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ACTIVATION DOSE RATE IN ACCSESS SCENARIOUS TO THE AREA BETWEEN DISK SHIELD AND TOROID

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Abstract

The present note reports on the results obtained in evaluating activation dose rate for the access scenarios to the area between JDisk and Toroid and to the Big Wheel muon chambers.

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1. Introduction

Shielding and equipment are activated by elementary particles during LHC operation. Induced radioactivity depends on flux, energy spectra of particles, activation cross-section, concentration of target nuclei in the material, exposure time, and time after shut down.

Interactions of hadrons with stable nuclei produce most contribution to induced radioactivity. From the methodical point of view, its is convenient to divide the energy range onto two sub-ranges: (1) from thermal energies to 20 MeV, and (2) above 20 MeV. The point is that different processes of radionuclide production predominate in the energy ranges. At energy below 20 MeV, neutron induced reactions like (n,γ), (n,p), (n,α), and (n,2n) predominate. While, at energy above 20 MeV hadron induced reactions (x,Spall), were *X* is proton, neutron, Pi+, or Pi-, are most important. The division is also convenient due to different representation and availability of activation cross-sections. Neutron cross-sections are studied well for energy below 20 MeV as widely used in reactor applications. For energy above 20 MeV activation cross-sections are usually studied in less detail. As a rule, only proton cross-sections are studied well enough and used as a conservative estimation for other hadrons.

The note reports on the results achieved during the second phase of implementation of the ISTC #1800 project. The basic aim for the phase is simulating activation dose rate for access scenarios on the base of previously developed activation code and associated data sets [1].

The following results are given:

- Equivalent dose rate for the access scenario to the area between JDisk and Toroid - both with Beam Pipe in place and without Beam Pipe;
- Equivalent dose rate for the access scenario to the Big Weel muon chambers.

2. The simulations

Induced activity

It is convenient to use activation integral for calculation of induced activity. The integral, calculated per one target nuclear, shows the rate of a nuclear reaction:

$$q = \int_0^\infty \sigma(E)\varphi(E)\,dE\,,$$

where, ***σ(E)*** - activation cross-section, ***φ(E)*** - flux of particles.

Having solved the balance equation for the number of radioactive atoms, one could come to the formula for activity per unit volume

$$A_v = nq\left(1-\exp(-\lambda T)\right)\exp(-\lambda t) \qquad (1)$$

where λ is the decay constant, $\lambda = \ln(2)/T_{1/2}$ and $T_{1/2}$ is half life;
n - number of target nuclei per unit of volume;
T - is exposure time in the steady flux;
t - time after shut down.

In (1) we disregard the burning-out processes for both stable and target nuclei. The same expressions one could formulate for the daughter radioactive nuclei produced by radioactive decay of the radionuclide-product of nuclear reaction. Practically, it is enough

to consider a mass-chain of three radioactive nuclei, as there is not a radionuclide with half decay exceeding few hours, which would have a longer mass-chain.

In the case the flux cannot be considered as steady in time, its possible to approximate it with a step-wise function of time. So that, the formula (1) will transform into the following:

$$A_{\mathrm{v}} = \frac{nq_{nom}}{W_{nom}} \left\{ \sum_{j=1}^{J} W_j \left(1 - \exp(-\lambda \Delta T_j)\right) \exp\left(-\lambda \ (t + T - \sum_{i=1}^{j} \Delta T_i) \right) \right\} \qquad (2)$$

where q_{nom} - is activation integral calculated for the nominal W_{nom} luminosity; W_j – luminosity during the time period ΔT_j; $T = \sum_{j=1}^{J} T_j$ - full exposure time.

Number of target nuclei per unit volume in formulas (1) and (2) are calculated using:

$$n = P\rho N_A / A, \qquad (3)$$

where, P - natural abundance of the isotope in natural material; ρ - density; N_A – Avogadro constant; A- atomic weight of the element.

Volume activity can be expressed in terms of contact dose rate - dose rate at the surface of a semi-infinite source uniformly contaminated with volume activity A_v.

Any radionuclide emitting I gamma rays with different energy E_{0i}, MeV, and absolute intensity n_i, photons per decay, will produce contact dose rate $\dot{H}$, Sv/h:

$$\dot{H} = \frac{2\pi \Gamma_H A_v}{\mu^S_{en,m}(\bar{E})\rho} 3600 \cdot 10^4, \qquad (4)$$

where $\mu^S_{en,m}(\bar{E})$, cm^2/g, - mass energy attenuation coefficient for average energy $\bar{E}$ emitted by the radionuclide; ρ- is density of material, $\mathrm{g/cm}^3$.

Γ_H, $\frac{\mathrm{Sv} \cdot \mathrm{m}^2}{\mathrm{Bq} \cdot \mathrm{s}}$, – so-called "gamma-factor", which is constant for the radionuclide:

$$\Gamma_H = \frac{\sum_{i=1}^{I} \left(E_{0i} n_i \mu^{tiss}_{en,m}(E_{0i}) w\right) 1.602 \cdot 10^{-13}}{4\pi}. \qquad (5)$$

where $\mu^{tiss}_{en,m}(E_{0i})$ - mass energy attenuation coefficient for energy E_{0i} emitted by the radionuclide in the biological tissue, m^2/kg;
w= 1 Sv/Gy - tissue weighting factor for photons;
Factor 1.602E-13 is used to transform energy E_{0i} from MeV to Joles.

If the source contains more than one radionuclide, then the contact dose will be the sum for all the radionuclides.

Another value, which can be used for characterization of emitting power of a radioactive source, is the so-called "gamma-equivalent", which is a product of gamma-factor by activity. Gamma-equivalent is equal to the dose from a point-wise radionuclide source with activity A at the distance 1 m. For example, volume gamma-equivalent can be calculated with the formula

$$k_{e,v} = A_v \Gamma_v \qquad (6)$$

There exists a direct relation between the gamma-equivalent and contact dose rate:

$$\dot{H} = \frac{2\pi k_{e,v}}{\mu^{S}_{en,m}(\overline{E})\rho} 3600 \cdot 10^{4} \qquad (7)$$

The described methods for simulation of induced activity and dose characteristics (contact dose rate and gamma-equivalent) have been implemented in the ACTIVATION-2 code [2,3]. Additionally, the code allow to calculate a distributed volume source which is used in the study as input for simulation of photons transport with radiation transport codes DOT-III [4] and MCNP [5]. The ACTIVATION-2 code is equally applicable for study of both low energy neutrons and high-energy hadron activation if relevant group activation cross-sections libraries are available.

Dose rate

Both simple engineering methods and radiation transport codes are used in the present study for simulating of dose rate fields. Engineering methods are based on simplification of a real geometry and radiation source distribution that allows an analytical solution. A complex geometry can be represented as a set of sources of simple shape and dose rate will be the sum over the sources. Implementation of engineering methods, in some cases, allows to get rather a precise estimation for dose rate. For example, formula (7) gives absolutely correct results in the case of uniformly contaminated semi-infinite source. Though applicability of every particular method is limited and its use must be justified on case-by-case basis. If geometry is complex enough or radiation source is not uniform, the only way to get correct solution is to use venerable codes for simulating radiation transport in real geometry. In this study we use DOT-III two-dimensional discrete ordinate radiation transport code and MCNP-4A Monte-Carlo code.

To estimate dose rate from Beam Pipe we use the following engineering method.

The Beam Pipe was modeled as a set of point-wise sources positioned along the Z-axis and dose rate in a point (Z_0,R_0) is sum of contributions over all the sources:

$$\dot{H} = 3600 \sum_i \frac{k_{e,m}(z_i) m(z_i)}{(z_i - Z_0)^2 + (R_0)^2}, \qquad (8)$$

where $\dot{H}$ - equivalent dose rate, Sv/h,

$k_{e,m}(z_i) m(z_i)$ is gamma-equivalent of source *i*, Sv.m^2/s;

$k_{e,m}(z_i)$ - specific gamma-equivalent, Sv.m^2/(s.kg),

$m(z_i)$ - mass of the source, kg,

At that the doses will be slightly conservative as no attenuation of gamma radiation in the Beam Pipe was taken into account. Beam Pipe itself is a thin stainless tube (0.8 mm) and attenuation of gamma radiation in it is negligible. There are flanges in the place of conjunction between Beam Pipe sections. Cross-section of each flange is 14x14 mm. Consequently dose rate may be overestimated in the region close to the flanges by some 10%. Besides this method does not allow calculating surface doses because dose rate at the surface of a point source is infinitely high.

Dose rate fields from JDisk and Toroid were calculated with DOT radiation transport code and DLC-23/CASK cross-section library [6]. It is known that a discrete ordinate code

like DOT can result in significant inaccuracy being implemented for geometry with localized source surrounded with low-density material like air due to the so-called "ray-effects", especially when a full symmetric angle mesh of low order is used. Usual way to cope with ray-effects is to use a biased angle mesh. Though choose of a particular biased mesh should be justified by comparison with a method free of ray effects— either engineering, in simplified geometry, or with Monte-Carlo method in real geometry. In order to estimate the related inaccuracy of DOT results, we done calculations in real geometry with MCNP code. Angle mesh with 100 directions biased towards detector was found to be the most correct for the particular problem.

3. Input data

In order to calculate specific induced activity one should know:

- flux of incident particles;
- concentration of target nuclei;
- cross-section of nuclear reactions producing radioactive nuclei;
- operation scenario: time of operation ***T*** and time of cooling ***t***.

Fluxes

Fluxes in the region 0<R<12 m, 0<Z<24 m, together with a readback procedure, were produced by Mike Shupe with GEANT/GCALOR. The following data available [7]:

- Fluxes on 10 cm x 10 cm grid

1. High energy neutrons above 20 MeV;
2. Fast neutrons - 2.19 MeV to 20 MeV;
3. Intermediate neutrons - 3.78 keV to 2.19 MeV;
4. Moderated neutrons - 0.414 eV to 3.78 keV;
5. Thermal neutrons - 10E-5 to 0.414 eV;
6. Protons above 20 MeV;
7. Pi minus above 20 MeV;
8. Pi plus above 20 MeV;
9. Stars, threshold 50 MeV.

- Neutron spectra on 100 cm x 100 cm grid, 61 energy groups.
- Charged hadron spectra on 50 cm x 50 cm grid, 21 energy groups:

1. protons,
2. π- pions,
3. π+ pions.

The data was calculated for baseline geometry of February 2001. Totally, 1505 events were processed.

Cross-sections

Cross-sections of nuclear reactions producing radioactive nuclei are usually available in form of data libraries.

Historically, neutron cross-sections, ranging from thermal energies up to 20 MeV, are studied rather well, because they are extensively used in fission reactor applications. There are number sources available, e.g ENDF, JANDL, IRDF.

Calculated proton cross-sections for threshold reactions are available up to energy 200 MeV from MENDL-2 data library [8]. Proton reaction data up to energy 10 GeV are

also available in the form of experimental or calculated data compilations for a limited list of materials [9,10].

Cross-section data set for protons was prepared in the same energy group structure as fluxes. By now the data set includes Be, C, N, O, F, Al, Ar, Ti, Mn, Fe, Ni, Cu, Au. For other elements we use cross-sections of material with a most close atomic number. For example, in the study we use cross-sections for Mn instead of Cr, Cu instead of Zn, and Au instead of Pb.

There were no pion activation cross-sections data found so far. For the purpose of this study, proton cross- sections are used for all hadrons with energy above 20 MeV. The estimation is rather valid for neutrons and results are certainly conservative for pions (up to 30%), that can be concluded from the energy dependence of hadrons inelastic cross-sections.

Geometry

For the purpose of this study the version of GEANT/GCALOR geometry description file of February 2001 was used to define material composition of JDisk and Toroid.

- JDisk materials were taken cast iron, brass (90% Cu, 10% Zn), and aluminum alloy. Description of geometry is given in Table 1.
- Toroid materials were taken cast iron, brass (90% Cu, 10% Zn), aluminum alloy 5000, Polyethylene with Li, and Lead. Description of geometry is given in Table 2.
- Beam Pipe materials was taken stainless steel. Geometry was adopted from drawings LHCVC1T_0002 B, LHCVC1A_001 B, and LHCVC1J_001. Description of geometry is given in Table 3.

Access scenarios had been formulated by V.Hedberg [11]. The distance between JDisk and shifted Toroid was taken 570 cm for the relevant scenario. The distance between JDisk and shifted muon chambers was taken 106 cm.

Concentrations

Concentrations of target nuclei for activation calculations were taken from [12]. Table 3 summarizes concentrations of elements assumed in the present study.

Operation scenario

For the purpose of this study there is no need in detail specifying LHC operation history. It is assumed, for the short term operation scenarios (less than one year), that LHC is operated at high luminosity during T and then is shut down during time t. For long-term operation scenarios, 120 days per year run at high luminosity was assumed and the rest of the year LHC is shut down.

4. Results

Equivalent dose rate fields for the studied access scenarios were calculated for T=30 days, 100 days, 5 years, and 10 years; time after shut down is 1 day, 5 days, and 100 days. Dose rate is given in μSv/h.

Equivalent dose rate fields in the area between JDisk and shifted Toroid (fig. 1) with beam Pipe in place are given in Table 5 and, without Beam pipe (fig.2), in Table 6. Both high energy hadron and low energy neutron activation was taken into consideration.

Equivalent dose rate fields resulted from high-energy hadron activation in the area

between JDisk and shifted muon chambers (fig. 3) are given in Table 7 and from low energy neutron activation in Table 8.

Equivalent dose rate field from individual components— JDisk (fig.4), Toroid (fig.5), and Beam pipe (fig.6) are given in tables 9-14. Dose rate resulted from hadron and low energy neutron activation are given in separate tables.

It is known that a discrete ordinate code like DOT can result in significant inaccuracy being implemented for geometry with localized source surrounded with low-density material like air due to the so-called "ray-effects". In order to estimate the related inaccuracy, some calculations were done for the same geometry with MCNP code. Equivalent dose rates resulted from activation of JDisk by low energy neutrons calculated with both DOT and MCNP are given in Table 15. Ray effect shows itself by unphysical oscillation of dose rate. The closer to the source (JD surface) the less inaccuracy resulted from ray effect. In the region close to the beam pipe (0< R< 100 cm), where the dose rate is high, the difference do not exceeds 40%. In the region 100 cm< R< 425 the difference may be within 2. Though dose rate level in this region is less than 1 μSv and may be considered as insignificant. So that, DOT together with chosen gamma-ray transport cross-section library, space mesh, and angle mesh allows to get satisfactory results and its use for multiple calculation is justified, as calculation of the same problem with MCNP takes much more computation time.

5. Conclusions

Levels of equivalent dose rate in the access scenario into the region between Jdisk and shifted Toroid are significant. Maximum dose rate is at the front surface of JD plug and reach 2.7 mSv/h (Table 5 -- T=10 year, t=1 day). At the locations most close to the Z-axis, the contact dose rate ranges from 0.3 mSv/h up to 1.8 mSv/h in 5 days after shutdown. In these regions high-energy hadrons produce predominating contribution to the total dose rate. Though low energy neutrons activation contributes 2-20% on the front surface of JD plug for various exposure and cooling time assumptions.

Contribution from the Beam Pipe turned out to be rather high (see Tables 5-6). It is comparable with contribution from activation of JD Plug and exceeds activation of Toroid. More precise estimation is absolutely necessary for the Beam Pipe, as here only estimation was made. The estimation is based on not yet finalized design and, that is more important, hadron fluxes had been calculated with a rather rough space binning along the R-axis.

Dose rate in the access scenario to the Big Weel muon chambers are much less than in the previous scenario. Maximum dose rate is at the side surface of JD plug and may reach 0.5 mSv/h (Table 7, 8 -- T=10 year and t=1 day). Though, at the distance 1 m along R the dose rate do not exceed 30 μSv/h in 5 days after shutdown. Contribution tho the total dose rate of activation induced by low energy neutron does not exceed 50-60% in 1 day after shutdown and 20-30% for 5 and 100 day after shut down.

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Table 1

JD geometry and materials taken for calculations

##	Zmin	Zmax	Rmin	Rmax	Material
1	669.5	671.5	12.8	93	Iron
2	668.5	671.5	389	423	Iron
3	671.5	674.5	33	100	Iron
4	671.5	674.5	100	275	Polyethylene +Li
5	671.5	674.5	411	423	Polyethylene +Li
6	674.5	676.5	33	275	Iron
7	676.5	684.5	33	423	Iron
8	671.5	680	12.9	33	Brass
9	680	730	13.5	33	Brass
10	730	780	14.5	33	Brass
11	780	852.5	15.5	33	Brass
12	684.5	730	33	38	Iron
13	730	780	33	38	Iron
14	780	852.5	33	38	Iron
15	684.5	690	38	74.3	Brass
16	690	700	38	74.3	Brass
17	700	710	38	74.3	Brass
18	684.5	690	74.5	147.67	Brass
19	690	695	74.3	114.45	Brass
20	695	700	74.5	88.67	Brass
21	684.5	695	147.67	154.67	Polyethylene +Li
22	690	697	114.45	147.67	Polyethylene +Li
23	697	702	114.45	121.45	Polyethylene +Li
24	695	702	88.67	114.45	Polyethylene +Li
25	702	707	88.67	95.67	Polyethylene +Li
26	700	707	74.3	88.67	Polyethylene +Li
27	684.5	700	154.67	157.67	Lead
28	697	700	121.45	154.67	Lead
29	700	705	121.45	124.45	Lead
30	702	705	95.67	121.45	Lead
31	705	710	95.67	98.67	Lead
32	707	710	74.3	95.67	Lead
33	710	735	38	75.85	Brass
34	735	783	38	80.2	Brass
35	710	735	75.85	82.85	Polyethylene +Li
36	735	783	80.2	87.2	Polyethylene +Li
37	710	735	82.85	85.85	Lead
38	735	783	87.2	90.2	Lead

Table 2

JT and Toroid geometry and materials taken for calculations

##	Zmin	Zmax	Rmin	Rmax	Material
1	854.2	880	16.6	81.5	Brass
2	880	910	17.2	81.5	Brass
3	910	940	17.7	81.5	Brass
4	940	970	18.2	81.5	Brass
5	970	1000	18.8	81.5	Brass
6	1000	1050	19.6	81.5	Brass
7	1050	1100	20.5	81.5	Brass
8	1100	1150	21.5	81.5	Brass
9	1150	1200	22.5	81.5	Brass
10	1200	1250	23.5	81.5	Brass
11	1250	1283	24.5	81.5	Brass
12	854.2	880	81.5	86.5	Lead
13	880	910	81.5	86.5	Lead
14	910	940	81.5	86.5	Lead
15	940	1000	81.5	86.5	Lead
16	1000	1283	81.5	86.5	Lead
17	785	854.2	81.5	86.5	Lead
18	793	1283	87.5	91.5	Iron
19	1283	1291	24.7	86.5	Brass
20	809	1257	92.5	94.5	Aluminum
21	787	809	91.5	123.5	Polyethylene +Li
22	1257	1279	91.5	123.5	Polyethylene +Li
23	787	1279	524	530	Aluminum
24	869	873	107.5	400	Aluminum
25	1193	1197	107.5	400	Aluminum
26	787	794.5	123.5	524	Aluminum
27	785	854.2	40	81.5	Brass

Table 3

Beam pipe geometry taken for calculations

##	Section	Element	Zmin	Zmax	Mass of SS, kg
1	VA	Bellows	853.5	864.7	0.45
2		Tube	864.7	868.6	0.06
3		Flange	868.6	870	0.9
4	VT	Flange	870	871.4	0.9
5		Tube	871.4	1046.5	2.8
6		Tube	878.5	1039.3	3.5
7		Tube	1046.5	1278.7	5.2
8		Flange	1278.7	1300.7	3
9	VJ	Flange	1300.7	1302.9	0.9
10		Tube	1302.9	1320.7	0.4
11		Bellows	1320.7	1332.1	0.4
12		Tube	1332.1	1392.8	1.3
13		Bellows	1392.8	1404.2	0.4

Table 4

Concentrations of elements in materials, %

Element	Cast iron ASTM A 48 Class 40	Poly. + Li	Aluminum 5000 Series Alloy	Bronze Commercial 220	Chemical Lead, UNS L51120	Stainless Steel 304
H		0.13				
Li		0.05				
C	3.5	0.82				0.08
Mg			4.5			
Al			94.8			
Si			0.4			
Ti			0.15			
V						
Cr	0.45		0.25			19
Mn	0.9		1			2
Fe	95		0.4		0.002	71
Co	0.015(*)					0.2
Ni	0.2					10.5
Cu	0.4		0.1	90		
Zn			0.25	10		
As					0.002	
Zr						
Mo	0.1					
Ag					0.02	
Sn					0.002	
Sb					0.002	
Pb					99.9	

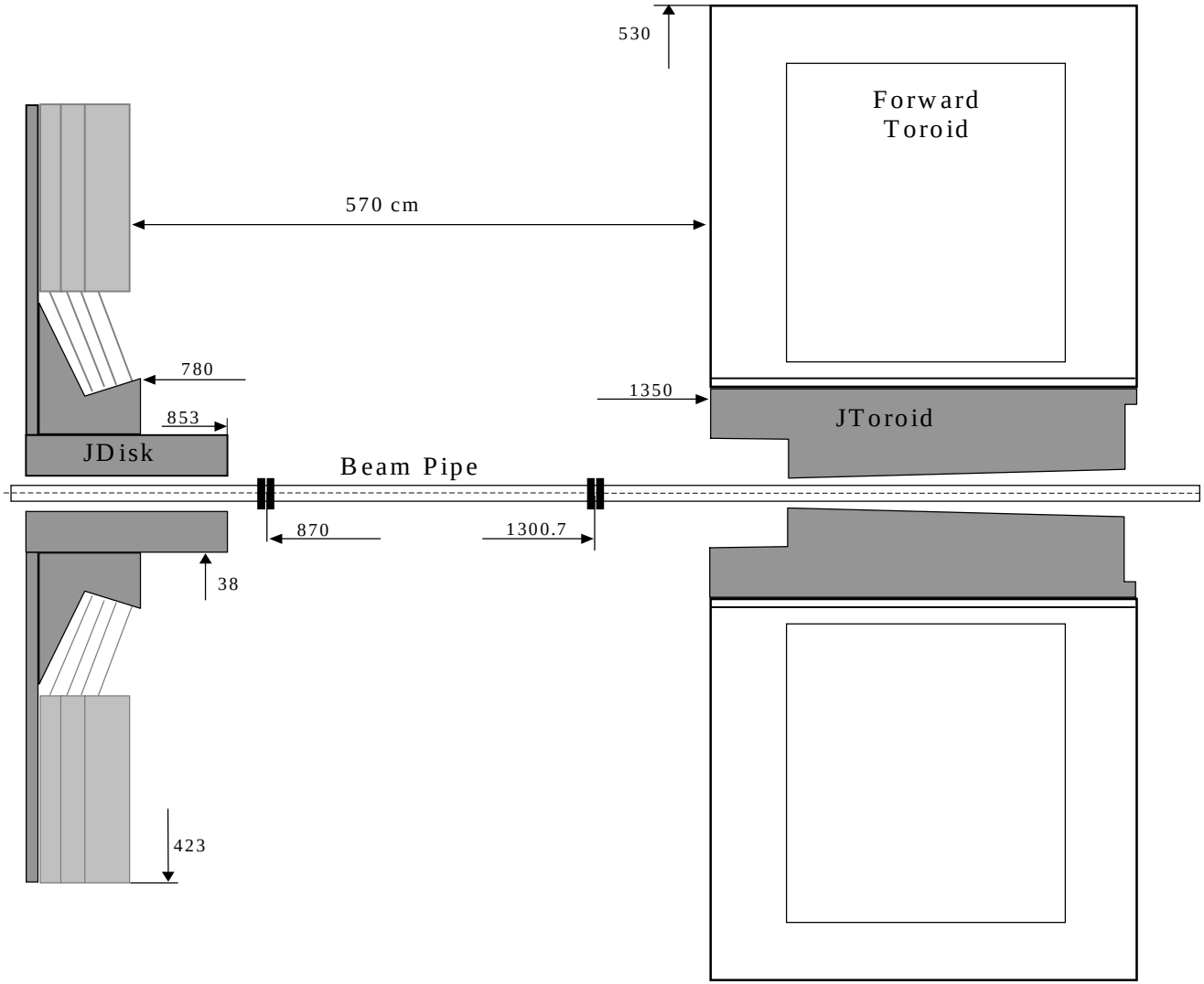

Fig.1. Access scenario to the area between JDisk and Forward Toroid with Beam Pipe in place.

Table 5

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 30d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					1839.9	1732.7	1707.5	1275.2	967.2	1176.4	1525.6	857.4	584	720.7	1356.1	782.9	643.2	595.3
20- 38	18					699	715.1	729.3	655.9	562.9	612.2	704.1	456.9	329.1	412.3	603.1	484.3	460.6	460.2
38	0.	459.2	319.6	246.1	180.5	397.1	429.3	470.4	471.2	438.4	458.8	493.9	346.4	259.3	317.3	418.1	384.9	390	395.6
38- 60	22	273.8	232.1	202.9	194.1	288.9	305.3	327.3	342.1	336.2	349.2	357.1	266.3	207.7	243.2	299	282.8	279.8	282.4
60- 80	20	116	131.4	141.6	159.9	188.8	196.6	204	221.1	228.5	236.7	239.2	186.9	153.5	170.2	182.5	164.3	154.9	148.1
80- 100	20	59	80.1	102.2	123.2	134	139.7	144.4	158	167.1	170.6	174.5	143	119.8	127.4	119.7	103.5	91.5	82.8
100- 125	25	45.5	57.3	76.3	91.4	98.8	102.6	106.2	113.3	122.3	128.7	121.6	113.7	95.1	90.9	82.9	70.3	63	58
125- 150	25	38.6	46.2	58.9	67.5	72.4	75.2	80	83.6	90.6	93.5	95.7	88.3	76.7	68.2	59.7	51.8	46.8	43.7
150- 175	25	34.1	38.1	47.5	52.3	56.5	58.3	61.5	63.7	69.8	71.6	76.7	70.2	65.5	53.5	45.6	40.8	36.7	34.9
175- 200	25	29.1	31.9	39.8	41.6	45.3	47	49.8	51	54.5	60	60.7	58.3	53.6	45.9	36.3	33.3	29.9	28.8
200- 225	25	25	28	33.4	34	36.6	38	40.9	43.7	44.3	51.4	49.9	47.8	42.8	39.5	30	27.7	25.1	24.3
225- 250	25	22.3	24.7	28.3	28.9	30	31.1	33.5	38.3	38.5	42.3	41.3	40.3	35.8	31.3	25.3	23.4	21.5	21.1
250- 275	25	21.2	21.8	24	25.2	25.8	26.2	27.8	33.2	33.4	33.7	34.5	35.2	30.2	26.7	21.9	20.1	18.8	18.4
275- 300	25	19.1	19.3	20.6	22.2	22.7	22.8	23.6	27.3	27.5	27.5	29.5	30.7	26.5	22	19.4	17.4	16.5	16.1
300- 325	25	17	16.9	17.7	19.7	20.1	20.2	20.7	22.4	23	23.6	26.2	26.4	24.2	18.4	17	15.4	14.6	14.4
325- 350	25	15.4	15	15.3	17.6	18.1	18.1	18.4	19.2	19.5	21	23.7	22.6	22.3	16.3	15.2	13.7	13	12.9
350- 375	25	13.8	13.2	13.4	15.8	16.3	16.3	16.4	17.1	17.1	18.8	21.6	19.2	20.2	15.4	13.6	12.1	11.8	11.6
375- 400	25	12.5	11.8	11.7	14.1	14.7	14.8	15	15.5	16	17.4	19.4	16.8	17.9	14.5	12.4	11	10.7	10.6
400- 425	25	11	10.4	10.5	12.5	13.1	13.2	13.3	14.2	14.9	15.7	16.4	14.8	15.2	13.1	11.2	9.9	9.7	9.7

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 30d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					977.9	953.2	1000.1	770.7	599.6	748.4	980.9	548	367.4	445.2	831.4	420.8	305	259.3
20- 38	18					366.6	386.4	413.5	383.6	339.4	382.3	448	288.8	202.8	247.3	347.8	234.8	192.5	177.9
38	0.	116.6	128.6	123.9	94.8	228.5	242.8	266	271.9	260.6	282.9	312	217.6	157.9	187.1	231.5	178.2	154.8	143.9
38- 60	22	70.4	89.3	100.4	106.4	166.2	174.2	186.5	196.2	197.5	212.5	223	165.9	124.7	140.2	160.2	128.4	109.5	102
60- 80	20	43.7	58.2	70.8	88.8	108.2	112.3	117.6	126.9	133.1	141.4	146.2	115	90.5	95.4	96.2	78.4	69.7	65.8
80- 100	20	33.9	42.3	54.1	69.9	77.6	80.4	83.1	90.3	96.8	101.5	104.8	86.5	70	70.8	64.2	54.9	49.7	47.2
100- 125	25	27.8	32.8	43.4	52.5	57	59.5	62	65.6	70.5	75.5	73.6	67.3	55.1	51	46.1	40.1	37.2	35.6
125- 150	25	24	27.7	34.9	40	42.9	44.2	46.4	48.8	53	54.7	56.4	51.8	43.9	38.6	34.3	30.5	28.5	27.6
150- 175	25	21.4	23.3	29	31.4	34	35	36.6	37.3	40.8	42.4	44.2	41	37.1	30.4	26.9	24.3	22.9	22.3
175- 200	25	18.4	19.8	24.3	25.4	27.4	28.3	29.9	30.3	31.8	34.6	35.2	33.5	30.4	26.3	22	20	18.9	18.6
200- 225	25	15.8	17.5	20.5	21.2	22.4	23	24.5	25.5	26	28.9	29	27.5	24.4	22.5	18.4	16.8	16	15.8
225- 250	25	14.1	15.6	17.2	18.3	18.8	19.2	20.4	21.8	22.1	24	24	23.5	20.3	18.4	15.6	14.5	13.9	13.7
250- 275	25	13.4	13.7	14.8	15.8	16.2	16.4	17.2	18.7	19.1	19.9	20	20.1	17.3	15.6	13.6	12.5	12	11.9
275- 300	25	12	12.2	12.6	13.9	14.3	14.5	14.8	15.9	16.1	16.7	17.3	17.2	15.4	13.2	11.9	11.1	10.7	10.5
300- 325	25	10.8	10.8	10.9	12.3	12.7	12.8	13	13.6	13.6	14.4	15.2	14.8	14.1	11.5	10.6	9.8	9.4	9.3
325- 350	25	9.7	9.6	9.6	11	11.4	11.5	11.7	11.9	11.7	12.5	13.7	12.8	12.8	10.4	9.3	8.7	8.5	8.4
350- 375	25	8.8	8.5	8.4	9.8	10.1	10.2	10.4	10.7	10.5	11.1	12.1	11.3	11.6	9.5	8.4	7.8	7.7	7.6
375- 400	25	8	7.5	7.4	8.8	9.1	9.3	9.4	9.6	9.5	9.7	10.7	9.9	10.2	8.8	7.6	7.1	6.9	6.8
400- 425	25	7	6.7	6.7	7.7	8.2	8.3	8.5	8.6	8.7	8.6	9.3	8.9	8.8	8	6.8	6.4	6.3	6.2

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 100d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					2470.3	2291	2227	1655.3	1253.3	1538.4	2019.9	1127.4	755.2	928.4	1744.1	990.4	806.1	739.2
20- 38	18					906.2	931.3	953.3	854.8	732.6	801.2	930	600.2	425.7	530.1	770	607.4	569.5	565.6
38	0.	329.9	141.8	65.8	42	506.5	552.2	610.7	613.9	571.5	600.8	651.3	455.1	335.4	407.2	531	482.7	478.9	479.4
38- 60	22	320.4	278.1	248.1	241.4	366.1	389.8	422.4	444.2	438.1	457.4	469.6	349.6	268.7	311.1	379.3	351	339.7	340.7
60- 80	20	139.4	160.1	174.5	200.5	238.9	250.3	261.2	285.6	296.8	309.6	314.3	244.7	198.4	217.4	230.7	204.1	190.9	182.2
80- 100	20	74.2	99.6	127.7	155.3	170.4	178.1	184.9	203.4	216.3	222.2	228.9	186.5	154.4	163.1	151.1	130.4	115.7	105.5
100- 125	25	58	72.6	96.6	115.7	125.6	131	136.1	145.7	158.2	167.3	158.4	148.2	122.5	115.8	105.3	89.4	80.5	74.5
125- 150	25	49.6	59.1	74.9	86	92.4	96.2	102.7	107.4	117.3	120.9	124.3	114.8	98.7	86.9	76.1	66.3	60.2	56.5
150- 175	25	44	48.9	61.2	67.1	72.4	74.7	79.1	81.8	89.9	92.7	99.8	90.6	84.7	68.3	58.3	52.4	47.4	45.2
175- 200	25	37.5	41.2	51	53.3	58.2	60.3	64.1	65.6	69.9	77.5	78.6	75.2	69.3	58.9	46.8	42.8	38.7	37.3
200- 225	25	32.3	36	42.8	43.8	46.9	48.9	52.7	56.2	57.1	66.1	64.6	61.7	54.7	50.9	38.6	35.7	32.5	31.7
225- 250	25	28.8	31.9	36.3	37.4	38.9	40.1	43.3	49.2	49.6	54.9	53.2	52.2	45.7	40	32.7	30.2	27.9	27.3
250- 275	25	27.4	28.1	30.9	32.5	33.4	33.9	35.9	42.5	42.8	43.6	44.4	45.3	38.7	34.3	28.4	25.9	24.3	23.9
275- 300	25	24.4	24.8	26.5	28.7	29.1	29.4	30.6	35.3	35.5	35.5	38.4	39.5	34.2	28.3	24.9	22.6	21.5	21.1
300- 325	25	21.9	21.9	22.8	25.5	26	26.1	26.7	29.1	29.5	30.5	33.9	33.8	31.4	23.9	22.1	19.9	19.1	18.8
325- 350	25	19.8	19.4	19.8	22.8	23.2	23.3	23.8	24.9	25.3	26.8	30.6	28.8	28.8	21.2	19.7	17.7	17.1	16.9
350- 375	25	17.9	17.2	17.2	20.4	21	21.1	21.4	22.1	22.5	24.2	27.7	24.9	26	20.1	17.7	15.9	15.3	15.1
375- 400	25	16.2	15.3	15.4	18.2	19	19.1	19.1	20.1	20.6	22	24.7	21.7	23	19.1	15.9	14.4	13.9	13.8
400- 425	25	14.2	13.6	13.6	16	16.8	17	17.2	18.3	19.2	19.8	20.8	19.2	19.6	17.1	14.5	12.9	12.6	12.5

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for for T= 100d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					1607	1499.	1501.6	1131.7	871.9	1091.1	1448.1	803.2	529	641.3	1197.1	618.6	458.4	395.5
20- 38	18					564.4	594.2	627.4	574	501.6	561.6	661.7	424.2	294	358.8	506	351.6	296.8	278.7
38	0.	189.9	186.2	173.1	132.7	332.7	360.1	399.6	407.6	388	417.7	460.9	320	229.8	272	339	269.3	240.3	225.4
38- 60	22	113.8	132.3	142.1	151.4	241.4	255.7	277.2	293.7	294.7	315.6	329.8	244.6	182.4	204.7	236	193.1	167.9	158
60- 80	20	65.9	85.2	102.2	127.5	156	163.5	172.1	188.3	198.2	210.7	217.3	169.5	132.9	140.2	141.7	116.2	104.2	98.4
80- 100	20	48.4	60.8	78.2	100.2	112.1	116.8	121.5	133.3	143.4	150.5	156.6	127.9	102.6	104.4	94	80.4	72.7	68.5
100- 125	25	39.9	47.4	62.5	75.5	82.5	86.3	90.2	96.3	104.3	112.1	108.4	100	80.9	74.5	67.2	58.3	53.6	51.4
125- 150	25	34.4	39.8	50.2	57.3	61.9	64.1	67.7	71.4	78.2	81	83.7	77.1	64.9	56.3	49.9	44.3	41.2	39.8
150- 175	25	30.7	33.4	41.6	45.3	49	50.5	53.4	54.5	60	62.5	65.8	60.4	55.2	44.4	39.1	35.3	33.1	32.1
175- 200	25	26.2	28.3	35.1	36.6	39.5	40.7	43.4	44.2	46.4	51.1	52.2	49.5	45.1	38.7	31.8	29	27.4	26.7
200- 225	25	22.7	25.1	29.4	30.4	32.2	33.2	35.6	37.3	37.9	43	42.9	40.9	35.8	33.2	26.6	24.5	23.2	22.6
225- 250	25	20.4	22.3	24.9	26.2	27.2	27.8	29.5	32.1	32.7	35.8	35.4	34.9	29.8	26.4	22.7	21	19.9	19.5
250- 275	25	19.3	19.7	21.2	22.7	23.5	23.8	24.8	27.6	28	29.1	29.7	29.9	25.5	22.6	19.6	18.2	17.4	17.1
275- 300	25	17.3	17.5	18.3	20.1	20.6	20.8	21.4	23.5	23.5	24.4	25.6	25.5	22.9	19.2	17.1	16	15.4	15.2
300- 325	25	15.4	15.4	15.8	17.8	18.4	18.5	18.7	19.8	19.8	20.9	22.6	21.9	21.1	16.5	15.2	14.1	13.7	13.4
325- 350	25	14	13.7	13.9	15.8	16.3	16.4	16.7	17.2	17.2	18.3	20	19	19	14.9	13.6	12.6	12.2	12
350- 375	25	12.6	12.1	12.2	14.1	14.6	14.7	15	15.4	15.4	16	17.8	16.6	17	14	12.2	11.4	11	10.9
375- 400	25	11.3	10.9	10.9	12.5	13.1	13.3	13.6	13.9	13.9	14.1	15.9	14.9	14.8	13.1	11	10.2	10	9.9
400- 425	25	10	9.7	9.7	11.2	11.7	11.9	12.1	12.6	12.7	12.5	13.7	13.2	12.8	11.7	9.9	9.3	9.1	9

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					2709.9	2489.7	2409.7	1792.2	1356.4	1668.6	2198	1218	808.2	991.4	1861.6	1058.4	861	789.2
20- 38	18					981.9	1010.3	1031.7	926.6	793.5	869.3	1011.1	648.6	456	566.4	822.6	648.9	608.4	603.7
38	0.	570.9	410.7	323.5	239.4	549.7	599.6	659.8	663.9	618.7	651.9	707.8	491.8	359.7	435.1	567.5	512.1	511.8	510.7
38- 60	22	343.5	300.8	269.3	261.4	396.6	422.9	457.7	480.8	474.8	496.2	510.1	377.8	288	332.9	405.1	375.1	363.7	364.1
60- 80	20	150.1	173	189.4	216.9	258.8	270.9	282.7	309.1	321.5	335.5	340.9	264.5	212.8	232.6	246.5	218.1	204.1	194.6
80- 100	20	80.8	108.1	138.3	168.2	184.1	192.8	199.9	220.1	234	240.9	248.1	201.7	166	174.5	161.6	139.4	123.7	112.9
100- 125	25	63.3	78.7	104.7	125.3	135.7	141.6	147.1	157.7	171.1	181.2	171.5	160.1	131.7	124	112.9	95.8	86.4	80.1
125- 150	25	53.9	63.9	81.2	93.1	100	104.1	111.2	116.2	126.9	131.2	134.5	124.1	106.3	93.3	81.5	71.1	64.6	60.9
150- 175	25	47.7	53.1	66.4	72.5	78.4	80.8	85.9	88.4	97.3	100.3	107.7	97.9	91.1	73.4	62.6	56.4	51	48.7
175- 200	25	40.7	44.6	55.3	57.9	63	65.2	69.4	71.1	75.8	83.7	85	81.2	74.6	63.5	50.2	46	41.8	40.2
200- 225	25	35.1	39.1	46.4	47.5	50.9	52.8	57.1	60.7	61.5	71.4	69.6	66.8	59.1	54.7	41.5	38.5	35.2	34.1
225- 250	25	31.3	34.5	39.4	40.4	42.1	43.4	46.8	53.3	53.6	59.2	57.6	56.3	49.3	43.2	35.2	32.5	30.1	29.5
250- 275	25	29.7	30.6	33.5	35.2	36.2	36.7	38.8	46.1	46.3	47.1	48.2	48.9	41.7	36.8	30.5	28	26.2	25.8
275- 300	25	26.6	26.8	28.6	31.1	31.6	31.9	33.1	38.3	38.4	38.5	41.4	42.5	36.9	30.6	26.9	24.5	23.1	22.8
300- 325	25	23.8	23.8	24.7	27.7	28.2	28.3	29	31.5	32	32.8	36.7	36.5	33.9	25.7	23.7	21.5	20.5	20.2
325- 350	25	21.5	20.9	21.5	24.8	25.3	25.3	25.7	27	27.5	29	33.2	31.3	31.1	23.1	21.2	19.1	18.4	18.2
350- 375	25	19.3	18.6	18.8	22	22.8	22.8	23.1	23.9	24.3	26.3	30	27	28.1	21.6	19.1	17.1	16.6	16.4
375- 400	25	17.4	16.6	16.6	19.8	20.5	20.6	21	21.8	22.3	23.9	26.5	23.4	24.7	20.5	17.2	15.4	15	14.9
400- 425	25	15.4	14.7	14.8	17.3	18.2	18.3	18.5	19.9	20.8	21.3	22.4	20.9	21.2	18.5	15.6	14	13.7	13.6

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					1849.7	1726.3	1708.8	1285.5	985	1234.2	1640.1	904.7	591	716	1337.1	696.6	520.7	452.5
20- 38	18					649.3	682.8	716.5	654.1	569.1	636	749.6	478.5	329.3	401.6	567.2	398.7	340.5	321.5
38	0.	232.8	220.7	200.8	153.3	380.6	411.3	457.7	464.2	440.9	473.7	522.3	361.2	257.9	305	380.9	306.7	276.9	261.7
38- 60	22	138.5	156.6	165.3	173.5	274.3	291.1	316.8	334.9	335.6	358.3	373.8	276.3	205	229.9	266.1	220	193.1	182.8
60- 80	20	77.4	99.5	118	145.4	177.6	186.4	196.1	214.6	225.8	239.4	246.7	191.6	149.6	157.9	159.9	131.8	118.7	112.1
80- 100	20	55.3	69.9	89.8	114.3	127.4	132.7	138.1	152	163.6	171	177.7	144.6	115.8	117.9	106	90.6	81.9	77
100- 125	25	45.2	54.2	71.3	86.1	93.9	98	102.8	109.7	119	127.8	122.8	113.4	91.3	84.1	75.8	65.6	60.5	57.5
125- 150	25	38.9	45.2	57.2	65.3	70.3	72.9	77.3	81.1	89.1	92	95	87.3	73.3	63.4	56.2	49.8	46.4	44.6
150- 175	25	34.8	38	47.3	51.4	55.7	57.3	60.7	61.9	68.1	70.8	74.8	68.5	62.8	50.3	44.1	39.8	37.2	36
175- 200	25	29.8	32.2	39.7	41.4	44.6	46.2	49.3	50.1	52.7	58.2	59.3	56.3	51.3	43.8	35.8	32.7	30.9	30
200- 225	25	25.7	28.4	33.5	34.5	36.5	37.8	40.4	42.4	42.9	48.9	48.7	46.5	40.6	37.8	29.9	27.6	26	25.5
225- 250	25	23	25.3	28.3	29.6	30.8	31.4	33.5	36.6	37.2	40.8	40	39.6	33.8	30	25.5	23.5	22.5	22
250- 275	25	21.8	22.4	24	25.8	26.5	26.8	28.1	31.6	32	33.1	33.6	33.9	28.9	25.7	22.1	20.5	19.6	19.3
275- 300	25	19.6	19.8	20.7	22.6	23.3	23.4	24.2	26.5	26.6	27.5	29	29.1	25.9	21.6	19.4	17.9	17.3	16.9
300- 325	25	17.4	17.5	17.9	20.2	20.6	20.8	21.2	22.5	22.6	23.8	25.6	25	23.8	18.8	17.2	16	15.3	15.1
325- 350	25	15.8	15.5	15.6	17.9	18.5	18.6	19	19.6	19.7	20.5	22.8	21.5	21.6	16.9	15.2	14.1	13.7	13.6
350- 375	25	14.2	13.8	13.7	15.9	16.6	16.8	17	17.4	17.3	18.1	20.4	18.8	19.3	15.7	13.7	12.8	12.4	12.3
375- 400	25	12.9	12.2	12.2	14.2	15	15.1	15.3	15.8	15.9	16.1	18	16.7	17	14.9	12.3	11.5	11.3	11.1
400- 425	25	11.4	10.9	10.9	12.5	13.3	13.5	13.6	14.2	14.4	14.3	15.5	15	14.6	13.3	11.3	10.5	10.3	10.2

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 10y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					2747.5	2529.7	2447.3	1814.3	1374.8	1685.9	2218	1225.6	812.1	997.8	1873.1	1064.9	865.8	795
20- 38	18					995.9	1023.8	1046.5	938	803.7	878.5	1020.4	653.1	458.7	570.4	827.9	653.4	612.1	607.3
38	0.	582.4	417.3	326.6	242.9	555.1	605.7	672.2	674.4	627.8	658.8	714.1	495.3	361.9	438.1	571.5	515.3	515.1	514
38- 60	22	346.3	303.9	271.9	264.9	402.4	429.1	464.4	488.4	480.5	501.6	514.7	380.8	290.1	335.1	407.8	377.6	365.8	365.6
60- 80	20	151.3	174.5	191.3	219.4	261.5	274	286.4	312.9	325.5	339.2	344.2	266.5	214.5	234.2	248.3	219.4	205.4	196.1
80- 100	20	81.7	109.2	139.9	170.1	186.5	194.9	202.3	222.6	236.9	243.3	250.6	203.3	167.2	175.9	162.6	140.3	124.5	113.6
100- 125	25	63.9	79.6	105.9	126.8	137.2	143.3	148.6	159.3	173	183.2	173.1	161.6	132.5	125	113.6	96.5	87	80.6
125- 150	25	54.4	64.8	82.2	94	101.1	105.3	112.1	117.5	128.4	132.5	135.9	125.2	107.2	93.9	82.1	71.7	65.2	61.3
150- 175	25	48.3	53.6	66.9	73.3	79.4	81.8	86.7	89.4	98.3	101.5	108.7	98.8	91.8	73.8	63.1	56.7	51.4	49.1
175- 200	25	41.1	45.2	56	58.6	63.7	65.9	70.1	71.8	76.5	84.5	85.9	82	75.2	64	50.7	46.3	42.1	40.6
200- 225	25	35.5	39.5	46.9	48	51.4	53.4	57.7	61.3	62.1	72.2	70.4	67.4	59.4	55.3	41.9	38.7	35.4	34.4
225- 250	25	31.6	35	39.8	40.9	42.5	43.8	47.4	53.8	54.1	59.9	58	56.8	49.8	43.4	35.5	32.8	30.3	29.8
250- 275	25	30	30.9	33.9	35.6	36.4	37.1	39.2	46.7	46.9	47.6	48.6	49.4	42.1	37	30.7	28.2	26.4	25.9
275- 300	25	26.8	27.1	29	31.4	32	32.4	33.4	38.6	38.8	38.8	41.7	43	37.2	30.9	27	24.6	23.4	22.9
300- 325	25	24.1	24	25	27.9	28.4	28.6	29.1	31.9	32.2	33.2	37.1	36.8	34.2	25.8	24	21.7	20.7	20.5
325- 350	25	21.7	21.1	21.7	24.9	25.5	25.6	26	27.4	27.6	29.3	33.5	31.4	31.5	23.3	21.3	19.2	18.5	18.3
350- 375	25	19.6	18.7	18.9	22.3	23	23.1	23.2	24.3	24.4	26.5	30.2	27.1	28.3	21.7	19.2	17.2	16.7	16.5
375- 400	25	17.5	16.7	16.7	19.9	20.8	20.9	21.1	22	22.5	24.1	26.8	23.8	24.9	20.7	17.3	15.6	15.2	15
400- 425	25	15.6	14.8	14.9	17.5	18.4	18.5	18.7	20	21	21.7	22.5	21	21.3	18.6	15.7	14.1	13.8	13.7

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 10y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					1881.3	1752.8	1733.1	1305.2	999	1250.3	1660.1	912.3	594.5	720.2	1344.1	700.9	524.7	456.3
20- 38	18					658.9	691.7	726.8	662.7	576.6	644.5	758.6	482.7	331.6	404	570.5	402	343.4	324.5
38	0.	234.7	224.5	204.3	156.2	385.4	418	463.3	471.8	446.7	479.7	528.4	364.8	259.8	306.9	383.4	308.9	279.5	263.5
38- 60	22	141.6	159.7	168.4	176.1	278	295.6	321.3	340.1	340.2	362.8	378.2	278.8	206.5	231.3	268	221.5	194.6	184.3
60- 80	20	78.8	101.1	119.9	147.8	180.2	189	198.6	217.7	228.8	242.4	249.9	193.5	150.8	159	161	132.8	119.6	113
80- 100	20	56.3	71.1	91.1	116	129.2	134.8	140	154	165.6	173.1	179.9	146.1	116.7	118.7	106.7	91.4	82.4	77.6
100- 125	25	45.9	55	72.4	87.2	95.1	99.3	103.9	111.3	120.4	129.4	124.3	114.7	92.1	84.8	76.3	66.1	60.9	57.8
125- 150	25	39.5	45.8	58	66.3	71.3	73.9	78.2	82.2	90.3	93.2	96.1	88.2	74	63.9	56.6	50.1	46.7	45
150- 175	25	35.4	38.4	48	52.1	56.4	58.3	61.4	62.9	68.9	71.6	75.7	69.2	63.3	50.7	44.4	40.1	37.4	36.4
175- 200	25	30.3	32.6	40.4	42	45.2	46.8	49.9	50.8	53.4	58.9	60	56.9	51.7	44.3	36.1	33	31.1	30.3
200- 225	25	26.1	28.9	33.9	35	37.1	38.2	41	43	43.5	49.5	49.2	47.1	41	38.1	30.2	27.8	26.3	25.6
225- 250	25	23.3	25.6	28.6	30	31	31.9	33.8	37.1	37.6	41.2	40.5	39.9	34.1	30.3	25.7	23.8	22.6	22.3
250- 275	25	22	22.7	24.4	26.1	26.9	27.2	28.4	32.1	32.3	33.6	34.1	34.4	29.2	25.9	22.4	20.7	19.7	19.4
275- 300	25	19.7	20	21	23	23.5	23.8	24.5	26.9	27.1	27.8	29.4	29.5	26.2	21.9	19.6	18.1	17.4	17.2
300- 325	25	17.8	17.7	18.1	20.3	20.9	21.1	21.6	22.7	23	24	25.9	25.1	24.1	19	17.3	16.1	15.5	15.2
325- 350	25	16	15.7	15.8	18.1	18.8	18.9	19.1	19.8	19.8	20.8	23.1	21.6	21.9	17.1	15.5	14.3	13.8	13.7
350- 375	25	14.5	14	13.8	16.1	16.7	16.9	17.2	17.8	17.6	18.3	20.5	19	19.5	15.8	13.8	12.9	12.5	12.4
375- 400	25	13	12.4	12.3	14.4	15.1	15.3	15.5	15.9	16.1	16.2	18.3	16.9	17.1	15	12.4	11.6	11.3	11.2
400- 425	25	11.5	11.1	11	12.6	13.4	13.6	13.7	14.3	14.6	14.5	15.6	15.1	14.6	13.5	11.3	10.6	10.4	10.3

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 100d, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					414.6	365	327.7	236.4	177.3	227.5	315.5	169.4	104.7	126.4	236.1	130.3	103.2	93.2
20- 38	18					133.4	138.8	141.8	125.7	106.8	119.3	143.8	90.2	59.6	72.2	103.1	78.1	71.4	69.8
38	0.	56.1	43.1	34.7	26.6	70.3	78.9	89.1	90.5	84.3	89.8	99.9	68.1	47.2	55.4	70.4	61.4	59	57.2
38- 60	22	33.5	31.5	29.9	30.8	49.8	54.6	60.6	64.8	64.7	68.7	71.7	52.4	37.8	42.1	50	44.1	40.4	39.1
60- 80	20	15.9	19.3	22	26	32	34.2	36.4	41.1	43.3	46.3	47.7	36.3	27.8	29.5	30.2	25.4	23.3	22.1
80- 100	20	10	13	16.6	20.4	23	24.4	25.5	28.9	31.4	32.8	34.6	27.6	21.6	22.2	19.6	16.9	15.2	14
100- 125	25	8.1	9.8	12.8	15.5	16.9	17.9	19	20.5	22.8	24.6	23.2	21.9	17.1	15.5	14	11.9	10.8	10.2
125- 150	25	6.9	8.1	10.3	11.8	12.7	13.3	14.4	15	16.9	17.6	18.3	16.9	13.8	11.8	10.2	9	8.3	7.9
150- 175	25	6.1	6.9	8.5	9.2	10.1	10.4	11.2	11.6	12.8	13.3	14.6	13	12.2	9.3	8	7.1	6.7	6.3
175- 200	25	5.3	5.8	7.1	7.5	8.1	8.4	9.1	9.4	9.8	11.1	11.5	10.8	9.8	8.3	6.5	5.9	5.5	5.3
200- 225	25	4.6	5	6	6.2	6.5	6.7	7.5	7.8	8	9.5	9.3	9	7.5	7.1	5.4	4.9	4.6	4.6
225- 250	25	4.1	4.5	5.1	5.3	5.4	5.6	6.1	6.8	6.9	7.9	7.6	7.5	6.4	5.6	4.6	4.2	4	3.9
250- 275	25	3.9	3.9	4.4	4.7	4.7	4.8	5	6	6.1	6.2	6.5	6.5	5.3	4.6	4	3.8	3.5	3.4
275- 300	25	3.4	3.6	3.8	4	4.1	4.1	4.4	5.1	5	5.1	5.5	5.7	4.9	4	3.6	3.2	3	3
300- 325	25	3.1	3.1	3.2	3.6	3.7	3.7	3.8	4.1	4.1	4.3	5	4.7	4.5	3.5	3.2	2.8	2.7	2.7
325- 350	25	2.8	2.8	2.8	3.2	3.2	3.2	3.3	3.6	3.7	3.7	4.3	4	4.2	3.1	2.9	2.4	2.4	2.4
350- 375	25	2.6	2.4	2.4	2.8	3	3	3	3.2	3.2	3.4	3.8	3.6	3.7	3	2.5	2.2	2.2	2.2
375- 400	25	2.3	2.1	2.1	2.5	2.7	2.7	2.7	2.9	2.9	3	3.4	3.1	3.2	2.8	2.3	2	2	2
400- 425	25	2.1	1.9	2	2.3	2.4	2.4	2.4	2.5	2.7	2.7	2.9	2.8	2.8	2.5	2	1.9	1.9	1.8

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 5y, t=100d

R/Z, cm	dR\dZ	779-781	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					600.3	532.9	489.1	353.8	264.4	336.3	461.6	244.9	150.3	181.8	338.9	187.3	148.9	134.6
20- 38	18					197.6	205.5	210	186.4	158.3	176.2	210.6	130.5	85.6	103.9	148	113	103.1	101.1
38	0.	86.5	68.4	55.9	42	105.5	117.8	132.4	134.1	124.9	132.4	146.6	98.9	67.9	79.8	101.3	88.9	86.2	83.9
38- 60	22	51.8	49.6	47.1	47.7	75.3	81.8	90.5	96.3	95.6	101.1	104.9	76	54.5	60.9	72.2	63.7	58.8	57.3
60- 80	20	24.8	30	33.9	39.9	48.4	51.6	54.8	61	64.4	68.1	70.1	52.9	40.3	42.5	43.6	37	34	32.3
80- 100	20	15.3	19.9	25.4	31.2	34.8	36.8	38.4	43.1	46.5	48.3	50.7	40.1	31.5	32.1	28.6	24.6	21.9	20.4
100- 125	25	12.2	15	19.7	23.5	25.6	27	28.3	30.8	33.8	36.3	34.1	32	24.9	22.7	20.2	17.3	15.8	14.8
125- 150	25	10.5	12.3	15.5	17.7	19	20	21.5	22.5	25	26	26.9	24.4	20.4	17.1	14.9	13.2	12.2	11.6
150- 175	25	9.4	10.2	12.7	13.9	15	15.6	16.7	17.1	19.2	19.7	21.4	19.1	17.8	13.6	11.7	10.5	9.8	9.3
175- 200	25	8.1	8.8	10.8	11.2	12.1	12.6	13.5	13.8	14.8	16.5	16.9	15.8	14.4	12.1	9.4	8.6	8.1	7.8
200- 225	25	6.9	7.7	9	9.2	9.8	10.2	11.1	11.9	11.9	13.9	13.5	13.1	11	10.5	7.9	7.3	6.8	6.6
225- 250	25	6.1	6.7	7.6	7.9	8.3	8.4	9.1	10.3	10.4	11.7	11.2	11.1	9.2	8.1	6.7	6.2	5.8	5.7
250- 275	25	5.8	6	6.5	6.9	7	7.1	7.5	8.9	9.1	9.2	9.5	9.5	7.9	6.9	5.9	5.4	5.1	4.9
275- 300	25	5.2	5.3	5.6	6	6.2	6.3	6.5	7.4	7.4	7.5	8.3	8.1	7.3	5.9	5.2	4.7	4.5	4.5
300- 325	25	4.7	4.7	4.8	5.4	5.5	5.5	5.6	6.3	6.1	6.4	7.1	7	6.8	5	4.5	4.1	4	4
325- 350	25	4.2	4.1	4.2	4.8	4.8	4.8	5	5.3	5.2	5.7	6.4	6	6.1	4.5	4	3.7	3.7	3.5
350- 375	25	3.8	3.7	3.6	4.2	4.4	4.5	4.5	4.7	4.7	4.9	5.7	5.2	5.4	4.3	3.7	3.3	3.3	3.2
375- 400	25	3.5	3.2	3.3	3.8	3.9	4	4.1	4.2	4.5	4.5	5.1	4.6	4.6	4.2	3.3	3.1	3	3
400- 425	25	3	2.9	3	3.3	3.5	3.6	3.7	4	4	4	4.3	4.1	4	3.6	3.1	2.6	2.6	2.6

Table 5, Continuation

Equivalent dose rate from JDisk and Toroid JDisk, Toroid, and Beam Pipe for T= 10y, t=100d

R/Z, cm	dR\dZ	779-781	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					640.7	566.4	519.6	375.3	279.3	353.3	483	253.7	154.4	186.3	347	192.3	152.8	138.5
20- 38	18					209.4	217.8	222.5	197.7	167.3	185.2	220.2	135.4	87.9	106.6	151.9	116.1	106.4	104.2
38	0.	91	73.2	60.1	45.2	111.7	124.7	140.4	141.7	131.8	139.3	153.1	102.8	69.9	82	104.1	91.6	88.4	86.4
38- 60	22	54.3	52.7	50.4	50.6	79.9	86.7	95.6	101.9	101	106.4	109.6	79	56.5	62.4	74.1	65.6	60.3	58.8
60- 80	20	26.1	31.7	36	42.3	51.4	54.6	57.8	64.4	67.9	71.6	73.3	55	41.8	43.7	44.8	37.9	34.9	33.2
80- 100	20	16.2	21	26.9	33	36.6	38.7	40.5	45.3	48.9	50.8	53.1	41.7	32.5	33	29.4	25.2	22.6	20.9
100- 125	25	13	15.9	20.9	24.8	27	28.5	30	32.4	35.5	38.2	35.7	33.3	25.8	23.4	20.7	17.8	16.3	15.3
125- 150	25	11.1	13	16.5	18.7	20.1	21.1	22.6	23.7	26.4	27.2	28.1	25.5	21	17.6	15.4	13.6	12.6	12
150- 175	25	9.9	10.9	13.5	14.7	16	16.5	17.7	18.1	20	20.7	22.4	19.9	18.4	14	12.1	10.9	10.1	9.8
175- 200	25	8.4	9.1	11.3	11.8	12.8	13.2	14.2	14.5	15.4	17.3	17.5	16.7	14.9	12.6	9.8	8.9	8.3	8.1
200- 225	25	7.3	8.1	9.5	9.8	10.4	10.8	11.7	12.4	12.6	14.6	14.2	13.8	11.5	10.9	8.2	7.6	7.1	6.9
225- 250	25	6.5	7.1	8	8.4	8.7	8.9	9.5	10.9	10.8	12.1	11.7	11.6	9.6	8.3	6.9	6.4	6	6
250- 275	25	6.2	6.3	6.9	7.3	7.5	7.6	8.1	9.5	9.4	9.7	9.9	10	8.2	7.2	6	5.6	5.3	5.3
275- 300	25	5.4	5.5	5.9	6.4	6.5	6.6	6.9	7.7	7.7	8	8.5	8.6	7.5	6	5.3	4.9	4.6	4.6
300- 325	25	4.9	5	5	5.6	5.7	5.8	5.9	6.5	6.5	6.7	7.4	7.2	7	5.2	4.7	4.2	4.1	4.1
325- 350	25	4.5	4.4	4.3	5	5.2	5.2	5.3	5.6	5.7	5.9	6.8	6.3	6.4	4.6	4.2	3.8	3.8	3.6
350- 375	25	3.9	3.9	3.7	4.5	4.7	4.7	4.7	4.8	4.9	5.3	6	5.4	5.6	4.4	3.8	3.4	3.4	3.4
375- 400	25	3.6	3.3	3.4	4	4.3	4.3	4.2	4.3	4.7	4.8	5.2	4.8	4.8	4.3	3.4	3.2	3	3
400- 425	25	3.2	3	3.1	3.5	3.6	3.7	3.9	4.1	4.1	4.2	4.4	4.2	4.2	3.8	3.1	2.9	2.7	2.7

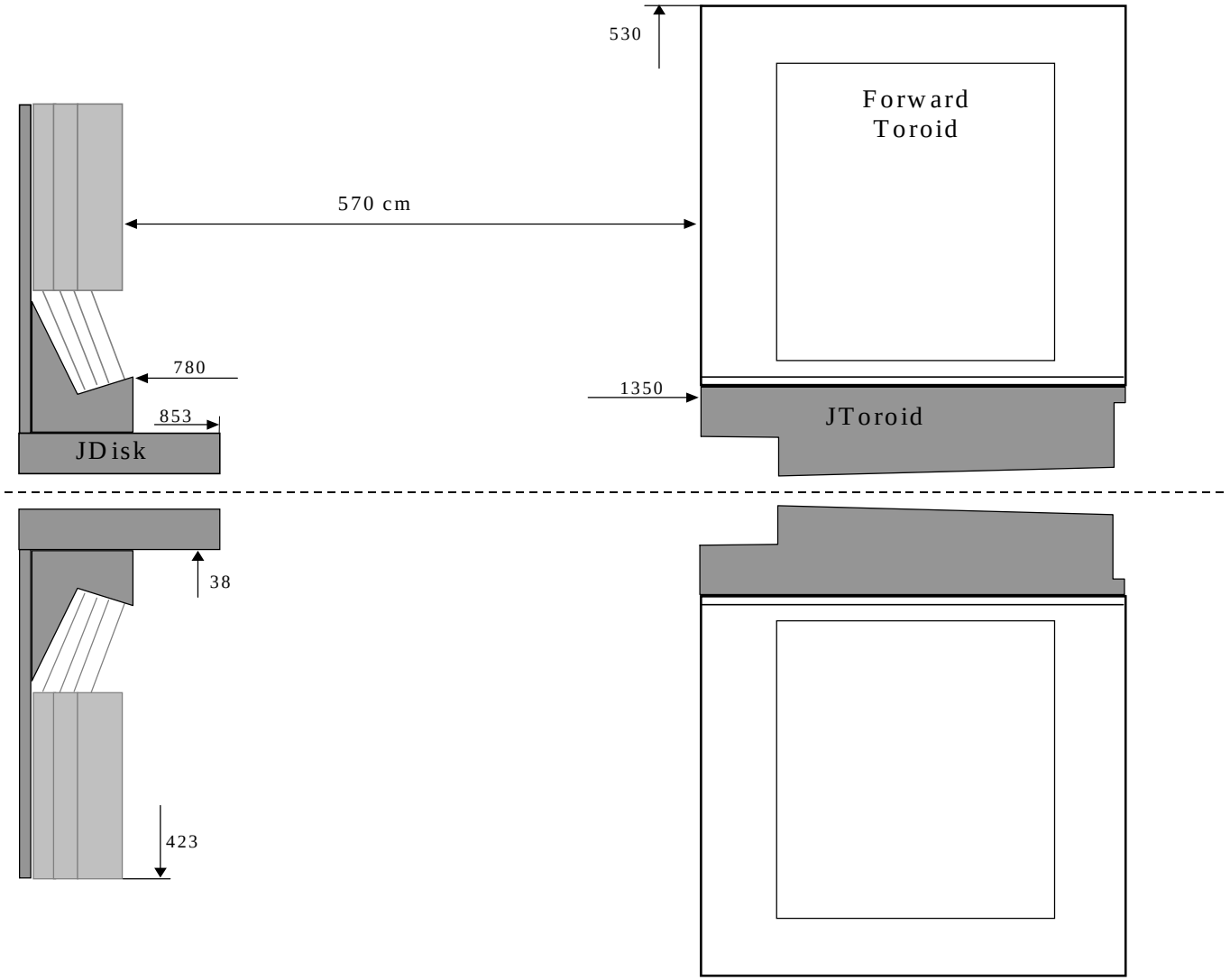

Fig.2. Access scenario to the area between JDisk and Forward Toroid without beam pipe.

Table 6

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 30d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1402.5	1046.	606.7	291.3	130.5	65.7	40.3	29.9	32.8	57.5	115.7	199.9	251.9	283.3
10- 20	15					1142.2	844.1	501.4	253.3	117.8	58.1	35.7	26.8	30	52.8	108	188.5	242.2	272.8
20- 38	18					353.3	327	265.5	184.3	108.7	57.3	33	25.2	28.9	48.1	94.5	169.5	226.1	256.1
38	0.	459.2	319.6	246.1	180.5	150.9	162.5	164.7	142.2	99.6	57.4	31.4	24.6	28.7	44.8	85.7	153	207	231.5
38- 60	22	267	221.3	177.6	124.9	108.5	113.8	112.8	106.4	83.6	56.2	30.9	23.5	27.7	39.8	73.2	112.4	138.6	152.8
60- 80	20	93.3	103.8	98.4	74.8	68.8	71.1	66.7	68.8	60.3	46.1	34.4	20.6	23.7	33.9	46	52.7	56.7	55.7
80- 100	20	32.9	49.7	56.5	48.8	45.4	48	45.4	48.7	46.1	35.4	31.5	19.8	19.7	28.1	25.4	23.1	18.5	13
100- 125	25	19.3	27.3	32.5	31.2	31.5	33.4	32.4	32.6	33.7	30.8	18.8	20.9	17	16.8	14.7	10.6	7.6	4.5
125- 150	25	14.1	17.2	20	19.7	20.2	21.8	23.5	22.7	24.2	21	19.8	17.3	15.2	11.6	8.3	6.1	3.7	1.8
150- 175	25	9.9	11.4	13.7	13.3	14.6	15.4	16.7	15.7	18.1	15.7	18.1	14	15.8	8.4	4.9	4.3	1.9	0.8
175- 200	25	7	8.1	10.6	9	10.8	11.8	13.2	12.1	13	15.5	14	12.8	12.7	9	3.1	3.1	1	0.4
200- 225	25	5.5	6.3	8.3	6.3	7.5	8.5	10.4	11.5	10.1	14.9	11.8	10.1	8.5	8.6	2.1	2.2	0.5	0.2
225- 250	25	4.8	5.1	6.5	5.1	5.3	5.9	7.6	11.2	9.8	12	9.5	8.7	6.7	5	1.5	1.5	0.3	0.2
250- 275	25	4.3	4.2	4.9	4.5	4.4	4.5	5.5	10	9.1	8	7.7	8.3	5.2	4.1	1.3	1	0.2	0.1
275- 300	25	3.9	3.6	3.8	4.1	4	3.9	4.2	7.2	6.5	5.4	6.5	7.6	4.8	2.3	1.3	0.6	0.2	0
300- 325	25	3.4	2.9	2.7	3.7	3.6	3.6	3.7	4.8	4.6	4.4	6.3	6.3	5.3	1	1.1	0.4	0	0
325- 350	25	3.1	2.4	1.9	3.4	3.5	3.4	3.3	3.6	3.4	4.2	6.3	5	5.6	1	1	0.3	0	0
350- 375	25	2.7	1.9	1.3	3	3.2	3.1	3	3.3	2.9	4	6.2	3.6	5.4	1.7	0.9	0.1	0	0
375- 400	25	2.4	1.5	0.8	2.7	3	2.9	2.9	3.1	3.2	4.2	5.7	3	4.6	2.2	0.9	0.1	0	0
400- 425	25	1.8	1	0.5	2.1	2.5	2.5	2.5	3.1	3.5	3.8	4.1	2.4	3.4	2	0.8	0	0	0

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 30d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					660.9	486.6	271.7	124.9	54.2	26	14.3	8.7	8.4	12.8	24.3	40.1	50.5	55.9
10- 20	15					526.2	378.9	218.8	109.1	48.7	22.8	12.4	7.8	7.5	11.4	20.9	34.7	44.4	49.7
20- 38	18					142.9	135.1	113.1	78.1	45	22.2	11.9	8.1	7.8	10.8	17.5	30.4	40.3	45.3
38	0.	116.6	128.6	123.9	94.8	68.8	70	68.1	58.8	40.8	22.5	11.5	8.4	8	10	15.6	27.5	36	37.1
38- 60	22	65.9	82.4	83.9	61.5	49.5	50.1	47.6	43.5	33.7	22.5	11.1	8	7.8	8.2	13.4	17.7	17.8	17.9
60- 80	20	28.9	40.2	42.8	33.7	30.3	30.9	28.6	28.1	24	17.7	13.2	6.8	6.2	6.9	7.5	5.8	6	5.8
80- 100	20	17	22.5	24.4	21.7	20.2	20.9	18.9	19.4	18.3	13.7	11.9	6.4	4.9	6.3	3	2.7	2.3	1.8
100- 125	25	10.8	13.4	15	13.4	13.4	14.5	14.1	13.3	12.9	11.9	6.8	7	4.4	2.9	1.8	1.4	1.2	0.8
125- 150	25	8.1	8.8	9.7	9	9.1	9.5	9.7	9.3	10	7.7	7.1	5.7	4	1.8	1	0.8	0.6	0.4
150- 175	25	5.8	5.9	7.1	6.1	6.8	7.2	7.5	6.2	7.2	6.1	6.1	4.5	4.8	1.1	0.6	0.6	0.3	0.2
175- 200	25	4	4.3	5.4	4.2	4.9	5.4	6.1	5.1	4.8	5.7	4.9	4	3.8	2.3	0.4	0.4	0.1	0.1
200- 225	25	3.2	3.4	4.3	3.2	3.6	3.9	4.6	4.6	3.8	5.2	4.3	3.1	2.2	2.4	0.3	0.3	0.1	0.1
225- 250	25	2.7	2.8	3.2	2.8	2.8	2.9	3.5	4.2	3.6	4.3	3.3	3	1.4	1.3	0.2	0.2	0.1	0.1
250- 275	25	2.4	2.3	2.4	2.4	2.4	2.4	2.7	3.6	3.3	3.2	2.6	2.7	1.1	0.9	0.2	0.1	0	0
275- 300	25	2.2	2	1.7	2.1	2.2	2.2	2.2	2.9	2.5	2.3	2.4	2.2	1.4	0.3	0.2	0.1	0	0
300- 325	25	2	1.7	1.2	1.9	2	2	2	2.1	1.7	1.9	2.3	1.8	1.8	0.2	0.2	0.1	0	0
325- 350	25	1.8	1.4	0.9	1.7	1.9	1.9	1.9	1.8	1.3	1.6	2.3	1.4	2	0.4	0.1	0	0	0
350- 375	25	1.6	1.1	0.6	1.5	1.7	1.7	1.7	1.7	1.2	1.4	2.1	1.2	1.9	0.6	0.1	0	0	0
375- 400	25	1.4	0.8	0.3	1.3	1.5	1.6	1.6	1.6	1.3	1.1	1.9	1	1.6	0.8	0.1	0	0	0
400- 425	25	1.1	0.6	0.2	0.9	1.3	1.3	1.4	1.4	1.3	0.9	1.4	0.9	1.1	0.8	0.1	0	0	0

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 100d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1951.5	1445.8	834	394.8	174.8	87.1	52.2	37.6	40.5	69.7	140	241.3	302.8	337.5
10- 20	15					1576.2	1154.2	681.7	343.8	156.9	76.7	46.1	33.5	36.9	63.4	129.2	222.3	287.7	322.5
20- 38	18					462.3	432.9	357.5	247.7	145.3	75.7	43	32.2	36	58.3	111.8	200.3	266.4	301.8
38	0.	329.9	141.8	65.8	42	189.4	209.1	217.2	189.7	132.3	76	41.1	31.8	35.7	54.1	100.5	182.7	242	267
38- 60	22	311.4	264	214.8	151.3	133.6	143	145.8	139.6	110.5	74.3	39.9	30.5	34.6	47.5	86.8	130.5	156.9	173
60- 80	20	109.6	123.8	118.1	90.2	83.7	88	83.5	88.1	78.2	60.3	45	26.3	29.4	40.6	53.8	59.5	63.8	62.5
80- 100	20	40.1	59.8	68.1	58.8	55.5	59.1	56.5	61.4	58.7	45.5	41.3	25	24.1	34.1	28.8	26.2	21	14.9
100- 125	25	23.8	33.4	39.6	37.6	38.3	41.1	40.1	40.8	42.6	39.4	23.6	26.7	20.8	19.5	16.8	12	8.6	5.1
125- 150	25	17.5	21.3	24.4	23.9	24.6	26.7	29.2	28	30.7	26.3	24.9	21.9	18.7	13.2	9.4	7	4.3	2.1
150- 175	25	12.4	14	17.1	16.3	17.8	19	20.7	19.3	22.5	19.6	23.1	17.2	20	9.7	5.5	4.9	2.2	1
175- 200	25	8.7	10.1	13	10.9	13.2	14.5	16.4	15	15.7	19.3	17.6	15.7	15.9	10.9	3.6	3.6	1.2	0.5
200- 225	25	6.9	7.8	10.2	7.8	9.1	10.4	12.9	14.2	12.5	18.5	14.7	12.6	10	10.7	2.4	2.5	0.6	0.3
225- 250	25	5.9	6.3	8	6.3	6.6	7.3	9.5	13.8	12.2	15.2	11.8	10.9	7.8	5.8	1.8	1.6	0.4	0.2
250- 275	25	5.3	5.2	6.1	5.6	5.5	5.7	6.8	12.3	11.1	10	9.3	10.2	6.1	4.8	1.5	1.1	0.2	0.1
275- 300	25	4.7	4.4	4.5	5.1	4.8	4.8	5.3	9.1	8.1	6.6	8.3	9.3	6	2.6	1.4	0.7	0.2	0.1
300- 325	25	4.3	3.6	3.3	4.7	4.5	4.4	4.5	6.2	5.6	5.4	7.9	7.6	6.7	1.3	1.3	0.4	0.1	0.1
325- 350	25	3.8	3	2.3	4.2	4.2	4.1	4.1	4.7	4.3	4.9	7.9	5.9	7.1	1.2	1.2	0.3	0.1	0.1
350- 375	25	3.4	2.4	1.5	3.8	4	4	3.9	4.1	3.9	4.9	7.6	4.6	6.7	2.2	1.1	0.2	0	0
375- 400	25	3	1.8	1.1	3.2	3.7	3.7	3.5	4	4	4.8	6.8	3.6	5.7	3.1	1	0.2	0	0
400- 425	25	2.2	1.3	0.6	2.5	3	3.1	3	3.8	4.3	4.4	4.9	3.1	4.1	2.7	0.9	0	0	0

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 100d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1191.5	879.2	493.2	225.4	96.7	47	25.6	16.2	15.9	24.4	46.8	77.9	98	108.4
10- 20	15					968.9	687.3	397.2	194.5	87	40.6	22.6	14.3	14.2	21.8	40.6	67.9	86.8	96.9
20- 38	18					247.2	238	201.6	139.8	80.7	40	21.6	14.8	14.5	20.7	34.4	59.8	79.5	89.4
38	0.	189.9	186.2	173.1	132.7	106.3	114.4	118	104.1	73.1	40.4	20.7	15.1	14.9	19.1	30.6	54.3	70.5	73.5
38- 60	22	107.3	122.1	118.2	86.7	75	79.1	79.3	75.6	59.7	40.1	19.9	14.8	14.5	15.7	26.4	35	36.8	37.8
60- 80	20	44.4	59.1	61.6	48.4	44.7	47.2	44.9	46.8	41.4	31.4	23.3	12.3	11.6	13.5	14.8	12.4	13	12.6
80- 100	20	23.8	32.2	35.4	31.1	29.8	31.5	29.4	31.6	30.4	23.5	21.5	11.6	9	12	6.3	5.7	4.8	3.6
100- 125	25	15.2	19.2	21.6	19.5	19.9	21.8	21.4	21	21.3	20.2	11.4	12.6	7.9	5.5	3.7	2.8	2.1	1.5
125- 150	25	11.3	12.6	13.9	12.8	13.2	14.2	15	14.4	16.1	12.9	12.2	10.2	7.4	3.4	2.1	1.7	1.1	0.7
150- 175	25	8	8.4	10	8.8	9.8	10.5	11.4	9.6	11.5	9.9	10.7	7.6	8.7	2.4	1.3	1.2	0.6	0.4
175- 200	25	5.6	6	7.8	6.1	7.1	7.8	9.1	7.8	7.5	9.3	8.3	6.8	6.8	4.2	0.8	0.8	0.4	0.2
200- 225	25	4.4	4.8	6	4.6	5.1	5.6	7	7.1	5.9	8.8	7.1	5.6	3.7	4.4	0.6	0.6	0.3	0.1
225- 250	25	3.9	4	4.6	3.9	4	4.3	5.2	6.6	5.8	7.3	5.5	5.2	2.5	1.9	0.5	0.5	0.1	0.1
250- 275	25	3.4	3.3	3.4	3.4	3.4	3.5	4	5.9	5.2	5	4.5	4.7	2.1	1.5	0.3	0.3	0.1	0.1
275- 300	25	3.1	2.9	2.5	3.1	3.1	3.1	3.3	4.6	3.8	3.6	4	3.8	2.6	0.7	0.3	0.2	0.1	0.1
300- 325	25	2.7	2.3	1.7	2.8	2.9	2.9	2.8	3.4	2.6	2.9	3.9	3.1	3.3	0.3	0.3	0.1	0.1	0
325- 350	25	2.5	1.9	1.3	2.5	2.7	2.6	2.6	2.7	2.2	2.5	3.7	2.5	3.4	0.5	0.3	0.1	0	0
350- 375	25	2.2	1.5	0.8	2.2	2.4	2.4	2.4	2.5	2	2	3.4	2	3.1	1.2	0.3	0.1	0	0
375- 400	25	1.9	1.2	0.6	1.8	2.2	2.2	2.3	2.3	2	1.8	3.1	1.9	2.4	1.6	0.2	0	0	0
400- 425	25	1.4	0.9	0.4	1.4	1.8	1.9	1.9	2.2	2	1.4	2.2	1.6	1.7	1.3	0.2	0	0	0

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					2136.5	1589.3	908.6	429.5	188.9	94.8	56.5	40.6	43.6	74.6	150.7	253.3	322.5	364.9
10- 20	15					1745.9	1264.5	744.5	375.3	172.9	83.4	50	36.2	39.7	67.9	137.4	237.6	307.1	344.1
20- 38	18					502.8	472.5	388.8	270.9	158.5	82.3	46.8	34.7	38.7	62.3	119.6	214	284.5	321.6
38	0.	570.9	410.7	323.5	239.3	206.9	228.6	235.3	205.5	143.8	82.8	44.7	34.5	38.7	57.8	107.9	191.3	258.5	284
38- 60	22	333.8	285.6	233.3	164	145.9	156.3	158.9	151.7	120.3	80.9	43.4	32.9	37.1	51.1	92.5	139.3	168.3	184.6
60- 80	20	117.8	133.8	128.3	97.6	90.9	95.5	90.7	95.7	85	65.4	48.8	28.5	31.5	43.4	57.3	63.3	68	66.7
80- 100	20	43.8	65	73.8	63.8	60.1	64.2	61.1	66.6	63.6	49.5	44.8	27.1	26	36.5	30.8	28	22.4	15.9
100- 125	25	26.2	36.4	43	40.9	41.3	44.4	43.4	44.3	46	42.8	25.6	28.9	22.5	20.9	18.1	13	9.4	5.7
125- 150	25	19.2	23.1	26.5	26	26.7	28.9	31.8	30.3	33.3	28.8	27	23.8	20.2	14.3	10.1	7.6	4.7	2.5
150- 175	25	13.6	15.4	18.7	17.6	19.4	20.6	22.7	20.9	24.4	21.3	24.8	18.6	21.5	10.5	6	5.4	2.6	1.3
175- 200	25	9.6	11	14.2	12	14.3	15.7	17.8	16.4	17.2	20.8	19	17	17.2	11.9	3.9	3.9	1.4	0.7
200- 225	25	7.6	8.6	11.2	8.5	10	11.2	14	15.3	13.4	20	15.8	13.8	10.9	11.5	2.6	2.8	0.9	0.4
225- 250	25	6.5	6.9	8.8	6.9	7.2	8	10.3	15	13.2	16.3	12.8	11.8	8.4	6.4	2	1.9	0.5	0.4
250- 275	25	5.9	5.8	6.7	6.1	6	6.2	7.4	13.4	12	10.8	10.3	11.1	6.7	5.1	1.7	1.3	0.3	0.2
275- 300	25	5.3	4.8	4.9	5.6	5.3	5.3	5.8	9.9	8.8	7.3	8.9	10	6.4	3	1.6	0.9	0.3	0.2
300- 325	25	4.7	4	3.6	5.1	5	4.9	5	6.7	6.2	5.7	8.6	8.2	7.3	1.4	1.4	0.6	0.1	0.1
325- 350	25	4.2	3.2	2.6	4.7	4.7	4.6	4.5	5.1	4.8	5.4	8.6	6.5	7.7	1.6	1.3	0.4	0.1	0.1
350- 375	25	3.7	2.6	1.7	4.1	4.4	4.3	4.2	4.5	4.2	5.4	8.3	5.1	7.3	2.4	1.2	0.2	0.1	0.1
375- 400	25	3.2	2	1.1	3.6	4	4	4	4.4	4.4	5.3	7.3	4	6.1	3.2	1.1	0.2	0.1	0.1
400- 425	25	2.4	1.4	0.7	2.7	3.3	3.3	3.3	4.2	4.7	4.7	5.2	3.5	4.5	2.9	1	0.1	0.1	0.1

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1406.9	1042.5	582.2	267	114.5	55.8	30.6	19.4	19.2	29.7	57.3	95.4	120	132.7
10- 20	15					1133.2	814.7	468.4	230.9	102	48.3	26.9	17.3	17.2	26.5	50.2	84.1	107.5	120.4
20- 38	18					292.7	282.2	237.6	165.5	95.4	47.4	25.7	17.8	17.5	25.1	42.4	74.1	98.7	111
38	0.	232.8	220.7	200.8	153.2	125.6	135	141	122.6	86.4	48	24.8	18.1	18	23.2	37.7	67.3	88	92.5
38- 60	22	131.3	145.2	138.3	100.7	87.4	92.5	94.1	89.4	70.9	47.5	23.7	17.6	17.4	19.4	32.6	44.1	47.1	48.9
60- 80	20	53.2	70.1	72.3	56.4	52.4	55.5	52.8	55.2	49.1	37.3	27.8	14.7	14	16.5	18.6	16.3	17.1	16.4
80- 100	20	27.6	37.7	41.5	36.4	34.8	36.7	34.5	37.4	36.2	27.8	25.4	13.8	11.1	14.7	8.2	7.4	6.2	4.7
100- 125	25	17.5	22.6	25.2	23	23.4	25.4	25.3	24.9	25.5	24.1	13.5	15.1	9.6	7	5	3.7	2.9	2
125- 150	25	13	14.6	16.3	15.1	15.4	16.7	18	17	19.2	15.3	14.5	12.2	8.9	4.4	2.8	2.3	1.6	1
150- 175	25	9.3	9.8	11.7	10.3	11.6	12.3	13.4	11.4	13.5	11.6	12.7	9.1	10.7	3.3	1.8	1.7	1	0.6
175- 200	25	6.5	7.1	9	7.1	8.3	9.2	10.8	9.2	8.9	11.1	9.9	8.3	8.4	5.2	1.2	1.2	0.7	0.5
200- 225	25	5.2	5.6	7.1	5.4	6	6.7	8.2	8.5	6.9	10.4	8.4	6.8	4.6	5.5	0.8	0.9	0.4	0.3
225- 250	25	4.5	4.6	5.4	4.5	4.7	4.9	6.1	8	7	8.7	6.5	6.3	3.2	2.5	0.6	0.6	0.3	0.2
250- 275	25	4	3.9	4	4	4	4	4.7	7.2	6.3	6	5.3	5.6	2.7	2	0.5	0.5	0.2	0.2
275- 300	25	3.7	3.3	3	3.6	3.6	3.5	3.8	5.4	4.5	4.2	4.8	4.7	3.2	0.9	0.5	0.3	0.2	0.1
300- 325	25	3.2	2.7	2.1	3.3	3.3	3.3	3.3	4	3.3	3.5	4.6	3.8	3.9	0.6	0.5	0.3	0.1	0.1
325- 350	25	2.9	2.3	1.5	2.9	3.1	3.1	3.1	3.3	2.7	2.8	4.4	2.9	4.1	0.8	0.4	0.1	0.1	0.1
350- 375	25	2.5	1.8	1	2.5	2.8	2.9	2.9	2.9	2.3	2.5	4.2	2.4	3.7	1.4	0.4	0.1	0.1	0.1
375- 400	25	2.3	1.4	0.6	2.1	2.6	2.6	2.6	2.8	2.4	2.2	3.6	2.2	3.1	2	0.3	0.1	0.1	0.1
400- 425	25	1.7	0.9	0.4	1.6	2.1	2.2	2.2	2.5	2.4	1.8	2.6	2	2.1	1.7	0.3	0.1	0.1	0.1

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 10y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					2195.9	1619.5	924.4	437.6	190.8	96.4	57.4	41.1	44	75.4	152	255.3	327	367.6
10- 20	15					1772	1288	757.4	379.8	175.7	84.5	50.6	36.6	40	68.5	138.3	239.4	308.7	347.3
20- 38	18					510.8	479	395.1	273.9	161.3	83.6	47.5	35.3	39.1	63.1	120.4	215.8	286.3	323.5
38	0.	582.4	417.3	326.6	241.6	207.8	230.2	242	210.5	147.6	84	45.2	34.9	39.1	58.5	108.8	192.6	260.5	285.5
38- 60	22	336.6	288.6	235.6	166.4	148.5	159.2	161.8	155.2	122	82.1	43.9	33.5	37.7	51.4	93.2	140.4	169.1	185.2
60- 80	20	118.7	135	129.6	98.7	91.7	96.5	92.1	97.1	86.4	66.4	49.5	28.8	32	43.7	57.8	63.7	68.4	67
80- 100	20	44.4	65.8	74.7	64.6	61.1	64.9	61.9	67.5	64.7	50.1	45.5	27.4	26.3	37	31	28.1	22.5	16.1
100- 125	25	26.5	36.9	43.6	41.4	41.9	45.1	43.9	44.7	46.7	43.3	25.9	29.3	22.6	21.2	18.2	13.1	9.5	5.8
125- 150	25	19.4	23.5	26.9	26.2	27	29.4	31.9	30.8	33.9	29.1	27.4	24.1	20.5	14.4	10.2	7.7	4.9	2.6
150- 175	25	13.9	15.5	18.8	17.8	19.7	20.9	22.9	21.2	24.6	21.7	25.1	18.9	21.7	10.5	6.1	5.4	2.6	1.4
175- 200	25	9.7	11.2	14.5	12.2	14.6	15.9	18	16.6	17.4	21	19.4	17.3	17.3	12.1	4	3.9	1.5	0.8
200- 225	25	7.7	8.7	11.3	8.7	10.1	11.5	14.2	15.5	13.5	20.3	16.1	13.9	11	11.8	2.7	2.8	0.9	0.5
225- 250	25	6.6	7	8.9	7	7.3	8	10.5	15.2	13.3	16.6	12.9	11.9	8.6	6.4	2	1.9	0.5	0.4
250- 275	25	6	5.9	6.8	6.2	6	6.3	7.6	13.6	12.2	11	10.4	11.2	6.7	5.1	1.7	1.3	0.4	0.2
275- 300	25	5.4	4.9	5.1	5.6	5.5	5.5	5.9	10	8.9	7.4	9	10.2	6.6	3	1.6	0.9	0.3	0.2
300- 325	25	4.8	4.1	3.7	5.2	5	5	5	6.9	6.2	5.9	8.7	8.3	7.4	1.4	1.5	0.6	0.2	0.2
325- 350	25	4.3	3.2	2.6	4.7	4.7	4.7	4.6	5.3	4.8	5.4	8.7	6.5	7.8	1.6	1.3	0.4	0.1	0.1
350- 375	25	3.8	2.6	1.7	4.2	4.5	4.4	4.2	4.7	4.2	5.4	8.4	5.1	7.3	2.4	1.2	0.2	0.1	0.1
375- 400	25	3.2	2	1.1	3.6	4.1	4.1	4	4.5	4.4	5.3	7.4	4.2	6.2	3.3	1.1	0.2	0.1	0.1
400- 425	25	2.5	1.4	0.7	2.8	3.4	3.4	3.3	4.2	4.8	4.8	5.2	3.5	4.5	2.9	1	0.1	0.1	0.1

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 10y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1433.8	1053.	591.6	271	116.3	56.8	31.2	19.8	19.6	30.4	58.3	97.3	122.2	135.3
10- 20	15					1156.7	830.5	477.6	236.7	105.8	49.1	27.4	17.7	17.5	27.2	51.2	85.5	109.5	122.5
20- 38	18					298.2	286.4	242	168.1	97.1	48.5	26.3	18.1	17.9	25.6	43.2	75.8	100.4	113
38	0.	234.7	224.5	204.3	156.1	126.9	138.5	143	126	87.9	48.7	25.2	18.6	18.3	23.8	38.4	68.3	89.5	93.5
38- 60	22	134.3	148.2	141.1	102.4	89	94.5	95.8	91.5	72.2	48.3	24.2	17.9	17.7	19.7	33.3	44.8	47.9	49.8
60- 80	20	54.4	71.4	73.7	57.6	53.6	56.6	53.7	56.5	49.9	37.9	28.5	15	14.3	16.8	18.9	16.6	17.4	16.8
80- 100	20	28.3	38.6	42.4	37.1	35.5	37.7	35.2	38.1	36.7	28.4	25.9	14.1	11.3	14.9	8.4	7.7	6.3	4.8
100- 125	25	17.9	23	25.8	23.4	23.8	25.9	25.6	25.6	25.9	24.6	13.8	15.5	9.8	7.2	5.1	3.8	3	2
125- 150	25	13.3	14.9	16.6	15.5	15.9	17.1	18.2	17.3	19.5	15.7	14.7	12.4	9.1	4.5	2.9	2.4	1.7	1.1
150- 175	25	9.6	9.9	12	10.5	11.8	12.7	13.7	11.8	13.8	11.9	13	9.4	10.8	3.4	1.9	1.7	1	0.7
175- 200	25	6.8	7.2	9.3	7.4	8.5	9.4	10.9	9.4	9.1	11.3	10.1	8.5	8.5	5.4	1.3	1.3	0.7	0.5
200- 225	25	5.3	5.8	7.2	5.6	6.2	6.8	8.4	8.7	7.1	10.6	8.5	7	4.7	5.6	0.9	0.9	0.5	0.3
225- 250	25	4.6	4.7	5.5	4.7	4.7	5.1	6.2	8.2	7.1	8.8	6.7	6.3	3.3	2.6	0.6	0.7	0.3	0.3
250- 275	25	4.1	4	4.1	4.1	4.1	4.2	4.7	7.4	6.4	6.2	5.5	5.8	2.8	2	0.6	0.6	0.2	0.2
275- 300	25	3.7	3.4	3.1	3.7	3.7	3.7	3.9	5.5	4.7	4.3	4.9	4.9	3.3	1	0.5	0.4	0.2	0.2
300- 325	25	3.4	2.8	2.2	3.3	3.4	3.4	3.5	4	3.5	3.5	4.7	3.8	4	0.6	0.5	0.3	0.1	0.1
325- 350	25	2.9	2.3	1.5	3	3.2	3.2	3.1	3.3	2.7	2.9	4.5	3	4.2	0.9	0.5	0.2	0.1	0.1
350- 375	25	2.7	1.9	1	2.5	2.9	2.9	2.9	3.1	2.5	2.5	4.2	2.5	3.8	1.4	0.4	0.1	0.1	0.1
375- 400	25	2.3	1.4	0.7	2.2	2.6	2.7	2.7	2.8	2.5	2.2	3.7	2.2	3.1	2	0.3	0.1	0.1	0.1
400- 425	25	1.7	1	0.4	1.6	2.1	2.2	2.2	2.5	2.4	1.9	2.6	2	2.1	1.8	0.3	0.1	0.1	0.1

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 100d, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					367.8	272	152.2	69.6	29.7	14.8	8.2	5.4	5.3	8.6	16.6	28.2	35.5	39.1
10- 20	15					295.7	213.9	122.1	60.4	27	12.6	7.3	4.8	4.9	7.7	14.8	25.2	32.3	36.2
20- 38	18					73.5	71.6	61.5	43.1	24.9	12.5	6.9	4.9	5	7.2	12.7	22.3	29.8	33.6
38	0.	56.1	43.1	34.7	26.6	27.2	32.2	35.5	32.2	22.6	12.5	6.4	4.7	5	6.7	11.3	20.1	26.4	28
38- 60	22	32.2	29.4	24.9	17.9	17.9	20.7	22.6	22.6	18.3	12.3	6.3	4.7	4.8	5.6	9.7	13.7	15.2	16
60- 80	20	11.5	13.9	13.7	10.5	10.4	11.6	11.6	13.3	12.1	9.6	7.2	3.9	3.9	4.9	5.7	5.4	5.7	5.6
80- 100	20	4.9	7.1	8	6.8	6.8	7.6	7.4	8.7	8.7	6.9	6.6	3.7	3.1	4.2	2.7	2.5	2	1.5
100- 125	25	3.1	4.1	4.7	4.4	4.5	5.1	5.3	5.5	6.1	5.9	3.3	4	2.6	2	1.6	1.1	0.8	0.6
125- 150	25	2.2	2.6	3	2.9	3	3.3	3.9	3.6	4.4	3.8	3.7	3.2	2.4	1.4	0.9	0.7	0.5	0.3
150- 175	25	1.6	1.8	2.1	1.9	2.2	2.4	2.8	2.6	3.1	2.7	3.3	2.3	3	1	0.6	0.5	0.3	0.1
175- 200	25	1.1	1.3	1.7	1.4	1.6	1.8	2.2	2.1	2	2.6	2.5	2.1	2.2	1.5	0.4	0.4	0.2	0.1
200- 225	25	0.9	1	1.3	1	1.1	1.2	1.7	1.8	1.6	2.6	2	1.9	1.1	1.4	0.2	0.2	0.1	0.1
225- 250	25	0.8	0.8	1	0.8	0.8	0.9	1.2	1.7	1.5	2.2	1.5	1.5	0.9	0.7	0.2	0.2	0.1	0.1
250- 275	25	0.7	0.6	0.8	0.8	0.7	0.8	0.9	1.6	1.5	1.3	1.4	1.4	0.6	0.4	0.2	0.2	0	0
275- 300	25	0.6	0.6	0.6	0.6	0.6	0.6	0.7	1.3	1.1	0.9	1.1	1.3	0.8	0.3	0.2	0.1	0	0
300- 325	25	0.5	0.5	0.4	0.6	0.6	0.6	0.6	0.8	0.7	0.6	1.2	0.9	1	0.2	0.2	0	0	0
325- 350	25	0.5	0.4	0.3	0.5	0.5	0.5	0.5	0.6	0.6	0.5	1	0.7	1	0.2	0.2	0	0	0
350- 375	25	0.5	0.3	0.2	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.9	0.7	0.9	0.4	0.2	0	0	0
375- 400	25	0.4	0.2	0.1	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.5	0.7	0.5	0.2	0	0	0
400- 425	25	0.3	0.1	0.1	0.3	0.4	0.4	0.4	0.4	0.6	0.5	0.6	0.4	0.6	0.4	0	0	0	0

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 5y, t=100d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					524.9	387.6	217.9	100.3	42.6	21.1	11.8	7.7	7.8	12.5	24.2	40.9	51.7	57.2
10- 20	15					420.9	304.5	177.3	86.8	38.6	18.2	10.4	6.9	7	11.3	21.7	36.7	47.3	53
20- 38	18					107.4	104.1	88.7	61.8	35.9	18	10	7	7.1	10.6	18.5	32.9	43.5	49.1
38	0.	86.5	68.4	55.9	42	40.6	47.5	51.7	46.5	32.7	18.1	9.5	7	7.2	9.8	16.5	29.7	39.5	42
38- 60	22	49.9	46.5	39.8	28.6	27.5	30.9	33.3	33	26.4	17.7	9	6.8	6.9	8.4	14.3	20.1	22.6	24.1
60- 80	20	18.2	22.1	21.7	16.7	16.1	17.8	17.7	19.6	18	13.9	10.6	5.7	5.7	7.1	8.4	8.2	8.7	8.5
80- 100	20	7.9	11.3	12.7	10.9	10.7	11.8	11.4	13.1	12.9	10.1	9.6	5.3	4.6	6.2	4.2	3.8	3	2.3
100- 125	25	4.9	6.6	7.6	7	7.2	8	8.1	8.5	9.1	8.7	4.8	5.9	3.9	3.2	2.4	1.8	1.4	0.9
125- 150	25	3.6	4.2	4.8	4.6	4.7	5.3	5.9	5.6	6.6	5.6	5.4	4.6	3.7	2.2	1.5	1.2	0.9	0.6
150- 175	25	2.6	2.8	3.4	3.1	3.5	3.8	4.3	3.8	4.7	4.1	4.9	3.4	4.3	1.6	1	0.9	0.6	0.4
175- 200	25	1.9	2.1	2.7	2.2	2.5	2.9	3.4	3	3.2	4	3.8	3.2	3.3	2.2	0.6	0.7	0.4	0.3
200- 225	25	1.5	1.7	2.1	1.6	1.8	2.1	2.6	2.9	2.4	3.8	2.9	2.7	1.7	2.2	0.5	0.5	0.2	0.2
225- 250	25	1.2	1.3	1.6	1.3	1.4	1.4	2	2.8	2.4	3.2	2.4	2.3	1.3	1	0.3	0.3	0.2	0.2
250- 275	25	1.1	1.1	1.2	1.1	1.1	1.1	1.4	2.5	2.3	2.1	2	2.1	1.1	0.8	0.3	0.3	0.1	0.1
275- 300	25	1	1	0.9	1	1	1	1.1	1.9	1.6	1.4	1.9	1.8	1.4	0.5	0.3	0.2	0.1	0.1
300- 325	25	0.9	0.8	0.6	1	1	0.9	0.9	1.4	1.1	1.1	1.6	1.4	1.6	0.3	0.2	0.1	0.1	0.1
325- 350	25	0.8	0.7	0.5	0.9	0.8	0.8	0.8	1	0.8	1.1	1.6	1.1	1.5	0.3	0.2	0.1	0.1	0.1
350- 375	25	0.7	0.5	0.3	0.7	0.8	0.8	0.8	0.9	0.8	0.8	1.4	0.9	1.3	0.6	0.2	0.1	0.1	0.1
375- 400	25	0.7	0.4	0.2	0.6	0.7	0.7	0.8	0.8	1	0.8	1.3	0.8	1	0.8	0.2	0.1	0.1	0.1
400- 425	25	0.4	0.3	0.2	0.5	0.6	0.7	0.7	0.9	0.8	0.7	0.9	0.7	0.8	0.6	0.2	0	0	0

Table 6, Continuation

Equivalent dose rate from JDisk and Toroid (no Beam Pipe) for T= 10y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					560.5	413.3	232.1	106.2	45.1	22.4	12.5	8.3	8.3	13.1	25.4	42.9	53.7	59.7
10- 20	15					451	324.6	188.9	91.9	41	19.3	11	7.3	7.5	11.8	22.8	38.4	49.1	55.1
20- 38	18					114	110.6	94.1	65.8	38.2	19.2	10.5	7.4	7.4	11	19.3	34.2	45.3	51
38	0.	91	73.2	60.1	45.2	43.1	50.5	55.1	49.1	34.7	19.3	10	7.5	7.6	10.3	17.3	31	40.5	43.5
38- 60	22	52.3	49.5	42.8	30.5	29.3	33	35.3	35.1	28.2	18.9	9.5	7.2	7.5	8.7	14.9	20.9	23.3	24.8
60- 80	20	19.3	23.5	23.3	17.9	17.3	19	18.7	20.8	19.1	14.8	11.2	6	6.1	7.4	8.8	8.5	9	8.8
80- 100	20	8.5	12.1	13.5	11.7	11.3	12.5	12.1	13.8	13.7	10.7	10.2	5.6	4.8	6.4	4.3	3.9	3.2	2.4
100- 125	25	5.3	7.1	8.2	7.5	7.7	8.6	8.7	9	9.6	9.3	5.2	6.2	4.1	3.4	2.5	1.9	1.5	1
125- 150	25	3.9	4.5	5.2	4.9	5	5.6	6.3	6	7.1	5.9	5.7	4.9	3.9	2.2	1.5	1.3	1	0.7
150- 175	25	2.8	3.1	3.7	3.4	3.8	4.1	4.7	4.1	4.9	4.3	5.2	3.7	4.5	1.6	1	1	0.7	0.5
175- 200	25	2	2.2	2.8	2.3	2.8	3	3.6	3.2	3.3	4.3	3.9	3.5	3.4	2.4	0.7	0.7	0.4	0.3
200- 225	25	1.6	1.8	2.2	1.8	2	2.2	2.9	3.1	2.6	4	3.1	2.9	1.9	2.4	0.5	0.6	0.4	0.3
225- 250	25	1.4	1.5	1.7	1.5	1.5	1.6	2	3	2.5	3.3	2.5	2.5	1.4	1	0.4	0.4	0.2	0.2
250- 275	25	1.3	1.2	1.4	1.3	1.3	1.3	1.6	2.7	2.4	2.3	2.1	2.3	1.1	0.9	0.3	0.3	0.2	0.2
275- 300	25	1.1	1	1	1.2	1.1	1.1	1.3	1.9	1.6	1.6	1.9	1.9	1.4	0.5	0.3	0.3	0.1	0.1
300- 325	25	1	0.9	0.7	1	1	1	1	1.4	1.2	1.1	1.7	1.4	1.7	0.3	0.3	0.1	0.1	0.1
325- 350	25	0.9	0.7	0.5	0.9	1	1	1	1.1	1	1.1	1.8	1.3	1.7	0.3	0.3	0.1	0.1	0.1
350- 375	25	0.7	0.6	0.3	0.8	0.9	0.9	0.9	0.9	0.8	1	1.6	1	1.4	0.6	0.2	0.1	0.1	0.1
375- 400	25	0.7	0.4	0.2	0.7	0.9	0.9	0.8	0.8	1	1	1.3	0.9	1.1	0.8	0.2	0.1	0.1	0.1
400- 425	25	0.5	0.3	0.2	0.5	0.6	0.7	0.7	0.9	0.8	0.8	0.9	0.7	0.8	0.7	0.2	0.1	0	0

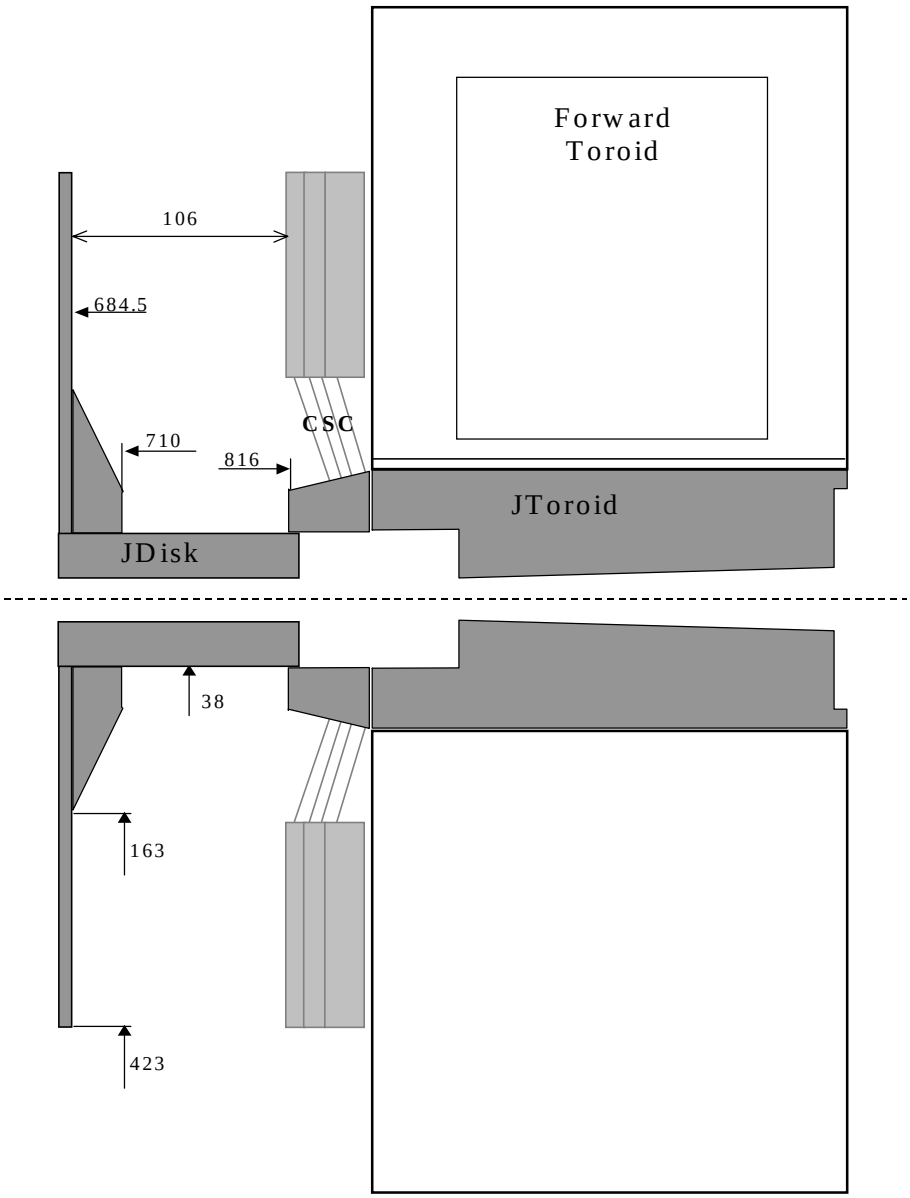

Fig.2 Access scenario to the area between JD and shifted muon chambers.

Table 7

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 30d, t=1d

R/Z, cm		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			337.2	280.1	271.3	264.3	264	266.2	269.5	277	276.3
38- 50	12			98.3	140.2	150.4	148	148	150	153.1	146.4	112.8
50- 75	25			21.4	63.9	79.8	84.6	85.9	85.2	81.5	69.7	46.1
75- 100	25			4.5	33.6	42.3	46.5	48.1	47.2	43.3	36.7	25.2
100- 125	25			3.9	22.1	26.5	28.4	29.4	28.7	26.9	23.1	20.4
125- 150	25			4.8	15.4	18.6	18.9	19.5	19	18.9	15.9	15.1
150- 175	25	1.6	2	6	11.8	13.6	14	13.3	13.8	13.8	11.8	11.8
175- 200	25	3.6	5.7	7.6	9.1	10.1	10.9	9.9	10.7	10.2	8.9	9.2
200- 225	25	4.2	5.9	6.9	7.3	7.6	8.5	8.3	8.4	7.6	7	7.3
225- 250	25	3.4	5.3	6	6.1	5.5	6.8	7.4	6.9	5.5	5.8	6.2
250- 275	25	3	5	5.4	4.8	4.2	5.6	6.6	5.8	4.2	4.5	5.2
275- 300	25	3	4.8	4.7	3.8	3.6	4.7	5.9	4.9	3.5	3.6	4
300- 325	25	2.9	4.3	4	3.2	3.2	4	5	4.1	3.1	3.1	3.2
325- 350	25	2.3	3.5	3.2	2.9	2.9	3.4	4.1	3.4	2.8	2.8	2.8
350- 375	25	1.9	2.8	2.8	2.7	2.7	2.9	3.3	2.9	2.6	2.6	2.6
375- 400	25	1.6	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4
400- 425	25	1.4	2.3	2.2	2.3	2.3	2.1	1.8	2	2.2	2.2	2.2

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 30d, t=5d

R/Z, Cm		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			197	170.8	168.8	164.4	164.4	166.1	166.4	169.9	171.8
38- 50	12			57.3	86	92.9	92.8	92.5	93.2	93.5	90.3	71.6
50- 75	25			12.6	40	49.5	52.7	53.4	53.1	50.8	43.5	29.1
75- 100	25			2.3	20.8	26.3	28.9	29.8	29.3	26.9	22.8	15.6
100- 125	25			3.4	13.8	16.4	17.6	18.1	17.8	16.7	14.4	12.6
125- 150	25			4.7	9.6	11.5	11.7	12.1	11.8	11.6	9.8	9.4
150- 175	25	1	1.3	5.5	7.3	8.4	8.6	8.3	8.6	8.5	7.2	7.2
175- 200	25	2.2	3.5	5.5	5.6	6.2	6.7	6.1	6.6	6.3	5.5	5.7
200- 225	25	2.6	3.7	4.7	4.5	4.7	5.2	5.1	5.2	4.7	4.3	4.5
225- 250	25	2.1	3.3	4	3.7	3.4	4.2	4.5	4.3	3.4	3.6	3.8
250- 275	25	1.9	3.1	3.5	3	2.6	3.5	4.1	3.6	2.6	2.8	3.2
275- 300	25	1.8	3	2.9	2.3	2.2	2.9	3.6	3	2.2	2.2	2.4
300- 325	25	1.7	2.6	2.3	2	1.9	2.4	3.1	2.5	1.9	1.9	1.9
325- 350	25	1.5	2.1	1.9	1.8	1.8	2.1	2.6	2.1	1.7	1.7	1.7
350- 375	25	1.2	1.7	1.7	1.6	1.6	1.8	2	1.8	1.6	1.6	1.6
375- 400	25	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
400- 425	25	0.9	1.4	1.4	1.4	1.4	1.3	1.1	1.2	1.4	1.4	1.3

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 100d, t=1d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			404.3	338.7	326.4	318.8	318.8	320.5	326.8	334.8	341.2
38- 50	12			131.3	173	184.4	181.8	181.8	183.1	186.3	182.7	148.8
50- 75	25			30.5	79.7	97.5	103.9	105.4	105.2	101	86.7	60.2
75- 100	25			5.3	41.3	51.9	57.1	59.1	57.9	53.2	45	30.9
100- 125	25			6.8	27.1	32.5	34.8	36.1	35.3	33	28.2	24.8
125- 150	25			9.4	18.8	22.8	23.3	23.6	23.4	23.2	19.5	18.2
150- 175	25	2	2.6	10.8	14.3	16.5	17.1	16.5	16.9	16.8	14.4	14.4
175- 200	25	4.5	7	11	11.2	12.3	13.4	12.1	13.1	12.5	10.8	11.4
200- 225	25	5.1	7.2	9.3	8.9	9.3	10.3	10.1	10.2	9.3	8.6	8.9
225- 250	25	4.1	6.5	7.9	7.4	6.8	8.3	9	8.5	6.7	7.1	7.5
250- 275	25	3.7	6.1	6.8	5.9	5.2	6.9	8.1	7.1	5.1	5.5	6.3
275- 300	25	3.6	5.9	5.7	4.6	4.3	5.7	7.1	6	4.3	4.4	4.9
300- 325	25	3.5	5.2	4.5	3.9	3.9	4.8	6.1	5	3.8	3.7	3.9
325- 350	25	2.9	4.2	3.7	3.5	3.5	4.1	5.1	4.2	3.4	3.4	3.4
350- 375	25	2.3	3.4	3.3	3.2	3.2	3.5	4	3.6	3.2	3.1	3.1
375- 400	25	1.9	3	3	3	3	3	3	3	2.9	2.9	2.9
400- 425	25	1.7	2.7	2.7	2.7	2.7	2.6	2.2	2.5	2.7	2.7	2.7

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 100d, t=5d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			279.7	226.7	217.9	209.5	209.2	212.5	219.2	222.7	231.7
38- 50	12			99.1	117.8	125.2	122.5	122.5	123.8	126.4	124	105.5
50- 75	25			23.7	54.2	66	69.8	70.9	70.5	67.8	59.2	42
75- 100	25			4	27.8	35	38.5	39.9	39	35.9	30.4	20.8
100- 125	25			4.7	18.3	21.9	23.4	24.6	23.8	22.2	19	16.7
125- 150	25			6.3	12.6	15.3	15.6	16.1	15.6	15.4	13.1	12.3
150- 175	25	1.3	1.8	7.3	9.6	11.2	11.5	11.2	11.3	11.3	9.6	9.5
175- 200	25	3	4.7	7.4	7.5	8.3	8.9	8.1	8.8	8.4	7.2	7.5
200- 225	25	3.4	4.9	6.3	6	6.2	6.9	6.7	6.9	6.3	5.7	6
225- 250	25	2.8	4.3	5.3	4.9	4.6	5.5	6	5.7	4.5	4.7	5
250- 275	25	2.5	4.1	4.6	3.9	3.5	4.6	5.4	4.7	3.4	3.7	4.2
275- 300	25	2.4	3.9	3.8	3.1	2.9	3.8	4.7	4	2.9	2.9	3.2
300- 325	25	2.3	3.5	3	2.6	2.6	3.2	4.1	3.3	2.5	2.5	2.6
325- 350	25	1.9	2.8	2.5	2.3	2.3	2.7	3.4	2.8	2.3	2.3	2.3
350- 375	25	1.5	2.3	2.2	2.1	2.2	2.3	2.7	2.4	2.1	2.1	2.1
375- 400	25	1.3	2	2	2	2	2	2	2	1.9	1.9	1.9
400- 425	25	1.2	1.8	1.8	1.8	1.8	1.7	1.5	1.6	1.8	1.8	1.8

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 5y, t= 1d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			436.5	362	348.4	338.7	334.9	339.2	347	355.6	363.6
38- 50	12			146.7	186.5	197.6	194.8	192	195.4	198.6	194.4	160.3
50- 75	25			34.3	85.8	104.6	110.5	112.6	112.7	107.4	93.1	64.7
75- 100	25			5.9	44.3	55.6	61.2	63.3	61.9	57	48.2	33.2
100- 125	25			7.4	29.2	34.8	37.3	38.8	37.7	35.4	30.3	26.7
125- 150	25			10.2	20.2	24.4	24.9	25.5	25	24.7	21	19.8
150- 175	25	2.2	2.9	11.6	15.5	17.9	18.4	17.7	18.3	18	15.5	15.5
175- 200	25	4.8	7.6	11.8	12	13.3	14.4	13	14.1	13.5	11.7	12.2
200- 225	25	5.5	7.8	10	9.6	10	11.2	10.9	11	10.1	9.3	9.6
225- 250	25	4.5	7	8.5	7.9	7.3	8.9	9.6	9.1	7.3	7.6	8.1
250- 275	25	4	6.6	7.4	6.4	5.6	7.4	8.7	7.7	5.6	6	6.8
275- 300	25	3.9	6.3	6.2	5	4.7	6.2	7.7	6.4	4.6	4.7	5.3
300- 325	25	3.8	5.7	4.9	4.2	4.2	5.2	6.6	5.4	4.1	4.1	4.2
325- 350	25	3.1	4.6	4	3.8	3.8	4.4	5.5	4.5	3.7	3.7	3.7
350- 375	25	2.5	3.7	3.5	3.5	3.5	3.8	4.3	3.8	3.4	3.4	3.4
375- 400	25	2.1	3.3	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.1	3.1
400- 425	25	1.9	2.9	2.9	2.9	2.9	2.7	2.4	2.7	2.9	2.9	2.9

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 5y, t=5d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			313.6	249.4	238.9	234.1	234.1	235.8	237.1	246.8	259.1
38- 50	12			114.4	129.9	136.6	136.5	136.5	136.5	136.6	135.9	118.3
50- 75	25			27.6	60.3	73.5	77.6	78.5	78.2	75.3	65.9	47.4
75- 100	25			4.7	30.9	38.8	42.8	44.4	43.4	39.9	33.8	23.2
100- 125	25			5.3	20.3	24.3	26.1	27.1	26.5	24.7	21.3	18.7
125- 150	25			7.1	14.2	16.9	17.4	17.8	17.5	17.2	14.6	13.8
150- 175	25	1.5	2.1	8.1	10.8	12.5	12.8	12.3	12.7	12.6	10.8	10.8
175- 200	25	3.4	5.3	8.2	8.4	9.3	10	9.1	9.8	9.4	8.1	8.5
200- 225	25	3.8	5.4	7	6.7	7	7.8	7.5	7.7	7	6.4	6.7
225- 250	25	3.1	4.9	5.9	5.5	5.1	6.2	6.7	6.3	5.1	5.3	5.6
250- 275	25	2.8	4.6	5.1	4.4	3.9	5.1	6	5.3	3.9	4.2	4.7
275- 300	25	2.7	4.4	4.3	3.5	3.3	4.3	5.3	4.5	3.2	3.3	3.7
300- 325	25	2.6	3.9	3.4	2.9	2.9	3.6	4.6	3.7	2.9	2.8	2.9
325- 350	25	2.2	3.2	2.8	2.6	2.6	3.1	3.8	3.1	2.6	2.6	2.6
350- 375	25	1.7	2.6	2.5	2.4	2.4	2.6	3	2.7	2.4	2.3	2.4
375- 400	25	1.4	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2
400- 425	25	1.3	2	2	2	2	1.9	1.7	1.9	2	2	2

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 10y, t=1d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			437.7	362	348.4	338.7	334.9	339.2	347	356.6	371.2
38- 50	12			148.8	186.7	197.7	194.8	192.5	195.8	198.6	194.7	162.3
50- 75	25			35	86.1	104.9	110.8	113.6	113.2	107.7	93.6	65.5
75- 100	25			6	44.4	55.8	61.3	63.4	62.2	57.2	48.4	33.3
100- 125	25			7.5	29.3	35	37.4	39	37.9	35.5	30.4	26.7
125- 150	25			10.2	20.4	24.4	25	25.6	25.1	24.8	21.1	20.1
150- 175	25	2.2	2.9	11.7	15.5	18	18.5	17.8	18.3	18.1	15.6	15.5
175- 200	25	4.8	7.6	11.8	12.1	13.3	14.4	13	14.2	13.5	11.7	12.2
200- 225	25	5.5	7.8	10.1	9.6	10	11.2	11	11.1	10.1	9.3	9.7
225- 250	25	4.5	7	8.5	8	7.4	9	9.7	9.1	7.3	7.7	8.2
250- 275	25	4	6.6	7.4	6.4	5.6	7.4	8.7	7.7	5.6	6	6.8
275- 300	25	3.9	6.3	6.2	5	4.7	6.2	7.7	6.5	4.7	4.8	5.3
300- 325	25	3.8	5.7	4.9	4.2	4.2	5.2	6.6	5.4	4.2	4.1	4.2
325- 350	25	3.1	4.6	4	3.8	3.8	4.4	5.5	4.6	3.8	3.7	3.7
350- 375	25	2.5	3.7	3.6	3.5	3.5	3.8	4.4	3.9	3.4	3.4	3.4
375- 400	25	2.1	3.3	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.1	3.1
400- 425	25	1.9	3	3	3	3	2.8	2.4	2.7	2.9	2.9	2.9

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 10y, t=5d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			316.1	249.4	239.8	234.1	234.1	235.8	237.9	246.8	259.1
38- 50	12			116.1	130.1	136.8	136.5	136.5	136.5	136.6	136.9	120
50- 75	25			28.4	60.8	73.7	77.8	79.1	78.5	75.5	66.3	47.7
75- 100	25			4.8	31	39.1	43	44.5	43.7	40.1	34	23.3
100- 125	25			5.3	20.6	24.5	26.2	27.3	26.6	24.8	21.4	18.7
125- 150	25			7.1	14.3	17	17.5	17.9	17.6	17.2	14.8	13.9
150- 175	25	1.6	2.1	8.2	10.9	12.5	12.9	12.3	12.8	12.7	10.8	10.8
175- 200	25	3.4	5.3	8.2	8.4	9.3	10.1	9.1	9.9	9.5	8.2	8.5
200- 225	25	3.9	5.5	7	6.7	7	7.8	7.6	7.8	7.1	6.5	6.8
225- 250	25	3.1	4.9	5.9	5.6	5.2	6.3	6.7	6.4	5.2	5.4	5.7
250- 275	25	2.8	4.6	5.1	4.5	3.9	5.2	6	5.4	3.9	4.2	4.8
275- 300	25	2.7	4.4	4.3	3.5	3.3	4.3	5.3	4.5	3.3	3.3	3.7
300- 325	25	2.6	3.9	3.4	3	2.9	3.6	4.6	3.8	2.9	2.9	3
325- 350	25	2.2	3.2	2.8	2.6	2.7	3.1	3.8	3.2	2.6	2.6	2.6
350- 375	25	1.7	2.6	2.5	2.4	2.4	2.7	3	2.7	2.4	2.4	2.4
375- 400	25	1.5	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2
400- 425	25	1.3	2	2	2.1	2.1	1.9	1.7	1.9	2	2	2

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 100d, t=100d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			55.7	37.3	34.4	33	32.9	33.3	34.5	36.3	41.7
38- 50	12			28.9	21.2	20.7	19.9	19.5	20.1	21	22.1	23.3
50- 75	25			7.7	9.9	11.4	11.8	11.9	12.1	12	11	9
75- 100	25			1.2	4.8	6.1	6.7	6.9	6.8	6.3	5.3	3.6
100- 125	25			0.9	3.2	3.8	4.1	4.2	4.1	3.8	3.3	2.8
125- 150	25			1.1	2.2	2.6	2.7	2.8	2.7	2.7	2.3	2.1
150- 175	25	0.3	0.4	1.3	1.7	1.9	2	1.9	1.9	2	1.7	1.6
175- 200	25	0.5	0.8	1.3	1.3	1.4	1.5	1.4	1.5	1.5	1.3	1.3
200- 225	25	0.6	0.8	1.1	1	1.1	1.2	1.1	1.2	1.1	1	1
225- 250	25	0.5	0.8	0.9	0.9	0.8	0.9	1	1	0.8	0.8	0.9
250- 275	25	0.4	0.7	0.8	0.7	0.6	0.8	0.9	0.8	0.6	0.7	0.7
275- 300	25	0.4	0.7	0.7	0.5	0.5	0.7	0.8	0.7	0.5	0.5	0.6
300- 325	25	0.4	0.6	0.5	0.4	0.4	0.6	0.7	0.6	0.4	0.4	0.5
325- 350	25	0.3	0.5	0.4	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.4
350- 375	25	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4
375- 400	25	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3
400- 425	25	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 5y, t=100d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			80.6	55.8	52	50.3	49.5	50.6	51.8	53.9	60.6
38- 50	12			39.3	31	30.8	29.9	29.6	30.2	31.2	32.3	32.9
50- 75	25			10.4	14.6	17	17.8	17.9	18	17.6	16	12.8
75- 100	25			1.7	7.2	9	9.9	10.2	10.1	9.3	7.9	5.4
100- 125	25			1.4	4.8	5.7	6.1	6.4	6.2	5.8	4.9	4.3
125- 150	25			1.7	3.3	4	4.1	4.2	4.1	4	3.5	3.2
150- 175	25	0.4	0.6	1.9	2.5	2.9	3	2.9	3	3	2.6	2.5
175- 200	25	0.8	1.3	1.9	2	2.2	2.3	2.1	2.3	2.3	2	2
200- 225	25	0.9	1.3	1.6	1.6	1.7	1.8	1.8	1.8	1.7	1.6	1.6
225- 250	25	0.8	1.2	1.4	1.3	1.2	1.5	1.5	1.5	1.3	1.3	1.4
250- 275	25	0.7	1.1	1.2	1.1	0.9	1.2	1.4	1.3	1	1	1.2
275- 300	25	0.7	1	1	0.8	0.8	1	1.2	1.1	0.8	0.8	0.9
300- 325	25	0.6	0.9	0.8	0.7	0.7	0.9	1.1	0.9	0.7	0.7	0.7
325- 350	25	0.5	0.8	0.7	0.6	0.6	0.7	0.9	0.8	0.6	0.6	0.6
350- 375	25	0.4	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6
375- 400	25	0.3	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5
400- 425	25	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5

Table 7, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by high-energy hadrons for T= 10y, t= 100d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			83.2	56.9	52.6	50.6	50.3	51.2	52.6	54.7	62.1
38- 50	12			41.7	32	31.3	30.3	30.3	30.6	31.7	33.2	34.5
50- 75	25			11.1	15.1	17.4	18	18.1	18.2	18	16.4	13.2
75- 100	25			1.8	7.4	9.3	10.2	10.5	10.3	9.5	8	5.5
100- 125	25			1.4	4.9	5.8	6.2	6.5	6.3	5.9	5.1	4.4
125- 150	25			1.7	3.4	4.1	4.2	4.3	4.2	4.1	3.5	3.3
150- 175	25	0.4	0.6	2	2.6	3	3.1	3	3.1	3.1	2.6	2.6
175- 200	25	0.9	1.3	2	2	2.3	2.4	2.2	2.4	2.3	2	2.1
200- 225	25	0.9	1.3	1.7	1.6	1.7	1.9	1.8	1.9	1.8	1.6	1.7
225- 250	25	0.8	1.2	1.4	1.4	1.3	1.5	1.6	1.6	1.3	1.3	1.4
250- 275	25	0.7	1.1	1.2	1.1	1	1.3	1.4	1.3	1	1.1	1.2
275- 300	25	0.7	1.1	1.1	0.9	0.8	1.1	1.3	1.1	0.8	0.8	1
300- 325	25	0.6	1	0.8	0.7	0.7	0.9	1.1	0.9	0.7	0.7	0.8
325- 350	25	0.5	0.8	0.7	0.6	0.7	0.8	0.9	0.8	0.6	0.6	0.7
350- 375	25	0.4	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.6	0.6	0.6
375- 400	25	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5
400- 425	25	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5

Table 8

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 30d, t=1d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			434	95	56.6	48.8	47.4	50.7	61.8	98.5	218.7
38- 50	12			508.9	111.7	63.5	51.8	50	56	74.5	129.3	281.1
50- 75	25			182.3	59.9	48.4	43.9	43.5	47.6	57	74	106.6
75- 100	25			20.6	15.9	22.6	25.8	27.4	28	26.2	20.6	11.1
100- 125	25			5.1	9.7	12.1	14.3	15.7	14.9	12.5	9.8	6.4
125- 150	25			3.8	6.4	7.9	8.6	9.3	8.3	7.5	6.1	4.6
150- 175	25	1.8	3.1	3.9	4.7	6	5.5	5.6	4.8	5.7	4.1	3.4
175- 200	25	1.9	3.1	3.7	3.8	4.5	4	3	3.3	4.3	2.9	2.6
200- 225	25	1.7	2.6	3.1	2.9	3.3	3	1.6	2.7	3.2	2.1	2.1
225- 250	25	1.5	2.2	2.4	2.2	2.5	2	1.4	2.1	2.3	1.6	1.6
250- 275	25	1.1	1.7	2	2	1.4	1.5	1.5	1.9	1.3	1.4	1.4
275- 300	25	0.9	1.5	1.8	1.4	0.7	1.2	1.6	1.6	0.8	0.9	1.2
300- 325	25	0.9	1.6	1.4	0.8	0.6	1	1.7	1.4	0.6	0.6	0.8
325- 350	25	0.9	1.3	0.8	0.6	0.5	0.9	1.6	1.2	0.5	0.5	0.5
350- 375	25	0.6	0.8	0.5	0.5	0.5	0.8	1.5	0.9	0.5	0.4	0.4
375- 400	25	0.3	0.4	0.4	0.4	0.5	0.8	1.2	0.8	0.4	0.4	0.4
400- 425	25	0.2	0.3	0.3	0.4	0.5	0.8	1	0.6	0.4	0.4	0.4

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 30d, t=5d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			28	11	8.8	8.2	7.9	8	8.6	10.6	16.3
38- 50	12			26.9	9	6.7	6	5.8	6	6.9	9.5	16.1
50- 75	25			9.7	4.6	4.3	4.1	4.1	4.3	4.6	5.2	6.2
75- 100	25			1.1	1.6	2.1	2.4	2.5	2.5	2.3	1.9	1.1
100- 125	25			0.4	1	1.2	1.4	1.5	1.4	1.3	1	0.8
125- 150	25			0.4	0.7	0.8	0.9	0.9	0.9	0.8	0.7	0.6
150- 175	25	0.2	0.3	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5
175- 200	25	0.2	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4
200- 225	25	0.2	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.3
225- 250	25	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
250- 275	25	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
275- 300	25	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2
300- 325	25	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
325- 350	25	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
350- 375	25	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
375- 400	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
400- 425	25	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons forT= 100d, t=1d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
Cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			468.7	110.2	68.6	60.2	58.7	61.7	73.9	112.5	243.7
38- 50	12			543.7	123.9	72.6	59.8	57.9	64.3	83.7	140.8	299.9
50- 75	25			194.9	65.9	54.3	49.6	49.1	53.4	63.2	80.8	114.6
75- 100	25			22.1	18.2	25.5	29.1	30.7	31.2	29.3	23	12.6
100- 125	25			5.7	11.1	13.8	16.2	17.7	16.8	14.2	11.3	7.5
125- 150	25			4.4	7.4	9	9.8	10.3	9.5	8.6	7	5.4
150- 175	25	2.1	3.4	4.4	5.4	6.9	6.3	6.5	5.6	6.5	4.7	4
175- 200	25	2.2	3.5	4.3	4.4	5.1	4.6	3.6	3.9	4.9	3.4	3.2
200- 225	25	2	3	3.6	3.3	3.8	3.5	2	3.2	3.7	2.4	2.5
225- 250	25	1.7	2.6	2.8	2.6	2.9	2.4	1.8	2.5	2.6	1.9	1.9
250- 275	25	1.3	2	2.3	2.3	1.7	1.8	1.8	2.2	1.6	1.7	1.7
275- 300	25	1.1	1.8	2.1	1.7	0.9	1.5	1.9	1.9	1	1.1	1.5
300- 325	25	1.1	1.8	1.7	1	0.7	1.2	2	1.6	0.8	0.7	0.9
325- 350	25	1.1	1.6	1	0.7	0.6	1.1	1.9	1.4	0.6	0.6	0.6
350- 375	25	0.7	1	0.6	0.6	0.6	1	1.7	1.1	0.6	0.5	0.5
375- 400	25	0.4	0.5	0.5	0.5	0.6	0.9	1.4	0.9	0.6	0.5	0.5
400- 425	25	0.3	0.4	0.4	0.5	0.6	0.9	1.1	0.8	0.5	0.5	0.5

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 100d, t=5d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			64.3	25.3	20.2	19.1	18.9	19.3	20.4	24.7	37.6
38- 50	12			61.8	20.7	15.4	13.9	13.5	14.2	16.2	22.2	37
50- 75	25			22.2	10.7	10.1	9.7	9.6	10	10.8	12.1	14.3
75- 100	25			2.6	3.7	5	5.6	5.8	5.8	5.4	4.3	2.7
100- 125	25			1	2.3	2.9	3.3	3.5	3.3	2.9	2.4	1.9
125- 150	25			0.9	1.6	2	2.1	2.2	2.1	1.9	1.6	1.4
150- 175	25	0.5	0.6	1	1.2	1.5	1.4	1.4	1.4	1.5	1.2	1.1
175- 200	25	0.5	0.7	1	1	1.1	1.1	1	1	1.1	0.9	0.9
200- 225	25	0.5	0.7	0.8	0.8	0.9	0.9	0.7	0.8	0.8	0.7	0.7
225- 250	25	0.4	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.6
250- 275	25	0.3	0.5	0.6	0.5	0.4	0.5	0.6	0.6	0.4	0.4	0.5
275- 300	25	0.3	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.3	0.3	0.4
300- 325	25	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3
325- 350	25	0.3	0.4	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2
350- 375	25	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2
375- 400	25	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
400- 425	25	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 5y, t= 1d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			504.2	125.9	82.1	72.8	71	74.4	87.2	128.3	263.7
38- 50	12			572.6	135.6	81.9	68.4	66.1	72.8	93.1	154.6	319.5
50- 75	25			205.1	71.9	60.1	55.2	54.7	59.1	69.2	87.4	122.3
75- 100	25			23.4	20.3	28.5	32.3	34.1	34.6	32.3	25.5	14.3
100- 125	25			6.2	12.4	15.5	18	19.6	18.6	16	12.7	8.7
125- 150	25			4.9	8.3	10.2	11	11.9	10.7	9.7	8.1	6.3
150- 175	25	2.5	3.8	5	6.1	7.7	7.2	7.3	6.5	7.4	5.4	4.6
175- 200	25	2.5	4	4.9	5	5.8	5.3	4.2	4.6	5.6	3.9	3.7
200- 225	25	2.3	3.4	4.1	3.8	4.3	4	2.5	3.7	4.2	2.9	2.9
225- 250	25	1.9	2.9	3.2	3	3.3	2.8	2.1	3	3	2.3	2.3
250- 275	25	1.5	2.3	2.6	2.6	1.9	2.1	2.2	2.5	1.8	1.9	2
275- 300	25	1.3	2	2.4	1.9	1.1	1.8	2.3	2.2	1.2	1.3	1.7
300- 325	25	1.3	2.1	1.9	1.2	0.9	1.5	2.3	1.9	0.9	0.9	1.1
325- 350	25	1.2	1.8	1.2	0.9	0.8	1.3	2.1	1.6	0.8	0.7	0.8
350- 375	25	0.9	1.1	0.8	0.8	0.8	1.2	1.9	1.3	0.7	0.6	0.7
375- 400	25	0.5	0.7	0.6	0.7	0.8	1.1	1.6	1.1	0.7	0.6	0.6
400- 425	25	0.3	0.5	0.5	0.6	0.7	1	1.2	0.9	0.6	0.6	0.6

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 5y, t=5d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			98.1	41.4	33.7	32.1	31.4	31.7	33.5	40	58.1
38- 50	12			91.3	32.4	24.9	22.6	22.3	23	25.9	34.4	54.9
50- 75	25			32.6	16.5	16	15.4	15.4	15.8	17.1	18.7	21.6
75- 100	25			3.9	5.9	7.9	8.9	9.2	9.1	8.5	6.9	4.3
100- 125	25			1.5	3.7	4.6	5.2	5.5	5.3	4.7	3.9	3
125- 150	25			1.4	2.6	3.1	3.3	3.5	3.3	3.1	2.6	2.3
150- 175	25	0.9	1	1.6	2	2.4	2.3	2.3	2.2	2.3	1.9	1.7
175- 200	25	0.8	1.2	1.6	1.6	1.8	1.8	1.5	1.7	1.8	1.4	1.4
200- 225	25	0.8	1.1	1.3	1.3	1.4	1.4	1.1	1.3	1.3	1.1	1.1
225- 250	25	0.7	0.9	1.1	1	1	1.1	1	1.1	1	0.9	0.9
250- 275	25	0.5	0.8	0.9	0.8	0.7	0.8	0.9	0.9	0.7	0.7	0.8
275- 300	25	0.5	0.7	0.8	0.7	0.5	0.7	0.9	0.8	0.5	0.5	0.6
300- 325	25	0.5	0.7	0.6	0.5	0.4	0.6	0.8	0.7	0.4	0.4	0.5
325- 350	25	0.4	0.6	0.5	0.4	0.4	0.5	0.7	0.6	0.4	0.4	0.4
350- 375	25	0.3	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.4	0.3	0.3
375- 400	25	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3
400- 425	25	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 10y, t=1d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			509.7	131	87.6	78.3	76.2	79.6	92.1	133.7	268.6
38- 50	12			573.1	138.5	85	71.4	69.1	75.8	96	157.4	319.5
50- 75	25			205.4	73.1	61.7	56.9	56.3	60.8	70.6	88.4	122.5
75- 100	25			23.4	21.1	29.3	33.3	35	35.4	33.2	26.3	14.8
100- 125	25			6.3	12.8	16	18.6	20.3	19.3	16.5	13.2	9.1
125- 150	25			5	8.6	10.4	11.4	12.2	11.1	10.1	8.3	6.6
150- 175	25	2.6	3.9	5.2	6.4	8	7.5	7.6	6.7	7.7	5.7	4.9
175- 200	25	2.6	4.1	5.1	5.2	6	5.5	4.4	4.8	5.8	4.1	3.9
200- 225	25	2.4	3.6	4.2	4	4.5	4.2	2.7	3.8	4.3	3	3.1
225- 250	25	2	3	3.4	3.1	3.4	2.9	2.3	3.1	3.1	2.4	2.4
250- 275	25	1.6	2.4	2.7	2.7	2	2.2	2.3	2.7	1.9	2	2.1
275- 300	25	1.3	2.1	2.5	2	1.2	1.9	2.4	2.3	1.3	1.4	1.8
300- 325	25	1.3	2.2	2	1.3	0.9	1.5	2.4	1.9	1	1	1.2
325- 350	25	1.3	1.8	1.2	0.9	0.9	1.3	2.2	1.6	0.8	0.8	0.8
350- 375	25	0.9	1.2	0.8	0.8	0.8	1.2	2	1.3	0.8	0.7	0.7
375- 400	25	0.5	0.7	0.7	0.7	0.8	1.1	1.6	1.1	0.7	0.7	0.6
400- 425	25	0.4	0.6	0.6	0.6	0.8	1.1	1.3	0.9	0.7	0.6	0.6

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 10y, t=5d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			103.7	47	39.4	37.5	36.9	37.2	39.1	45.3	63
38- 50	12			92	35.3	28.1	25.8	25.4	26.1	29	37.3	56.8
50- 75	25			32.9	17.8	17.5	17.1	17	17.6	18.6	20	22.4
75- 100	25			4	6.6	8.8	9.8	10.2	10.1	9.3	7.6	4.8
100- 125	25			1.6	4.2	5.1	5.8	6.1	5.9	5.3	4.4	3.5
125- 150	25			1.6	2.9	3.5	3.7	3.9	3.7	3.5	2.9	2.6
150- 175	25	1	1.1	1.8	2.2	2.7	2.6	2.6	2.5	2.6	2.1	2
175- 200	25	1	1.3	1.8	1.8	2	2	1.8	1.9	2	1.6	1.6
200- 225	25	0.9	1.2	1.5	1.4	1.5	1.6	1.3	1.5	1.5	1.2	1.3
225- 250	25	0.8	1.1	1.2	1.2	1.1	1.2	1.2	1.2	1.1	1	1
250- 275	25	0.6	0.9	1	1	0.8	1	1.1	1	0.8	0.8	0.9
275- 300	25	0.6	0.9	0.9	0.7	0.6	0.8	1	0.9	0.6	0.6	0.7
300- 325	25	0.6	0.8	0.7	0.6	0.5	0.7	0.9	0.7	0.5	0.5	0.5
325- 350	25	0.5	0.7	0.5	0.5	0.5	0.6	0.8	0.6	0.4	0.4	0.4
350- 375	25	0.4	0.5	0.4	0.4	0.4	0.5	0.7	0.5	0.4	0.4	0.4
375- 400	25	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4
400- 425	25	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 100d, t=100d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			32.8	12	9.5	8.6	8.4	8.6	9.4	11.7	18.8
38- 50	12			32.8	10.5	7.4	6.6	6.4	6.7	7.8	11.1	19.3
50- 75	25			12	5.4	5	4.7	4.7	4.9	5.4	6.1	7.4
75- 100	25			1.4	1.8	2.5	2.8	2.9	2.9	2.7	2.1	1.3
100- 125	25			0.5	1.1	1.4	1.6	1.7	1.6	1.4	1.2	0.9
125- 150	25			0.5	0.8	0.9	1	1.1	1	0.9	0.8	0.7
150- 175	25	0.2	0.3	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.5
175- 200	25	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
200- 225	25	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3
225- 250	25	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
250- 275	25	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2
275- 300	25	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2
300- 325	25	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
325- 350	25	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1
350- 375	25	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
375- 400	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
400- 425	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 5y, t=100d

R/Z,		684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
cm	dR\dZ	0.	10	15	15	15	15	15	15	15	15	0.
38	0.			59.6	25.5	21.2	19.8	19.4	19.7	20.6	24.6	35.5
38- 50	12			54.7	19.7	15.4	13.9	13.4	14.1	15.9	20.9	33.3
50- 75	25			19.6	10.1	9.8	9.5	9.4	9.7	10.4	11.3	13.1
75- 100	25			2.4	3.7	4.9	5.4	5.6	5.6	5.2	4.2	2.6
100- 125	25			0.9	2.3	2.8	3.2	3.4	3.3	2.9	2.4	1.9
125- 150	25			0.9	1.6	1.9	2	2.1	2	1.9	1.6	1.4
150- 175	25	0.6	0.6	1	1.2	1.5	1.4	1.4	1.4	1.4	1.2	1.1
175- 200	25	0.5	0.7	1	1	1.1	1.1	1	1	1.1	0.9	0.9
200- 225	25	0.5	0.7	0.8	0.8	0.8	0.9	0.7	0.8	0.8	0.7	0.7
225- 250	25	0.4	0.6	0.7	0.6	0.6	0.7	0.6	0.7	0.6	0.5	0.6
250- 275	25	0.3	0.5	0.6	0.5	0.4	0.5	0.6	0.6	0.4	0.4	0.5
275- 300	25	0.3	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.3	0.3	0.4
300- 325	25	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3
325- 350	25	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.3	0.2	0.2	0.2
350- 375	25	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2
375- 400	25	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
400- 425	25	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 8, Continuation

Dose rate in the gap between JD and shifted muon chambers resulted from activation by low energy neutrons for T= 10y, t= 100d

R/Z, cm	dR\dZ	684.5	684.5-695	695- -710	710-725	725-740	740-755	755-770	770-785	785-800	800-815	816
		0.	10	15	15	15	15	15	15	15	15	0.
38	0.			65.4	30.9	26.6	25.2	24.4	24.7	25.9	29.7	40.5
38- 50	12			56.2	22.4	18.4	17.1	16.6	17.1	18.8	23.6	35.2
50- 75	25			19.9	11.4	11.3	11.2	11.1	11.3	11.8	12.6	13.7
75- 100	25			2.5	4.3	5.7	6.3	6.6	6.5	6	4.9	3.1
100- 125	25			1.1	2.7	3.4	3.7	3.9	3.8	3.4	2.8	2.3
125- 150	25			1.1	1.9	2.3	2.4	2.5	2.4	2.3	1.9	1.7
150- 175	25	0.7	0.7	1.2	1.5	1.7	1.7	1.7	1.6	1.7	1.4	1.3
175- 200	25	0.6	0.9	1.2	1.2	1.3	1.3	1.2	1.2	1.3	1.1	1
200- 225	25	0.6	0.8	1	0.9	1	1	0.9	1	1	0.8	0.8
225- 250	25	0.5	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.7
250- 275	25	0.4	0.6	0.7	0.6	0.5	0.6	0.7	0.7	0.5	0.5	0.6
275- 300	25	0.4	0.6	0.6	0.5	0.4	0.5	0.7	0.6	0.4	0.4	0.5
300- 325	25	0.4	0.5	0.5	0.4	0.3	0.4	0.6	0.5	0.3	0.3	0.4
325- 350	25	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3
350- 375	25	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3
375- 400	25	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
400- 425	25	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2

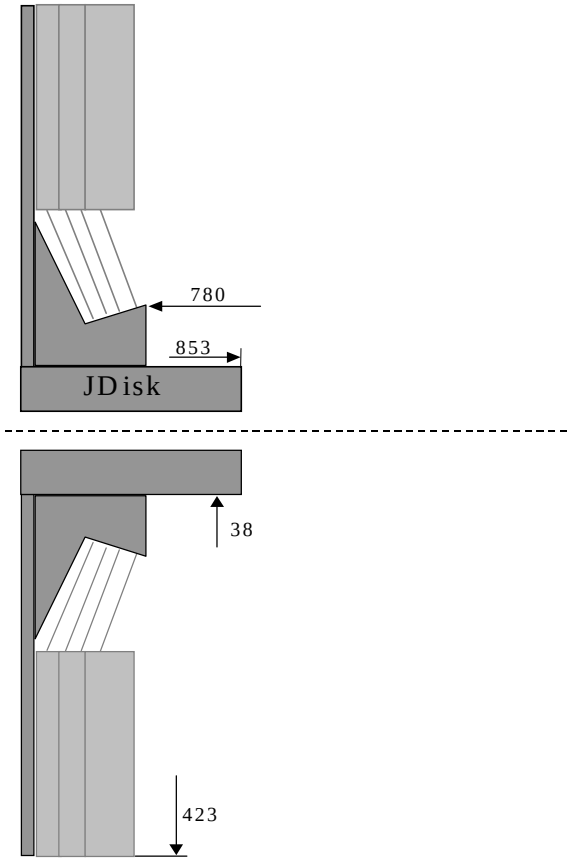

Fig.4. To dose rate calculation from JDisk in access scenario to the area between JDisk and Toroid.

Table 9

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 30d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1011.6	743.1	415.8	187.5	80.4	36.9	18.3	8.7	4.1	1.5				
10- 20	15					801.4	577.9	333.7	163.8	71.1	32	16.1	7.8	3.7	1.4				
20- 38	18					209.9	201.5	169.1	116	65.8	31.2	15.3	8.2	4	1.5				
38	0.	153.8	191	189.4	144.7	103.9	104.3	101.8	86.5	59.4	31.4	14.4	8.4	4.3	1.6				
38- 60	22	85.8	119.3	126.4	93.1	74.7	75	71	63.6	48.3	31.4	13.8	8	4.5	1.7				
60- 80	20	40.6	58.7	63.7	50.5	45.3	46.2	42.6	40.4	33.9	23.9	16.8	6.4	4.5	1.8				
80- 100	20	25.5	33.6	36.2	32.1	30.1	31	28	27.3	25.1	18.1	15.2	6.9	3.8	1.8				
100- 125	25	16.6	20.4	22.3	19.8	19.9	21.5	21	18.5	17.3	16.1	8.5	9	2.3	1.5				
125- 150	25	12.3	13.3	14.6	13.3	13.5	14.2	14.4	13	14	10.5	9.9	7	3.2	0.7				
150- 175	25	8.7	8.8	10.6	9	10.1	10.8	11.2	8.9	10.3	8.6	8	4.5	5.8	0.5				
175- 200	25	6.1	6.4	8.3	6.3	7.2	8	9.1	7.4	6.6	7.9	5.7	4.2	4.8	2.5				
200- 225	25	4.8	5.1	6.4	4.9	5.2	5.7	6.9	6.5	4.9	6.4	4.6	3.9	2.5	2.9				
225- 250	25	4.2	4.2	4.8	4.2	4.2	4.4	5.1	5.4	4.2	4.9	4.2	4	1.5	1.2				
250- 275	25	3.8	3.6	3.5	3.7	3.7	3.7	4	4.4	3.7	4	3.7	3.7	1.2	0.8				
275- 300	25	3.4	3.1	2.6	3.3	3.4	3.3	3.4	3.5	3	3.4	3.3	3	1.8	0.2				
300- 325	25	3	2.5	1.8	2.9	3.1	3.1	3.1	3	2.4	2.8	3.2	2.2	2.4	0.1				
325- 350	25	2.7	2.1	1.2	2.6	2.9	2.9	2.8	2.7	2	2.3	3	1.8	2.6	0.4				
350- 375	25	2.4	1.7	0.8	2.2	2.6	2.6	2.6	2.6	1.7	1.7	2.7	1.5	2.5	0.9				
375- 400	25	2.1	1.3	0.5	1.9	2.3	2.4	2.5	2.4	1.7	1.3	2.4	1.5	2	1.3				
400- 425	25	1.6	0.9	0.3	1.4	1.9	2	2.1	2	1.5	0.8	1.8	1.3	1.3	1.2				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 30d, t=5d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					638.4	469	260.6	118.2	50.4	23.3	11.6	5.5	2.6	1				
10- 20	15					506.7	363.6	209	103.2	45.1	20.3	10.1	4.9	2.3	0.9				
20- 38	18					133.6	127.2	107.2	73.4	41.6	19.7	9.6	5.2	2.5	0.9				
38	0.	97.3	117.9	117.1	90.2	65	65.9	64.1	54.8	37.5	19.9	9.1	5.3	2.7	1				
38- 60	22	54.4	74.4	78.6	58	46.6	47.1	44.7	40.1	30.5	19.8	8.7	5.1	2.8	1.1				
60- 80	20	25.2	36.5	39.6	31.4	28.3	28.9	26.7	25.4	21.2	15.1	10.6	4	2.9	1.1				
80- 100	20	16	20.9	22.5	20.1	18.8	19.4	17.5	17.1	15.8	11.4	9.6	4.3	2.4	1.1				
100- 125	25	10.3	12.6	13.9	12.3	12.4	13.5	13.1	11.5	10.9	10.1	5.4	5.7	1.5	0.9				
125- 150	25	7.7	8.3	9.1	8.3	8.4	8.8	9	8.1	8.8	6.6	6.2	4.4	2	0.4				
150- 175	25	5.5	5.5	6.7	5.6	6.3	6.7	7	5.5	6.4	5.4	5.1	2.8	3.7	0.3				
175- 200	25	3.8	4	5.1	3.9	4.5	5	5.7	4.6	4.1	4.9	3.6	2.6	3	1.6				
200- 225	25	3	3.2	4	3	3.3	3.6	4.3	4	3.1	4	2.9	2.5	1.6	1.8				
225- 250	25	2.6	2.6	3	2.6	2.6	2.7	3.2	3.4	2.6	3.1	2.6	2.5	0.9	0.8				
250- 275	25	2.3	2.2	2.2	2.3	2.3	2.3	2.5	2.7	2.3	2.5	2.3	2.3	0.7	0.5				
275- 300	25	2.1	1.9	1.6	2	2.1	2.1	2.1	2.2	1.9	2.1	2.1	1.8	1.1	0.1				
300- 325	25	1.9	1.6	1.1	1.8	1.9	1.9	1.9	1.9	1.5	1.8	2	1.4	1.5	0.1				
325- 350	25	1.7	1.3	0.8	1.6	1.8	1.8	1.8	1.7	1.2	1.4	1.9	1.1	1.7	0.3				
350- 375	25	1.5	1	0.5	1.4	1.6	1.6	1.6	1.6	1.1	1.1	1.7	1	1.6	0.6				
375- 400	25	1.3	0.8	0.3	1.2	1.4	1.5	1.5	1.5	1.1	0.8	1.5	0.9	1.3	0.8				
400- 425	25	1	0.6	0.2	0.8	1.2	1.2	1.3	1.3	1	0.5	1.1	0.8	0.8	0.8				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 100d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1531.2	1117.5	627.9	282.1	120.1	55.4	27.3	13	6.1	2.3				
10- 20	15					1209.4	867.8	503	246.3	105.7	47.8	23.9	11.6	5.5	2				
20- 38	18					306.5	296.5	253	173.3	98.4	46.7	22.9	12.3	6	2.2				
38	0.					137.4	145.4	148.6	128.7	88.1	47	21.6	12.6	6.4	2.4				
38- 60	22	115	151.3	156.4	114.8	95.8	100	100.2	92.5	71.5	46.6	20.3	12	6.7	2.5				
60- 80	20	51.7	73.6	79	62.7	57.6	60.4	57	56.4	48.7	35.2	24.8	9.4	6.7	2.7				
80- 100	20	31.4	41.6	45.1	40	38.2	40.1	37.1	37.3	35.1	25.7	22.6	10	5.6	2.7				
100- 125	25	20.4	25.3	27.9	24.8	25.2	27.6	27.4	24.6	24	22.8	11.8	13.4	3.3	2.1				
125- 150	25	15.2	16.6	18.2	16.6	17	18.1	19.1	17	19.1	14.6	14	10.1	4.6	1				
150- 175	25	10.8	10.9	13.3	11.3	12.7	13.7	14.6	11.6	13.8	11.7	11.7	6	8.7	0.7				
175- 200	25	7.5	8	10.3	7.8	9	10.1	11.8	9.6	8.6	10.7	8	5.9	7	3.7				
200- 225	25	6	6.3	7.9	6.1	6.5	7.2	8.9	8.5	6.3	8.7	6.1	5.7	3.3	4.3				
225- 250	25	5.1	5.2	6	5.2	5.2	5.5	6.6	7.2	5.4	6.7	5.6	5.7	2	1.5				
250- 275	25	4.6	4.4	4.4	4.6	4.6	4.7	5.1	5.8	4.7	5.3	5.1	5.1	1.7	1.1				
275- 300	25	4.1	3.8	3.2	4.1	4.1	4.1	4.3	4.7	3.9	4.3	4.7	4	2.6	0.2				
300- 325	25	3.7	3.1	2.3	3.7	3.8	3.8	3.8	4	3.2	3.6	4.4	3	3.5	0.2				
325- 350	25	3.3	2.6	1.5	3.2	3.5	3.5	3.5	3.6	2.6	2.9	4.1	2.4	3.8	0.6				
350- 375	25	3	2.1	1	2.8	3.2	3.3	3.3	3.3	2.4	2.2	3.6	2.1	3.4	1.4				
375- 400	25	2.6	1.6	0.7	2.3	2.9	3	3	3.1	2.3	1.6	3.1	2	2.7	2				
400- 425	25	1.9	1.1	0.4	1.7	2.3	2.5	2.5	2.6	2	1.1	2.3	1.9	1.7	1.7				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 100d, t=5d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1139.7	838.9	467.8	210.2	88.2	41.2	20.3	9.7	4.6	1.7				
10- 20	15					923.6	651.8	374.6	181.2	79.2	35.4	17.8	8.6	4.1	1.5				
20- 38	18					225.9	219.9	188	129.3	73.3	34.7	17	9.1	4.4	1.7				
38	0.	145.7	161.1	157.2	122	97.4	104.9	108.6	95.1	65.9	34.9	15.9	9.4	4.7	1.8				
38- 60	22	80.6	103.4	105.7	78.5	68.1	72.1	72.6	68.1	53	34.6	15	8.9	5	1.9				
60- 80	20	35.6	50.4	54	42.9	39.9	42.4	40.6	40.9	35.6	26	18.3	6.9	5	2				
80- 100	20	21.5	28.4	30.9	27.4	26.5	28.1	26.2	26.7	25.3	18.8	16.8	7.4	4.2	2				
100- 125	25	13.9	17.2	19.1	17	17.4	19.3	19.2	17.4	17.2	16.5	8.5	9.9	2.4	1.6				
125- 150	25	10.4	11.3	12.4	11.3	11.6	12.5	13.3	11.9	13.6	10.7	10.2	7.4	3.4	0.7				
150- 175	25	7.3	7.5	9	7.7	8.7	9.4	10.2	8.1	9.8	8.4	8.6	4.3	6.4	0.5				
175- 200	25	5.1	5.4	7	5.4	6.2	6.9	8.2	6.7	6.1	7.6	5.8	4.2	5.1	2.8				
200- 225	25	4	4.3	5.4	4.1	4.5	4.9	6.2	5.9	4.4	6.3	4.3	4.2	2.3	3.2				
225- 250	25	3.5	3.6	4.1	3.5	3.6	3.8	4.6	5	3.7	4.8	4	4.1	1.4	1				
250- 275	25	3.1	3	3	3.1	3.1	3.2	3.6	4.1	3.2	3.7	3.7	3.7	1.2	0.7				
275- 300	25	2.8	2.6	2.2	2.8	2.8	2.8	3	3.3	2.8	3	3.4	2.8	1.9	0.2				
300- 325	25	2.5	2.1	1.5	2.5	2.6	2.6	2.6	2.8	2.2	2.5	3.2	2.1	2.6	0.1				
325- 350	25	2.3	1.7	1.1	2.2	2.4	2.4	2.4	2.5	1.9	2	2.9	1.7	2.8	0.4				
350- 375	25	2	1.4	0.7	1.9	2.2	2.2	2.2	2.3	1.7	1.5	2.5	1.5	2.5	1				
375- 400	25	1.7	1.1	0.5	1.6	2	2	2.1	2.1	1.6	1.1	2.2	1.5	1.9	1.4				
400- 425	25	1.3	0.8	0.3	1.2	1.6	1.7	1.7	1.8	1.5	0.8	1.6	1.4	1.2	1.2				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1690.6	1242.4	691.5	310.9	130.7	61.1	30.1	14.3	6.8	2.5				
10- 20	15					1355.7	960.7	554.4	272	118.4	52.6	26.4	12.8	6	2.2				
20- 38	18					336.4	327.3	277.9	191.9	108.5	51.5	25.2	13.5	6.6	2.4				
38	0.	219.5	254.5	248.3	190.9	149.9	159.9	162	140.7	96.7	51.8	23.8	13.9	7	2.6				
38- 60	22	124.1	162.7	167.8	122.9	104.5	109.7	110	101.5	78.7	51.3	22.4	13.2	7.3	2.8				
60- 80	20	55.5	79	85.1	67.2	62.2	65.4	61.9	61.7	53.4	38.7	27.3	10.3	7.4	2.9				
80- 100	20	33.9	44.7	48.4	43	41	43.4	40.1	40.6	38.3	28.2	24.8	11	6.2	2.9				
100- 125	25	22	27.2	29.9	26.6	27	29.7	29.6	26.7	26.1	24.9	12.9	14.7	3.7	2.4				
125- 150	25	16.3	17.7	19.4	17.8	18.2	19.4	20.7	18.3	20.8	16.1	15.3	11.1	5.1	1.1				
150- 175	25	11.6	11.8	14.3	12	13.6	14.7	15.9	12.6	15	12.7	12.8	6.5	9.5	0.8				
175- 200	25	8.1	8.5	11	8.4	9.6	10.8	12.7	10.4	9.4	11.6	8.7	6.4	7.7	4.1				
200- 225	25	6.4	6.8	8.5	6.5	7	7.7	9.6	9.2	6.8	9.5	6.6	6.3	3.6	4.7				
225- 250	25	5.5	5.6	6.5	5.5	5.6	5.9	7.1	7.8	5.8	7.3	6.1	6.2	2.1	1.6				
250- 275	25	5	4.8	4.8	4.9	4.9	5	5.5	6.3	5.1	5.7	5.6	5.5	1.9	1.1				
275- 300	25	4.5	4	3.4	4.4	4.4	4.4	4.6	5.1	4.3	4.7	5.1	4.3	2.9	0.3				
300- 325	25	4	3.4	2.4	3.9	4.1	4.1	4.1	4.3	3.5	3.8	4.8	3.2	3.8	0.2				
325- 350	25	3.6	2.7	1.7	3.5	3.8	3.8	3.8	3.8	2.9	3.1	4.4	2.6	4.1	0.7				
350- 375	25	3.2	2.2	1.1	3	3.5	3.5	3.5	3.5	2.6	2.4	3.9	2.3	3.8	1.5				
375- 400	25	2.7	1.7	0.7	2.5	3.1	3.2	3.3	3.3	2.5	1.8	3.3	2.2	2.9	2.1				
400- 425	25	2.1	1.2	0.4	1.8	2.5	2.6	2.7	2.8	2.2	1.2	2.5	2.1	1.9	1.9				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1331.3	983.6	544.8	245	102.6	47.9	23.5	11.2	5.3	2				
10- 20	15					1067.1	762.7	435.2	211.7	91	41.1	20.6	9.9	4.7	1.7				
20- 38	18					260.7	255.3	217.6	150.2	85	40.2	19.7	10.6	5.1	1.9				
38	0.	165.7	181.7	175.4	136	111.6	120.3	127	109.6	76.4	40.6	18.6	10.9	5.5	2				
38- 60	22	91.4	116.5	118.7	87.8	76.7	81.7	84	78.6	61.5	40.1	17.4	10.3	5.7	2.2				
60- 80	20	40	56.7	60.5	47.9	44.9	48.1	46.2	46.9	41.1	30.1	21.2	8	5.8	2.3				
80- 100	20	24	31.8	34.6	30.6	29.6	31.5	29.6	30.6	29.2	21.6	19.4	8.5	4.8	2.3				
100- 125	25	15.5	19.4	21.3	19.1	19.6	21.6	21.8	19.8	19.9	19.1	9.7	11.5	2.8	1.8				
125- 150	25	11.5	12.6	13.9	12.7	13	14.1	15.3	13.5	15.6	12.2	11.7	8.5	3.9	0.8				
150- 175	25	8.2	8.4	10.1	8.6	9.8	10.5	11.6	9.2	11.1	9.5	9.9	4.8	7.5	0.6				
175- 200	25	5.7	6.1	7.8	6	6.9	7.8	9.3	7.6	6.9	8.7	6.6	4.9	5.9	3.2				
200- 225	25	4.5	4.8	6.1	4.6	5	5.6	7	6.8	4.9	7.2	4.9	4.9	2.6	3.7				
225- 250	25	3.9	4	4.6	3.9	4	4.2	5.2	5.7	4.2	5.5	4.5	4.8	1.6	1.2				
250- 275	25	3.5	3.4	3.4	3.5	3.5	3.5	4	4.7	3.7	4.2	4.2	4.2	1.4	0.8				
275- 300	25	3.2	2.9	2.5	3.1	3.1	3.1	3.3	3.8	3.1	3.4	3.9	3.2	2.2	0.2				
300- 325	25	2.8	2.4	1.7	2.8	2.9	2.9	2.9	3.2	2.6	2.8	3.6	2.4	3	0.2				
325- 350	25	2.5	2	1.2	2.5	2.7	2.7	2.7	2.8	2.2	2.2	3.3	1.9	3.2	0.5				
350- 375	25	2.2	1.6	0.8	2.1	2.4	2.5	2.5	2.6	1.9	1.7	2.9	1.7	2.8	1.2				
375- 400	25	2	1.2	0.5	1.8	2.2	2.3	2.3	2.4	1.9	1.3	2.4	1.7	2.2	1.7				
400- 425	25	1.5	0.8	0.3	1.3	1.8	1.9	1.9	2	1.7	0.9	1.8	1.6	1.4	1.4				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 10y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1750	1272.6	707.3	318.7	132.3	62.4	30.8	14.7	6.9	2.6				
10- 20	15					1381.8	983	567.3	276.3	121	53.6	26.9	13	6.1	2.3				
20- 38	18					344	333.4	284.1	194.7	111	52.6	25.8	13.8	6.7	2.5				
38	0.	229.5	257.3	248.3	190.9	149.9	160.8	168.6	145.7	100.2	52.9	24.2	14.2	7.2	2.7				
38- 60	22	126.6	164.2	168.1	123.7	106.1	111.9	112.2	104.6	80.2	52.3	22.8	13.5	7.5	2.8				
60- 80	20	55.8	79.3	85.4	67.5	62.5	65.9	62.8	62.7	54.4	39.5	27.8	10.5	7.6	3				
80- 100	20	33.9	44.9	48.7	43.2	41.4	43.7	40.6	41.1	38.9	28.6	25.4	11.2	6.3	3				
100- 125	25	22	27.3	30.1	26.8	27.2	30	29.9	26.9	26.5	25.3	13	15	3.7	2.4				
125- 150	25	16.3	17.8	19.5	17.8	18.3	19.7	20.8	18.5	21.1	16.3	15.6	11.3	5.2	1.1				
150- 175	25	11.7	11.8	14.3	12.1	13.7	14.8	16	12.7	15.1	12.9	13	6.6	9.7	0.8				
175- 200	25	8.1	8.6	11.1	8.5	9.8	10.9	12.8	10.5	9.5	11.7	8.9	6.5	7.8	4.2				
200- 225	25	6.4	6.8	8.5	6.6	7	7.8	9.7	9.3	6.8	9.6	6.7	6.4	3.6	4.9				
225- 250	25	5.5	5.6	6.5	5.6	5.6	5.9	7.2	7.9	5.8	7.4	6.2	6.3	2.2	1.6				
250- 275	25	5	4.8	4.8	4.9	4.9	5	5.6	6.4	5.1	5.8	5.7	5.6	1.9	1.1				
275- 300	25	4.5	4	3.5	4.4	4.5	4.5	4.7	5.2	4.3	4.7	5.2	4.4	2.9	0.3				
300- 325	25	4	3.4	2.5	4	4.1	4.1	4.1	4.4	3.5	3.9	4.9	3.3	3.9	0.2				
325- 350	25	3.6	2.7	1.7	3.5	3.8	3.8	3.8	3.9	2.9	3.1	4.5	2.6	4.2	0.7				
350- 375	25	3.2	2.2	1.1	3	3.5	3.5	3.5	3.6	2.6	2.4	4	2.3	3.8	1.5				
375- 400	25	2.7	1.7	0.7	2.5	3.1	3.2	3.3	3.3	2.5	1.8	3.4	2.3	3	2.2				
400- 425	25	2.1	1.2	0.4	1.9	2.5	2.6	2.7	2.8	2.3	1.2	2.5	2.1	1.9	1.9				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 10y, t=5d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					1356.3	992.2	553.3	248.3	103.9	48.7	23.9	11.3	5.4	2				
10- 20	15					1088.7	777.2	443.7	217.1	94.5	41.7	20.9	10.2	4.8	1.8				
20- 38	18					265.2	258.6	221.2	152.4	86.5	41	20.1	10.8	5.2	1.9				
38	0.	165.7	182.3	175.4	136.8	111.9	123.1	128.6	112.8	77.6	41.1	18.9	11.1	5.6	2.1				
38- 60	22	92.9	117.5	119.3	88	77.4	83	85.1	80.3	62.5	40.7	17.7	10.5	5.8	2.2				
60- 80	20	40.4	57	60.9	48.3	45.5	48.6	46.6	47.7	41.7	30.6	21.7	8.1	5.9	2.3				
80- 100	20	24.2	32.1	34.9	30.8	29.8	32	29.9	30.9	29.5	21.9	19.7	8.7	4.9	2.3				
100- 125	25	15.6	19.5	21.5	19.2	19.7	21.8	21.9	20.1	20.1	19.3	9.9	11.7	2.8	1.9				
125- 150	25	11.6	12.7	14	12.8	13.2	14.3	15.3	13.6	15.8	12.4	11.8	8.7	4	0.8				
150- 175	25	8.3	8.4	10.2	8.7	9.9	10.7	11.7	9.3	11.3	9.6	10.1	4.9	7.6	0.6				
175- 200	25	5.8	6.1	7.9	6.1	7	7.8	9.3	7.7	7	8.8	6.7	5	6	3.3				
200- 225	25	4.5	4.9	6.1	4.7	5.1	5.6	7.1	6.8	5	7.3	4.9	5	2.6	3.8				
225- 250	25	3.9	4	4.6	4	4	4.3	5.2	5.8	4.2	5.5	4.6	4.8	1.6	1.2				
250- 275	25	3.5	3.4	3.4	3.5	3.5	3.6	4	4.7	3.7	4.3	4.3	4.3	1.5	0.8				
275- 300	25	3.2	2.9	2.5	3.1	3.2	3.2	3.4	3.8	3.2	3.4	4	3.3	2.3	0.2				
300- 325	25	2.9	2.4	1.8	2.8	2.9	2.9	3	3.2	2.6	2.8	3.7	2.4	3	0.2				
325- 350	25	2.5	2	1.2	2.5	2.7	2.7	2.7	2.8	2.2	2.2	3.4	1.9	3.2	0.5				
350- 375	25	2.3	1.6	0.8	2.1	2.5	2.5	2.5	2.6	2	1.7	2.9	1.7	2.9	1.2				
375- 400	25	2	1.2	0.5	1.8	2.2	2.3	2.3	2.4	1.9	1.3	2.5	1.7	2.2	1.7				
400- 425	25	1.5	0.9	0.3	1.3	1.8	1.9	1.9	2	1.7	0.9	1.8	1.6	1.4	1.5				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 100d, t=100d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					339.4	249.8	138.3	61.7	25.5	12.1	5.9	2.8	1.3	0.5				
10- 20	15					270.8	194.5	109.9	53.5	23.1	10.2	5.2	2.5	1.2	0.4				
20- 38	18					62.2	62	54.2	37.7	21.4	10.1	5	2.7	1.3	0.5				
38	0.	33	30.5	27.1	21.6	22.7	27.2	30.5	27.6	19.1	10	4.6	2.7	1.4	0.5				
38- 60	22	18.2	19.9	18.8	14	14.5	17.2	19.1	18.9	15.2	9.9	4.3	2.6	1.4	0.5				
60- 80	20	7	9.5	10	7.8	8	9.2	9.4	10.5	9.6	7.3	5.2	1.9	1.4	0.6				
80- 100	20	3.8	5.2	5.8	5	5.1	5.9	5.8	6.5	6.6	5	4.8	2.1	1.2	0.6				
100- 125	25	2.5	3.1	3.5	3.2	3.3	3.9	4.2	4	4.4	4.3	2.1	2.8	0.6	0.4				
125- 150	25	1.8	2	2.3	2.1	2.2	2.5	3	2.6	3.3	2.8	2.7	2	0.9	0.2				
150- 175	25	1.3	1.4	1.6	1.4	1.6	1.8	2.2	1.8	2.3	2	2.4	1	1.9	0.1				
175- 200	25	0.9	1	1.3	1	1.2	1.3	1.7	1.5	1.4	1.8	1.5	1.1	1.4	0.8				
200- 225	25	0.7	0.8	1	0.8	0.8	0.9	1.3	1.3	0.9	1.6	1	1.2	0.5	0.9				
225- 250	25	0.6	0.6	0.8	0.6	0.6	0.7	0.9	1.1	0.7	1.2	0.9	1.1	0.3	0.2				
250- 275	25	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.9	0.7	0.8	0.9	0.9	0.3	0.1				
275- 300	25	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.8	0.6	0.6	0.9	0.7	0.5	0				
300- 325	25	0.4	0.4	0.3	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.8	0.5	0.7	0				
325- 350	25	0.4	0.3	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.7	0.4	0.7	0.1				
350- 375	25	0.4	0.2	0.1	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.6	0.4	0.6	0.3				
375- 400	25	0.3	0.2	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.2	0.5	0.4	0.4	0.4				
400- 425	25	0.2	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 5y, t=100d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					478.4	351.3	195	87.1	35.8	16.9	8.3	3.9	1.8	0.7				
10- 20	15					380	272.3	157	75.4	32.3	14.4	7.2	3.5	1.6	0.6				
20- 38	18					88.1	87.7	76.3	52.9	30.1	14.1	7	3.7	1.8	0.7				
38	0.	47	45	40.4	31.5	32.2	38.6	43.2	38.9	27	14.2	6.5	3.8	1.9	0.7				
38- 60	22	25.7	29.2	27.9	20.7	21	24.4	27.1	26.8	21.3	13.9	6	3.6	2	0.8				
60- 80	20	10.2	14	14.6	11.5	11.6	13.3	13.7	14.9	13.7	10.3	7.4	2.7	2	0.8				
80- 100	20	5.7	7.7	8.5	7.4	7.5	8.6	8.4	9.3	9.3	7	6.8	2.9	1.7	0.8				
100- 125	25	3.7	4.7	5.2	4.7	4.9	5.7	6	5.8	6.2	6.2	3	4	0.9	0.6				
125- 150	25	2.7	3	3.4	3.1	3.2	3.7	4.3	3.7	4.7	3.9	3.8	2.8	1.3	0.3				
150- 175	25	1.9	2	2.4	2.1	2.4	2.7	3.2	2.6	3.3	2.9	3.4	1.4	2.6	0.2				
175- 200	25	1.4	1.5	1.9	1.5	1.7	2	2.5	2.1	2	2.6	2.1	1.6	2	1.1				
200- 225	25	1.1	1.2	1.5	1.1	1.2	1.4	1.9	1.9	1.3	2.2	1.4	1.7	0.7	1.3				
225- 250	25	0.9	0.9	1.1	0.9	1	1	1.4	1.6	1.1	1.7	1.3	1.6	0.4	0.3				
250- 275	25	0.8	0.8	0.8	0.8	0.8	0.8	1	1.3	1	1.2	1.3	1.3	0.5	0.2				
275- 300	25	0.7	0.7	0.6	0.7	0.7	0.7	0.8	1.1	0.9	0.9	1.3	1	0.8	0.1				
300- 325	25	0.7	0.6	0.4	0.7	0.7	0.7	0.7	0.9	0.7	0.7	1.1	0.7	1	0.1				
325- 350	25	0.6	0.5	0.3	0.6	0.6	0.6	0.6	0.8	0.6	0.6	1	0.6	1	0.2				
350- 375	25	0.5	0.4	0.2	0.5	0.6	0.6	0.6	0.7	0.6	0.4	0.8	0.5	0.9	0.4				
375- 400	25	0.5	0.3	0.1	0.4	0.5	0.5	0.6	0.6	0.6	0.3	0.7	0.5	0.6	0.6				
400- 425	25	0.3	0.2	0.1	0.3	0.4	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.4	0.5				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by high-energy hadrons for T= 10y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					513.4	376.6	208.8	92.8	38.1	18.1	8.8	4.2	2	0.7				
10- 20	15					409.8	292.3	168.1	80.2	34.6	15.3	7.7	3.7	1.8	0.6				
20- 38	18					93.6	93.5	81.4	56.5	32.1	15.2	7.4	4	1.9	0.7				
38	0.	49.3	46.5	41.5	32.5	33.7	40.9	46.2	41.3	28.9	15.3	6.9	4.1	2.1	0.8				
38- 60	22	27	30.2	28.7	21.2	21.9	25.7	28.7	28.5	22.8	14.9	6.4	3.9	2.2	0.8				
60- 80	20	10.7	14.5	15.2	11.9	12.1	14	14.2	15.8	14.5	11	7.8	2.9	2.2	0.8				
80- 100	20	5.9	8	8.7	7.7	7.7	8.9	8.8	9.8	9.8	7.4	7.2	3.1	1.8	0.8				
100- 125	25	3.8	4.8	5.4	4.8	5.1	6	6.3	6.1	6.5	6.5	3.2	4.3	1	0.7				
125- 150	25	2.8	3.1	3.5	3.2	3.3	3.8	4.5	3.9	5	4.1	4	3	1.4	0.3				
150- 175	25	2	2.1	2.5	2.2	2.5	2.8	3.4	2.7	3.4	3	3.6	1.5	2.8	0.2				
175- 200	25	1.4	1.5	1.9	1.5	1.8	2	2.6	2.2	2	2.8	2.2	1.7	2.1	1.2				
200- 225	25	1.1	1.2	1.5	1.2	1.3	1.4	2	2	1.4	2.3	1.5	1.8	0.7	1.4				
225- 250	25	1	1	1.1	1	1	1.1	1.4	1.7	1.1	1.7	1.4	1.7	0.5	0.3				
250- 275	25	0.9	0.8	0.9	0.9	0.9	0.9	1.1	1.4	1	1.3	1.4	1.4	0.5	0.2				
275- 300	25	0.8	0.7	0.6	0.8	0.8	0.8	0.9	1.1	0.9	1	1.3	1	0.8	0.1				
300- 325	25	0.7	0.6	0.4	0.7	0.7	0.7	0.7	0.9	0.8	0.7	1.2	0.7	1.1	0.1				
325- 350	25	0.6	0.5	0.3	0.6	0.7	0.7	0.7	0.8	0.7	0.6	1.1	0.6	1.1	0.2				
350- 375	25	0.5	0.4	0.2	0.5	0.6	0.6	0.6	0.7	0.6	0.5	0.9	0.6	0.9	0.4				
375- 400	25	0.5	0.3	0.1	0.5	0.6	0.6	0.6	0.6	0.6	0.4	0.7	0.6	0.7	0.6				
400- 425	25	0.4	0.2	0.1	0.3	0.4	0.5	0.5	0.5	0.5	0.3	0.5	0.5	0.4	0.5				

Table 10

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 30d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					390.9	303.2	190.9	99.4	44	21.5	12.7	7.3	4	1.6				
10- 20	15					340.8	266.2	167.7	85.5	41.3	19.6	11.3	6.6	3.6	1.4				
20- 38	18					143.4	125.5	96.4	64.7	37.9	20.2	10.2	6.1	3.4	1.3				
38	0.	305.4	128.6	56.7	35.8	47	58.2	62.9	52.1	35.3	20.2	9.7	5.9	3.4	1.3				
38- 60	22	181.2	102	51.2	31.8	33.8	38.8	41.8	39.1	30.2	18.8	9.8	5.5	3.3	1.3				
60- 80	20	52.7	45.1	34.7	24.3	23.5	24.9	24.1	24.5	21.2	16.3	10.6	4.9	3.3	1.4				
80- 100	20	7.4	16.1	20.3	16.7	15.3	17	17.4	17.7	16	11.9	10.3	5.2	2.9	1.4				
100- 125	25	2.7	6.9	10.2	11.4	11.6	11.9	11.4	10.9	12.4	10.6	6.1	6.1	2.2	1.2				
125- 150	25	1.8	3.9	5.4	6.4	6.7	7.6	9.1	7.7	7.8	8.1	6.7	4.5	2.6	0.8				
150- 175	25	1.2	2.6	3.1	4.3	4.5	4.6	5.5	5.8	6.2	4.9	6.6	3.1	3.7	0.7				
175- 200	25	0.9	1.7	2.3	2.7	3.6	3.8	4.1	3.6	4.5	4.6	3.5	3.7	2.8	1.5				
200- 225	25	0.7	1.2	1.9	1.4	2.3	2.8	3.5	3.1	2.3	4.4	2.4	3.3	1.8	1.7				
225- 250	25	0.6	0.9	1.7	0.9	1.1	1.5	2.5	3	1.7	3	2.8	2.3	2	0.6				
250- 275	25	0.5	0.6	1.4	0.8	0.7	0.8	1.5	2.5	1.9	1.8	3	1.9	1.6	1				
275- 300	25	0.5	0.5	1.2	0.8	0.6	0.6	0.8	1.8	1.9	1.3	2.4	1.8	1.2	0.7				
300- 325	25	0.4	0.4	0.9	0.8	0.5	0.5	0.6	1.2	1.7	1.2	1.6	1.6	1.3	0.2				
325- 350	25	0.4	0.3	0.7	0.8	0.6	0.5	0.5	0.8	1.3	1.2	1.2	1.5	1.4	0.2				
350- 375	25	0.3	0.2	0.5	0.8	0.6	0.5	0.4	0.6	0.9	1.1	1	1.2	1.3	0.5				
375- 400	25	0.3	0.2	0.3	0.8	0.7	0.5	0.4	0.5	0.7	1	0.9	1	1.2	0.7				
400- 425	25	0.2	0.1	0.2	0.7	0.6	0.5	0.4	0.4	0.5	0.7	0.8	0.7	1	0.6				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 30d, t=5d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					22.5	17.6	11.1	5.8	2.6	1.3	0.8	0.4	0.2	0.1				
10- 20	15					19.5	15.3	9.8	5.1	2.5	1.2	0.7	0.4	0.2	0.1				
20- 38	18					9.3	7.9	5.9	3.9	2.3	1.2	0.6	0.4	0.2	0.1				
38	0.	19.3	10.7	6.8	4.6	3.8	4.1	4	3.2	2.1	1.2	0.6	0.4	0.2	0.1				
38- 60	22	11.5	8	5.3	3.5	2.9	3	2.9	2.5	1.9	1.2	0.6	0.3	0.2	0.1				
60- 80	20	3.7	3.7	3.2	2.3	2	2	1.9	1.7	1.4	1	0.7	0.3	0.2	0.1				
80- 100	20	1	1.6	1.9	1.6	1.4	1.5	1.4	1.3	1.1	0.8	0.6	0.3	0.2	0.1				
100- 125	25	0.5	0.8	1.1	1.1	1	1	1	0.9	0.9	0.7	0.4	0.4	0.2	0.1				
125- 150	25	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.3	0.2	0.1				
150- 175	25	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.2	0.2	0				
175- 200	25	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.2	0.1				
200- 225	25	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.1				
225- 250	25	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1				
250- 275	25	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1				
275- 300	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0				
300- 325	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0				
325- 350	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0				
350- 375	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0				
375- 400	25	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0				
400- 425	25	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 100d, t=1d

R/Z,		780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
cm	dR\dZ	0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					420.3	328.3	206.1	107.4	47.4	23.1	13.8	7.9	4.3	1.7				
10- 20	15					366.8	286.4	178.7	92.8	44.7	21.2	12.3	7.1	3.9	1.5				
20- 38	18					155.8	136.4	104.5	70	40.9	21.8	11	6.6	3.7	1.4				
38	0.	329.9	141.8	65.8	42	52	63.7	68.6	56.5	38.1	21.8	10.5	6.4	3.6	1.4				
38- 60	22	196.4	112.7	58.4	36.5	37.8	43	45.6	42.5	32.7	20.4	10.6	6	3.6	1.4				
60- 80	20	57.9	50.2	39.1	27.5	26.1	27.6	26.5	26.9	23	17.7	11.5	5.3	3.6	1.5				
80- 100	20	8.7	18.2	23	18.8	17.3	19	19.4	19.4	17.4	12.9	11.1	5.6	3.2	1.5				
100- 125	25	3.4	8.1	11.7	12.8	13.1	13.5	12.7	12.2	13.5	11.5	6.7	6.6	2.4	1.3				
125- 150	25	2.3	4.7	6.2	7.3	7.6	8.6	10.1	8.5	8.6	8.8	7.2	4.9	2.9	0.8				
150- 175	25	1.6	3.1	3.8	5	5.1	5.3	6.1	6.4	6.9	5.4	7.2	3.4	4	0.8				
175- 200	25	1.2	2.1	2.7	3.1	4.2	4.4	4.6	4.1	4.9	5.1	3.8	4	3.1	1.6				
200- 225	25	0.9	1.5	2.3	1.7	2.6	3.2	4	3.5	2.7	4.8	2.7	3.6	2	1.9				
225- 250	25	0.8	1.1	2	1.1	1.4	1.8	2.9	3.4	2	3.4	3.1	2.5	2.2	0.7				
250- 275	25	0.7	0.8	1.7	1	0.9	1	1.7	2.8	2.1	2	3.2	2.1	1.7	1.1				
275- 300	25	0.6	0.6	1.3	1	0.7	0.7	1	2.1	2.2	1.5	2.6	2	1.3	0.8				
300- 325	25	0.6	0.5	1	1	0.7	0.6	0.7	1.4	1.9	1.4	1.8	1.8	1.4	0.2				
325- 350	25	0.5	0.4	0.8	1	0.7	0.6	0.6	0.9	1.5	1.3	1.3	1.6	1.5	0.2				
350- 375	25	0.4	0.3	0.5	1	0.8	0.7	0.6	0.7	1.1	1.3	1.1	1.4	1.5	0.5				
375- 400	25	0.4	0.2	0.4	0.9	0.8	0.7	0.5	0.6	0.8	1.1	1	1.1	1.4	0.8				
400- 425	25	0.3	0.2	0.2	0.8	0.7	0.6	0.5	0.5	0.6	0.8	0.9	0.8	1.1	0.7				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 100d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					51.8	40.3	25.4	13.5	6.1	3	1.8	1	0.6	0.2				
10- 20	15					45.3	35.5	22.6	11.8	5.7	2.7	1.6	0.9	0.5	0.2				
20- 38	18					21.3	18.1	13.6	9	5.3	2.8	1.4	0.9	0.5	0.2				
38	0.	44.2	25.1	15.9	10.7	8.9	9.5	9.4	7.4	5	2.8	1.4	0.8	0.5	0.2				
38- 60	22	26.7	18.7	12.5	8.2	6.9	7	6.7	5.8	4.3	2.7	1.4	0.8	0.5	0.2				
60- 80	20	8.8	8.7	7.6	5.5	4.8	4.8	4.3	4	3.3	2.4	1.5	0.7	0.5	0.2				
80- 100	20	2.3	3.8	4.5	3.7	3.3	3.4	3.2	3	2.6	1.9	1.5	0.8	0.4	0.2				
100- 125	25	1.3	2	2.5	2.5	2.5	2.5	2.2	2	2	1.7	1	0.9	0.4	0.2				
125- 150	25	0.9	1.3	1.5	1.5	1.6	1.7	1.7	1.5	1.4	1.3	1.1	0.7	0.4	0.1				
150- 175	25	0.7	0.9	1	1.1	1.1	1.1	1.2	1.1	1.2	0.9	1	0.5	0.5	0.1				
175- 200	25	0.5	0.6	0.8	0.7	0.9	0.9	0.9	0.8	0.9	0.8	0.6	0.6	0.4	0.2				
200- 225	25	0.4	0.5	0.6	0.5	0.6	0.7	0.8	0.7	0.5	0.8	0.5	0.5	0.3	0.2				
225- 250	25	0.4	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.4	0.6	0.5	0.4	0.3	0.1				
250- 275	25	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.3	0.2	0.2				
275- 300	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.2	0.1				
300- 325	25	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.1				
325- 350	25	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.1				
350- 375	25	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1				
375- 400	25	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1				
400- 425	25	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					445.9	346.9	217.1	112.9	50.4	24.5	14.5	8.4	4.6	1.8				
10- 20	15					390.2	303.8	190.1	98.2	47.5	22.5	13.1	7.5	4.1	1.6				
20- 38	18					166.4	145.2	110.9	74.3	43.5	23.1	11.8	7	3.9	1.5				
38	0.	351.4	156.2	75.2	48.4	57	68.7	73.3	60	40.5	23.2	11.2	6.8	3.9	1.5				
38- 60	22	209.7	122.9	65.5	41.1	41.4	46.6	48.9	45.3	34.8	21.7	11.3	6.3	3.8	1.5				
60- 80	20	62.3	54.8	43.2	30.4	28.7	30.1	28.8	28.8	24.6	18.8	12.2	5.7	3.8	1.6				
80- 100	20	9.9	20.3	25.4	20.8	19.1	20.8	21	20.9	18.6	13.9	11.9	6	3.4	1.6				
100- 125	25	4.2	9.2	13.1	14.3	14.3	14.7	13.8	13.3	14.5	12.4	7.2	7.1	2.6	1.3				
125- 150	25	2.9	5.4	7.1	8.2	8.5	9.5	11.1	9.3	9.3	9.5	7.8	5.3	3	0.9				
150- 175	25	2	3.6	4.4	5.6	5.8	5.9	6.8	7	7.5	5.9	7.6	3.7	4.2	0.8				
175- 200	25	1.5	2.5	3.2	3.6	4.7	4.9	5.1	4.5	5.4	5.5	4.1	4.3	3.3	1.7				
200- 225	25	1.2	1.8	2.7	2	3	3.5	4.4	3.8	2.9	5.2	2.9	3.8	2.2	2				
225- 250	25	1	1.3	2.3	1.4	1.6	2.1	3.2	3.7	2.2	3.6	3.4	2.7	2.3	0.8				
250- 275	25	0.9	1	1.9	1.2	1.1	1.2	1.9	3.1	2.3	2.2	3.5	2.3	1.9	1.2				
275- 300	25	0.8	0.8	1.5	1.2	0.9	0.9	1.2	2.3	2.4	1.6	2.8	2.1	1.3	0.9				
300- 325	25	0.7	0.6	1.2	1.2	0.9	0.8	0.9	1.5	2.1	1.5	2	2	1.5	0.2				
325- 350	25	0.6	0.5	0.9	1.2	0.9	0.8	0.7	1.1	1.6	1.5	1.5	1.8	1.6	0.3				
350- 375	25	0.5	0.4	0.6	1.1	0.9	0.8	0.7	0.8	1.2	1.4	1.3	1.5	1.6	0.6				
375- 400	25	0.5	0.3	0.4	1.1	0.9	0.8	0.7	0.7	0.9	1.2	1.2	1.2	1.5	0.8				
400- 425	25	0.3	0.2	0.3	0.9	0.8	0.7	0.6	0.6	0.7	0.8	1	0.9	1.2	0.7				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					75.6	58.9	37.4	19.9	9	4.4	2.7	1.5	0.8	0.3				
10- 20	15					66.1	52	33.2	17.4	8.4	4.1	2.4	1.4	0.8	0.3				
20- 38	18					32	26.9	20	13.4	7.8	4.2	2.1	1.3	0.7	0.3				
38	0.	67.1	39	25.4	17.2	14	14.7	14	11	7.3	4.2	2.1	1.2	0.7	0.3				
38- 60	22	39.9	28.7	19.6	12.9	10.7	10.8	10.1	8.7	6.5	4	2.1	1.2	0.7	0.3				
60- 80	20	13.2	13.4	11.8	8.5	7.5	7.4	6.6	6	4.9	3.6	2.3	1.1	0.7	0.3				
80- 100	20	3.6	5.9	6.9	5.8	5.2	5.2	4.9	4.6	3.9	2.8	2.2	1.2	0.7	0.3				
100- 125	25	2	3.2	3.9	3.9	3.8	3.8	3.5	3.1	3.1	2.5	1.5	1.3	0.5	0.3				
125- 150	25	1.5	2	2.4	2.4	2.4	2.6	2.7	2.3	2.2	2	1.6	1.1	0.6	0.2				
150- 175	25	1.1	1.4	1.6	1.7	1.8	1.8	1.8	1.7	1.8	1.4	1.5	0.8	0.8	0.2				
175- 200	25	0.8	1	1.2	1.1	1.4	1.4	1.5	1.2	1.3	1.3	0.9	0.9	0.7	0.3				
200- 225	25	0.7	0.8	1	0.8	1	1.1	1.2	1	0.8	1.2	0.7	0.7	0.5	0.4				
225- 250	25	0.6	0.6	0.8	0.6	0.7	0.7	0.9	1	0.7	0.9	0.8	0.6	0.5	0.2				
250- 275	25	0.5	0.5	0.6	0.5	0.5	0.5	0.7	0.8	0.7	0.6	0.8	0.5	0.4	0.3				
275- 300	25	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.6	0.6	0.5	0.6	0.5	0.3	0.2				
300- 325	25	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.3	0.1				
325- 350	25	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.1				
350- 375	25	0.3	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.1				
375- 400	25	0.3	0.2	0.1	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.2				
400- 425	25	0.2	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2				

Table 9, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 10y, t= 1d

R/Z, Cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					445.9	346.9	217.1	113.2	50.6	24.6	14.6	8.4	4.6	1.8				
10- 20	15					390.2	305	190.1	98.4	47.6	22.6	13.1	7.6	4.1	1.6				
20- 38	18					166.8	145.6	111	74.4	43.7	23.2	11.8	7.1	3.9	1.5				
38	0.	352.9	160	78.3	50.7	57.9	69.4	73.4	60	40.7	23.2	11.2	6.8	3.9	1.5				
38- 60	22	210	124.4	67.5	42.7	42.4	47.3	49.6	45.6	34.9	21.8	11.3	6.4	3.9	1.5				
60- 80	20	62.9	55.7	44.2	31.2	29.2	30.6	29.3	29.2	24.9	18.9	12.3	5.7	3.8	1.6				
80- 100	20	10.5	20.9	26	21.4	19.7	21.2	21.3	21.2	19	14	11.9	6	3.4	1.6				
100- 125	25	4.5	9.6	13.5	14.6	14.7	15.1	14	13.5	14.7	12.5	7.3	7.1	2.6	1.4				
125- 150	25	3.1	5.7	7.4	8.4	8.7	9.7	11.1	9.5	9.5	9.6	7.9	5.3	3.1	0.9				
150- 175	25	2.2	3.7	4.5	5.7	6	6.1	6.9	7.1	7.6	6	7.7	3.8	4.2	0.8				
175- 200	25	1.6	2.6	3.4	3.7	4.8	5	5.2	4.6	5.5	5.6	4.2	4.4	3.3	1.7				
200- 225	25	1.3	1.9	2.8	2.1	3.1	3.7	4.5	3.9	3	5.3	3	3.8	2.2	2				
225- 250	25	1.1	1.4	2.4	1.4	1.7	2.1	3.3	3.8	2.3	3.7	3.4	2.7	2.4	0.8				
250- 275	25	1	1.1	2	1.3	1.1	1.3	2	3.2	2.4	2.3	3.5	2.3	1.9	1.2				
275- 300	25	0.9	0.9	1.6	1.2	1	1	1.2	2.3	2.4	1.7	2.8	2.2	1.4	0.9				
300- 325	25	0.8	0.7	1.2	1.2	0.9	0.9	0.9	1.6	2.1	1.6	2	2	1.5	0.2				
325- 350	25	0.7	0.5	0.9	1.2	0.9	0.9	0.8	1.1	1.6	1.5	1.5	1.8	1.6	0.3				
350- 375	25	0.6	0.4	0.6	1.2	1	0.9	0.7	0.9	1.2	1.4	1.3	1.5	1.6	0.6				
375- 400	25	0.5	0.3	0.4	1.1	1	0.9	0.7	0.8	0.9	1.2	1.2	1.2	1.5	0.8				
400- 425	25	0.4	0.2	0.3	0.9	0.9	0.8	0.6	0.6	0.7	0.9	1	0.9	1.2	0.7				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 10y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					77.5	60.7	38.3	20.5	9.4	4.5	2.8	1.6	0.9	0.3				
10- 20	15					68	53.3	33.9	17.7	8.7	4.2	2.5	1.4	0.8	0.3				
20- 38	18					33	27.8	20.8	13.7	8	4.3	2.2	1.3	0.7	0.3				
38	0.	69	42.2	28.9	19.3	15	15.4	14.4	11.2	7.5	4.3	2.1	1.3	0.7	0.3				
38- 60	22	41.4	30.7	21.8	14.4	11.6	11.5	10.7	9.1	6.7	4.1	2.2	1.2	0.7	0.3				
60- 80	20	14	14.4	12.8	9.3	8.1	8	7.1	6.4	5.1	3.7	2.4	1.1	0.7	0.3				
80- 100	20	4.1	6.5	7.5	6.3	5.7	5.7	5.3	4.9	4.1	3	2.3	1.2	0.7	0.3				
100- 125	25	2.3	3.5	4.3	4.2	4.1	4.1	3.7	3.4	3.2	2.7	1.6	1.4	0.6	0.3				
125- 150	25	1.7	2.2	2.6	2.7	2.7	2.8	2.9	2.5	2.3	2.1	1.7	1.1	0.6	0.2				
150- 175	25	1.3	1.5	1.8	1.8	1.9	2	2	1.9	1.9	1.5	1.5	0.9	0.8	0.2				
175- 200	25	1	1.1	1.4	1.3	1.5	1.6	1.6	1.3	1.4	1.4	1	0.9	0.7	0.3				
200- 225	25	0.8	0.9	1.1	0.9	1.1	1.2	1.3	1.2	0.9	1.2	0.8	0.8	0.6	0.4				
225- 250	25	0.7	0.7	0.9	0.7	0.7	0.8	1	1	0.8	0.9	0.8	0.6	0.5	0.2				
250- 275	25	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.9	0.7	0.7	0.8	0.6	0.4	0.3				
275- 300	25	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.7	0.7	0.6	0.6	0.5	0.3	0.2				
300- 325	25	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.3	0.1				
325- 350	25	0.4	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.1				
350- 375	25	0.4	0.3	0.2	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.1				
375- 400	25	0.3	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.2				
400- 425	25	0.2	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 100d, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					28.4	22.2	13.9	7.3	3.3	1.6	1	0.6	0.3	0.1				
10- 20	15					24.9	19.4	12.2	6.3	3.1	1.5	0.9	0.5	0.3	0.1				
20- 38	18					11.3	9.6	7.3	4.8	2.8	1.5	0.8	0.5	0.3	0.1				
38	0.	23.1	12.6	7.6	5	4.5	5	5	4	2.7	1.5	0.7	0.4	0.3	0.1				
38- 60	22	14	9.5	6.1	3.9	3.4	3.5	3.5	3.1	2.3	1.4	0.8	0.4	0.3	0.1				
60- 80	20	4.5	4.4	3.7	2.7	2.4	2.4	2.2	2.1	1.7	1.3	0.8	0.4	0.3	0.1				
80- 100	20	1.1	1.9	2.2	1.8	1.7	1.7	1.6	1.5	1.3	1	0.8	0.4	0.2	0.1				
100- 125	25	0.6	1	1.2	1.2	1.2	1.2	1.1	1	1	0.9	0.5	0.5	0.2	0.1				
125- 150	25	0.4	0.6	0.7	0.8	0.8	0.8	0.9	0.7	0.7	0.7	0.6	0.4	0.2	0.1				
150- 175	25	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.3	0.3	0.1				
175- 200	25	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.1				
200- 225	25	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.4	0.2	0.3	0.2	0.1				
225- 250	25	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.1				
250- 275	25	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.1				
275- 300	25	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1				
300- 325	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1				
325- 350	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
350- 375	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
375- 400	25	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
400- 425	25	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 5y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					46.5	36.3	22.9	12.2	5.5	2.7	1.6	0.9	0.5	0.2				
10- 20	15					40.9	32.2	20.3	10.6	5.2	2.5	1.5	0.8	0.5	0.2				
20- 38	18					19.3	16.4	12.4	8.1	4.7	2.5	1.3	0.8	0.4	0.2				
38	0.	39.5	23.4	15.5	10.5	8.4	8.9	8.5	6.7	4.5	2.6	1.3	0.8	0.4	0.2				
38- 60	22	24.2	17.3	11.9	7.9	6.5	6.5	6.2	5.3	3.9	2.4	1.3	0.7	0.4	0.2				
60- 80	20	8	8.1	7.1	5.2	4.5	4.5	4	3.7	3	2.2	1.4	0.7	0.4	0.2				
80- 100	20	2.2	3.6	4.2	3.5	3.2	3.2	3	2.8	2.4	1.7	1.3	0.7	0.4	0.2				
100- 125	25	1.2	1.9	2.4	2.3	2.3	2.3	2.1	1.9	1.9	1.5	0.9	0.8	0.3	0.2				
125- 150	25	0.9	1.2	1.4	1.5	1.5	1.6	1.6	1.4	1.3	1.2	1	0.6	0.4	0.1				
150- 175	25	0.7	0.8	1	1	1.1	1.1	1.1	1	1.1	0.8	0.9	0.5	0.5	0.1				
175- 200	25	0.5	0.6	0.8	0.7	0.8	0.9	0.9	0.7	0.8	0.8	0.6	0.5	0.4	0.2				
200- 225	25	0.4	0.5	0.6	0.5	0.6	0.7	0.7	0.6	0.5	0.7	0.4	0.4	0.3	0.2				
225- 250	25	0.3	0.4	0.5	0.4	0.4	0.4	0.6	0.6	0.4	0.5	0.5	0.3	0.3	0.1				
250- 275	25	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.3	0.2	0.2				
275- 300	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.2	0.1				
300- 325	25	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.1				
325- 350	25	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1				
350- 375	25	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1				
375- 400	25	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1				
400- 425	25	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1				

Table 10, Continuation

Equivalent dose rate resulted from activation of JD by low energy neutrons for T= 10y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10					47.1	36.7	23.3	12.4	5.7	2.7	1.7	1	0.5	0.2				
10- 20	15					41.2	32.3	20.8	10.9	5.3	2.6	1.5	0.9	0.5	0.2				
20- 38	18					20.4	17.1	12.7	8.4	4.9	2.6	1.3	0.8	0.4	0.2				
38	0.	41.7	26.7	18.6	12.7	9.4	9.6	8.9	6.9	4.6	2.6	1.3	0.8	0.4	0.2				
38- 60	22	25.3	19.3	14.1	9.3	7.4	7.3	6.6	5.6	4.1	2.5	1.3	0.7	0.5	0.2				
60- 80	20	8.6	9	8.1	6	5.2	5	4.5	4	3.2	2.3	1.5	0.7	0.5	0.2				
80- 100	20	2.6	4.1	4.8	4	3.6	3.6	3.3	3	2.6	1.8	1.4	0.7	0.4	0.2				
100- 125	25	1.5	2.3	2.8	2.7	2.6	2.6	2.4	2.1	2	1.7	1	0.8	0.3	0.2				
125- 150	25	1.1	1.4	1.7	1.7	1.7	1.8	1.8	1.6	1.5	1.3	1.1	0.7	0.4	0.1				
150- 175	25	0.8	1	1.2	1.2	1.3	1.3	1.3	1.2	1.2	0.9	0.9	0.6	0.5	0.1				
175- 200	25	0.6	0.7	0.9	0.8	1	1	1	0.8	0.9	0.9	0.6	0.6	0.4	0.2				
200- 225	25	0.5	0.6	0.7	0.6	0.7	0.8	0.9	0.7	0.6	0.8	0.5	0.5	0.4	0.2				
225- 250	25	0.4	0.5	0.6	0.5	0.5	0.5	0.6	0.7	0.5	0.6	0.5	0.4	0.3	0.1				
250- 275	25	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.6	0.5	0.4	0.5	0.4	0.2	0.2				
275- 300	25	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.1				
300- 325	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1				
325- 350	25	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1				
350- 375	25	0.2	0.2	0.1	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.1				
375- 400	25	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1				
400- 425	25	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1				

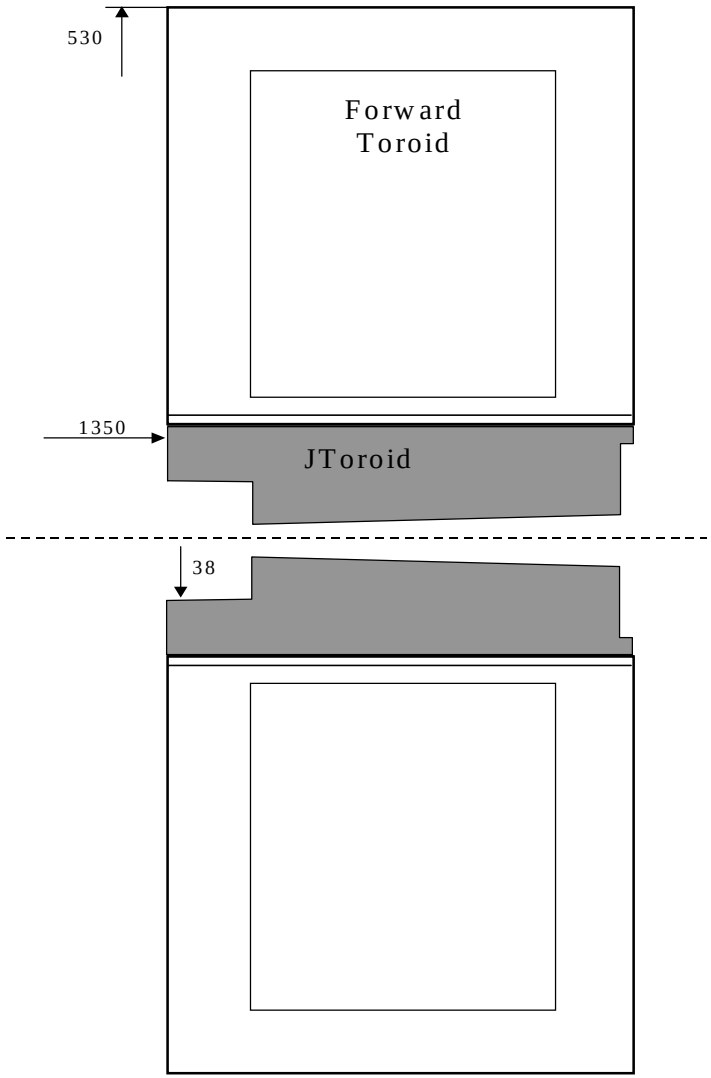

Fig.5. To dose rate calculation from Toroid in access scenario to the area between JDisk and Toroid.

Table 11

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 30d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								1.1	1.5	1.8	2.3	3.5	7.2	14.8	30.4	49.9	61.9	68.3
10- 20	15								1	1.3	1.6	2	3.1	6.3	13.1	25.5	41.3	52.2	58.4
20- 38	18								1	1.4	1.7	2.2	3.3	6.6	12.4	20.9	35.8	47.4	53.1
38	0.								1.1	1.5	1.8	2.3	3.5	6.8	11.2	18.1	33	42	41.5
38- 60	22								1.2	1.7	2	2.5	3.6	6.3	8.4	16	19.4	17.3	16.3
60- 80	20								1.3	1.8	2.1	2.6	3.4	3.8	6.9	8.3	5	4.9	4.7
80- 100	20								1.3	1.8	2	2.3	2.2	2.5	6.3	2.7	2.4	2.2	1.8
100- 125	25								1.2	1.5	1.5	1.3	1	3.4	1.8	1.6	1.3	1.2	0.9
125- 150	25								0.7	0.8	0.6	0.5	1.2	2.2	1.2	1	0.8	0.6	0.4
150- 175	25								0.2	0.3	0.3	0.5	1.9	0.9	0.8	0.6	0.6	0.3	0.2
175- 200	25								0.1	0.2	0.5	1.3	1.4	0.6	0.6	0.4	0.4	0.2	0.1
200- 225	25								0.3	0.5	1.1	1.6	0.5	0.5	0.5	0.3	0.3	0.1	0.1
225- 250	25								0.7	1.1	1.3	0.7	0.3	0.4	0.4	0.2	0.2	0.1	0.1
250- 275	25								1	1.1	0.6	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1
275- 300	25								0.6	0.4	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0
300- 325	25								0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0	0
325- 350	25								0	0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0	0
350- 375	25								0	0	0.1	0.3	0.1	0.2	0.1	0.1	0	0	0
375- 400	25								0	0.1	0.2	0.3	0.1	0.2	0	0.1	0	0	0
400- 425	25								0.1	0.2	0.3	0.2	0.1	0.1	0	0.1	0	0	0

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 30d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.7	1	1.1	1.5	2.3	4.7	9.6	19.8	32.3	40.2	44.4
10- 20	15								0.6	0.9	1	1.3	2	4.1	8.5	16.6	27	34.2	38.2
20- 38	18								0.7	0.9	1.1	1.4	2.1	4.3	8.1	13.7	23.4	31	34.7
38	0.								0.7	1	1.2	1.5	2.3	4.4	7.3	12.1	21.3	27.5	27.5
38- 60	22								0.8	1.1	1.3	1.6	2.3	4.1	5.5	10.4	12.8	11.4	10.8
60- 80	20								0.9	1.2	1.4	1.7	2.2	2.5	4.5	5.5	3.3	3.3	3.1
80- 100	20								0.9	1.2	1.3	1.5	1.5	1.7	4.1	1.8	1.6	1.4	1.2
100- 125	25								0.8	1	1	0.8	0.6	2.2	1.2	1.1	0.9	0.8	0.6
125- 150	25								0.5	0.5	0.4	0.3	0.8	1.4	0.8	0.6	0.5	0.4	0.3
150- 175	25								0.2	0.2	0.2	0.4	1.3	0.6	0.5	0.4	0.4	0.2	0.2
175- 200	25								0.1	0.2	0.3	0.8	0.9	0.4	0.4	0.3	0.3	0.1	0.1
200- 225	25								0.2	0.4	0.7	1	0.3	0.3	0.3	0.2	0.2	0.1	0.1
225- 250	25								0.4	0.7	0.9	0.4	0.2	0.3	0.3	0.1	0.1	0.1	0.1
250- 275	25								0.6	0.7	0.4	0.1	0.2	0.2	0.2	0.1	0.1	0	0
275- 300	25								0.4	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0	0
300- 325	25								0.1	0.1	0	0.1	0.2	0.1	0.1	0.1	0.1	0	0
325- 350	25								0	0	0.1	0.2	0.1	0.1	0.1	0.1	0	0	0
350- 375	25								0	0	0.1	0.2	0.1	0.1	0	0.1	0	0	0
375- 400	25								0	0.1	0.1	0.2	0	0.1	0	0.1	0	0	0
400- 425	25								0	0.1	0.2	0.1	0	0.1	0	0.1	0	0	0

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 100d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								1.7	2.4	2.8	3.6	5.6	11.4	23.4	48.1	79	97.8	107.5
10- 20	15								1.5	2.1	2.5	3.2	4.9	10	20.6	40.5	65.8	83.4	93.1
20- 38	18								1.6	2.2	2.7	3.4	5.2	10.4	19.6	33.5	57.5	76	85.1
38	0.								1.8	2.4	2.9	3.7	5.5	10.6	17.6	29	52.7	67	67
38- 60	22								1.9	2.6	3.1	3.9	5.7	9.8	13.4	25.6	31.2	28.4	27.3
60- 80	20								2.1	2.8	3.3	4	5.3	6.1	11	13.4	8.4	8.3	7.9
80- 100	20								2.1	2.8	3.2	3.6	3.5	4.1	9.9	4.5	4	3.5	2.8
100- 125	25								1.9	2.4	2.3	2	1.5	5.3	2.9	2.7	2.1	1.8	1.3
125- 150	25								1.1	1.2	0.9	0.8	2	3.5	1.9	1.6	1.3	0.9	0.6
150- 175	25								0.4	0.4	0.5	0.9	3	1.5	1.3	1	0.9	0.5	0.3
175- 200	25								0.2	0.4	0.8	2	2.1	1	0.9	0.7	0.7	0.3	0.2
200- 225	25								0.5	0.9	1.7	2.5	0.8	0.8	0.8	0.5	0.5	0.2	0.2
225- 250	25								1	1.8	2.1	1.1	0.5	0.6	0.6	0.4	0.3	0.2	0.1
250- 275	25								1.5	1.8	1	0.2	0.5	0.5	0.5	0.3	0.2	0.1	0.1
275- 300	25								0.9	0.7	0.2	0.2	0.6	0.4	0.3	0.3	0.2	0.1	0.1
300- 325	25								0.2	0.1	0.1	0.3	0.5	0.3	0.2	0.2	0.1	0.1	0.1
325- 350	25								0.1	0.1	0.1	0.4	0.3	0.3	0.1	0.2	0.1	0.1	0.1
350- 375	25								0	0.1	0.2	0.5	0.2	0.3	0.1	0.2	0.1	0	0
375- 400	25								0.1	0.1	0.3	0.5	0.1	0.3	0.1	0.2	0.1	0	0
400- 425	25								0.1	0.3	0.4	0.3	0.1	0.2	0.1	0.2	0	0	0

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 100d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								1.3	1.8	2.1	2.7	4.2	8.6	17.7	36.4	59.9	74.5	82.1
10- 20	15								1.1	1.6	1.9	2.4	3.7	7.6	15.7	30.7	50.1	63.7	71.3
20- 38	18								1.2	1.7	2	2.6	3.9	7.8	14.8	25.5	43.7	58	64.9
38	0.								1.3	1.8	2.2	2.8	4.1	8	13.4	22.4	40	51	51
38- 60	22								1.4	2	2.3	2.9	4.3	7.4	10.2	19.5	23.9	22.1	21.2
60- 80	20								1.6	2.1	2.5	3	4	4.6	8.4	10.2	6.6	6.7	6.3
80- 100	20								1.6	2.1	2.4	2.7	2.7	3.1	7.5	3.5	3.1	2.7	2.2
100- 125	25								1.4	1.8	1.7	1.5	1.2	4	2.2	2.1	1.6	1.3	1
125- 150	25								0.8	0.9	0.7	0.6	1.5	2.7	1.5	1.2	1	0.7	0.5
150- 175	25								0.3	0.3	0.4	0.7	2.3	1.1	1	0.8	0.7	0.4	0.3
175- 200	25								0.2	0.3	0.6	1.5	1.6	0.8	0.7	0.5	0.5	0.3	0.2
200- 225	25								0.3	0.7	1.3	1.9	0.6	0.6	0.6	0.4	0.4	0.2	0.1
225- 250	25								0.8	1.4	1.6	0.8	0.4	0.5	0.5	0.3	0.3	0.1	0.1
250- 275	25								1.1	1.3	0.7	0.2	0.4	0.4	0.4	0.2	0.2	0.1	0.1
275- 300	25								0.7	0.5	0.2	0.1	0.4	0.3	0.2	0.2	0.1	0.1	0.1
300- 325	25								0.2	0.1	0.1	0.2	0.4	0.3	0.1	0.2	0.1	0.1	0
325- 350	25								0	0	0.1	0.3	0.3	0.2	0.1	0.2	0.1	0	0
350- 375	25								0	0.1	0.2	0.4	0.2	0.2	0.1	0.2	0.1	0	0
375- 400	25								0	0.1	0.3	0.4	0.1	0.2	0.1	0.1	0	0	0
400- 425	25								0.1	0.2	0.3	0.2	0.1	0.2	0	0.1	0	0	0

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								1.9	2.6	3.1	4	6.2	12.5	25.7	52.8	86.6	107.5	119.9
10- 20	15								1.7	2.3	2.8	3.5	5.5	11.1	22.8	44.6	72.4	92.1	103.8
20- 38	18								1.8	2.5	2.9	3.8	5.7	11.5	21.5	36.9	63.3	83.8	94
38	0.								2	2.7	3.2	4.1	6.1	11.8	19.4	32.1	58	73.5	74
38- 60	22								2.1	2.9	3.4	4.3	6.2	10.8	14.9	28.2	34.4	31.6	30.6
60- 80	20								2.3	3.1	3.6	4.4	5.9	6.7	12.2	14.8	9.5	9.5	9
80- 100	20								2.3	3.1	3.5	3.9	3.9	4.6	11	5.1	4.6	4	3.2
100- 125	25								2.1	2.6	2.6	2.2	1.7	5.9	3.3	3.1	2.5	2.1	1.6
125- 150	25								1.2	1.3	1.1	0.9	2.2	3.9	2.2	1.9	1.6	1.2	0.9
150- 175	25								0.4	0.5	0.5	1	3.4	1.7	1.6	1.2	1.2	0.8	0.6
175- 200	25								0.3	0.5	0.9	2.2	2.4	1.2	1.1	0.8	0.9	0.5	0.4
200- 225	25								0.5	1	1.9	2.7	1	1	0.9	0.6	0.7	0.4	0.3
225- 250	25								1.2	2	2.3	1.2	0.6	0.8	0.8	0.5	0.5	0.3	0.3
250- 275	25								1.7	1.9	1.1	0.3	0.6	0.6	0.6	0.4	0.4	0.2	0.2
275- 300	25								1	0.7	0.3	0.2	0.7	0.4	0.4	0.4	0.3	0.2	0.2
300- 325	25								0.3	0.2	0.1	0.3	0.6	0.4	0.3	0.3	0.2	0.1	0.1
325- 350	25								0.1	0.1	0.2	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.1
350- 375	25								0.1	0.1	0.3	0.6	0.3	0.4	0.1	0.3	0.1	0.1	0.1
375- 400	25								0.1	0.2	0.4	0.5	0.1	0.3	0.1	0.2	0.1	0.1	0.1
400- 425	25								0.1	0.3	0.5	0.3	0.1	0.3	0.1	0.2	0.1	0.1	0.1

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								1.5	2.1	2.5	3.2	4.9	10	20.5	42.1	69.1	86	94.7
10- 20	15								1.3	1.9	2.2	2.8	4.4	8.8	18.1	35.6	58.1	73.6	82.5
20- 38	18								1.4	2	2.3	3	4.6	9.1	17.1	29.5	50.6	67.2	75.1
38	0.								1.6	2.1	2.5	3.2	4.8	9.3	15.5	25.8	46.3	59	59.5
38- 60	22								1.7	2.3	2.7	3.4	5	8.6	11.9	22.5	27.7	25.7	24.9
60- 80	20								1.8	2.5	2.9	3.5	4.6	5.4	9.7	11.9	7.8	7.9	7.4
80- 100	20								1.8	2.5	2.8	3.1	3.1	3.7	8.8	4.2	3.7	3.2	2.6
100- 125	25								1.6	2.1	2	1.8	1.4	4.7	2.7	2.6	2	1.7	1.3
125- 150	25								1	1.1	0.8	0.7	1.8	3.1	1.8	1.5	1.3	1	0.7
150- 175	25								0.3	0.4	0.4	0.8	2.7	1.4	1.3	1	1	0.7	0.5
175- 200	25								0.2	0.4	0.7	1.8	1.9	1	0.9	0.7	0.7	0.5	0.4
200- 225	25								0.4	0.8	1.5	2.2	0.8	0.8	0.8	0.5	0.6	0.3	0.3
225- 250	25								0.9	1.6	1.8	0.9	0.5	0.6	0.6	0.4	0.4	0.3	0.2
250- 275	25								1.3	1.5	0.9	0.2	0.5	0.5	0.5	0.3	0.3	0.2	0.2
275- 300	25								0.8	0.6	0.2	0.2	0.5	0.4	0.3	0.3	0.2	0.2	0.1
300- 325	25								0.2	0.1	0.1	0.3	0.5	0.3	0.2	0.3	0.2	0.1	0.1
325- 350	25								0.1	0.1	0.1	0.4	0.3	0.3	0.1	0.2	0.1	0.1	0.1
350- 375	25								0	0.1	0.2	0.5	0.2	0.3	0.1	0.2	0.1	0.1	0.1
375- 400	25								0.1	0.1	0.3	0.4	0.1	0.3	0.1	0.2	0.1	0.1	0.1
400- 425	25								0.1	0.3	0.4	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.1

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 10y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								1.9	2.7	3.2	4.1	6.3	12.8	26.4	54	88.4	112	122.6
10- 20	15								1.7	2.4	2.8	3.6	5.6	11.3	23.3	45.5	74.2	93.7	105.8
20- 38	18								1.9	2.6	3	3.9	5.9	11.7	22.1	37.7	64.7	85.6	95.9
38	0.								2	2.8	3.3	4.2	6.2	12	19.9	33	59.3	75.5	75.5
38- 60	22								2.2	3	3.5	4.4	6.4	11.1	15.2	28.8	35.5	32.4	31.2
60- 80	20								2.3	3.2	3.7	4.5	6	6.9	12.4	15.2	9.8	9.8	9.3
80- 100	20								2.4	3.2	3.6	4	4	4.7	11.3	5.3	4.7	4.1	3.3
100- 125	25								2.1	2.7	2.6	2.3	1.8	6	3.4	3.2	2.6	2.2	1.7
125- 150	25								1.3	1.4	1.1	0.9	2.3	4	2.3	2	1.7	1.3	1
150- 175	25								0.4	0.5	0.6	1	3.5	1.7	1.6	1.3	1.2	0.8	0.7
175- 200	25								0.3	0.5	0.9	2.3	2.5	1.2	1.2	0.9	0.9	0.6	0.5
200- 225	25								0.5	1	2	2.8	1	1	1	0.7	0.7	0.4	0.4
225- 250	25								1.2	2	2.4	1.2	0.6	0.8	0.8	0.5	0.5	0.3	0.3
250- 275	25								1.7	2	1.1	0.3	0.6	0.6	0.6	0.4	0.4	0.3	0.2
275- 300	25								1	0.8	0.3	0.2	0.7	0.5	0.4	0.4	0.3	0.2	0.2
300- 325	25								0.3	0.2	0.1	0.3	0.6	0.4	0.3	0.4	0.2	0.2	0.2
325- 350	25								0.1	0.1	0.2	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.1
350- 375	25								0.1	0.1	0.3	0.6	0.3	0.4	0.1	0.3	0.1	0.1	0.1
375- 400	25								0.1	0.2	0.4	0.5	0.2	0.3	0.1	0.2	0.1	0.1	0.1
400- 425	25								0.1	0.3	0.5	0.3	0.1	0.3	0.1	0.2	0.1	0.1	0.1

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 10y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								1.6	2.2	2.6	3.3	5.1	10.2	21.1	43.1	70.9	88.2	97.3
10- 20	15								1.4	1.9	2.3	2.9	4.5	9	18.6	36.6	59.4	75.5	84.5
20- 38	18								1.5	2	2.4	3.1	4.7	9.4	17.6	30.2	52.1	68.7	77
38	0.								1.6	2.2	2.6	3.3	5	9.5	16	26.5	47.3	60.5	60.5
38- 60	22								1.7	2.4	2.8	3.5	5.1	8.8	12.2	23.2	28.4	26.5	25.6
60- 80	20								1.9	2.5	2.9	3.6	4.8	5.5	10	12.2	8.1	8.1	7.6
80- 100	20								1.9	2.5	2.9	3.2	3.2	3.8	9	4.3	3.9	3.3	2.7
100- 125	25								1.7	2.1	2.1	1.8	1.5	4.8	2.8	2.7	2.1	1.8	1.3
125- 150	25								1	1.1	0.9	0.7	1.8	3.2	1.9	1.6	1.4	1.1	0.8
150- 175	25								0.4	0.4	0.5	0.9	2.8	1.4	1.4	1.1	1	0.7	0.6
175- 200	25								0.2	0.4	0.7	1.8	2	1	1	0.8	0.8	0.5	0.4
200- 225	25								0.4	0.8	1.6	2.2	0.8	0.8	0.8	0.6	0.6	0.4	0.3
225- 250	25								1	1.6	1.9	1	0.5	0.7	0.7	0.4	0.5	0.3	0.3
250- 275	25								1.4	1.6	0.9	0.3	0.5	0.5	0.5	0.4	0.4	0.2	0.2
275- 300	25								0.8	0.6	0.2	0.2	0.6	0.4	0.4	0.3	0.3	0.2	0.2
300- 325	25								0.2	0.2	0.1	0.3	0.5	0.4	0.2	0.3	0.2	0.1	0.1
325- 350	25								0.1	0.1	0.1	0.4	0.4	0.3	0.2	0.3	0.2	0.1	0.1
350- 375	25								0.1	0.1	0.2	0.5	0.2	0.3	0.1	0.2	0.1	0.1	0.1
375- 400	25								0.1	0.2	0.3	0.4	0.1	0.3	0.1	0.2	0.1	0.1	0.1
400- 425	25								0.1	0.3	0.4	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.1

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 100d, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.4	0.6	0.7	0.8	1.3	2.6	5.4	11	18.3	23	25.1
10- 20	15								0.4	0.5	0.6	0.8	1.2	2.3	4.8	9.4	15.5	19.8	22.2
20- 38	18								0.4	0.5	0.6	0.8	1.2	2.4	4.5	7.9	13.6	18.1	20.3
38	0.								0.4	0.6	0.7	0.8	1.2	2.4	4.1	6.9	12.3	16	16
38- 60	22								0.4	0.6	0.7	0.9	1.3	2.2	3.2	6	7.6	7.3	7.1
60- 80	20								0.5	0.6	0.7	0.9	1.2	1.4	2.6	3.2	2.3	2.3	2.2
80- 100	20								0.5	0.6	0.7	0.8	0.8	1	2.3	1.2	1.1	0.9	0.7
100- 125	25								0.4	0.5	0.5	0.5	0.4	1.2	0.7	0.7	0.5	0.4	0.3
125- 150	25								0.2	0.3	0.2	0.2	0.5	0.8	0.5	0.4	0.3	0.3	0.2
150- 175	25								0.1	0.1	0.1	0.2	0.7	0.4	0.4	0.3	0.3	0.2	0.1
175- 200	25								0.1	0.1	0.2	0.5	0.5	0.3	0.3	0.2	0.2	0.1	0.1
200- 225	25								0.1	0.2	0.4	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.1
225- 250	25								0.2	0.4	0.5	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1
250- 275	25								0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0	0
275- 300	25								0.2	0.2	0.1	0	0.2	0.1	0.1	0.1	0.1	0	0
300- 325	25								0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0	0
325- 350	25								0	0	0	0.1	0.1	0.1	0	0.1	0	0	0
350- 375	25								0	0	0.1	0.1	0.1	0.1	0	0.1	0	0	0
375- 400	25								0	0	0.1	0.1	0	0.1	0	0.1	0	0	0
400- 425	25								0	0.1	0.1	0.1	0	0.1	0	0	0	0	0

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 5y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.6	0.8	0.9	1.2	1.8	3.6	7.4	15.1	25	31.2	34.2
10- 20	15								0.5	0.7	0.8	1	1.6	3.2	6.6	12.9	21.1	26.9	30.1
20- 38	18								0.5	0.7	0.9	1.1	1.7	3.3	6.2	10.7	18.6	24.5	27.4
38	0.								0.6	0.8	0.9	1.2	1.7	3.4	5.6	9.4	17	22	22
38- 60	22								0.6	0.8	1	1.2	1.8	3.1	4.4	8.2	10.2	9.8	9.6
60- 80	20								0.7	0.9	1	1.3	1.7	2	3.6	4.4	3.1	3.1	3
80- 100	20								0.7	0.9	1	1.1	1.1	1.4	3.2	1.7	1.5	1.2	1
100- 125	25								0.6	0.7	0.7	0.6	0.6	1.7	1.1	1	0.8	0.7	0.5
125- 150	25								0.4	0.4	0.3	0.3	0.7	1.2	0.8	0.7	0.6	0.5	0.4
150- 175	25								0.1	0.2	0.2	0.3	1	0.6	0.6	0.5	0.5	0.4	0.3
175- 200	25								0.1	0.2	0.3	0.7	0.7	0.4	0.4	0.3	0.4	0.3	0.3
200- 225	25								0.2	0.3	0.6	0.8	0.3	0.3	0.3	0.3	0.3	0.2	0.2
225- 250	25								0.4	0.6	0.7	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2
250- 275	25								0.5	0.6	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1
275- 300	25								0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1
300- 325	25								0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1
325- 350	25								0	0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
350- 375	25								0	0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
375- 400	25								0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
400- 425	25								0.1	0.1	0.2	0.1	0.1	0.1	0	0.1	0	0	0

Table 11, Continuation

Equivalent dose rate resulted from activation of Toroid by high-energy hadrons for T= 10y, t=100d

R/Z,		780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
Cm	dR\dZ	0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.6	0.8	1	1.3	2	3.9	8	16.2	26.6	33.2	36.7
10- 20	15								0.5	0.7	0.9	1.1	1.7	3.4	7.1	13.9	22.7	28.6	32.1
20- 38	18								0.6	0.8	0.9	1.2	1.8	3.5	6.6	11.5	19.9	26.2	29.3
38	0.								0.6	0.8	1	1.3	1.9	3.6	6	10.2	18	23	23.5
38- 60	22								0.7	0.9	1.1	1.3	1.9	3.3	4.7	8.8	11	10.5	10.3
60- 80	20								0.7	1	1.1	1.4	1.8	2.1	3.8	4.7	3.3	3.4	3.2
80- 100	20								0.7	1	1.1	1.2	1.2	1.5	3.4	1.8	1.6	1.4	1.1
100- 125	25								0.6	0.8	0.8	0.7	0.6	1.8	1.2	1.1	0.9	0.8	0.6
125- 150	25								0.4	0.4	0.3	0.3	0.7	1.3	0.8	0.7	0.7	0.6	0.5
150- 175	25								0.1	0.2	0.2	0.4	1.1	0.6	0.6	0.5	0.6	0.5	0.4
175- 200	25								0.1	0.2	0.3	0.7	0.8	0.4	0.5	0.4	0.4	0.3	0.3
200- 225	25								0.2	0.3	0.6	0.8	0.3	0.4	0.4	0.3	0.4	0.3	0.3
225- 250	25								0.4	0.6	0.7	0.4	0.2	0.3	0.3	0.3	0.3	0.2	0.2
250- 275	25								0.5	0.6	0.4	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2
275- 300	25								0.3	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.1
300- 325	25								0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1
325- 350	25								0	0	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1
350- 375	25								0	0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1
375- 400	25								0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
400- 425	25								0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0	0

Table 12

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 30d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								3.3	4.6	5.5	7	10.4	17.5	39.6	85.3	150	190	215
10- 20	15								3	4.1	4.9	6.3	9.3	16.4	36.9	82.5	147.2	190	214.4
20- 38	18								2.6	3.6	4.2	5.3	7.6	14.9	32.9	73.6	133.7	178.7	203
38	0.								2.5	3.4	4	5	6.8	14.2	30.7	67.6	120	165	190
38- 60	22								2.5	3.4	4	4.8	6.4	13.6	28.4	57.2	93	121.3	136.5
60- 80	20								2.6	3.4	3.8	4.4	5.9	12.1	23.8	37.7	47.7	51.8	51
80- 100	20								2.4	3.2	3.4	3.7	5.5	10.5	18.6	22.7	20.7	16.3	11.2
100- 125	25								2	2.5	2.6	2.9	4.8	9.1	12.3	13.1	9.3	6.4	3.6
125- 150	25								1.3	1.6	1.8	2.7	4.6	7.2	8.9	7.3	5.3	3.1	1.4
150- 175	25								0.8	1.3	1.9	3	4.5	5.4	6.4	4.3	3.7	1.6	0.6
175- 200	25								1	1.7	2.5	3.5	3.5	4.5	4.4	2.7	2.7	0.8	0.3
200- 225	25								1.6	2.4	3	3.2	2.4	3.7	3.5	1.8	1.9	0.4	0.1
225- 250	25								2.1	2.8	2.8	1.8	2.1	2.8	2.8	1.3	1.3	0.2	0.1
250- 275	25								2.1	2.4	1.6	0.8	2.4	2.1	2	1.1	0.8	0.1	0
275- 300	25								1.3	1.2	0.6	0.7	2.5	1.6	1.2	1.1	0.5	0.1	0
300- 325	25								0.5	0.4	0.3	1.3	2.2	1.4	0.6	1	0.3	0	0
325- 350	25								0.1	0.1	0.6	1.9	1.5	1.4	0.3	0.9	0.2	0	0
350- 375	25								0.1	0.3	1.1	2.2	0.8	1.4	0.2	0.8	0.1	0	0
375- 400	25								0.2	0.7	1.7	2.1	0.4	1.2	0.2	0.8	0.1	0	0
400- 425	25								0.6	1.3	2	1.3	0.3	1	0.2	0.7	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 30d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.2	0.2	0.3	0.4	0.5	0.9	2.1	4.5	7.8	10.3	11.5
10- 20	15								0.2	0.2	0.3	0.3	0.5	0.9	1.9	4.3	7.7	10.2	11.5
20- 38	18								0.1	0.2	0.2	0.3	0.4	0.8	1.7	3.8	7	9.3	10.6
38	0.								0.1	0.2	0.2	0.3	0.4	0.7	1.6	3.5	6.2	8.5	9.6
38- 60	22								0.1	0.2	0.2	0.2	0.3	0.7	1.5	3	4.9	6.4	7.1
60- 80	20								0.1	0.2	0.2	0.2	0.3	0.6	1.2	2	2.5	2.7	2.7
80- 100	20								0.1	0.2	0.2	0.2	0.3	0.6	1	1.2	1.1	0.9	0.6
100- 125	25								0.1	0.1	0.1	0.2	0.3	0.5	0.7	0.7	0.5	0.4	0.2
125- 150	25								0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.4	0.3	0.2	0.1
150- 175	25								0	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0
175- 200	25								0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0	0
200- 225	25								0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0	0
225- 250	25								0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0
250- 275	25								0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0	0	0
275- 300	25								0.1	0.1	0	0	0.1	0.1	0.1	0.1	0	0	0
300- 325	25								0	0	0	0.1	0.1	0.1	0	0.1	0	0	0
325- 350	25								0	0	0	0.1	0.1	0.1	0	0	0	0	0
350- 375	25								0	0	0.1	0.1	0	0.1	0	0	0	0	0
375- 400	25								0	0	0.1	0.1	0	0.1	0	0	0	0	0
400- 425	25								0	0.1	0.1	0.1	0	0.1	0	0	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 100d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								3.6	4.9	5.8	7.5	11.1	18.7	42.3	91.9	162.3	205	230
10- 20	15								3.2	4.4	5.2	6.7	9.9	17.5	39.3	88.7	156.5	204.3	229.4
20- 38	18								2.8	3.8	4.5	5.7	8.1	15.9	35.1	78.3	142.8	190.4	216.7
38	0.								2.7	3.7	4.3	5.3	7.3	15.1	32.7	71.5	130	175	200
38- 60	22								2.7	3.7	4.2	5.1	6.8	14.5	30.2	61.2	99.3	128.5	145.7
60- 80	20								2.7	3.7	4.1	4.7	6.3	13	25.4	40.4	51.1	55.5	54.6
80- 100	20								2.6	3.4	3.7	4	5.9	11.2	20	24.3	22.2	17.5	12.1
100- 125	25								2.1	2.7	2.8	3.1	5.2	9.8	13.2	14.1	9.9	6.8	3.8
125- 150	25								1.4	1.8	2	2.9	4.9	7.7	9.5	7.8	5.7	3.4	1.5
150- 175	25								0.9	1.4	2	3.3	4.8	5.8	6.9	4.5	4	1.7	0.7
175- 200	25								1.1	1.8	2.7	3.8	3.7	4.8	4.7	2.9	2.9	0.9	0.3
200- 225	25								1.7	2.6	3.3	3.4	2.5	3.9	3.7	1.9	2	0.4	0.1
225- 250	25								2.2	3	3	2	2.2	3	3	1.4	1.3	0.2	0.1
250- 275	25								2.2	2.5	1.7	0.8	2.5	2.2	2.1	1.2	0.9	0.1	0
275- 300	25								1.4	1.3	0.6	0.8	2.7	1.7	1.3	1.1	0.5	0.1	0
300- 325	25								0.6	0.4	0.3	1.4	2.3	1.5	0.7	1.1	0.3	0	0
325- 350	25								0.1	0.1	0.6	2.1	1.6	1.5	0.3	1	0.2	0	0
350- 375	25								0.1	0.3	1.2	2.4	0.9	1.5	0.2	0.9	0.1	0	0
375- 400	25								0.2	0.8	1.8	2.2	0.4	1.3	0.2	0.8	0.1	0	0
400- 425	25								0.6	1.4	2.1	1.4	0.3	1.1	0.2	0.7	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 100d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.4	0.6	0.7	0.8	1.3	2.1	4.8	10.4	18	23.5	26.3
10- 20	15								0.4	0.5	0.6	0.8	1.1	2	4.4	9.9	17.8	23.1	25.6
20- 38	18								0.3	0.4	0.5	0.6	0.9	1.8	4	8.9	16.1	21.5	24.5
38	0.								0.3	0.4	0.5	0.6	0.8	1.7	3.7	8.2	14.3	19.5	22.5
38- 60	22								0.3	0.4	0.5	0.6	0.8	1.6	3.4	6.9	11.1	14.7	16.6
60- 80	20								0.3	0.4	0.5	0.5	0.7	1.5	2.9	4.6	5.8	6.3	6.3
80- 100	20								0.3	0.4	0.4	0.5	0.7	1.3	2.3	2.8	2.6	2.1	1.4
100- 125	25								0.2	0.3	0.3	0.4	0.6	1.1	1.5	1.6	1.2	0.8	0.5
125- 150	25								0.2	0.2	0.2	0.3	0.6	0.9	1.1	0.9	0.7	0.4	0.2
150- 175	25								0.1	0.2	0.2	0.4	0.5	0.7	0.8	0.5	0.5	0.2	0.1
175- 200	25								0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.3	0.3	0.1	0
200- 225	25								0.2	0.3	0.4	0.4	0.3	0.5	0.4	0.2	0.2	0.1	0
225- 250	25								0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0	0
250- 275	25								0.2	0.3	0.2	0.1	0.3	0.3	0.2	0.1	0.1	0	0
275- 300	25								0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0	0
300- 325	25								0.1	0	0	0.2	0.3	0.2	0.1	0.1	0	0	0
325- 350	25								0	0	0.1	0.2	0.2	0.2	0	0.1	0	0	0
350- 375	25								0	0	0.1	0.3	0.1	0.2	0	0.1	0	0	0
375- 400	25								0	0.1	0.2	0.3	0.1	0.1	0	0.1	0	0	0
400- 425	25								0.1	0.2	0.2	0.2	0	0.1	0	0.1	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								3.8	5.2	6.1	7.9	11.7	19.7	44.6	97.9	166.7	215	245
10- 20	15								3.4	4.7	5.5	7	10.4	18.5	41.3	92.8	165.2	215	240.3
20- 38	18								2.9	4	4.8	6	8.5	16.7	36.9	82.7	150.7	200.7	227.6
38	0.								2.8	3.9	4.6	5.6	7.7	16	34.3	75.8	133.3	185	210
38- 60	22								2.8	3.9	4.5	5.4	7.2	15.2	31.9	64.3	104.9	136.7	154
60- 80	20								2.9	3.9	4.3	4.9	6.6	13.6	26.7	42.5	53.8	58.5	57.7
80- 100	20								2.8	3.6	3.9	4.2	6.2	11.8	21	25.7	23.4	18.4	12.7
100- 125	25								2.2	2.8	2.9	3.3	5.4	10.3	13.9	15	10.5	7.3	4.1
125- 150	25								1.5	1.9	2.1	3	5.2	8.2	10.1	8.2	6	3.5	1.6
150- 175	25								0.9	1.4	2.2	3.4	5	6.1	7.3	4.8	4.2	1.8	0.7
175- 200	25								1.2	1.9	2.8	4	3.9	5	5	3.1	3	0.9	0.3
200- 225	25								1.8	2.7	3.4	3.6	2.7	4.1	3.9	2	2.1	0.5	0.1
225- 250	25								2.3	3.2	3.1	2.1	2.3	3.2	3.2	1.5	1.4	0.2	0.1
250- 275	25								2.3	2.7	1.8	0.9	2.7	2.3	2.2	1.3	0.9	0.1	0
275- 300	25								1.5	1.4	0.7	0.8	2.9	1.8	1.4	1.2	0.6	0.1	0
300- 325	25								0.6	0.4	0.3	1.5	2.4	1.6	0.7	1.1	0.4	0	0
325- 350	25								0.1	0.2	0.6	2.2	1.7	1.6	0.4	1	0.2	0	0
350- 375	25								0.1	0.3	1.3	2.5	1	1.5	0.2	0.9	0.1	0	0
375- 400	25								0.3	0.8	1.9	2.3	0.5	1.4	0.2	0.9	0.1	0	0
400- 425	25								0.7	1.5	2.2	1.4	0.4	1.1	0.2	0.8	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.6	0.8	1	1.2	1.8	3.1	6.9	15.2	26.3	34	38
10- 20	15								0.5	0.7	0.9	1.1	1.6	2.9	6.4	14.6	26	33.9	37.9
20- 38	18								0.5	0.6	0.7	0.9	1.3	2.6	5.8	12.9	23.5	31.5	35.9
38	0.								0.4	0.6	0.7	0.9	1.2	2.5	5.4	11.9	21	29	33
38- 60	22								0.4	0.6	0.7	0.8	1.1	2.4	5	10.1	16.4	21.4	24
60- 80	20								0.5	0.6	0.7	0.8	1	2.1	4.2	6.7	8.5	9.2	9
80- 100	20								0.4	0.6	0.6	0.7	1	1.9	3.3	4	3.7	3	2.1
100- 125	25								0.4	0.4	0.5	0.5	0.9	1.6	2.2	2.4	1.7	1.2	0.7
125- 150	25								0.2	0.3	0.3	0.5	0.8	1.3	1.6	1.3	1	0.6	0.3
150- 175	25								0.2	0.2	0.3	0.5	0.8	1	1.2	0.8	0.7	0.3	0.1
175- 200	25								0.2	0.3	0.4	0.6	0.6	0.8	0.8	0.5	0.5	0.2	0.1
200- 225	25								0.3	0.4	0.5	0.6	0.4	0.7	0.6	0.3	0.3	0.1	0
225- 250	25								0.4	0.5	0.5	0.3	0.4	0.5	0.5	0.2	0.2	0	0
250- 275	25								0.4	0.4	0.3	0.1	0.4	0.4	0.4	0.2	0.2	0	0
275- 300	25								0.2	0.2	0.1	0.1	0.5	0.3	0.2	0.2	0.1	0	0
300- 325	25								0.1	0.1	0.1	0.2	0.4	0.3	0.1	0.2	0.1	0	0
325- 350	25								0	0	0.1	0.3	0.3	0.3	0.1	0.2	0	0	0
350- 375	25								0	0	0.2	0.4	0.2	0.2	0	0.2	0	0	0
375- 400	25								0	0.1	0.3	0.4	0.1	0.2	0	0.1	0	0	0
400- 425	25								0.1	0.2	0.3	0.2	0.1	0.2	0	0.1	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 10y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								3.8	5.2	6.2	7.9	11.7	19.7	44.6	98	166.9	215	245
10- 20	15								3.4	4.7	5.5	7	10.4	18.5	41.3	92.8	165.2	215	241.5
20- 38	18								2.9	4	4.8	6	8.5	16.8	37	82.7	151.1	200.7	227.6
38	0.								2.8	3.9	4.6	5.6	7.7	16	34.4	75.8	133.3	185	210
38- 60	22								2.8	3.9	4.5	5.4	7.2	15.2	31.9	64.4	104.9	136.7	154
60- 80	20								2.9	3.9	4.3	4.9	6.6	13.7	26.7	42.6	53.9	58.6	57.7
80- 100	20								2.8	3.6	3.9	4.2	6.2	11.9	21.1	25.7	23.4	18.4	12.8
100- 125	25								2.2	2.8	2.9	3.3	5.4	10.3	14	15	10.5	7.3	4.1
125- 150	25								1.5	1.9	2.1	3	5.2	8.2	10.1	8.2	6	3.6	1.6
150- 175	25								1	1.4	2.2	3.4	5	6.1	7.3	4.8	4.2	1.8	0.7
175- 200	25								1.2	1.9	2.8	4	3.9	5	5	3.1	3	0.9	0.3
200- 225	25								1.8	2.7	3.4	3.6	2.7	4.2	3.9	2	2.1	0.5	0.1
225- 250	25								2.3	3.2	3.1	2.1	2.3	3.2	3.2	1.5	1.4	0.2	0.1
250- 275	25								2.3	2.7	1.8	0.9	2.7	2.3	2.2	1.3	0.9	0.1	0
275- 300	25								1.5	1.4	0.7	0.8	2.9	1.8	1.4	1.2	0.6	0.1	0
300- 325	25								0.6	0.4	0.3	1.5	2.4	1.6	0.7	1.1	0.4	0	0
325- 350	25								0.2	0.2	0.6	2.2	1.7	1.6	0.4	1	0.2	0	0
350- 375	25								0.1	0.3	1.3	2.5	1	1.5	0.2	0.9	0.1	0	0
375- 400	25								0.3	0.8	1.9	2.3	0.5	1.4	0.2	0.9	0.1	0	0
400- 425	25								0.7	1.5	2.2	1.4	0.4	1.1	0.2	0.8	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 10y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.6	0.8	1	1.2	1.8	3.1	7	15.2	26.4	34	38
10- 20	15								0.5	0.7	0.9	1.1	1.6	2.9	6.5	14.6	26.1	34	38
20- 38	18								0.5	0.6	0.8	0.9	1.3	2.6	5.8	13	23.7	31.7	36
38	0.								0.4	0.6	0.7	0.9	1.2	2.5	5.4	11.9	21	29	33
38- 60	22								0.4	0.6	0.7	0.8	1.1	2.4	5	10.1	16.4	21.4	24.2
60- 80	20								0.5	0.6	0.7	0.8	1	2.2	4.2	6.7	8.5	9.3	9.2
80- 100	20								0.4	0.6	0.6	0.7	1	1.9	3.3	4.1	3.8	3	2.1
100- 125	25								0.4	0.5	0.5	0.5	0.9	1.6	2.2	2.4	1.7	1.2	0.7
125- 150	25								0.2	0.3	0.3	0.5	0.8	1.3	1.6	1.3	1	0.6	0.3
150- 175	25								0.2	0.2	0.3	0.5	0.8	1	1.2	0.8	0.7	0.3	0.1
175- 200	25								0.2	0.3	0.4	0.6	0.6	0.8	0.8	0.5	0.5	0.2	0.1
200- 225	25								0.3	0.4	0.5	0.6	0.4	0.7	0.6	0.3	0.3	0.1	0
225- 250	25								0.4	0.5	0.5	0.3	0.4	0.5	0.5	0.2	0.2	0	0
250- 275	25								0.4	0.4	0.3	0.1	0.4	0.4	0.4	0.2	0.2	0	0
275- 300	25								0.2	0.2	0.1	0.1	0.5	0.3	0.2	0.2	0.1	0	0
300- 325	25								0.1	0.1	0.1	0.2	0.4	0.3	0.1	0.2	0.1	0	0
325- 350	25								0	0	0.1	0.3	0.3	0.3	0.1	0.2	0	0	0
350- 375	25								0	0.1	0.2	0.4	0.2	0.2	0	0.2	0	0	0
375- 400	25								0	0.1	0.3	0.4	0.1	0.2	0	0.1	0	0	0
400- 425	25								0.1	0.2	0.4	0.2	0.1	0.2	0	0.1	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 100d, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1349-1351
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.2	0.3	0.4	0.5	0.7	1.1	2.6	5.6	9.9	12.5	14
10- 20	15								0.2	0.3	0.3	0.4	0.6	1.1	2.4	5.4	9.7	12.5	14
20- 38	18								0.2	0.2	0.3	0.3	0.5	1	2.1	4.8	8.7	11.7	13.3
38	0.								0.2	0.2	0.3	0.3	0.4	0.9	2	4.4	7.8	10.4	12
38- 60	22								0.2	0.2	0.3	0.3	0.4	0.9	1.8	3.7	6.1	7.9	8.9
60- 80	20								0.2	0.2	0.3	0.3	0.4	0.8	1.6	2.5	3.1	3.4	3.4
80- 100	20								0.2	0.2	0.2	0.2	0.4	0.7	1.2	1.5	1.4	1.1	0.8
100- 125	25								0.1	0.2	0.2	0.2	0.3	0.6	0.8	0.9	0.6	0.4	0.3
125- 150	25								0.1	0.1	0.1	0.2	0.3	0.5	0.6	0.5	0.4	0.2	0.1
150- 175	25								0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.3	0.2	0.1	0
175- 200	25								0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0
200- 225	25								0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0	0
225- 250	25								0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0	0
250- 275	25								0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0	0
275- 300	25								0.1	0.1	0	0	0.2	0.1	0.1	0.1	0	0	0
300- 325	25								0	0	0	0.1	0.1	0.1	0	0.1	0	0	0
325- 350	25								0	0	0	0.1	0.1	0.1	0	0.1	0	0	0
350- 375	25								0	0	0.1	0.1	0.1	0.1	0	0.1	0	0	0
375- 400	25								0	0	0.1	0.1	0	0.1	0	0.1	0	0	0
400- 425	25								0	0.1	0.1	0.1	0	0.1	0	0	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 5y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.4	0.5	0.6	0.7	1.1	1.9	4.2	9.1	15.9	20.5	23
10- 20	15								0.3	0.4	0.5	0.7	1	1.7	3.9	8.8	15.6	20.4	22.9
20- 38	18								0.3	0.4	0.5	0.6	0.8	1.6	3.5	7.8	14.3	19	21.7
38	0.								0.3	0.4	0.4	0.5	0.7	1.5	3.3	7.1	12.7	17.5	20
38- 60	22								0.3	0.4	0.4	0.5	0.7	1.4	3	6.1	9.9	12.8	14.5
60- 80	20								0.3	0.4	0.4	0.5	0.6	1.3	2.5	4	5.1	5.6	5.5
80- 100	20								0.3	0.3	0.4	0.4	0.6	1.1	2	2.5	2.3	1.8	1.3
100- 125	25								0.2	0.3	0.3	0.3	0.5	1	1.3	1.4	1	0.7	0.4
125- 150	25								0.1	0.2	0.2	0.3	0.5	0.8	1	0.8	0.6	0.4	0.2
150- 175	25								0.1	0.1	0.2	0.3	0.5	0.6	0.7	0.5	0.4	0.2	0.1
175- 200	25								0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.3	0.3	0.1	0
200- 225	25								0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0	0
225- 250	25								0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.1	0.1	0	0
250- 275	25								0.2	0.3	0.2	0.1	0.3	0.2	0.2	0.1	0.1	0	0
275- 300	25								0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0	0
300- 325	25								0.1	0	0	0.1	0.2	0.2	0.1	0.1	0	0	0
325- 350	25								0	0	0.1	0.2	0.2	0.2	0	0.1	0	0	0
350- 375	25								0	0	0.1	0.2	0.1	0.1	0	0.1	0	0	0
375- 400	25								0	0.1	0.2	0.2	0	0.1	0	0.1	0	0	0
400- 425	25								0.1	0.1	0.2	0.1	0	0.1	0	0.1	0	0	0

Table 12, Continuation

Equivalent dose rate resulted from activation of Toroid by low energy neutrons for T= 10y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10								0.4	0.5	0.6	0.7	1.1	1.9	4.2	9.2	16.3	20.5	23
10- 20	15								0.3	0.4	0.5	0.7	1	1.8	3.9	8.9	15.7	20.5	23
20- 38	18								0.3	0.4	0.5	0.6	0.8	1.6	3.5	7.8	14.3	19.1	21.7
38	0.								0.3	0.4	0.4	0.5	0.7	1.5	3.3	7.1	13	17.5	20
38- 60	22								0.3	0.4	0.4	0.5	0.7	1.5	3	6.1	9.9	12.8	14.5
60- 80	20								0.3	0.4	0.4	0.5	0.6	1.3	2.6	4.1	5.2	5.6	5.6
80- 100	20								0.3	0.3	0.4	0.4	0.6	1.1	2	2.5	2.3	1.8	1.3
100- 125	25								0.2	0.3	0.3	0.3	0.5	1	1.3	1.4	1	0.7	0.4
125- 150	25								0.1	0.2	0.2	0.3	0.5	0.8	1	0.8	0.6	0.4	0.2
150- 175	25								0.1	0.1	0.2	0.3	0.5	0.6	0.7	0.5	0.4	0.2	0.1
175- 200	25								0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.3	0.3	0.1	0
200- 225	25								0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.1	0
225- 250	25								0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.1	0.1	0	0
250- 275	25								0.2	0.3	0.2	0.1	0.3	0.2	0.2	0.1	0.1	0	0
275- 300	25								0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0	0
300- 325	25								0.1	0	0	0.1	0.2	0.2	0.1	0.1	0	0	0
325- 350	25								0	0	0.1	0.2	0.2	0.2	0	0.1	0	0	0
350- 375	25								0	0	0.1	0.2	0.1	0.1	0	0.1	0	0	0
375- 400	25								0	0.1	0.2	0.2	0	0.1	0	0.1	0	0	0
400- 425	25								0.1	0.1	0.2	0.1	0	0.1	0	0.1	0	0	0

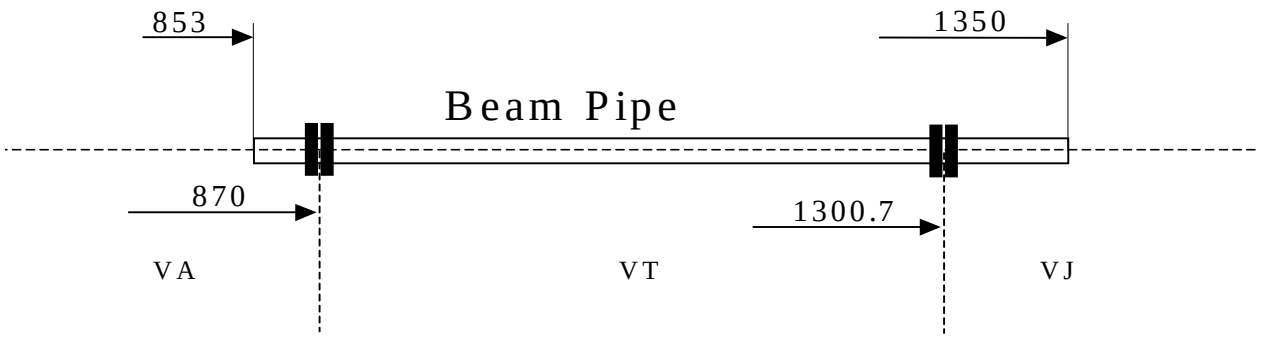

Fig.6. To dose rate calculation from Beam Pipe in access scenario to the area between JDisk and Toroid

Table 13

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 30d, t=1d

R/Z,		780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
cm	dR\dZ	0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					685.5	873.1	1184.4	1002.2	831	1080.3	1420.3	799.5	543.3	655.5	1225.2	583.9	394.1	316.9
20- 38	18					338.9	380.5	454.6	461.6	443	535.8	641.4	415.7	293.8	357.3	499.1	309	230.2	200.4
38	0.					241	261.2	299.2	321.5	330	387.5	442.8	310	225.5	267.2	326.1	227.6	179.6	161
38- 60	22	6.6	10.4	24.4	67.2	176.3	187.2	209.6	230	245.7	282.9	312.8	234	175.8	199.3	221.5	167.1	138.5	127.1
60- 80	20	21.8	26.6	41.8	82.8	117	122.4	133.8	148.3	163.3	184.1	196.9	160.5	126.6	133.5	133.8	109.4	96.2	90.6
80- 100	20	25.2	29.4	44.3	72.4	86.3	89.3	96.3	106.2	117.4	130.6	137.7	119	97.5	97.1	92.3	78.7	71.5	68.4
100- 125	25	25.3	29	42.5	58.5	65.4	67.3	71.7	78.3	85.9	94.6	99.2	89.7	76	72.4	66.7	58.4	54.2	52.4
125- 150	25	23.7	28.1	37.7	46.4	50.7	51.9	54.8	59.1	64.3	70.1	73.3	68.7	59.8	55.3	50.2	44.7	42.1	41
150- 175	25	23.4	25.9	32.8	37.9	40.7	41.6	43.5	46.5	50.1	54.1	56.7	54.4	48.3	44	39.7	35.7	34	33.3
175- 200	25	21.4	23.1	28.3	31.6	33.5	34.1	35.5	37.7	40.2	43.1	45.2	44.1	39.8	36	32.4	29.5	28.2	27.7
200- 225	25	18.9	21	24.3	26.9	28.2	28.6	29.6	31.2	33.1	35.3	36.9	36.5	33.3	30.1	27.2	24.9	24	23.5
225- 250	25	17	19	21.1	23.1	24	24.4	25.1	26.3	27.8	29.4	30.8	30.6	28.3	25.6	23.2	21.4	20.7	20.4
250- 275	25	16.4	17.1	18.5	20.1	20.8	21	21.6	22.5	23.6	24.9	26	26.1	24.3	22	20.1	18.6	18.1	17.8
275- 300	25	14.7	15.2	16.3	17.6	18.1	18.3	18.8	19.5	20.4	21.4	22.3	22.4	21.1	19.2	17.6	16.4	15.9	15.7
300- 325	25	13.2	13.6	14.5	15.5	16	16.1	16.5	17.1	17.8	18.6	19.3	19.5	18.4	16.9	15.5	14.6	14.2	14
325- 350	25	11.9	12.2	13	13.8	14.2	14.3	14.6	15.1	15.6	16.3	16.9	17.1	16.2	14.9	13.8	13	12.7	12.6
350- 375	25	10.8	11	11.7	12.4	12.7	12.8	13	13.4	13.8	14.4	14.9	15.1	14.4	13.3	12.4	11.7	11.5	11.3
375- 400	25	9.8	10	10.6	11.1	11.4	11.5	11.7	12	12.4	12.8	13.3	13.4	12.9	12	11.2	10.6	10.4	10.3
400- 425	25	8.9	9.1	9.7	10.1	10.3	10.4	10.5	10.8	11.1	11.5	11.9	12	11.5	10.8	10.1	9.6	9.4	9.4

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 30d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					443.8	564.4	767.6	648.7	537.5	693.5	906.7	512.3	350.4	422.7	789.9	376.7	254.4	204.6
20- 38	18					219	246.1	294.1	298.4	285.9	343.9	409.9	266.4	189.3	230.3	321.8	199.2	148.4	129.2
38	0.					156	168.8	193.3	207.6	212.9	248.7	283.2	198.7	145.3	172.4	210.3	146.8	115.7	104
38- 60	22	4.3	6.6	15.7	43.2	113.7	120.9	135.3	148.4	158.3	181.5	200.2	150.1	113.2	128.4	142.9	107.8	89.3	81.9
60- 80	20	14	17.1	26.8	53.3	75.6	79	86.3	95.6	105.1	118.2	126.1	103	81.5	86	86.3	70.6	62	58.4
80- 100	20	16.1	18.9	28.5	46.6	55.6	57.6	62.1	68.4	75.5	83.9	88.3	76.4	62.8	62.6	59.5	50.7	46.1	44.1
100- 125	25	16.3	18.6	27.3	37.7	42.1	43.4	46.2	50.4	55.3	60.8	63.6	57.6	48.9	46.6	43	37.6	34.9	33.8
125- 150	25	15.2	18.1	24.3	29.9	32.6	33.4	35.3	38	41.3	45	47.1	44.1	38.4	35.6	32.3	28.8	27.1	26.4
150- 175	25	15	16.7	21.1	24.4	26.2	26.8	28	29.9	32.2	34.8	36.4	34.9	31.1	28.3	25.5	23	21.9	21.4
175- 200	25	13.8	14.9	18.2	20.4	21.6	22	22.9	24.2	25.9	27.7	29	28.3	25.6	23.2	20.9	19	18.2	17.9
200- 225	25	12.1	13.5	15.6	17.3	18.1	18.4	19.1	20.1	21.3	22.7	23.7	23.4	21.4	19.4	17.5	16	15.4	15.2
225- 250	25	10.9	12.3	13.5	14.9	15.4	15.7	16.2	16.9	17.8	18.9	19.8	19.7	18.2	16.5	14.9	13.8	13.3	13.1
250- 275	25	10.6	11	11.9	12.9	13.3	13.5	13.9	14.5	15.2	16	16.7	16.7	15.6	14.2	12.9	12	11.6	11.5
275- 300	25	9.4	9.8	10.5	11.3	11.6	11.8	12.1	12.5	13.1	13.8	14.3	14.4	13.5	12.4	11.3	10.6	10.3	10.1
300- 325	25	8.5	8.7	9.3	10	10.3	10.4	10.6	11	11.4	12	12.4	12.5	11.8	10.9	10	9.4	9.1	9
325- 350	25	7.6	7.9	8.4	8.9	9.1	9.2	9.4	9.7	10	10.5	10.9	11	10.4	9.6	8.9	8.4	8.2	8.1
350- 375	25	6.9	7.1	7.5	8	8.1	8.2	8.4	8.6	8.9	9.3	9.6	9.7	9.3	8.6	8	7.5	7.4	7.3
375- 400	25	6.3	6.4	6.8	7.2	7.3	7.4	7.5	7.7	7.9	8.3	8.5	8.6	8.3	7.7	7.2	6.8	6.7	6.6
400- 425	25	5.7	5.9	6.2	6.5	6.6	6.7	6.8	6.9	7.1	7.4	7.6	7.7	7.4	6.9	6.5	6.2	6.1	6

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 100d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					869	1105.1	1501.3	1270.9	1056.5	1373.1	1807.8	1019.3	692.8	835.3	1559.9	742.9	501.8	403.4
20- 38	18					429.5	482.4	576.5	585.7	562.6	681	816.4	529.8	374.5	455.2	635.5	393.2	292.8	254.8
38	0.					306	331.1	379.5	408	419.4	492.5	563.4	395.1	287.4	340.4	415.4	289.6	228.7	205
38- 60	22	8.5	13.2	31.1	85.4	223.7	237.4	265.9	292	312	359.6	398	298.2	224.1	253.9	282.1	212.7	176.3	161.7
60- 80	20	27.8	33.9	53.1	105.1	148.6	155.4	170	188.4	207.4	234.1	250.5	204.5	161.4	170	170.4	139.3	122.4	115.3
80- 100	20	32	37.4	56.4	91.9	109.6	113.5	122.4	135	149.2	166.1	175.1	151.5	124.2	123.8	117.6	100.2	91.1	87.1
100- 125	25	32.2	36.9	54	74.3	83.1	85.5	91.2	99.5	109.3	120.3	126.2	114.2	96.8	92.3	85	74.3	69.1	66.7
125- 150	25	30.2	35.7	47.9	59	64.4	66	69.7	75.2	81.8	89.1	93.3	87.4	76.1	70.5	63.9	56.9	53.6	52.2
150- 175	25	29.8	33	41.8	48.2	51.8	52.8	55.3	59.1	63.7	68.9	72.1	69.2	61.5	56	50.5	45.5	43.3	42.3
175- 200	25	27.2	29.4	36	40.2	42.6	43.4	45.2	47.9	51.2	54.9	57.4	56.1	50.7	45.8	41.3	37.5	35.9	35.2
200- 225	25	24	26.7	30.9	34.1	35.8	36.4	37.7	39.7	42.1	44.9	47	46.4	42.4	38.3	34.6	31.7	30.5	30
225- 250	25	21.6	24.2	26.8	29.4	30.6	31	32	33.5	35.3	37.5	39.1	39	36	32.6	29.5	27.3	26.3	25.9
250- 275	25	20.9	21.7	23.5	25.5	26.4	26.7	27.5	28.6	30	31.7	33.1	33.2	30.9	28.1	25.6	23.7	23	22.7
275- 300	25	18.6	19.3	20.8	22.3	23	23.3	23.9	24.8	25.9	27.3	28.4	28.6	26.8	24.4	22.4	20.9	20.3	20
300- 325	25	16.7	17.3	18.5	19.7	20.3	20.5	21	21.7	22.6	23.7	24.6	24.8	23.4	21.5	19.8	18.6	18.1	17.8
325- 350	25	15.1	15.5	16.6	17.6	18	18.2	18.6	19.1	19.9	20.7	21.5	21.7	20.6	19	17.6	16.6	16.2	16
350- 375	25	13.7	14	14.9	15.7	16.1	16.2	16.6	17	17.6	18.3	19	19.2	18.3	17	15.8	14.9	14.6	14.4
375- 400	25	12.5	12.8	13.5	14.2	14.5	14.6	14.8	15.2	15.7	16.3	16.9	17.1	16.4	15.2	14.2	13.5	13.2	13.1
400- 425	25	11.4	11.6	12.3	12.8	13.1	13.2	13.4	13.7	14.1	14.6	15.1	15.3	14.7	13.7	12.9	12.3	12	11.9

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 100d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					617.7	785.7	1069	904	750.7	969.6	1270.8	719	491	591.7	1104.9	527.1	356.1	286.1
20- 38	18					305.2	342.9	409.7	416.2	399.3	480.9	574.4	373.7	265.3	322.5	450.3	278.8	207.7	180.9
38	0.					217	235.5	269.8	289.6	297.4	347.8	396.7	278.6	203.5	241	294.3	205.2	162.1	145
38- 60	22	6	9.3	21.9	60.5	158.8	168.5	188.7	207.1	221.1	254	280.4	210.3	158.6	179.9	199.9	150.8	125	114.6
60- 80	20	19.6	23.9	37.6	74.5	105.5	110.2	120.4	133.5	146.8	165.4	176.6	144.3	114.2	120.4	120.8	98.8	86.8	81.7
80- 100	20	22.6	26.4	39.9	65.1	77.6	80.4	86.7	95.5	105.5	117.3	123.6	107	87.9	87.6	83.3	71	64.5	61.7
100- 125	25	22.8	26.1	38.2	52.6	58.8	60.6	64.5	70.4	77.3	85	89.1	80.6	68.4	65.3	60.2	52.7	48.9	47.3
125- 150	25	21.4	25.3	33.9	41.7	45.6	46.7	49.3	53.2	57.8	63	65.9	61.8	53.8	49.9	45.2	40.3	38	37
150- 175	25	21.1	23.3	29.5	34.1	36.6	37.4	39.2	41.8	45.1	48.7	50.9	48.9	43.5	39.6	35.7	32.2	30.7	30
175- 200	25	19.2	20.8	25.5	28.5	30.2	30.7	32	33.9	36.2	38.8	40.6	39.6	35.8	32.4	29.2	26.6	25.5	25
200- 225	25	17	18.9	21.8	24.1	25.3	25.7	26.7	28.1	29.8	31.7	33.2	32.8	30	27.1	24.5	22.5	21.6	21.2
225- 250	25	15.3	17.1	18.9	20.8	21.6	21.9	22.6	23.7	25	26.5	27.7	27.6	25.5	23	20.9	19.3	18.6	18.3
250- 275	25	14.8	15.3	16.6	18	18.7	18.9	19.4	20.2	21.2	22.4	23.4	23.4	21.9	19.8	18.1	16.8	16.3	16
275- 300	25	13.2	13.6	14.7	15.8	16.3	16.5	16.9	17.6	18.3	19.3	20.1	20.2	19	17.3	15.8	14.8	14.4	14.2
300- 325	25	11.8	12.2	13.1	14	14.4	14.5	14.8	15.3	16	16.7	17.4	17.5	16.6	15.2	14	13.1	12.8	12.6
325- 350	25	10.7	11	11.7	12.4	12.7	12.9	13.1	13.5	14	14.7	15.2	15.4	14.6	13.5	12.5	11.7	11.4	11.3
350- 375	25	9.7	9.9	10.6	11.1	11.4	11.5	11.7	12	12.5	13	13.4	13.6	13	12	11.2	10.6	10.3	10.2
375- 400	25	8.8	9	9.6	10	10.2	10.3	10.5	10.8	11.1	11.5	11.9	12.1	11.6	10.8	10.1	9.6	9.4	9.3
400- 425	25	8	8.2	8.7	9.1	9.2	9.3	9.5	9.7	10	10.3	10.7	10.8	10.4	9.7	9.1	8.7	8.5	8.4

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					921.4	1171	1589.1	1348.1	1120.5	1460.8	1927.1	1084.2	734.5	884.5	1652.2	787.9	532.2	427.6
20- 38	18					455.6	511.5	611	621.3	597.5	724.6	870	563.6	397.1	482.2	673.2	416.8	310.4	270.3
38	0.					325	351.7	402.2	433	445.3	524	600.4	420.1	304.7	360.6	439.9	307.2	242.5	217
38- 60	22	9	14	33.1	90.7	237	251.9	282.1	309.8	331.5	382.5	424	317.2	237.6	269	298.9	225.5	186.9	171.6
60- 80	20	29.6	36	56.5	111.7	157.9	165	180.4	200	220.4	249	266.7	217.5	171.2	180.2	180.6	147.8	129.9	122.1
80- 100	20	34.1	39.8	59.9	97.7	116.2	120.5	129.9	143.4	158.5	176.6	186.4	161.2	131.9	131.2	124.6	106.2	96.5	92.4
100- 125	25	34.3	39.2	57.4	78.9	88.2	90.8	96.8	105.7	116.2	127.9	134.2	121.4	102.7	97.8	90.1	78.8	73.2	70.8
125- 150	25	32.1	37.9	50.9	62.6	68.4	70.1	74	79.9	86.9	94.7	99.2	92.9	80.8	74.7	67.7	60.3	56.9	55.4
150- 175	25	31.7	35	44.4	51.2	55	56.1	58.8	62.8	67.7	73.2	76.6	73.6	65.3	59.4	53.6	48.3	45.9	44.9
175- 200	25	28.9	31.2	38.3	42.7	45.3	46.1	48	50.9	54.4	58.3	61.1	59.6	53.8	48.6	43.8	39.8	38.2	37.4
200- 225	25	25.5	28.4	32.8	36.3	38.1	38.7	40.1	42.2	44.7	47.7	49.9	49.3	45.1	40.7	36.7	33.7	32.4	31.8
225- 250	25	23	25.7	28.5	31.2	32.5	32.9	34	35.6	37.5	39.8	41.6	41.4	38.3	34.6	31.3	28.9	27.9	27.5
250- 275	25	22.2	23.1	24.9	27.1	28.1	28.4	29.2	30.4	31.9	33.7	35.2	35.2	32.8	29.8	27.1	25.2	24.4	24.1
275- 300	25	19.8	20.5	22.1	23.7	24.5	24.8	25.4	26.4	27.5	29	30.2	30.3	28.5	25.9	23.8	22.2	21.5	21.3
300- 325	25	17.8	18.4	19.6	21	21.6	21.8	22.3	23.1	24	25.2	26.2	26.4	24.9	22.8	21	19.7	19.2	18.9
325- 350	25	16.1	16.5	17.6	18.7	19.2	19.3	19.7	20.4	21.1	22	22.9	23.1	21.9	20.2	18.7	17.6	17.2	17
350- 375	25	14.5	14.9	15.9	16.7	17.1	17.2	17.6	18.1	18.7	19.5	20.2	20.4	19.5	18	16.8	15.9	15.5	15.3
375- 400	25	13.2	13.6	14.4	15.1	15.4	15.5	15.8	16.2	16.7	17.3	17.9	18.1	17.4	16.2	15.1	14.3	14	13.9
400- 425	25	12.1	12.4	13.1	13.6	13.9	14	14.2	14.6	15	15.5	16	16.2	15.6	14.6	13.7	13	12.8	12.7

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					678.7	863.6	1173.1	993.4	825.9	1069.5	1404.2	794.9	541.7	652.5	1218.6	581.3	392.6	315.5
20- 38	18					335.6	377	450.4	457.6	439.4	530.3	634.8	413.1	292.7	355.7	496.6	307.4	229	199.3
38	0.					239	258.9	296.5	318.6	327.3	383.5	438.3	307.9	224.5	265.9	324.5	226.4	178.6	160
38- 60	22	6.6	10.3	24.2	66.6	174.4	185.3	207.6	227.9	243.5	280.1	309.8	232.5	175	198.4	220.5	166.2	137.9	126.4
60- 80	20	21.6	26.4	41.4	82	116.1	121.3	132.7	147	161.8	182.4	195	159.4	126	132.9	133.1	108.9	95.8	90.2
80- 100	20	25	29.1	44	71.7	85.5	88.6	95.4	105.2	116.3	129.4	136.4	118.2	97	96.7	91.9	78.3	71.2	68
100- 125	25	25.1	28.7	42.1	58	64.8	66.7	71.1	77.6	85.2	93.8	98.3	89	75.5	72.1	66.4	58.1	54	52.1
125- 150	25	23.5	27.8	37.4	46	50.3	51.5	54.3	58.6	63.7	69.5	72.7	68.2	59.4	55	49.9	44.4	41.9	40.8
150- 175	25	23.2	25.7	32.6	37.6	40.4	41.2	43.2	46.1	49.7	53.7	56.2	54	48	43.7	39.4	35.6	33.8	33.1
175- 200	25	21.2	22.9	28.1	31.4	33.2	33.8	35.2	37.3	39.9	42.8	44.8	43.7	39.5	35.8	32.2	29.3	28.1	27.5
200- 225	25	18.7	20.8	24.1	26.6	27.9	28.4	29.4	30.9	32.8	35	36.6	36.2	33.1	29.9	27	24.8	23.8	23.4
225- 250	25	16.9	18.9	20.9	22.9	23.8	24.2	25	26.1	27.5	29.2	30.5	30.4	28.1	25.4	23.1	21.3	20.6	20.3
250- 275	25	16.3	16.9	18.3	19.9	20.6	20.8	21.4	22.3	23.4	24.7	25.8	25.9	24.1	21.9	20	18.5	18	17.7
275- 300	25	14.5	15.1	16.2	17.4	18	18.2	18.6	19.3	20.2	21.3	22.1	22.3	20.9	19.1	17.5	16.3	15.8	15.6
300- 325	25	13	13.5	14.4	15.4	15.8	16	16.4	16.9	17.6	18.5	19.2	19.4	18.3	16.8	15.4	14.5	14.1	13.9
325- 350	25	11.8	12.1	12.9	13.7	14.1	14.2	14.5	14.9	15.5	16.2	16.8	17	16.1	14.8	13.7	12.9	12.6	12.5
350- 375	25	10.7	11	11.6	12.3	12.6	12.7	12.9	13.3	13.7	14.3	14.8	15	14.3	13.2	12.3	11.7	11.4	11.3
375- 400	25	9.7	9.9	10.6	11.1	11.3	11.4	11.6	11.9	12.3	12.7	13.2	13.3	12.8	11.9	11.1	10.5	10.3	10.2
400- 425	25	8.9	9.1	9.6	10	10.2	10.3	10.4	10.7	11	11.4	11.8	11.9	11.5	10.7	10.1	9.6	9.4	9.3

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 10y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					923.3	1175	1595.8	1350.3	1124.3	1461.7	1926.6	1083.8	735.1	887.2	1657.4	790.1	533.7	428.9
20- 38	18					456.7	512.9	612.8	622.8	598.6	725	869.9	563.4	397.6	483.6	675.4	418.1	311.3	271.1
38	0.					326	352.5	403.5	433.8	446	524.3	600.3	420.1	305.1	361.5	441.4	308	242.9	218
38- 60	22	9	14	33.1	90.9	237.6	252.5	282.9	310.6	332	382.8	424	317.2	237.9	269.8	299.8	226.1	187.5	171.9
60- 80	20	29.6	36	56.6	111.9	158.2	165.3	180.8	200.3	220.7	249.2	266.8	217.5	171.4	180.7	181.2	148.1	130.3	122.8
80- 100	20	34.1	39.8	60	97.8	116.5	120.7	130.2	143.5	158.7	176.7	186.5	161.3	132	131.5	124.9	106.5	96.8	92.6
100- 125	25	34.3	39.2	57.5	79.1	88.3	90.9	96.9	105.8	116.3	128.1	134.3	121.5	102.8	98	90.3	79	73.4	70.9
125- 150	25	32.1	38	51	62.7	68.5	70.2	74.1	80	87	94.8	99.3	93	80.9	74.9	67.9	60.5	57	55.5
150- 175	25	31.7	35.1	44.4	51.3	55.1	56.2	58.9	62.9	67.8	73.3	76.7	73.6	65.4	59.5	53.7	48.4	46	45
175- 200	25	28.9	31.3	38.3	42.8	45.3	46.2	48.1	50.9	54.4	58.4	61.1	59.7	53.9	48.7	43.9	39.9	38.2	37.5
200- 225	25	25.6	28.4	32.9	36.3	38.1	38.7	40.1	42.2	44.8	47.8	50	49.4	45.1	40.7	36.8	33.7	32.4	31.9
225- 250	25	23	25.8	28.5	31.3	32.5	33	34	35.6	37.6	39.9	41.6	41.5	38.3	34.6	31.4	29	28	27.6
250- 275	25	22.2	23.1	25	27.1	28.1	28.4	29.2	30.5	32	33.7	35.2	35.3	32.9	29.8	27.2	25.2	24.4	24.1
275- 300	25	19.8	20.5	22.1	23.8	24.5	24.8	25.4	26.4	27.6	29	30.2	30.4	28.5	26	23.8	22.2	21.6	21.3
300- 325	25	17.8	18.4	19.7	21	21.6	21.8	22.3	23.1	24	25.2	26.2	26.4	24.9	22.8	21	19.7	19.2	19
325- 350	25	16.1	16.5	17.6	18.7	19.2	19.3	19.8	20.4	21.1	22.1	22.9	23.1	22	20.2	18.7	17.6	17.2	17
350- 375	25	14.6	14.9	15.9	16.7	17.1	17.3	17.6	18.1	18.7	19.5	20.2	20.4	19.5	18	16.8	15.9	15.5	15.3
375- 400	25	13.2	13.6	14.4	15.1	15.4	15.5	15.8	16.2	16.7	17.4	18	18.2	17.4	16.2	15.1	14.4	14.1	13.9
400- 425	25	12.1	12.4	13.1	13.6	13.9	14	14.2	14.6	15	15.6	16	16.2	15.6	14.6	13.7	13.1	12.8	12.7

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 10y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					677.2	861.7	1170.3	991.8	824.2	1069.6	1403.9	794.4	541.9	652.9	1219.1	581.6	393	315.9
20- 38	18					334.8	376.2	449.5	456.8	438.9	530.2	634.5	412.8	292.8	355.8	496.8	307.6	229.2	199.4
38	0.					239	258.4	295.8	318.1	327	383.4	438.1	307.9	224.6	265.9	324.7	226.6	178.9	160
38- 60	22	6.6	10.3	24.2	66.6	174	185.1	207.4	227.7	243.3	279.9	309.6	232.3	175	198.4	220.6	166.2	137.9	126.4
60- 80	20	21.6	26.4	41.4	82	115.9	121.1	132.4	146.8	161.7	182.3	195	159.3	126	132.9	133.2	109	95.8	90.2
80- 100	20	25	29.1	43.9	71.7	85.4	88.4	95.3	105.1	116.2	129.2	136.4	118.1	97	96.7	91.9	78.3	71.2	68.1
100- 125	25	25.1	28.7	42.1	57.9	64.7	66.6	71	77.5	85.1	93.7	98.3	89	75.5	72.1	66.4	58.1	54	52.1
125- 150	25	23.5	27.8	37.4	46	50.2	51.4	54.3	58.6	63.7	69.4	72.7	68.1	59.4	55	49.9	44.4	41.9	40.8
150- 175	25	23.2	25.7	32.5	37.6	40.3	41.2	43.1	46.1	49.6	53.6	56.2	53.9	48	43.7	39.4	35.6	33.8	33.1
175- 200	25	21.2	22.9	28.1	31.3	33.2	33.8	35.2	37.3	39.9	42.8	44.8	43.7	39.5	35.8	32.2	29.3	28.1	27.6
200- 225	25	18.7	20.8	24.1	26.6	27.9	28.4	29.4	30.9	32.8	35	36.6	36.2	33.1	29.9	27	24.8	23.8	23.4
225- 250	25	16.8	18.9	20.9	22.9	23.8	24.2	24.9	26.1	27.5	29.2	30.5	30.4	28.1	25.4	23.1	21.3	20.6	20.3
250- 275	25	16.2	16.9	18.3	19.9	20.6	20.8	21.4	22.3	23.4	24.7	25.8	25.9	24.1	21.9	20	18.5	18	17.7
275- 300	25	14.5	15	16.2	17.4	17.9	18.2	18.6	19.3	20.2	21.2	22.1	22.3	20.9	19.1	17.5	16.3	15.8	15.6
300- 325	25	13	13.5	14.4	15.4	15.8	16	16.4	16.9	17.6	18.5	19.2	19.3	18.3	16.8	15.4	14.5	14.1	13.9
325- 350	25	11.8	12.1	12.9	13.7	14.1	14.2	14.5	14.9	15.5	16.2	16.8	16.9	16.1	14.8	13.7	12.9	12.6	12.5
350- 375	25	10.7	10.9	11.6	12.3	12.5	12.7	12.9	13.3	13.7	14.3	14.8	15	14.3	13.2	12.3	11.7	11.4	11.3
375- 400	25	9.7	9.9	10.5	11	11.3	11.4	11.6	11.9	12.3	12.7	13.2	13.3	12.8	11.9	11.1	10.5	10.3	10.2
400- 425	25	8.9	9.1	9.6	10	10.2	10.3	10.4	10.7	11	11.4	11.8	11.9	11.4	10.7	10.1	9.6	9.4	9.3

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 100d, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					108.4	137.9	187.3	159.1	133.7	178.1	239.8	134	89.2	106.5	198.6	94.7	64.1	51.5
20- 38	18					53.9	60.5	72.3	73.7	71.6	88.3	107.8	69.6	48.3	58.1	81	50.1	37.4	32.5
38	0.					38.5	41.7	47.8	51.6	53.5	63.9	74.2	51.8	37.1	43.5	52.9	37	29.2	26.2
38- 60	22	1.1	1.7	4.1	11	28.2	30	33.6	37	39.9	46.7	52.3	39.1	28.9	32.5	36	27.2	22.5	20.6
60- 80	20	3.6	4.4	6.9	13.4	18.9	19.7	21.6	24	26.6	30.4	32.8	26.7	20.8	21.8	21.8	17.8	15.7	14.7
80- 100	20	4.2	4.9	7.3	11.7	14	14.5	15.6	17.3	19.2	21.5	22.9	19.8	16	15.9	15	12.8	11.7	11.1
100- 125	25	4.2	4.8	6.9	9.5	10.6	11	11.7	12.8	14.1	15.6	16.4	14.9	12.5	11.8	10.9	9.5	8.8	8.5
125- 150	25	3.9	4.6	6.2	7.6	8.3	8.5	8.9	9.7	10.5	11.5	12.1	11.4	9.8	9.1	8.2	7.3	6.9	6.7
150- 175	25	3.8	4.3	5.4	6.2	6.7	6.8	7.1	7.6	8.2	8.9	9.4	9	7.9	7.2	6.5	5.8	5.6	5.4
175- 200	25	3.5	3.8	4.6	5.2	5.5	5.6	5.8	6.2	6.6	7.1	7.5	7.3	6.5	5.9	5.3	4.8	4.6	4.5
200- 225	25	3.1	3.4	4	4.4	4.6	4.7	4.9	5.1	5.4	5.8	6.1	6	5.5	4.9	4.5	4.1	3.9	3.9
225- 250	25	2.8	3.1	3.5	3.8	3.9	4	4.1	4.3	4.6	4.8	5.1	5.1	4.7	4.2	3.8	3.5	3.4	3.3
250- 275	25	2.7	2.8	3	3.3	3.4	3.4	3.5	3.7	3.9	4.1	4.3	4.3	4	3.6	3.3	3.1	3	2.9
275- 300	25	2.4	2.5	2.7	2.9	3	3	3.1	3.2	3.3	3.5	3.7	3.7	3.5	3.2	2.9	2.7	2.6	2.6
300- 325	25	2.2	2.2	2.4	2.5	2.6	2.6	2.7	2.8	2.9	3.1	3.2	3.2	3	2.8	2.6	2.4	2.3	2.3
325- 350	25	1.9	2	2.1	2.3	2.3	2.3	2.4	2.5	2.6	2.7	2.8	2.8	2.7	2.5	2.3	2.1	2.1	2.1
350- 375	25	1.8	1.8	1.9	2	2.1	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.4	2.2	2	1.9	1.9	1.9
375- 400	25	1.6	1.6	1.7	1.8	1.9	1.9	1.9	2	2	2.1	2.2	2.2	2.1	2	1.8	1.7	1.7	1.7
400- 425	25	1.5	1.5	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2	1.9	1.8	1.7	1.6	1.6	1.5

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 5y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					153.3	195	264.6	224.9	189.1	252.3	340.7	190.2	126.3	151.2	281.9	134.5	90.9	73
20- 38	18					76.2	85.6	102.2	104.3	101.2	125.3	153.2	98.7	68.4	82.5	114.9	71.2	53	46.2
38	0.					54.5	59	67.6	72.9	75.7	90.6	105.5	73.5	52.5	61.7	75.1	52.5	41.4	37.1
38- 60	22	1.6	2.5	5.8	15.5	39.9	42.4	47.6	52.4	56.5	66.2	74.3	55.4	41	46.1	51.1	38.5	32	29.3
60- 80	20	5.2	6.3	9.8	19	26.7	27.9	30.6	34	37.7	43.1	46.6	37.9	29.5	30.9	30.9	25.3	22.2	20.9
80- 100	20	5.9	6.9	10.3	16.6	19.8	20.5	22.1	24.5	27.2	30.5	32.5	28.1	22.8	22.5	21.3	18.2	16.5	15.8
100- 125	25	5.9	6.8	9.8	13.5	15.1	15.5	16.5	18.1	20	22.1	23.3	21.1	17.7	16.8	15.5	13.5	12.5	12.1
125- 150	25	5.6	6.5	8.7	10.7	11.7	12	12.7	13.7	14.9	16.4	17.2	16.1	14	12.8	11.6	10.4	9.8	9.5
150- 175	25	5.5	6	7.6	8.8	9.4	9.6	10.1	10.8	11.7	12.6	13.3	12.8	11.3	10.2	9.2	8.3	7.9	7.7
175- 200	25	5	5.4	6.6	7.3	7.8	7.9	8.2	8.8	9.4	10.1	10.6	10.3	9.3	8.4	7.5	6.8	6.6	6.4
200- 225	25	4.4	4.9	5.6	6.2	6.5	6.6	6.9	7.3	7.7	8.2	8.6	8.5	7.8	7	6.3	5.8	5.6	5.5
225- 250	25	4	4.4	4.9	5.4	5.6	5.7	5.8	6.1	6.5	6.9	7.2	7.2	6.6	6	5.4	5	4.8	4.7
250- 275	25	3.8	4	4.3	4.7	4.8	4.9	5	5.2	5.5	5.8	6.1	6.1	5.7	5.1	4.7	4.3	4.2	4.1
275- 300	25	3.4	3.5	3.8	4.1	4.2	4.3	4.4	4.5	4.7	5	5.2	5.2	4.9	4.5	4.1	3.8	3.7	3.7
300- 325	25	3.1	3.2	3.4	3.6	3.7	3.8	3.8	4	4.1	4.3	4.5	4.6	4.3	3.9	3.6	3.4	3.3	3.3
325- 350	25	2.8	2.8	3	3.2	3.3	3.3	3.4	3.5	3.6	3.8	3.9	4	3.8	3.5	3.2	3	3	2.9
350- 375	25	2.5	2.6	2.7	2.9	2.9	3	3	3.1	3.2	3.4	3.5	3.5	3.4	3.1	2.9	2.7	2.7	2.6
375- 400	25	2.3	2.3	2.5	2.6	2.6	2.7	2.7	2.8	2.9	3	3.1	3.1	3	2.8	2.6	2.5	2.4	2.4
400- 425	25	2.1	2.1	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.7	2.8	2.8	2.7	2.5	2.4	2.2	2.2	2.2

Table 13, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by high-energy hadrons for T= 10y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					154.3	196.3	266.2	226.3	190.1	253.5	342.4	191.1	127	152.2	283.6	135.3	91.4	73.5
20- 38	18					76.7	86.1	102.8	104.9	101.8	125.9	153.9	99.2	68.7	83	115.7	71.6	53.4	46.5
38	0.					54.8	59.3	68	73.4	76.1	91.1	105.8	73.9	52.8	62.1	75.6	52.8	41.7	37.4
38- 60	22	1.6	2.5	5.8	15.6	40.2	42.7	47.8	52.7	56.8	66.5	74.6	55.7	41.2	46.3	51.4	38.8	32.1	29.5
60- 80	20	5.2	6.3	9.8	19.1	26.9	28.1	30.8	34.2	37.9	43.3	46.8	38.1	29.7	31.1	31.1	25.4	22.4	21
80- 100	20	5.9	6.9	10.4	16.7	19.9	20.6	22.3	24.6	27.3	30.7	32.6	28.2	22.9	22.6	21.5	18.3	16.6	15.9
100- 125	25	6	6.8	9.9	13.5	15.1	15.6	16.6	18.2	20.1	22.2	23.4	21.2	17.8	16.9	15.5	13.6	12.6	12.2
125- 150	25	5.6	6.6	8.8	10.8	11.8	12.1	12.7	13.8	15	16.4	17.3	16.2	14	12.9	11.7	10.4	9.8	9.6
150- 175	25	5.5	6.1	7.6	8.8	9.5	9.7	10.1	10.9	11.7	12.7	13.3	12.8	11.3	10.3	9.3	8.3	7.9	7.8
175- 200	25	5	5.4	6.6	7.4	7.8	8	8.3	8.8	9.4	10.1	10.6	10.4	9.3	8.4	7.6	6.9	6.6	6.5
200- 225	25	4.4	4.9	5.7	6.3	6.6	6.7	6.9	7.3	7.8	8.3	8.7	8.6	7.8	7	6.4	5.8	5.6	5.5
225- 250	25	4	4.4	4.9	5.4	5.6	5.7	5.9	6.2	6.5	6.9	7.2	7.2	6.6	6	5.4	5	4.8	4.8
250- 275	25	3.8	4	4.3	4.7	4.9	4.9	5.1	5.3	5.5	5.8	6.1	6.1	5.7	5.2	4.7	4.4	4.2	4.2
275- 300	25	3.4	3.5	3.8	4.1	4.2	4.3	4.4	4.6	4.8	5	5.2	5.3	4.9	4.5	4.1	3.8	3.7	3.7
300- 325	25	3.1	3.2	3.4	3.6	3.7	3.8	3.9	4	4.2	4.4	4.5	4.6	4.3	4	3.6	3.4	3.3	3.3
325- 350	25	2.8	2.9	3	3.2	3.3	3.3	3.4	3.5	3.7	3.8	4	4	3.8	3.5	3.2	3	3	2.9
350- 375	25	2.5	2.6	2.7	2.9	3	3	3	3.1	3.2	3.4	3.5	3.5	3.4	3.1	2.9	2.7	2.7	2.7
375- 400	25	2.3	2.3	2.5	2.6	2.7	2.7	2.7	2.8	2.9	3	3.1	3.1	3	2.8	2.6	2.5	2.4	2.4
400- 425	25	2.1	2.1	2.3	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.8	2.8	2.7	2.5	2.4	2.3	2.2	2.2

Table 14

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 30d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					12.2	15.5	21.7	19.7	18.4	38	69.6	31.1	10.7	12.4	22.9	10.5	6.9	5.6
20- 38	18					6.8	7.6	9.2	10	11.2	19.1	29.7	16	6.4	6.9	9.5	5.8	4.3	3.7
38	0.					5.2	5.6	6.5	7.5	8.8	13.9	19.7	11.8	5.1	5.3	6.3	4.3	3.4	3.1
38- 60	22	0.2	0.4	0.9	2	4.1	4.3	4.9	5.7	6.9	10.1	13.4	8.8	4.2	4.1	4.3	3.3	2.7	2.5
60- 80	20	0.9	1	1.4	2.3	3	3.1	3.5	4	4.9	6.5	7.9	5.8	3.2	2.8	2.7	2.2	2	1.8
80- 100	20	0.9	1	1.4	2	2.3	2.4	2.7	3.1	3.6	4.6	5.3	4.2	2.6	2.2	2	1.7	1.5	1.4
100- 125	25	0.9	1	1.3	1.7	1.9	1.9	2.1	2.4	2.7	3.3	3.6	3.1	2.1	1.7	1.5	1.3	1.2	1.1
125- 150	25	0.8	0.9	1.2	1.4	1.5	1.5	1.7	1.8	2.1	2.4	2.6	2.3	1.7	1.3	1.2	1	1	0.9
150- 175	25	0.8	0.8	1	1.1	1.2	1.3	1.3	1.5	1.6	1.8	1.9	1.8	1.4	1.1	1	0.8	0.8	0.8
175- 200	25	0.7	0.7	0.9	1	1	1.1	1.1	1.2	1.3	1.4	1.5	1.4	1.1	0.9	0.8	0.7	0.7	0.7
200- 225	25	0.6	0.7	0.8	0.8	0.9	0.9	0.9	1	1.1	1.2	1.2	1.2	1	0.8	0.7	0.6	0.6	0.6
225- 250	25	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1	1	0.8	0.7	0.6	0.5	0.5	0.5
250- 275	25	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.5
275- 300	25	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4
300- 325	25	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4
325- 350	25	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3
350- 375	25	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3
375- 400	25	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
400- 425	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 30d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	853-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					7.9	9.9	13.7	12.9	13.4	32.1	61.8	27.9	9.5	11.1	20.6	9.4	6.2	5
20- 38	18					4.7	5.2	6.3	7.1	8.5	16.2	26.2	14.3	5.7	6.2	8.5	5.2	3.8	3.4
38	0.					3.7	4	4.6	5.5	6.9	11.7	17.3	10.5	4.6	4.7	5.6	3.9	3.1	2.8
38- 60	22	0.2	0.3	0.8	1.7	3	3.2	3.6	4.3	5.5	8.5	11.7	7.8	3.7	3.6	3.9	2.9	2.4	2.2
60- 80	20	0.8	0.9	1.2	1.8	2.3	2.4	2.7	3.2	4	5.5	6.9	5.2	2.8	2.5	2.4	2	1.7	1.6
80- 100	20	0.8	0.9	1.2	1.6	1.8	1.9	2.1	2.5	3	3.9	4.6	3.7	2.3	1.9	1.7	1.5	1.3	1.3
100- 125	25	0.7	0.8	1.1	1.4	1.5	1.6	1.7	1.9	2.3	2.8	3.2	2.7	1.8	1.5	1.3	1.1	1.1	1
125- 150	25	0.7	0.8	0.9	1.1	1.2	1.3	1.4	1.5	1.7	2	2.2	2	1.5	1.2	1	0.9	0.8	0.8
150- 175	25	0.6	0.7	0.8	0.9	1	1	1.1	1.2	1.4	1.5	1.7	1.6	1.2	1	0.8	0.7	0.7	0.7
175- 200	25	0.6	0.6	0.7	0.8	0.9	0.9	0.9	1	1.1	1.2	1.3	1.2	1	0.8	0.7	0.6	0.6	0.6
200- 225	25	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.9	1	1	1	0.8	0.7	0.6	0.5	0.5	0.5
225- 250	25	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.5
250- 275	25	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4
275- 300	25	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4
300- 325	25	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3
325- 350	25	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3
350- 375	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
375- 400	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
400- 425	25	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 100d, t=1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					25.1	31.7	44	40.6	39.9	88.6	166	74.6	25.5	29.7	55	25.2	16.6	13.3
20- 38	18					14.4	16	19.3	21.4	24.7	44.5	70.6	38.2	15.2	16.6	22.7	13.9	10.3	9
38	0.					11.1	12	14	16.2	19.8	32.3	46.8	28.2	12.3	12.7	15.1	10.4	8.2	7.4
38- 60	22	0.5	0.9	2.2	4.7	8.8	9.4	10.7	12.6	15.6	23.5	31.7	20.9	10	9.7	10.4	7.8	6.5	6
60- 80	20	2	2.4	3.3	5.2	6.6	6.9	7.7	9.1	11.2	15.2	18.8	13.9	7.6	6.8	6.5	5.3	4.7	4.4
80- 100	20	2.1	2.4	3.2	4.6	5.3	5.5	6	7	8.4	10.6	12.5	10	6.1	5.2	4.7	4	3.6	3.5
100- 125	25	2	2.3	3	3.8	4.2	4.4	4.8	5.4	6.3	7.6	8.6	7.3	4.9	4	3.5	3.1	2.8	2.7
125- 150	25	1.9	2.1	2.6	3.1	3.4	3.5	3.8	4.2	4.8	5.5	6.1	5.5	3.9	3.2	2.8	2.4	2.3	2.2
150- 175	25	1.8	1.9	2.3	2.6	2.8	2.9	3.1	3.4	3.7	4.2	4.6	4.2	3.2	2.6	2.3	2	1.9	1.9
175- 200	25	1.6	1.7	2	2.2	2.4	2.4	2.5	2.7	3	3.3	3.6	3.4	2.7	2.2	1.9	1.7	1.6	1.6
200- 225	25	1.4	1.5	1.7	1.9	2	2.1	2.1	2.3	2.5	2.7	2.9	2.7	2.3	1.9	1.6	1.5	1.4	1.4
225- 250	25	1.3	1.4	1.5	1.7	1.7	1.8	1.8	1.9	2.1	2.2	2.3	2.3	1.9	1.6	1.4	1.3	1.2	1.2
250- 275	25	1.2	1.2	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.9	2	1.9	1.7	1.4	1.3	1.1	1.1	1.1
275- 300	25	1.1	1.1	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.6	1.7	1.6	1.4	1.3	1.1	1	1	1
300- 325	25	0.9	1	1	1.1	1.2	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.3	1.1	1	0.9	0.9	0.9
325- 350	25	0.9	0.9	0.9	1	1	1	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1	0.9	0.8	0.8	0.8
350- 375	25	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1	1	1	1.1	1.1	1	0.9	0.8	0.8	0.7	0.7
375- 400	25	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1	1	0.9	0.8	0.7	0.7	0.7	0.7
400- 425	25	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 100d, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					20.4	25.6	35.4	33.2	34.2	80.9	154.7	69.9	23.8	27.8	51.6	23.6	15.5	12.5
20- 38	18					12	13.3	16.1	18	21.6	40.7	65.7	35.7	14.2	15.6	21.3	13	9.6	8.4
38	0.					9.4	10.2	11.8	13.9	17.5	29.5	43.5	26.3	11.4	11.9	14.1	9.8	7.7	6.9
38- 60	22	0.5	0.9	2	4.2	7.6	8.1	9.2	11	13.9	21.5	29.5	19.5	9.3	9.1	9.7	7.3	6.1	5.6
60- 80	20	1.9	2.2	3	4.6	5.8	6.1	6.8	8	10	13.9	17.4	12.9	7.1	6.3	6.1	5	4.4	4.1
80- 100	20	2	2.2	2.9	4	4.7	4.9	5.4	6.2	7.5	9.7	11.5	9.3	5.7	4.8	4.4	3.7	3.4	3.2
100- 125	25	1.9	2.1	2.7	3.4	3.8	3.9	4.3	4.9	5.7	6.9	7.9	6.8	4.6	3.7	3.3	2.8	2.6	2.6
125- 150	25	1.7	1.9	2.4	2.8	3.1	3.2	3.4	3.8	4.3	5.1	5.6	5.1	3.7	3	2.6	2.3	2.1	2.1
150- 175	25	1.6	1.7	2.1	2.4	2.6	2.6	2.8	3.1	3.4	3.9	4.2	3.9	3	2.4	2.1	1.9	1.8	1.7
175- 200	25	1.4	1.5	1.8	2	2.2	2.2	2.3	2.5	2.7	3	3.3	3.1	2.5	2.1	1.8	1.6	1.5	1.5
200- 225	25	1.3	1.4	1.6	1.7	1.8	1.9	1.9	2.1	2.2	2.5	2.6	2.5	2.1	1.7	1.5	1.4	1.3	1.3
225- 250	25	1.2	1.2	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2	2.2	2.1	1.8	1.5	1.3	1.2	1.2	1.1
250- 275	25	1.1	1.1	1.2	1.3	1.4	1.4	1.4	1.5	1.6	1.7	1.8	1.8	1.5	1.3	1.2	1.1	1	1
275- 300	25	1	1	1.1	1.2	1.2	1.2	1.2	1.3	1.4	1.5	1.5	1.5	1.3	1.2	1	1	0.9	0.9
300- 325	25	0.9	0.9	1	1	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.3	1.2	1	0.9	0.9	0.8	0.8
325- 350	25	0.8	0.8	0.9	0.9	0.9	0.9	1	1	1	1.1	1.1	1.1	1	0.9	0.8	0.8	0.8	0.7
350- 375	25	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1	1	1	0.9	0.8	0.7	0.7	0.7	0.7
375- 400	25	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.6
400- 425	25	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 5y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					42.6	54.2	76.1	68.8	63	124.4	220.9	97.6	34	39	72	32.9	21.7	17.5
20- 38	18					23.5	26.3	31.9	34.4	37.5	62.4	94.3	50.3	20.2	21.9	29.8	18.1	13.5	11.8
38	0.					17.8	19.3	22.3	25.4	29.6	45.1	62.7	37.2	16.3	16.7	19.7	13.6	10.8	9.7
38- 60	22	0.7	1.2	2.9	6.7	13.7	14.7	16.7	19.3	23	32.8	42.7	27.7	13.3	12.8	13.7	10.3	8.5	7.9
60- 80	20	2.7	3.2	4.6	7.6	10	10.4	11.6	13.4	16.1	21.1	25.4	18.5	10.1	9	8.6	7	6.2	5.8
80- 100	20	2.9	3.3	4.6	6.7	7.8	8.1	8.9	10.1	11.9	14.8	16.9	13.4	8.1	6.8	6.2	5.2	4.8	4.6
100- 125	25	2.8	3.1	4.3	5.5	6.2	6.4	6.9	7.7	8.9	10.5	11.7	9.8	6.5	5.3	4.7	4	3.8	3.6
125- 150	25	2.6	2.9	3.8	4.5	4.9	5.1	5.4	6	6.7	7.7	8.3	7.4	5.3	4.3	3.7	3.2	3	3
150- 175	25	2.4	2.7	3.3	3.7	4	4.1	4.4	4.7	5.2	5.8	6.3	5.7	4.3	3.5	3	2.7	2.5	2.5
175- 200	25	2.2	2.4	2.8	3.2	3.4	3.4	3.6	3.8	4.2	4.6	4.9	4.6	3.6	3	2.5	2.3	2.2	2.1
200- 225	25	2	2.1	2.4	2.7	2.8	2.9	3	3.2	3.4	3.7	3.9	3.7	3.1	2.5	2.2	2	1.9	1.9
225- 250	25	1.8	1.9	2.1	2.3	2.4	2.5	2.5	2.7	2.9	3.1	3.2	3.1	2.6	2.2	1.9	1.7	1.7	1.6
250- 275	25	1.6	1.7	1.9	2	2.1	2.1	2.2	2.3	2.4	2.6	2.7	2.6	2.2	1.9	1.7	1.5	1.5	1.5
275- 300	25	1.5	1.5	1.6	1.8	1.8	1.8	1.9	2	2.1	2.2	2.3	2.2	2	1.7	1.5	1.4	1.3	1.3
300- 325	25	1.3	1.4	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.9	1.9	1.9	1.7	1.5	1.3	1.2	1.2	1.2
325- 350	25	1.2	1.2	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.5	1.3	1.2	1.1	1.1	1.1
350- 375	25	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.3	1.2	1.1	1	1	1
375- 400	25	1	1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.1	1	0.9	0.9	0.9
400- 425	25	0.9	0.9	1	1	1	1	1	1.1	1.1	1.1	1.2	1.2	1.1	1	0.9	0.9	0.8	0.8

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 5y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					37.8	48	67.3	61.2	57.1	116.4	209	92.5	32.1	37	68.3	31.2	20.6	16.6
20- 38	18					21	23.6	28.5	31	34.3	58.3	89.1	47.6	19.1	20.8	28.2	17.2	12.8	11.2
38	0.					16	17.4	20.2	23	27.2	42.2	59.2	35.2	15.4	15.9	18.7	13	10.3	9.2
38- 60	22	0.6	1.1	2.8	6.2	12.5	13.3	15.1	17.6	21.2	30.7	40.3	26.2	12.6	12.1	13	9.7	8.1	7.5
60- 80	20	2.6	3	4.3	7	9.1	9.6	10.6	12.4	14.9	19.7	23.9	17.5	9.6	8.5	8.2	6.6	5.8	5.5
80- 100	20	2.7	3.1	4.3	6.2	7.1	7.4	8.2	9.4	11.1	13.8	15.9	12.6	7.7	6.5	5.9	4.9	4.5	4.3
100- 125	25	2.6	2.9	4	5.1	5.7	5.9	6.4	7.2	8.3	9.9	11	9.3	6.2	5	4.4	3.8	3.6	3.4
125- 150	25	2.4	2.8	3.5	4.2	4.6	4.7	5	5.5	6.2	7.2	7.8	6.9	5	4	3.5	3.1	2.9	2.8
150- 175	25	2.3	2.5	3	3.5	3.7	3.8	4.1	4.4	4.9	5.5	5.9	5.4	4.1	3.3	2.9	2.5	2.4	2.3
175- 200	25	2.1	2.2	2.6	2.9	3.1	3.2	3.3	3.6	3.9	4.3	4.6	4.3	3.4	2.8	2.4	2.2	2.1	2
200- 225	25	1.8	2	2.3	2.5	2.6	2.7	2.8	3	3.2	3.5	3.7	3.5	2.9	2.4	2.1	1.9	1.8	1.8
225- 250	25	1.6	1.8	2	2.2	2.3	2.3	2.4	2.5	2.7	2.9	3	2.9	2.5	2.1	1.8	1.6	1.6	1.5
250- 275	25	1.5	1.6	1.7	1.9	1.9	2	2	2.1	2.3	2.4	2.5	2.4	2.1	1.8	1.6	1.5	1.4	1.4
275- 300	25	1.4	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.9	2	2.1	2.1	1.8	1.6	1.4	1.3	1.3	1.2
300- 325	25	1.2	1.3	1.4	1.5	1.5	1.5	1.5	1.6	1.7	1.8	1.8	1.8	1.6	1.4	1.3	1.2	1.1	1.1
325- 350	25	1.1	1.1	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.4	1.3	1.1	1.1	1	1
350- 375	25	1	1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.3	1.1	1	1	0.9	0.9
375- 400	25	0.9	0.9	1	1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.1	1	0.9	0.9	0.9	0.8
400- 425	25	0.8	0.9	0.9	0.9	1	1	1	1	1	1.1	1.1	1.1	1	0.9	0.9	0.8	0.8	0.8

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 10y, t= 1d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15	0					52.2	66.7	94.1	84.2	74.8	139.7	240.8	105.2	37	42.1	77.4	35.4	23.4
20- 38	18	0					28.4	31.9	38.6	41.3	43.8	69.9	103	54.4	22	23.7	32.1	19.5	14.5
38	0.	0					21.3	23	26.7	30.1	34.2	50.5	68.6	40.3	17.7	18.1	21.3	14.7	11.7
38- 60	22	9	0.7	1.3	3.2	7.6	16.3	17.4	19.7	22.6	26.5	36.7	46.8	30.1	14.5	13.9	14.8	11.1	9.2
60- 80	20	29.6	3	3.5	5.1	8.8	11.6	12.2	13.5	15.5	18.4	23.6	27.9	20.2	11.1	9.8	9.3	7.6	6.7
80- 100	20	34.1	3.2	3.6	5.2	7.7	8.9	9.3	10.2	11.6	13.5	16.5	18.6	14.6	8.9	7.4	6.7	5.7	5.2
100- 125	25	34.3	3.1	3.5	4.8	6.3	7	7.3	7.8	8.8	10	11.8	12.9	10.8	7.1	5.8	5.1	4.4	4.1
125- 150	25	32.1	2.9	3.3	4.3	5.1	5.6	5.7	6.1	6.7	7.5	8.6	9.2	8.1	5.8	4.6	4	3.5	3.3
150- 175	25	31.7	2.7	3	3.7	4.2	4.6	4.7	4.9	5.3	5.9	6.5	6.9	6.3	4.7	3.8	3.3	2.9	2.8
175- 200	25	28.9	2.5	2.7	3.2	3.6	3.8	3.8	4	4.3	4.7	5.1	5.4	5	4	3.2	2.8	2.5	2.4
200- 225	25	25.6	2.2	2.4	2.7	3	3.2	3.2	3.4	3.6	3.8	4.1	4.3	4.1	3.3	2.8	2.4	2.2	2.1
225- 250	25	23	2	2.2	2.4	2.6	2.7	2.8	2.9	3	3.2	3.4	3.5	3.4	2.9	2.4	2.1	1.9	1.8
250- 275	25	22.2	1.8	1.9	2.1	2.3	2.3	2.4	2.4	2.6	2.7	2.9	3	2.9	2.5	2.1	1.8	1.7	1.6
275- 300	25	19.8	1.6	1.7	1.8	2	2	2.1	2.1	2.2	2.3	2.4	2.5	2.4	2.1	1.9	1.6	1.5	1.5
300- 325	25	17.8	1.5	1.5	1.6	1.7	1.8	1.8	1.8	1.9	2	2.1	2.2	2.1	1.9	1.6	1.5	1.4	1.3
325- 350	25	16.1	1.3	1.4	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.9	1.8	1.7	1.5	1.3	1.2	1.2
350- 375	25	14.6	1.2	1.2	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.5	1.3	1.2	1.1	1.1
375- 400	25	13.2	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1	1
400- 425	25	12.1	1	1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.1	1	0.9	0.9

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 10y, t=5d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					47.4	60.6	85.2	76.7	69	131.6	228.8	100.2	35.1	40.1	73.8	33.8	22.2	17.9
20- 38	18					25.9	29.1	35.3	37.8	40.6	65.8	97.8	51.8	20.9	22.6	30.5	18.6	13.8	12.1
38	0.					19.5	21.1	24.5	27.7	31.8	47.6	65.1	38.3	16.9	17.2	20.3	14	11.1	10
38- 60	22	0.7	1.2	3.1	7.1	15	16	18.1	20.9	24.7	34.6	44.4	28.6	13.8	13.2	14.1	10.5	8.8	8.1
60- 80	20	2.8	3.3	4.8	8.2	10.7	11.3	12.5	14.4	17.2	22.2	26.4	19.2	10.5	9.3	8.9	7.2	6.4	6
80- 100	20	3	3.4	4.8	7.2	8.3	8.7	9.5	10.8	12.7	15.5	17.6	13.9	8.4	7.1	6.4	5.4	4.9	4.7
100- 125	25	2.9	3.3	4.5	5.9	6.6	6.8	7.3	8.2	9.4	11.1	12.2	10.2	6.8	5.5	4.8	4.2	3.9	3.7
125- 150	25	2.7	3.1	4	4.8	5.2	5.4	5.7	6.3	7.1	8.1	8.7	7.7	5.5	4.4	3.8	3.3	3.1	3.1
150- 175	25	2.6	2.8	3.5	4	4.3	4.4	4.6	5	5.5	6.1	6.5	5.9	4.5	3.6	3.1	2.8	2.6	2.6
175- 200	25	2.3	2.5	3	3.3	3.5	3.6	3.8	4.1	4.4	4.8	5.1	4.7	3.7	3.1	2.6	2.4	2.3	2.2
200- 225	25	2.1	2.3	2.6	2.8	3	3	3.2	3.4	3.6	3.9	4.1	3.9	3.2	2.6	2.3	2.1	2	1.9
225- 250	25	1.9	2	2.2	2.4	2.5	2.6	2.7	2.8	3	3.2	3.3	3.2	2.7	2.3	2	1.8	1.7	1.7
250- 275	25	1.7	1.8	2	2.1	2.2	2.2	2.3	2.4	2.5	2.7	2.8	2.7	2.3	2	1.8	1.6	1.5	1.5
275- 300	25	1.5	1.6	1.7	1.9	1.9	1.9	2	2.1	2.2	2.3	2.4	2.3	2	1.8	1.6	1.4	1.4	1.4
300- 325	25	1.4	1.4	1.5	1.6	1.7	1.7	1.7	1.8	1.9	2	2	2	1.8	1.6	1.4	1.3	1.3	1.2
325- 350	25	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1.1
350- 375	25	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.2	1.1	1.1	1	1
375- 400	25	1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.2	1.1	1	1	0.9	0.9
400- 425	25	0.9	1	1	1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.1	1	0.9	0.9	0.9	0.9

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 100d, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					10.5	13.2	18.3	16.9	16.6	36.8	68.4	30.6	10.6	12.2	22.7	10.4	6.8	5.5
20- 38	18					6	6.7	8	8.9	10.3	18.5	29.1	15.7	6.3	6.9	9.4	5.7	4.2	3.7
38	0.					4.6	5	5.8	6.7	8.2	13.4	19.3	11.6	5.1	5.2	6.2	4.3	3.4	3
38- 60	22	0.2	0.4	0.9	1.9	3.7	3.9	4.4	5.2	6.5	9.7	13.1	8.6	4.1	4	4.3	3.2	2.7	2.5
60- 80	20	0.8	1	1.4	2.1	2.7	2.9	3.2	3.8	4.6	6.3	7.7	5.7	3.1	2.8	2.7	2.2	1.9	1.8
80- 100	20	0.9	1	1.3	1.9	2.2	2.3	2.5	2.9	3.5	4.4	5.1	4.1	2.5	2.1	1.9	1.6	1.5	1.4
100- 125	25	0.8	0.9	1.2	1.6	1.8	1.8	2	2.2	2.6	3.1	3.5	3	2	1.7	1.5	1.3	1.2	1.1
125- 150	25	0.8	0.9	1.1	1.3	1.4	1.5	1.6	1.7	2	2.3	2.5	2.3	1.6	1.3	1.1	1	0.9	0.9
150- 175	25	0.7	0.8	1	1.1	1.2	1.2	1.3	1.4	1.5	1.7	1.9	1.7	1.3	1.1	0.9	0.8	0.8	0.8
175- 200	25	0.7	0.7	0.8	0.9	1	1	1.1	1.1	1.2	1.4	1.5	1.4	1.1	0.9	0.8	0.7	0.7	0.7
200- 225	25	0.6	0.6	0.7	0.8	0.8	0.8	0.9	0.9	1	1.1	1.2	1.1	0.9	0.8	0.7	0.6	0.6	0.6
225- 250	25	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	1	0.9	0.8	0.7	0.6	0.5	0.5	0.5
250- 275	25	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.5
275- 300	25	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4
300- 325	25	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4
325- 350	25	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3
350- 375	25	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
375- 400	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
400- 425	25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 5y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					26.1	33.4	47.2	42.1	36.7	65.8	110.5	47.8	17	19.3	35.3	16.1	10.7	8.6
20- 38	18					14	15.8	19.1	20.3	21.2	32.9	47.4	24.8	10.1	10.8	14.6	8.9	6.6	5.8
38	0.					10.4	11.3	13.1	14.7	16.5	23.7	31.6	18.4	8.2	8.3	9.7	6.7	5.3	4.8
38- 60	22	0.3	0.6	1.5	3.6	7.9	8.5	9.6	10.9	12.7	17.2	21.6	13.8	6.6	6.4	6.8	5.1	4.2	3.9
60- 80	20	1.4	1.6	2.4	4.2	5.6	5.9	6.5	7.4	8.7	11.1	12.9	9.3	5.1	4.5	4.3	3.5	3.1	2.9
80- 100	20	1.5	1.7	2.4	3.7	4.3	4.5	4.9	5.5	6.4	7.7	8.6	6.7	4.1	3.4	3.1	2.6	2.4	2.3
100- 125	25	1.4	1.6	2.3	3	3.3	3.5	3.7	4.2	4.7	5.5	6	5	3.3	2.7	2.3	2	1.9	1.8
125- 150	25	1.3	1.6	2	2.4	2.6	2.7	2.9	3.2	3.5	4	4.3	3.7	2.7	2.1	1.8	1.6	1.5	1.5
150- 175	25	1.3	1.4	1.7	2	2.1	2.2	2.3	2.5	2.8	3	3.2	2.9	2.2	1.8	1.5	1.3	1.3	1.2
175- 200	25	1.2	1.3	1.5	1.7	1.8	1.8	1.9	2	2.2	2.4	2.5	2.3	1.8	1.5	1.3	1.1	1.1	1.1
200- 225	25	1	1.1	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2	1.9	1.5	1.3	1.1	1	1	0.9
225- 250	25	0.9	1	1.1	1.2	1.3	1.3	1.3	1.4	1.5	1.6	1.6	1.6	1.3	1.1	1	0.9	0.8	0.8
250- 275	25	0.9	0.9	1	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.4	1.3	1.1	1	0.9	0.8	0.8	0.7
275- 300	25	0.8	0.8	0.9	0.9	1	1	1	1	1.1	1.1	1.2	1.1	1	0.9	0.8	0.7	0.7	0.7
300- 325	25	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1	1	1	0.9	0.8	0.7	0.6	0.6	0.6
325- 350	25	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.6	0.6	0.6	0.5
350- 375	25	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.5
375- 400	25	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5
400- 425	25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4

Table 14, Continuation

Equivalent dose rate resulted from activation of Beam Pipe by low energy neutrons for T= 10y, t=100d

R/Z, cm	dR\dZ	780	780-805	805-830	830-853	853	852-863	863-875	875-900	900-925	925-975	975-1025	1025-1125	1125-1225	1225-1275	1275-1325	1325-1340	1340-1350	1350
		0	25	25	23	0	10	12	25	25	50	50	100	100	50	50	15	10	0
0- 10	10																		
10- 20	15					35.4	45.5	64.5	57.1	48.2	80.5	129.6	55.3	19.9	22.3	40.6	18.6	12.3	9.9
20- 38	18					18.7	21.1	25.6	27	27.3	40.1	55.8	28.8	11.8	12.6	16.9	10.3	7.7	6.7
38	0.					13.8	14.9	17.3	19.2	21	28.9	37.3	21.4	9.5	9.6	11.2	7.8	6.2	5.5
38- 60	22	0.4	0.7	1.8	4.5	10.4	11	12.5	14.1	16	21	25.5	16.1	7.8	7.4	7.8	5.9	4.9	4.5
60- 80	20	1.6	1.9	2.9	5.3	7.2	7.5	8.3	9.4	10.9	13.5	15.3	10.9	6	5.2	4.9	4	3.5	3.4
80- 100	20	1.8	2	3	4.6	5.4	5.6	6.1	6.9	7.9	9.4	10.3	7.9	4.8	4	3.6	3	2.8	2.6
100- 125	25	1.7	2	2.8	3.8	4.2	4.3	4.7	5.2	5.8	6.7	7.1	5.9	3.9	3.1	2.7	2.3	2.2	2.1
125- 150	25	1.6	1.9	2.5	3	3.3	3.4	3.6	3.9	4.3	4.9	5.1	4.4	3.1	2.5	2.2	1.9	1.8	1.7
150- 175	25	1.6	1.7	2.2	2.5	2.7	2.7	2.9	3.1	3.4	3.7	3.9	3.4	2.6	2.1	1.8	1.6	1.5	1.5
175- 200	25	1.4	1.5	1.9	2.1	2.2	2.2	2.3	2.5	2.7	2.9	3	2.8	2.2	1.8	1.5	1.3	1.3	1.3
200- 225	25	1.3	1.4	1.6	1.7	1.8	1.9	1.9	2	2.2	2.3	2.4	2.3	1.8	1.5	1.3	1.2	1.1	1.1
225- 250	25	1.1	1.2	1.4	1.5	1.6	1.6	1.6	1.7	1.8	1.9	2	1.9	1.6	1.3	1.1	1	1	1
250- 275	25	1.1	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.7	1.6	1.4	1.1	1	0.9	0.9	0.9
275- 300	25	0.9	1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.2	1	0.9	0.8	0.8	0.8
300- 325	25	0.8	0.9	0.9	1	1	1	1	1.1	1.1	1.2	1.2	1.2	1	0.9	0.8	0.7	0.7	0.7
325- 350	25	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1	1	1	1	1	0.9	0.8	0.7	0.7	0.7	0.6
350- 375	25	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.6
375- 400	25	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5
400- 425	25	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5

Table 15

Comparison of dose rate fields from activation of JDisk by low energy neutrons calculated with DOT and MCNP

R/Z, cm		852-875	875-900	900-925	925-950	950-975	975-1000	1000-1040	1040-1080	1080-1120	1120-1160	1160-1200	1200-1240
	dR\dZ	23	25	25	25	25	25	40	40	40	40	40	40
	T= 30d, t=1d calculated with DOT												
0-25	25	204.6	84.6	41.3	23.8	16.1	12.6	9.6	7.2	5.5	4.3	3.5	2.9
25-50	25	73.5	54.2	35.3	23.7	16.3	11.2	8.2	6.4	5	4	3.2	2.7
50-75	25	29.2	29.2	24.4	19.6	15.4	12	7.9	5.3	4.5	3.9	3.3	2.7
75-100	25	18.5	18.6	16.7	13.7	11.3	10.9	9.4	5.8	3.5	3.2	3	2.7
100-125	25	12	11.2	12.5	11.6	9.7	6.3	6.5	7.4	4.8	2.6	2.1	2.2
125-150	25	8.6	7.8	7.9	7.5	8.8	8.4	4.3	3.9	5.8	4.3	2.1	1.4
150-175	25	5.2	5.9	6.4	5.6	4.4	6.1	6.6	3	2.4	4.4	3.8	1.9
175-200	25	4.1	3.7	4.5	5.6	3.8	2.9	4.5	4.7	2.5	1.7	3.4	3.4
200-225	25	3.3	3.2	2.4	4.3	4.6	2.7	2.4	3.6	3.2	2.3	1.4	2.5
225-250	25	2.1	3.1	1.8	2.3	3.9	3.6	2	2.4	2.5	2.2	2.2	1.3
250-275	25	1.2	2.6	1.9	1.4	2.3	3.3	2.4	1.7	2.2	1.5	1.4	2.1
275-300	25	0.8	1.9	2	1.3	1.4	2.2	2.5	1.7	1.7	1.8	0.9	0.9
300-325	25	0.6	1.2	1.8	1.4	1.1	1.5	1.9	1.8	1.4	1.7	1.3	0.4
325-350	25	0.5	0.9	1.4	1.4	1.1	1.1	1.4	1.6	1.5	1.4	1.6	0.8
350-375	25	0.5	0.6	1	1.2	1.1	1	1.1	1.2	1.4	1.3	1.4	1.3
375-400	25	0.5	0.5	0.7	0.9	1.1	1	1	0.9	1	1.3	1.2	1.4
400-425	25	0.5	0.4	0.5	0.6	0.8	0.9	0.8	0.8	0.6	1	1	1.1
	T= 30d, t=1d calculated with MCNP												
0-25	25	233.5	88.8	41.9	23.9	15.7	11.1	7.6	5.2	3.9	3.2	2.6	2.1
25-50	25	81.0	55.2	33.7	22.1	15.3	11.3	8.1	5.7	4.2	3.2	2.6	2.1
50-75	25	22.8	27.9	23.2	17.5	13.2	10.1	7.4	5.4	4.2	3.2	2.5	2.0
75-100	25	12.9	15.6	15.1	12.9	10.5	8.6	6.7	4.9	3.7	3.1	2.6	2.1
100-125	25	8.2	9.7	10.1	9.5	8.2	7.0	5.7	4.5	3.5	2.7	2.3	2.0
125-150	25	5.4	6.5	6.9	6.9	6.5	5.7	4.8	3.9	3.2	2.7	2.2	1.8
150-175	25	3.7	4.4	5.0	5.1	4.9	4.6	4.1	3.4	2.8	2.4	2.0	1.7
175-200	25	2.6	3.1	3.6	3.9	3.9	3.7	3.4	3.0	2.5	2.2	1.9	1.6
200-225	25	1.9	2.4	2.7	2.9	3.0	3.1	2.8	2.5	2.3	1.9	1.7	1.5
225-250	25	1.4	1.8	2.1	2.3	2.4	2.5	2.4	2.2	2.0	1.8	1.6	1.4
250-275	25	1.1	1.4	1.6	1.8	1.9	2.0	2.0	1.9	1.7	1.6	1.4	1.3
275-300	25	0.8	1.1	1.3	1.5	1.5	1.7	1.7	1.7	1.5	1.4	1.3	1.2
300-325	25	0.6	0.9	1.1	1.2	1.3	1.4	1.4	1.4	1.4	1.3	1.2	1.1
325-350	25	0.5	0.7	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.0	1.0
350-375	25	0.4	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.0	1.0	0.9
375-400	25	0.3	0.5	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8
400-425	25	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
	Ratio DOT to MCNP result												
0-25	25	0.9	1.0	1.0	1.0	1.0	1.1	1.3	1.4	1.4	1.4	1.4	1.3
25-50	25	0.9	1.0	1.0	1.1	1.1	1.0	1.0	1.1	1.2	1.2	1.2	1.3
50-75	25	1.3	1.0	1.1	1.1	1.2	1.2	1.1	1.0	1.1	1.2	1.3	1.3
75-100	25	1.4	1.2	1.1	1.1	1.1	1.3	1.4	1.2	0.9	1.0	1.2	1.3
100-125	25	1.5	1.2	1.2	1.2	1.2	0.9	1.1	1.7	1.4	1.0	0.9	1.1
125-150	25	1.6	1.2	1.1	1.1	1.4	1.5	0.9	1.0	1.8	1.6	1.0	0.8
150-175	25	1.4	1.3	1.3	1.1	0.9	1.3	1.6	0.9	0.8	1.9	1.9	1.1
175-200	25	1.6	1.2	1.2	1.4	1.0	0.8	1.3	1.6	1.0	0.8	1.8	2.1
200-225	25	1.8	1.3	0.9	1.5	1.5	0.9	0.8	1.4	1.4	1.2	0.8	1.7
225-250	25	1.5	1.7	0.9	1.0	1.6	1.5	0.8	1.1	1.3	1.2	1.4	0.9
250-275	25	1.1	1.9	1.2	0.8	1.2	1.7	1.2	0.9	1.3	0.9	1.0	1.6
275-300	25	1.0	1.7	1.5	0.9	0.9	1.3	1.5	1.0	1.1	1.3	0.7	0.8
300-325	25	0.9	1.4	1.7	1.2	0.9	1.1	1.3	1.3	1.0	1.3	1.1	0.4
325-350	25	1.0	1.3	1.6	1.4	1.0	1.0	1.2	1.3	1.2	1.2	1.5	0.8
350-375	25	1.2	1.0	1.4	1.5	1.2	1.1	1.1	1.1	1.3	1.3	1.4	1.5
375-400	25	1.4	1.0	1.2	1.3	1.4	1.2	1.1	1.0	1.1	1.4	1.4	1.7
400-425	25	1.7	1.0	1.0	1.0	1.2	1.3	1.1	1.0	0.7	1.2	1.3	1.4

Table 15, Continuation

R/Z, cm		852-875	875-900	900-925	925-950	950-975	975-1000	1000-1040	1040-1080	1080-1120	1120-1160	1160-1200	1200-1240
	dR\dZ	23	25	25	25	25	25	40	40	40	40	40	40
	T= 30d, t=5d calculated with DOT												
0-25	25	12.1	5.3	2.6	1.5	1	0.8	0.6	0.5	0.4	0.3	0.2	0.2
25-50	25	5.4	3.6	2.3	1.5	1.1	0.7	0.5	0.4	0.3	0.3	0.2	0.2
50-75	25	2.8	2.3	1.8	1.3	1	0.8	0.6	0.4	0.3	0.3	0.2	0.2
75-100	25	1.9	1.6	1.4	1.1	0.9	0.7	0.6	0.4	0.3	0.2	0.2	0.2
100-125	25	1.3	1.1	1	0.9	0.8	0.6	0.5	0.5	0.3	0.2	0.2	0.2
125-150	25	0.9	0.8	0.8	0.7	0.7	0.6	0.4	0.3	0.4	0.3	0.2	0.1
150-175	25	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.3	0.2	0.3	0.3	0.1
175-200	25	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2
200-225	25	0.4	0.4	0.3	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2
225-250	25	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
250-275	25	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2
275-300	25	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
300-325	25	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
325-350	25	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1
350-375	25	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
375-400	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
400-425	25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	T= 30d, t=5d calculated with MCNP												
0-25	25	15.5	6.3	3.1	1.8	1.21	0.87	0.60	0.42	0.32	0.25	0.20	0.17
25-50	25	7.3	4.2	2.6	1.7	1.16	0.86	0.63	0.44	0.33	0.26	0.21	0.17
50-75	25	2.8	2.5	1.9	1.4	1.02	0.77	0.57	0.42	0.32	0.25	0.20	0.16
75-100	25	1.68	1.57	1.33	1.08	0.87	0.69	0.52	0.38	0.30	0.24	0.20	0.16
100-125	25	1.08	1.06	0.96	0.83	0.70	0.59	0.47	0.35	0.28	0.22	0.18	0.15
125-150	25	0.74	0.74	0.71	0.64	0.57	0.49	0.41	0.32	0.25	0.21	0.17	0.14
150-175	25	0.52	0.54	0.53	0.50	0.46	0.41	0.35	0.29	0.24	0.19	0.16	0.14
175-200	25	0.38	0.40	0.41	0.40	0.37	0.35	0.30	0.26	0.22	0.18	0.15	0.13
200-225	25	0.28	0.31	0.32	0.31	0.30	0.29	0.26	0.23	0.20	0.17	0.14	0.12
225-250	25	0.22	0.24	0.25	0.25	0.25	0.24	0.22	0.20	0.17	0.15	0.12	0.11
250-275	25	0.17	0.19	0.21	0.21	0.21	0.20	0.19	0.18	0.16	0.14	0.11	0.11
275-300	25	0.14	0.16	0.17	0.17	0.17	0.17	0.16	0.15	0.14	0.13	0.10	0.10
300-325	25	0.11	0.13	0.14	0.15	0.15	0.15	0.14	0.13	0.13	0.11	0.10	0.09
325-350	25	0.10	0.11	0.12	0.12	0.13	0.12	0.12	0.12	0.11	0.10	0.09	0.09
350-375	25	0.08	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.10	0.09	0.08	0.08
375-400	25	0.07	0.08	0.08	0.09	0.09	0.09	0.10	0.09	0.09	0.08	0.07	0.07
400-425	25	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07
	Ratio DOT to MCNP result												
0-25	25	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.2	1.3	1.2	1.0	1.2
25-50	25	0.7	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	1.2	1.0	1.2
50-75	25	1.0	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.9	1.2	1.0	1.2
75-100	25	1.1	1.0	1.1	1.0	1.0	1.0	1.2	1.0	1.0	0.8	1.0	1.2
100-125	25	1.2	1.0	1.0	1.1	1.1	1.0	1.1	1.4	1.1	0.9	1.1	1.3
125-150	25	1.2	1.1	1.1	1.1	1.2	1.2	1.0	0.9	1.6	1.4	1.2	0.7
150-175	25	1.4	1.1	1.1	1.0	0.9	1.2	1.4	1.0	0.8	1.6	1.8	0.7
175-200	25	1.3	1.2	1.2	1.3	1.1	0.9	1.0	1.2	0.9	1.1	1.3	1.6
200-225	25	1.4	1.3	0.9	1.3	1.3	1.0	0.8	1.3	1.0	1.2	1.4	1.7
225-250	25	1.4	1.7	1.2	1.2	1.2	1.3	0.9	1.0	1.2	1.3	1.6	1.7
250-275	25	1.1	1.6	1.5	1.0	1.0	1.5	1.0	1.1	1.3	0.7	0.9	1.8
275-300	25	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.4	0.8	1.0	1.0
300-325	25	1.8	1.6	1.5	1.4	1.4	1.4	1.4	1.5	1.6	1.8	1.0	1.1
325-350	25	2.1	0.9	0.9	1.6	1.6	1.6	0.8	0.8	1.8	1.0	1.1	1.2
350-375	25	2.4	1.1	1.0	1.0	1.8	0.9	0.9	0.9	1.0	1.1	1.2	1.3
375-400	25	1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.4	1.4
400-425	25	1.6	1.5	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.5	1.5