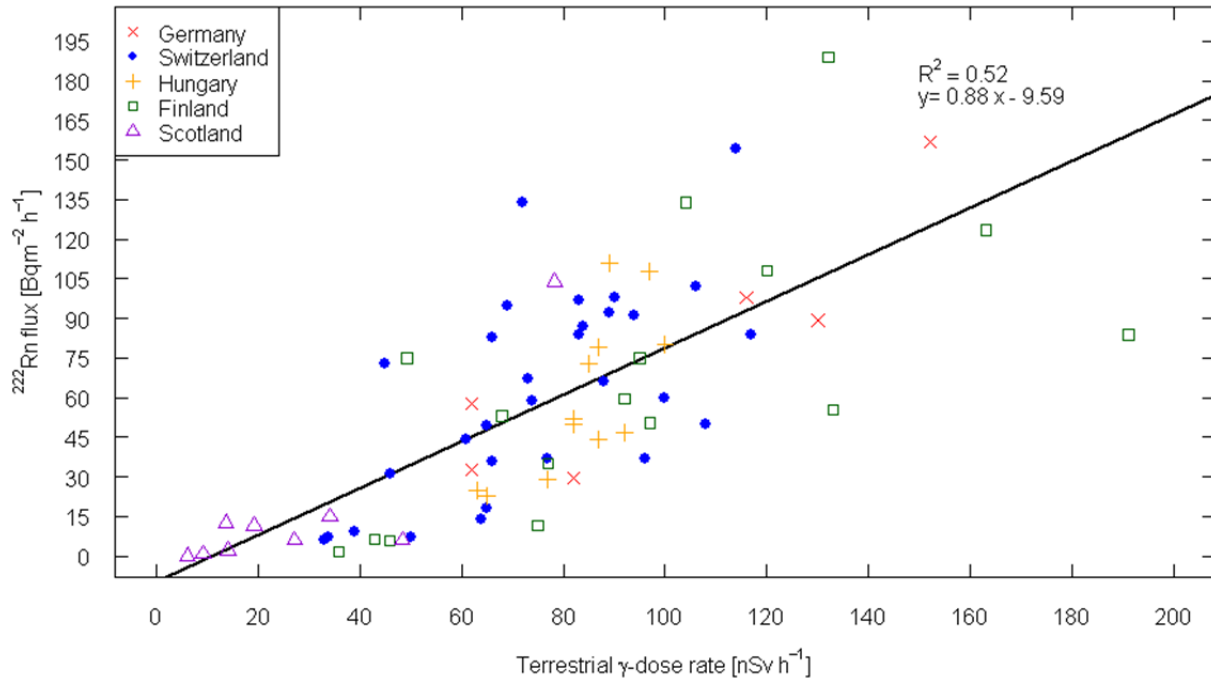


Flux time series

As presented in Szegvary et al. (2007b), the continuous ^{222}Rn flux measurements can be downloaded here. The table below gives information about the field sites, mean values for continuous measurements and results from spot measurements, as shown in the following diagram:



Correlation of ^{222}Rn flux and terrestrial γ -dose rate measured at field sites in Switzerland, Germany, Finland and Hungary. Additionally data from Robertson (2005) was taken for Scottish ^{222}Rn flux measurements.

Field site information	^{222}Rn flux and GDR	Particle size fractions [%]								
Sample	Longitude	Latitude	Height asl	Site	^{222}Rn flux	Terr. GDR	Sand	Silt	Clay	Water content
			[m]		[$\text{Bq m}^{-2} \text{h}^{-1}$]	[nSv h^{-1}]	(60-2000 μm)	(2-60 μm)	(0-2 μm)	[wt%]
Switzerland										
CH-001	7.58	47.54	316	Basel*	66	88	5.87	71.44	22.69	21.3
CH-002	7.88	47.43	610	Rünenberg	14	57	25.7	55.4	18.9	17.6
CH-002	7.88	47.43	610	Rünenberg*	14	64	25.7	55.4	18.9	17.6
CH-003	6.67	46.51	461	Pully*	91	93	30.9	54.0	15.1	
CH-004	7.74	47.29	453	Oensingen*	87	84				
CH-005	7.42	46.93	565	Bern/Liebefeld*	84	83	45.2	37.1	17.7	

CH-005	7.42	46.93	565	Bern/Liebefeld	66	63	45.2	37.1	17.7	
CH-006	6.92	46.33	381	Aigle	37	96	5.5	82.4	12.1	
CH-006	6.92	46.33	381	Aigle	13	92	5.5	82.4	12.1	
CH-008	7.84	46.30	640	Visp*	50	108	44.3	52.6	3.1	
CH-009	6.58	46.84	1202	La Frêtaz	49	65	37.2	47.2	15.6	21.8
CH-010	6.79	47.08	1018	La Chaux-de-Fonds	67	73	6.3	70.3	23.4	25.8
CH-011	6.23	46.40	430	Changins	92	89	25.2	49.3	25.6	15.3
CH-012	9.84	46.81	1590	Davos	18	65	54.2	33.8	12.0	29.1
CH-013	9.88	46.53	1705	Samedan	37	77	39.6	46.5	13.9	25.5
CH-014	10.07	46.34	1201	S. Carlo	98	92	48.5	34.4	17.1	23.4
CH-015	7.79	47.26	422	Wynau	83	66	33.0	41.8	8.8	23.9
CH-016	8.31	46.50	1345	Ulrichen	61	100	62.1	34.3	3.6	18.4
CH-017	8.90	47.48	536	Tänikon	96	69	28.6	49.4	22.0	24.9
CH-018	9.40	47.43	779	St. Gallen	44	61	33.5	45.7	20.8	34.1
CH-020	9.07	47.03	515	Glarus	74	59	8.7	52.8	38.5	41.3
CH-021	9.52	47.13	460	Vaduz	39	66	20.5	70.1	9.4	26.8
CH-022	8.46	47.06	1040	Rigi	7	33	17.3	39.5	43.3	
CH-025	7.64	47.59	268	Lange Erlen	109	105				
Germany										
D-001	7.81	47.76	850	Herrischried	157	155				
D-002	8.00	47.66	700	Albruck	30	82				
D-003	8.14	47.59	300	Bad Säkingen	33	61				
D-004	7.95	47.56	280	Rheinfelden	58	62				
D-005	7.78	47.56	350	Schopfheim b	98	116				
D-006	7.82	47.65	500	Elbenschwand	89	127				
Finland										
F-001	25.29	60.39	11	Sipoo	189	132	2.60	39.59	57.81	20.3
F-002	26.22	60.46	30	Loviisa	84	191	70.80	23.37	5.83	8.2
F-003	26.05	60.44	6	Parnaja	124	166	87.28	7.41	5.31	12.5
F-004	23.79	61.51	112	Tampere	55	135	9.05	48.94	42.01	24.7
F-005	24.04	61.27	94	Valkeakoski	60	94	22.95	36.15	40.90	16.2
F-006	24.29	60.89	110	Renko	51	100	25.88	61.63	12.50	17.4
F-007	22.37	60.45	37	Varissio	134	104	17.35	39.95	42.70	23.9
F-008	23.98	60.47	37	Nummi-Pusula	108	124	1.45	42.53	56.02	16.9
F-009	28.14	66.14	250	Posio	12	80	67.45	25.10	7.45	53.0
F-010	26.76	66.37	118	Pekkala	95	82	8.47	69.23	22.29	18.8
F-011	25.79	66.51	61	Rovaniemi	49	81	58.22	37.24	4.54	11.1
F-012	26.91	65.40	118	Pudasjärvi	6	53	33.85	40.95	25.20	76.4
F-013	26.47	65.95	160	Ranua	6	50	41.97	49.48	8.55	48.9
F-014	26.64	67.41	173	Sodankylae	35	45	52.90	42.72	4.38	26.7
F-015	27.33	66.72	162	Kernijarvi	2	43	35.40	58.11	6.49	54.9

F-016	24.85	66.12	27	Tervola	53	73	38.40	51.52	10.08	8.4
Hungary										
HU-001	17.67	47.71	121	Győr	29	86	54.50	37.10	8.40	3.2
HU-002	18.41	47.56	182	Tatabanya	108	100	60.10	24.98	14.92	4.3
HU-003	19.14	47.94	227	Retseg	80	108	12.90	60.87	26.23	9.6
HU-004	19.54	48.10	163	Szetseny	44	89	52.45	31.66	15.89	9.6
HU-005	19.79	48.05	225	Salgotarjan	47	94	30.70	44.43	24.87	2.4
HU-006	17.89	47.10	260	Veszprem	79	93	25.50	56.95	17.55	5.2
HU-007	17.47	47.35	144	Papa	25	70	48.60	31.17	20.23	13.8
HU-008	20.27	47.73	127	Kal	23	70	82.63	9.52	7.86	3.6
HU-009	20.77	48.10	230	Miskolc	111	91				11.8
HU-010	20.26	48.23	176	Ozd	73	92	27.67	47.20	25.13	7.0
HU-011	18.61	47.76	112	Tat	50	88	44.93	45.44	9.63	8.0
HU-012	18.80	47.55	203	Budajenő	52	92	12.57	68.09	19.33	21.0

* continuous ^{222}Rn flux measurement

Download data for continuous measurements [$\text{Bq m}^{-2} \text{h}^{-1}$]

[aigle_2705-240605.txt](#)

[aigle_2809-131005.txt](#)

[liebefeld_2705-070605.txt](#)

[pully_2107-300705.txt](#)

[robbia_1410-101105.txt](#)

[ruenenberg_3003-260405.txt](#)

[visp_1209-280905.txt](#)

Based on the correlation between ^{222}Rn flux and terrestrial gamma dose rate, we generated ^{222}Rn flux maps for Europe. The continuous gamma dose monitoring network EURDEP (<https://rem.jrc.ec.europa.eu/remweb/Activities.aspx?id=Eurdep>) allowed us to produce seasonal, monthly and weekly averages for 2006. The figure below shows a mean ^{222}Rn emissions map for 2006.

The correlation function:

$$^{222}\text{Rnflux} [\text{Bq m}^{-2} \text{h}^{-1}] = 11.75 \times \text{gamma-dose rate} [\mu\text{Svh}^{-1}] - 0.15$$

was used to convert the terrestrial gamma-dose rate map into a ^{222}Rn flux map. Additionally, we applied a correction factor of 0.3 to peat soils as they are defined in the European Soil Database (<http://esdac.jrc.ec.europa.eu/>), because during field measurements in Finland only these soil types were found to be significantly overestimated by the equation.

The data can be downloaded and be used with reference to this website.