

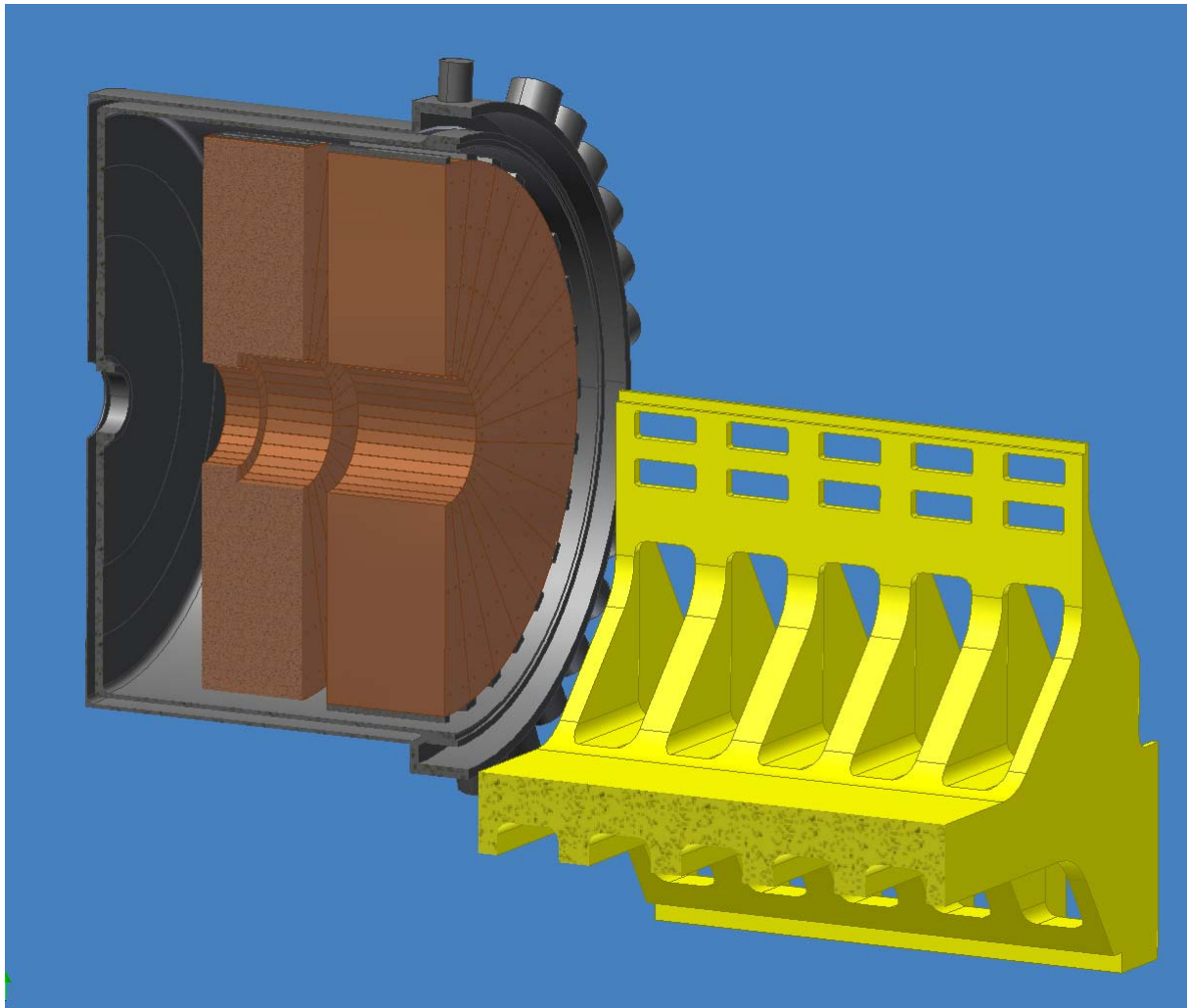


Bild 1

Attachment A1

Dose rate fields, maps and tables (t=60d)

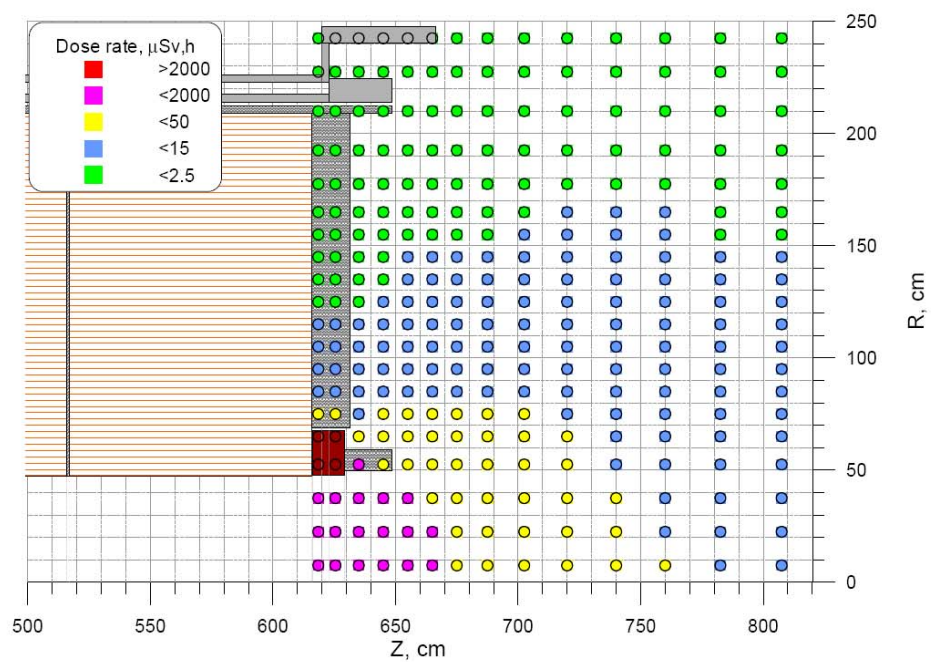


Fig. A1.11. Geomentry 4 (Plug 1 and cold bulkhead are removed), rear

Table A1.11

Geometry 4 (Plug 1 and cold bulkhead are removed), rear - effective dose rate, $\mu\text{Sv/h}$

Z		616-621	621-630	630-640	640-650	650-660	660-670	670-680	680-695	695-710	710-730	730-750	750-770	770-795	795-820
R	ΔZ ΔR	5	9	10	10	10	10	10	15	15	20	20	20	25	25
0- 15	15	122.4	108.1	91.60	77.61	65.77	53.98	46.28	38.01	30.77	25.66	20.75	16.18	12.69	10.37
15- 30	15	118.9	106.5	89.78	74.83	62.63	51.46	42.56	35.29	28.28	21.91	17.43	14.40	11.51	9.07
30- 45	15	123.7	109.5	85.72	68.21	54.90	45.60	38.10	31.03	24.92	19.46	15.01	12.23	10.14	8.14
45- 60	15	118.8	114.0	57.20	46.52	39.97	36.03	32.01	27.06	22.36	18.21	14.07	11.13	9.14	7.66
60- 70	10	57.83	56.08	27.50	24.18	22.72	23.25	23.38	21.91	19.08	16.48	13.46	10.76	8.59	7.15
70- 80	10	19.22	16.64	14.86	15.85	15.31	15.28	15.87	16.47	16.36	14.56	12.48	10.26	8.18	6.70
80- 90	10	10.61	9.26	9.47	11.13	11.04	11.09	11.37	11.32	11.83	12.58	11.68	9.84	7.79	6.25
90- 100	10	6.52	5.90	6.37	7.92	8.41	8.18	8.77	9.04	8.37	8.85	10.29	9.65	7.73	5.95
100- 110	10	4.42	3.98	4.47	5.77	6.54	6.31	6.58	7.30	7.13	6.29	7.18	8.73	7.95	6.06
110- 120	10	2.99	2.73	3.19	4.36	5.05	5.10	5.10	5.71	6.13	5.47	4.91	6.10	7.56	6.50
120- 130	10	2.00	1.89	2.35	3.27	4.01	4.14	4.03	4.48	5.07	4.92	4.15	4.00	5.50	6.55
130- 140	10	1.38	1.33	1.76	2.48	3.22	3.41	3.33	3.55	4.09	4.39	3.82	3.30	3.51	5.16
140- 150	10	1.01	0.96	1.33	1.93	2.59	2.84	2.83	2.88	3.29	3.76	3.59	3.01	2.73	3.30
150- 160	10	0.75	0.71	1.02	1.53	2.10	2.37	2.39	2.44	2.69	3.13	3.29	2.90	2.41	2.37
160- 170	10	0.55	0.52	0.79	1.22	1.73	1.98	2.02	2.11	2.24	2.55	2.87	2.80	2.32	2.00
170- 185	15	0.38	0.37	0.59	0.93	1.38	1.64	1.64	1.75	1.89	2.06	2.30	2.46	2.30	1.86
185- 200	15	0.27	0.26	0.44	0.69	1.06	1.36	1.32	1.36	1.57	1.69	1.77	1.94	2.14	1.90
200- 220	20	0.18	0.19	0.35	0.52	0.78	1.11	1.10	1.02	1.21	1.41	1.43	1.44	1.67	1.83
220- 235	15	0.11	0.13	0.17	0.21	0.54	0.90	0.96	0.81	0.88	1.16	1.26	1.16	1.19	1.51
235- 250	15	0.08	0.10	0.11	0.13	0.33	0.67	0.86	0.71	0.67	0.95	1.14	1.06	0.94	1.15

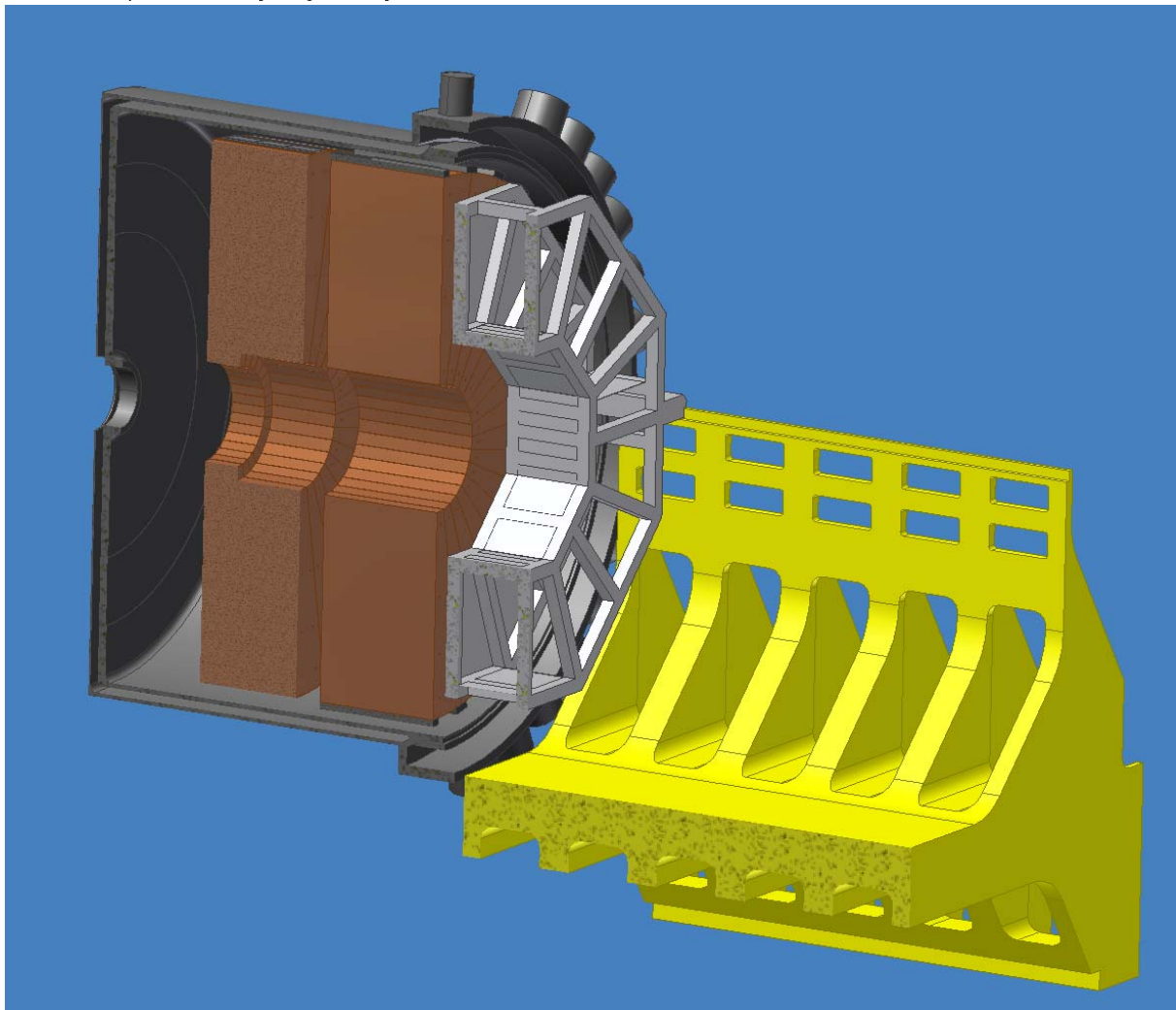


Bild 2

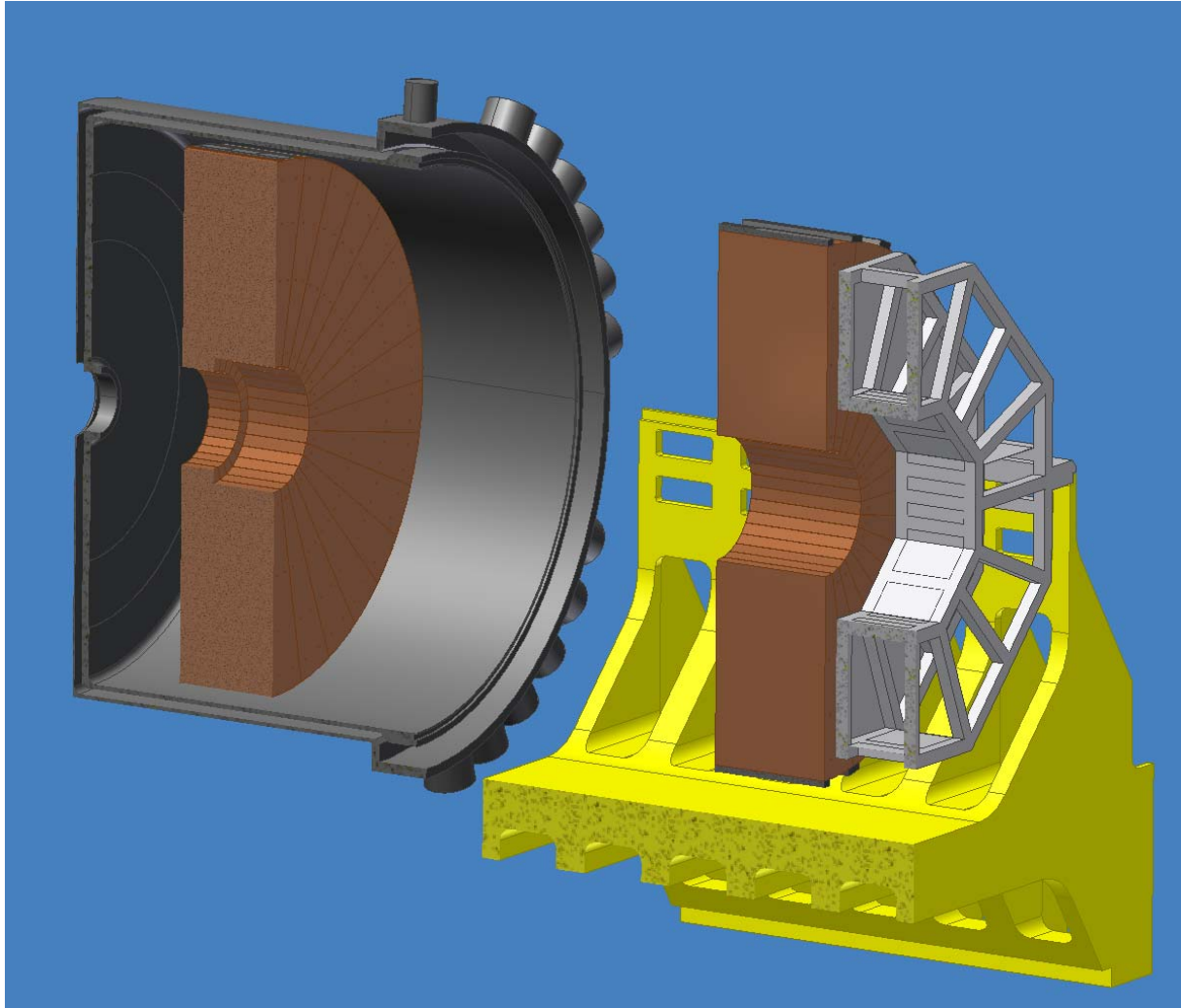


Bild 3

Attachment A1

Dose rate fields, maps and tables ($t=60d$)

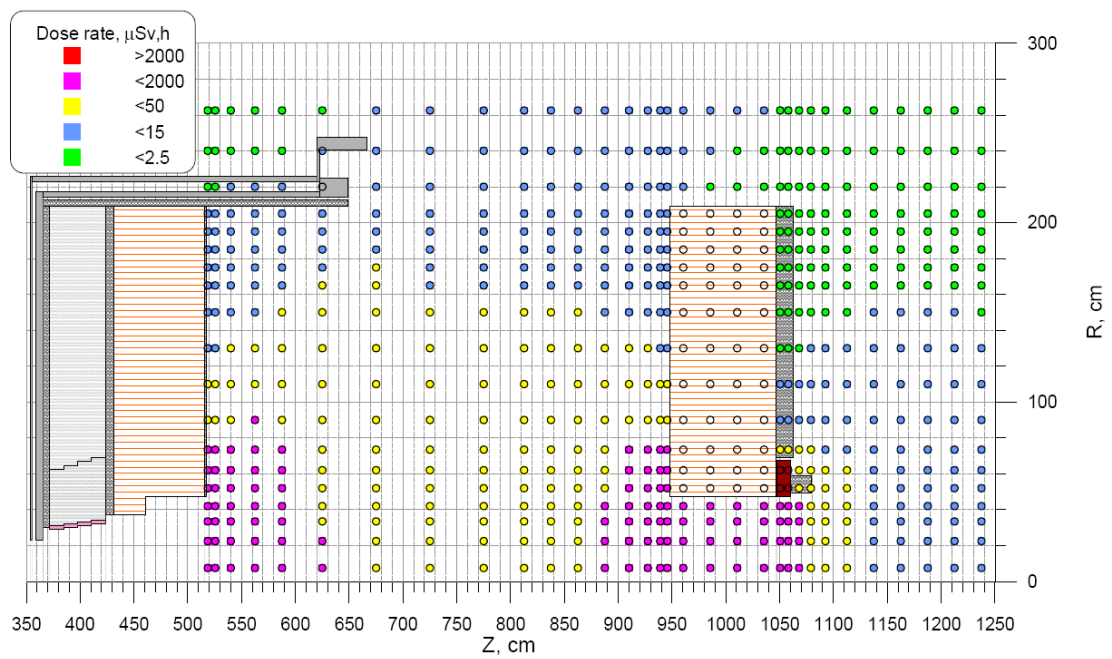


Fig. A1.12. Geomentry 5 (Plug 1 and cold bulkhead are removed, HEC2 is shifted 431 cm)

Table A1.12

Geometry 5 (Plug 1 and cold bulkhead are removed, HEC2 is shifted 431 cm) - effective dose rate, $\mu\text{Sv/h}$

Z, cm		516-521	521-530	530-550	550-575	575-600	600-650	650-700	700-750	750-800	800-825	825-850	850-875	875-900	900-920	920-935	935-943
R, cm	$\frac{\Delta Z}{\Delta R}$	5	9	20	25	25	50	50	50	50	25	25	25	25	20	15	8
0- 15	15	335.3	296.3	224.2	143.3	93.92	58.65	35.90	26.89	23.60	26.66	32.95	44.22	61.91	85.81	110.2	130.4
15- 30	15	332.8	286.4	213.0	138.0	90.23	54.44	33.15	25.37	24.84	27.73	32.61	41.90	58.27	82.88	109.5	133.7
30- 37	7	324.9	272.8	194.1	125.0	83.33	49.83	30.10	23.12	23.46	27.37	32.55	41.31	55.53	78.77	108.3	139.6
37- 47	10	307.6	248.4	174.0	113.6	77.45	47.72	28.85	21.75	21.48	25.32	30.71	39.05	53.04	74.65	103.7	136.5
47- 57	10	229.2	196.0	144.5	98.12	68.93	45.03	27.93	20.98	19.69	22.76	27.23	34.19	46.54	66.71	95.80	134.7
57- 67	10	134.3	133.4	114.8	84.26	60.61	42.72	27.59	20.64	19.04	22.03	26.64	33.84	44.77	60.51	82.81	105.1
67- 80	13	71.12	79.70	81.80	69.96	51.70	38.87	27.32	21.59	20.46	23.06	26.32	30.68	38.96	50.21	61.73	68.64
80- 100	20	32.07	40.46	48.58	51.14	43.35	33.50	26.41	22.59	20.36	20.31	22.24	26.32	31.78	35.93	39.11	38.31
100- 120	20	15.60	20.43	28.45	33.12	35.74	28.29	22.72	19.85	18.72	19.20	20.13	21.81	23.38	23.62	23.53	20.85
120- 140	20	8.84	11.60	17.76	21.69	25.35	22.87	18.98	16.99	17.92	17.83	18.02	18.28	17.67	16.32	15.44	12.51
140- 160	20	5.33	6.89	11.70	14.22	17.78	18.70	16.34	15.36	15.46	16.15	16.24	15.82	14.17	12.50	11.39	8.70
160- 170	10	3.97	5.11	8.86	10.60	14.69	15.78	15.46	13.76	13.60	14.57	14.90	14.39	12.52	11.01	9.86	7.32
170- 180	10	3.39	4.36	7.49	9.06	13.04	14.26	15.03	12.63	12.41	13.30	13.85	13.46	11.66	10.44	9.26	6.83
180- 190	10	3.02	3.88	6.45	8.19	11.51	13.14	14.15	11.90	11.23	12.07	12.66	12.42	10.90	10.04	8.85	6.59
190- 200	10	2.79	3.60	5.69	7.79	10.09	12.46	13.02	11.48	10.19	10.84	11.47	11.28	10.10	9.72	8.58	6.51
200- 210	10	2.61	3.41	5.12	7.76	8.81	11.98	11.64	11.19	9.32	9.63	10.23	10.03	9.22	9.27	8.27	6.42
210- 230	20	1.55	2.07	2.96	5.05	4.68	7.39	9.45	10.77	8.63	8.03	8.32	8.15	7.80	8.35	7.53	6.02
230- 250	20	0.88	1.08	1.40	2.47	2.02	3.67	6.24	9.68	8.45	6.90	6.30	5.73	5.86	6.79	6.19	5.16
250- 275	25	0.89	1.02	1.16	1.98	1.76	2.38	3.81	7.48	8.42	6.75	5.33	4.01	3.99	4.82	4.30	3.72

Table A1.12 (cont.)

Z, cm		943-948	948-973	973-998	998-1023	1023-1048	1048-1053	1053-1063	1063-1073	1073-1085	1085-1100	1100-1125	1125-1150	1150-1175	1175-1200	1200-1225	1225-1250
R, cm	$\frac{\Delta Z}{\Delta R}$	5	25	25	25	25	5	10	10	12	15	25	25	25	25	25	25
0- 15	15	143.9	176.1	178.3	139.5	102.5	78.49	67.09	56.94	43.41	33.07	22.61	14.32	9.47	6.95	5.54	4.67
15- 30	15	145.1	189.3	182.6	138.6	101.3	78.98	68.40	57.08	42.50	32.78	22.63	14.78	10.17	7.35	5.68	4.61
30- 37	7	153.7	213.9	190.9	138.2	100.8	83.36	71.40	57.18	41.42	31.46	21.55	14.19	9.94	7.23	5.40	4.18
37- 47	10	154.3	254.5	200.3	137.7	99.87	92.68	77.88	55.20	38.17	28.31	19.53	13.06	9.34	6.81	5.00	3.76
47- 57	10	162.4	347.2	201.6	114.5	76.50	122.8	102.4	46.70	30.72	23.75	17.27	11.68	8.30	6.10	4.52	3.40
57- 67	10	116.6	206.5	119.6	66.74	43.57	79.00	66.31	31.41	22.91	19.13	15.04	10.76	7.82	5.88	4.51	3.46
67- 80	13	70.29	104.0	62.42	34.72	21.70	22.30	18.58	17.18	15.48	14.01	12.51	9.74	7.47	5.90	4.71	3.75
80- 100	20	36.00	42.96	26.46	15.05	9.52	8.45	7.31	8.83	9.30	8.76	8.76	7.75	6.24	5.01	4.16	3.55
100- 120	20	18.20	17.12	9.94	5.88	4.18	3.65	3.25	4.50	5.52	5.26	5.59	5.65	5.12	4.36	3.52	2.86
120- 140	20	10.38	7.02	3.89	2.18	1.72	1.63	1.56	2.43	3.57	3.38	3.67	3.97	3.87	3.61	3.25	2.79
140- 160	20	6.97	3.33	1.65	0.91	0.81	0.80	0.78	1.37	2.43	2.33	2.48	2.89	2.89	2.81	2.65	2.44
160- 170	10	5.81	2.16	0.95	0.52	0.47	0.48	0.47	0.89	1.87	1.84	1.86	2.28	2.37	2.33	2.29	2.14
170- 180	10	5.55	1.70	0.64	0.36	0.32	0.34	0.34	0.66	1.58	1.61	1.54	1.95	2.09	2.06	2.04	1.98
180- 190	10	5.49	1.42	0.43	0.26	0.25	0.25	0.24	0.49	1.34	1.43	1.30	1.68	1.87	1.82	1.82	1.79
190- 200	10	5.53	1.24	0.32	0.18	0.19	0.19	0.17	0.36	1.13	1.30	1.11	1.43	1.66	1.65	1.61	1.62
200- 210	10	5.62	1.20	0.23	0.13	0.14	0.13	0.12	0.26	0.95	1.18	0.96	1.22	1.48	1.49	1.46	1.45
210- 230	20	5.42	3.91	1.23	0.24	0.11	0.06	0.07	0.16	0.72	1.03	0.80	0.97	1.24	1.30	1.27	1.24
230- 250	20	4.82	4.68	4.26	2.42	0.77	0.05	0.05	0.09	0.51	0.87	0.66	0.71	0.98	1.09	1.07	1.04
250- 275	25	3.59	3.79	4.10	4.05	3.04	0.04	0.04	0.06	0.34	0.72	0.58	0.50	0.74	0.89	0.91	0.88

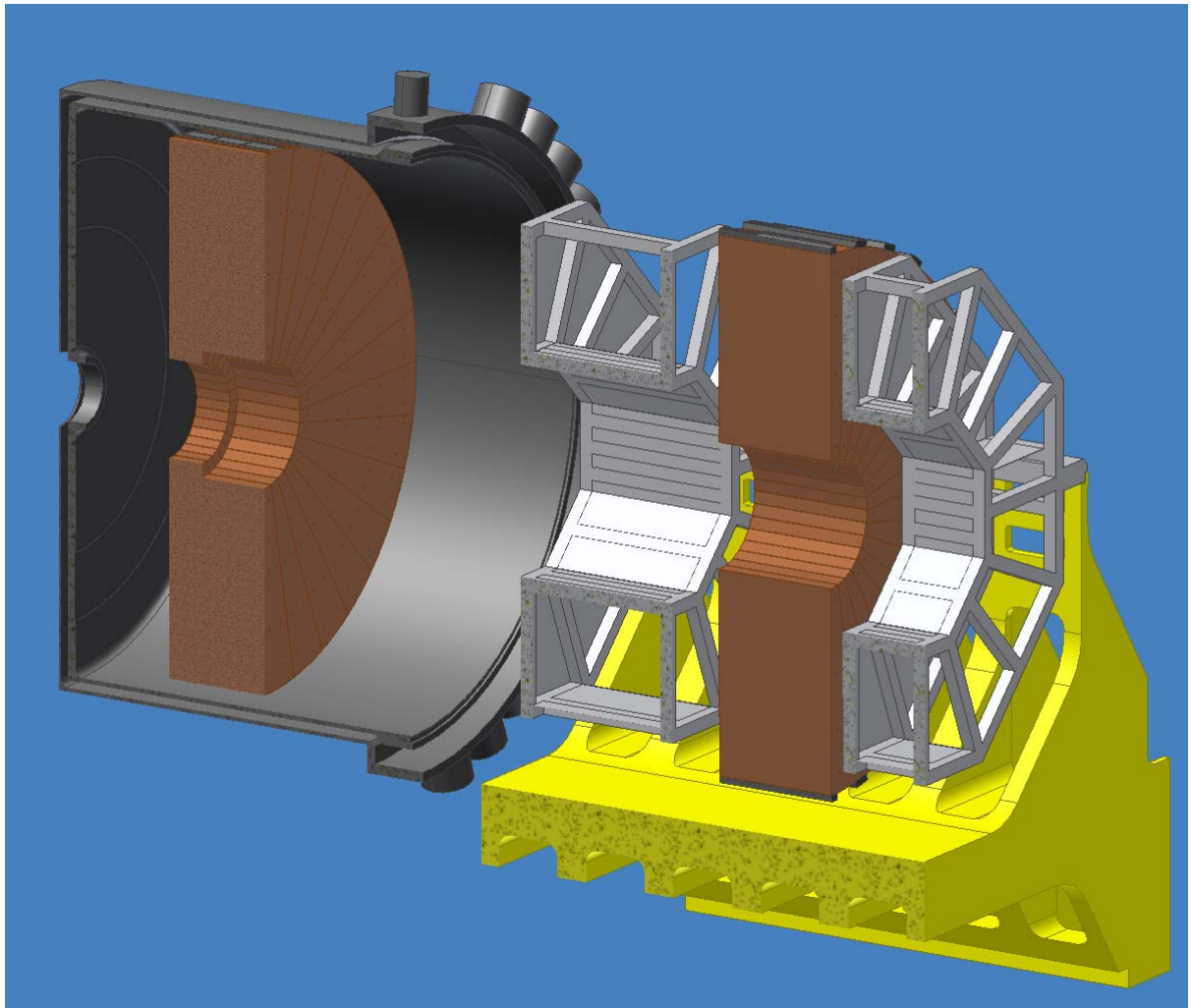


Bild 4

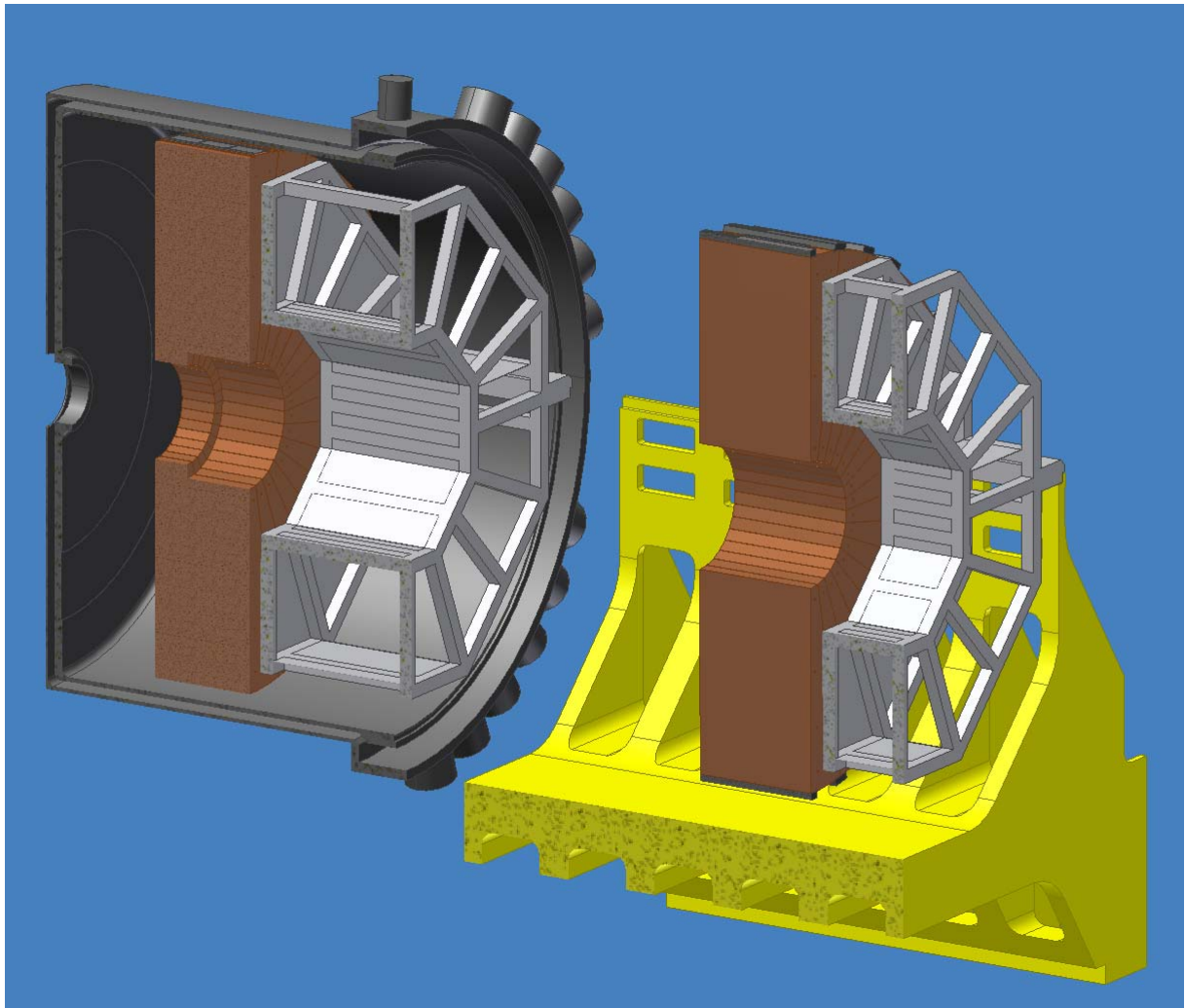


Bild 5

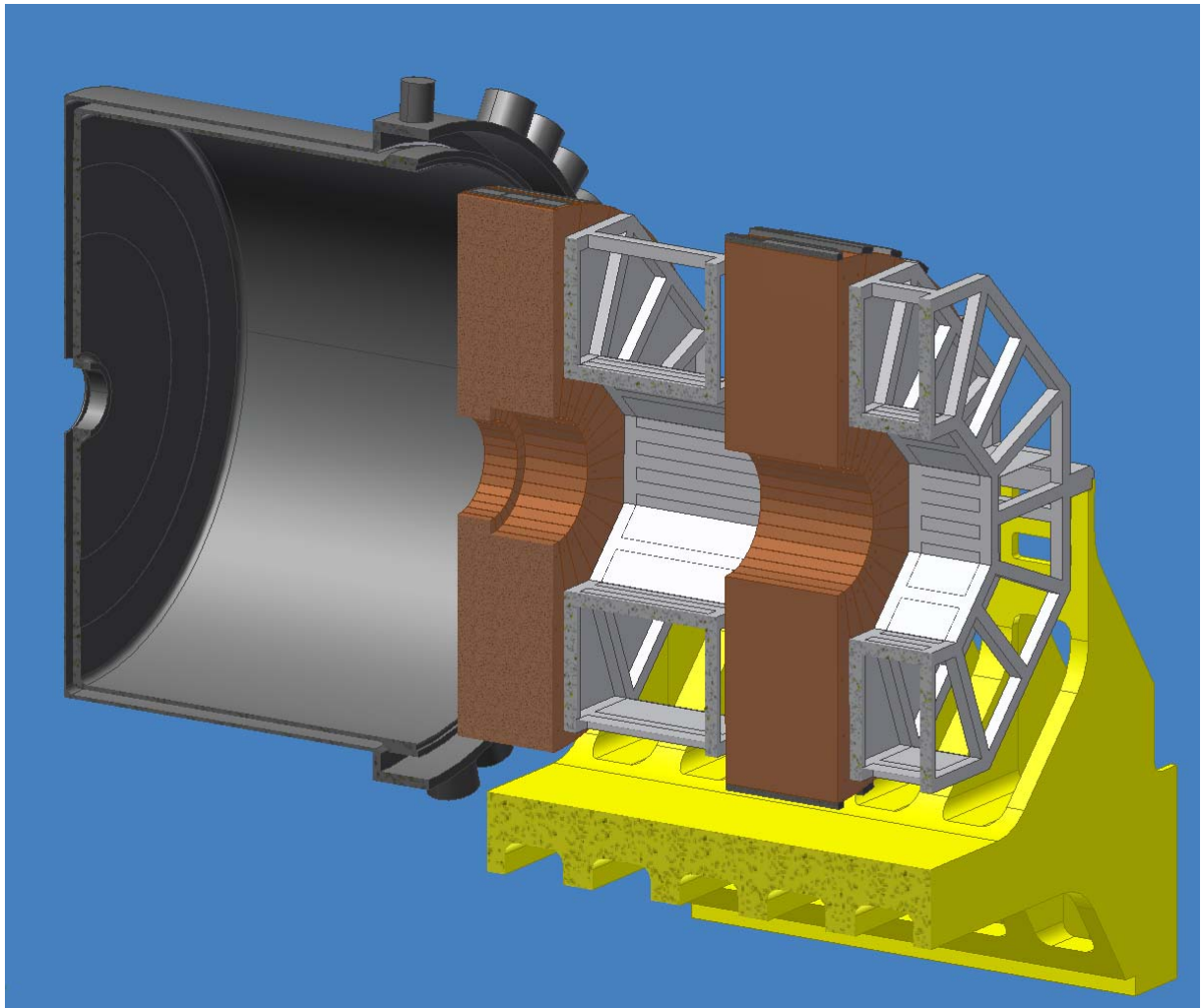


Bild 6

Attachment A1

Dose rate fields, maps and tables (t=60d)

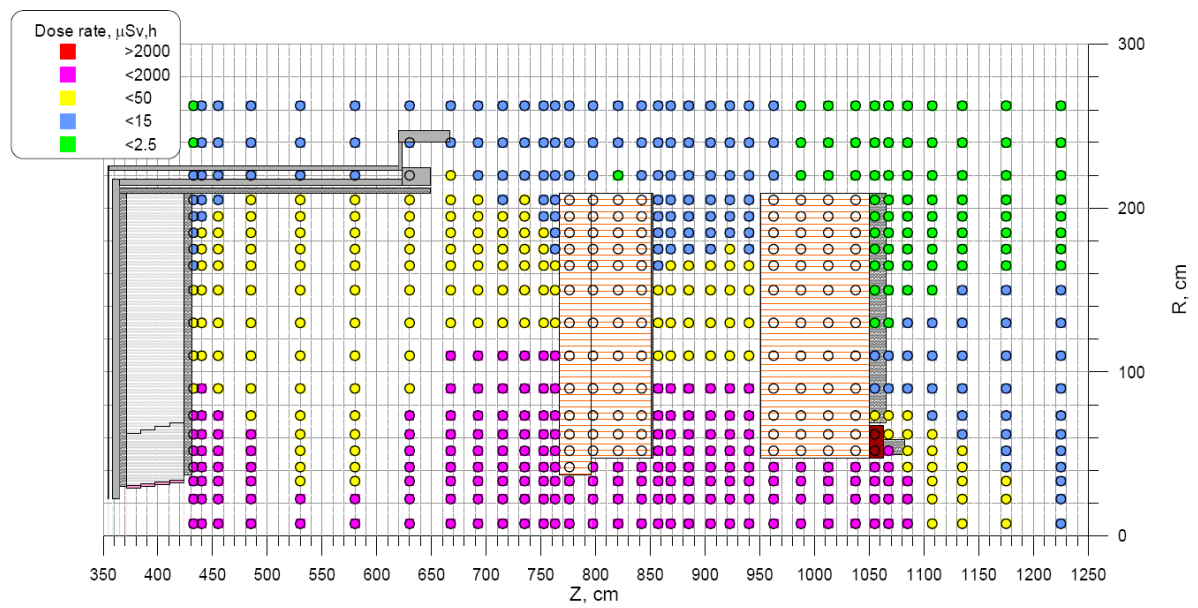


Fig. A1.13. Geomentry 6 (HEC2 is shifted 434 cm, HEC2 is shifted 335 cm)

Table A1.13

Geometry 6 (HEC2 is shifted 434 cm, HEC2 is shifted 335 cm) - effective dose rate, $\mu\text{Sv/h}$

Z, cm		430-435	435-445	445-465	465-505	505-555	555-605	605-655	655-680	680-705	705-725	725-745	745-760	760-766	766-786	786-809	809-832	832-852
R, cm	ΔZ ΔR	5	10	20	40	50	50	50	25	25	20	20	15	6	20	23	23	20
0- 15	15	121.9	113.0	92.09	68.79	54.02	51.13	61.21	84.81	117.6	170.6	246.4	346.7	424.2	550.2	623.6	544.7	421.1
15- 30	15	118.3	108.0	87.54	64.68	50.60	49.92	63.42	86.72	117.1	163.2	231.8	334.0	427.0	611.6	663.1	559.9	431.9
30- 37	7	112.9	100.8	81.59	60.24	47.14	47.05	60.50	83.69	112.3	154.5	220.2	319.4	420.4	713.3	718.0	584.9	454.2
37- 47	10	106.7	95.59	76.79	56.97	44.80	44.71	56.32	77.47	104.1	143.3	200.9	297.5	404.9	932.3	814.1	623.7	495.2
47- 57	10	93.74	86.90	71.21	53.66	43.00	43.04	54.69	76.26	101.0	134.8	181.8	256.8	309.9	628.2	606.2	574.5	505.1
57- 67	10	80.31	76.08	64.85	50.59	41.91	43.37	55.97	74.03	92.53	120.2	157.8	201.7	223.9	408.2	361.3	320.3	281.4
67- 80	13	65.25	64.25	57.34	48.09	42.30	43.94	53.04	66.41	83.58	105.3	128.0	149.2	153.3	261.6	211.8	169.7	142.4
80- 100	20	49.11	51.94	49.38	44.58	39.45	39.31	47.44	59.18	71.31	83.78	92.12	100.6	95.55	150.2	111.3	78.95	62.04
100- 120	20	33.49	37.92	38.13	36.17	33.38	35.46	42.10	50.10	57.45	61.73	62.73	64.76	57.23	82.80	55.65	35.65	27.59
120- 140	20	22.43	26.58	28.33	29.10	29.64	32.95	36.37	41.77	45.24	45.03	44.08	43.66	35.59	46.83	29.40	16.96	12.80
140- 160	20	15.70	19.50	22.08	24.79	27.28	28.84	31.62	34.43	35.35	32.62	32.40	30.46	23.66	29.03	17.13	9.17	7.08
160- 170	10	12.71	16.34	19.31	22.63	24.76	26.20	28.45	30.07	29.40	25.81	26.16	23.54	17.79	20.17	11.59	6.06	4.77
170- 180	10	11.63	15.36	18.29	20.97	23.24	24.40	26.49	27.55	25.99	22.07	23.06	19.85	14.78	15.86	8.69	4.57	3.76
180- 190	10	11.10	14.88	17.25	19.14	21.99	22.74	24.68	25.27	22.96	19.15	20.41	16.75	12.38	12.98	6.75	3.36	2.99
190- 200	10	10.36	13.87	15.78	17.80	21.07	21.36	23.06	23.07	20.06	16.82	18.15	14.05	10.27	10.27	5.46	2.72	2.45
200- 210	10	9.33	12.61	14.52	16.89	20.05	20.34	21.79	21.10	17.63	14.77	16.06	11.45	7.90	7.18	3.77	1.95	1.95
210- 230	20	5.16	6.85	8.08	9.69	11.52	12.03	13.29	17.62	14.26	12.45	13.55	8.66	5.44	4.59	2.76	1.45	2.92
230- 250	20	2.26	2.96	3.57	4.28	5.19	5.61	7.12	11.74	10.21	10.18	10.99	6.37	4.17	3.87	3.60	3.11	4.80
250- 275	25	2.02	2.66	3.00	3.58	4.36	4.48	4.33	7.52	6.40	8.40	8.55	4.53	3.18	3.03	3.20	4.30	5.26

Table A1.13 (cont.)

Z, cm		852-862	862-875	875-895	895-915	915-930	930-950	950-975	975-1000	1000-1025	1025-1050	1050-1060	1060-1075	1075-1095	1095-1120	1120-1150	1150-1200	1200-1250
R, cm	ΔZ ΔR	10	13	20	20	15	20	25	25	25	25	10	15	20	25	30	50	50
0- 15	15	324.5	264.8	214.4	183.2	173.1	187.0	213.8	209.2	166.0	125.3	98.2	81.54	61.30	43.95	29.93	18.72	11.45
15- 30	15	324.3	258.8	209.1	178.1	174.5	192.3	229.5	215.9	165.1	121.8	95.5	77.54	56.32	39.44	26.63	16.73	10.48
30- 37	7	316.6	250.4	196.7	168.5	167.0	192.6	249.2	221.0	162.0	118.2	95.0	74.74	52.29	34.99	23.42	15.18	9.83
37- 47	10	291.6	222.3	177.6	152.2	152.5	185.1	292.3	230.5	157.8	114.1	103.9	73.29	45.98	30.56	20.70	13.89	9.08
47- 57	10	230.8	184.8	153.1	137.1	138.9	177.0	355.3	209.6	118.6	77.56	124.7	64.65	35.10	25.60	18.36	12.44	8.36
57- 67	10	160.1	145.8	130.8	121.9	124.0	148.0	211.8	122.6	68.11	43.11	79.46	40.78	23.46	19.35	14.56	10.55	7.77
67- 80	13	102.3	105.0	103.2	101.6	101.3	105.8	108.8	63.79	35.46	22.03	22.04	16.90	15.44	14.04	12.13	8.46	6.24
80- 100	20	58.47	67.41	72.49	75.46	74.05	70.15	47.15	26.90	15.30	9.69	8.23	8.06	9.10	9.01	8.56	6.93	4.80
100- 120	20	34.86	42.60	46.34	49.72	49.47	45.42	20.44	10.14	5.96	4.24	3.55	4.00	5.34	5.47	5.84	5.16	4.18
120- 140	20	22.59	28.93	30.30	32.46	33.98	30.78	9.37	3.97	2.21	1.73	1.61	2.16	3.41	3.50	4.00	3.91	3.34
140- 160	20	15.50	20.57	20.63	21.19	23.97	21.94	4.95	1.69	0.94	0.82	0.79	1.21	2.33	2.34	2.85	2.93	2.69
160- 170	10	12.16	16.19	15.94	15.57	18.78	17.28	3.32	0.96	0.53	0.47	0.48	0.79	1.80	1.77	2.23	2.38	2.33
170- 180	10	10.44	13.85	13.52	12.77	16.11	14.85	2.62	0.66	0.37	0.32	0.34	0.60	1.54	1.49	1.89	2.10	2.09
180- 190	10	9.11	11.84	11.66	10.59	13.73	12.80	2.11	0.44	0.27	0.25	0.25	0.45	1.33	1.28	1.59	1.87	1.85
190- 200	10	7.88	10.02	10.01	9.04	11.76	10.96	1.72	0.32	0.18	0.19	0.19	0.34	1.15	1.12	1.34	1.67	1.64
200- 210	10	6.75	8.42	8.75	7.81	10.03	9.31	1.39	0.23	0.13	0.14	0.13	0.25	1.00	0.99	1.13	1.51	1.46
210- 230	20	5.41	6.53	7.28	6.59	7.86	7.17	2.52	0.20	0.10	0.08	0.08	0.17	0.81	0.87	0.88	1.29	1.26
230- 250	20	4.23	4.63	5.86	5.68	5.77	5.13	4.08	0.53	0.18	0.11	0.10	0.15	0.65	0.78	0.65	1.06	1.08
250- 275	25	3.35	3.18	4.79	5.21	4.18	3.44	4.16	1.52	0.30	0.16	0.12	0.14	0.50	0.72	0.49	0.85	0.93

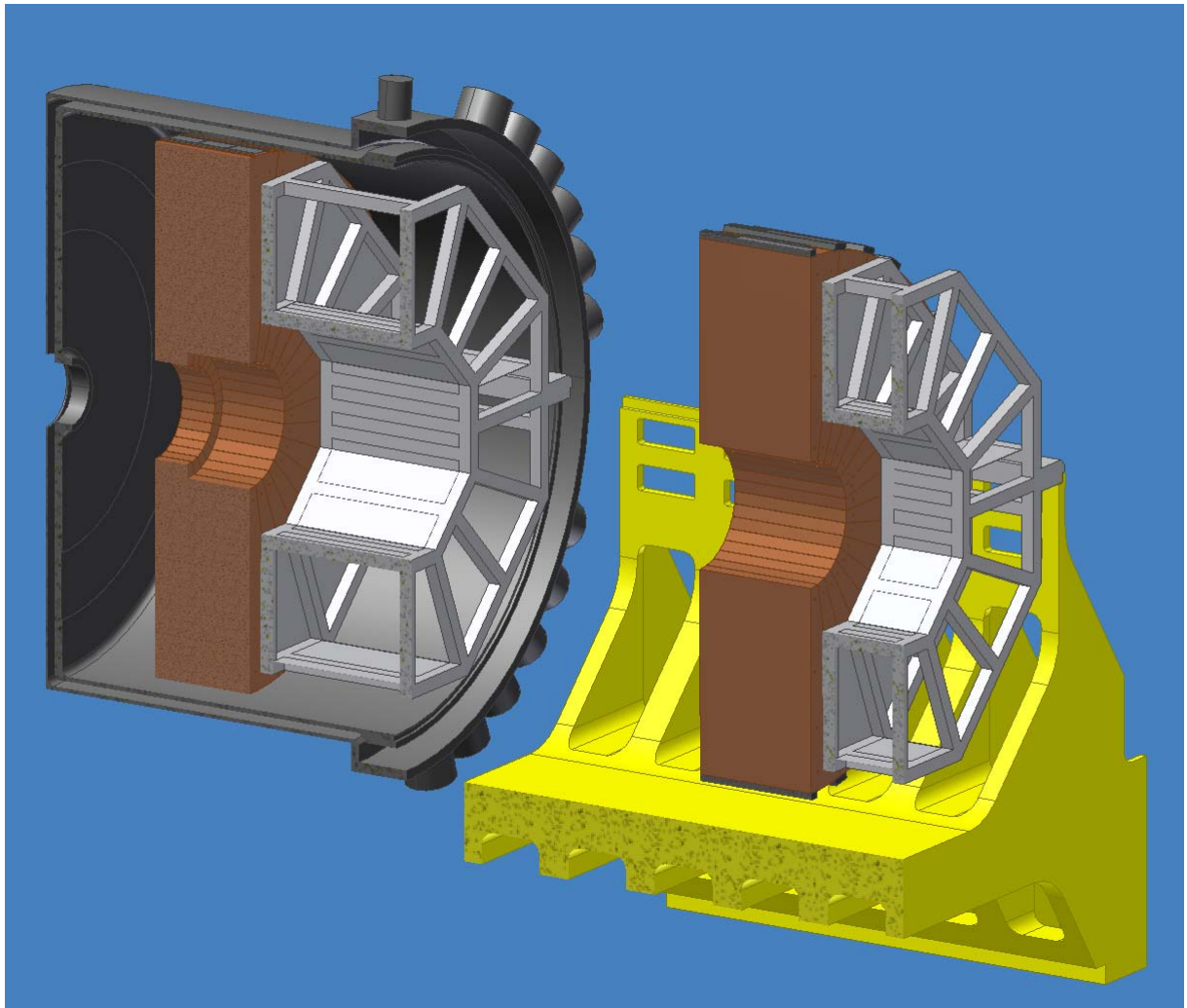


Bild 7

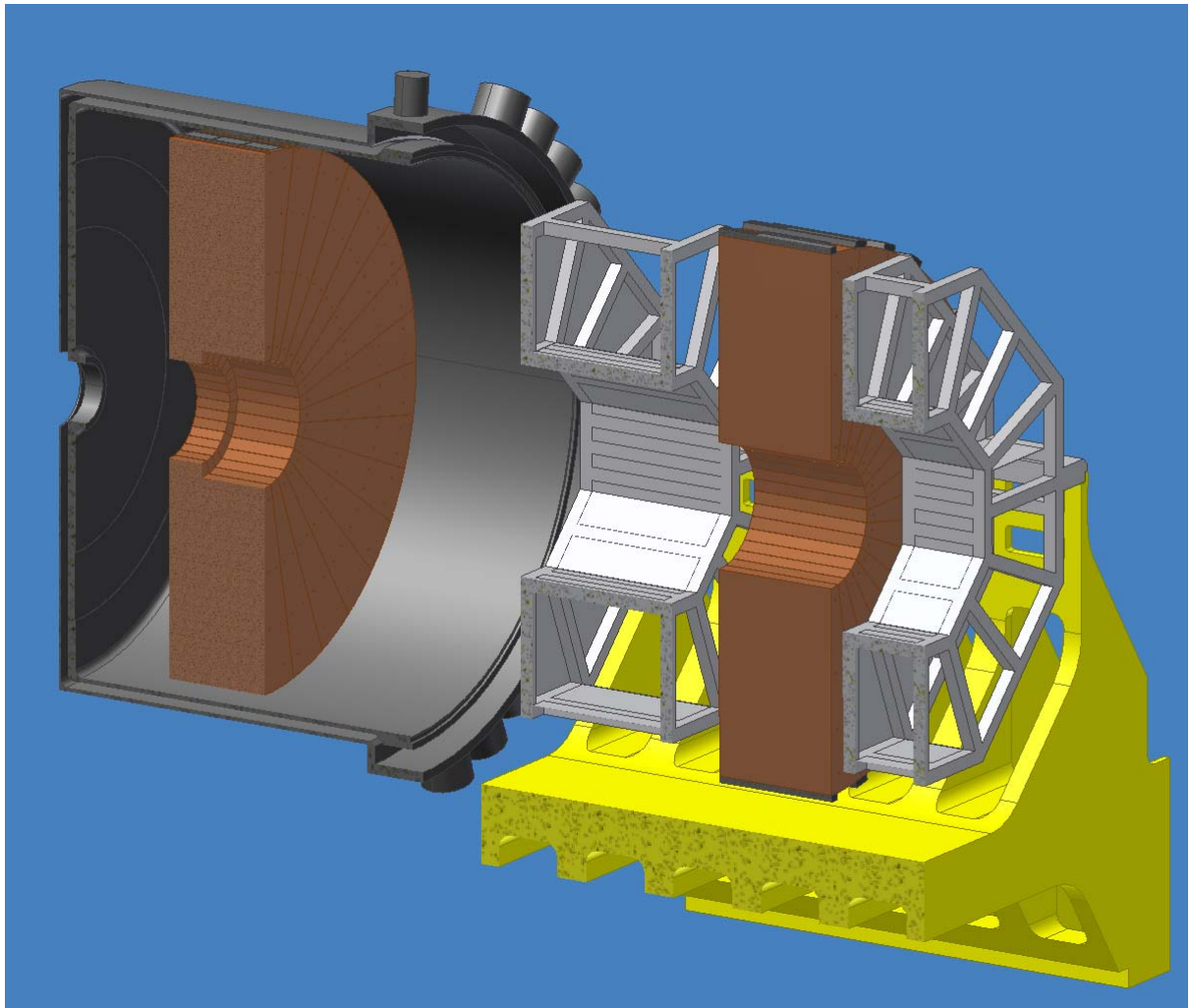


Bild 8

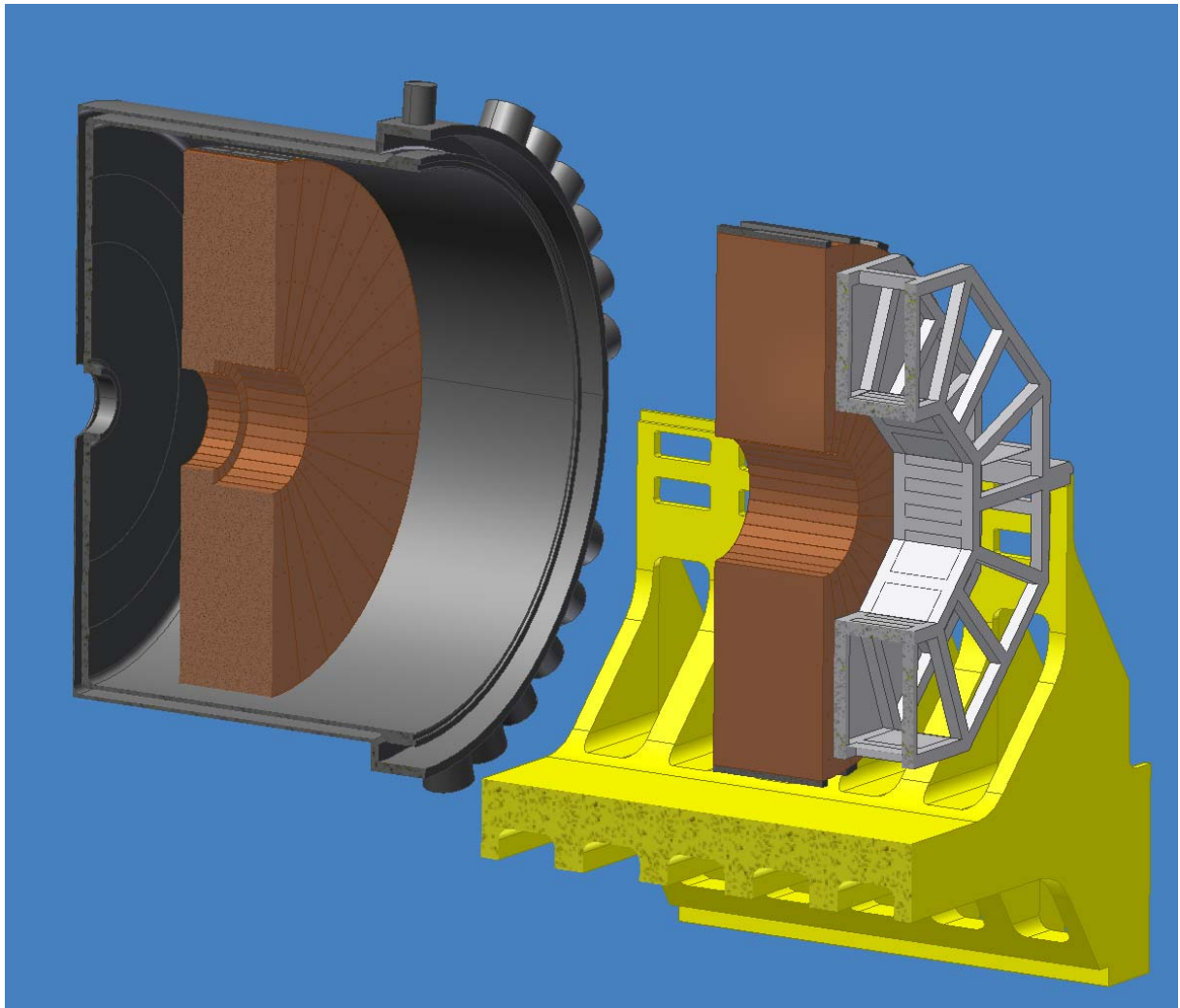


Bild 9

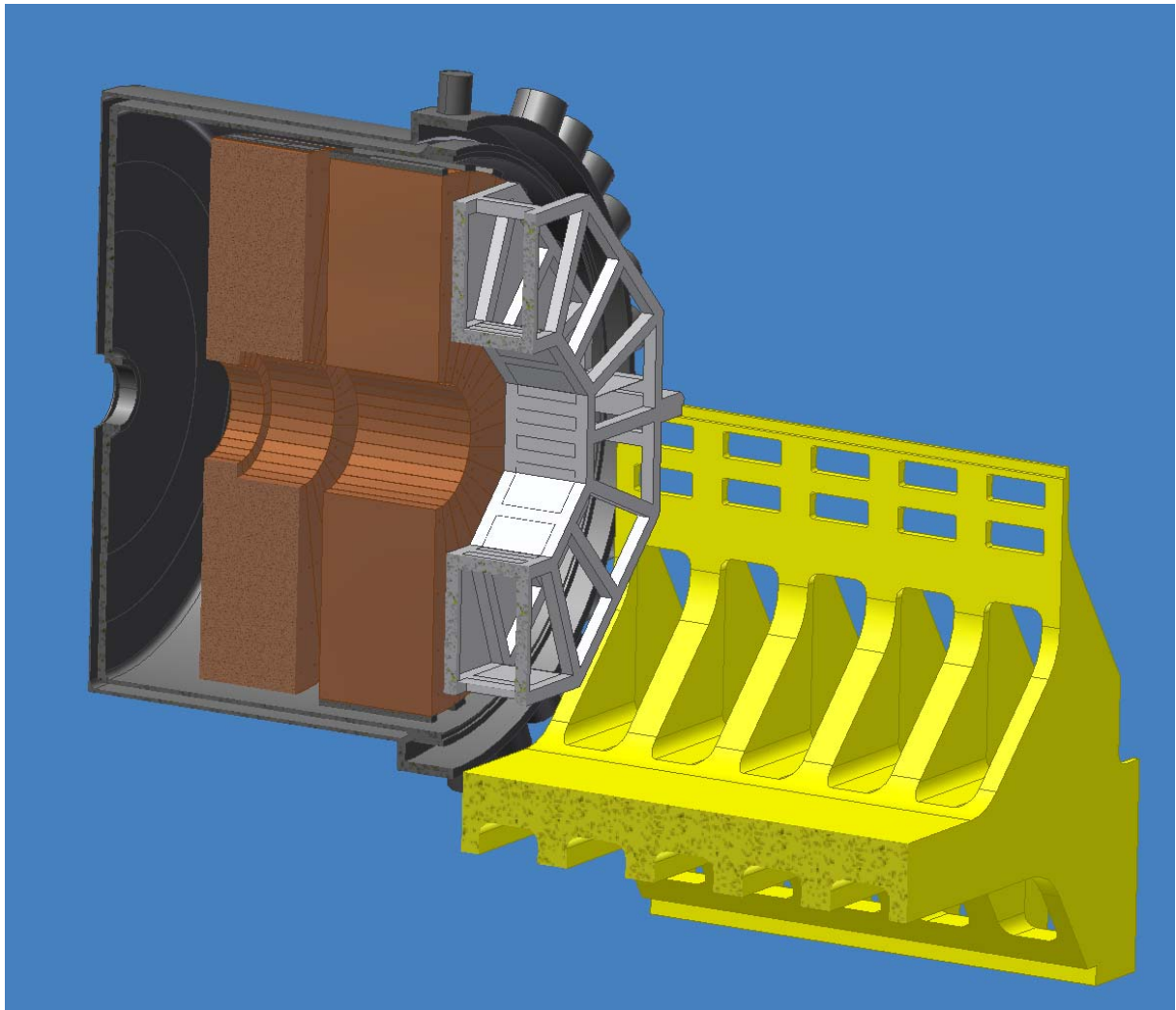


Bild 10

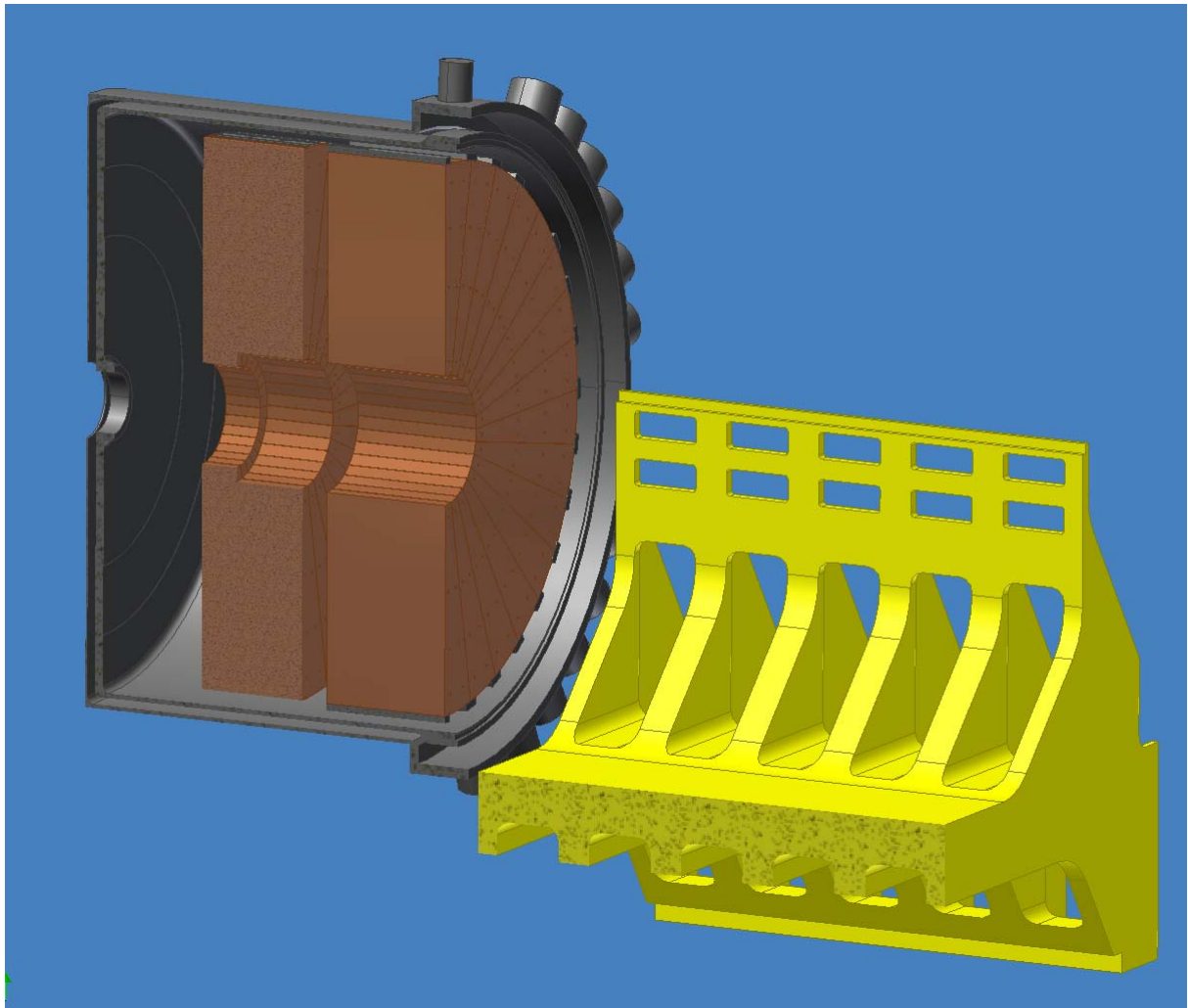


Bild 11

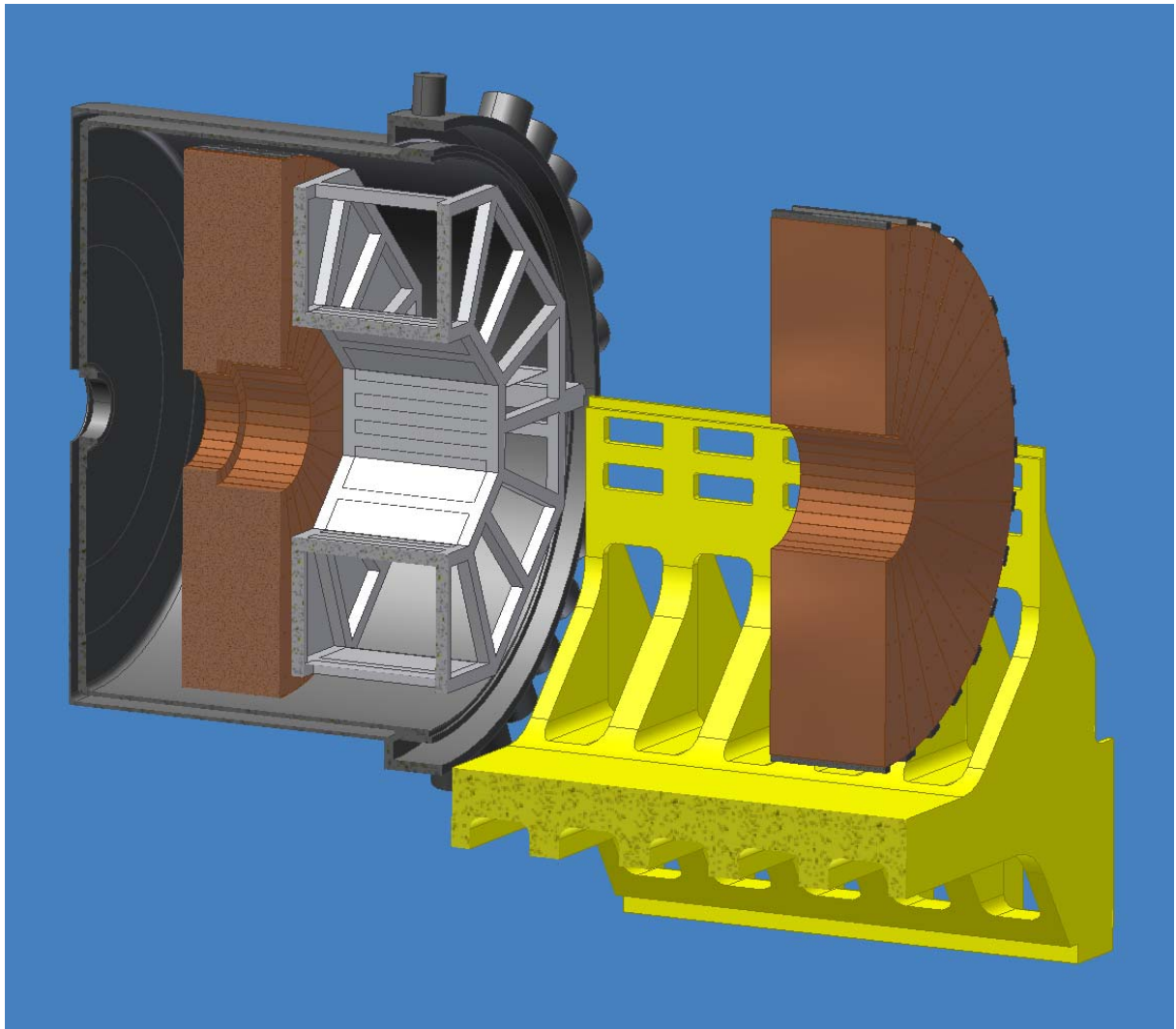


Bild 12

Nach 200 Tagen

Dose rate fields, maps and tables (t=200d)

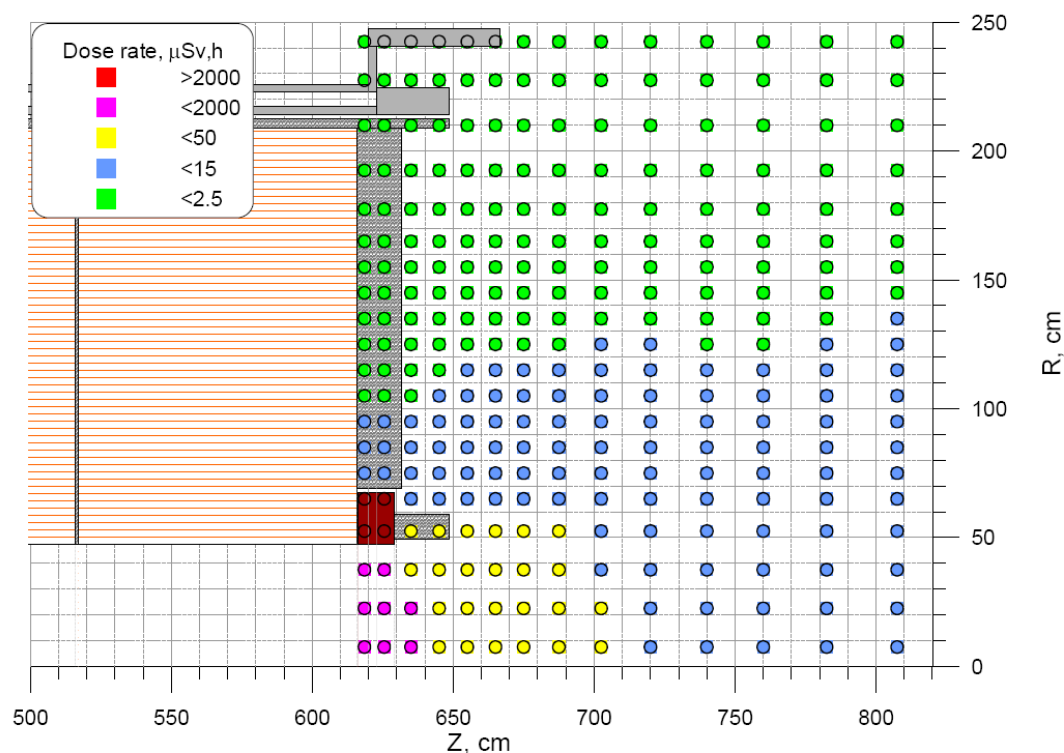


Fig. A5.11. Geomentry 4 (Plug 1 and cold bulkhead are removed), rear

Attachment A5

Dose rate fields, maps and tables (t=200d)

Table A5.11

Z		616-621	621-630	630-640	640-650	650-660	660-670	670-680	680-695	695-710	710-730	730-750	750-770	770-795	795-820
R	ΔZ ΔR	5	9	10	10	10	10	10	15	15	20	20	20	25	25
0- 15	15	69.65	61.66	51.96	43.70	36.93	30.40	26.00	21.36	17.40	14.41	11.68	9.22	7.31	5.97
15- 30	15	67.95	60.30	50.54	42.06	35.08	28.81	23.89	19.87	15.85	12.34	9.86	8.13	6.51	5.18
30- 45	15	69.60	60.94	47.68	37.92	30.64	25.51	21.28	17.51	14.02	11.00	8.50	6.96	5.73	4.62
45- 60	15	61.41	57.30	30.17	25.44	22.18	20.12	17.93	15.14	12.59	10.25	7.99	6.35	5.22	4.36
60- 70	10	28.15	26.72	13.58	12.57	12.25	12.68	12.84	12.09	10.73	9.26	7.61	6.11	4.91	4.09
70- 80	10	9.93	8.45	7.53	8.14	8.11	8.21	8.57	9.10	9.02	8.15	6.98	5.78	4.65	3.82
80- 90	10	5.66	4.89	4.91	5.73	5.76	5.93	6.14	6.12	6.52	7.03	6.51	5.49	4.38	3.54
90-100	10	3.54	3.19	3.36	4.13	4.39	4.30	4.71	4.85	4.51	4.88	5.77	5.40	4.32	3.34
100-110	10	2.44	2.19	2.39	3.02	3.42	3.33	3.49	3.93	3.87	3.40	3.98	4.90	4.45	3.40
110-120	10	1.66	1.52	1.72	2.30	2.65	2.68	2.68	3.05	3.32	2.97	2.65	3.37	4.23	3.66
120-130	10	1.12	1.06	1.27	1.75	2.10	2.18	2.16	2.36	2.72	2.70	2.24	2.14	3.05	3.68
130-140	10	0.78	0.75	0.95	1.33	1.70	1.78	1.78	1.89	2.18	2.38	2.11	1.80	1.88	2.87
140-150	10	0.57	0.55	0.73	1.04	1.38	1.48	1.49	1.56	1.74	1.98	1.99	1.66	1.46	1.77
150-160	10	0.43	0.40	0.56	0.82	1.12	1.24	1.25	1.32	1.44	1.64	1.78	1.62	1.32	1.26
160-170	10	0.32	0.30	0.44	0.65	0.92	1.05	1.05	1.13	1.22	1.35	1.52	1.55	1.29	1.08
170-185	15	0.22	0.21	0.33	0.50	0.74	0.87	0.86	0.92	1.03	1.10	1.21	1.34	1.29	1.03
185-200	15	0.16	0.15	0.25	0.37	0.57	0.73	0.70	0.71	0.84	0.91	0.94	1.03	1.17	1.06
200-220	20	0.12	0.13	0.22	0.30	0.42	0.59	0.59	0.54	0.64	0.76	0.77	0.76	0.89	1.02
220-235	15	0.08	0.10	0.12	0.14	0.30	0.48	0.51	0.43	0.46	0.62	0.68	0.62	0.62	0.82
235-250	15	0.06	0.07	0.08	0.09	0.19	0.36	0.45	0.38	0.35	0.50	0.61	0.57	0.49	0.61

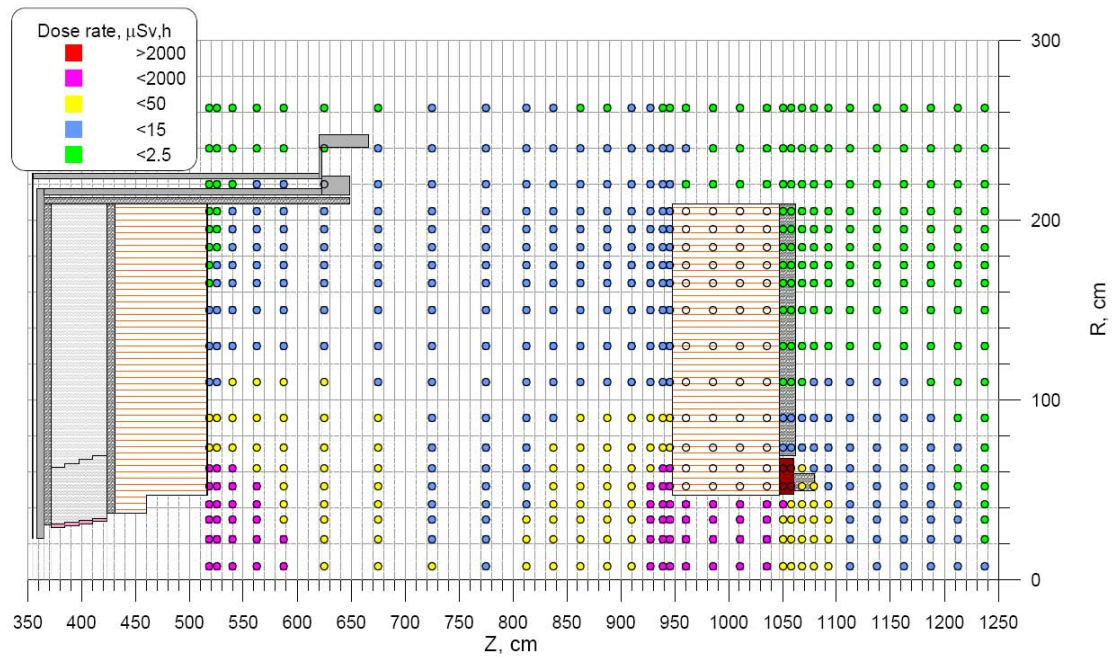


Fig. A5.12. Geomentry 5 (Plug 1 and cold bulkhead are removed, HEC2 is shifted 431 cm)

Table A5.12

Geomentry 5 (Plug 1 and cold bulkhead are removed, HEC2 is shifted 431 cm) - effective dose rate, $\mu\text{Sv/h}$

Z, cm		516-521	521-530	530-550	550-575	575-600	600-650	650-700	700-750	750-800	800-825	825-850	850-875	875-900	900-920	920-935	935-943
R, cm	ΔZ ΔR	5	9	20	25	25	50	50	50	50	25	25	25	25	20	15	8
0- 15	15	190.5	170.5	129.5	83.54	54.66	34.19	20.96	15.66	13.78	15.47	19.06	25.52	35.75	49.54	63.71	76.76
15- 30	15	191.0	166.9	123.7	80.03	52.44	31.66	19.30	14.78	14.41	16.08	18.76	24.21	33.60	47.79	63.11	77.54
30- 37	7	188.7	157.8	112.5	72.48	48.41	29.01	17.56	13.46	13.66	15.96	18.91	23.67	31.96	45.28	62.19	78.90
37- 47	10	176.7	144.2	101.5	66.01	45.03	27.74	16.96	12.65	12.54	14.73	17.91	22.66	30.57	42.87	59.91	79.46
47- 57	10	133.3	112.9	83.99	57.24	40.12	26.20	16.29	12.14	11.47	13.25	15.76	19.78	26.96	38.27	55.09	77.88
57- 67	10	78.03	77.20	66.58	49.05	35.39	24.88	16.04	12.09	11.10	12.79	15.46	19.57	25.71	34.87	47.78	60.66
67- 80	13	41.35	46.14	47.14	40.45	30.15	22.67	15.80	12.47	11.90	13.43	15.21	17.72	22.51	28.85	35.42	39.67
80- 100	20	18.64	23.50	28.10	29.53	25.18	19.53	15.30	13.10	11.83	11.79	12.88	15.26	18.37	20.90	22.53	22.12
100- 120	20	9.01	11.82	16.44	19.15	20.66	16.39	13.23	11.52	10.85	11.06	11.65	12.61	13.51	13.67	13.62	12.16
120- 140	20	5.10	6.72	10.31	12.47	14.68	13.20	11.01	9.92	10.37	10.30	10.41	10.59	10.23	9.47	8.97	7.32
140- 160	20	3.09	4.00	6.73	8.21	10.26	10.79	9.45	8.97	9.01	9.35	9.39	9.14	8.21	7.25	6.60	5.03
160- 170	10	2.30	2.94	5.13	6.13	8.49	9.15	8.94	7.98	7.95	8.48	8.62	8.33	7.23	6.39	5.70	4.22
170- 180	10	1.97	2.53	4.34	5.23	7.54	8.23	8.68	7.31	7.22	7.77	8.03	7.77	6.73	6.04	5.34	3.96
180- 190	10	1.75	2.26	3.73	4.73	6.65	7.60	8.19	6.86	6.53	7.07	7.38	7.21	6.29	5.83	5.10	3.80
190- 200	10	1.63	2.10	3.30	4.51	5.83	7.18	7.52	6.61	5.89	6.35	6.69	6.58	5.87	5.61	4.93	3.75
200- 210	10	1.53	2.00	2.99	4.49	5.09	6.90	6.72	6.45	5.38	5.60	5.96	5.85	5.37	5.38	4.81	3.70
210- 230	20	0.99	1.28	1.78	2.96	2.73	4.31	5.47	6.21	4.98	4.65	4.85	4.77	4.58	4.88	4.39	3.51
230- 250	20	0.57	0.69	0.86	1.48	1.20	2.18	3.63	5.60	4.88	4.01	3.65	3.32	3.42	3.98	3.62	3.05
250- 275	25	0.57	0.65	0.72	1.20	1.05	1.42	2.22	4.31	4.85	3.89	3.06	2.32	2.32	2.82	2.51	2.19

Table A5.12 (cont.)

Z, cm		943-948	948-973	973-998	998-1023	1023-1048	1048-1053	1053-1063	1063-1073	1073-1085	1085-1100	1100-1125	1125-1150	1150-1175	1175-1200	1200-1225	1225-1250
R, cm	$\frac{\Delta Z}{\Delta R}$	5	25	25	25	25	5	10	10	12	15	25	25	25	25	25	25
0- 15	15	83.69	100.6	102.4	80.19	58.11	43.72	37.55	31.57	24.07	17.87	12.25	7.75	5.12	3.79	3.04	2.62
15- 30	15	85.10	108.9	105.0	79.65	57.25	44.21	37.90	31.37	23.45	17.69	12.35	8.10	5.54	4.02	3.09	2.48
30- 37	7	87.90	122.5	109.6	79.39	57.13	45.90	39.29	31.31	22.42	16.87	11.67	7.70	5.39	3.88	2.89	2.24
37- 47	10	91.09	146.1	116.0	79.39	56.79	50.81	42.14	29.83	20.53	15.05	10.60	7.06	5.03	3.65	2.67	2.01
47- 57	10	93.86	199.6	116.7	66.08	43.55	62.18	51.27	24.43	16.36	12.68	9.31	6.34	4.50	3.34	2.47	1.87
57- 67	10	67.27	118.1	69.26	38.50	24.57	38.40	31.65	15.70	12.01	10.15	8.15	5.83	4.26	3.21	2.47	1.90
67- 80	13	40.44	59.83	36.00	20.04	12.34	11.41	9.26	8.68	8.03	7.42	6.70	5.21	4.02	3.17	2.54	2.01
80- 100	20	20.84	24.69	15.19	8.69	5.46	4.54	3.89	4.58	4.81	4.61	4.69	4.20	3.38	2.71	2.25	1.90
100- 120	20	10.64	9.84	5.73	3.38	2.41	2.03	1.79	2.37	2.87	2.76	2.97	3.02	2.77	2.37	1.93	1.56
120- 140	20	6.03	4.07	2.24	1.26	1.00	0.93	0.88	1.29	1.88	1.78	1.94	2.13	2.09	1.95	1.75	1.51
140- 160	20	3.99	1.93	0.95	0.53	0.47	0.46	0.45	0.72	1.28	1.22	1.30	1.53	1.56	1.52	1.44	1.33
160- 170	10	3.38	1.25	0.55	0.30	0.28	0.28	0.28	0.47	0.98	0.96	0.98	1.21	1.27	1.26	1.24	1.17
170- 180	10	3.23	0.98	0.37	0.21	0.19	0.20	0.20	0.35	0.82	0.85	0.82	1.04	1.12	1.11	1.10	1.07
180- 190	10	3.18	0.83	0.25	0.15	0.14	0.15	0.14	0.26	0.69	0.75	0.69	0.89	1.00	0.99	0.98	0.97
190- 200	10	3.20	0.73	0.18	0.10	0.11	0.11	0.10	0.20	0.58	0.67	0.59	0.76	0.88	0.88	0.87	0.87
200- 210	10	3.22	0.70	0.13	0.07	0.08	0.08	0.07	0.14	0.48	0.61	0.50	0.65	0.79	0.80	0.78	0.78
210- 230	20	3.14	2.28	0.72	0.14	0.06	0.04	0.04	0.09	0.37	0.53	0.42	0.51	0.66	0.69	0.68	0.67
230- 250	20	2.83	2.75	2.49	1.40	0.45	0.03	0.03	0.05	0.26	0.45	0.34	0.37	0.52	0.58	0.57	0.56
250- 275	25	2.10	2.25	2.42	2.38	1.78	0.02	0.02	0.03	0.17	0.37	0.30	0.26	0.39	0.47	0.48	0.47

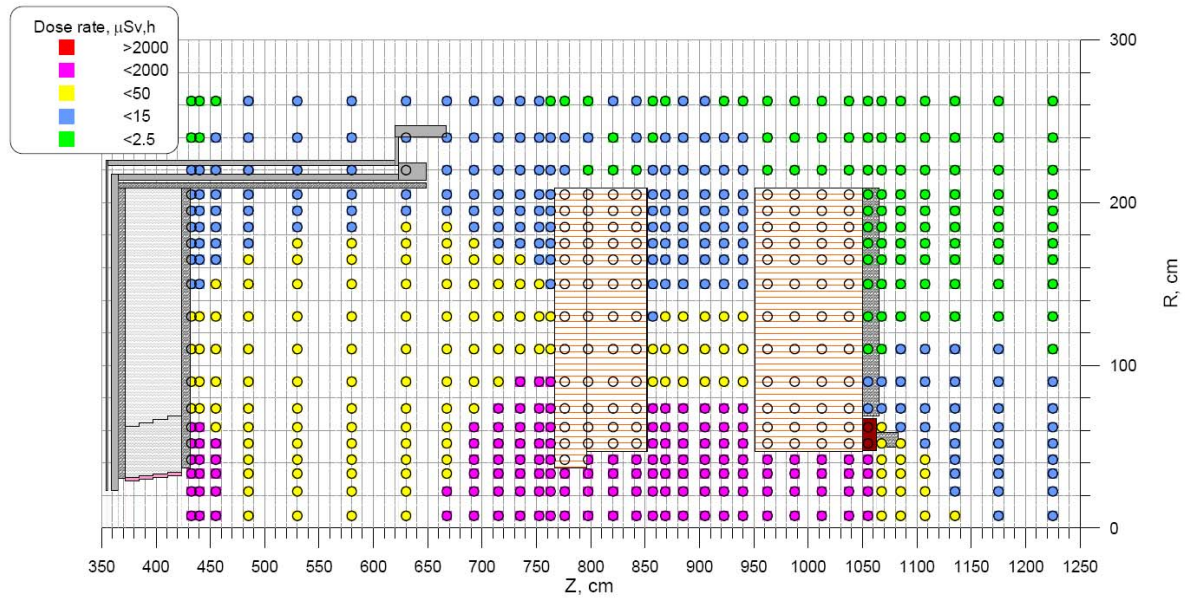


Fig. A5.13. Geomentry 6 (HEC2 is shifted 434 cm, HEC2 is shifted 335 cm)

Table A5.13

Geomentry 6 (HEC2 is shifted 434 cm, HEC2 is shifted 335 cm) - effective dose rate, $\mu\text{Sv/h}$

Z, cm		430-435	435-445	445-465	465-505	505-555	555-605	605-655	655-680	680-705	705-725	725-745	745-760	760-766	766-786	786-809	809-832	832-852
R, cm	ΔZ ΔR	5	10	20	40	50	50	50	25	25	20	20	15	6	20	23	23	20
0- 15	15	88.46	81.18	66.03	48.06	36.21	32.60	37.19	50.23	69.20	98.64	140.8	197.7	243.2	313.4	356.4	311.1	242.6
15- 30	15	86.01	77.80	62.92	45.57	34.19	31.94	38.60	51.28	68.35	94.21	133.7	191.6	242.7	348.1	378.8	320.8	248.0
30- 37	7	82.20	73.14	58.82	42.76	31.95	30.16	36.79	49.54	65.90	90.11	126.5	182.5	240.1	405.2	410.1	334.4	261.6
37- 47	10	78.29	69.66	55.83	40.66	30.49	28.71	34.29	45.94	61.15	83.31	116.1	170.1	231.6	534.2	467.0	356.9	284.1
47- 57	10	69.33	63.34	51.77	38.35	29.35	27.64	33.37	45.20	59.17	78.08	104.9	145.9	177.8	359.7	349.2	331.1	290.1
57- 67	10	59.79	56.11	47.20	36.10	28.55	27.75	33.98	43.99	54.42	70.18	91.17	116.4	128.1	234.1	208.1	184.1	162.8
67- 80	13	48.98	47.47	41.86	34.06	28.46	28.00	32.37	39.57	49.09	61.51	74.12	86.67	89.54	149.9	121.9	97.99	82.31
80-100	20	36.64	37.83	35.52	31.09	26.41	25.17	29.07	35.41	42.23	49.15	53.95	58.52	55.98	86.06	64.04	45.60	35.86
100-120	20	24.59	27.20	27.01	25.24	22.42	22.75	25.91	30.17	34.31	36.47	37.11	38.15	33.86	47.81	32.12	20.61	15.91
120-140	20	16.25	18.83	20.09	20.17	19.77	21.05	22.56	25.31	27.14	26.91	26.35	26.01	21.26	27.15	17.02	9.81	7.40
140-160	20	11.09	13.50	15.34	16.91	18.02	18.44	19.66	20.96	21.39	19.72	19.44	18.37	14.42	16.83	9.86	5.30	4.09
160-170	10	8.78	11.13	13.17	15.24	16.31	16.70	17.74	18.37	17.91	15.58	15.93	14.33	11.03	11.75	6.66	3.49	2.76
170-180	10	7.91	10.26	12.35	13.98	15.26	15.56	16.54	16.95	15.83	13.62	14.03	12.20	9.26	9.29	5.03	2.62	2.17
180-190	10	7.39	9.77	11.51	12.75	14.42	14.48	15.43	15.47	14.10	11.89	12.53	10.42	7.90	7.62	3.89	1.94	1.73
190-200	10	6.83	9.09	10.51	11.82	13.72	13.57	14.44	14.27	12.48	10.48	11.18	8.84	6.64	6.06	3.14	1.56	1.42
200-210	10	6.21	8.34	9.70	11.14	13.05	12.90	13.63	13.08	11.02	9.30	9.97	7.30	5.24	4.27	2.17	1.12	1.13
210-230	20	3.89	5.15	5.91	6.69	7.64	7.72	8.29	10.92	9.04	7.91	8.48	5.63	3.78	3.15	1.82	0.92	1.71
230-250	20	1.74	2.26	2.65	3.05	3.53	3.70	4.41	7.10	6.44	6.46	6.90	4.24	2.95	2.77	2.55	2.13	2.94
250-275	25	1.45	1.89	2.14	2.51	2.95	2.99	2.76	4.42	3.94	5.25	5.35	3.05	2.25	2.20	2.30	2.88	3.36

Table A5.13 (cont.)

Z, cm		852-862	862-875	875-895	895-915	915-930	930-950	950-975	975-1000	1000-1025	1025-1050	1050-1060	1060-1075	1075-1095	1095-1120	1120-1150	1150-1200	1200-1250
R, cm	ΔZ	10	13	20	20	15	20	25	25	25	25	10	15	20	25	30	50	50
	ΔR																	
0- 15	15	185.0	154.3	123.9	104.4	100.1	106.6	121.7	119.1	95.54	71.40	55.29	45.62	34.31	24.35	16.56	10.49	6.49
15- 30	15	182.4	145.8	119.3	102.1	99.93	109.7	132.0	124.1	94.61	69.06	53.67	42.98	31.39	21.88	14.83	9.38	5.86
30- 37	7	178.8	144.7	113.8	96.58	95.87	109.0	142.9	127.7	92.88	67.08	53.02	41.42	28.71	19.32	12.87	8.41	5.44
37- 47	10	169.1	128.2	101.4	87.71	87.80	105.7	167.8	132.6	90.93	64.84	57.08	39.69	25.29	16.69	11.37	7.65	5.06
47- 57	10	131.2	106.2	88.00	78.32	79.00	101.6	204.0	120.9	69.08	44.20	62.99	33.13	19.03	14.00	10.10	6.92	4.69
57- 67	10	91.98	84.59	75.08	69.62	71.39	84.96	121.1	71.04	39.42	24.41	38.26	19.82	12.26	10.53	8.00	5.86	4.36
67- 80	13	58.97	60.64	59.51	58.44	58.39	61.27	62.70	36.85	20.49	12.48	11.09	8.49	8.02	7.54	6.60	4.61	3.43
80- 100	20	33.70	38.73	41.77	43.49	42.61	40.32	27.08	15.55	8.87	5.53	4.41	4.22	4.74	4.79	4.62	3.80	2.61
100- 120	20	20.33	24.53	26.67	28.57	28.37	26.08	11.74	5.87	3.46	2.43	1.97	2.13	2.78	2.90	3.12	2.81	2.32
120- 140	20	12.98	16.63	17.47	18.73	19.49	17.67	5.42	2.30	1.28	1.00	0.91	1.15	1.79	1.86	2.13	2.11	1.82
140- 160	20	8.89	11.74	11.90	12.20	13.81	12.57	2.88	0.98	0.54	0.47	0.46	0.65	1.22	1.23	1.52	1.57	1.47
160- 170	10	6.98	9.29	9.16	8.94	10.79	9.94	1.93	0.56	0.31	0.27	0.28	0.43	0.94	0.93	1.18	1.28	1.26
170- 180	10	6.03	7.95	7.79	7.35	9.24	8.55	1.52	0.38	0.22	0.18	0.20	0.32	0.80	0.79	1.00	1.13	1.13
180- 190	10	5.24	6.79	6.68	6.13	7.91	7.36	1.23	0.26	0.16	0.14	0.15	0.25	0.69	0.67	0.84	1.00	1.00
190- 200	10	4.50	5.75	5.76	5.19	6.76	6.29	1.00	0.19	0.11	0.11	0.11	0.18	0.59	0.58	0.71	0.90	0.88
200- 210	10	3.86	4.86	5.03	4.49	5.77	5.36	0.81	0.13	0.08	0.08	0.08	0.13	0.51	0.52	0.60	0.80	0.79
210- 230	20	3.11	3.75	4.19	3.78	4.53	4.13	1.46	0.12	0.06	0.04	0.05	0.09	0.42	0.45	0.46	0.68	0.68
230- 250	20	2.45	2.67	3.37	3.27	3.33	2.95	2.37	0.31	0.10	0.07	0.06	0.08	0.33	0.41	0.34	0.56	0.58
250- 275	25	2.01	1.82	2.76	3.00	2.40	1.99	2.40	0.88	0.18	0.09	0.07	0.08	0.26	0.37	0.26	0.45	0.50