

Table S1. CRII and dH*(10)/dt values for cut-off rigidities 0.1GV, 3.1GV, 8.5GV and 14.9GV over the years 1996–2019.

Cut-off Rigidity 0.1GV						
	CRII (Ion Pairs/(g*s))			dH*(10)/dt (μSv/h)		
Year	FL310	FL350	FL390	FL310	FL350	FL390
1996	66631.6	93313.2	119780.0	4.354	5.269	7.056
1997	67316.4	94362.8	121220.0	3.824	5.291	6.652
1998	63690.0	88840.0	113600.0	3.672	5.436	6.300
1999	59138.8	82004.8	104286.0	3.497	4.599	6.449
2000	50598.0	69344.0	87232.4	3.405	4.363	5.630
2001	52586.0	72272.0	91166.0	2.825	3.841	5.498
2002	50782.0	69616.0	87595.6	3.092	4.365	5.101
2003	50372.0	69011.2	86788.0	3.310	4.474	5.769
2004	57623.8	79748.8	101231.4	3.745	4.752	6.333
2005	58745.2	81419.2	103494.0	3.460	5.062	6.611
2006	66118.0	92526.0	118700.0	3.476	5.058	6.787
2007	69647.4	97911.2	126122.0	3.966	5.077	6.792
2008	70963.2	99909.2	128928.0	3.386	5.267	6.626
2009	74259.2	104994.0	136022.0	3.909	4.970	6.833
2010	69507.6	97698.8	125828.0	3.840	5.220	6.564
2011	64570.0	90173.2	115448.0	3.739	4.935	6.160
2012	61301.0	85254.0	108720.0	3.450	5.158	6.288
2013	59991.6	83273.6	106002.0	3.589	4.458	5.663
2014	58614.0	81224.0	103230.0	2.876	4.107	5.487
2015	58646.8	81272.8	103296.0	3.648	4.313	5.213
2016	65946.8	92263.6	118340.0	3.120	4.499	5.554
2017	68901.8	96778.4	124554.0	3.720	5.172	5.640
2018	71113.8	100137.8	129252.0	3.388	4.857	6.051
2019	71967.2	101433.2	131088.0	4.007	5.227	6.979
Cut-off Rigidity 3.1 GV						
	CRII (ion pairs/(g*sec))			dH*(10)/dt (μSv/h)		
Year	FL310	FL350	FL390	FL310	FL350	FL390
1996	57959.6	79204.8	99028.0	3.054	4.022	5.286
1997	58388.4	79819.2	99812.0	3.280	3.999	5.122
1998	56100.0	76540.0	95570.0	2.960	4.066	5.028
1999	53066.2	72202.0	89971.0	2.872	3.757	4.709
2000	46904.4	63428.8	78640.8	2.941	3.480	4.467
2001	48398.0	65552.0	81376.0	2.793	3.634	4.446
2002	47043.6	63627.2	78895.2	2.297	3.500	4.593
2003	46732.8	63184.8	78327.6	2.734	3.729	4.436
2004	52016.8	70709.2	88040.8	2.875	4.132	4.932
2005	52799.8	71818.0	89479.0	2.817	4.151	4.805
2006	57638.0	78744.0	98440.0	3.380	4.081	5.217
2007	59809.8	81847.8	102428.0	3.053	4.106	4.946
2008	60590.4	82968.4	103896.0	3.213	4.114	5.519
2009	62489.0	85697.6	107482.0	3.224	4.080	5.376
2010	59725.2	81727.2	102272.0	3.198	4.110	5.178
2011	56658.8	77340.8	96617.2	3.237	4.248	4.815
2012	54529.0	74299.0	92672.0	3.300	4.381	5.128
2013	53643.4	73034.0	91037.0	2.734	3.739	4.320
2014	52711.0	71690.0	89315.0	2.445	3.403	4.078
2015	52733.2	71722.0	89356.0	2.676	3.513	4.596
2016	57530.8	78590.4	98244.0	2.647	3.468	4.559
2017	59358.6	81204.6	101596.0	2.860	3.741	4.814
2018	60678.6	83095.6	104064.0	2.929	3.868	4.887
2019	61178.4	83816.4	105016.0	2.998	4.065	4.984

Cut-off Rigidity 8.5 GV						
	CR11 (ion pairs/(g*sec))			dH*(10)/dt (μSv/h)		
Year	FL310	FL350	FL390	FL310	FL350	FL390
1996	36896.0	48553.2	58806.0	1.580	2.036	2.482
1997	37024.0	48722.8	59014.0	1.615	2.052	2.504
1998	36340.0	47790.0	57870.0	1.640	2.038	2.479
1999	35391.2	46505.8	56266.2	1.606	1.980	2.400
2000	33258.4	43602.8	52666.0	1.464	1.885	2.287
2001	33804.0	44342.0	53590.0	1.452	1.897	2.264
2002	33309.6	43673.2	52754.0	1.466	1.907	2.250
2003	33194.4	43515.6	52557.6	1.519	1.935	2.321
2004	35045.6	46040.8	55686.0	1.516	2.042	2.415
2005	35304.8	46388.2	56119.8	1.611	1.987	2.441
2006	36800.0	48426.0	58650.0	1.607	2.078	2.512
2007	37432.0	49271.2	59700.4	1.643	2.049	2.445
2008	37644.8	49566.0	60067.6	1.568	2.139	2.431
2009	38153.6	50264.8	60936.0	1.640	2.102	2.548
2010	37408.0	49238.8	59659.6	1.512	1.921	2.311
2011	36507.2	48023.2	58156.0	1.557	1.952	2.409
2012	35859.0	47140.0	57054.0	1.473	1.885	2.332
2013	35578.4	46760.6	56583.4	1.483	1.883	2.236
2014	35276.0	46349.0	56071.0	1.385	1.801	2.166
2015	35283.2	46358.8	56083.2	1.351	1.788	2.149
2016	36768.0	48383.6	58598.0	1.409	1.763	2.188
2017	37304.0	49098.4	59482.8	1.462	1.857	2.301
2018	37668.2	49599.0	60108.4	1.503	1.904	2.242
2019	37800.8	49786.0	60339.6	1.489	1.955	2.328
Cut-off Rigidity 14.9 GV						
	CR11 (ion pairs/(g*sec))			dH*(10)/dt (μSv/h)		
Year	FL310	FL350	FL390	FL310	FL350	FL390
1996	26450.4	34011.2	40623.2	0.917	1.193	1.410
1997	26501.6	34084.8	40712.8	0.957	1.159	1.400
1998	26210.0	33690.0	40230.0	0.914	1.207	1.405
1999	25781.4	33132.4	39539.2	0.918	1.131	1.323
2000	24798.0	31834.0	37958.8	0.923	1.154	1.352
2001	25050.0	32170.0	38362.0	0.898	1.101	1.356
2002	24822.0	31866.0	37997.2	0.784	1.018	1.180
2003	24768.0	31794.8	37910.0	0.903	1.135	1.312
2004	25623.6	32926.6	39295.0	0.915	1.176	1.367
2005	25740.6	33079.6	39476.8	0.892	1.153	1.383
2006	26412.0	33956.0	40556.0	0.868	1.112	1.282
2007	26672.6	34311.6	40990.6	0.974	1.209	1.391
2008	26767.6	34433.6	41139.6	0.908	1.238	1.335
2009	26988.6	34729.2	41498.2	0.951	1.160	1.360
2010	26662.4	34298.4	40974.4	0.944	1.155	1.406
2011	26284.8	33786.8	40348.8	0.968	1.193	1.464
2012	25992.0	33407.0	39886.0	0.901	1.170	1.343
2013	25869.8	33246.8	39674.4	0.942	1.166	1.360
2014	25727.0	33062.0	39456.0	0.885	1.166	1.307
2015	25730.4	33066.4	39461.2	0.884	1.134	1.329
2016	26399.2	33937.6	40533.6	0.906	1.115	1.317
2017	26618.2	34241.2	40904.2	0.920	1.188	1.368
2018	26778.4	34447.4	41156.4	0.951	1.153	1.369
2019	26839.6	34525.6	41251.6	0.902	1.164	1.408