.68	0.81	0.86	0.89	0.58	0.58	0.64	0.75	0.70	0.66	0.76
	Maximum	6.6	6.2	6.8	8.2	7.3	7.0	7.1	12.1	7.3	6.9	7.2	6.0	5.7	6.6	11.1	6.9	7.0	6.5
Jan.	Average	4.06	3.97	3.80	5.37	4.49	3.97	4.03	4.49	3.92	3.40	3.70	3.93	3.89	3.93	4.30	4.22	4.58	3.86
	3σ	0.36	0.35	0.39	0.47	0.40	0.41	0.44	0.46	0.46	0.47	0.47	0.36	0.33	0.40	0.40	0.40	0.38	0.43
	Maximum	5.3	5.3	5.1	7.2	5.8	5.2	5.6	8.3	5.6	5.0	5.3	4.9	4.9	5.2	5.5	5.5	6.0	5.4
Feb.	Average	4.03	3.96	3.82	5.31	4.51	3.96	4.08	4.48	3.93	3.44	3.74	3.94	3.91	3.96	4.33	4.23	4.61	3.88
	3σ	0.72	0.76	0.87	1.01	0.76	0.81	0.87	0.72	0.85	0.94	0.92	0.65	0.76	0.79	0.79	0.76	0.71	0.85
	Maximum	5.7	5.6	5.8	7.8	6.2	5.8	6.0	6.1	5.8	5.4	5.7	5.3	5.6	5.7	6.1	6.0	6.1	5.8
Mar.	Average	3.97	3.89	3.80	5.24	4.51	3.94	4.08	4.48	3.92	3.44	3.74	3.93	3.90	3.96	4.29	4.22	4.60	3.88
	3σ	0.89	0.83	0.99	1.10	0.98	1.01	1.05	0.93	1.09	1.19	1.18	0.77	0.78	0.88	0.93	0.92	0.84	1.03
	Maximum	6.6	6.1	6.3	7.6	7.0	6.6	6.5	6.7	6.6	6.5	6.7	5.8	5.5	6.1	6.6	6.5	6.6	6.4
Apr.	Average	3.91	3.84	3.79	5.16	4.47	3.90	4.04	4.42	3.88	3.41	3.69	3.89	3.88	3.93	4.25	4.19	4.57	3.85
	3σ	0.72	0.76	0.90	0.89	0.82	0.82	0.89	0.71	0.89	1.00	1.01	0.64	0.72	0.76	0.83	0.81	0.73	0.86
	Maximum	5.5	5.3	5.5	7.0	6.2	5.9	5.7	6.3	5.6	5.5	5.8	5.5	5.3	5.4	5.9	5.8	6.0	5.7
May	Average	3.91	3.83	3.80	4.97	4.45	3.88	4.00	4.41	3.86	3.38	3.66	3.86	3.83	3.90	4.22	4.16	4.54	3.82
	3σ	0.67	0.65	0.73	0.80	0.80	0.71	0.81	0.71	0.85	0.89	0.96	0.61	0.55	0.59	0.78	0.72	0.67	0.81
	Maximum	5.8	5.8	5.6	6.9	6.6	5.9	6.3	12.1	6.2	5.8	6.4	5.5	5.3	5.5	7.1	6.2	6.4	6.1
Jun.	Average	3.82	3.78	3.77	4.95	4.44	3.84	3.96	4.39	3.84	3.34	3.63	3.84	3.80	3.89	4.18	4.14	4.52	3.80
	3σ	0.52	0.52	0.60	0.57	0.60	0.54	0.60	0.59	0.72	0.71	0.75	0.49	0.44	0.54	0.58	0.57	0.51	0.58
	Maximum	5.1	5.2	5.5	6.4	5.9	5.2	5.5	7.1	6.0	5.1	5.4	5.0	4.8	5.9	5.8	5.5	5.7	5.2
Jul.	Average	3.82	3.77	3.76	5.00	4.42	3.84	3.94	4.39	3.81	3.30	3.61	3.83	3.77	3.89	4.18	4.13	4.51	3.79
	3σ	0.64	0.54	0.62	0.71	0.62	0.62	0.61	0.62	0.68	0.74	0.76	0.50	0.45	0.56	0.76	0.57	0.52	0.61
	Maximum	6.4	6.2	6.5	8.0	7.1	6.4	6.6	7.1	7.0	6.8	7.0	6.0	5.6	6.6	11.1	6.5	6.7	6.4
Aug.	Average	3.98	3.85	3.77	5.13	4.43	3.90	3.95	4.42	3.82	3.32	3.63	3.87	3.80	3.91	4.22	4.14	4.51	3.79
	3σ	0.32	0.28	0.33	0.48	0.32	0.34	0.30	0.30	0.30	0.32	0.34	0.31	0.30	0.28	0.48	0.31	0.28	0.33
	Maximum	4.9	4.7	5.1	6.2	5.6	5.2	5.0	5.3	4.9	4.6	5.1	5.0	4.3	4.7	10.8	5.1	5.6	5.0
Sep.	Average	4.09	3.95	3.90	5.31	4.56	4.02	4.09	4.53	3.97	3.46	3.79	3.97	3.91	4.01	4.35	4.27	4.63	3.93
	3σ	0.81	0.82	1.01	0.95	0.98	0.87	1.04	0.74	1.09	1.13	1.21	0.70	0.70	0.76	0.96	0.92	0.87	1.02
	Maximum	5.8	5.7	5.9	7.1	6.4	5.8	6.3	6.1	6.3	5.8	6.1	5.4	5.2	5.5	6.2	6.0	6.3	5.9
Oct.	Average	3.99	3.88	3.83	5.19	4.49	3.93	4.02	4.47	3.88	3.36	3.70	3.92	3.85	3.93	4.27	4.21	4.62	3.85
	3σ	0.58	0.54	0.68	0.70	0.66	0.66	0.69	0.60	0.72	0.79	0.81	0.50	0.47	0.56	0.65	0.64	0.60	0.68
	Maximum	5.3	5.0	5.3	6.7	6.1	5.4	5.6	5.9	5.7	5.2	5.5	5.2	4.9	5.3	5.7	5.6	5.9	5.4
Nov.	Average	4.04	3.91	3.85	5.25	4.51	3.95	4.04	4.49	3.91	3.39	3.72	3.94	3.88	3.95	4.28	4.23	4.65	3.87
	3σ	0.59	0.58	0.73	0.74	0.63	0.62	0.69	0.61	0.72	0.79	0.79	0.48	0.56	0.57	0.66	0.64	0.59	0.67
	Maximum	6.3	6.2	6.8	8.2	7.0	6.4	6.8	7.1	7.0	6.7	7.0	5.5	5.7	6.2	7.1	6.9	7.0	6.5
Dec.	Average	4.03	3.92	3.88	5.23	4.54	3.96	4.05	4.52	3.95	3.41	3.75	3.95	3.89	3.96	4.31	4.25	4.67	3.90
	3σ	0.67	0.68	0.78	0.84	0.81	0.78	0.89	0.77	0.86	0.87	0.92	0.56	0.53	0.67	0.76	0.73	0.67	0.80
	Maximum	6.6	6.2	6.0	8.0	7.3	7.0	7.1	10.1	7.3	6.9	7.2	5.8	5.7	6.0	7.1	6.7	6.8	6.5

3.2 Atmospheric Radionuclides

3.2.1 Radiocesium, Radioiodine and Radiotellurium

Atmospheric radionuclide concentration is shown in Figure 3.2-1, Figure 3.2-2, Figure 3.2-3, Figure 3.2-4, Figure 3.2-5 and Table 3.2. The variations of atmospheric radionuclides concentration corresponded with those of the gamma-ray dose rate.

The highest concentrations of aerosol-bound Cs-134, Cs-136 and Cs-137 were 4.26×10^{2}, 5.68×10^{1} and 4.26×10^{2} Bq m^{-3}, respectively. These values were observed in the period when the Fourth Peak of the gamma-ray dose rate appeared. As for radioiodine, the highest concentrations were observed in the period when the First Peak of the gamma-ray dose rate appeared. The highest concentrations of volatile (or gaseous) I-131, I-132 and I-133 were 1.37×10^{3}, 6.45×10^{2} and 1.89×10^{2} Bq m^{-3}, respectively. The highest concentrations of aerosol I-131, I-132, I-133 and Te-132 were 1.43×10^{3}, 1.91×10^{3}, 2.04×10^{2} and 2.05×10^{3} Bq m^{-3}, respectively.

Aerosol-bound Cs-134, Cs-137 and I-131 were detected until the end of May. Volatile I-131 was detected for a longer period than aerosol I-131 and I-133, which were detected until 16 March 2011. When the second largest peak of I-131 was observed, I-133 was not detected.

3.2.2 The Other Radionuclides

Xe-133, Te-129m, Te-129 and Tc-99m were detected. The highest concentration of each of these radionuclides was observed in the period when the First Peak of the gamma-ray dose rate appeared. Xe-133 could not be quantified since the collecting efficiency of the sampling filter for it cannot be assumed. The relative variation of Xe-133 could be observed. The concentrations of Xe-133 are shown in Table 3.2(c) only for reference. It was not clear why Xe-133 was detected on HE-40TA.

3.2.3 Radiocesium in CHC-50

Radiocesium was detected in some CHC-50 samples. These CHC-50 samples might have been contaminated with radiocesium while handling them in the radioactive plume. In addition small amount of atmospheric radiocesium might have penetrated HE-40TA, and been trapped on CHC-50.

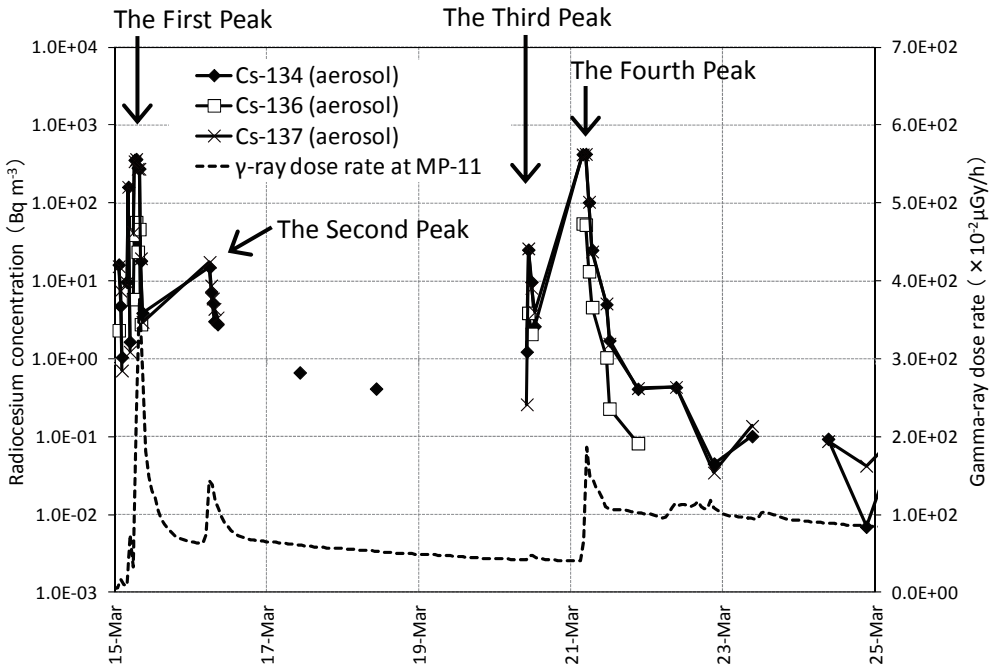

Figure 3.2-1(a) Atmospheric aerosol-bound radiocesium concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

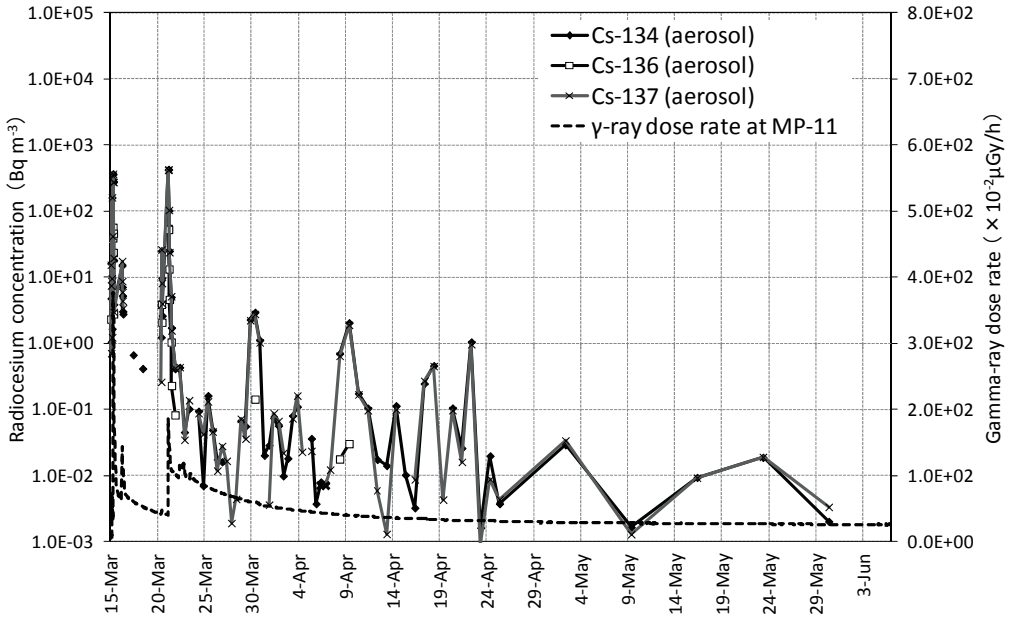

Figure 3.2-1(b) Atmospheric aerosol-bound radiocesium concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

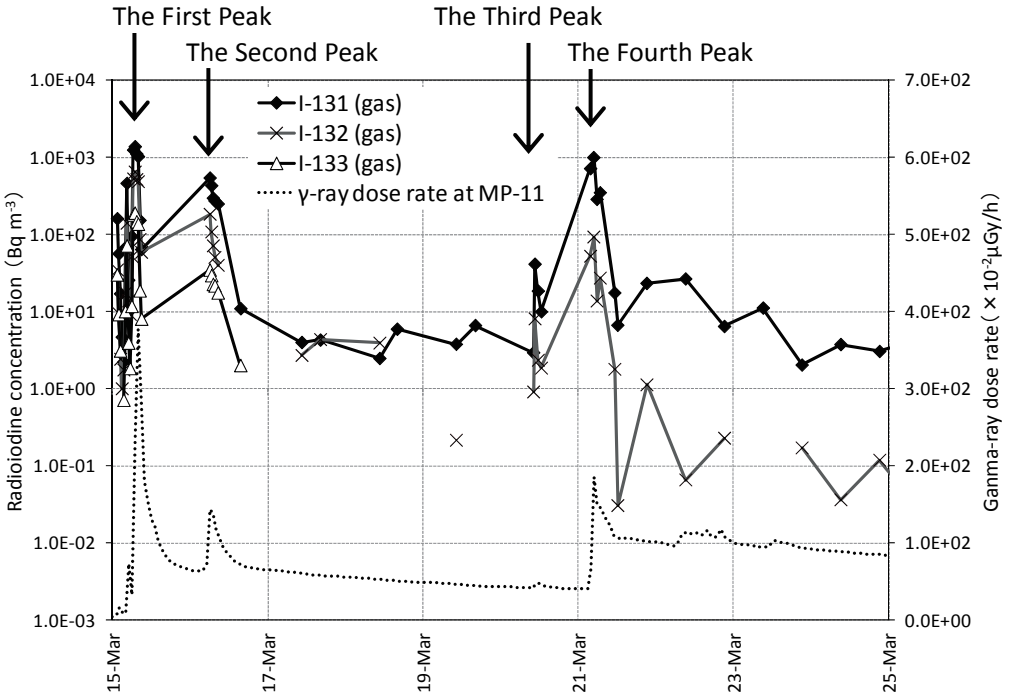

Figure 3.2-2(a) Atmospheric volatile radioiodine concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

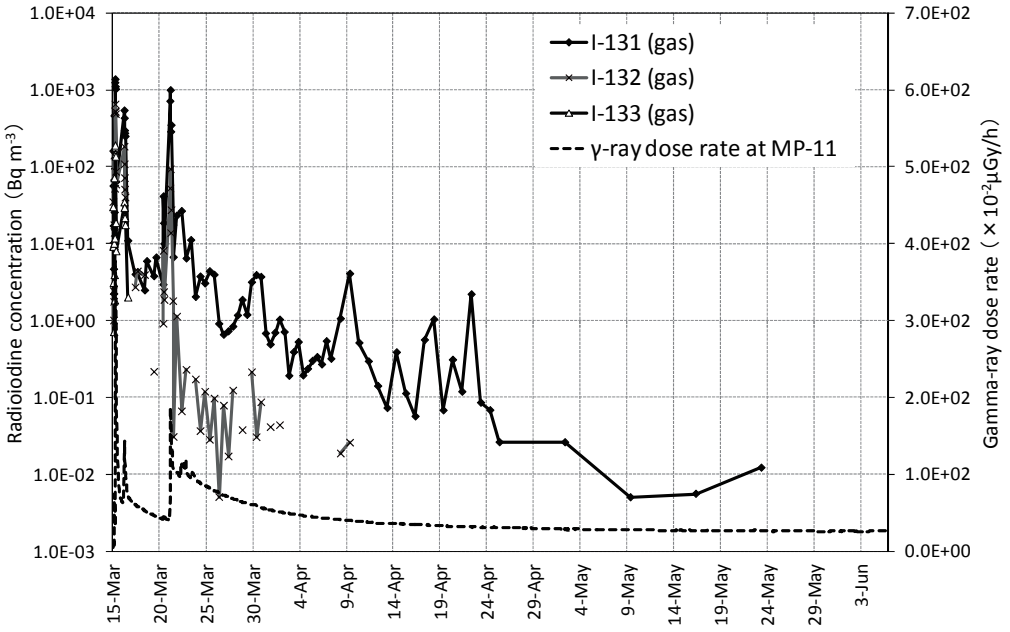

Figure 3.2-2(b) Atmospheric volatile radioiodine concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

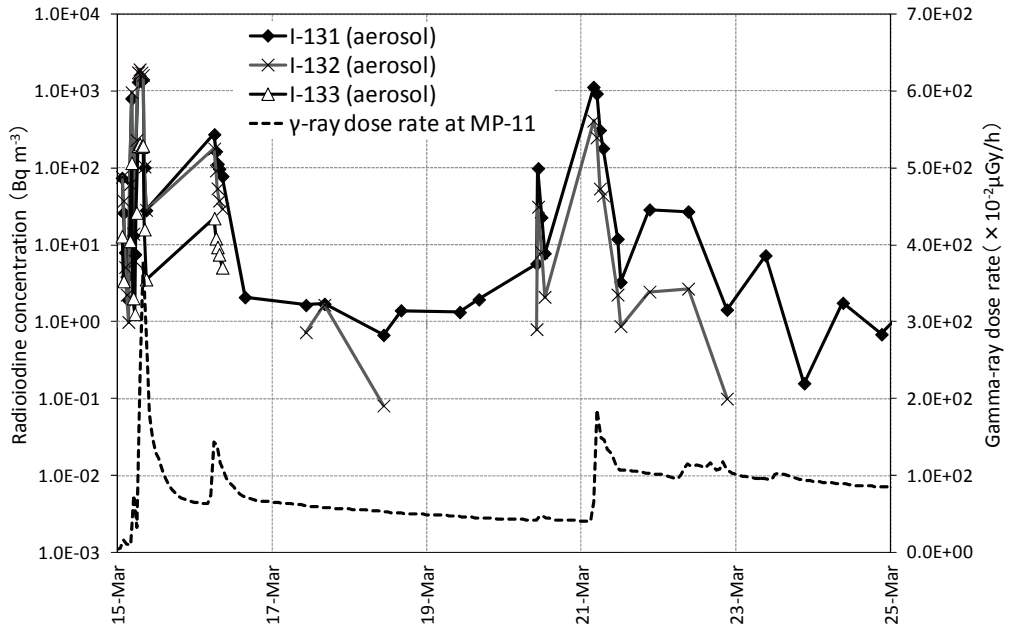

Figure 3.2-3(a) Atmospheric aerosol-bound radioiodine concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

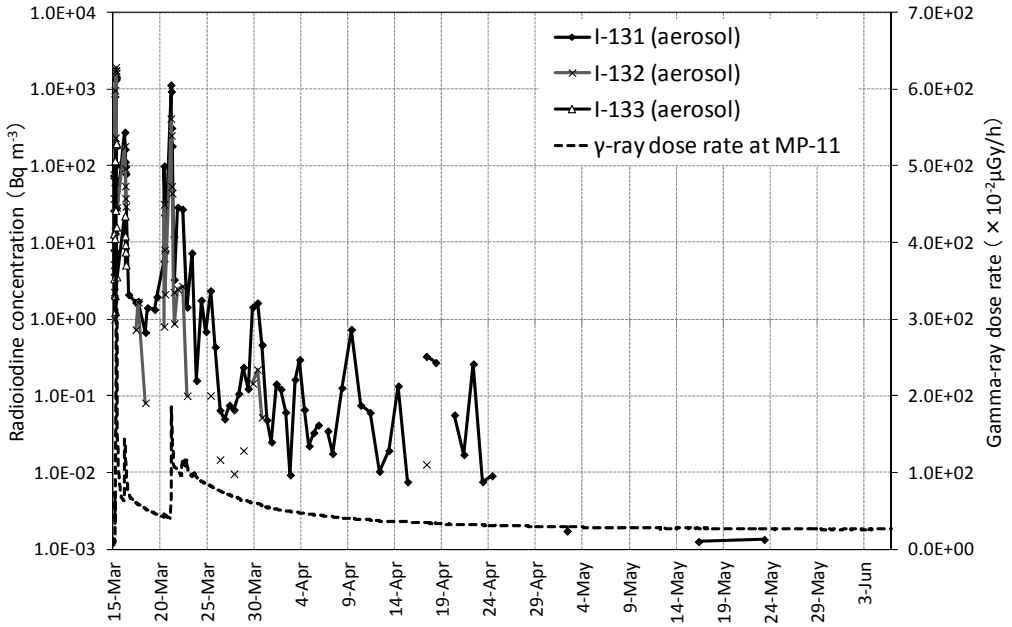

Figure 3.2-3(b) Atmospheric aerosol-bound radioiodine concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

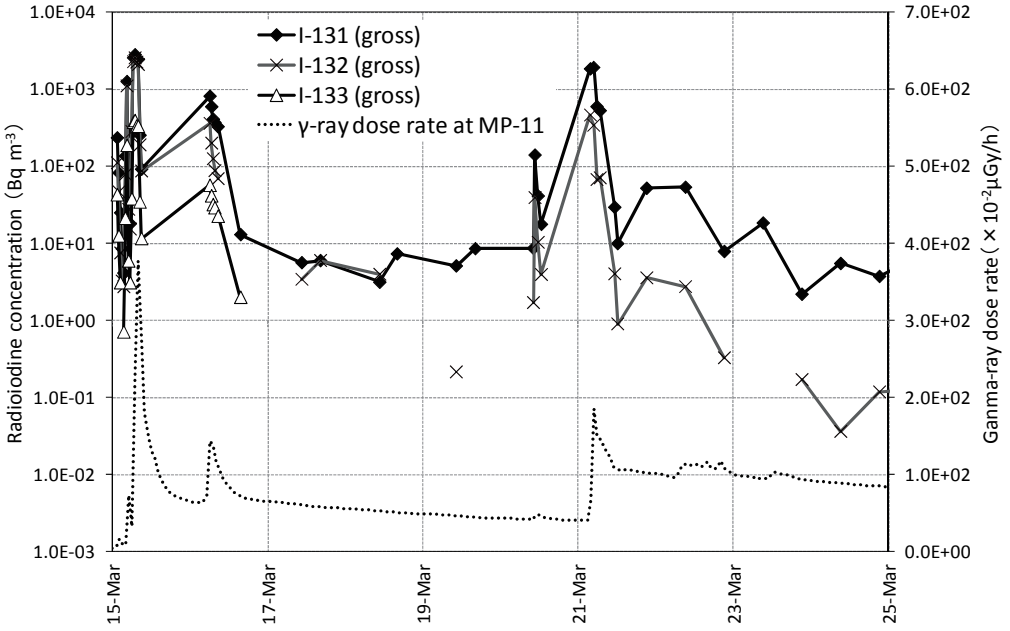

Figure 3.2-4(a) Atmospheric gross radioiodine concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

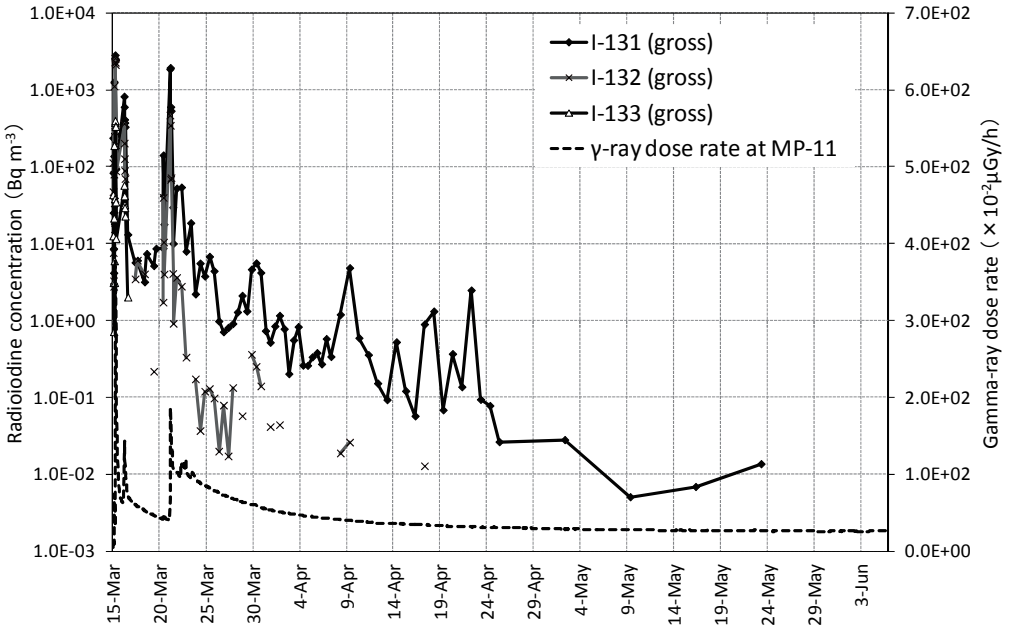

Figure 3.2-4(b) Atmospheric gross radioiodine concentration

Note 1: Gamma-ray dose rate is one-hour average.

Note 2: Symbols are plotted at the time of the beginning of sampling terms

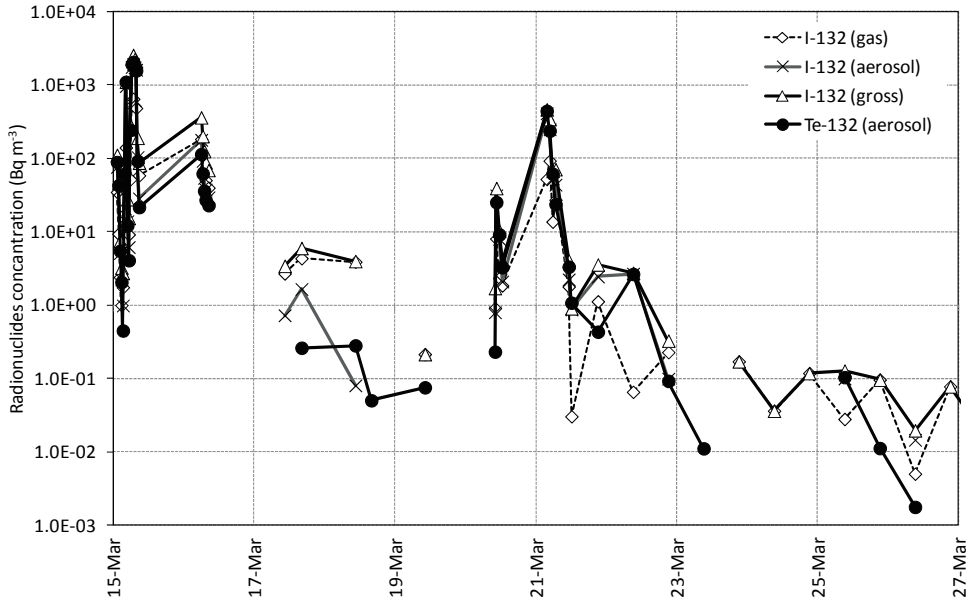

Figure 3.2-5 Atmospheric Te-132 and I-132 concentration

Note: Symbols are plotted at the time of the beginning of sampling terms

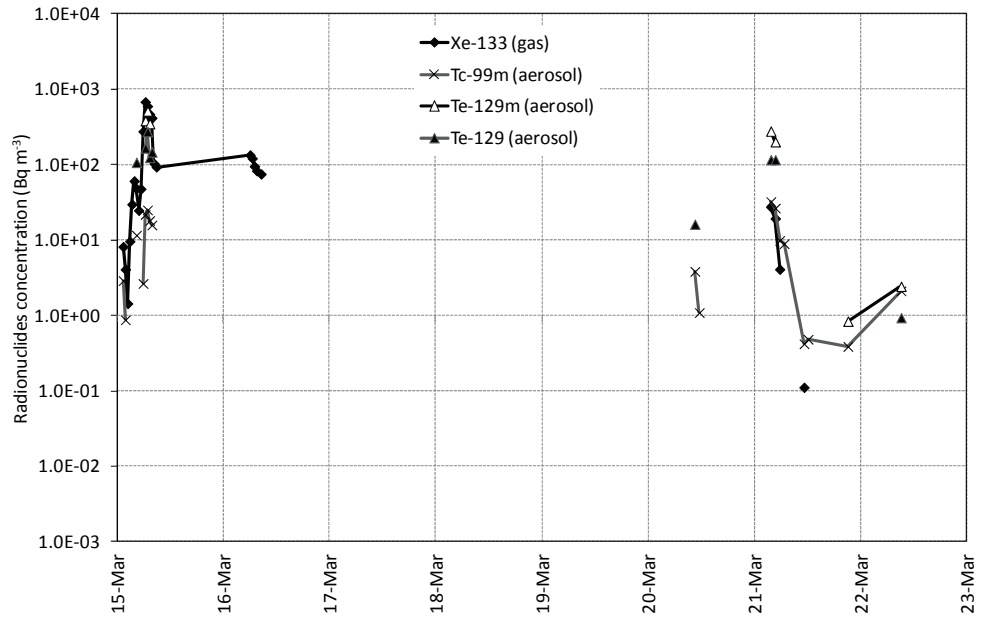

Figure 3.2-6 Atmospheric nuclides concentration

Note: Symbols are plotted at the time of the beginning of sampling terms

Table 3.2(a) Atmospheric radioactivity concentration (part 1: radiocesium)

				Method	HE-40TA			CHC-50		
				Nuclide	Cs-134 aerosol	Cs-136 aerosol	Cs-137 aerosol	Cs-134 —	Cs-136 —	Cs-137 —
Sample Number	Sampling Start		End		(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})
1	15-Mar	1:25 ～	15-Mar	1:45	1.62E+01	2.32E+00	1.54E+01	****	****	****
2		1:55 ～		2:15	4.78E+00	****	7.48E+00	****	****	****
3		2:25 ～		2:45	1.05E+00	****	7.07E-01	****	****	****
4		2:55 ～		3:15	****	****	****	****	****	****
5		3:25 ～		3:45	****	****	****	****	****	****
6		3:55 ～		4:15	9.73E+00	****	9.57E+00	****	****	****
7		4:25 ～		4:45	1.60E+02	****	1.61E+02	****	****	****
8		4:55 ～		5:15	1.65E+00	****	1.23E+00	****	****	****
9		5:25 ～		5:45	****	****	****	1.49E+00	****	****
10		5:55 ～		6:15	3.79E+01	5.83E+00	4.17E+01	2.83E+00	****	2.95E+00
11		6:25 ～		6:45	3.57E+02	3.91E+01	3.43E+02	****	****	****
12		6:55 ～		7:15	**3.66E+02**	**5.68E+01**	**3.66E+02**	5.63E+00	****	****
13		7:25 ～		7:45	2.84E+02	2.36E+01	2.75E+02	****	****	6.59E+00
14		7:55 ～		8:15	2.76E+02	4.62E+01	2.75E+02	7.19E+00	****	1.13E+01
15		8:25 ～		8:45	1.82E+01	2.78E+00	1.95E+01	6.25E+00	****	6.21E+00
16		8:55 ～		9:15	3.88E+00	****	2.97E+00	6.97E+00	****	6.30E+00
17	16-Mar	6:05 ～	16-Mar	6:25	1.50E+01	****	1.75E+01	9.40E-01	****	1.34E+00
18		6:35 ～		6:55	7.13E+00	****	8.71E+00	2.35E+00	****	1.28E+00
19		7:05 ～		7:25	5.22E+00	****	5.94E+00	1.83E-01	****	1.59E+00
20		7:35 ～		7:55	3.03E+00	****	4.37E+00	1.26E-01	****	1.48E+00
21		8:35 ～		8:55	2.77E+00	****	3.39E+00	4.59E-01	****	1.48E+00
22		15:35 ～		15:55	----	****	----	----	****	----
23	17-Mar	10:30 ～	17-Mar	10:50	6.67E-01	****	****	0.00E+00	****	0.00E+00
24		16:15 ～		16:35	****	****	----	----	****	----
25	18-Mar	10:35 ～	18-Mar	10:55	4.14E-01	****	----	****	****	4.70E-01
26		16:00 ～		16:20	----	****	****	****	****	----
27	19-Mar	10:15 ～	19-Mar	10:35	----	****	----	8.03E-01	****	6.50E-01
28		16:10 ～		16:30	****	****	----	3.44E-01	****	8.40E-01
29	20-Mar	10:07 ～	20-Mar	10:27	1.23E+00	****	2.60E-01	****	****	----
30		10:35 ～		10:55	2.51E+01	3.88E+00	2.61E+01	2.29E-02	****	----
31		11:35 ～		11:55	9.70E+00	2.08E+00	8.13E+00	----	****	3.60E-01
32		12:35 ～		12:55	2.61E+00	****	3.97E+00	2.29E-01	****	----
33	21-Mar	3:45 ～	21-Mar	4:05	4.22E+02	**5.45E+01**	4.19E+02	5.34E+00	****	5.15E+00
34		4:45 ～		5:05	**4.26E+02**	5.26E+01	**4.26E+02**	9.61E+00	****	1.19E+01
35		5:45 ～		6:05	1.02E+02	1.33E+01	1.04E+02	5.16E-01	****	1.00E-01
36		6:45 ～		7:05	2.49E+01	4.60E+00	2.38E+01	----	****	----
37		11:15 ～		12:00	5.00E+00	1.04E+00	5.13E+00	9.29E-01	****	6.50E-01
38		12:10 ～		21:00	1.72E+00	2.29E-01	1.56E+00	9.29E-02	****	----
39		21:10 ～	22-Mar	9:00	4.11E-01	8.23E-02	4.20E-01	----	****	----
40	22-Mar	9:10 ～		21:00	4.32E-01	****	4.35E-01	----	****	1.80E-02
41		21:10 ～	23-Mar	9:00	4.51E-02	****	3.46E-02	----	****	----
42	23-Mar	9:10 ～		21:00	1.02E-01	****	1.37E-01	3.56E-02	****	3.20E-02
43		21:10 ～	24-Mar	9:00	----	****	----	----	****	6.00E-03
44	24-Mar	9:10 ～		21:00	9.37E-02	****	8.76E-02	6.07E-02	****	4.00E-03
45		21:10 ～	25-Mar	9:00	6.97E-03	****	4.23E-02	4.55E-02	****	----
46	25-Mar	9:10 ～		21:00	1.61E-01	****	1.32E-01	----	****	2.30E-02
47		21:10 ～	26-Mar	9:00	4.85E-02	****	4.61E-02	----	****	2.20E-02
48	26-Mar	9:10 ～		21:00	1.75E-02	****	1.18E-02	4.90E-02	****	----
49		21:10 ～	27-Mar	9:00	1.60E-02	****	2.78E-02	2.47E-02	****	----
50	27-Mar	9:10 ～		21:00	----	****	1.66E-02	4.48E-02	****	2.90E-02
51		21:10 ～	28-Mar	9:00	----	****	1.90E-03	3.76E-02	****	----
52	28-Mar	9:10 ～		21:00	----	****	4.40E-03	1.61E-03	****	1.10E-03
53		21:10 ～	29-Mar	9:00	6.73E-02	****	7.18E-02	1.64E-02	****	----
54	29-Mar	9:10 ～		21:00	5.56E-02	****	3.59E-02	----	****	1.30E-02
55		21:10 ～	30-Mar	9:00	2.28E+00	****	2.22E+00	5.50E-03	****	2.43E-02
56	30-Mar	9:10 ～		21:00	2.94E+00	1.43E-01	2.77E+00	----	****	2.18E-02
57		21:10 ～	31-Mar	9:00	1.11E+00	****	1.03E+00	----	****	2.33E-02
58	31-Mar	9:10 ～		21:00	2.01E-02	****	----	----	****	----
59		21:10 ～	1-Apr	9:00	2.87E-02	****	3.60E-03	2.80E-02	****	----
60	1-Apr	9:10 ～		21:00	7.36E-02	****	8.73E-02	5.62E-03	****	1.72E-02
61		21:10 ～	2-Apr	9:00	5.65E-02	****	6.65E-02	----	****	8.00E-04
62	2-Apr	9:10 ～		21:00	9.83E-03	****	2.19E-02	----	****	4.00E-03
63		21:10 ～	3-Apr	9:00	1.82E-02	****	----	5.28E-03	****	0.00E+00
64	3-Apr	9:10 ～		21:00	8.01E-02	****	7.30E-02	1.25E-02	****	3.07E-02
65		21:10 ～	4-Apr	9:00	1.10E-01	****	1.61E-01	----	****	9.80E-03
66	4-Apr	9:10 ～		21:00	----	****	2.27E-02	3.52E-02	****	8.10E-02
67		21:10 ～	5-Apr	9:00	----	****	----	1.66E-02	****	----
68	5-Apr	9:10 ～		21:00	3.62E-02	****	2.35E-02	3.91E-02	****	1.83E-02
69		21:10 ～	6-Apr	9:00	3.73E-03	****	----	1.30E-02	****	2.23E-02
70	6-Apr	9:10 ～		21:00	7.96E-03	****	7.00E-03	3.44E-04	****	1.99E-02
71		21:10 ～	7-Apr	9:00	7.59E-03	****	7.00E-03	----	****	5.60E-03

Note 1: The concentration represented by " **** " was below the detection limit of the Ge detector.

Note 2: The concentration represented by " ---- " was below the background filter values . See 2.2.2 (b).

Table 3.2(a) Atmospheric radioactivity concentration (part 1: radiocesium)
— (continued)

72	7-Apr	9:10 ～	8-Apr 9:00	----	****	1.22E-02	----	****	5.40E-03
73	8-Apr	9:10 ～	9-Apr 9:00	6.97E-01	1.77E-02	6.44E-01	----	****	----
74	9-Apr	9:10 ～	10-Apr 9:00	2.04E+00	3.02E-02	1.89E+00	----	****	3.80E-03
75	10-Apr	9:10 ～	11-Apr 9:00	1.74E-01	****	1.68E-01	----	****	8.20E-03
76	11-Apr	9:10 ～	12-Apr 9:00	1.04E-01	****	9.67E-02	2.41E-03	****	2.00E-03
77	12-Apr	9:10 ～	13-Apr 9:00	1.74E-02	****	5.80E-03	1.27E-02	****	----
78	13-Apr	9:10 ～	14-Apr 9:00	1.41E-02	****	1.30E-03	1.66E-02	****	----
79	14-Apr	9:10 ～	15-Apr 9:00	1.13E-01	****	9.96E-02	9.63E-03	****	1.90E-03
80	15-Apr	9:10 ～	16-Apr 9:00	1.02E-02	****	----	----	****	----
81	16-Apr	9:10 ～	17-Apr 9:00	3.23E-03	****	8.70E-03	----	****	----
82	17-Apr	9:10 ～	18-Apr 9:00	2.46E-01	****	2.69E-01	8.49E-03	****	2.20E-03
83	18-Apr	9:10 ～	19-Apr 9:00	4.58E-01	****	4.51E-01	----	****	----
84	19-Apr	9:10 ～	20-Apr 9:00	----	****	4.30E-03	1.34E-02	****	1.14E-02
85	20-Apr	9:10 ～	21-Apr 9:00	1.05E-01	****	9.70E-02	----	****	----
86	21-Apr	9:10 ～	22-Apr 9:00	2.59E-02	****	1.60E-02	7.57E-03	****	----
87	22-Apr	9:10 ～	23-Apr 9:00	1.05E+00	****	9.65E-01	6.88E-04	****	1.51E-02
88	23-Apr	9:10 ～	24-Apr 9:00	1.62E-03	****	9.00E-04	2.64E-03	****	9.50E-03
89	24-Apr	9:10 ～	25-Apr 9:00	1.98E-02	****	8.80E-03	----	****	7.60E-03
90	25-Apr	9:10 ～	2-May 9:00	3.73E-03	****	4.35E-03	----	****	1.34E-03
91	2-May	9:10 ～	9-May 9:00	2.90E-02	****	3.37E-02	----	****	9.60E-04
92	9-May	9:10 ～	16-May 9:00	1.65E-03	****	1.29E-03	7.57E-04	****	4.40E-04
93	16-May	9:10 ～	23-May 9:00	9.32E-03	****	9.19E-03	----	****	9.30E-04
94	23-May	9:10 ～	30-May 9:00	1.87E-02	****	1.90E-02	9.63E-04	****	1.29E-03
95	30-May	9:10 ～	6-Jun 9:00	2.01E-03	****	3.33E-03	2.24E-03	****	1.04E-03

Table 3.2(b) Atmospheric radioactivity concentration (part 2: radioiodine and Te-132)

Method	HE-40TA			CHC-50			Gross			HE-40TA	CHC-50
Nuclide	I-131 aerosol	I-132 aerosol	I-133 aerosol	I-131 gas	I-132 gas	I-133 gas	I-131 —	I-132 —	I-133 —	Te-132 aerosol	Te-132 —
Sample Number	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})
1	7.41E+01	7.64E+01	1.29E+01	1.60E+02	3.47E+01	2.99E+01	2.34E+02	1.11E+02	4.28E+01	8.90E+01	7.36E+00
2	2.60E+01	3.73E+01	3.37E+00	5.62E+01	9.38E+00	9.13E+00	8.22E+01	4.67E+01	1.25E+01	4.29E+01	8.73E-01
3	7.94E+00	5.12E+00	****	1.70E+01	2.41E+00	3.09E+00	2.49E+01	7.53E+00	3.09E+00	5.49E+00	****
4	3.84E+00	2.24E+00	****	4.66E+00	1.00E+00	****	8.50E+00	3.24E+00	****	2.06E+00	8.61E-01
5	1.90E+00	9.90E-01	****	2.22E+00	1.75E+00	7.11E-01	4.12E+00	2.74E+00	7.11E-01	4.51E-01	1.23E+01
6	6.88E+01	6.14E+01	1.12E+01	6.70E+01	1.74E+01	1.00E+01	1.36E+02	7.88E+01	2.12E+01	6.17E+01	3.55E+00
7	7.98E+02	9.64E+02	1.16E+02	4.59E+02	1.40E+02	7.11E+01	1.26E+03	1.10E+03	1.87E+02	1.10E+03	4.48E+00
8	1.32E+01	1.39E+01	2.02E+00	2.55E+01	1.38E+01	3.91E+00	3.87E+01	2.77E+01	5.93E+00	1.22E+01	5.82E+00
9	7.55E+00	6.17E+00	1.26E+00	1.04E+01	9.19E+00	1.83E+00	1.80E+01	1.54E+01	3.09E+00	4.08E+00	5.48E+00
10	1.75E+02	2.31E+02	2.62E+01	9.41E+01	5.18E+01	1.17E+01	2.69E+02	2.83E+02	3.79E+01	2.43E+02	1.58E+01
11	1.31E+03	1.75E+03	1.94E+02	1.24E+03	5.25E+02	1.79E+02	2.55E+03	2.28E+03	3.73E+02	1.91E+03	2.53E+01
12	**1.43E+03**	**1.91E+03**	**2.04E+02**	**1.37E+03**	**6.45E+02**	**1.89E+02**	2.80E+03	2.56E+03	3.93E+02	**2.05E+03**	1.01E+02
13	1.34E+03	1.73E+03	1.88E+02	1.10E+03	5.15E+02	1.46E+02	2.44E+03	2.25E+03	3.34E+02	1.72E+03	4.28E+01
14	1.41E+03	1.61E+03	1.95E+02	1.02E+03	4.83E+02	1.36E+02	2.43E+03	2.09E+03	3.31E+02	1.57E+03	4.78E+01
15	1.01E+02	1.04E+02	1.59E+01	1.52E+02	8.60E+01	1.86E+01	2.53E+02	1.90E+02	3.45E+01	9.20E+01	4.07E+01
16	2.81E+01	2.84E+01	3.56E+00	6.37E+01	5.86E+01	8.00E+00	9.18E+01	8.70E+01	1.16E+01	2.16E+01	4.24E+01
17	2.73E+02	1.78E+02	2.21E+01	5.39E+02	1.83E+02	3.46E+01	8.12E+02	3.61E+02	5.67E+01	1.14E+02	2.73E+00
18	1.64E+02	9.22E+01	1.21E+01	4.28E+02	1.08E+02	2.93E+01	5.92E+02	2.00E+02	4.14E+01	6.21E+01	4.04E-01
19	1.12E+02	5.41E+01	9.33E+00	2.95E+02	7.12E+01	2.26E+01	4.07E+02	1.25E+02	3.19E+01	3.61E+01	2.02E-01
20	9.71E+01	3.75E+01	7.48E+00	2.72E+02	5.04E+01	2.15E+01	3.69E+02	8.79E+01	2.90E+01	2.71E+01	----
21	7.80E+01	2.94E+01	5.07E+00	2.48E+02	3.98E+01	1.75E+01	3.26E+02	6.92E+01	2.25E+01	2.29E+01	8.00E-01
22	2.08E+00	----	****	1.09E+01	----	2.00E+00	1.30E+01	****	2.00E+00	----	----
23	1.64E+00	7.27E-01	****	3.98E+00	2.70E+00	****	5.62E+00	3.43E+00	****	----	----
24	1.70E+00	1.66E+00	****	4.28E+00	4.34E+00	****	5.98E+00	6.00E+00	****	2.63E-01	1.62E+00
25	6.70E-01	8.08E-02	****	2.47E+00	3.90E+00	****	3.14E+00	3.98E+00	****	2.83E-01	----
26	1.40E+00	----	****	5.91E+00	----	****	7.31E+00	****	****	5.05E-02	----
27	1.33E+00	----	****	3.77E+00	2.15E-01	****	5.10E+00	2.15E-01	****	7.59E-02	1.27E+00
28	1.95E+00	----	****	6.59E+00	----	****	8.54E+00	****	****	----	1.22E+00
29	5.69E+00	7.98E-01	****	2.93E+00	9.09E-01	****	8.62E+00	1.71E+00	****	2.32E-01	2.63E-01
30	9.88E+01	3.12E+01	****	4.11E+01	8.06E+00	****	1.40E+02	3.93E+01	****	2.52E+01	1.41E-01
31	2.27E+01	7.99E+00	****	1.84E+01	2.34E+00	****	4.12E+01	1.03E+01	****	9.16E+00	7.07E-02
32	7.73E+00	2.10E+00	****	9.93E+00	1.85E+00	****	1.77E+01	3.95E+00	****	3.28E+00	1.07E+00
33	**1.13E+03**	**4.10E+02**	****	7.12E+02	5.22E+01	****	1.84E+03	4.62E+02	****	**4.42E+02**	1.03E+00
34	9.26E+02	2.48E+02	****	**9.90E+02**	**9.27E+01**	****	1.92E+03	3.41E+02	****	2.37E+02	2.10E+01
35	3.09E+02	5.37E+01	****	2.85E+02	1.37E+01	****	5.94E+02	6.74E+01	****	6.15E+01	----
36	1.80E+02	4.37E+01	****	3.47E+02	2.72E+01	****	5.27E+02	7.09E+01	****	2.38E+01	----
37	1.19E+01	2.24E+00	****	1.74E+01	1.79E+00	****	2.94E+01	4.03E+00	****	3.33E+00	2.08E+00
38	3.26E+00	8.73E-01	****	6.65E+00	3.06E-02	****	9.91E+00	9.04E-01	****	1.08E+00	5.06E-02
39	2.87E+01	2.45E+00	****	2.32E+01	1.12E+00	****	5.19E+01	3.58E+00	****	4.34E-01	8.60E-03
40	2.70E+01	2.69E+00	****	2.65E+01	6.59E-02	****	5.35E+01	2.75E+00	****	2.65E+00	----
41	1.43E+00	9.97E-02	****	6.42E+00	2.29E-01	****	7.85E+00	3.28E-01	****	9.30E-02	----
42	7.26E+00	----	****	1.11E+01	----	****	1.84E+01	****	****	1.12E-02	6.12E-03
43	1.58E-01	----	****	2.03E+00	1.71E-01	****	2.19E+00	1.71E-01	****	----	3.24E-02
44	1.75E+00	----	****	3.74E+00	3.64E-02	****	5.49E+00	3.64E-02	****	----	2.27E-02
45	6.85E-01	----	****	3.05E+00	1.19E-01	****	3.73E+00	1.19E-01	****	----	----
46	2.34E+00	1.00E-01	****	4.38E+00	2.81E-02	****	6.72E+00	1.28E-01	****	1.05E-01	1.56E-02
47	4.32E-01	----	****	3.93E+00	9.66E-02	****	4.36E+00	9.66E-02	****	1.13E-02	----
48	6.47E-02	1.46E-02	****	9.05E-01	5.06E-03	****	9.70E-01	1.97E-02	****	1.79E-03	9.65E-03
49	4.97E-02	****	****	6.55E-01	7.82E-02	****	7.04E-01	7.82E-02	****	----	****
50	7.51E-02	----	****	7.25E-01	1.71E-02	****	8.00E-01	1.71E-02	****	----	****
51	6.55E-02	9.57E-03	****	8.35E-01	1.23E-01	****	9.01E-01	1.32E-01	****	****	----
52	1.06E-01	****	****	1.17E+00	----	****	1.27E+00	****	****	8.81E-03	4.59E-03
53	2.35E-01	1.93E-02	****	1.85E+00	3.76E-02	****	2.09E+00	5.68E-02	****	1.06E-02	****
54	1.23E-01	****	****	1.19E+00	****	****	1.31E+00	****	****	****	****
55	1.43E+00	1.45E-01	****	3.15E+00	2.13E-01	****	4.58E+00	3.58E-01	****	1.27E-01	****
56	1.62E+00	2.19E-01	****	3.90E+00	3.04E-02	****	5.53E+00	2.49E-01	****	2.17E-01	****
57	4.61E-01	5.23E-02	****	3.69E+00	8.64E-02	****	4.15E+00	1.39E-01	****	8.00E-02	****
58	4.83E-02	****	****	6.78E-01	****	****	7.27E-01	****	****	****	****
59	2.48E-02	****	****	4.89E-01	4.11E-02	****	5.14E-01	4.11E-02	****	1.15E-02	****
60	1.42E-01	****	****	6.94E-01	****	****	8.35E-01	****	****	****	****
61	1.22E-01	****	****	1.03E+00	4.35E-02	****	1.15E+00	4.35E-02	****	****	****
62	6.10E-02	****	****	7.09E-01	****	****	7.70E-01	****	****	****	****
63	9.28E-03	****	****	1.91E-01	****	****	2.01E-01	****	****	****	****
64	1.63E-01	****	****	3.89E-01	****	****	5.52E-01	****	****	****	****
65	2.95E-01	****	****	5.24E-01	****	****	8.20E-01	****	****	****	****
66	6.58E-02	****	****	1.93E-01	****	****	2.59E-01	****	****	****	****
67	2.22E-02	****	****	2.35E-01	****	****	2.57E-01	****	****	****	****
68	3.29E-02	****	****	2.99E-01	****	****	3.32E-01	****	****	****	****
69	4.13E-02	****	****	3.34E-01	****	****	3.76E-01	****	****	****	****
70	----	****	****	2.69E-01	****	****	2.69E-01	****	****	****	****
71	3.46E-02	****	****	5.39E-01	****	****	5.74E-01	****	****	****	****

Table 3.2(b) Atmospheric radioactivity concentration (part 2: radioiodine and Te-132)
— (continued)

72	1.76E-02	****	****	3.18E-01	****	****	3.35E-01	****	****	****	****
73	1.27E-01	****	****	1.06E+00	1.87E-02	****	1.18E+00	1.87E-02	****	****	****
74	7.32E-01	****	****	4.06E+00	2.58E-02	****	4.79E+00	2.58E-02	****	2.04E-02	****
75	7.49E-02	****	****	5.12E-01	****	****	5.87E-01	****	****	****	****
76	6.02E-02	****	****	2.94E-01	****	****	3.54E-01	****	****	****	****
77	1.03E-02	****	****	1.41E-01	****	****	1.51E-01	****	****	****	****
78	1.93E-02	****	****	7.28E-02	****	****	9.21E-02	****	****	****	****
79	1.34E-01	****	****	3.86E-01	****	****	5.19E-01	****	****	****	****
80	7.52E-03	****	****	1.12E-01	****	****	1.20E-01	****	****	****	****
81	----	****	****	5.66E-02	****	****	5.66E-02	****	****	****	****
82	3.25E-01	1.27E-02	****	5.59E-01	****	****	8.85E-01	1.27E-02	****	****	****
83	2.70E-01	****	****	1.03E+00	****	****	1.30E+00	****	****	****	****
84	****	****	****	6.79E-02	****	****	6.79E-02	****	****	****	****
85	5.61E-02	****	****	3.08E-01	****	****	3.65E-01	****	****	****	****
86	1.71E-02	****	****	1.19E-01	****	****	1.36E-01	****	****	****	****
87	2.59E-01	****	****	2.19E+00	****	****	2.45E+00	****	****	****	****
88	7.56E-03	****	****	8.55E-02	****	****	9.30E-02	****	****	****	****
89	9.02E-03	****	****	6.82E-02	****	****	7.73E-02	****	****	****	****
90	****	****	****	2.62E-02	****	****	2.62E-02	****	****	****	****
91	1.72E-03	****	****	2.61E-02	****	****	2.78E-02	****	****	****	****
92	****	****	****	5.03E-03	****	****	5.03E-03	****	****	****	****
93	1.25E-03	****	****	5.58E-03	****	****	6.83E-03	****	****	****	****
94	1.33E-03	****	****	1.22E-02	****	****	1.35E-02	****	****	****	****
95	****	****	****	****	****	****	****	****	****	****	****

Table 3.2(c) Atmospheric radioactivity concentration (part 3: the other radionuclides)

Method	HE-40TA				CHC-50			
Nuclide	Xe-133	Tc-99m	Te-129m	Te-129	Xe-133	Tc-99m	Te-129m	Te-129
	—	aerosol	aerosol	aerosol	gas	—	—	—
Sample Number	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})	(Bq m^{-3})
1	****	2.89E+00	****	****	8.16E+00	****	****	****
2	****	8.73E-01	****	****	4.08E+00	****	****	****
3	1.01E+00	****	****	****	1.44E+00	****	****	****
4	9.20E-01	****	****	****	9.61E+00	****	****	****
5	1.37E+01	****	****	****	2.98E+01	****	****	****
6	1.50E+01	****	****	****	6.07E+01	****	****	****
7	8.72E+00	1.16E+01	****	1.07E+02	4.81E+01	****	****	****
8	1.17E+01	****	****	****	2.47E+01	****	****	****
9	1.67E+01	****	****	****	4.77E+01	****	****	****
10	3.68E+01	2.65E+00	****	****	2.76E+02	****	****	****
11	6.12E+01	2.18E+01	3.83E+02	1.66E+02	6.80E+02	****	****	****
12	7.12E+01	2.50E+01	5.14E+02	2.74E+02	5.96E+02	****	****	****
13	7.63E+01	1.81E+01	3.49E+02	1.24E+02	4.66E+02	****	****	****
14	1.63E+02	1.58E+01	****	1.47E+02	4.16E+02	****	****	****
15	5.59E+01	****	****	****	1.03E+02	****	****	****
16	4.51E+01	****	****	****	9.29E+01	****	****	****
17	----	****	****	****	1.34E+02	****	****	****
18	----	****	****	****	1.21E+02	****	****	****
19	----	****	****	****	9.50E+01	****	****	****
20	----	****	****	****	8.30E+01	****	****	****
21	----	****	****	****	7.50E+01	****	****	****
22	----	****	****	****	----	****	****	****
23	****	****	****	****	****	****	****	****
24	****	****	****	****	****	****	****	****
25	****	****	****	****	****	****	****	****
26	****	****	****	****	****	****	****	****
27	****	****	****	****	****	****	****	****
28	****	****	****	****	****	****	****	****
29	****	****	****	****	****	****	****	****
30	****	3.84E+00	****	1.62E+01	****	****	****	****
31	****	1.09E+00	****	****	****	****	****	****
32	****	****	****	****	****	****	****	****
33	****	3.22E+01	2.78E+02	1.16E+02	2.74E+01	****	****	****
34	****	2.65E+01	2.01E+02	1.16E+02	1.93E+01	****	****	****
35	****	9.87E+00	****	****	4.09E+00	****	****	****
36	****	8.93E+00	****	****	----	****	****	****
37	****	4.20E-01	****	****	1.11E-01	****	****	****
38	****	4.82E-01	****	****	****	****	****	****
39	****	3.88E-01	8.38E-01	****	****	****	****	****
40	****	2.12E+00	2.43E+00	9.34E-01	****	****	****	****
41	****	****	****	****	****	****	****	****
42	****	5.02E-01	****	****	****	****	****	****
43	****	****	****	****	****	****	****	****
44	****	****	****	****	****	****	****	****
45	****	****	****	****	****	****	****	****
46	****	3.00E-01	****	****	****	****	****	****
47	****	****	****	****	****	****	****	****
48	****	****	****	****	****	****	****	****
49	****	****	****	****	****	****	****	****
50	****	****	****	****	****	****	****	****
51	****	****	****	****	****	****	****	****
52	****	****	****	****	****	****	****	****
53	****	****	****	****	****	****	****	****
54	****	****	****	****	****	****	****	****
55	****	2.20E-01	****	****	****	****	****	****
56	****	1.08E+00	****	****	****	****	****	****
57	****	1.28E-01	****	****	****	****	****	****
58	****	****	****	****	****	****	****	****
59	****	****	****	****	****	****	****	****
60	****	****	****	****	****	****	****	****
61	****	****	****	****	****	****	****	****
62	****	****	****	****	****	****	****	****
63	****	****	****	****	****	****	****	****
64	****	****	****	****	****	****	****	****
65	****	****	****	****	****	****	****	****
66	****	****	****	****	****	****	****	****
67	****	****	****	****	****	****	****	****
68	****	****	****	****	****	****	****	****
69	****	****	****	****	****	****	****	****
70	****	****	****	****	****	****	****	****
71	****	****	****	****	****	****	****	****

Table 3.2(c) Atmospheric radioactivity concentration (part 3: the other radionuclides)
— (continued)

72	****	****	****	****	****	****	****	****
73	****	****	****	****	****	****	****	****
74	****	****	****	****	****	****	****	****
75	****	****	****	****	****	****	****	****
76	****	****	****	****	****	****	****	****
77	****	****	****	****	****	****	****	****
78	****	****	****	****	****	****	****	****
79	****	****	****	****	****	****	****	****
80	****	****	****	****	****	****	****	****
81	****	****	****	****	****	****	****	****
82	****	****	****	****	****	****	****	****
83	****	****	****	****	****	****	****	****
84	****	****	****	****	****	****	****	****
85	****	****	****	****	****	****	****	****
86	****	****	****	****	****	****	****	****
87	****	****	****	****	****	****	****	****
88	****	****	****	****	****	****	****	****
89	****	****	****	****	****	****	****	****
90	****	****	****	****	****	****	****	****
91	****	****	****	****	****	****	****	****
92	****	****	****	****	****	****	****	****
93	****	****	****	****	****	****	****	****
94	****	****	****	****	****	****	****	****
95	****	****	****	****	****	****	****	****

3.3 Composition of Radionuclides

Table 3.3-1 shows the concentration ratio of the atmospheric radionuclides. The atmospheric concentration of Cs-134 and of Cs-137 was almost the same. Most of the ratio of Cs-134 to Cs-137 was found between 0.9 and 1.1. The ratios were relatively small in the period when the Second Peak of the gamma-ray dose rate appeared.

Figure 3.3-1 shows the concentration ratio of gross I-131 to Cs-137. The largest values of the ratio in the periods when the First Peak, the Second Peak or the Fourth Peak of gamma-ray dose rate appeared were 35.3, 96.2 and 22.1, respectively. The maximum value of the ratio until 25 March was 226.8, which was observed after the Fifth Peak of gamma-ray dose rate. The atmospheric concentration of radionuclides however did not have clear peak when the Fifth Peak appeared.

Figure 3.3-2 shows the ratio of aerosol I-131 to gross I-131. The ratios were relatively large in the period when peaks of the gamma-ray dose rate appeared. The largest values of the ratio in the periods when the First Peak or the Third Peak appeared were 0.65 and 0.71, respectively.

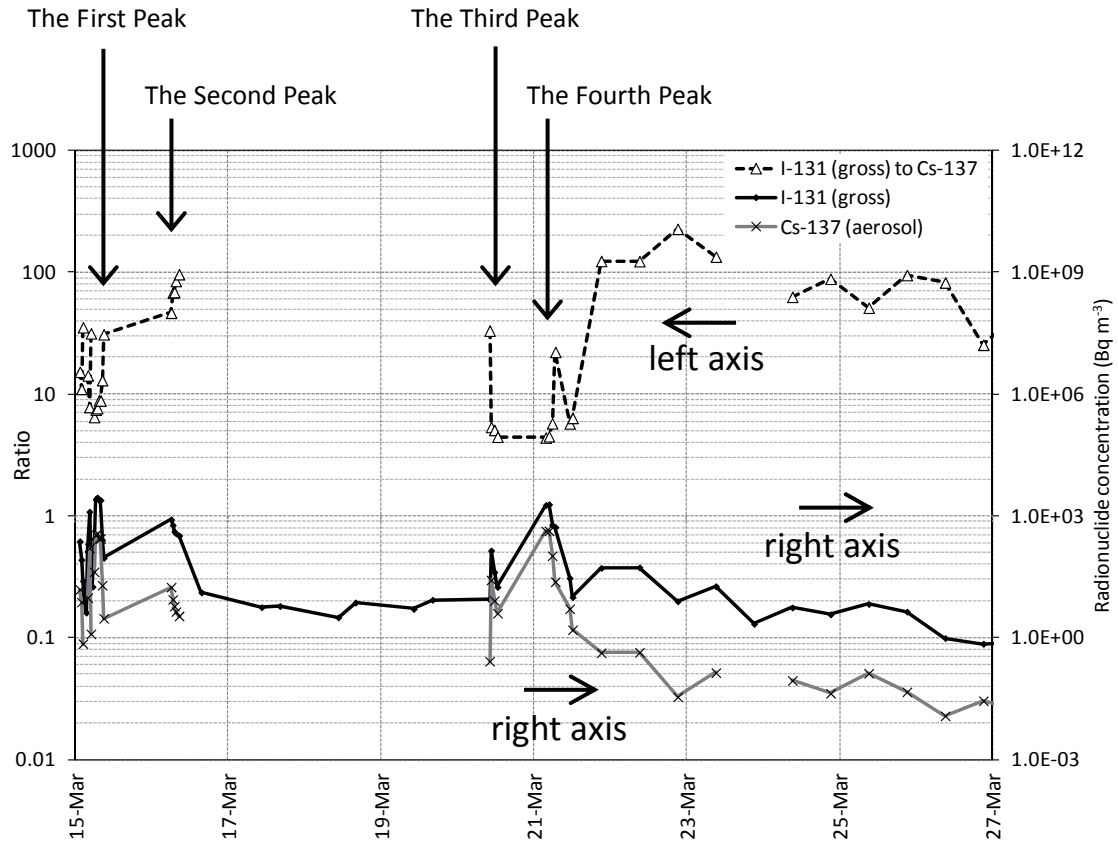

Figure 3.3-1 Concentration ratio: I-131to Cs-137

Note: Symbols are plotted at the time of the beginning of sampling terms.

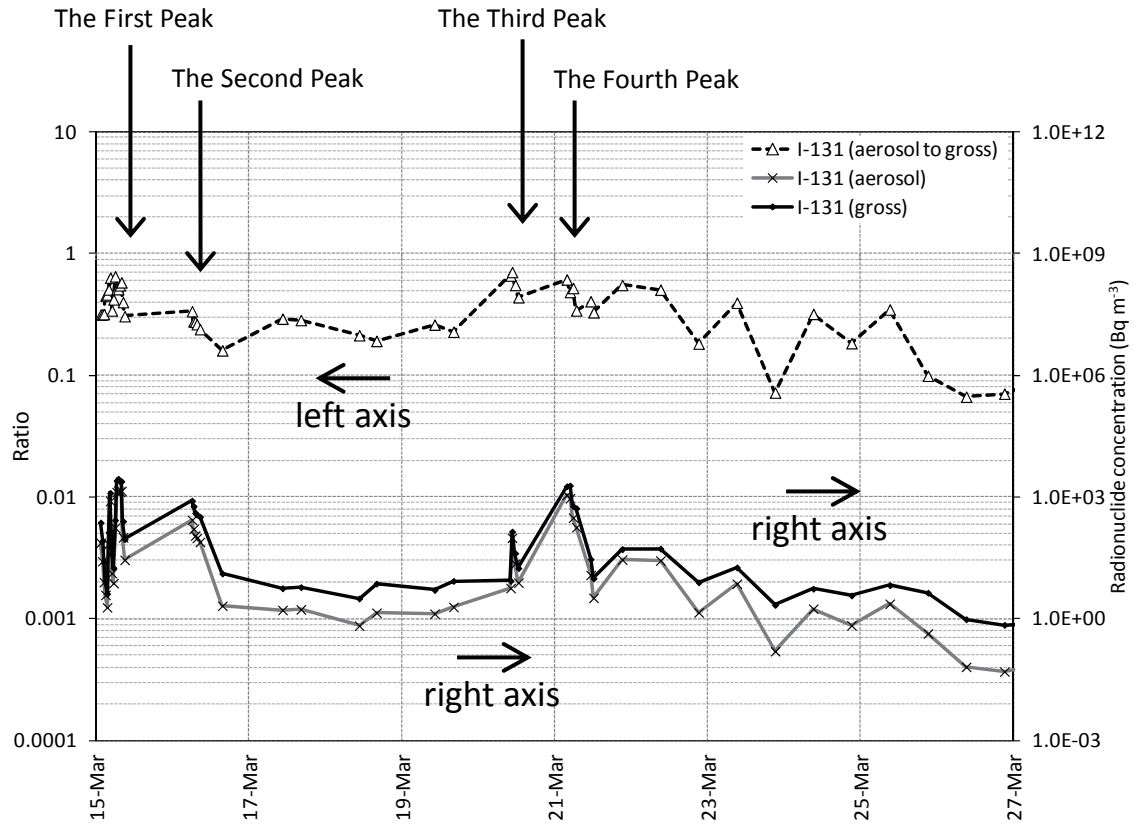

Figure 3.3-2 Concentration ratio: aerosol I-131 to gross I-131

Note: Symbols are plotted at the time of the beginning of sampling terms.

Table 3.3-1 Composition of radionuclides

Sample Number	Ratio							
	I-131 (gas) to Cs-137	I-131 (aerosol) to Cs-137	I-131 (gross) to Cs-137	I-132 (gas) to I-131 (gas)	I-132 (aerosol) to I-131 (aerosol)	I-132 (gross) to I-131 (gross)	I-131 (aerosol to gross)	Cs-134 to Cs-137
1	10.4	4.8	15.2	0.22	1.03	0.47	0.32	1.05
2	7.5	3.5	11.0	0.17	1.43	0.57	0.32	0.64
3	24.0	11.2	**35.3**	0.14	0.64	0.30	0.32	1.48
4	****	****	****	0.21	0.58	0.38	0.45	****
5	****	****	****	0.79	0.52	0.67	0.46	****
6	7.0	7.2	14.2	0.26	0.89	0.58	0.51	1.02
7	2.9	5.0	7.8	0.31	1.21	0.88	0.63	1.00
8	20.7	10.7	31.5	0.54	1.05	0.72	0.34	1.34
9	****	****	****	0.88	0.82	0.86	0.42	****
10	2.3	4.2	6.5	0.55	1.32	1.05	**0.65**	0.91
11	3.6	3.8	7.4	0.42	1.34	0.89	0.51	1.04
12	3.7	3.9	7.7	0.47	1.34	0.91	0.51	1.00
13	4.0	4.9	8.9	0.47	1.29	0.92	0.55	1.03
14	3.7	5.1	8.8	0.47	1.14	0.86	0.58	1.00
15	7.8	5.2	13.0	0.57	1.03	0.75	0.40	0.93
16	21.4	9.5	30.9	0.92	1.01	0.95	0.31	1.31
17	30.8	15.6	46.4	0.34	0.65	0.44	0.34	0.86
18	49.2	18.8	68.0	0.25	0.56	0.34	0.28	0.82
19	49.7	18.9	68.6	0.24	0.48	0.31	0.28	0.88
20	62.3	22.2	84.5	0.19	0.39	0.24	0.26	0.69
21	73.2	23.0	**96.2**	0.16	0.38	0.21	0.24	0.82
22	----	----	----	----	----	****	0.16	----
23	****	****	****	0.68	0.44	0.61	0.29	****
24	----	----	----	1.01	0.97	1.00	0.28	----
25	----	----	----	1.58	0.12	1.27	0.21	----
26	****	****	****	----	----	****	0.19	****
27	----	----	----	0.06	----	0.04	0.26	----
28	----	----	----	----	----	****	0.23	----
29	11.3	21.9	33.1	0.31	0.14	0.20	0.66	4.74
30	1.6	3.8	5.4	0.20	0.32	0.28	**0.71**	0.96
31	2.3	2.8	5.1	0.13	0.35	0.25	0.55	1.19
32	2.5	1.9	4.4	0.19	0.27	0.22	0.44	0.66
33	1.7	2.7	4.4	0.07	0.36	0.25	**0.61**	1.01
34	2.3	2.2	4.5	0.09	0.27	0.18	0.48	1.00
35	2.7	3.0	5.7	0.05	0.17	0.11	0.52	0.98
36	14.6	7.6	**22.1**	0.08	0.24	0.13	0.34	1.05
37	3.4	2.3	5.7	0.10	0.19	0.14	0.41	0.97
38	4.3	2.1	6.4	0.00	0.27	0.09	0.33	1.10
39	55.3	68.3	123.5	0.05	0.09	0.07	0.55	0.98
40	61.0	62.2	123.1	0.00	0.10	0.05	0.50	0.99
41	185.5	41.3	**226.8**	0.04	0.07	0.04	0.18	1.30
42	81.0	52.8	133.9	----	----	****	0.39	0.74
43	----	----	----	0.08	----	0.08	0.07	----
44	42.7	20.0	62.7	0.01	----	0.01	0.32	1.07
45	72.0	16.2	88.2	0.04	----	0.03	0.18	0.16
46	33.3	17.8	51.1	0.01	0.04	0.02	0.35	1.23
47	85.3	9.4	94.6	0.02	----	0.02	0.10	1.05
48	76.7	5.5	82.2	0.01	0.23	0.02	0.07	1.49
49	23.5	1.8	25.3	0.12	****	0.11	0.07	0.58
50	43.7	4.5	48.2	0.02	----	0.02	0.09	----
51	439.5	34.5	474.0	0.15	0.15	0.15	0.07	----
52	265.2	24.2	289.3	----	****	****	0.08	----
53	25.8	3.3	29.1	0.02	0.08	0.03	0.11	0.94
54	33.0	3.4	36.5	****	****	****	0.09	1.55
55	1.4	0.6	2.1	0.07	0.10	0.08	0.31	1.03
56	1.4	0.6	2.0	0.01	0.13	0.05	0.29	1.06
57	3.6	0.4	4.0	0.02	0.11	0.03	0.11	1.08
58	----	----	----	****	****	****	0.07	----
59	135.7	6.9	142.6	0.08	****	0.08	0.05	7.98
60	7.9	1.6	9.6	****	****	****	0.17	0.84
61	15.5	1.8	17.3	0.04	****	0.04	0.11	0.85
62	32.4	2.8	35.2	****	****	****	0.08	0.45
63	----	----	----	****	****	****	0.05	----
64	5.3	2.2	7.6	****	****	****	0.29	1.10
65	3.3	1.8	5.1	****	****	****	0.36	0.68
66	8.5	2.9	11.4	****	****	****	0.25	----
67	----	----	----	****	****	****	0.09	----
68	12.7	1.4	14.1	****	****	****	0.10	1.54
69	----	----	----	****	****	****	0.11	----
70	38.4	----	38.4	****	----	****	----	1.14
71	77.0	4.9	81.9	****	****	****	0.06	1.08

4. Summary

This report provides the monitoring results of ambient gamma-ray dose rate and atmospheric radioactivity concentration until the beginning of June 2011.

(1) The Accident of Fukushima Daiichi Nuclear Power Plant has affected the radiological situation in the Nuclear Science Research Institute. From 15 through 24 March 2011 five large peaks of gamma-ray dose rate were observed. Gamma-ray dose rate was the largest at MP-19 at the First Peak, which was observed on 15 March 2011.
(2) The variations of atmospheric radionuclides concentration corresponded with those of the gamma-ray dose rate. The highest concentrations of aerosol-bound Cs-134 and Cs-137 were observed on 21 March in the period when the Fourth Peak of the gamma-ray dose rate appeared. As for radioiodine, the highest concentrations were observed in the period when the First Peak of the gamma-ray dose rate appeared.
(3) Most of the ratio of atmospheric concentration of Cs-134 to that of Cs-137 was found between 0.9 and 1.1 from 15 March to 7 April 2011. The ratios of atmospheric concentration of aerosol I-131 to that of gross I-131 were relatively large in the period when peaks of the gamma-ray dose rate appeared.

Acknowledgement

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References

1) Geospatial Information Authority of Japan, Chizu etsuran service (System for Servicing Achieved Map Information, available at http://watchizu.gsi.go.jp/), the latest access: 30 January 2012 (in Japanese).
2) Ministry of Education, Culture, Sports, Science and Technology, Houshanou sokutei series No. 7, Japan Chemical Analysis Center, 1992, pp. 77-87 (in Japanese).
3) Japan Meteorological Observatory, Kako-no kisyo-data kensaku (Database of Achieved Meteorological Observatory, available at http://www.data.jma.go.jp/obd/stats/etrn/index.php), the latest access: 30 January 2012 (in Japanese).

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国際単位系（SI）

表１．SI 基本単位

基本量	SI 基本単位	
	名称	記号
長さ	メートル	m
質量	キログラム	kg
時間	秒	s
電流	アンペア	A
熱力学温度	ケルビン	K
物質量	モル	mol
光度	カンデラ	cd

表２．基本単位を用いて表されるSI組立単位の例

組立量	SI 基本単位	
	名称	記号
面積	平方メートル	m^2
体積	立法メートル	m^3
速さ，速度	メートル毎秒	m/s
加速度	メートル毎秒毎秒	m/s^2
波数	毎メートル	m^{-1}
密度，質量密度	キログラム毎立方メートル	kg/m^3
面積密度	キログラム毎平方メートル	kg/m^2
比体積	立方メートル毎キログラム	m^3/kg
電流密度	アンペア毎平方メートル	A/m^2
磁界の強さ	アンペア毎メートル	A/m
量濃度(a)，濃度	モル毎立方メートル	mol/m^3
質量濃度	キログラム毎立法メートル	kg/m^3
輝度	カンデラ毎平方メートル	cd/m^2
屈折率(b)	（数字の） 1	1
比透磁率(b)	（数字の） 1	1

(a) 量濃度（amount concentration）は臨床化学の分野では物質濃度（substance concentration）ともよばれる。
(b) これらは無次元量あるいは次元１をもつ量であるが、そのことを表す単位記号である数字の１は通常は表記しない。

表３．固有の名称と記号で表されるSI組立単位

組立量	SI 組立単位			
	名称	記号	他のSI単位による表し方	SI基本単位による表し方
平面角	ラジアン(b)	rad	1 (b)	m/m
立体角	ステラジアン(b)	sr(c)	1 (b)	m^2/m^2
周波数	ヘルツ(d)	Hz		s^{-1}
力	ニュートン	N		m kg s^{-2}
圧力，応力	パスカル	Pa	N/m^2	m^{-1} kg s^{-2}
エネルギー，仕事，熱量	ジュール	J	N m	m^2 kg s^{-2}
仕事率，工率，放射束	ワット	W	J/s	m^2 kg s^{-3}
電荷，電気量	クーロン	C		s A
電位差（電圧），起電力	ボルト	V	W/A	m^2 kg s^{-3} A^{-1}
静電容量	ファラド	F	C/V	m^{-2} kg^{-1} s^4 A^2
電気抵抗	オーム	Ω	V/A	m^2 kg s^{-3} A^{-2}
コンダクタンス	ジーメンス	S	A/V	m^{-2} kg^{-1} s^3 A^2
磁束	ウエーバ	Wb	Vs	m^2 kg s^{-2} A^{-1}
磁束密度	テスラ	T	Wb/m^2	kg s^{-2} A^{-1}
インダクタンス	ヘンリー	H	Wb/A	m^2 kg s^{-2} A^{-2}
セルシウス温度	セルシウス度(e)	℃		K
光束	ルーメン	lm	cd sr(c)	cd
照度	ルクス	lx	lm/m^2	m^{-2} cd
放射性核種の放射能(f)	ベクレル(d)	Bq		s^{-1}
吸収線量，比エネルギー分与，カーマ	グレイ	Gy	J/kg	m^2 s^{-2}
線量当量，周辺線量当量，方向性線量当量，個人線量当量	シーベルト(g)	Sv	J/kg	m^2 s^{-2}
酸素活性	カタール	kat		s^{-1} mol

(a)SI接頭語は固有の名称と記号を持つ組立単位と組み合わせても使用できる。しかし接頭語を付した単位はもはやコヒーレントではない。
(b)ラジアンとステラジアンは数字の１に対する単位の特別な名称で、量についての情報をつたえるために使われる。実際には、使用する時には記号rad及びsrが用いられるが、習慣として組立単位としての記号である数字の１は明示されない。
(c)測光学ではステラジアンという名称と記号srを単位の表し方の中に、そのまま維持している。
(d)ヘルツは周期現象についてのみ、ベクレルは放射性核種の統計的過程についてのみ使用される。
(e)セルシウス度はケルビンの特別な名称で、セルシウス温度を表すために使用される。セルシウス度とケルビンの単位の大きさは同一である。したがって、温度差や温度間隔を表す数値はどちらの単位で表しても同じである。
(f)放射性核種の放射能（activity referred to a radionuclide）は、しばしば誤った用語で"radioactivity"と記される。
(g)単位シーベルト（PV,2002,70,205）についてはCIPM勧告2（CI-2002）を参照。

表４．単位の中に固有の名称と記号を含むSI組立単位の例

組立量	SI 組立単位		
	名称	記号	SI 基本単位による表し方
粘度	パスカル秒	Pa s	m^{-1} kg s^{-1}
力のモーメント	ニュートンメートル	N m	m^2 kg s^{-2}
表面張力	ニュートン毎メートル	N/m	kg s^{-2}
角速度	ラジアン毎秒	rad/s	m m^{-1} s^{-1}=s^{-1}
角加速度	ラジアン毎秒毎秒	rad/s^2	m m^{-1} s^{-2}=s^{-2}
熱流密度，放射照度	ワット毎平方メートル	W/m^2	kg s^{-3}
熱容量，エントロピー	ジュール毎ケルビン	J/K	m^2 kg s^{-2} K^{-1}
比熱容量，比エントロピー	ジュール毎キログラム毎ケルビン	J/(kg K)	m^2 s^{-2} K^{-1}
比エネルギー	ジュール毎キログラム	J/kg	m^2 s^{-2}
熱伝導率	ワット毎メートル毎ケルビン	W/(m K)	m kg s^{-3} K^{-1}
体積エネルギー	ジュール毎立方メートル	J/m^3	m^{-1} kg s^{-2}
電界の強さ	ボルト毎メートル	V/m	m kg s^{-3} A^{-1}
電荷密度	クーロン毎立方メートル	C/m^3	m^{-3} sA
表面電荷	クーロン毎平方メートル	C/m^2	m^{-2} sA
電束密度，電気変位	クーロン毎平方メートル	C/m^2	m^{-2} sA
誘電率	ファラド毎メートル	F/m	m^{-3} kg^{-1} s^4 A^2
透磁率	ヘンリー毎メートル	H/m	m kg s^{-2} A^{-2}
モルエネルギー	ジュール毎モル	J/mol	m^2 kg s^{-2} mol^{-1}
モルエントロピー，モル熱容量	ジュール毎モル毎ケルビン	J/(mol K)	m^2 kg s^{-2} K^{-1} mol^{-1}
照射線量（X線及びγ線）	クーロン毎キログラム	C/kg	kg^{-1} sA
吸収線量率	グレイ毎秒	Gy/s	m^2 s^{-3}
放射強度	ワット毎ステラジアン	W/sr	m^4 m^{-2} kg s^{-3}=m^2 kg s^{-3}
放射輝度	ワット毎平方メートル毎ステラジアン	$W/(m^2 sr)$	m^2 m^{-2} kg s^{-3}=kg s^{-3}
酵素活性濃度	カタール毎立方メートル	kat/m^3	m^{-3} s^{-1} mol

表５．SI 接頭語

乗数	接頭語	記号	乗数	接頭語	記号
10^{24}	ヨタ	Y	10^{-1}	デシ	d
10^{21}	ゼタ	Z	10^{-2}	センチ	c
10^{18}	エクサ	E	10^{-3}	ミリ	m
10^{15}	ペタ	P	10^{-6}	マイクロ	μ
10^{12}	テラ	T	10^{-9}	ナノ	n
10^{9}	ギガ	G	10^{-12}	ピコ	p
10^{6}	メガ	M	10^{-15}	フェムト	f
10^{3}	キロ	k	10^{-18}	アト	a
10^{2}	ヘクト	h	10^{-21}	ゼプト	z
10^{1}	デカ	da	10^{-24}	ヨクト	y

表６．SIに属さないが、SIと併用される単位

名称	記号	SI 単位による値
分	min	1 min=60s
時	h	1h =60 min=3600 s
日	d	1 d=24 h=86 400 s
度	°	1°=(π/180) rad
分	’	1’=(1/60)°=(π/10800) rad
秒	”	1”=(1/60)’=(π/648000) rad
ヘクタール	ha	$1ha=1hm^2=10^4m^2$
リットル	L，l	$1L=11=1dm^3=10^3cm^3=10^{-3}m^3$
トン	t	$1t=10^3$ kg

表７．SIに属さないが、SIと併用される単位で、SI単位で表される数値が実験的に得られるもの

名称	記号	SI 単位で表される数値
電子ボルト	eV	$1eV=1.602\ 176\ 53(14)\times10^{-19}J$
ダルトン	Da	$1Da=1.660\ 538\ 86(28)\times10^{-27}kg$
統一原子質量単位	u	1u=1 Da
天文単位	ua	$1ua=1.495\ 978\ 706\ 91(6)\times10^{11}m$

表８．SIに属さないが、SIと併用されるその他の単位

名称	記号	SI 単位で表される数値
バール	bar	1 bar=0.1MPa=100kPa=10^5Pa
水銀柱ミリメートル	mmHg	1mmHg=133.322Pa
オングストローム	Å	1 Å=0.1nm=100pm=10^{-10}m
海里	M	1 M=1852m
バーン	b	$1\ b=100fm^2=(10^{-12}cm)2=10^{-28}m^2$
ノット	kn	1 kn=(1852/3600)m/s
ネーパ	Np	SI単位との数値的な関係は、対数量の定義に依存。
ベル	B	
デジベル	dB	

表９．固有の名称をもつCGS組立単位

名称	記号	SI 単位で表される数値
エルグ	erg	$1\ erg=10^{-7}$ J
ダイン	dyn	$1\ dyn=10^{-5}$N
ポアズ	P	1 P=1 dyn s cm^{-2}=0.1Pa s
ストークス	St	1 St =$1cm^2$ s^{-1}=$10^{-4}m^2$ s^{-1}
スチルブ	sb	1 sb =1cd cm^{-2}=10^4cd m^{-2}
フォト	ph	1 ph=1cd sr cm^{-2} 10^4lx
ガル	Gal	1 Gal =1cm s^{-2}=$10^{-2}ms^{-2}$
マクスウェル	Mx	1 Mx = 1G cm^2=10^{-8}Wb
ガウス	G	1 G =1Mx cm^{-2} =10^{-4}T
エルステッド(c)	Oe	1 Oe ≙ $(10^3/4\pi)$A m^{-1}

(c) 3元系のCGS単位系とSIでは直接比較できないため、等号「 ≙ 」は対応関係を示すものである。

表10．SIに属さないその他の単位の例

名称	記号	SI 単位で表される数値
キュリー	Ci	$1\ Ci=3.7\times10^{10}Bq$
レントゲン	R	$1\ R = 2.58\times10^{-4}C/kg$
ラド	rad	$1\ rad=1cGy=10^{-2}Gy$
レム	rem	$1\ rem=1\ cSv=10^{-2}Sv$
ガンマ	γ	$1\ \gamma=1\ nT=10\text{-}9T$
フェルミ		1フェルミ=1 fm=10-15m
メートル系カラット		1メートル系カラット = 200 mg = 2×10-4kg
トル	Torr	1 Torr = (101 325/760) Pa
標準大気圧	atm	1 atm = 101 325 Pa
カロリー	cal	1cal=4.1858J（「15℃」カロリー），4.1868J（「IT」カロリー） 4.184J（「熱化学」カロリー）
ミクロン	μ	1 μ =1μm=10^{-6}m

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