

Supporting Information for

Radioactive Ruthenium from an Undeclared Major Nuclear Release in 2017, Part 1: Airborne Concentrations and Chemical Considerations

Table of contents

Table S1: Airborne ^{106}Ru activity concentrations ($\text{mBq}\cdot\text{m}^{-3}$)	2
Table S2: Airborne ^{103}Ru activity concentrations ($\text{mBq}\cdot\text{m}^{-3}$) and $^{103}\text{Ru}/^{106}\text{Ru}$ isotopic ratio	30
Table S3: Dry + wet fallout/deposition of ^{106}Ru ($\text{Bq}\cdot\text{m}^{-2}$) and ^{106}Ru activity concentrations in rainwater ($\text{Bq}\cdot\text{L}^{-1}$)	31
Table S4: ^{106}Ru deposition on plant and soil ($\text{Bq}\cdot\text{m}^{-2}$ or $\text{Bq}\cdot\text{kg}^{-1}$ fresh)	34
Datasets used	36
Radioactive properties and use of ^{106}Ru	36
Discussion of a possible satellite re-entry	36
Sequence of airborne ^{106}Ru detections in Ukraine	37
Correction for plume duration	37
Chemistry of ruthenium and solubility experiments	38
Volatilization experiments	40
Imaging plate (IP) autoradiography	41
Scanning electron microscopic imaging of the filter surface	42
Gamma-ray spectrum	43
References	44

Table S1: Airborne ^{106}Ru activity concentrations ($\text{mBq}\cdot\text{m}^{-3}$). Results are usually given with 2σ . Uncertainty in %.

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	^{106}Ru ($\text{mBq}\cdot\text{m}^{-3}$)	\pm (%)
Austria	Alt Prerau	48.7964	16.4753	25/09/17	04:03	02/10/17	04:09	11.1	8
Austria	Alt Prerau	48.7964	16.4753	25/09/17	04:03	02/10/17	04:09	0.003	43
Austria	Bregenz	47.5048	9.7264	25/09/17	04:40	02/10/17	07:00	<0.1	
Austria	Bregenz	47.5048	9.7264	26/09/17	04:40	03/10/17	07:00	<0.017	
Austria	Graz	47.0755	15.4505	25/09/17	09:53	02/10/17	06:20	9.1	6
Austria	Graz	47.0755	15.4505	02/10/17	08:16	03/10/17	08:16	36.2	7
Austria	Graz	47.0755	15.4505	03/10/17	08:20	04/10/17	05:50	12.4	6
Austria	Graz	47.0755	15.4505	04/10/17	06:00	05/10/17	05:00	1.3	36
Austria	Graz	47.0755	15.4505	05/10/17	05:05	06/10/17	05:15	0.8	36
Austria	Graz	47.0755	15.4505	06/10/17	05:30	09/10/17	05:30	<0.1	
Austria	Innsbruck	47.2600	11.3566	25/09/17	05:15	02/10/17	04:55	<0.014	
Austria	Innsbruck	47.2600	11.3566	02/10/17	05:03	04/10/17	04:29	<0.3	
Austria	Innsbruck	47.2600	11.3566	04/10/17	04:30	05/10/17	05:22	<1	
Austria	Innsbruck	47.2600	11.3566	05/10/17	05:27	06/10/17	05:15	<1	
Austria	Innsbruck	47.2600	11.3566	06/10/17	05:27	09/10/17	05:36	<0.6	
Austria	Klagenfurt	46.6484	14.3184	25/09/17	08:02	02/10/17	06:18	4.9	7
Austria	Klagenfurt	46.6484	14.3184	25/09/17	08:02	02/10/17	06:18	0.002	49
Austria	Laa an der Thaya	48.7317	16.3917	28/09/17	15:45	29/09/17	16:46	<4.6	
Austria	Laa an der Thaya	48.7317	16.3917	29/09/17	16:46	30/09/17	17:50	<4.5	
Austria	Laa an der Thaya	48.7317	16.3917	30/09/17	17:50	01/10/17	18:52	38	13
Austria	Laa an der Thaya	48.7317	16.3917	01/10/17	18:52	02/10/17	08:13	40	26
Austria	Laa an der Thaya	48.7317	16.3917	02/10/17	16:45	03/10/17	07:32	23	11
Austria	Leopoldschlag	48.6182	14.5018	28/09/17	10:13	29/09/17	10:31	<4.9	
Austria	Leopoldschlag	48.6182	14.5018	29/09/17	10:31	30/09/17	10:49	<4.6	
Austria	Leopoldschlag	48.6182	14.5018	30/09/17	10:49	01/10/17	11:07	<4.5	
Austria	Leopoldschlag	48.6182	14.5018	01/10/17	11:07	02/10/17	14:25	<4.2	
Austria	Linz	48.2675	14.2800	25/09/17	07:50	02/10/17	07:52	0.7	7
Austria	Linz	48.2675	14.2800	02/10/17	08:00	03/10/17	08:25	8.2	8
Austria	Linz	48.2675	14.2800	03/10/17	08:28	04/10/17	07:32	0.3	27
Austria	Linz	48.2675	14.2800	04/10/17	07:35	05/10/17	07:30	<0.2	
Austria	Linz	48.2675	14.2800	05/10/17	07:33	06/10/17	07:36	<0.1	
Austria	Linz	48.2675	14.2800	06/10/17	07:36	09/10/17	07:47	<0.1	
Austria	Retz	48.7549	15.9506	25/09/17	16:55	02/10/17	09:43	13	-
Austria	Retz	48.7549	15.9506	25/09/17	16:11	03/10/17	09:53	12.1	6
Austria	Retz	48.7549	15.9506	25/09/17	16:11	03/10/17	09:53	0.003	44
Austria	Salzburg	47.7909	13.0526	25/09/17	06:30	02/10/17	06:20	<0.0096	
Austria	Sonnblick	47.0500	12.9666	02/10/17	00:01	02/10/17	23:59	0.173	64
Austria	Straß in der Steiermark	46.7259	15.6248	25/09/17	08:02	03/10/17	06:18	9.5	6

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Austria	Straß in der Steiermark	46.7259	15.6248	25/09/17	08:02	03/10/17	06:18	0.003	21
Austria	Vienna	48.2561	16.4828	25/09/17	07:10	02/10/17	07:05	12.9	6
Austria	Vienna	48.2561	16.4828	25/09/17	07:13	02/10/17	07:10	13.3	5
Austria	Vienna	48.2345	16.4175	28/09/17	10:24	04/10/17	06:14	21.7	-
Austria	Vienna	48.2561	16.4828	02/10/17	07:10	03/10/17	07:22	41.6	5
Austria	Vienna	48.2561	16.4828	03/10/17	07:30	04/10/17	07:05	10.2	6
Austria	Vienna	48.2561	16.4828	04/10/17	07:10	05/10/17	06:47	<0.1	
Austria	Vienna	48.2565	16.4829	05/10/17	06:51	06/10/17	06:54	<0.2	
Austria	Vienna	48.2565	16.4829	02/10/17	07:05	09/10/17	06:55	8	9
Austria	Vienna	48.2561	16.4828	06/10/17	06:57	09/10/17	06:57	<0.4	
Austria	Vienna	48.1200	16.2500	02/10/17	08:00	02/10/17	20:40	32.6	4
Austria	Vienna	48.1200	16.2500	03/10/17	08:00	03/10/17	20:40	12.7	10
Belarus	Braslav	55.6333	27.0333	01/10/17	-	02/10/17	-	<LOD	
Belarus	Braslav	55.6333	27.0333	02/10/17	-	03/10/17	-	<LOD	
Belarus	Braslav	55.6333	27.0333	03/10/17	-	04/10/17	-	2.7	-
Belarus	Braslav	55.6333	27.0333	04/10/17	-	05/10/17	-	<LOD	
Belarus	Braslav	55.6333	27.0333	05/10/17	-	06/10/17	-	<LOD	
Belarus	Gomel	52.4400	30.9900	01/10/17	-	02/10/17	-	<LOD	
Belarus	Gomel	52.4400	30.9900	02/10/17	-	03/10/17	-	<LOD	
Belarus	Gomel	52.4400	30.9900	03/10/17	-	04/10/17	-	0.21	-
Belarus	Gomel	52.4400	30.9900	04/10/17	-	05/10/17	-	0.16	-
Belarus	Gomel	52.4400	30.9900	05/10/17	-	06/10/17	-	<LOD	
Belarus	Minsk	53.9030	27.5640	01/10/17	-	02/10/17	-	<LOD	
Belarus	Minsk	53.9030	27.5640	02/10/17	-	03/10/17	-	<LOD	
Belarus	Minsk	53.9030	27.5640	03/10/17	-	04/10/17	-	<LOD	
Belarus	Minsk	53.9030	27.5640	04/10/17	-	05/10/17	-	<LOD	
Belarus	Minsk	53.9030	27.5640	05/10/17	-	06/10/17	-	<LOD	
Belarus	Mstislavl	54.0176	31.7230	01/10/17	-	02/10/17	-	<LOD	
Belarus	Mstislavl	54.0176	31.7230	02/10/17	-	03/10/17	-	<LOD	
Belarus	Mstislavl	54.0176	31.7230	03/10/17	-	04/10/17	-	<LOD	
Belarus	Mstislavl	54.0176	31.7230	04/10/17	-	05/10/17	-	<LOD	
Belarus	Mstislavl	54.0176	31.7230	05/10/17	-	06/10/17	-	<LOD	
Belarus	Pinsk	52.1244	26.0797	01/10/17	-	02/10/17	-	<LOD	
Belarus	Pinsk	52.1244	26.0797	02/10/17	-	03/10/17	-	<LOD	
Belarus	Pinsk	52.1244	26.0797	03/10/17	-	04/10/17	-	3.5	-
Belarus	Pinsk	52.1244	26.0797	04/10/17	-	05/10/17	-	0.05	-
Belarus	Pinsk	52.1244	26.0797	05/10/17	-	06/10/17	-	<LOD	
Belgium	Mol	51.2171	5.0904	29/09/17	07:00	30/09/17	07:00	<1.7	
Belgium	Mol	51.2171	5.0904	30/09/17	07:00	01/10/17	07:00	<1.4	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Belgium	Mol	51.2171	5.0904	01/10/17	07:00	02/10/17	07:00	<1.2	
Belgium	Mol	51.2171	5.0904	02/10/17	07:00	03/10/17	07:00	<0.5	
Bosnia and Herzegovina	Sarajevo	43.8639	18.4175	22/09/17	-	02/10/17	-	4.76	8
Bosnia and Herzegovina	Sarajevo	43.8639	18.4176	02/10/17	-	09/10/17	-	3.17	12
Bosnia and Herzegovina	Sarajevo	43.8639	18.4177	09/10/17	-	17/10/17	-	<0.05	
Bosnia and Herzegovina	Sarajevo	43.8639	18.4178	17/10/17	-	25/10/17	-	<0.07	
Bulgaria	Buhovo	42.7660	23.5660	29/09/17	-	02/10/17	-	29.1	20
Bulgaria	Burgas	42.5000	27.4660	29/09/17	12:00	04/10/17	06:00	11.8	5
Bulgaria	Kozloduy	43.7461	23.7706	29/09/17	12:00	02/10/17	06:00	58.9	-
Bulgaria	Kozloduy	43.7461	23.7706	15/09/17	13:00	02/10/17	06:00	10.9	-
Bulgaria	Montana	43.4166	23.2333	25/09/17	12:00	02/10/17	06:00	2.6	12
Bulgaria	Moussala Peak	42.1833	23.5833	03/10/17	08:30	03/10/17	17:00	1.75	25
Bulgaria	Pleven	43.4166	24.6000	02/10/17	12:00	04/10/17	06:00	24	10
Bulgaria	Vratsa	43.2166	23.5500	02/10/17	12:00	04/10/17	06:00	4.1	20
Bulgaria	Yana	42.7330	23.5660	29/09/17	12:00	04/10/17	06:00	17.6	6
Croatia	Zagreb	45.8338	15.9783	01/09/17	10:00	29/09/17	09:53	<0.0008	
Croatia	Zagreb	45.8338	15.9783	29/09/17	09:57	09/10/17	10:36	13.3	1
Cyprus	Lefkosia	35.1754	33.3710	25/09/17	-	02/10/17	-	0.0461	14
Cyprus	Lefkosia	35.1754	33.3710	03/10/17	08:10	13/10/17	-	0.245	13
Czech Rep.	Brno	49.2000	16.6000	26/09/17	07:00	03/10/17	07:00	21.1	20
Czech Rep.	Brno	49.2000	16.6000	03/10/17	14:00	04/10/17	12:30	0.84	15
Czech Rep.	Brno	49.2000	16.6000	04/10/17	14:00	10/10/17	12:30	<0.005	
Czech Rep.	Brno	49.2000	16.6000	17/10/17	06:00	24/10/17	06:00	0.057	8
Czech Rep.	Brno	49.2000	16.6000	07/11/17	06:00	14/11/17	06:00	0.0099	20
Czech Rep.	České Budějovice	48.9667	14.4667	26/09/17	05:00	03/10/17	05:00	1.90	20
Czech Rep.	České Budějovice	48.9667	14.4667	03/10/17	05:10	03/10/17	15:30	<0.1	
Czech Rep.	České Budějovice	48.9667	14.4667	03/10/17	15:30	04/10/17	13:30	<0.1	
Czech Rep.	České Budějovice	48.9667	14.4667	04/10/17	13:30	10/10/17	05:30	<0.05	
Czech Rep.	Cheb	50.0800	12.4000	03/10/17	09:50	04/10/17	12:30	<0.052	
Czech Rep.	Cheb	50.0800	12.4000	04/10/17	12:30	10/10/17	10:25	<0.02	
Czech Rep.	Holešov	49.3167	17.5667	25/09/17	05:20	02/10/17	05:07	7.9	10
Czech Rep.	Holešov	49.3167	17.5667	02/10/17	05:22	05/10/17	06:28	21.2	20
Czech Rep.	Holešov	49.3167	17.5667	05/10/17	06:29	09/10/17	05:07	0.018	40
Czech Rep.	Holešov	49.3167	17.5667	09/10/17	05:00	16/10/17	05:45	0.005	15
Czech Rep.	Hradec Králové	50.2453	15.8696	26/09/17	04:46	03/10/17	04:47	10.90	10
Czech Rep.	Hradec Králové	50.2453	15.8696	26/09/17	04:46	03/10/17	04:47	0.0026	30
Czech Rep.	Hradec Králové	50.2333	15.8696	29/09/17	06:25	03/10/17	04:47	24.90	10
Czech Rep.	Hradec Králové	50.2453	15.8696	03/10/17	04:50	03/10/17	11:50	4.19	10

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Czech Rep.	Hradec Králové	50.2453	15.8696	03/10/17	11:54	04/10/17	11:40	<0.3	
Czech Rep.	Hradec Králové	50.2453	15.8696	04/10/17	11:40	05/10/17	11:40	<0.3	
Czech Rep.	Hradec Králové	50.2453	15.8696	05/10/17	11:40	10/10/17	04:30	<0.011	
Czech Rep.	Kamenná	49.6160	14.0000	25/09/17	05:30	02/10/17	05:30	3.74	10
Czech Rep.	Kamenná	49.6160	14.0000	02/10/17	07:10	04/10/17	12:12	1.31	20
Czech Rep.	Kamenná	49.6160	14.0000	04/10/17	12:12	09/10/17	07:10	<0.02	10
Czech Rep.	Ostrava	49.8333	18.2833	25/09/17	04:00	02/10/17	04:00	3.82	10
Czech Rep.	Ostrava	49.8333	18.2833	02/10/17	04:00	03/10/17	13:00	40.00	10
Czech Rep.	Ostrava	49.8333	18.2833	03/10/17	13:00	04/10/17	13:00	1.10	10
Czech Rep.	Ostrava	49.8333	18.2833	04/10/17	13:00	05/10/17	04:30	<0.15	
Czech Rep.	Ostrava	49.8333	18.2833	05/10/17	04:30	05/10/17	12:30	<0.48	
Czech Rep.	Ostrava	49.8333	18.2833	05/10/17	12:30	06/10/17	04:00	<0.3	
Czech Rep.	Ostrava	49.8333	18.2833	06/10/17	04:00	09/10/17	04:00	<0.03	
Czech Rep.	Plzeň	49.7333	13.3667	26/09/17	07:00	03/10/17	07:00	0.62	20
Czech Rep.	Plzeň	49.7333	13.3667	04/10/17	06:00	10/10/17	06:00	<0.004	
Czech Rep.	Praha	50.0667	14.4500	26/09/17	06:00	03/10/17	06:05	0.00062	30
Czech Rep.	Praha	50.0667	14.4500	26/09/17	06:00	03/10/17	06:05	6.21	10
Czech Rep.	Praha	50.0670	14.4500	29/09/17	04:45	02/10/17	14:35	13.10	10
Czech Rep.	Praha	50.0670	14.4500	01/10/17	09:00	02/10/17	02:00	57.70	10
Czech Rep.	Praha	50.0667	14.4500	02/10/17	14:40	02/10/17	18:25	1.38	10
Czech Rep.	Praha	50.0667	14.4500	02/10/17	18:25	03/10/17	06:10	0.96	30
Czech Rep.	Praha	50.0667	14.4500	03/10/17	06:10	03/10/17	13:00	<0.04	
Czech Rep.	Praha	50.0667	14.4500	03/10/17	13:05	04/10/17	06:00	<0.1	
Czech Rep.	Praha	50.0667	14.4500	04/10/17	06:00	05/10/17	06:05	<0.01	
Czech Rep.	Praha	50.0667	14.4500	05/10/17	06:05	06/10/17	04:40	<0.006	
Czech Rep.	Praha	50.0667	14.4500	06/10/17	04:40	07/10/17	08:30	<0.08	
Czech Rep.	Praha	50.0667	14.4500	07/10/17	08:40	10/10/17	08:45	<0.03	
Czech Rep.	Praha	50.0667	14.4500	10/10/17	05:50	13/10/17	04:50	<0.03	
Czech Rep.	Ústí nad Labem	50.6667	14.0333	26/09/17	09:00	04/10/17	07:00	4.23	7
Czech Rep.	Ústí nad Labem	50.6667	14.0333	04/10/17	06:58	05/10/17	08:28	<0.252	
Czech Rep.	Ústí nad Labem	50.6667	14.0333	17/10/17	10:05	24/10/17	07:35	0.016	30
Denmark	Allinge	55.2700	14.8000	27/09/17	-	04/10/17	-	1.8	20
Denmark	Haderslev	55.2300	9.5000	30/09/17	-	30/09/17	23:00	<LOD	
Denmark	Roskilde	55.6830	12.1000	26/09/17	12:00	02/10/17	12:00	0.0008	60
Denmark	Roskilde	55.6830	12.1000	02/10/17	12:00	10/10/17	12:00	<0.01	60
Estonia	Harku	59.4625	28.0450	24/09/17	-	01/10/17	-	<LOD	
Estonia	Harku	59.4625	28.0450	26/09/17	11:00	03/10/17	-	<LOD	
Estonia	Harku	59.4625	28.0450	01/10/17	-	08/10/17	-	0.18	6

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Estonia	Narva-Joesuu	59.4625	28.0450	26/09/17	11:00	03/10/17	09:00	0.0107	10
Estonia	Narva-Joesuu	59.4625	28.0450	03/10/17	09:00	10/10/17	09:00	0.111	6
Estonia	Toravere	58.2644	26.4617	25/09/17	-	02/10/17	-	<LOD	
Estonia	Toravere	58.2644	26.4617	02/10/17	-	09/10/17	-	0.214	7
Finland	Böle	60.3711	26.3934	26/09/17	-	04/10/17	-	0.192	-
Finland	Haapasaari	61.1725	21.4777	27/09/17	-	11/10/17	-	0.17	-
Finland	Hankkila	61.1959	21.5530	20/09/17	-	04/10/17	-	0.168	-
Finland	Helsinki	60.2100	25.0500	28/09/17	10:57	03/10/17	04:29	0.064	9
Finland	Helsinki	60.2100	25.0500	03/10/17	09:01	04/10/17	08:58	0.849	4
Finland	Helsinki	60.2100	25.0500	03/10/17	09:01	05/10/17	08:58	0.45	4
Finland	Helsinki	60.2100	25.0500	05/10/17	-	06/10/17	-	<LOD	4
Finland	Imatra	61.1300	28.8300	03/10/17	02:33	05/10/17	09:30	0.288	8
Finland	Ivalo	68.6400	27.5700	02/10/17	05:27	05/10/17	03:21	0.138	4
Finland	Kajaani	67.4136	26.5910	02/10/17	-	09/10/17	-	0.045	-
Finland	Keitala	60.4219	26.3659	26/09/17	-	04/10/17	-	0.192	-
Finland	Korvensuo	61.2400	21.4819	27/09/17	-	11/10/17	-	0.16	-
Finland	Kotka	60.4800	26.9200	11/09/17	11:50	04/10/17	09:10	0.016	10
Finland	Kuivalahti	61.2739	21.5699	20/09/17	-	04/10/17	-	0.163	-
Finland	Kuopio	62.8900	27.6300	02/10/17	06:08	05/10/17	06:10	0.217	4
Finland	Loviisa NPP	60.3778	26.3222	26/09/17	-	10/10/17	-	0.135	-
Finland	Määrlahti	60.4499	26.2607	26/09/17	-	10/10/17	-	0.109	-
Finland	Rovaniemi	66.5100	25.6800	02/10/17	05:15	09/10/17	04:57	0.061	3
Finland	Sodankylä	67.3700	26.6300	02/10/17	04:51	05/10/17	04:38	0.107	8
France	Ajaccio	41.9183	8.7928	18/09/17	07:30	25/09/17	07:10	<0.048	
France	Ajaccio	41.9183	8.7928	25/09/17	07:11	02/10/17	07:30	<0.0043	
France	Ajaccio	41.9183	8.7928	02/10/17	07:00	09/10/17	07:00	0.0082	34
France	Ajaccio	41.9183	8.7928	09/10/17	07:00	16/10/17	07:00	<0.009	
France	Alençon	48.4324	0.0911	26/09/17	09:20	03/10/17	10:00	<0.0004	
France	Alençon	48.4324	0.0911	03/10/17	10:05	10/10/17	09:00	<0.00024	
France	Alençon	48.4324	0.0911	10/10/17	09:00	17/10/17	09:00	0.000277	58
France	Alençon	48.4324	0.0911	17/10/17	09:00	24/10/17	09:43	<0.00026	
France	Bordeaux	44.8271	-0.7043	25/09/17	13:30	02/10/17	13:15	<0.00022	
France	Bordeaux	44.8271	-0.7043	02/10/17	13:30	09/10/17	12:30	<0.00022	
France	Bordeaux	44.8271	-0.7043	09/10/17	12:30	16/10/17	13:08	<0.00025	
France	Bordeaux	44.8271	-0.7043	16/10/17	13:08	23/10/17	12:00	<0.00031	
France	Bugey	45.7907	5.2667	18/09/17	06:19	25/09/17	06:12	<0.050	
France	Bugey	45.7907	5.2667	25/09/17	06:12	02/10/17	06:19	<0.013	
France	Bugey	45.7907	5.2667	02/10/17	06:34	09/10/17	07:11	<0.031	
France	Bugey	45.7907	5.2667	09/10/17	09:00	16/10/17	10:00	<0.025	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
France	Bure	48.4872	5.3550	25/09/17	10:40	02/10/17	11:25	<0.00021	
France	Bure	48.4872	5.3550	02/10/17	11:30	05/10/17	07:00	<0.00038	
France	Bure	48.4872	5.3550	05/10/17	07:05	09/10/17	10:23	<0.00018	
France	Bure	48.4872	5.3550	09/10/17	10:27	16/10/17	10:29	<0.00011	
France	Bure	48.4872	5.3550	16/10/17	10:32	23/10/17	11:55	0.00043	36
France	Cadarache	43.7001	5.7471	18/09/17	08:15	29/09/17	07:45	<0.050	
France	Cadarache	43.7001	5.7471	25/09/17	07:45	02/10/17	06:20	<0.029	
France	Cadarache	43.7001	5.7471	02/10/17	08:20	09/10/17	07:35	<0.012	
France	Cadarache	43.7001	5.7471	09/10/17	07:35	16/10/17	08:05	<0.015	
France	Cattenom	49.4203	6.2269	18/09/17	07:55	25/09/17	07:34	<0.048	
France	Cattenom	49.4203	6.2269	25/09/17	07:34	02/10/17	06:06	<0.024	
France	Cattenom	49.4203	6.2269	02/10/17	08:00	09/10/17	07:59	<0.021	
France	Cattenom	49.4203	6.2269	09/10/17	08:00	16/10/17	07:55	<0.05	
France	Charleville-Mézières	49.9378	4.7028	26/09/17	09:50	03/10/17	11:15	<0.00027	
France	Charleville-Mézières	49.9378	4.7028	03/10/17	11:15	10/10/17	10:35	0.00017	71
France	Charleville-Mézières	49.9378	4.7028	10/10/17	10:40	17/10/17	13:10	<0.00023	
France	Charleville-Mézières	49.9378	4.7028	17/10/17	13:15	24/10/17	10:24	0.00017	70
France	Chooz	50.0949	4.7917	02/10/17	07:46	09/10/17	07:51	<0.06	
France	Cruas	44.6263	4.7516	02/10/17	06:30	05/10/17	06:45	<0.008	
France	Cruas	44.6263	4.7516	09/10/17	07:27	16/10/17	07:29	<0.008	
France	Dijon	47.3180	5.0382	13/09/17	11:00	02/10/17	11:35	<0.00024	
France	Dijon	47.3180	5.0382	13/09/17	11:00	02/10/17	11:35	0.00328	16
France	Dijon	47.3180	5.0382	02/10/17	11:35	05/10/17	06:00	<0.00068	
France	Dijon	47.3180	5.0382	05/10/17	06:00	12/10/17	11:30	<0.0003	
France	Dijon	47.3180	5.0382	12/10/17	11:30	19/10/17	12:45	0.000245	78
France	Dijon	47.3180	5.0382	19/10/17	12:45	27/10/17	13:00	<0.00018	
France	Fessenheim	47.9163	7.5662	18/09/17	06:45	25/09/17	06:41	<0.049	
France	Fessenheim	47.9163	7.5662	25/09/17	06:41	02/10/17	06:45	<0.023	
France	Fessenheim	47.9163	7.5662	02/10/17	06:45	09/10/17	06:53	<0.021	
France	Fessenheim	47.9163	7.5662	09/10/17	06:53	16/10/17	06:50	<0.018	
France	Gravelines	50.9974	2.1435	25/09/17	07:05	02/10/17	07:25	<0.00029	
France	Grenoble	45.2020	5.7050	18/09/17	08:03	22/09/17	07:16	<0.140	
France	Grenoble	45.2020	5.7050	22/09/17	07:17	25/09/17	07:13	<0.140	
France	Grenoble	45.2020	5.7050	25/09/17	07:15	29/09/17	07:17	<0.048	
France	Grenoble	45.2020	5.7050	29/09/17	07:19	02/10/17	07:25	<0.050	
France	Grenoble	45.2113	5.6833	02/10/17	07:26	06/10/17	06:12	<0.014	
France	Grenoble	45.2113	5.6833	09/10/17	07:15	12/10/17	07:20	<0.01	
France	Grenoble	45.2113	5.6833	13/10/17	07:09	16/10/17	07:52	<0.016	
France	La Seyne sur Mer	43.1068	5.8847	26/09/17	06:25	03/10/17	09:30	0.0074	19

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
France	La Seyne sur Mer	43.1068	5.8847	03/10/17	09:30	11/10/17	08:35	0.0197	17
France	La Seyne sur Mer	43.1068	5.8847	11/10/17	08:35	13/10/17	09:42	0.00155	45
France	La Seyne sur Mer	43.1068	5.8847	13/10/17	09:43	17/10/17	12:30	0.001034	38
France	La Seyne sur Mer	43.1068	5.8847	17/10/17	14:18	24/10/17	12:18	<0.00028	
France	Marcoule	44.1237	4.7027	18/09/17	07:01	21/09/17	06:46	<0.120	
France	Marcoule	44.1237	4.7027	21/09/17	06:47	25/09/17	07:20	<0.080	
France	Marcoule	44.1237	4.7027	25/09/17	07:21	28/09/17	07:25	<0.021	
France	Marcoule	44.1237	4.7027	28/09/17	07:21	02/10/17	07:25	<0.023	
France	Marcoule	44.1237	4.7027	02/10/17	07:26	05/10/17	06:39	<0.0082	
France	Marcoule	44.1237	4.7027	05/10/17	06:40	09/10/17	07:15	<0.011	
France	Marcoule	44.1237	4.7027	09/10/17	07:16	12/10/17	14:50	<0.018	
France	Marcoule	44.1237	4.7027	12/10/17	07:51	16/10/17	06:59	<0.023	
France	Marcoule	44.1237	4.7027	16/10/17	07:01	19/10/17	06:36	<0.024	
France	Nancy	48.6879	6.2215	18/09/17	10:10	25/09/17	10:08	<0.048	
France	Nancy	48.6879	6.2215	25/09/17	10:09	02/10/17	10:30	<0.011	
France	Nancy	48.6879	6.2215	02/10/17	10:31	09/10/17	09:38	<0.011	
France	Nancy	48.6879	6.2215	09/10/17	09:40	16/10/17	09:48	<0.0046	
France	Nice	43.6492	7.2092	18/09/17	07:00	25/09/17	07:00	<0.047	
France	Nice	43.6492	7.2092	25/09/17	07:00	02/10/17	13:20	0.0068	39
France	Nice	43.6492	7.2092	02/10/17	11:55	09/10/17	12:40	0.046	17
France	Nice	43.6492	7.2092	09/10/17	13:40	16/10/17	07:43	<0.007	
France	Omonville	49.6949	-1.8733	09/10/17	06:50	16/10/17	13:00	<0.022	
France	Opme	45.7070	3.0937	27/09/17	07:38	03/10/17	08:02	< 0.0005	
France	Opme	45.7070	3.0937	03/10/17	08:04	11/10/17	08:32	<0.0003	
France	Opme	45.7070	3.0937	11/10/17	08:36	18/10/17	07:26	0.00035	83
France	Opme	45.7070	3.0937	18/10/17	07:29	25/10/17	08:48	<0.00032	
France	Orsay	48.7061	2.1783	27/09/17	11:30	03/10/17	07:10	<0.00035	
France	Orsay	48.7061	2.1783	03/10/17	07:13	11/10/17	11:38	<0.00035	
France	Orsay	48.7061	2.1783	11/10/17	11:40	18/10/17	11:56	< 0.00028	
France	Orsay	48.7061	2.1783	18/10/17	11:58	25/10/17	11:32	<0.00022	
France	Orsay	48.7061	2.1783	25/10/17	11:33	31/10/17	11:51	<0.00021	
France	Penly	49.9761	1.2247	18/09/17	06:30	25/09/17	06:40	<0.048	
France	Penly	49.9761	1.2247	25/09/17	06:40	02/10/17	06:38	<0.023	
France	Penly	49.9761	1.2247	02/10/17	06:40	09/10/17	06:20	<0.022	
France	Penly	49.9761	1.2247	09/10/17	07:23	16/10/17	07:23	<0.027	
France	Prevessin	46.2668	6.1142	18/09/17	12:12	25/09/17	12:06	<0.046	
France	Prevessin	46.2668	6.1142	25/09/17	12:11	02/10/17	12:32	<0.007	
France	Prevessin	46.2668	6.1142	02/10/17	12:36	06/10/17	10:31	<0.033	
France	Puy de Dôme	45.7723	2.9645	27/09/17	11:59	03/10/17	09:37	<0.00045	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
France	Puy de Dôme	45.7723	2.9645	03/10/17	07:39	11/10/17	11:06	<0.00028	
France	Puy de Dôme	45.7723	2.9645	11/10/17	11:08	18/10/17	11:07	<0.00031	
France	Puy de Dôme	45.7723	2.9645	18/10/17	11:09	25/10/17	10:47	0.00062	50
France	Puy de Dôme	45.7723	2.9645	25/10/17	10:49	02/11/17	12:33	0.000373	54
France	Saint Alban	45.3957	4.7581	18/09/17	07:35	25/09/17	07:33	<0.046	
France	Saint Alban	45.3957	4.7581	25/09/17	07:33	02/10/17	07:43	<0.032	
France	Saint Alban	45.3957	4.7581	02/10/17	08:58	09/10/17	08:07	<0.024	
France	Saint Alban	45.3957	4.7581	09/10/17	07:25	16/10/17	07:39	<0.026	
France	Saint Laurent	47.7267	1.5993	09/10/17	07:10	16/10/17	07:05	<0.027	
France	Tricastin	44.3222	4.7308	18/09/17	06:54	25/09/17	07:03	<0.048	
France	Tricastin	44.3222	4.7308	25/09/17	07:45	02/10/17	07:45	<0.026	
France	Tricastin	44.3222	4.7308	02/10/17	06:31	06/10/17	07:46	<0.010	
France	Tricastin	44.3222	4.7308	09/10/17	07:45	16/10/17	07:45	<0.016	
France	Villeneuve d'Ascq	50.6091	3.1327	19/09/17	10:05	22/09/17	08:45	<0.140	
France	Villeneuve d'Ascq	50.6091	3.1327	22/09/17	06:49	26/09/17	09:23	<0.100	
France	Villeneuve d'Ascq	50.6091	3.1327	26/09/17	09:24	29/09/17	08:20	<0.160	
France	Villeneuve d'Ascq	50.6091	3.1327	29/09/17	06:21	03/10/17	09:10	<0.060	
France	Villeneuve d'Ascq	50.6091	3.1327	03/10/17	09:10	06/10/17	11:14	<0.050	
France	Villeneuve d'Ascq	50.6091	3.1327	06/10/17	-	13/10/17	-	<0.012	
France	Villeneuve d'Ascq	50.6091	3.1327	13/10/17	-	17/10/17	-	<0.1	
Germany	Aachen-Orsbach	50.7983	6.0244	25/09/17	09:00	02/10/17	08:00	<0.00743	
Germany	Aachen-Orsbach	50.7983	6.0244	02/10/17	09:00	04/10/17	08:00	<0.053	
Germany	Aachen-Orsbach	50.7983	6.0244	04/10/17	08:00	09/10/17	09:00	<0.0101	
Germany	Angermünde	53.0315	13.9908	25/09/17	09:00	02/10/17	09:00	0.160	8
Germany	Angermünde	53.0315	13.9908	02/10/17	09:00	09/10/17	09:00	0.050	11
Germany	Arkona	54.6792	13.4343	25/09/17	09:00	02/10/17	09:00	0.014	29
Germany	Arkona	54.6792	13.4343	02/10/17	09:00	04/10/17	08:00	<0.0942	29
Germany	Arkona	54.6792	13.4343	04/10/17	08:00	09/10/17	09:00	<0.0299	29
Germany	Artern	51.3745	11.2920	25/09/17	09:00	02/10/17	09:00	<0.0139	29
Germany	Artern	51.3745	11.2920	02/10/17	09:00	09/10/17	09:00	<0.021	29
Germany	Braunschweig	52.3000	10.4660	25/09/17	-	02/10/17	-	<0.00023	
Germany	Braunschweig	52.3000	10.4660	02/10/17	-	05/10/17	-	0.000299	25
Germany	Braunschweig	52.3000	10.4660	09/10/17	05:40	16/10/17	05:17	<LOD	
Germany	Braunschweig	52.3000	10.4660	16/10/17	05:40	23/10/17	05:17	0.0005	19
Germany	Bremen	53.0450	8.7979	25/09/17	09:00	02/10/17	09:00	<0.0193	
Germany	Bremen	53.0450	8.7979	02/10/17	09:00	09/10/17	09:00	<0.0196	
Germany	Brocken	51.7986	10.6183	25/09/17	09:00	02/10/17	09:00	<0.0198	
Germany	Brocken	51.7986	10.6181	02/10/17	09:00	09/10/17	09:00	<0.0193	
Germany	Brocken	51.7986	10.6181	16/10/17	09:00	23/10/17	09:00	<0.0185	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Germany	Cottbus	51.7760	14.3168	25/09/17	09:00	02/10/17	09:00	0.677	7
Germany	Cottbus	51.7760	14.3168	02/10/17	09:00	09/10/17	09:00	0.167	9
Germany	Essen-Bredeney	51.4041	6.9677	25/09/17	09:00	02/10/17	09:00	<0.0239	
Germany	Essen-Bredeney	51.4041	6.9677	02/10/17	09:00	04/10/17	08:00	<0.09	
Germany	Essen-Bredeney	51.4041	6.9677	04/10/17	08:00	09/10/17	09:00	<0.0217	
Germany	Fehmarn	54.5284	11.1404	25/09/17	09:00	02/10/17	09:00	<0.0154	
Germany	Fürstenzell	48.5451	13.3531	25/09/17	09:00	02/10/17	09:00	0.0198	17
Germany	Fürstenzell	48.5442	13.3531	02/10/17	09:00	09/10/17	09:00	<0.0195	
Germany	Garmisch-Partenkirchen	47.4831	11.0623	25/09/17	09:00	02/10/17	09:00	<0.0231	
Germany	Garmisch-Partenkirchen	47.4831	11.0623	02/10/17	09:00	04/10/17	09:00	<0.0349	
Germany	Garmisch-Partenkirchen	47.4831	11.0623	04/10/17	09:00	09/10/17	09:00	<0.0855	
Germany	Gera-Leumnitz	50.8813	12.1289	25/09/17	09:00	02/10/17	09:00	<0.0336	
Germany	Gera-Leumnitz	50.8813	12.1289	02/10/17	09:00	04/10/17	09:00	<0.103	
Germany	Gera-Leumnitz	50.8813	12.1289	04/10/17	09:00	09/10/17	09:00	<0.0409	
Germany	Görlitz	51.1622	14.9506	25/09/17	09:00	02/10/17	09:00	4.91	6
Germany	Görlitz	51.1622	14.9506	02/10/17	09:00	04/10/17	08:00	4.57	7
Germany	Görlitz	51.1622	14.9506	04/10/17	09:00	09/10/17	09:00	<0.0349	
Germany	Greifswald	54.0967	13.4056	25/09/17	09:00	02/10/17	09:00	0.009	6
Germany	Greifswald	54.0967	13.4056	02/10/17	09:00	09/10/17	09:00	<0.0147	
Germany	Hamburg-Fuhlsbüttel	53.6332	9.9881	25/09/17	09:00	02/10/17	09:00	<0.0292	
Germany	Hamburg-Fuhlsbüttel	53.6332	9.9881	02/10/17	09:00	04/10/17	13:20	<0.0782	
Germany	Hamburg-Fuhlsbüttel	53.6332	9.9881	04/10/17	13:30	09/10/17	09:00	<0.043	
Germany	Hof	50.3122	11.8761	25/09/17	09:00	02/10/17	09:00	<0.0115	
Germany	Hof	50.3122	11.8761	02/10/17	09:00	04/10/17	08:00	<0.0378	
Germany	Hof	50.3122	11.8761	04/10/17	09:00	09/10/17	09:00	<0.0167	
Germany	Kahler Asten	51.1803	8.4891	25/09/17	09:00	02/10/17	09:00	<0.0133	
Germany	Kahler Asten	51.1803	8.4891	02/10/17	09:00	09/10/17	09:00	<0.0138	
Germany	Konstanz	47.6774	9.1901	25/09/17	09:00	02/10/17	09:00	<0.0414	
Germany	Konstanz	47.6774	9.1901	02/10/17	09:00	04/10/17	08:00	<0.197	
Germany	Konstanz	47.6774	9.1901	04/10/17	09:00	09/10/17	09:00	<0.00561	
Germany	Lahr	48.3647	7.8280	25/09/17	09:00	02/10/17	09:00	<0.00953	
Germany	Lahr	48.3647	7.8280	02/10/17	09:00	04/10/17	08:00	<0.0661	
Germany	Lahr	48.3647	7.8280	04/10/17	09:00	09/10/17	09:00	<0.0114	
Germany	Lingen	52.5181	7.3081	25/09/17	09:00	02/10/17	09:00	<0.0164	
Germany	Lingen	52.5181	7.3081	02/10/17	09:00	09/10/17	09:00	<0.0164	
Germany	Lippspringe. Bad	51.7855	8.8388	25/09/17	09:00	02/10/17	09:00	<0.0128	
Germany	Lippspringe. Bad	51.7855	8.8388	02/10/17	09:00	09/10/17	09:00	<0.0133	
Germany	Magdeburg	52.1029	11.5827	25/09/17	09:00	02/10/17	09:00	<0.020	
Germany	Magdeburg	52.1029	11.5827	25/09/17	09:00	02/10/17	09:00	<0.0254	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Germany	Neuherberg	48.2500	11.5500	22/09/17	14:05	29/09/17	12:02	<0.00256	
Germany	Neuherberg	48.2500	11.5500	29/09/17	12:05	03/10/17	12:30	<0.00671	
Germany	Norderney	53.7123	7.1519	25/09/17	09:00	02/10/17	09:00	<0.0359	
Germany	Norderney	53.7123	7.1519	02/10/17	09:00	04/10/17	08:00	<0.115	
Germany	Norderney	53.7123	7.1519	04/10/17	09:00	09/10/17	09:00	<0.0438	
Germany	Nürburg-Barweiler	50.3601	6.9533	25/09/17	09:00	02/10/17	09:00	<0.0137	
Germany	Nürburg-Barweiler	50.3601	6.9533	02/10/17	09:00	09/10/17	09:00	<0.0157	
Germany	Nürnberg	49.5030	11.0549	25/09/17	09:00	02/10/17	09:00	<0.032	
Germany	Nürnberg	49.5030	11.0549	02/10/17	09:00	04/10/17	08:00	<0.0914	
Germany	Nürnberg	49.5030	11.0549	04/10/17	09:00	09/10/17	09:00	<0.0461	
Germany	Oberschleißheim	48.2446	11.5525	25/09/17	09:00	02/10/17	09:00	<0.0148	
Germany	Oberschleißheim	48.2446	11.5525	02/10/17	09:00	04/10/17	08:00	<0.0425	
Germany	Oberschleißheim	48.2446	11.5525	04/10/17	09:00	09/10/17	09:00	<0.00874	
Germany	Potsdam	52.3813	13.0622	25/09/17	09:00	02/10/17	09:00	0.00921	9
Germany	Potsdam	52.3813	13.0622	02/10/17	09:00	04/10/17	08:00	<0.0394	
Germany	Potsdam	52.3813	13.0622	04/10/17	09:00	09/10/17	09:00	<0.0014	
Germany	Regensburg	49.0424	12.1021	25/09/17	09:00	02/10/17	09:00	<0.0144	
Germany	Regensburg	49.0424	12.1021	02/10/17	09:00	09/10/17	09:00	<0.0159	
Germany	Rheinstetten	48.9726	8.3301	25/09/17	09:00	02/10/17	09:00	<0.0579	
Germany	Rheinstetten	48.9726	8.3301	02/10/17	09:00	04/10/17	08:00	<0.154	
Germany	Rheinstetten	48.9726	8.3301	04/10/17	09:00	09/10/17	09:00	<0.0542	
Germany	Rostock-Warnemünde	54.1803	12.0808	25/09/17	09:00	02/10/17	09:00	<0.0245	
Germany	Rostock-Warnemünde	54.1803	12.0808	02/10/17	09:00	04/10/17	08:00	<0.0648	
Germany	Rostock-Warnemünde	54.1803	12.0808	04/10/17	09:00	09/10/17	09:00	<0.0164	
Germany	Saarbrücken-Ensheim	49.2128	7.1077	25/09/17	09:00	02/10/17	09:00	<0.023	
Germany	Saarbrücken-Ensheim	49.2128	7.1077	02/10/17	09:00	09/10/17	09:00	<0.024	
Germany	Schauinsland	47.9100	7.8900	25/09/17	-	02/10/17	-	<0.01	
Germany	Schleswig	54.5275	9.5487	25/09/17	09:00	02/10/17	09:00	<0.00716	
Germany	Schleswig	54.5275	9.5487	02/10/17	09:00	04/10/17	08:00	<0.0285	
Germany	Schleswig	54.5275	9.5487	04/10/17	09:00	09/10/17	09:00	<0.00973	
Germany	Seehausen	52.8911	11.7297	25/09/17	09:00	02/10/17	09:00	<0.032	
Germany	Seehausen	52.8911	11.7297	02/10/17	09:00	04/10/17	08:00	<0.0737	
Germany	Seehausen	52.8911	11.7297	04/10/17	09:00	09/10/17	09:00	<0.02	
Germany	Seehausen	52.8911	11.7297	02/10/17	09:00	09/10/17	09:00	0.00957	-
Germany	Stötten	48.6657	9.8646	25/09/17	09:00	02/10/17	09:00	<0.0206	
Germany	Stötten	48.6657	9.8646	02/10/17	09:00	09/10/17	09:00	<0.0218	
Germany	Trier-Petrisberg	49.7479	6.6582	25/09/17	09:00	02/10/17	09:00	<0.0357	
Germany	Trier-Petrisberg	49.7479	6.6582	02/10/17	09:00	04/10/17	08:00	<0.141	
Germany	Trier-Petrisberg	49.7479	6.6582	04/10/17	09:00	09/10/17	09:00	<0.0456	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Germany	Wasserkuppe	50.4973	9.9428	25/09/17	09:00	02/10/17	09:00	<0.00561	
Germany	Wasserkuppe	50.4973	9.9428	02/10/17	09:00	04/10/17	08:00	<0.03	
Germany	Wasserkuppe	50.4973	9.9428	04/10/17	09:00	09/10/17	09:00	<0.00712	
Germany	Würzburg	49.7703	9.9577	25/09/17	09:00	02/10/17	09:00	<0.0154	
Germany	Würzburg	49.7703	9.9577	02/10/17	09:00	09/10/17	09:00	<0.0142	
Germany	Zinnwald-Georgenfeld	50.7314	13.7516	25/09/17	09:00	02/10/17	09:00	<0.0159	
Germany	Zinnwald-Georgenfeld	50.7314	13.7516	25/09/17	09:00	02/10/17	09:00	<0.0112	
Germany	Zugspitze	47.4209	10.9847	25/09/17	09:00	02/10/17	09:00	<0.0256	
Germany	Zugspitze	47.4209	10.9847	02/10/17	09:00	09/10/17	09:00	<0.0245	
Greece	Athens	37.9950	23.81599	27/09/17	13:27	03/10/17	10:00	2.64	24
Greece	Athens	37.9950	23.81599	03/10/17	11:10	04/10/17	14:40	0.19	14
Greece	Athens	37.9950	23.81599	04/10/17	14:53	06/10/17	14:17	0.11	13
Greece	Athens	37.9950	23.81599	06/10/17	14:25	11/10/17	15:10	0.04	13
Greece	Athens	37.9998	23.8159	05/10/17	17:43	10/10/17	17:13	<0.2	
Greece	Athens	37.9766	23.7851	09/10/17	13:00	11/10/17	09:00	<0.1	
Greece	Athens	37.9766	23.7851	10/10/17	16:00	17/10/17	17:00	<0.1	
Greece	Helmos Mountain	37.9842	22.1964	27/09/17	-	29/09/17	-	0.99	20
Hungary	Budapest	47.5011	19.0465	29/09/17	-	02/10/17	-	33.76	-
Hungary	Budapest	47.5011	19.0465	02/10/17	-	03/10/17	-	27.58	-
Hungary	Budapest	47.5011	19.0465	03/10/17	-	04/10/17	-	9.9	-
Hungary	Budapest	47.5011	19.0465	04/10/17	-	05/10/17	-	2.08	-
Hungary	Budapest	47.5011	19.0465	25/09/17	-	02/10/17	-	11.95	5
Hungary	Budapest	47.5011	19.0465	25/09/17	-	02/10/17	-	14.67	2
Hungary	Budapest	47.5011	19.0465	02/10/17	-	05/10/17	-	9.21	3
Hungary	Budapest	47.5011	19.0465	05/10/17	-	09/10/17	-	0.271	-
Hungary	Budapest	47.5011	19.0465	09/10/17	-	16/10/17	-	0.0114	3
Hungary	Budapest *	47.4891	18.9537	25/09/17	10:00	02/10/17	10:00	10.7	6
Hungary	Budapest *	47.4891	18.9537	02/10/17	10:00	03/10/17	10:00	24.1	7
Hungary	Budapest *	47.4891	18.9537	03/10/17	10:00	04/10/17	10:00	11.9	8
Hungary	Budapest *	47.4891	18.9537	04/10/17	10:00	05/10/17	10:00	<1.2	
Hungary	Budapest *	47.4891	18.9537	02/10/17	10:00	09/10/17	10:00	3.9	5
Hungary	Budapest *	47.4891	18.9537	09/10/17	10:00	16/10/17	10:00	<0.19	
Hungary	Győr	47.6850	17.6530	26/09/17	-	03/10/17	-	14.3	5
Hungary	Miskolc	48.1000	20.7700	29/09/17	-	05/10/17	-	14.6	5
Hungary	Paks	46.5742	18.8496	25/09/17	-	02/10/17	-	13.5	-
Hungary	Paks	46.5742	18.8496	30/09/17	-	02/10/17	-	49.4	-
Ireland	Belfield	53.3090	-6.2247	28/09/17	-	09/10/17	-	<0.00257	
Italy	Belluno	46.1650	12.2460	29/09/17	07:00	02/10/17	07:00	2.62	23
Italy	Belluno	46.1650	12.2460	02/10/17	07:00	03/10/17	07:00	18.6	20

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Italy	Belluno	46.1650	12.2460	03/10/17	07:00	04/10/17	07:00	9.3	24
Italy	Belluno	46.1650	12.2460	04/10/17	07:00	05/10/17	07:00	2.97	34
Italy	Belluno	46.1650	12.2460	05/10/17	07:00	06/10/17	07:00	2.17	32
Italy	Bergamo	45.6970	9.6794	29/09/17	07:00	02/10/17	07:00	3.8	16
Italy	Bergamo	45.6970	9.6794	02/10/17	07:00	03/10/17	07:00	12.2	18
Italy	Bergamo	45.6970	9.6794	03/10/17	07:00	03/10/17	21:00	6.9	19
Italy	Firenze	43.7772	11.2486	30/09/17	-	02/10/17	-	0.5	40
Italy	Firenze	43.7772	11.2486	02/10/17	-	03/10/17	-	1.4	29
Italy	Firenze	43.7772	11.2486	03/10/17	-	04/10/17	-	<0.2	
Italy	Firenze	43.7772	11.2486	04/10/17	-	05/10/17	-	<0.3	
Italy	Genova	44.4070	8.9460	29/09/17	-	02/10/17	-	0.5	40
Italy	Gorizia	45.9371	13.6162	29/09/17	-	29/09/17	23:59	<4.1	
Italy	Gorizia	45.9371	13.6162	30/10/17	-	30/10/17	23:59	<3.9	
Italy	Gorizia	45.9371	13.6162	01/10/17	-	01/10/17	23:59	48.4	13
Italy	Gorizia	45.9371	13.6162	02/10/17	-	02/10/17	23:59	6.3	17
Italy	Gorizia	45.9371	13.6162	03/10/17	-	03/10/17	23:59	39.5	11
Italy	Gorizia	45.9371	13.6162	04/10/17	-	04/10/17	23:59	9.2	34
Italy	Gorizia	45.9371	13.6162	05/10/17	-	05/10/17	23:59	5.3	34
Italy	Gorizia	45.9371	13.6162	06/10/17	-	06/10/17	23:59	<4.3	
Italy	Ivrea	45.4742	7.8742	27/09/17	-	03/10/17	-	0.88	68
Italy	Ivrea	45.4742	7.8742	05/10/17	-	06/10/17	-	1.17	77
Italy	Milano	45.4731	9.2225	25/09/17	07:00	02/10/17	07:00	1.09	25
Italy	Milano	45.4731	9.2225	29/09/17	07:00	02/10/17	07:00	2.49	17
Italy	Milano	45.4731	9.2225	02/10/17	07:30	09/10/17	07:30	1.64	24
Italy	Milano	45.4731	9.2225	02/10/17	07:30	02/10/17	15:00	6.3	23
Italy	Milano	45.4731	9.2225	02/10/17	15:00	03/10/17	07:30	3.6	33
Italy	Milano	45.4731	9.2225	03/10/17	07:30	04/10/17	07:30	3.5	34
Italy	Milano	45.4731	9.2225	04/10/17	07:30	05/10/17	07:30	3.09	34
Italy	Milano	45.4731	9.2225	05/10/17	07:30	06/10/17	07:30	<1.7	
Italy	Milano	45.4731	9.2225	06/10/17	07:30	09/10/17	07:30	<0.62	
Italy	Milano	45.4731	9.2225	09/10/17	07:30	10/10/17	07:30	<2.4	
Italy	Milano	45.4731	9.2225	10/10/17	07:30	11/10/17	07:30	<2.4	
Italy	Milano	45.4731	9.2225	11/10/17	07:30	12/10/17	07:30	<2.6	
Italy	Milano	45.4731	9.2225	12/10/17	07:30	13/10/17	07:30	<3.1	
Italy	Milano	45.4731	9.2225	13/10/17	07:30	16/10/17	07:30	<1.1	
Italy	Milano	45.4731	9.2225	16/10/17	07:30	17/10/17	07:30	<4.4	
Italy	Milano	45.4731	9.2225	17/10/17	07:30	18/10/17	07:30	<3.7	
Italy	Milano	45.4731	9.2225	18/10/17	07:30	19/10/17	07:30	<2.8	
Italy	Milano	45.4731	9.2225	19/10/17	07:30	20/10/17	07:30	<2.8	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Italy	Milano	45.4731	9.2225	20/10/17	07:30	23/10/17	07:30	<0.5	
Italy	Milano	45.4731	9.2225	23/10/17	07:30	24/10/17	07:30	<2.1	
Italy	Milano	45.4731	9.2225	24/10/17	07:30	25/10/17	07:30	<2.4	
Italy	Milano	45.4731	9.2225	25/10/17	07:30	26/10/17	07:30	<3.5	
Italy	Milano	45.4731	9.2225	26/10/17	07:30	27/10/17	07:30	<2.7	
Italy	Milano	45.4731	9.2225	27/10/17	07:30	30/10/17	07:30	<0.78	
Italy	Milano	45.4731	9.2225	30/10/17	07:30	31/10/17	07:30	<2.3	
Italy	Perugia	43.0819	12.3380	29/09/17	-	02/10/17	-	0.91	22
Italy	Perugia	43.0819	12.3380	02/10/17	-	03/10/17	-	6.2	21
Italy	Perugia	43.0819	12.3380	03/10/17	-	04/10/17	-	<0.13	
Italy	Porcia	45.9576	12.6187	29/09/17	-	29/09/17	21:59	<3.8	
Italy	Porcia	45.9576	12.6187	30/10/17	-	30/10/17	21:59	<3.8	
Italy	Porcia	45.9576	12.6187	01/10/17	-	01/10/17	21:59	16.6	19
Italy	Porcia	45.9576	12.6187	02/10/17	-	02/10/17	21:59	53.5	20
Italy	Porcia	45.9576	12.6187	03/10/17	-	03/10/17	21:59	38.3	11
Italy	Porcia	45.9576	12.6187	04/10/17	-	04/10/17	21:59	15.7	21
Italy	Porcia	45.9576	12.6187	05/10/17	-	05/10/17	21:59	6.8	35
Italy	Porcia	45.9576	12.6187	06/10/17	-	06/10/17	21:59	4.8	33
Italy	Trino	45.1953	8.2961	29/09/17	-	02/10/17	-	1.14	35
Italy	Udine	46.0710	13.2340	29/09/17	07:00	02/10/17	07:00	12.5	24
Italy	Udine	46.0710	13.2340	02/10/17	07:00	03/10/17	07:00	49.1	24
Italy	Udine	46.0710	13.2340	03/10/17	07:10	03/10/17	13:30	54.3	37
Italy	Udine	46.0710	13.2340	03/10/17	13:30	04/10/17	07:05	30	30
Italy	Udine	46.0710	13.2340	04/10/17	07:10	04/10/17	13:30	4.2	35
Italy	Udine	46.0710	13.2340	04/10/17	13:30	05/10/17	07:00	5.2	29
Italy	Udine	46.0710	13.2340	05/10/17	07:10	06/10/17	07:00	3.3	45
Italy	Udine	46.0710	13.2340	06/10/17	07:10	07/10/17	06:00	<1.1	
Italy	Udine	46.0710	13.2340	07/10/17	06:00	09/10/17	06:00	<1.5	
Italy	Udine	46.0710	13.2340	09/10/17	06:00	10/10/17	06:00	<1.3	
Italy	Udine	46.0661	13.2408	29/09/17	-	29/09/17	21:59	<4.23	
Italy	Udine	46.0661	13.2408	30/10/17	-	30/10/17	21:59	<4.77	
Italy	Udine	46.0661	13.2408	01/10/17	-	01/10/17	21:59	41.6	22
Italy	Udine	46.0661	13.2408	02/10/17	-	02/10/17	21:59	50.4	11
Italy	Udine	46.0661	13.2408	03/10/17	-	03/10/17	21:59	33.7	22
Italy	Udine	46.0661	13.2408	04/10/17	-	04/10/17	21:59	6.3	21
Italy	Udine	46.0661	13.2408	05/10/17	-	05/10/17	21:59	9.2	26
Italy	Ugovizza	46.5101	13.4747	29/09/17	-	29/09/17	21:59	<2.4	
Italy	Ugovizza	46.5101	13.4747	30/10/17	-	30/10/17	21:59	10.2	26
Italy	Ugovizza	46.5101	13.4747	01/10/17	-	01/10/17	21:59	35.4	10

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Italy	Ugovizza	46.5101	13.4747	02/10/17	-	02/10/17	21:59	27.5	16
Italy	Ugovizza	46.5101	13.4747	03/10/17	-	03/10/17	21:59	6	37
Italy	Vercelli	45.3099	8.4077	29/09/17	-	05/10/17	-	1.25	32
Italy	Verona	45.4260	10.9920	29/09/17	07:00	02/10/17	07:00	5.58	16
Italy	Verona	45.4260	10.9920	02/10/17	07:00	03/10/17	07:00	19.1	22
Italy	Verona	45.4260	10.9920	03/10/17	07:00	04/10/17	07:00	17.4	29
Italy	Verona	45.4260	10.9920	04/10/17	07:00	05/10/17	07:00	7.07	42
Italy	Verona	45.4260	10.9920	05/10/17	07:00	06/10/17	07:00	<1.93	
Italy	Vicenza	45.5460	11.5620	29/09/17	07:00	02/10/17	07:00	8.4	18
Italy	Vicenza	45.5460	11.5620	02/10/17	07:00	03/10/17	07:00	25.2	7
Italy	Vicenza	45.5460	11.5620	03/10/17	07:00	04/10/17	07:00	23	13
Italy	Vicenza	45.5460	11.5620	04/10/17	07:00	05/10/17	07:00	6	32
Italy	Vicenza	45.5460	11.5620	05/10/17	07:00	06/10/17	07:00	<3.10	
Lithuania	Ignalina NPP	55.6043	26.5601	25/09/17	-	03/10/17	-	0.021	-
Lithuania	Ignalina NPP	55.6043	26.5601	03/10/17	-	05/10/17	-	1.7	-
Lithuania	Utena	55.4932	25.6220	29/09/17	-	02/10/17	-	<0.0243	
Lithuania	Utena	55.4932	25.6220	02/10/17	-	05/10/17	-	1.21	-
Luxembourg	Luxembourg-ville	49.6114	6.1231	18/09/17	-	26/09/17	-	<0.021	
Luxembourg	Luxembourg-ville	49.6114	6.1231	26/09/17	-	02/10/17	-	<0.023	
Luxembourg	Luxembourg-ville	49.6114	6.1231	02/10/17	-	09/10/17	-	<0.021	
Luxembourg	Luxembourg-ville	49.6114	6.1231	09/10/17	-	16/10/17	-	<0.019	
Netherlands	Bilthoven	52.1365	5.2104	21/09/17	08:29	28/09/17	08:10	<0.0043	
Netherlands	Bilthoven	52.1365	5.2104	28/09/17	08:10	03/10/17	07:00	<0.0076	
Netherlands	Bilthoven	52.1365	5.2104	03/10/17	07:00	05/10/17	07:58	<0.0241	
Netherlands	Bilthoven	52.1365	5.2104	05/10/17	07:58	06/10/17	11:26	<0.0215	
North Macedonia	Skopje	41.9900	21.4240	25/09/17	-	02/10/17	-	5.773	8
Norway	Ørland	63.6900	9.6100	25/09/17	10:00	02/10/17	10:00	0.074	4
Norway	Ørland	63.6900	9.6100	02/10/17	10:00	03/10/17	10:00	0.213	4
Norway	Ørland	63.6900	9.6100	03/10/17	10:00	09/10/17	10:00	0.003	14
Norway	Ørland	63.6900	9.6100	09/10/17	10:00	16/10/17	10:00	<0.001	
Norway	Oslo	59.9482	10.6032	25/09/17	10:00	02/10/17	10:00	0.2	-
Norway	Østerås	59.9400	10.6000	25/09/17	10:00	02/10/17	10:00	0.184	4
Norway	Østerås	59.9400	10.6000	25/09/17	10:00	02/10/17	10:00	0.0006	18
Norway	Østerås	59.9400	10.6000	02/10/17	10:00	03/10/17	10:00	0.024	10
Norway	Østerås	59.9400	10.6000	03/10/17	10:00	04/10/17	10:00	<0.003	
Norway	Østerås	59.9400	10.6000	04/10/17	10:00	06/10/17	10:00	<0.055	
Norway	Østerås	59.9400	10.6000	06/10/17	10:00	09/10/17	10:00	<0.005	
Norway	Sola	58.8800	5.6400	22/09/17	10:00	29/09/17	10:00	<0.001	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Norway	Sola	58.8800	5.6400	29/09/17	10:00	03/10/17	10:00	<0.002	
Norway	Skibotn	69.3700	20.3000	25/09/17	10:00	02/10/17	10:00	<0.003	
Norway	Skibotn	69.3700	20.3000	02/10/17	10:00	09/10/17	10:00	0.094	6
Norway	Skibotn	69.3700	20.3000	09/10/17	10:00	16/10/17	10:00	0.004	6
Norway	Skibotn	69.3700	20.3000	16/10/17	10:00	23/10/17	10:00	<0.002	
Norway	Sola	58.8800	5.6400	03/10/17	10:00	06/10/17	10:00	<0.002	
Norway	Svanhovd	69.4500	30.0400	13/10/17	10:00	16/10/17	10:00	<0.01	
Norway	Viksjo fjell	69.6200	30.8100	24/09/17	10:00	01/10/17	10:00	<0.002	
Norway	Viksjo fjell	69.6200	30.8100	01/10/17	10:00	08/10/17	10:00	<0.04	
Poland	Białystok	53.1279	23.1649	25/09/17	10:00	02/10/17	10:00	0.23	4
Poland	Białystok	53.1279	23.1649	02/10/17	10:00	09/10/17	10:00	1.752	3
Poland	Gdynia	54.5210	18.5463	25/09/17	10:00	02/10/17	10:00	3.62	2
Poland	Gdynia	54.5210	18.5463	02/10/17	10:00	09/10/17	10:00	2.536	2
Poland	Katowice	50.2707	19.0268	25/09/17	10:00	02/10/17	10:00	0.6	5
Poland	Katowice	50.2707	19.0268	02/10/17	10:00	09/10/17	10:00	4.65	3
Poland	Kraków	50.0902	19.8886	25/09/17	09:18	02/10/17	09:46	3.11	7
Poland	Kraków	50.0902	19.8886	25/09/17	09:12	02/10/17	09:41	1.67	7
Poland	Kraków	50.0902	19.8886	02/10/17	09:50	03/10/17	11:35	16.7	7
Poland	Kraków	50.0902	19.8886	03/10/17	12:00	04/10/17	10:12	2.44	7
Poland	Kraków	50.0902	19.8886	04/10/17	10:30	05/10/17	09:53	<0.0103	
Poland	Kraków	50.0902	19.8886	05/10/17	10:00	06/10/17	08:33	<0.0073	
Poland	Kraków	50.0902	19.8886	06/10/17	08:37	09/10/17	09:08	0.0045	67
Poland	Kraków	50.0902	19.8886	02/10/17	09:45	09/10/17	09:02	3.11	7
Poland	Łódź	51.7446	19.4501	25/09/17	10:00	02/10/17	10:00	7.63	32
Poland	Łódź	51.7446	19.4501	02/10/17	10:00	09/10/17	10:00	12.19	3
Poland	Lublin	51.2610	22.5127	25/09/17	10:00	02/10/17	10:00	7.16	3
Poland	Lublin	51.2610	22.5127	02/10/17	10:00	09/10/17	10:00	3.36	1
Poland	Sanok	49.5501	22.2011	25/09/17	10:00	02/10/17	10:00	6.52	6
Poland	Sanok	49.5501	22.2011	02/10/17	10:00	09/10/17	10:00	4.83	6
Poland	Szczecin	53.4207	14.5351	25/09/17	10:00	02/10/17	10:00	0.36	3
Poland	Szczecin	53.4207	14.5351	02/10/17	10:00	09/10/17	10:00	0.09	3
Poland	Torun	53.0167	18.7779	26/09/17	11:00	03/10/17	11:00	9.93	4
Poland	Torun	53.0167	18.7779	02/10/17	10:00	09/10/17	11:00	0.0008	26
Poland	Warszawa	52.3016	20.9879	25/09/17	10:00	02/10/17	10:00	4.09	1
Poland	Warszawa	52.3016	20.9879	02/10/17	10:00	09/10/17	10:00	2.456	2
Poland	Wrocław	51.1060	17.0629	25/09/17	10:00	02/10/17	10:00	3.03	2
Poland	Wrocław	51.1060	17.0629	02/10/17	10:00	09/10/17	10:00	2.97	2
Poland	Zielona Gora	51.9435	15.5302	25/09/17	12:00	02/10/17	12:00	3.99	3
Poland	Zielona Gora	51.9435	15.5302	02/10/17	10:00	09/10/17	10:00	1.54	2

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Portugal	Lisboa	38.7200	-9.1300	-	-	-	-	<LOD	
Romania	Alba Iulia	46.0780	23.5780	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Alba Iulia	46.0780	23.5780	30/09/17	01:00	30/09/17	12:00	32.81	-
Romania	Alba Iulia	46.0780	23.5780	01/10/17	01:00	01/10/17	12:00	75.42	-
Romania	Alba Iulia	46.0780	23.5780	02/10/17	01:00	02/10/17	12:00	39.42	-
Romania	Alba Iulia	46.0780	23.5780	03/10/17	01:00	03/10/17	12:00	15.02	-
Romania	Alba Iulia	46.0780	23.5780	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Alba Iulia	46.0780	23.5780	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Arad	46.1910	21.3260	28/09/17	01:00	28/09/17	12:00	<LOD	
Romania	Arad	46.1910	21.3260	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Arad	46.1910	21.3260	30/09/17	01:00	30/09/17	12:00	<LOD	
Romania	Arad	46.1910	21.3260	01/10/17	01:00	01/10/17	12:00	64.42	-
Romania	Arad	46.1910	21.3260	02/10/17	01:00	02/10/17	12:00	30.41	-
Romania	Arad	46.1910	21.3260	03/10/17	01:00	03/10/17	12:00	9.31	-
Romania	Arad	46.1910	21.3260	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Arad	46.1910	21.3260	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Babele	45.4320	25.4520	29/09/17	01:00	30/09/17	00:00	<LOD	
Romania	Babele	45.4320	25.4520	30/09/17	01:00	01/10/17	00:00	<LOD	
Romania	Babele	45.4320	25.4520	01/10/17	01:00	02/10/17	00:00	<LOD	
Romania	Babele	45.4320	25.4520	02/10/17	01:00	03/10/17	00:00	<LOD	
Romania	Babele	45.4320	25.4520	03/10/17	01:00	04/10/17	00:00	<LOD	
Romania	Babele	45.4320	25.4520	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Babele	45.4320	25.4520	05/10/17	01:00	06/10/17	00:00	<LOD	
Romania	Bacau	46.5710	26.9240	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Bacau	46.5710	26.9240	30/09/17	01:00	30/09/17	12:00	39.3	-
Romania	Bacau	46.5710	26.9240	01/10/17	01:00	01/10/17	12:00	24.31	-
Romania	Bacau	46.5710	26.9240	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Bacau	46.5710	26.9240	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Bacau	46.5710	26.9240	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Bacau	46.5710	26.9240	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Baia Mare	47.6540	23.5890	28/09/17	01:00	28/09/17	12:00	<LOD	
Romania	Baia Mare	47.6540	23.5890	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Baia Mare	47.6540	23.5890	30/09/17	01:00	30/09/17	12:00	<LOD	
Romania	Baia Mare	47.6540	23.5890	01/10/17	01:00	01/10/17	12:00	47.47	-
Romania	Baia Mare	47.6540	23.5890	02/10/17	01:00	02/10/17	12:00	38.21	-
Romania	Baia Mare	47.6540	23.5890	03/10/17	01:00	03/10/17	12:00	24.6	-
Romania	Baia Mare	47.6540	23.5890	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Baia Mare	47.6540	23.5890	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Bechet	43.7820	23.9500	28/09/17	01:00	29/09/17	00:00	<LOD	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Romania	Bechet	43.7820	23.9500	29/09/17	01:00	30/09/17	00:00	66.6	-
Romania	Bechet	43.7820	23.9500	30/09/17	01:00	01/10/17	00:00	127.57	-
Romania	Bechet	43.7820	23.9500	01/10/17	01:00	02/10/17	00:00	18.1	-
Romania	Bechet	43.7820	23.9500	02/10/17	01:00	03/10/17	00:00	<LOD	
Romania	Bechet	43.7820	23.9500	03/10/17	01:00	04/10/17	00:00	<LOD	
Romania	Bechet	43.7820	23.9500	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Botosani	47.7460	26.6670	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Botosani	47.7460	26.6670	30/09/17	01:00	30/09/17	12:00	51.81	-
Romania	Botosani	47.7460	26.6670	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Botosani	47.7460	26.6670	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Botosani	47.7460	26.6670	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Botosani	47.7460	26.6670	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Botosani	47.7460	26.6670	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Brasov	45.6560	25.6100	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Brasov	45.6560	25.6100	30/09/17	01:00	30/09/17	12:00	113.03	-
Romania	Brasov	45.6560	25.6100	01/10/17	01:00	01/10/17	12:00	54.74	-
Romania	Brasov	45.6560	25.6100	02/10/17	01:00	02/10/17	12:00	17.44	-
Romania	Brasov	45.6560	25.6100	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Brasov	45.6560	25.6100	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Brasov	45.6560	25.6100	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	București	44.4310	26.1220	28/09/17	01:00	28/09/17	12:00	<LOD	
Romania	București	44.4310	26.1220	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	București	44.4310	26.1220	30/09/17	01:00	30/09/17	12:00	145	-
Romania	București	44.4310	26.1220	01/10/17	01:00	01/10/17	12:00	18.1	-
Romania	București	44.4310	26.1220	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	București	44.4310	26.1220	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	București	44.4310	26.1220	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Buzau	45.1490	26.8240	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Buzau	45.1490	26.8240	30/09/17	01:00	30/09/17	12:00	120.45	-
Romania	Buzau	45.1490	26.8240	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Buzau	45.1490	26.8240	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Buzau	45.1490	26.8240	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Buzau	45.1490	26.8240	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Buzau	45.1490	26.8240	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Calarasi	44.2050	27.3350	29/09/17	01:00	29/09/17	12:00	38.01	-
Romania	Calarasi	44.2050	27.3350	30/09/17	01:00	30/09/17	12:00	86.81	-
Romania	Calarasi	44.2050	27.3350	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Calarasi	44.2050	27.3350	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Calarasi	44.2050	27.3350	03/10/17	01:00	03/10/17	12:00	<LOD	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Romania	Calarasi	44.2050	27.3350	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Calarasi	44.2050	27.3350	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Cernavodă	44.3490	28.0490	29/09/17	01:00	30/09/17	00:00	81.28	-
Romania	Cernavodă	44.3177	28.0523	30/09/17	01:00	01/10/17	00:00	47.23	-
Romania	Cernavodă	44.3490	28.0490	01/10/17	01:00	02/10/17	00:00	<LOD	
Romania	Cernavodă	44.3490	28.0490	02/10/17	01:00	03/10/17	00:00	<LOD	
Romania	Cernavodă	44.3490	28.0490	03/10/17	01:00	04/10/17	00:00	<LOD	
Romania	Cernavodă	44.3490	28.0490	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Cernavodă	44.3490	28.0490	05/10/17	01:00	06/10/17	00:00	<LOD	
Romania	Cluj Napoca	46.7770	23.5990	29/09/17	01:00	30/09/17	00:00	<LOD	
Romania	Cluj Napoca	46.7770	23.5990	30/09/17	01:00	01/10/17	00:00	<LOD	
Romania	Cluj Napoca	46.7770	23.5990	01/10/17	01:00	02/10/17	00:00	29.08	-
Romania	Cluj Napoca	46.7770	23.5990	02/10/17	01:00	03/10/17	00:00	<LOD	
Romania	Cluj Napoca	46.7770	23.5990	03/10/17	01:00	04/10/17	00:00	<LOD	
Romania	Cluj Napoca	46.7770	23.5990	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Cluj Napoca	46.7770	23.5990	05/10/17	01:00	06/10/17	00:00	<LOD	
Romania	Constanța	44.1730	28.6350	28/09/17	01:00	29/09/17	00:00	<LOD	
Romania	Constanța	44.1730	28.6350	29/09/17	01:00	30/09/17	00:00	88.1	-
Romania	Constanța	44.1730	28.6350	30/09/17	01:00	01/10/17	00:00	44.31	-
Romania	Constanța	44.1730	28.6350	01/10/17	01:00	02/10/17	00:00	<LOD	
Romania	Constanța	44.1730	28.6350	02/10/17	01:00	03/10/17	00:00	<LOD	
Romania	Constanța	44.1730	28.6350	03/10/17	01:00	04/10/17	00:00	<LOD	
Romania	Constanța	44.1730	28.6350	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Craiova	44.3250	23.8140	28/09/17	01:00	29/09/17	00:00	<LOD	
Romania	Craiova	44.3250	23.8140	29/09/17	01:00	30/09/17	00:00	59.81	-
Romania	Craiova	44.3250	23.8140	30/09/17	01:00	01/10/17	00:00	106.27	-
Romania	Craiova	44.3250	23.8140	01/10/17	01:00	02/10/17	00:00	33.12	-
Romania	Craiova	44.3250	23.8140	02/10/17	01:00	03/10/17	00:00	<LOD	
Romania	Craiova	44.3250	23.8140	03/10/17	01:00	04/10/17	00:00	<LOD	
Romania	Craiova	44.3250	23.8140	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Deva	45.8870	22.9070	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Deva	45.8870	22.9070	30/09/17	01:00	30/09/17	12:00	<LOD	
Romania	Deva	45.8870	22.9070	01/10/17	01:00	01/10/17	12:00	35.8	-
Romania	Deva	45.8870	22.9070	02/10/17	01:00	02/10/17	12:00	22.7	-
Romania	Deva	45.8870	22.9070	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Deva	45.8870	22.9070	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Deva	45.8870	22.9070	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Drobeta Turnu Severin	44.6350	22.6660	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Drobeta Turnu Severin	44.6350	22.6660	30/09/17	01:00	30/09/17	12:00	123.5	-

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Romania	Drobeta Turnu Severin	44.6350	22.6660	01/10/17	01:00	01/10/17	12:00	47.56	-
Romania	Drobeta Turnu Severin	44.6350	22.6660	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Drobeta Turnu Severin	44.6350	22.6660	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Drobeta Turnu Severin	44.6350	22.6660	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Drobeta Turnu Severin	44.6350	22.6660	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Fetesti	44.3833	27.8333	06/09/17	-	06/10/17	-	3.18	50
Romania	Focsani	45.7010	27.1880	29/09/17	01:00	29/09/17	12:00	15.17	-
Romania	Focsani	45.7010	27.1880	30/09/17	01:00	30/09/17	12:00	82.81	-
Romania	Focsani	45.7010	27.1880	01/10/17	01:00	01/10/17	12:00	24.22	-
Romania	Focsani	45.7010	27.1880	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Focsani	45.7010	27.1880	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Focsani	45.7010	27.1880	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Focsani	45.7010	27.1880	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Galati	45.4350	28.0390	29/09/17	01:00	29/09/17	12:00	35.94	-
Romania	Galati	45.4350	28.0390	30/09/17	01:00	30/09/17	12:00	37.38	-
Romania	Galati	45.4350	28.0390	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Galati	45.4350	28.0390	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Galati	45.4350	28.0390	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Galati	45.4350	28.0390	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Galati	45.4350	28.0390	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Gherghina	44.3226	28.1819	05/09/17	-	05/10/17	-	3.39	37
Romania	Iași	47.1810	27.5830	28/09/17	01:00	29/09/17	00:00	<LOD	
Romania	Iași	47.1810	27.5830	29/09/17	01:00	30/09/17	00:00	80.75	-
Romania	Iași	47.1810	27.5830	30/09/17	01:00	01/10/17	00:00	65.8	-
Romania	Iași	47.1810	27.5830	01/10/17	01:00	02/10/17	00:00	<LOD	
Romania	Iași	47.1810	27.5830	02/10/17	01:00	02/10/17	00:00	<LOD	
Romania	Iași	47.1810	27.5830	03/10/17	01:00	03/10/17	00:00	<LOD	
Romania	Iași	47.1810	27.5830	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Medgidia	44.2500	28.2833	07/09/17	-	07/10/17	-	3.39	48
Romania	Miercurea Ciuc	46.3680	25.8140	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Miercurea Ciuc	46.3680	25.8140	30/09/17	01:00	30/09/17	12:00	61.76	-
Romania	Miercurea Ciuc	46.3680	25.8140	01/10/17	01:00	01/10/17	12:00	46.97	-
Romania	Miercurea Ciuc	46.3680	25.8140	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Miercurea Ciuc	46.3680	25.8140	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Miercurea Ciuc	46.3680	25.8140	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Miercurea Ciuc	46.3680	25.8140	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Mircea Voda	44.2833	28.1667	05/09/17	-	05/10/17	-	3.1	47
Romania	Oradea	47.0630	21.9180	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Oradea	47.0630	21.9180	30/09/17	01:00	30/09/17	12:00	<LOD	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Romania	Oradea	47.0630	21.9180	01/10/17	01:00	01/10/17	12:00	75.06	-
Romania	Oradea	47.0630	21.9180	02/10/17	01:00	02/10/17	12:00	45.77	-
Romania	Oradea	47.0630	21.9180	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Oradea	47.0630	21.9180	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Oradea	47.0630	21.9180	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Piatra Neamt	46.9490	26.3820	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Piatra Neamt	46.9490	26.3820	30/09/17	01:00	30/09/17	12:00	31.73	-
Romania	Piatra Neamt	46.9490	26.3820	01/10/17	01:00	01/10/17	12:00	38.83	-
Romania	Piatra Neamt	46.9490	26.3820	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Piatra Neamt	46.9490	26.3820	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Piatra Neamt	46.9490	26.3820	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Piatra Neamt	46.9490	26.3820	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Ploiesti	44.9360	26.0360	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Ploiesti	44.9360	26.0360	30/09/17	01:00	30/09/17	12:00	138.18	-
Romania	Ploiesti	44.9360	26.0360	01/10/17	01:00	01/10/17	12:00	46.07	-
Romania	Ploiesti	44.9360	26.0360	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Ploiesti	44.9360	26.0360	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Ploiesti	44.9360	26.0360	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Ploiesti	44.9360	26.0360	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Resita	45.2920	21.8920	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Resita	45.2920	21.8920	30/09/17	01:00	30/09/17	12:00	50.36	-
Romania	Resita	45.2920	21.8920	01/10/17	01:00	01/10/17	12:00	44.42	-
Romania	Resita	45.2920	21.8920	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Resita	45.2920	21.8920	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Resita	45.2920	21.8920	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Resita	45.2920	21.8920	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Saligny	44.2833	28.0833	07/09/17	-	03/10/17	-	4.54	34
Romania	Satu Mare	47.7850	22.8840	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Satu Mare	47.7850	22.8840	30/09/17	01:00	30/09/17	12:00	<LOD	
Romania	Satu Mare	47.7850	22.8840	01/10/17	01:00	01/10/17	12:00	35.35	-
Romania	Satu Mare	47.7850	22.8840	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Satu Mare	47.7850	22.8840	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Satu Mare	47.7850	22.8840	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Satu Mare	47.7850	22.8840	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Seimeni	44.4018	28.0876	06/09/17	-	04/10/17	-	5.34	29
Romania	Sf.Gheorghe - Tulcea	44.9040	29.6080	29/09/17	01:00	29/09/17	12:00	69.55	-
Romania	Sf.Gheorghe - Tulcea	44.9040	29.6080	30/09/17	01:00	30/09/17	12:00	34.45	-
Romania	Sf.Gheorghe - Tulcea	44.9040	29.6080	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Sf.Gheorghe - Tulcea	44.9040	29.6080	02/10/17	01:00	02/10/17	12:00	<LOD	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Romania	Sf.Gheorghe - Tulcea	44.9040	29.6080	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Sf.Gheorghe - Tulcea	44.9040	29.6080	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Sf.Gheorghe - Tulcea	44.9040	29.6080	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Sibiu	45.7880	24.1420	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Sibiu	45.7880	24.1420	30/09/17	01:00	30/09/17	12:00	<LOD	
Romania	Sibiu	45.7880	24.1420	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Sibiu	45.7880	24.1420	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Sibiu	45.7880	24.1420	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Sibiu	45.7880	24.1420	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Sibiu	45.7880	24.1420	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Slobozia	44.5700	27.3800	29/09/17	01:00	29/09/17	12:00	55.63	-
Romania	Slobozia	44.5700	27.3800	30/09/17	01:00	30/09/17	12:00	118.78	-
Romania	Slobozia	44.5700	27.3800	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Slobozia	44.5700	27.3800	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Slobozia	44.5700	27.3800	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Slobozia	44.5700	27.3800	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Slobozia	44.5700	27.3800	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Suceava	47.6420	26.2580	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Suceava	47.6420	26.2580	30/09/17	01:00	30/09/17	12:00	22.81	-
Romania	Suceava	47.6420	26.2580	01/10/17	01:00	01/10/17	12:00	52.28	-
Romania	Suceava	47.6420	26.2580	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Suceava	47.6420	26.2580	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Suceava	47.6420	26.2580	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Suceava	47.6420	26.2580	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Târgu Mures	46.5410	24.5650	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Târgu Mures	46.5410	24.5650	30/09/17	01:00	30/09/17	12:00	<LOD	
Romania	Târgu Mures	46.5410	24.5650	01/10/17	01:00	01/10/17	12:00	42.33	-
Romania	Târgu Mures	46.5410	24.5650	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Târgu Mures	46.5410	24.5650	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Târgu Mures	46.5410	24.5650	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Târgu Mures	46.5410	24.5650	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Timisoara	45.7560	21.2370	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Timisoara	45.7560	21.2370	30/09/17	01:00	30/09/17	12:00	30.03	-
Romania	Timisoara	45.7560	21.2370	01/10/17	01:00	01/10/17	12:00	82.88	-
Romania	Timisoara	45.7560	21.2370	02/10/17	01:00	02/10/17	12:00	31.99	-
Romania	Timisoara	45.7560	21.2370	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Timisoara	45.7560	21.2370	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Timisoara	45.7560	21.2370	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Toaca	46.9753	25.9487	29/09/17	01:00	30/09/17	00:00	<LOD	

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Romania	Toaca	46.9753	25.9487	30/09/17	01:00	01/10/17	00:00	58.28	-
Romania	Toaca	46.9753	25.9487	01/10/17	01:00	02/10/17	00:00	12.86	-
Romania	Toaca	46.9753	25.9487	02/10/17	01:00	03/10/17	00:00	12.9	-
Romania	Toaca	46.9753	25.9487	03/10/17	01:00	04/10/17	00:00	<LOD	
Romania	Toaca	46.9753	25.9487	04/10/17	01:00	05/10/17	00:00	<LOD	
Romania	Toaca	46.9753	25.9487	05/10/17	01:00	06/10/17	00:00	<LOD	
Romania	Topalu București	44.4323	26.1063	06/09/17	-	06/10/17	-	2.94	22
Romania	Tulcea	45.1800	28.8050	29/09/17	01:00	29/09/17	12:00	50.01	-
Romania	Tulcea	45.1800	28.8050	30/09/17	01:00	30/09/17	12:00	82.57	-
Romania	Tulcea	45.1800	28.8050	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Tulcea	45.1800	28.8050	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Tulcea	45.1800	28.8050	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Tulcea	45.1800	28.8050	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Tulcea	45.1800	28.8050	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Vaslui	46.6440	27.7400	29/09/17	01:00	29/09/17	12:00	44.22	-
Romania	Vaslui	46.6440	27.7400	30/09/17	01:00	30/09/17	12:00	132.77	-
Romania	Vaslui	46.6440	27.7400	01/10/17	01:00	01/10/17	12:00	21.79	-
Romania	Vaslui	46.6440	27.7400	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Vaslui	46.6440	27.7400	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Vaslui	46.6440	27.7400	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Vaslui	46.6440	27.7400	05/10/17	01:00	05/10/17	12:00	<LOD	
Romania	Zimnicea	43.6660	25.3660	29/09/17	01:00	29/09/17	12:00	<LOD	
Romania	Zimnicea	43.6660	25.3660	30/09/17	01:00	30/09/17	12:00	176.09	-
Romania	Zimnicea	43.6660	25.3660	01/10/17	01:00	01/10/17	12:00	<LOD	
Romania	Zimnicea	43.6660	25.3660	02/10/17	01:00	02/10/17	12:00	<LOD	
Romania	Zimnicea	43.6660	25.3660	03/10/17	01:00	03/10/17	12:00	<LOD	
Romania	Zimnicea	43.6660	25.3660	04/10/17	01:00	04/10/17	12:00	<LOD	
Romania	Zimnicea	43.6660	25.3660	05/10/17	01:00	05/10/17	12:00	<LOD	
Russia	Argayash	55.4860	60.8750	26/09/17	-	01/10/17	-	46	-
Russia	Argayash	55.4860	60.8750	26/09/17	-	01/10/17	-	30.78	-
Russia	Argayash	55.4860	60.8750	26/09/17	-	01/10/17	-	21	-
Russia	Argayash	55.4860	60.8750	26/09/17	-	01/10/17	-	29.4	-
Russia	Arkhangelsk	64.5521	40.5203	25/09/17	-	06/10/17	-	<LOD	
Russia	Balakovo NPP	52.0880	47.9830	01/09/17	-	02/10/17	-	27.7	-
Russia	Balakovo NPP	52.0880	47.9830	01/09/17	-	02/10/17	-	33.2	-
Russia	Balakovo NPP	52.0880	47.9830	02/10/17	-	02/11/17	-	63.6	-
Russia	Bilibino NPP	68.0514	166.5401	09/10/17	-	12/10/17	-	<0.066	
Russia	Bolshaya Murta	56.9090	93.1206	04/10/17	-	05/10/17	-	0.0785	
Russia	Bolshaya Murta	56.9090	93.1206	06/10/17	-	07/10/17	-	0.1128	-

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Russia	Dimitrovgrad NIIAR_facility	54.2210	49.3955	29/09/17	-	06/10/17	-	<LOD	
Russia	Kola NPP	67.4653	32.4811	28/09/17	-	05/10/17	-	19	-
Russia	Kola NPP	67.4653	32.4811	28/09/17	-	05/10/17	-	16.8	-
Russia	Kola NPP	67.4653	32.4811	01/10/17	-	31/10/17	-	<LOD	
Russia	Leningrad NPP	59.8307	29.0570	25/09/17	-	06/10/17	-	0.073	-
Russia	Leningrad NPP	59.8307	29.0570	01/10/17	-	31/10/17	-	<0.005	
Russia	Leningrad NPP	59.8697	29.0814	29/09/17	-	31/10/17	-	0.14	-
Russia	Novogornyy	55.6330	60.7870	26/09/17	-	01/10/17	-	18	-
Russia	Novogornyy	55.6330	60.7870	26/09/17	-	01/10/17	-	20.27	-
Russia	Rostov NPP2	47.6040	42.3739	29/09/17	-	13/10/17	-	4.41	-
Russia	Rostov NPP1	47.6040	42.3739	20/06/17	-	12/10/17	-	0.0532	-
Russia	Rostov NPP2	47.6040	42.3739	20/06/17	-	12/10/17	-	4.41	-
Russia	Rostov NPP Dubrovskoe	47.5000	42.1800	29/09/17	-	13/10/17	-	2.76	-
Russia	Rostov NPP Volgodonsk	47.5000	42.1800	20/06/17	-	13/11/17	-	3.17	-
Russia	Severodvinsk	64.5660	39.8500	25/09/17	-	06/10/17	-	<LOD	
Russia	Smolensk NPP	54.1658	33.2334	01/09/17	-	30/09/17	-	<LOD	
Russia	Smolensk NPP	54.1658	33.2334	01/10/17	-	31/10/17	-	<LOD	
Russia	Sosnovy Bor	59.8500	29.0090	01/10/17	-	31/10/17	-	<LOD	
Russia	Sukhobuzimsky	56.5142	93.2740	06/10/17	-	07/10/17	-	0.2076	-
Russia	Tsimlyansk	47.6300	42.1200	26/09/17	-	01/10/17	-	13.6	-
Russia	Tsimlyansk	47.6300	42.1200	26/09/17	-	01/10/17	-	19	-
Russia	Volgograd	48.7000	44.5000	26/09/17	-	01/10/17	-	19	-
Russia	Volgograd	48.7000	44.5000	26/09/17	-	01/10/17	-	13.6	-
San Marino	San Marino	43.9696	12.4802	02/10/17	00:00	02/10/17	23:59	13.47	39
Serbia	Beograd	44.7608	20.6000	03/10/17	07:00	04/10/17	07:00	5	20
Serbia	Beograd	44.7608	20.6000	04/10/17	07:00	05/10/17	07:00	< 0.2	
Serbia	Beograd	44.7608	20.6000	06/10/17	07:00	09/10/17	07:00	< 0.1	
Serbia	Beograd	44.7608	20.6000	09/10/17	07:00	10/10/17	07:00	< 0.2	
Serbia	Beograd	44.7608	20.6000	11/10/17	07:00	12/10/17	07:00	< 0.3	
Serbia	Institute Vinča 1	44.7608	20.6000	01/09/17	07:00	30/09/17	07:00	4.5	9
Serbia	Institute Vinča 1	44.7608	20.6000	29/09/17	07:00	02/10/17	07:00	40	8
Serbia	Institute Vinča 1	44.7608	20.6000	01/10/17	07:00	31/10/17	07:00	0.9	7
Serbia	Institute Vinča 2	44.7608	20.6000	01/09/17	07:00	30/09/17	07:00	5.2	15
Serbia	Institute Vinča 2	44.7608	20.6000	01/10/17	07:00	31/10/17	07:00	1.1	9
Serbia	Institute Vinča 3	44.7608	20.6000	01/09/17	07:00	30/09/17	07:00	7	14
Serbia	Institute Vinča 3	44.7608	20.6000	01/10/17	07:00	31/10/17	07:00	0.81	11
Serbia	Institute Vinča 4	44.7000	20.5000	01/09/17	07:00	30/09/17	07:00	< 0.013	
Serbia	Niš	43.3192	21.8961	01/09/17	07:00	30/09/17	07:00	< 0.008	
Serbia	Niš	43.3192	21.8961	01/10/17	07:00	31/10/17	07:00	0.047	13

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Serbia	Palić	46.1237	19.7583	01/09/17	07:00	30/09/17	07:00	< 0.008	
Serbia	Palić	46.1237	19.7583	01/10/17	07:00	31/10/17	07:00	7.8	6
Serbia	Vranje	42.5333	21.9000	28/09/17	07:00	30/09/17	07:00	2.1	14
Serbia	Vranje	42.5333	21.9000	01/09/17	07:00	30/09/17	07:00	0.21	19
Serbia	Vranje	42.5333	21.9000	01/10/17	07:00	31/10/17	07:00	5.2	8
Serbia	Zaječar	43.9333	22.3000	27/09/17	07:00	29/09/17	07:00	< 0.2	
Serbia	Zaječar	43.9333	22.3000	01/09/17	07:00	30/09/17	07:00	< 0.03	
Serbia	Zaječar	43.9333	22.3000	01/10/17	07:00	31/10/17	07:00	6.9	6
Serbia	Zeleno Brdo	44.7869	20.5219	01/09/17	07:00	30/09/17	07:00	4.8	8
Serbia	Zeleno Brdo	44.7869	20.5219	02/10/17	07:00	03/10/17	07:00	18	25
Serbia	Zeleno Brdo	44.7869	20.5219	01/10/17	07:00	31/10/17	07:00	0.61	7
Serbia	Zlatibor	43.7333	19.7167	01/09/17	07:00	30/09/17	07:00	0.18	17
Serbia	Zlatibor	43.7333	19.7167	28/09/17	07:00	30/09/17	07:00	1	10
Serbia	Zlatibor	43.7333	19.7167	01/10/17	07:00	31/10/17	07:00	7	14
Slovakia	Bohunice NPP 1	48.4914	17.6774	27/09/17	09:00	04/10/17	15:00	10.52	4
Slovakia	Bohunice NPP 2	48.4914	17.6774	27/09/17	09:00	04/10/17	15:00	8.98	4
Slovakia	Bohunice NPP 3	48.4914	17.6774	27/09/17	09:00	04/10/17	15:00	9.8	4
Slovakia	Bohunice NPP 4	48.4914	17.6774	27/09/17	09:00	04/10/17	15:00	8.32	3
Slovakia	Bohunice NPP 5	48.4914	17.6774	27/09/17	09:00	04/10/17	15:00	10.99	4
Slovakia	Bohunice NPP 6	48.4914	17.6774	25/09/17	09:00	02/10/17	15:00	2.78	50
Slovakia	Bratislava	48.1439	17.1097	27/09/17	14:00	03/10/17	14:00	9.8	5
Slovakia	Bratislava	48.1439	17.1097	29/09/17	10:00	05/10/17	14:00	16	5
Slovakia	Bratislava	48.1439	17.1097	03/10/17	14:00	06/10/17	14:00	1.27	7
Slovakia	Bratislava	48.1439	17.1097	06/10/17	14:00	11/10/17	14:00	0.011	20
Slovakia	Červený Hrádok	48.2999	18.3833	27/09/17	09:00	04/10/17	15:00	4.89	7
Slovakia	Jaslovské Bohunice NPP 1	48.4773	17.6473	29/09/17	09:00	06/10/17	15:00	10.3	5
Slovakia	Jaslovské Bohunice NPP 2	48.4773	17.6473	29/09/17	09:00	06/10/17	15:00	9.46	6
Slovakia	Jaslovské Bohunice NPP 3	48.4773	17.6473	27/09/17	09:00	04/10/17	15:00	10.74	3
Slovakia	Kátlovce	48.5265	17.6111	27/09/17	09:00	04/10/17	15:00	9.83	3
Slovakia	Levice	48.2174	18.6000	27/09/17	09:00	04/10/17	15:00	3.67	7
Slovakia	Mochovce NPP	48.2697	18.4533	25/09/17	09:00	05/10/17	15:00	5.78	7
Slovakia	Nižná	49.3103	19.5211	27/09/17	09:00	04/10/17	15:00	9.06	3
Slovakia	Nový Tekov	48.2440	18.5166	27/09/17	09:00	04/10/17	15:00	3.99	7
Slovakia	Pečeňady	48.4822	17.7198	27/09/17	09:00	04/10/17	15:00	11.88	3
Slovakia	Trakovice	48.4397	17.7092	27/09/17	09:00	04/10/17	15:00	8.88	3
Slovakia	Tajná	48.2625	18.3617	27/09/17	09:00	04/10/17	15:00	4.23	7
Slovakia	Veľké Kostoľany 1	48.5110	17.7227	27/09/17	09:00	04/10/17	15:00	9.54	3
Slovakia	Veľké Kostoľany 2	48.5110	17.7227	27/09/17	09:00	04/10/17	15:00	9.76	3
Slovenia	Jareninski Vrh	46.6406	15.6958	01/09/17	-	30/09/17	-	1.5	-

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Slovenia	Ljubljana	46.0558	14.5083	01/09/17	-	30/09/17	-	3.1	-
Slovenia	Ljubljana	46.0425	14.4875	02/10/17	11:50	04/10/17	10:30	37	5
Slovenia	Ljubljana	46.0425	14.4875	04/10/17	10:30	05/10/17	10:30	4	8
Slovenia	Ljubljana	46.0425	14.4875	05/10/17	10:30	06/10/17	10:30	3.3	6
Slovenia	Ljubljana	46.0425	14.4875	06/10/17	11:50	09/10/17	11:50	<0.03	
Spain	Barcelona	41.3800	2.1100	-	-	04/10/17	-	<LOD	
Spain	Caceres	39.4800	-6.3400	-	-	05/10/17	-	<LOD	
Spain	Madrid	40.4500	-3.7160	02/10/17	-	08/10/17	-	<LOD	
Spain	Sevilla	37.3600	-5.9800	-	-	04/10/17	-	<LOD	
Sweden	Gävle	60.6700	17.1900	26/09/17	10:10	29/09/17	11:45	<0.01	
Sweden	Gävle	60.6700	17.1900	29/09/17	11:45	03/10/17	05:00	4.07	4
Sweden	Gävle	60.6700	17.1900	29/09/17	11:45	03/10/17	05:00	0.001	40
Sweden	Gävle	60.6700	17.1900	03/10/17	05:00	06/10/17	08:00	<0.12	
Sweden	Kista	59.4020	17.9450	30/09/17	11:45	01/10/17	05:00	4.08	3
Sweden	Kista	59.4020	17.9450	01/10/17	05:00	03/10/17	03:45	16.63	3
Sweden	Kista	59.4020	17.9450	01/10/17	05:00	03/10/17	03:45	0.004	39
Sweden	Kiruna	67.8400	20.4200	25/09/17	10:40	02/10/17	05:02	<0.003	
Sweden	Kiruna	67.8400	20.4200	29/09/17	08:00	02/10/17	08:00	<0.11	
Sweden	Kiruna	67.8400	20.4200	02/10/17	05:02	06/10/17	08:47	0.092	7
Sweden	Ljungbyhed	56.0800	13.2200	25/09/17	06:35	29/09/17	06:10	<0.004	
Sweden	Ljungbyhed	56.0800	13.2200	29/09/17	06:10	02/10/17	06:50	0.98	4
Sweden	Stockholm	59.3900	17.9600	29/09/17	15:44	30/09/17	19:44	<0.034	
Sweden	Stockholm	59.3900	17.9600	30/09/17	19:44	01/10/17	23:44	7.59	5
Sweden	Stockholm	59.3900	17.9600	01/10/17	23:44	03/10/17	03:44	16.7	4
Sweden	Stockholm	59.3900	17.9600	01/10/17	23:44	03/10/17	03:44	0.004	39
Sweden	Stockholm	59.3900	17.9600	03/10/17	03:44	04/10/17	07:44	<0.025	
Sweden	Stockholm	59.3900	17.9600	04/10/17	07:44	05/10/17	11:44	<0.044	
Sweden	Stockholm (SEP63)**	59.3900	17.9600	30/09/17	08:42	01/10/17	08:42	0.039	51
Sweden	Stockholm (SEP63)**	59.3900	17.9600	01/10/17	08:42	02/10/17	08:42	20.58	4
Sweden	Stockholm (SEP63)**	59.3900	17.9600	01/10/17	08:42	02/10/17	08:42	0.0047	30
Sweden	Stockholm (SEP63)**	59.3900	17.9600	02/10/17	08:42	03/10/17	08:42	11.89	4
Sweden	Stockholm (SEP63)**	59.3900	17.9600	02/10/17	08:42	03/10/17	08:42	0.0048	4
Sweden	Umeå	63.8500	20.3400	25/09/17	11:01	02/10/17	08:41	<0.005	
Sweden	Umeå	63.8500	20.3400	29/09/17	08:00	02/10/17	08:00	<0.09	
Sweden	Umeå	63.8500	20.3400	02/10/17	08:41	06/10/17	05:10	0.621	5
Sweden	Visby	57.6150	18.3210	25/09/17	06:00	28/09/17	06:00	<0.01	
Sweden	Visby	57.6150	18.3210	28/09/17	06:00	02/10/17	06:30	5.87	4
Sweden	Visby	57.6150	18.3210	28/09/17	06:00	02/10/17	06:30	0.0014	20
Sweden	Visby	57.6150	18.3210	02/10/17	06:30	05/10/17	08:10	5.28	4

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Switzerland	Bern	46.9160	7.3500	25/09/17	08:00	02/10/17	08:00	< 0.02	
Switzerland	Cadenazzo	46.1602	8.9345	18/09/17	06:12	25/09/17	05:50	<0.0031	
Switzerland	Cadenazzo	46.1602	8.9345	25/09/17	05:50	02/10/17	06:45	0.0503	15
Switzerland	Cadenazzo	46.1602	8.9345	02/10/17	06:45	03/10/17	09:12	1.872	11
Switzerland	Cadenazzo	46.1602	8.9345	03/10/17	09:21	04/10/17	11:56	0.481	12
Switzerland	Cadenazzo	46.1602	8.9345	04/10/17	12:02	05/10/17	13:50	0.467	12
Switzerland	Cadenazzo	46.1602	8.9345	05/10/17	13:56	06/10/17	14:07	0.315	12
Switzerland	Cadenazzo	46.1602	8.9345	06/10/17	14:07	09/10/17	06:30	<0.0577	
Switzerland	Cadenazzo	46.1602	8.9345	09/10/17	06:36	16/10/17	06:01	<0.0029	
Switzerland	CERN	46.2289	6.0559	18/09/17	08:48	25/09/17	08:52	<0.0019	
Switzerland	CERN	46.2289	6.0559	25/09/17	08:52	02/10/17	12:24	<0.0053	
Switzerland	CERN	46.2289	6.0559	02/10/17	12:24	04/10/17	12:32	<0.0107	
Switzerland	CERN	46.2289	6.0559	04/10/17	12:32	09/10/17	13:20	<0.0046	
Switzerland	CERN	46.2289	6.0559	09/10/17	13:10	16/10/17	13:12	<0.0029	
Switzerland	Güttingen	47.6016	9.2799	18/09/17	11:05	25/09/17	11:05	<0.0027	
Switzerland	Güttingen	47.6016	9.2799	25/09/17	11:10	02/10/17	10:45	<0.0037	
Switzerland	Güttingen	47.6016	9.2799	02/10/17	10:50	03/10/17	10:15	<0.0257	
Switzerland	Güttingen	47.6010	9.2790	03/10/17	10:20	04/10/17	16:20	<0.0181	
Switzerland	Güttingen	47.6010	9.2790	04/10/17	16:20	09/10/17	11:05	<0.0031	
Switzerland	Güttingen	47.6010	9.2790	09/10/17	11:10	16/10/17	11:10	<0.0031	
Switzerland	Jungfrauoch	46.5470	7.9830	22/09/17	17:42	29/09/17	17:42	<0.0521	
Switzerland	Jungfrauoch	46.5470	7.9830	29/09/17	17:42	06/10/17	17:42	<0.0404	
Switzerland	Jungfrauoch	46.5470	7.9830	06/10/17	17:42	27/10/17	17:42	<0.0163	
Switzerland	Klingnau	47.5940	8.2240	20/09/17	06:15	27/09/17	05:30	<0.004	
Switzerland	Klingnau	47.5940	8.2240	27/09/17	05:35	04/10/17	05:25	<0.0036	
Switzerland	Klingnau	47.5940	8.2240	04/10/17	05:30	11/10/17	05:40	<0.003	
Switzerland	Liebefeld	46.9296	7.4228	25/09/17	07:56	02/10/17	08:00	<0.0053	
Switzerland	Liebefeld	46.9296	7.4228	02/10/17	08:00	03/10/17	06:25	<0.0704	
Switzerland	Liebefeld	46.9296	7.4228	03/10/17	06:30	04/10/17	07:32	<0.057	
Switzerland	Liebefeld	46.9296	7.4228	04/10/17	07:37	09/10/17	08:29	<0.009	
Switzerland	Liebefeld	46.9296	7.4228	09/10/17	08:33	16/10/17	08:09	<0.0023	
Switzerland	Posieux	46.7680	7.1000	20/09/17	04:55	27/09/17	05:00	<0.0036	
Switzerland	Posieux	46.7680	7.1000	27/09/17	05:00	04/10/17	05:00	<0.0026	
Switzerland	Posieux	46.7680	7.1000	04/10/17	05:00	11/10/17	05:00	<0.003	
UK	Chilton	51.5747	-1.3188	02/10/17	11:00	09/10/17	09:40	<0.034	
UK	Glasgow	55.8625	-4.3450	28/09/17	08:15	09/10/17	10:40	<0.021	
Ukraine	Ahronomiya	47.7681	31.3114	27/09/17	-	04/10/17	-	17	
Ukraine	Arbunzynka	47.9079	31.3151	26/09/17	-	03/10/17	-	29	
Ukraine	Baryshivka	50.3507	31.3189	29/09/17	-	03/10/17	-	13.9	-

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Ukraine	Bil's'ka Volya	51.4384	25.8159	28/09/17	06:50	06/10/17	06:45	1.02	5
Ukraine	Buz'ke	47.6036	31.2061	27/09/17	-	04/10/17	-	24	-
Ukraine	Chernobyl	51.2763	30.2219	29/09/17	-	03/10/17	-	2.5	-
Ukraine	Chytchors	51.8159	31.9582	29/09/17	-	01/10/17	-	0.1	-
Ukraine	Ivanivka	47.4807	34.7565	28/09/17	-	05/10/17	-	1.3	-
Ukraine	Kamianka Dniprovska	47.4863	34.4169	25/09/17	-	02/10/17	-	30	-
Ukraine	Khmelnitsky NPP	50.3024	26.6522	29/09/17	-	03/10/17	-	1.4	-
Ukraine	Kostyukhnivka	51.3499	25.7634	28/09/17	07:20	10/10/17	10:20	0.689	6
Ukraine	Kyiv	50.4501	30.5234	28/09/17	-	30/09/17	-	2.2	14
Ukraine	Kyiv	50.4501	30.5234	29/09/17	-	03/10/17	-	2.2	-
Ukraine	Lyubakhy	51.3743	26.0286	29/09/17	06:55	06/10/17	07:35	1.20	5
Ukraine	Manevychi	51.2856	25.5242	28/09/17	10:50	10/10/17	07:37	0.489	8
Ukraine	Nikopol	47.5567	34.4019	28/09/17	-	05/10/17	-	15	-
Ukraine	Novovodyane	47.4349	34.6822	25/09/17	-	02/10/17	-	36	-
Ukraine	Odesa	46.3846	30.7433	28/09/17	-	30/09/17	-	45	16
Ukraine	Polytsi	51.2581	26.0650	28/09/17	12:05	06/10/17	08:45	1.14	7
Ukraine	Rakhiv	48.0552	24.2135	27/09/17	-	29/09/17	-	2.6	-
Ukraine	Rivne NPP 1	51.3281	25.8898	28/09/17	07:40	06/10/17	06:55	1.19	5
Ukraine	Rivne NPP 2	51.3219	25.8815	28/09/17	07:15	06/10/17	06:45	1.06	5
Ukraine	Rivne NPP Heliport	51.3581	25.9194	29/09/17	06:30	06/10/17	07:13	1.39	5
Ukraine	Rivne NPP Heliport	51.3581	25.9194	06/10/17	07:13	11/10/17	07:10	0.0028	62
Ukraine	Rivne NPP Pump Station	51.3174	25.8773	28/09/17	08:25	06/10/17	06:35	1.13	6
Ukraine	Ryabokoneve	48.1063	31.2831	26/09/17	-	03/10/17	-	14	-
Ukraine	Sopachiv	51.4110	25.8912	28/09/17	06:20	06/10/17	06:18	0.953	5
Ukraine	South Ukraine NPP	47.8209	31.1862	22/09/17	-	29/09/17	-	3.9	-
Ukraine	South Ukraine NPP	47.8197	31.2238	28/09/17	-	05/10/17	-	24	-
Ukraine	South Ukraine NPP	47.8167	31.2167	29/09/17	-	03/10/17	-	29	-
Ukraine	Staryy Chartoryys'k	51.2289	25.8880	28/09/17	10:05	10/10/17	06:56	0.725	8
Ukraine	Sukhovolya	51.3413	25.9667	29/09/17	07:15	06/10/17	07:50	1.26	6
Ukraine	Tokmak	47.2500	35.7108	26/09/17	-	03/10/17	-	36	-
Ukraine	Varash	51.3363	25.8548	28/09/17	06:15	04/10/17	12:15	1.23	5
Ukraine	Varash	51.3363	25.8548	04/10/17	12:15	06/10/17	07:40	0.041	74
Ukraine	Velyka Vedmezhka	51.3079	25.7994	28/09/17	07:45	10/10/17	09:50	0.646	6
Ukraine	Velykyy Zholudsk	51.3107	26.0933	29/09/17	08:05	06/10/17	08:55	1.05	6
Ukraine	Vodyane	47.4819	34.5042	27/09/17	-	04/10/17	-	27	-
Ukraine	Volya	47.8035	30.8883	28/09/17	-	05/10/17	-	24	-
Ukraine	Yaroshivka	48.8047	31.2596	26/09/17	-	03/10/17	-	23	-
Ukraine	Zabolotta	51.3225	25.9141	28/09/17	08:05	06/10/17	07:20	0.914	8
Ukraine	Zaporizhzhya NPP	47.5047	34.5853	29/09/17	-	03/10/17	-	13	-

Country	Location	Latitude (decimal)	Longitude (decimal)	Start date	Start hour	End date	End hour	¹⁰⁶ Ru (mBq·m ⁻³)	± (%)
Ukraine	Zaporizhzhya NPP	47.4814	34.5723	26/09/17	-	03/10/17	-	40	-
Ukraine	Zaporizhzhya NPP	47.4998	34.5705	25/09/17	-	02/10/17	-	23	-
Ukraine	Zaporizhzhya NPP	47.5147	34.5945	25/09/17	-	02/10/17	-	18	-
Ukraine	Zaporizhzhya NPP	47.4919	34.6370	26/09/17	-	03/10/17	-	27	-
Ukraine	Zaporizhzhya NPP	47.5221	34.6552	04/10/17	-	05/10/17	-	30	-

All time stamps are unified to UTC.

Other data from Monaco, Malta, and Turkey exist but are not publicly available.

LOD: Limit of Detection

*: Data published in (1)

** : Data for Sweden from the IMS network have been published in (2)

“-” or blank cell: Information not provided

Table S2: Airborne ^{103}Ru activity concentrations ($\text{mBq}\cdot\text{m}^{-3}$) and $^{103}\text{Ru}/^{106}\text{Ru}$ isotopic ratio. Results are usually given with 2σ . Uncertainty in %.

Country	Location	Latitude (decimal)	Longitude (decimal)	Start sampling	End sampling	^{103}Ru ($\text{mBq}\cdot\text{m}^{-3}$)	\pm (%)	$^{103}\text{Ru}/^{106}\text{Ru}$
Austria	Alt Prerau	48.7964	16.4753	25/09/17	02/10/17	0.0030	43	$2.70\cdot 10^{-4}$
Austria	Klagenfurt	46.6484	14.3184	25/09/17	02/10/17	0.0020	49	$4.08\cdot 10^{-4}$
Austria	Retz	48.7549	15.9506	25/09/17	03/10/17	0.0030	44	$2.48\cdot 10^{-4}$
Austria	Straß in der Steiermark	46.7259	15.6248	25/09/17	03/10/17	0.0030	21	$3.16\cdot 10^{-4}$
Austria	Vienna	48.2345	16.4175	28/09/17	04/10/17	0.0073	30	$3.37\cdot 10^{-4}$
Czech Rep.	Praha	50.0667	14.4500	26/09/17	03/10/17	0.00062	30	$1.0\cdot 10^{-4}$
Czech Rep.	Hradec Králové	50.2453	15.8696	26/09/17	03/10/17	0.0026	30	$2.36\cdot 10^{-4}$
Czech Rep.	Ústí nad Labem	50.6667	14.0333	26/09/17	04/10/17	0.0012	30	$2.81\cdot 10^{-4}$
Poland	Krakow	50.0660	19.9660	25/09/17	02/10/17	0.00085	26	$5.09\cdot 10^{-4}$
Poland	Krakow	50.0660	19.9660	02/10/17	09/10/17	0.0001	20	$2.47\cdot 10^{-4}$
Poland	Lublin	51.2610	22.5127	25/09/17	02/10/17	0.00039	95	$0.55\cdot 10^{-4}$
Poland	Torun	53.0167	18.7779	26/09/17	03/10/17	0.00084	26	$0.85\cdot 10^{-4}$
Sweden	Gävle	60.6700	17.1900	29/09/17	03/10/17	0.0010	40	$2.46\cdot 10^{-4}$
Sweden	Kista	59.4020	17.9450	01/10/17	03/10/17	0.0040	39	$2.41\cdot 10^{-4}$
Sweden	Stockholm	59.3900	17.9600	01/10/17	03/10/17	0.0040	39	$2.77\cdot 10^{-4}$
Sweden	Stockholm (SEP63)*	59.3900	17.9600	01/10/17	02/10/17	0.0047	30	$2.41\cdot 10^{-4}$
Sweden	Stockholm (SEP63)*	59.3900	17.9600	02/10/17	03/10/17	0.0048	4	$4.90\cdot 10^{-4}$
Sweden	Visby	57.6150	18.3210	28/09/17	02/10/17	0.0014	20	$2.38\cdot 10^{-4}$

*: data from the IMS network have been published in (2)

Table S3: Dry + wet fallout/deposition of ^{106}Ru ($\text{Bq}\cdot\text{m}^{-2}$) and ^{106}Ru activity concentrations in rainwater ($\text{Bq}\cdot\text{L}^{-1}$). Results are usually given with 2σ . Uncertainty in %.

Country	Location	Latitude (decimal)	Longitude (decimal)	Type of deposition	Start date	End date	^{106}Ru	\pm (%)	Unit
Austria	Linz	48.2675	14.2800	Rain water	04/10/17	05/10/17	<1.0		$\text{Bq}\cdot\text{m}^{-2}$
Austria	Linz	48.2675	14.2800	Rain water	01/09/17	02/10/17	<0.12		$\text{Bq}\cdot\text{m}^{-2}$
Austria	Linz	48.2675	14.2800	Rain water	02/10/17	04/10/17	0.50	19	$\text{Bq}\cdot\text{m}^{-2}$
Austria	Vienna	48.2561	16.4828	Dry + wet	03/10/17	05/10/17	5.0	47	$\text{Bq}\cdot\text{m}^{-2}$
Austria	Vienna	48.2561	16.4828	Rain water	05/10/17	06/10/17	<1.1		$\text{Bq}\cdot\text{m}^{-2}$
Czech Rep.	České Budějovice	48.9667	14.4667	Rain water	29/09/17	03/10/17	<1.0		$\text{Bq}\cdot\text{m}^{-2}$
Czech Rep.	Hradec Kralove	50.2453	15.8696	Rain water	02/10/17	03/10/17	9.0	20	$\text{Bq}\cdot\text{m}^{-2}$
Czech Rep.	Hradec Kralove	50.2453	15.8696	Dry + wet	03/10/17	04/10/17	<1.1		$\text{Bq}\cdot\text{m}^{-2}$
Czech Rep.	Hradec Kralove	50.2453	15.8696	Rain water	04/10/17	05/10/17	<1.2		$\text{Bq}\cdot\text{m}^{-2}$
Czech Rep.	Ostrava	49.8333	18.2833	Rain water	02/10/17	03/10/17	40.0	15	$\text{Bq}\cdot\text{m}^{-2}$
Czech Rep.	Praha	50.0670	14.4500	Rain water	02/10/17	03/10/17	<1.6		$\text{Bq}\cdot\text{m}^{-2}$
Czech Rep.	Praha	50.0670	14.4500	Rain water	29/09/17	04/10/17	<1.1		$\text{Bq}\cdot\text{m}^{-2}$
Finland	Böle	60.3711	26.3934	Dry + wet	28/09/17	28/12/17	72.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Helsinki	60.1654	24.9411	Dry + wet	02/10/17	06/11/17	66.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Helsinki	60.1654	24.9411	Dry + wet	02/10/17	02/01/18	56.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Imatra	61.1891	28.7595	Dry + wet	02/10/17	02/01/18	5.8	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Kajaani	64.2186	27.7351	Dry + wet	02/10/17	02/01/18	2.8	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Keitala	60.4219	26.3659	Dry + wet	28/09/17	28/12/17	79.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Kotka	60.4940	26.9006	Dry + wet	03/07/17	02/10/17	27.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Kuopio	62.8921	27.6715	Dry + wet	02/10/17	02/01/18	9.7	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Loviisa	60.4532	26.2197	Dry + wet	28/09/17	31/10/17	87.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Olkiluoto NPP	61.2428	21.4302	Dry + wet	27/09/17	25/10/17	38.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Rovaniemi	66.4894	25.6842	Dry + wet	02/10/17	28/11/17	1.9	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Sodankylä	67.4136	26.5910	Dry + wet	02/10/17	02/01/18	5.3	-	$\text{Bq}\cdot\text{m}^{-2}$
Finland	Smoltti	60.3741	26.3487	Dry + wet	28/09/17	31/10/17	79.0	-	$\text{Bq}\cdot\text{m}^{-2}$
Germany	Hanover	52.3817	9.7179	Rain water	20/10/17	20/10/17	<0.05		$\text{Bq}\cdot\text{L}^{-1}$
Hungary	Budapest *	47.48910	18.95370	Dry + wet	25/09/17	02/10/17	<2.1		$\text{Bq}\cdot\text{m}^{-2}$
Hungary	Budapest *	47.48910	18.95370	Dry + wet	02/10/17	09/10/17	11.3	19	$\text{Bq}\cdot\text{m}^{-2}$
Hungary	Budapest *	47.48910	18.95370	Dry + wet	09/10/17	16/10/17	<2.5		$\text{Bq}\cdot\text{m}^{-2}$
Hungary	Budapest *	47.48910	18.95370	Dry + wet	04/09/17	02/10/17	<2.8		$\text{Bq}\cdot\text{m}^{-2}$
Hungary	Budapest *	47.48910	18.95370	Dry + wet	02/10/17	06/11/17	11.3	13	$\text{Bq}\cdot\text{m}^{-2}$
Italy	Udine	46.0788	13.2316	Dry + wet	01/09/17	30/09/17	1.14	22	$\text{Bq}\cdot\text{m}^{-2}$
Italy	Udine	46.0633	13.2358	Dry + wet	01/10/17	31/10/17	6.69	5	$\text{Bq}\cdot\text{m}^{-2}$
Italy	Udine	46.0633	13.2358	Dry + wet	01/11/17	30/11/17	0.757	38	$\text{Bq}\cdot\text{m}^{-2}$
Italy	Udine	46.0633	13.2358	Dry + wet	01/12/17	31/12/17	0.19	45	$\text{Bq}\cdot\text{m}^{-2}$
Italy	Udine	46.0633	13.2358	Dry + wet	01/01/18	31/01/18	0.099	40	$\text{Bq}\cdot\text{m}^{-2}$
Italy	Udine	46.0633	13.2358	Dry + wet	01/02/18	28/02/18	0.134	28	$\text{Bq}\cdot\text{m}^{-2}$
Norway	Østerås	59.9400	10.6000	Dry + wet	08/09/17*	02/10/17	22	-	$\text{Bq}\cdot\text{m}^{-2}$
Norway	Østerås	59.9400	10.6000	Rain water	08/09/17	02/10/17	0.222	-	$\text{Bq}\cdot\text{L}^{-1}$
Poland	Gdynia	54.5207	18.5462	Dry + wet	01/10/17	31/10/17	<0.9		$\text{Bq}\cdot\text{m}^{-2}$
Poland	Krakow	50.0902	19.8886	Dry + wet	02/10/17	04/10/17	0.912	3	$\text{Bq}\cdot\text{L}^{-1}$
Poland	Krakow	50.0902	19.8886	Dry + wet	02/10/17	04/10/17	9.7	3	$\text{Bq}\cdot\text{m}^{-2}$
Poland	Mikolajki	53.7904	21.5897	Dry + wet	02/10/17	03/10/17	5.7	9	$\text{Bq}\cdot\text{m}^{-2}$
Poland	Poznan	52.4192	16.8770	Dry + wet	01/10/17	02/10/17	12.1	1	$\text{Bq}\cdot\text{m}^{-2}$
Poland	Warszawa	52.2809	20.9614	Dry + wet	02/10/17	03/10/17	14.5	8	$\text{Bq}\cdot\text{m}^{-2}$
Poland	Warszawa	52.2809	20.9614	Dry + wet	03/10/17	04/10/17	3.0	12	$\text{Bq}\cdot\text{m}^{-2}$

Country	Location	Latitude (decimal)	Longitude (decimal)	Type of deposition	Start date	End date	¹⁰⁶ Ru	± (%)	Unit
Poland	Wlodawa	51.5542	23.5305	Dry + wet	03/10/17	04/10/17	19.7	8	Bq·m ⁻²
Poland	Whole country			Dry + wet	01/09/17	30/09/17	0.24	8	Bq·m ⁻²
Poland	Whole country			Dry + wet	01/10/17	31/10/17	6.32	2	Bq·m ⁻²
Poland	Whole country			Dry + wet	01/11/17	30/11/17	0.12	11	Bq·m ⁻²
Poland	Whole country			Dry + wet	01/12/17	31/12/17	0.16	11	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	25/09/17	26/09/17	115.5	-	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	25/09/17	26/09/17	13.9	-	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	25/09/17	26/09/17	15.6	-	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	25/09/17	26/09/17	32.6	-	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	26/09/17	27/09/17	112.0	-	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	26/09/17	27/09/17	11.0	-	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	26/09/17	27/09/17	109.7	-	Bq·m ⁻²
Russia	Argayash	55.4860	60.8750	Dry + wet	26/09/17	27/09/17	24.6	-	Bq·m ⁻²
Russia	Bugulma	54.5360	52.7980	Dry + wet	26/09/17	27/09/17	16.0	-	Bq·m ⁻²
Russia	Bugulma	54.5360	52.7980	Dry + wet	27/09/17	28/09/17	30.0	-	Bq·m ⁻²
Russia	Bugulma	54.5360	52.7980	Dry + wet	26/09/17	27/09/17	20.9	-	Bq·m ⁻²
Russia	Bugulma	54.5360	52.7980	Dry + wet	27/09/17	28/09/17	20.8	13	Bq·m ⁻²
Russia	Bugulma	54.5360	52.7980	Dry + wet	26/09/17	27/09/17	11.3	13	Bq·m ⁻²
Russia	Dema-Oufa	54.7140	55.8770	Dry + wet	26/09/17	27/09/17	17.0	-	Bq·m ⁻²
Russia	Khudaiberdinskiy	55.6110	60.9240	Dry + wet	27/09/17	28/09/17	74.0	-	Bq·m ⁻²
Russia	Khudaiberdinskiy	55.6110	60.9240	Dry + wet	29/09/17	30/09/17	24.7	-	Bq·m ⁻²
Russia	Khudaiberdinskiy	55.6110	60.9240	Dry + wet	29/09/17	30/09/17	54.0	-	Bq·m ⁻²
Russia	Khudaiberdinskiy	55.6110	60.9240	Dry + wet	27/09/17	28/09/17	19.8	-	Bq·m ⁻²
Russia	Khudaiberdinskiy	55.6110	60.9240	Dry + wet	27/09/17	28/09/17	9.1	-	Bq·m ⁻²
Russia	Khudaiberdinskiy	55.6110	60.9240	Dry + wet	29/09/17	30/09/17	230.9	-	Bq·m ⁻²
Russia	Khudaiberdinskiy	55.6110	60.9240	Dry + wet	26/09/17	27/09/17	8.6	-	Bq·m ⁻²
Russia	Kyshtym	55.7142	60.8445	Dry + wet	23/09/17	24/09/17	62.0	-	Bq·m ⁻²
Russia	Kyshtym	55.7142	60.8445	Dry + wet	23/09/17	24/09/17	50.7	-	Bq·m ⁻²
Russia	Kyshtym	55.7142	60.8445	Dry + wet	23/09/17	24/09/17	17.6	-	Bq·m ⁻²
Russia	Metlino	55.7890	60.9800	Dry + wet	26/09/17	27/09/17	343.3	-	Bq·m ⁻²
Russia	Metlino	55.7890	60.9800	Dry + wet	26/09/17	27/09/17	330.0	-	Bq·m ⁻²
Russia	Metlino	55.7890	60.9800	Dry + wet	26/09/17	27/09/17	37.1	-	Bq·m ⁻²
Russia	Metlino	55.7890	60.9800	Dry + wet	26/09/17	27/09/17	79.6	-	Bq·m ⁻²
Russia	Morozovsk	48.3500	41.8700	Dry + wet	28/09/17	29/09/17	17.1	-	Bq·m ⁻²
Russia	Novogornyy	55.6330	60.7870	Dry + wet	26/09/17	27/09/17	203.0	-	Bq·m ⁻²
Russia	Novogornyy	55.6330	60.7870	Dry + wet	26/09/17	27/09/17	184.8	-	Bq·m ⁻²
Russia	Novogornyy	55.6330	60.7870	Dry + wet	26/09/17	27/09/17	52.1	-	Bq·m ⁻²
Russia	Novogornyy	55.6330	60.7870	Dry + wet	26/09/17	27/09/17	30.9	-	Bq·m ⁻²
Russia	Novogornyy	55.6330	60.7870	Dry + wet	29/09/17	30/09/17	28.0	-	Bq·m ⁻²
Russia	Novogornyy	55.6330	60.7870	Dry + wet	27/09/17	28/09/17	14.7	-	Bq·m ⁻²
Russia	Novogornyy	55.6330	60.7870	Dry + wet	27/09/17	28/09/17	7.9	-	Bq·m ⁻²
Serbia	Kragujevac	44.0100	20.9100	Dry + wet	01/09/17	30/09/17	<0.8		Bq·m ⁻²
Serbia	Kragujevac	44.0100	20.9100	Dry + wet	01/10/17	31/10/17	<0.3		Bq·m ⁻²
Serbia	Niš	43.3192	21.8961	Dry + wet	01/09/17	30/09/17	<1.0		Bq·m ⁻²
Serbia	Niš	43.3192	21.8961	Dry + wet	01/10/17	31/10/17	<0.3		Bq·m ⁻²
Serbia	Novi Sad	45.2671	19.8335	Dry + wet	01/10/17	31/10/17	3.7	30	Bq·m ⁻²
Serbia	Novi Sad	45.2671	19.8335	Dry + wet	01/09/17	30/09/17	0.9	20	Bq·m ⁻²
Serbia	Palić	46.1237	19.7583	Dry + wet	01/09/17	30/09/17	<0.7		Bq·m ⁻²

Country	Location	Latitude (decimal)	Longitude (decimal)	Type of deposition	Start date	End date	¹⁰⁶ Ru	± (%)	Unit
Serbia	Palić	46.1237	19.7583	Dry + wet	01/10/17	31/10/17	<0.7		Bq·m ⁻²
Serbia	Vinča	44.7608	20.6000	Dry + wet	01/09/17	30/09/17	1.0	30	Bq·m ⁻²
Serbia	Vinča	44.7608	20.6000	Dry + wet	05/10/17	06/10/17	<2.6		Bq·L ⁻¹
Serbia	Vinča	44.7608	20.6000	Dry + wet	01/10/17	31/10/17	<0.4		Bq·m ⁻²
Serbia	Vinča	44.7000	20.5000	Dry + wet	01/09/17	30/09/17	<0.4		Bq·m ⁻²
Serbia	Vinča. Vodovod	44.7000	20.5000	Dry + wet	01/09/17	30/09/17	<0.3		Bq·m ⁻²
Serbia	Vinča. Vodovod	44.7000	20.5000	Dry + wet	01/10/17	31/10/17	<0.3		Bq·m ⁻²
Serbia	Vinča	44.8000	20.6000	Dry + wet	01/09/17	30/09/17	<0.1		Bq·m ⁻²
Serbia	Vinča.	44.7000	20.5000	Dry + wet	01/10/17	31/10/17	<0.1		Bq·m ⁻²
Serbia	Vinča	44.8000	20.6000	Dry + wet	01/09/17	30/09/17	<0.01		Bq·m ⁻²
Serbia	Vinča	44.8000	20.6000	Dry + wet	01/10/17	31/10/17	0.2	24	Bq·m ⁻²
Serbia	Vranje	42.5333	21.9000	Dry + wet	01/09/17	30/09/17	<0.2		Bq·m ⁻²
Serbia	Vranje	42.5333	21.9000	Dry + wet	01/10/17	31/10/17	<0.2		Bq·m ⁻²
Serbia	Zaječar	43.9333	22.3000	Dry + wet	01/09/17	30/09/17	<0.7		Bq·m ⁻²
Serbia	Zaječar	43.9333	22.3000	Dry + wet	01/10/17	31/10/17	<0.3		Bq·m ⁻²
Serbia	Zeleno brdo	44.7869	20.5219	Dry + wet	01/09/17	30/09/17	<0.3		Bq·m ⁻²
Serbia	Zeleno brdo	44.7869	20.5219	Dry + wet	01/10/17	31/10/17	2.6	19	Bq·m ⁻²
Serbia	Zlatibor	43.7333	19.7167	Dry + wet	01/09/17	30/09/17	<5.0		Bq·m ⁻²
Serbia	Zlatibor	43.7333	19.7167	Dry + wet	01/10/17	31/10/17	<0.7		Bq·m ⁻²
Slovakia	Bratislava	48.1439	17.1097	Dry + wet	03/10/17	10/10/17	0.17	25	Bq·L ⁻¹
Slovakia	Bratislava	48.1439	17.1097	Dry + wet	20/09/17	27/09/17	0.02	10	Bq·L ⁻¹
Slovakia	Bratislava	48.1439	17.1097	Rain water	20/09/17	27/09/17	0.02	10	Bq·L ⁻¹
Slovakia	Bratislava	48.1439	17.1097	Rain water	03/10/17	10/10/17	0.17	5	Bq·L ⁻¹
Slovakia	Bratislava	48.1439	17.1097	Rain water	03/10/17	10/10/17	7.9	8	Bq·m ⁻²
Slovakia	Bratislava	48.1439	17.1097	Rain water	20/09/17	10/10/17	8.2	7	Bq·m ⁻²
Slovenia	Krško – Location	45.9195	15.4981	Rain water	01/02/18	01/03/18	0.02	11	Bq·L ⁻¹
Slovenia	Krško – Location	45.9195	15.4981	Dry + wet	01/02/18	01/03/18	2.5	12	Bq·m ⁻²
Slovenia	Krško	45.9511	15.5031	Rain water	01/02/18	01/03/18	0.008	52	Bq·L ⁻¹
Slovenia	Krško	45.9511	15.5031	Dry + wet	01/02/18	01/03/18	1.2	42	Bq·m ⁻²
Slovenia	Krško reference	45.9061	15.0508	Rain water	01/02/18	01/03/18	0.0011	18	Bq·L ⁻¹
Slovenia	Krško reference	45.9061	15.0508	Dry + wet	01/02/18	01/03/18	1.6	13	Bq·m ⁻²
Slovenia	Ljubljana	46.0425	14.4875	Rain water	01/02/18	01/03/18	0.01	30	Bq·L ⁻¹
Slovenia	Ljubljana	46.0425	14.4875	Dry + wet	01/02/18	01/03/18	1.3	31	Bq·m ⁻²
Sweden	Gävle	60.6700	17.1900	Rain water	26/09/17	03/10/17	18.7	6	Bq·m ⁻²
Sweden	Gävle	60.6700	17.1900	Rain water	03/10/17	09/10/17	0.7	10	Bq·m ⁻²
Sweden	Gävle	60.6700	17.1900	Rain water	09/10/17	16/10/17	0.13	29	Bq·m ⁻²
Sweden	Kiruna	67.8400	20.4200	Rain water	02/10/17	09/10/17	3.36	7	Bq·m ⁻²
Sweden	Ljungbyhed	56.0800	13.2200	Rain water	25/09/17	02/10/17	<0.07		Bq·m ⁻²
Sweden	Ljungbyhed	56.0800	13.2200	Rain water	02/10/17	10/10/17	<0.12		Bq·m ⁻²
Sweden	Stockholm	59.3900	17.9600	Rain water	02/10/17	04/10/17	20.8	7	Bq·m ⁻²
Sweden	Stockholm	59.3900	17.9600	Rain water	04/10/17	09/10/17	0.46	24	Bq·m ⁻²

– : not provided

* : data from Budapest have been published in (1)

Table S4: ¹⁰⁶Ru deposition on plant and soil (Bq·m-2 or Bq·kg-1 fresh). Results are usually given with 2σ. Uncertainty in %.

Country	Location	Latitude (decimal)	Longitude (decimal)	Deposit	Start date	End date	¹⁰⁶ Ru activity	± (%)	Unit
Austria	Vienna	48.2502	16.3393	Red maple dry	13/10/17	13/10/17	1.30	31	Bq·kg ⁻¹
Austria	Vienna	48.2502	16.3393	Red maple wet	14/10/17	14/10/17	1.70	24	Bq·kg ⁻¹
Austria	Vienna	48.2502	16.3393	Paulownia	22/10/17	22/10/17	4.00	28	Bq·kg ⁻¹
Austria	Vienna	48.2502	16.3393	Grass	13/10/17	13/10/17	2.80	39	Bq·kg ⁻¹
Austria	Vienna	48.2502	16.3393	Grass	13/10/17	13/10/17	3.60	33	Bq·kg ⁻¹
Austria	Vienna	48.2502	16.3393	Grass	13/10/17	13/10/17	0.70	29	Bq·m ⁻²
Bulgaria	Glavan	42.068	26.1070	Pine needles	08/10/18	08/10/18	0.43	37	Bq·kg ⁻¹
Bulgaria	Glavan	42.068	26.1070	Oak leaf litter	08/10/18	08/10/18	14.47	10	Bq·kg ⁻¹
Bulgaria	Glavan	42.068	26.1070	Pine needles	08/10/18	08/10/18	19.0	5	Bq·kg ⁻¹
Bulgaria	Harmanli	41.933	25.9250	Oak leaf litter	07/10/18	07/10/18	<22.0		Bq·kg ⁻¹
Bulgaria	Harmanli	41.933	25.9250	Oak leaf litter	07/10/18	07/10/18	10.0	16	Bq·kg ⁻¹
Bulgaria	Harmanli	41.933	25.9250	Pine needle litter	07/10/18	07/10/18	3.6	16	Bq·kg ⁻¹
Bulgaria	Harmanli	41.933	25.9250	Pine needles	07/10/18	07/10/18	0.83	28	Bq·kg ⁻¹
Bulgaria	Harmanli	41.933	25.9250	Tall grass	07/10/18	07/10/18	<1.56		Bq·kg ⁻¹
Bulgaria	Haskovo	41.9275	25.5472	Pine needles	07/10/18	07/10/18	0.47	43	Bq·kg ⁻¹
Bulgaria	Haskovo	41.9275	25.5472	Pine needle litter	07/10/18	07/10/18	3.5	10	Bq·kg ⁻¹
Bulgaria	Rila Mountain	42.1747	23.5587	Lichen	07/11/17	07/11/17	0.14	20	Bq·kg ⁻¹
Bulgaria	Rila Mountain	42.1747	23.5587	Moss	07/11/17	07/11/17	0.14	19	Bq·kg ⁻¹
Bulgaria	Rila Mountain	42.1747	23.5587	Juniper	07/11/17	07/11/17	0.06	6	Bq·kg ⁻¹
Bulgaria	Rila Mountain	42.1747	23.5587	Dwarf pine	07/11/17	07/11/17	0.03	20	Bq·kg ⁻¹
Bulgaria	Sofia	42.6528	23.3844	Wild briar	12/10/17	12/10/17	0.0006	23	Bq·kg ⁻¹
Bulgaria	Sofia	42.6528	23.3844	Hawthorn	12/10/17	12/10/17	0.0007	24	Bq·kg ⁻¹
Bulgaria	Sofia	42.6528	23.3844	Fir-tree	19/12/17	19/12/17	0.0032	19	Bq·kg ⁻¹
Bulgaria	Sveti Vlas	42.7134	27.7588	Short grass	13/09/18	13/09/18	1.73	32	Bq·kg ⁻¹
Bulgaria	Sveti Vlas	42.7134	27.7588	Topsoil layer	12/09/18	12/09/18	55.60	11	Bq·m ⁻²
Bulgaria	Sveti Vlas	42.7134	27.7588	Topsoil layer	12/09/18	12/09/18	39.35	11	Bq·kg ⁻¹
Bulgaria	Sveti Vlas	42.7134	27.7588	Larch needles	12/09/18	12/09/18	4.91	21	Bq·kg ⁻¹
Bulgaria	Svilengrad	41.788	26.1920	Pine needle litter	07/10/18	07/10/18	5.46	24	Bq·kg ⁻¹
Bulgaria	Svilengrad	41.788	26.1920	Pine needles	07/10/18	07/10/18	0.51	37	Bq·kg ⁻¹
Czech Rep.	Frýdlant- Větrov	50.8905	15.0706	Grass	19/10/17	19/10/17	0.27	41	Bq·m ⁻²
Czech Rep.	Frýdlant- Větrov	50.8905	15.0706	Grass	19/10/17	19/10/17	0.63	40	Bq·kg ⁻¹
Czech Rep.	Frýdlant- Větrov	50.8905	15.0706	Grass	19/10/17	19/10/17	2.41	40	Bq·kg ⁻¹
Czech Rep.	Frýdlant- Větrov	50.8915	15.0698	Grass	19/10/17	19/10/17	0.79	25	Bq·m ⁻²
Czech Rep.	Frýdlant- Větrov	50.8915	15.0698	Grass	19/10/17	19/10/17	1.43	24	Bq·kg ⁻¹
Czech Rep.	Frýdlant- Větrov	50.8915	15.0698	Grass	19/10/17	19/10/17	6.57	25	Bq·kg ⁻¹
Czech Rep.	Jeřmanice	50.6882	15.1208	Grass	20/10/17	20/10/17	0.21	19	Bq·m ⁻²
Czech Rep.	Jeřmanice	50.6882	15.1208	Grass	20/10/17	20/10/17	0.50	20	Bq·kg ⁻¹
Czech Rep.	Jeřmanice	50.6882	15.1208	Grass	20/10/17	20/10/17	3.88	21	Bq·kg ⁻¹
Czech Rep.	Višňová	50.9650	15.0178	Grass	22/10/17	22/10/17	<0.10		Bq·m ⁻²
Czech Rep.	Višňová	50.9650	15.0178	Grass	22/10/17	22/10/17	<0.11		Bq·kg ⁻¹
Czech Rep.	Višňová	50.9650	15.0178	Grass	22/10/17	22/10/17	<0.99		Bq·kg ⁻¹
Germany	Hanover	52.3817	9.7179	Spanish chestnut	11/11/17	11/11/17	<1.5		Bq·kg ⁻¹
Greece	Kamena Vourla*	38.7785	22.7466	Soil (0-1 cm)	17/10/17	17/10/17	27.2	2	Bq·kg ⁻¹
Greece	Kamena Vourla*	38.7785	22.7466	Soil (1-2 cm)	17/10/17	17/10/17	27.2	2	Bq·kg ⁻¹
Greece	Kamena Vourla*	38.7785	22.7466	Soil (2-3 cm)	17/10/17	17/10/17	11.9	2	Bq·kg ⁻¹
Greece	Kamena Vourla*	38.7785	22.7466	Soil (3-4 cm)	17/10/17	17/10/17	12.1	2	Bq·kg ⁻¹

Country	Location	Latitude (decimal)	Longitude (decimal)	Deposit	Start date	End date	¹⁰⁶ Ru activity	± (%)	Unit
Greece	Thermopylae*	38.7927	22.5261	Soil	17/10/17	17/10/17	12.1	2	Bq·kg ⁻¹
Hungary	Budapest **	47.4300	19.0300	Grass	03/10/17	03/10/17	5.28	-	Bq·kg ⁻¹
Hungary	Budapest **	47.48910	18.95370	Grass	09/10/17	09/10/17	<3.20		Bq·kg ⁻¹
Hungary	Budapest **	47.48910	18.95370	Grass	16/10/17	16/10/17	<4.60		Bq·kg ⁻¹
Italy	Taipana	46.2738	13.3097	Moss	30/05/18	30/05/18	9.60	15	Bq·m ⁻²
Italy	Taipana	46.2738	13.3097	Moss	01/06/18	01/06/18	4.40	41	Bq·m ⁻²
Italy	Taipana	46.2728	13.3088	Moss	07/06/18	07/06/18	9.10	56	Bq·m ⁻²
Poland	Krakow	50.0902	19.8886	Grass	16/10/17	16/10/17	8.8	25	Bq·kg ⁻¹
Poland	Krakow	50.0902	19.8886	Grass	16/10/17	16/10/17	0.283	25	Bq·m ⁻²
Slovakia	Bratislava	48.1439	17.1097	Grass	17/10/17	17/10/17	0.58	2	Bq·m ⁻²
Sweden	Umeå	63.8500	20.3400	Topsoil + grass	15/10/17	15/11/17	48.50	16	Bq·m ⁻²
Sweden	Umeå	63.8500	20.3400	Topsoil + grass	15/10/17	15/11/17	25.50	17	Bq·m ⁻²
Sweden	Umeå	63.8500	20.3400	Topsoil + grass	15/10/17	15/11/17	28.40	17	Bq·m ⁻²
Sweden	Umeå	63.8500	20.3400	Topsoil + grass	15/10/17	15/11/17	44.70	17	Bq·m ⁻²
Sweden	Umeå	63.8500	20.3400	Topsoil + grass	15/10/17	15/11/17	34.50	23	Bq·m ⁻²
Sweden	Umeå	63.8500	20.3400	Topsoil + grass	15/10/17	15/11/17	8.50	115	Bq·m ⁻²
Switzerland	Mezzovico -Vira	46.0918	8.9217	Forage, grass	04/10/17	04/10/17	<2.6		Bq·kg ⁻¹
Switzerland	Mezzovico -Vira	46.0918	8.9217	Soil	04/10/17	04/10/17	<8.2		Bq·kg ⁻¹
Switzerland	Cevio	46.3171	8.6017	Forage, grass	04/10/17	04/10/17	<3.5		Bq·kg ⁻¹
Switzerland	Cevio	46.3171	8.6017	Soil	04/10/17	04/10/17	<4.1		Bq·kg ⁻¹
Switzerland	Prato Leventina	46.4829	8.7567	Forage, grass	04/10/17	04/10/17	<5.3		Bq·kg ⁻¹
Switzerland	Prato Leventina	46.4829	8.7567	Soil	04/10/17	04/10/17	<14.8		Bq·kg ⁻¹

* Data from Kamena Vourla and from Thermopylae (Greece) have been taken from (3)

** Data from Budapest have been taken from (1)

Datasets used

The dataset used in this study comprises mostly data from laboratory members involved in the Ro5 network, personal communications as well as publicly available data from the internet. Most notably, this includes data that have been provided only to IAEA-USIE but that can be found on various websites:

<https://blog.safecast.org/2017/11/about-that-radioactive-plume-of-ru-106/>

<http://geoenergetics.ru/2017/10/19/magate-stavit-tochku-v-skandale-vokrug-ruteniya/>

<http://www.criirad.org/accident-et-pollutions/som-accidents&pollutions.html>.

Data only reported through IAEA-USIE include the following countries:

- Albania (no value >LOD)
- Estonia
- Iceland (no value >LOD)
- Ireland
- Kazakhstan
- Turkey

Radioactive properties and use of ^{106}Ru

Both ruthenium isotopes are anthropogenic fission products of fissile materials. The ratio between the most notable fission nuclides ^{103}Ru and ^{106}Ru allows dating of the production of the radioactive batch, as ^{103}Ru has the higher fission yield (3.1% for thermal ^{235}U fission and 6.9% for ^{239}Pu fission, respectively) but shorter half-life ($T_{1/2} = 39.25$ d) compared with ^{106}Ru ($T_{1/2} = 371.8$ d) (fission yields; 0.41% for ^{235}U and 4.2% for ^{239}Pu , respectively). The detection of ruthenium isotopes alone excludes the possibility of an accident release from a nuclear reactor which would have resulted in the presence of much more other radionuclides. The origin of this radioelement is therefore to be found either in nuclear fuel reprocessing facilities or in radioactive sources (e.g. for nuclear medicine purposes like radiotherapy of eye tumors (4)). This isotope can also be used as reference source to test radiation monitoring equipment but as for the previous case, there is no need for very high activity source to make such tests.

The specific activity of ^{106}Ru is $1.24 \cdot 10^{14} \text{ Bq} \cdot \text{g}^{-1}$. It is classified in the second group (of four) of radiotoxicity and is considered a carcinogen at high dose. Its radiotoxicity is lower than for some naturally occurring radionuclides such as radon and radon decay products which belong to the first group. According to publications by the *International Commission on Radiological Protection (ICRP)*, ICRP 68 (5) and ICRP 72 (6), the dose per unit of incorporation after inhalation of $5 \mu\text{m}$ aerosol size is $3.5 \cdot 10^{-8} \text{ Sv} \cdot \text{Bq}^{-1}$ for workers. Regarding ingestion, the committed dose conversion factor is $7 \cdot 10^{-9} \text{ Sv} \cdot \text{Bq}^{-1}$ for a member of the public older than 17 years and is characterized by an ingestion factor of 0.05 for an adult.

Discussion of a possible satellite re-entry

Several organizations concluded that no satellite went missing during the ^{106}Ru episode. The IAEA concluded that no satellite containing ^{106}Ru had fallen back on earth during this period (7, 8). Several space agencies, among them the European Space Agency (ESA) and the Russian Space Agency (Roskosmos) (9), registered a constant number of satellites before and after the ^{106}Ru episode (10). The United Nations Office for Outer Space Affairs (UNOOSA) also confirmed that no satellite or other re-entries of objects containing ^{106}Ru RTGs had taken place. Previous disintegration of satellites fueled with radioactive material during their atmospheric re-entry have dispersed most of radioactive debris in the high stratosphere (at about 50 km in 1964 for the satellite SNAP-9A fueled with ^{238}Pu (11), at altitudes about 39 and 36 km for the Kosmos-954 and Kosmos-1402 satellites, fueled with enriched ^{235}U , during their re-entry in the earth's atmosphere in 1978 and 1983, respectively).

A re-entry of a disintegrating satellite would cause a vertical decreasing gradient in activity concentration from the disintegration altitude (the higher the altitude, the higher the concentration). Similar scenarios are observed for ^7Be , a cosmogenic radionuclide whose production takes place in the lower stratosphere and upper troposphere and for which concentrations at mountain sites are higher than in lowland.

Aircraft samplings were also performed on September 27 and October 30, 2017, in the lower stratosphere (11,700 and 13,100 m) above Switzerland but no ^{106}Ru was detected. However, these investigations were probably too early or too late to be compared with the probable date of the event. Stratosphere to troposphere exchanges (STE) can be tracked by looking at the ^7Be and ^{22}Na cosmogenic radionuclide concentrations which should have exhibited higher concentrations and based on their activity ratio. No significant and simultaneous increase of cosmogenic radionuclides which could have resulted from downdraft was noticed during the ^{106}Ru detections. Finally, assuming this re-entry had occurred several months or even some years before its detection in the lower troposphere one should not expect such a “high” concentration range at ground level.

Sequence of airborne ^{106}Ru detections in Ukraine

In Ukraine, thirty-eight detections occurred between 09/26 and 10/3 (or 09/28 and 10/5), however most of these filters were changed on a weekly basis, thus offering little time resolution. At four locations, however, ^{106}Ru was detected on filters having sampling duration as short as 1 to 2 days. This made it possible to demonstrate, in addition with daily detections in surrounding countries (Romania and Russia) that the plume duration was of the order of also 1 to 2 days only. This statement implicitly indicates similar or even shorter release duration upwind. It is thus obvious that proper comparison of the airborne ^{106}Ru concentration from different monitoring networks in Europe requires a correction for sampling periods longer than the plume duration. For instance, most ^{106}Ru results were based on weekly sampling and even as long as one month leading to a strong effect on the average estimated concentration with regards to the plume duration.

Correction for plume duration

Several aerosol filters have been changed on a daily basis even before the first detection of ^{106}Ru . The example in Fig. S1 shows that the radoruthenium plume was present on three consecutive filters, which is also another argument in favor of a ground-based release.

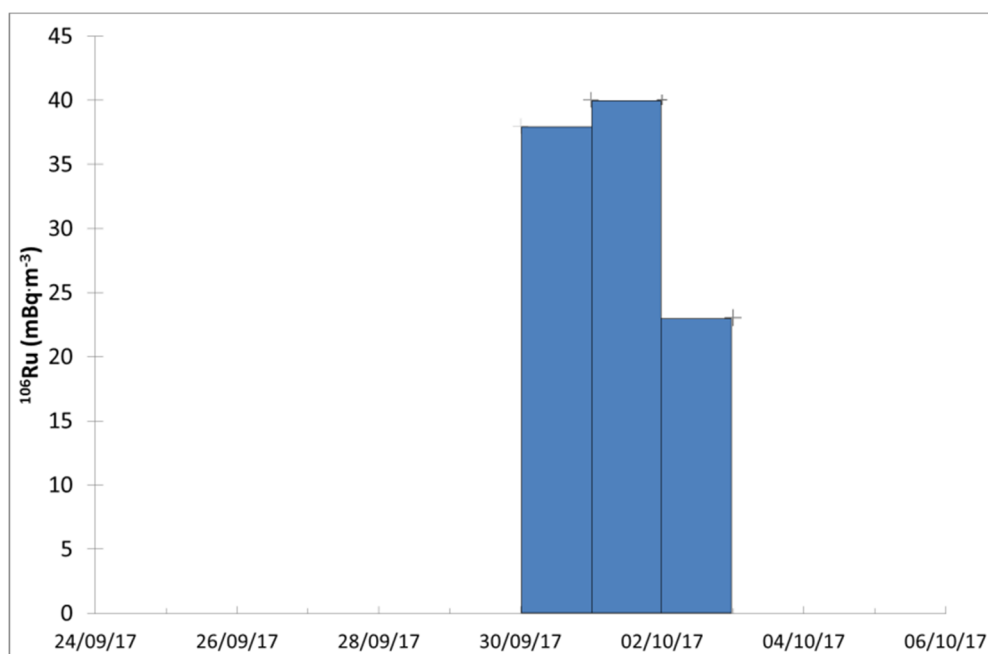


Fig. S1. Typical pattern of activity concentrations of ^{106}Ru detections on three consecutive filters.

Chemistry of ruthenium and solubility experiments

Ruthenium exhibits a rather complicated chemistry with multiple oxidation states. The release scenario most likely involved the most volatile oxidation state +VIII, mainly in the form of RuO₄, which is volatilized just above room temperature. The lack of any concomitant radionuclides of other elements suggests that the radioruthenium experienced a purification via the gas phase (before or during the release). Under highly oxidizing conditions, as they often occur in spent nuclear fuel reprocessing, highly volatile and reactive (oxidizing) RuO₄ is formed. Due to its volatility, it may easily escape under "normal" industrial conditions. Upon contact with organic (and even inorganic) substances (which includes natural aerosols and dust particles), airborne RuO₄ is quickly reduced to RuO₂ which exhibits both low volatility and solubility in water. In nuclear fuel processing, measures have to be taken to stabilize and trap the highly volatile RuO₄ by chemical reactions (trapping in acids or bases). This means that, even though RuO₄ had been involved in the release scenario at some point, it may already have been brought to react to a lower oxidation state at the time of release.

Ruthenium-106 trapped on aerosol filters was found to be quite readily soluble in water. A part of glass fibre filter with 30.5 ± 1.3 Bq of ¹⁰⁶Ru (as of 13.11.2017) collected in the period 29.9. - 2.10. 2017 in the Czech Republic was subjected to dissolution in serum ultra filtrate fluid (SUF) as defined in (12). The lung dissolution test was performed using the static method (Fig. S2). The filter was submerged in 80 ml of SUF solution. At specified time intervals sufficient to determine a half-life on the order of minutes to hours the solution was filtered through a membrane filter with a pore size of 120 nm and was replaced with a fresh simulant solution.

Rapid dissolution fraction of 0.91 with dissolution rate 6.03 h^{-1} ($T_{1/2} = 0.115 \text{ h}$) and slow dissolution fraction of 0.09 with dissolution rate 0.06 h^{-1} ($T_{1/2} = 10.7 \text{ h}$) were found.

Possible phagocytation of aerosol particles has not been considered.

	$y = \text{undissolved fraction}$	$t = \text{time (h)}$	$T_{1/2} \text{ (h)}$
	$y = (1-r_2) \cdot e^{-s_1 \cdot t} + r_2 \cdot e^{-s_2 \cdot t}$		
$r_1 (= 1-r_2)$	0.0866		
s_1	0.0646 h^{-1}		10.7
r_2	0.913		
s_2	6.033 h^{-1}		0.115

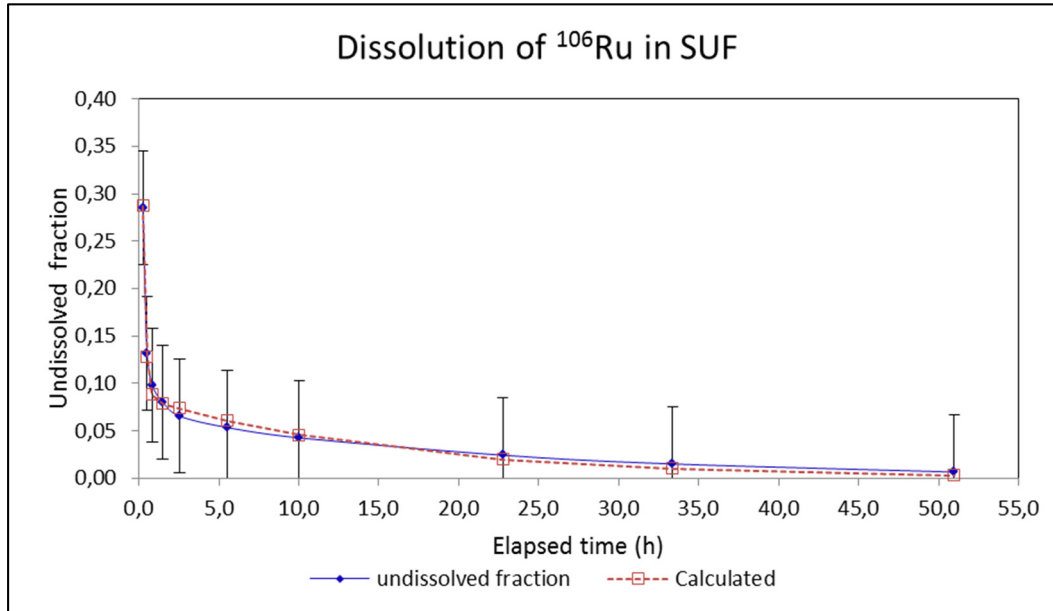


Fig. S2. Dissolution kinetics of ^{106}Ru from an aerosol filter in SUF

Volatilization experiments

An air filter from a high volume sampler from Austria with an aerosol ^{106}Ru activity concentration of $21.7 \text{ mBq}\cdot\text{m}^{-3}$ were used to provide chemical information about the released Ru species. Ruthenium has multiple oxidation states, most notably Ru^{III} , Ru^{IV} , and Ru^{VIII} . Under highly oxidizing conditions, highly volatile and reactive (oxidizing) RuO_4 is formed. Due to its volatility, it may easily escape under "normal" industrial conditions above room temperature. Upon contact with organic substances (which likely includes natural aerosols and dust particles), RuO_4 is quickly reduced to RuO_2 which exhibits both low volatility and solubility in water.

Heating experiments were performed in air. Filters fragments containing about 30 Bq were placed in quartz crucibles and heated for 60 min at the given temperatures (see Fig. S3.). In the course of the heating experiments, the polypropylene (Blown MicroFiber) filter melted and decomposed, causing deformation of the material, which, at least partially, had to be accounted for in the gamma-ray measurements.

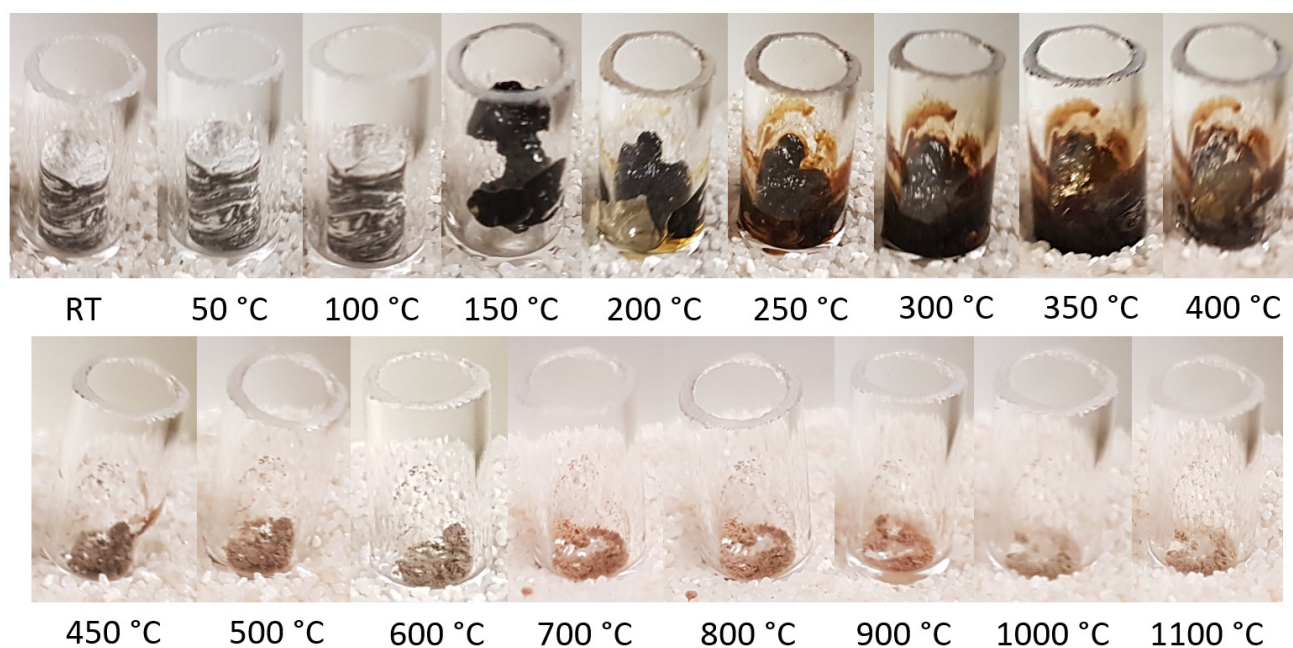


Fig. S3. An air filter fragment after being heated in air for 60 min at the given temperature in a minuscule quartz glass vial. It illustrates the changing geometry (which partially could be accounted for during the gamma-ray measurement) and the loss of matter through ashing

Imaging Plate (IP) Autoradiography

IP Autoradiography (Fig. S4) of a ^{106}Ru -contaminated filter from Germany reveals an extremely finely and homogeneously dispersed ^{106}Ru fraction, which is largely responsible for the darkening of the IP. The light grey spot represents a blank filter, which is only marginally darkened due to the electrostatic adhesion of natural airborne ^{210}Pb on the polypropylene fibres.

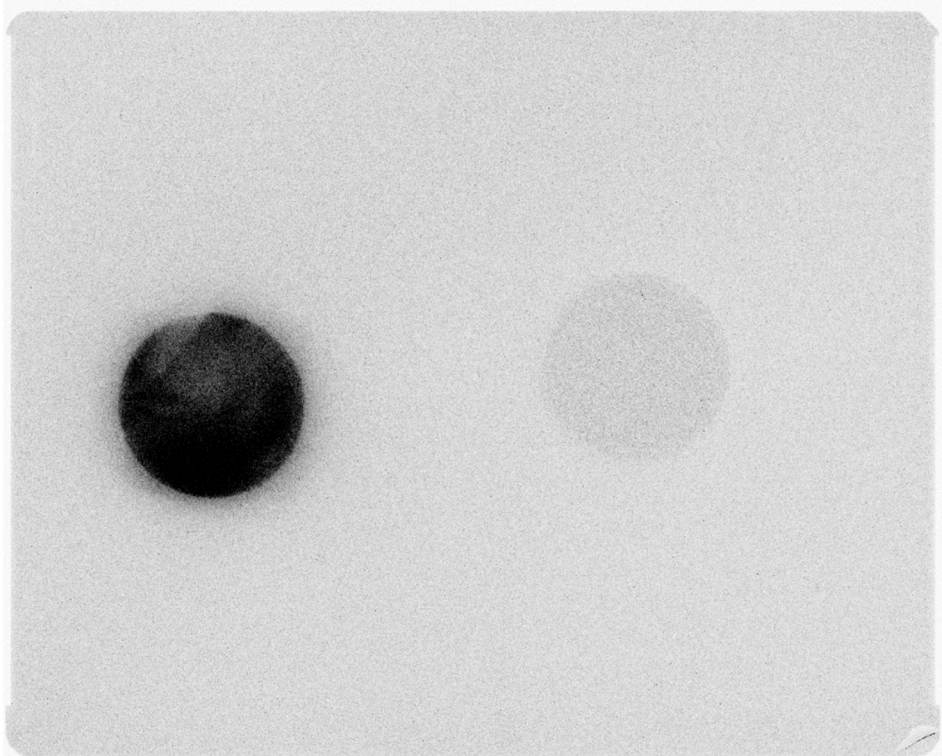


Fig. S4. IP autoradiograph of a ^{106}Ru containing aerosol filter (left) from Cottbus, Germany and blank (right). The ^{106}Ru containing sample was collected from 2017/09/25 to 2017/10/02 with a sample volume of 25194 m³. From gamma-ray spectrometry analysis the filter was determined to contain 18.7 Bq of ^{106}Ru , 11.4 Bq of ^7Be , and 17.2 Bq of ^{210}Pb .

Scanning electron microscopic imaging of the filter surface

Electron microscopy (Fig. S5) revealed only particles on the air filter (from Vienna, see above) that are typically found in dust. They include soil particles, pollen, fibres etc. No unusual particles containing high-Z elements were found.

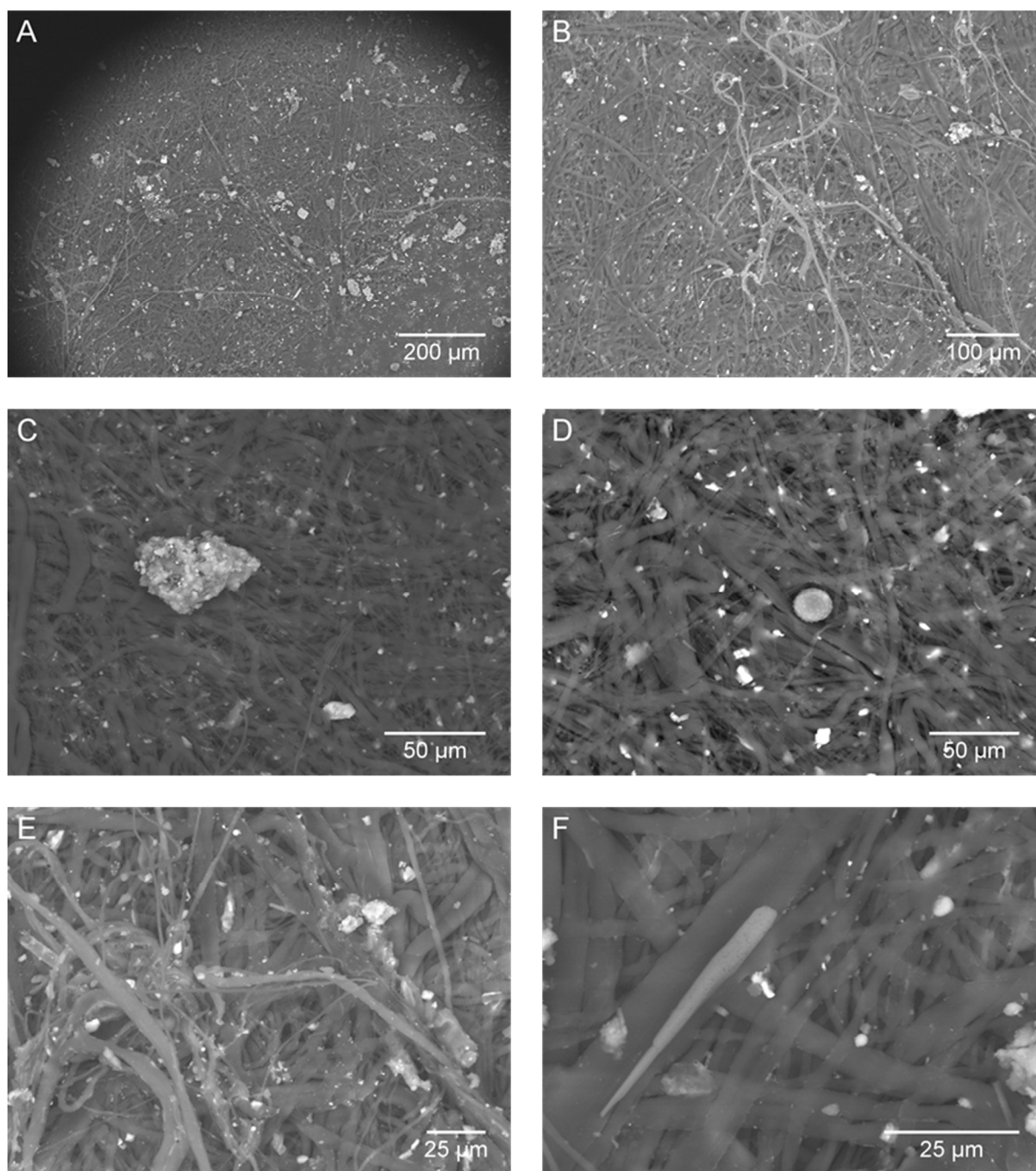


Fig. S5. Selection of scanning electron microscopic images of an air filter from Vienna, Austria (sampling period 2017/09/29 to 2017/10/04).

Gamma-ray spectrum

A gamma-ray spectrum exhibiting detectable activities of both ^{103}Ru ($9.7 \mu\text{Bq}\cdot\text{m}^{-3}$) and ^{106}Ru ($42 \text{mBq}\cdot\text{m}^{-3}$) is shown in Fig. S6. The most intense peak of ^{106}Ru (^{106}Rh) at 511.9 keV coincides with the unavoidable 511 keV annihilation peak that is typically found in gamma-ray spectra. Thus, activities of ^{106}Ru are typically calculated using the undisturbed photopeak at 621.9 keV. The activities of ^{214}Bi at 609.3 keV did not interfere with this photopeak, because activities of ^{214}Bi proved to be too low and energy resolution in modern gamma detectors allows for the distinction of both peak areas (if the 609.3 keV was present at all). The spectrum also exhibits the characteristic photopeaks of natural radionuclides, including ^{212}Pb , ^7Be , and ^{40}K .

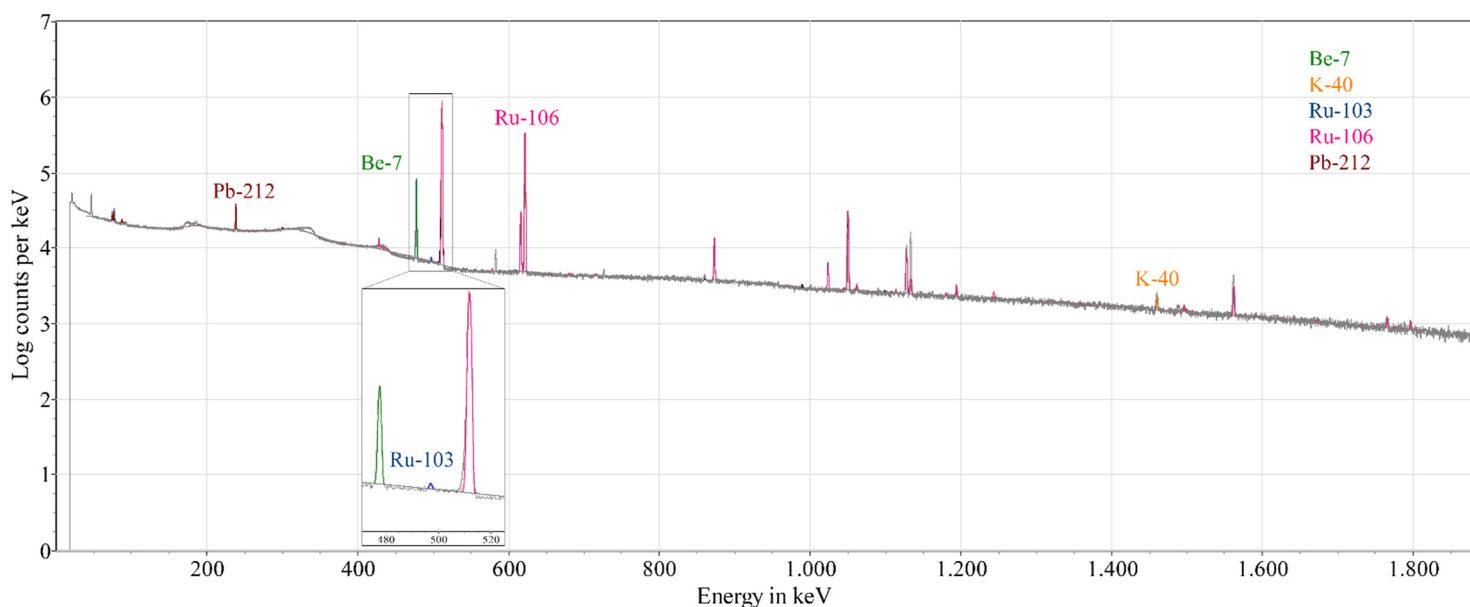


Fig. S6. A gamma-ray spectrum of an air filter from Vienna, Austria (sampling period 2017/10/02 to 2017/10/03). Measurement duration was 250,000 s. Peak areas and gamma-ray intensities for each nuclide are fitted using Visual RobFit™ software from Snakedance Scientific™.

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