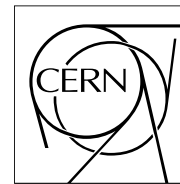


The Compact Muon Solenoid Experiment

CMS Note

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Advanced Method of Estimating Residual Dose Rates in a Hadron Environment

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Abstract

Traditionally the residual dose rate caused by high-energy hadrons has been parametrized with ω -factors, which relate the dose rate resulting from an activated object to the rate of inelastic hadron interactions within the object. Modern hadron simulation codes allow, in principle, to reach far better accuracy than these rudimentary parameterizations which date back several decades. However, it is shown in this paper that the concept of ω -factors is still useful if these values are properly defined and calculated. Such a re-evaluation, including proper treatment of low-energy neutrons, is given for 19 elements which should cover most of the materials encountered at accelerators.

1 Introduction

The radionuclide production around accelerators is dominated by the hadron halo which is produced by beam interactions with beam-line elements. In most cases neutrons form more than 90% of the hadron spectrum. The neutron energies depend on the beam energy and, primarily, on the shielding and other surrounding material. Provided the accelerator energy is sufficiently high, most of the induced radioactivity is usually due to inelastic interactions of protons, pions and high-energy neutrons. Other particles, like kaons and hyperons rarely play a significant role.

In most cases encountered at accelerators, the activation by high-energy particles (above several tens of MeV) dominates over that of low-energy (<20 MeV) neutrons¹⁾ even if the latter usually form a major part of the hadron spectrum.

Traditionally the activation has been estimated by ω -factors [1]. These were based on the argument that inelastic hadronic interactions transform the target nucleus and therefore the produced activity should be proportional to the rate of such interactions – called stars. Mainly due to the capabilities of hadron transport codes at the time of definition, the energy threshold for stars was set to 50 MeV, i.e. the incoming hadron was required to have a kinetic energy of at least 50 MeV [2].

The ω -factors defined in this way have a few important deficiencies. First the 50 MeV threshold, although it is of the same order of magnitude as the typical threshold for spallation reactions, is somewhat too high. In some materials significant activation reactions take place already at lower energies – negative pion absorption even at rest. Another, more serious, aspect is that low-energy neutron activation is totally neglected and cannot be claimed to be proportional to star production because low-energy neutrons are significantly influenced by the surrounding materials and the neutron yield depends strongly on the target material²⁾.

Modern simulation codes are capable of producing fairly reliable estimates of the yields of individual radionuclides [3]. The time evolution of activity for arbitrary irradiation and cooling times can be followed by solving the sets of coupled differential equations which govern the decay and buildup [4]. This last step can be treated analytically and is thus exact, provided the decay characteristics of the nuclides are known – which is usually the case.

Although such a procedure is feasible, it is rather time consuming and requires a fairly complicated simulation procedure. For a complicated system like a complete high-energy physics detector, the amount of residual nuclide yield data easily grows to enormous size. Much of this data are often redundant because – as this study will show – the activation can be parametrized with reasonable accuracy.

The original concept of the ω -factors provides the basis for this parameterization because it can be re-adopted to the new more accurate methods of activity estimation by recalculating the factors for various characteristic spectra and different irradiation and cooling times. Such an approach was already tested against experimental data and the agreement was found to be fairly good [5], especially when it is taken into account that the ω -factors used in [5] were calculated for an end-stop geometry, which did not really correspond to the actual experiment. This paper introduces a generalization of the ω -factors used in [5] by defining four well defined spectra for which the factors are evaluated.

¹⁾This cut is not dictated by any particular physics, but by the technical argument that comprehensive neutron cross section are available up to 20 MeV)

²⁾In a big uniform block of single material neutron activation can be absorbed in the traditional ω -factors, but such an approach fails in a multi-material geometry or small objects

Size (x×y×z)	Distance (cm)			
	0	1	10	100
4×4×1 m ³	$(2.0 \pm 0.2) \times 10^{-9}$	$(1.88 \pm 0.08) \times 10^{-9}$	$(1.8 \pm 0.3) \times 10^{-9}$	$9 \pm 1 \times 10^{-10}$
1×1×1 m ³	$(1.90 \pm 0.04) \times 10^{-9}$	$(2.04 \pm 0.08) \times 10^{-9}$	$(1.8 \pm 0.2) \times 10^{-9}$	$(2.9 \pm 0.2) \times 10^{-10}$
1×1×0.1 m ³	$(1.8 \pm 0.1) \times 10^{-9}$	$(1.65 \pm 0.06) \times 10^{-9}$	$(1.42 \pm 0.06) \times 10^{-9}$	$(2.2 \pm 0.2) \times 10^{-10}$
1×1×0.01 m ³	$(1.01 \pm 0.02) \times 10^{-9}$	$(9.4 \pm 0.2) \times 10^{-10}$	$(7.0 \pm 0.1) \times 10^{-10}$	$(6.8 \pm 0.3) \times 10^{-11}$
20×20×10 cm ³	$(1.94 \pm 0.04) \times 10^{-9}$	$(1.80 \pm 0.12) \times 10^{-9}$	$(5.46 \pm 0.08) \times 10^{-10}$	$(1.2 \pm 0.1) \times 10^{-11}$
10×10×10 cm ³	$(1.65 \pm 0.07) \times 10^{-9}$	$(1.21 \pm 0.05) \times 10^{-9}$	$(1.81 \pm 0.08) \times 10^{-10}$	$(2.7 \pm 0.3) \times 10^{-12}$
4×4×10 cm ³	$(1.10 \pm 0.01) \times 10^{-9}$	$(4.99 \pm 0.03) \times 10^{-10}$	$(3.05 \pm 0.08) \times 10^{-11}$	$(4.2 \pm 0.4) \times 10^{-13}$
4×4×1 cm ³	$(7.1 \pm 0.1) \times 10^{-11}$	$(2.79 \pm 0.05) \times 10^{-10}$	$(1.14 \pm 0.02) \times 10^{-11}$	$(1.36 \pm 0.06) \times 10^{-13}$

Table 1: Dose rates at various distances from iron blocks of different size. All values are Sv/h for unit star density per cm³ for 30 days irradiation and 1 day cooling. It is recalled that the ω -factor for this case has a value of 2.2×10^{-9} .

2 Definition of ω -factors

The ω -factor is defined such that it gives the dose (Sv/h) due to photons in front of a semi-infinite block of material with uniform activation. This is often referred to as contact dose rate. However, for an infinite wall this dose is independent of distance to the wall. From energy conservation and the requirement for equilibrium follows that this dose corresponds to one half of the energy emitted per unit volume inside the wall. Since, however, the mass absorption coefficient (μ) of tissue is usually different from that of the activated material, the emitted energy spectrum has to be weighted by the ratio of these coefficients. Often this ratio is rather close to unity, but has to be taken into account especially for high-Z materials.

The ω -factors give the dose after a fixed time of continuous and uniform irradiation and subsequent cooling. Traditionally these times have been fixed to 30 days of irradiation and 1 day of cooling – sometimes written $\omega(30,1)$. These represent a typical case encountered at accelerators. Since the ω -factors do not include any information about the individual radionuclides, the time dependence of the dose is not known. Parameterizations have been proposed [6], but these work only for certain materials and a limited range of irradiation and cooling times.

It has been shown in the case of iron that a threshold of 20 MeV instead of 50 MeV is a reasonable choice [8] because it covers better the whole energy range of spallation reactions. It should be pointed out, however, that in the simulations – which will be described below – all reactions are taken into account for nuclide production and the star threshold enters only in the normalization. Thus the optimum choice would always be exactly the threshold for spallation reactions, which depends on the target material and projectile type. A threshold of 20 MeV is supported also by the fact that it coincides with the upper limit of the energy range defined for low-energy neutron activation. The activation due to neutrons below 20 MeV of energy is taken into account by introducing two new ω -factors corresponding to 0.414 eV–20 MeV neutrons and thermal neutrons. Although this requires information about neutron fluxes in addition to star densities, the gain in accuracy and more universal applicability justifies this use of three factors.

The major shortcoming of the ω -factors, however, is that they give the dose rate close to a semi-infinite block [7]. This gives a fairly good approximation of the dose rate in contact with a large object, but can lead to significant overestimation when the activated object is small. Thus the ω -factors can be expected to produce an upper limit in essentially all practical cases. Table 1, which gives the dose from uniformly activated iron bodies at various distances, shows that the size of the active object has a large influence on

Nucl.	γ -MeV/dec	$T_{1/2}$	Nucl.	γ -MeV/dec	$T_{1/2}$	Nucl.	γ -MeV/dec	$T_{1/2}$
³ H	0.0	12.3 yr	⁵¹ Cr	0.033	27.7 d	¹³¹ I	0.381	8.04 d
⁷ Be	0.050	53.4 d	⁵² Mn	3.466	5.7 d	¹³⁷ Cs	0.564	30.1 yr
¹¹ Be	30.381	13.8 s	⁵⁴ Mn	0.836	312 d	¹⁵² Eu	1.159	12.4 yr
²² Na	2.193	2.6 yr	⁵⁵ Fe	0.002	2.7 yr	¹⁸⁵ Os	0.713	94 d
²⁴ Na	4.123	15.0 h	⁵⁶ Ni	1.721	6.1 d	¹⁹⁸ Au	0.403	2.7 d
²⁶ Al	2.816	7.2×10^6 yr	⁵⁷ Co	0.125	270 d	^{198m} Au	0.525	2.3 d
³⁷ Ar	0.0	35.1 d	⁵⁹ Fe	1.188	44.6 d	²⁰² Tl	0.466	12.2 d
⁴¹ Ca	0.0	1.3×10^5 yr	⁶⁰ Co	2.504	5.27 yr	²⁰⁴ Tl	0.001	3.78 yr
⁴⁴ Sc	2.137	3.92 h	⁶⁴ Cu	0.190	12.7 h	²⁰⁵ Pb	0.003	1.4×10^7 yr
^{44m} Sc	0.274	2.44 d	^{110m} Ag	2.739	250 d	²⁰⁶ Bi	3.279	6.24 d

Table 2: Photon energy emission rates (γ -MeV/decay) for some commonly encountered radionuclides. These are approximately proportional to the dose (due to photons) per unit of activity. ¹¹Be is included because it has the highest γ -MeV/decay value of all nuclides.

the contact dose and especially the dose at larger distance. The values in Table 1 are based on detailed FLUKA[9] simulations using the spectral information of the produced radionuclides contributing to the ω -factor. The photon fluxes have been folded with the mass absorption coefficients in order to determine the dose. This provides better statistics than using the energy deposition given by FLUKA directly.

It is very important to note that, by definition, the ω -factors only include the dose due to photons. In particular the dose due to β s is not taken into account. These can make a significant difference for the dose in contact with thin objects. Another consequence of this definition is that the ω -factors are not really related to specific activity (Bq g^{-1}), but only to the energy emission rate in form of photons (e.g. $\text{MeV s}^{-1} \text{g}^{-1}$). For instance, even for a large specific activity, the ω -factor due to tritium is zero and due to ⁵⁵Fe very small. To illustrate this large variation the photon energy emission rates of some common nuclides are listed in Table 2.

3 Simulation methods

The typical hadron accelerator spectra have been extracted from the simulations for the CMS experiment at the LHC, which is the 7+7 TeV proton-proton collider being constructed at CERN. Despite this large center of mass energy the spectra inside and behind shielding should be rather representative for lower energy accelerators also, because most of the radiation is due to higher generation hadrons produced within cascades. The energy of such hadrons is typically few hundred MeV with a tail extending to about 10 GeV.

Four spectra, shown in Figs. 1 and 2 have been used for the analysis:

1. In the steel surrounding a very forward collimator (TAS) which is hit by the high-energy secondaries from the collision. This is essentially a 'steel' spectrum with very little neutron moderation.
2. In the central tracker of CMS, where the radiation field is dominated by charged pions and neutron albedo from calorimeters. The particular feature of this spectrum is the large charged hadron flux. The neutron spectrum is a moderated 'steel' spectrum.
3. Outside the thick forward shielding, which – from inside out – consists of steel, borated concrete

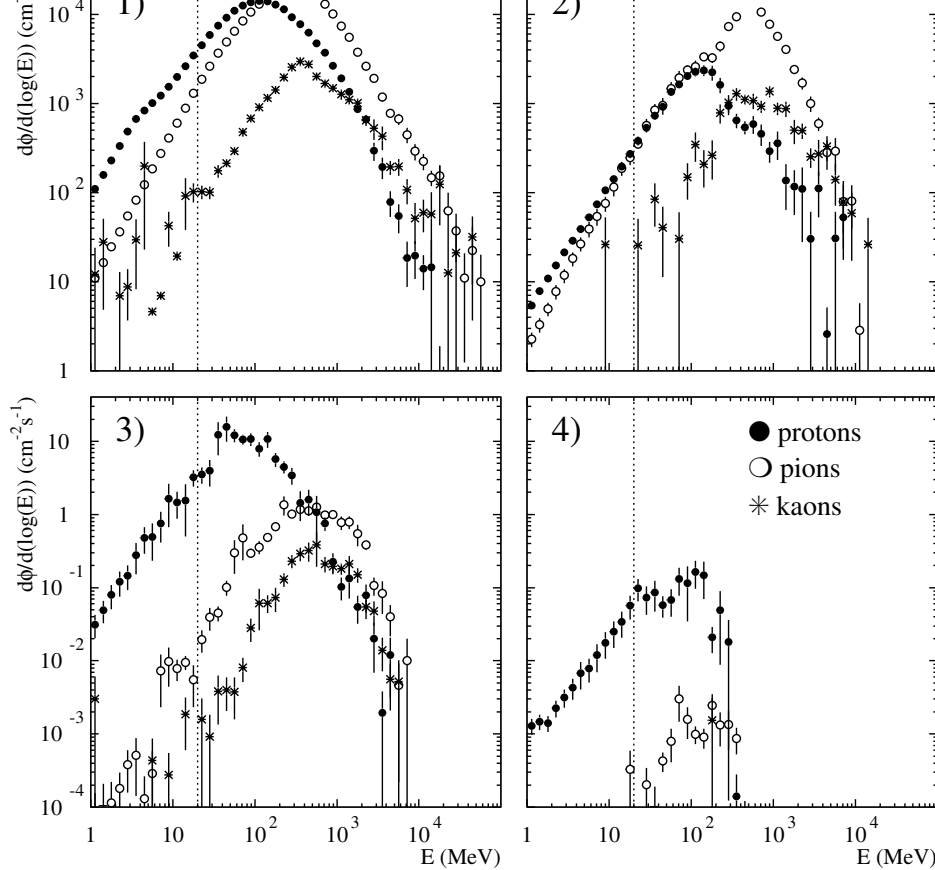


Figure 1: Proton, pion and kaon energy spectra in the region 1–4 described in the text. The dotted line indicates the 20 MeV limit used for star scoring. However, radionuclides are produced by the entire spectrum, including stopping negative particles.

and borated polyethylene. The spectrum mostly consists of neutrons having passed the borated concrete. The high-energy component at about 70 MeV is typical for neutron spectra in accelerator halls.

4. In the shadow of the CMS barrel, where the spectrum mainly consists of neutrons scattered back from the concrete walls of the experimental cavern. The spectrum comprises almost exclusively neutrons. Due to the dominance of backscattering the high-energy component appears relatively suppressed.

The spectra have been used in a separate FLUKA simulation, where only a 1 mm thick sample of the material to be studied was used. This thin sample is assumed to change the spectrum only by a negligible amount³⁾. Particle types and energies were sampled from the spectra and shot through this thin material layer. Radioisotope production due to low-energy neutrons and high-energy interactions was recorded.

At energies above 19.6 MeV for neutrons and the reaction threshold for other hadrons, the FLUKA event generators are used to obtain the residual nuclides. At energies below 1.3 GeV FLUKA uses a pre-equilibrium intranuclear cascade model. In this energy range the most accurate results are expected. At higher energies a resonance production and decay model is used and above 5 GeV/c a dual-parton model. These are complemented by a classical intranuclear cascade treatment. All models are followed by an evaporation step with a possibility of multi-fragmentation or fission.

³⁾For thermal neutrons in materials like gold even 1 mm is already opaque, but this is not significant because normalization is done with respect to the true tracklength in the sample

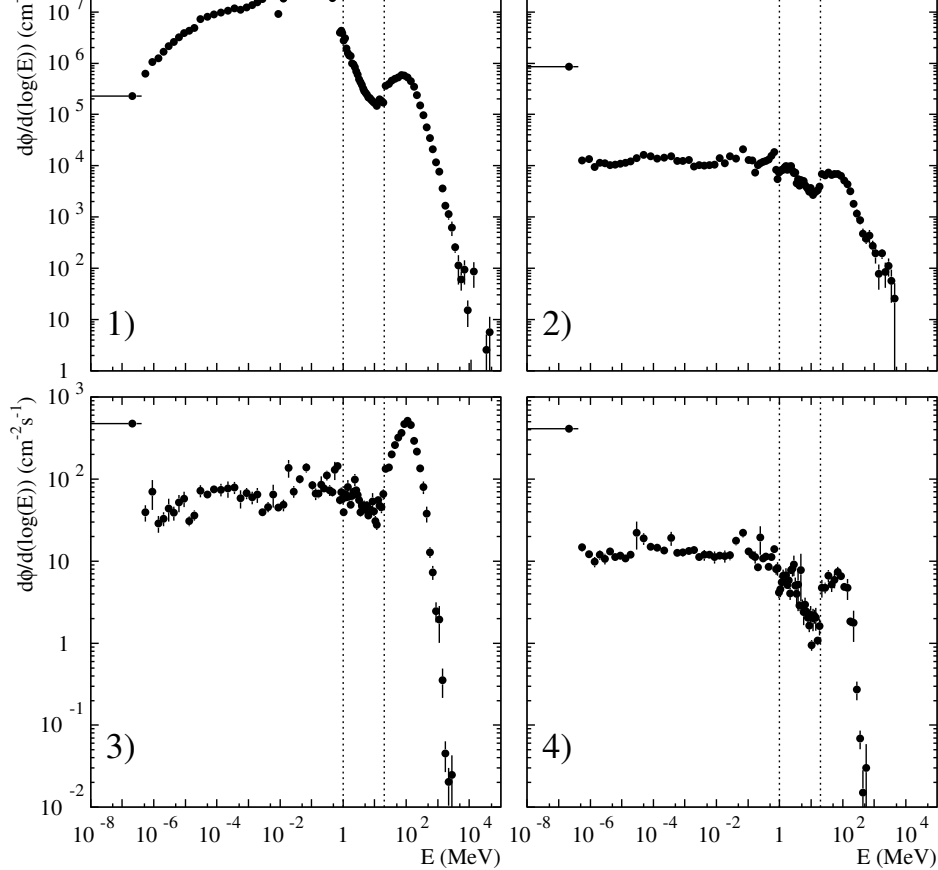


Figure 2: Neutron energy spectra for the regions 1–4 described in the text. The dotted lines indicate the 1 MeV and 20 MeV limits used in the activation analysis.

Nuclides with several isomeric states are somewhat problematic, because in general the relative production rates of these states are not known. In these cases – except for some special neutron activation reactions – equal share between all states has been assumed. For instance, if the produced nuclide has metastable states which decay independently (i.e. no internal conversion), this assumption of equal share guarantees that the maximum underestimate of dose or activity is a factor of two⁴⁾. In cases where the decay is by internal conversion the maximum possible underestimate is significantly smaller but the decay time distribution and the total emitted energy can be affected.

Among the materials studied in the work, aluminium and silicon are somewhat special cases because the dose rate for short cooling times is determined almost alone by ²⁴Na and at long cooling times by ²²Na. The third isotope of some significance is ⁷Be. For proton projectiles comprehensive experimental cross section data are available for production of these three radionuclides [10]. For neutron activation, data are available below 100 MeV [11] and for positive pions in the vicinity of the Δ -resonance [12]. For other particle types (e.g. negative pions) and energies the cross section has to be extrapolated from the available experimental points. This is done with the help of a FLUKA simulation, but now the ratio with respect to the proton activation cross section is extracted from the simulations and used to scale the experimental proton data. In cases when the latter is zero the FLUKA simulations are used to extrapolate from known data points. This gives a semi-experimental set of cross sections, which can be used to determine the activation. As will be seen, the difference of these cross sections and a direct FLUKA calculation is non-negligible.

The group cross sections used in FLUKA for low-energy neutron transport do not include explicit in-

⁴⁾The overestimate, of course, can still be infinitely large.

formation about the produced nuclides. This information has been extracted from the neutron data files ENDFB-VI and JENDL 3.2, and is used during the simulation. For each inelastic neutron interaction the produced radionuclide is sampled from this activation data⁵⁾.

After the production rates have been extracted from these simulations, the buildup and decay of the radionuclides are followed by the DeTra code[4]. Six irradiation times are considered for which the activity of to each individual radionuclide is calculated for 20 cooling times between zero and 30 years.

4 Normalization

The original idea behind the ω -factors of induced radioactivity being proportional to the inelastic interaction rate is neat because it parameterizes the residual activity in a simple and generic way with a quantity which is easy to extract from simulations. This quantity, the interaction density, is a simple scalar number and can thus be recorded in a mesh covering the region of interest with the desired spatial resolution.

The unit of the ω -factor, which at first look might appear bizarre, explicitly shows the normalization:

$$[\omega] = \frac{\text{Dose rate}}{\text{Star density rate}} = \frac{\text{Sv h}^{-1}}{\text{stars s}^{-1}\text{cm}^{-3}}. \quad (1)$$

The activity produced by low-energy neutrons, however, is not proportional to the star density. Thermal neutron activation is a fairly straightforward case because the residual nuclide production rates can be related to the neutron flux in the thermal regime. Like the star density this is a simple number and can therefore be given in a spatial mesh.

The neutrons between thermal and 20 MeV are more problematic. As can be seen from Fig. 2 the energy spectrum of neutrons can have quite different shapes in different environments. The only really proper procedure would be to include full spectral information, but this would require information on the full neutron spectrum, which would practically exclude scoring in a spatial mesh. The majority of non-thermal neutron activation reactions have a threshold around few MeV. Therefore it has been decided that the normalization of non-thermal low-energy neutron activation will be scaled with the neutron flux between 1 and 20 MeV. As will be shown by the results, this unfortunately does not completely remove the spectral dependence, although it greatly reduces it compared to the alternative of using the whole non-thermal flux. This normalization allows to characterize the low energy neutron activation also with a single number, suitable for spatial scoring.

Thus, for thermal and non-thermal low-energy neutrons the “ ω -factor” has the unit of

$$[\omega] = \frac{\text{Dose rate}}{\text{Neutron flux}} = \frac{\text{Sv h}^{-1}}{\text{s}^{-1}\text{cm}^{-2}}, \quad (2)$$

where the neutron flux is either that in the thermal group (of FLUKA) or in the energy range 1–20 MeV.

The values of the three quantities needed to apply the ω -factors depend to some extent on the simulation code. In particular the upper limit of the thermal neutron group can influence the simulated thermal flux. In FLUKA 0.414 eV is assumed and cross sections are processed at 293 K. Although neutron transport is rather well know physics, the 1–20 MeV neutron flux still depends on the neutron multiplicity given by the simulation code. This has some model-dependence, although the effect is not likely to be very

⁵⁾This means that the KERMA used in FLUKA is not correlated on the event basis, but only on average, with the produced residual nuclides.

	Aluminium	Iron	Lead
stars E>50 MeV	28.0	33.8	34.1
stars E>20 MeV	38.2	48.1	53.6
stars E> 0	40.0	50.0	55.4
n-flux 1–20 MeV	1740	1720	13400
thermal n-flux	6.2	8.1	820
energy deposition	7.6	8.4	7.6

Table 3: Number of stars and neutron tracklength (cm) produced by FLUKA in a 2 m long cylinder of 1 m radius hit by a 10 GeV proton beam. Values are given as integrals over the whole volume per incident proton. The total energy deposition (GeV) is given for reference only and is of no significance when renormalizing the ω -factors.

large [13]. More significant differences can be found in the star density - even between modern codes discrepancies can amount to a factor of up to two.

In order to provide some guideline for a renormalization of the present results to other codes, Table 3 gives the star densities, energy depositions and neutron fluxes in a simple cylindrical target geometry for three basic materials. In the simulations a 10 GeV proton was hitting the end of a 2 m long cylinder with 1 m radius. The beam spot was point-like at $(r,z)=(0,0)$. Stars and fluxes were averaged over the entire cylinder.

5 Results

With 4 different spectra, 6 irradiation times and a division of the ω -factors into three components, the amount of data for each material is significant and difficult to present in concise form. Extensive tables are given in appendix A, here only some of the most important materials and observations are illustrated.

Even the tables of appendix A give only a small fraction of the full information which is included in the computer-generated ω -files⁶⁾. In addition to the absorption-corrected ω -factors and the total activities, the full files also include the total emitted photon energy and the non-corrected ω -factors. For a more detailed analysis of small activated objects the gamma spectrum is needed in order to estimate correctly the attenuation. In the full files the spectrum corresponding to each ω -factor is given in 30 energy bins between 10 keV and 10 MeV. The spectrum has been adjusted to conserve energy, i.e. heights of gamma-lines are re-adjusted to compensate for the difference with respect to the center of a bin.

In addition to this basic information the full files include some auxiliary data, in particular:

- The relative star densities with 0, 20 MeV and 50 MeV thresholds, which allow to rescale the high-energy ω -factors to other thresholds.
- The high-energy and thermal neutron activation cross sections. The first is needed to construct compounds from the ω -factors of the elements.

⁶⁾These are simple ASCII files and can be made available on simple request

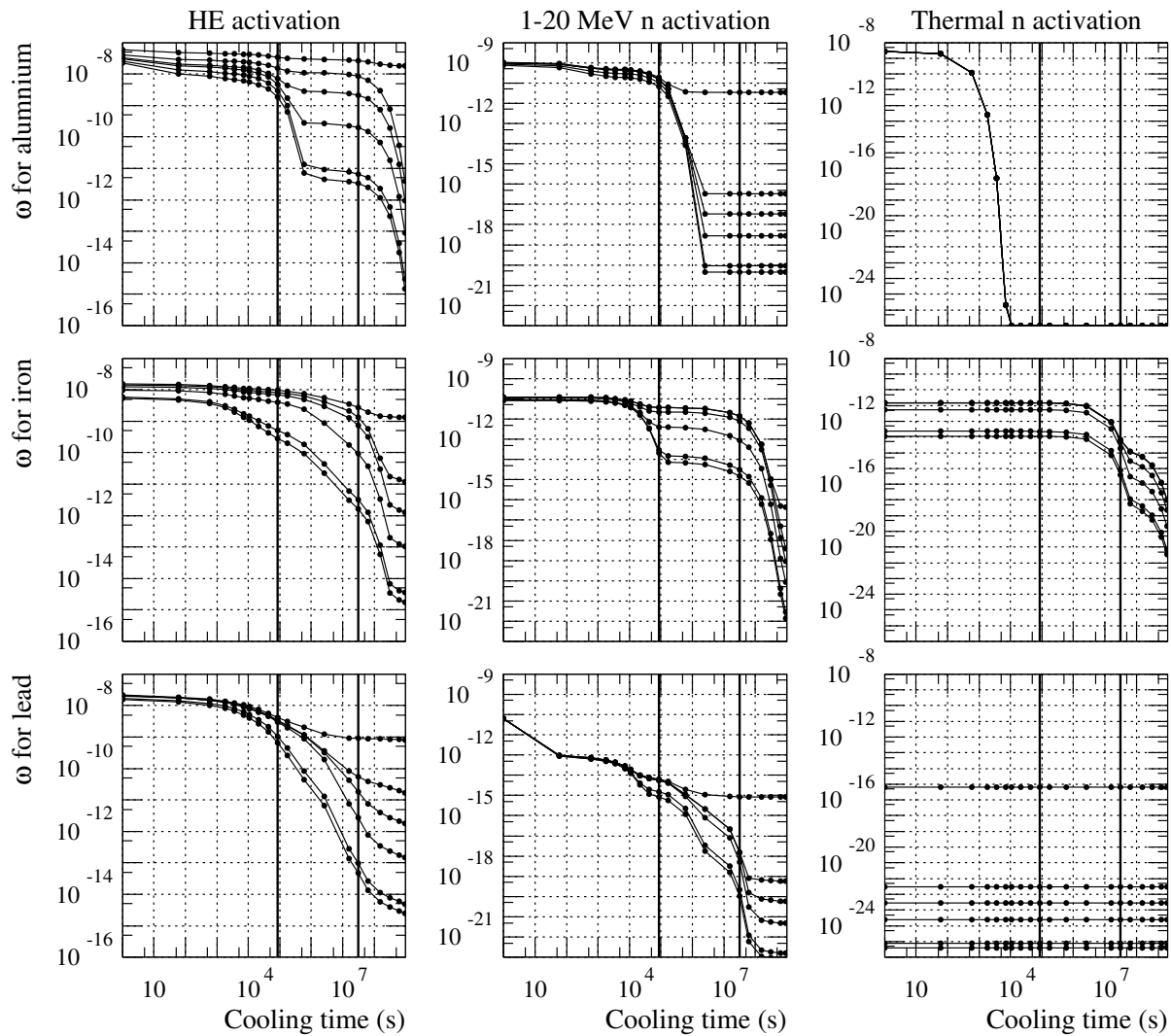


Figure 3: The ω -factors for aluminium, iron and lead for the four spectra considered. The six curves, counted from bottom up, represent irradiation times of 12 h, 1 day, 30 days, 1 year, 10 years and infinity. The two vertical lines indicate cooling times of 1 day and 1 year.

- The 1–20 MeV neutron tracklength per star generated. This could be used to absorb the low-energy neutron activation in the high-energy ω -factors. But such a procedure is not recommended.
- The top-5 nuclides contributing to the ω -factor and their percentual contribution. These can be very useful when comparing the factors with experimental γ -spectra of irradiated samples.

5.1 Activation of Al, Fe and Pb

Among the most important metals for accelerator applications are aluminium, iron and lead. In addition these represent three quite different cases with respect to the number of different radionuclide species produced. Thus these form a suitable example set to be discussed in more detail.

Fig. 3 shows the ω -factors for aluminium, iron and lead in graphical form. For this plot spectrum 2 is

used⁷⁾. It is reminded that the normalization is with respect to star density for the High-Energy activation, and the corresponding neutron tracklength in the other cases.

In the high-energy activation of aluminium two isotopes play a dominant role and are easily recognized: ^{24}Na and ^{22}Na with half-lives of 15 h and 2.6 years, respectively. Only in an essentially infinite irradiation the activity of ^{26}Al rises to a finite value (assuming equal sharing between ^{26}Al and ^{26m}Al).

The low-energy activation in aluminium produces no ^{22}Na , so only ^{24}Na and ^{26}Al are significant at cooling times longer than an hour.

The only isotope produced by the thermal (n, γ) reaction is ^{28}Al . Due to its short half-life ($\ll 12$ h) it is in saturation in all six cases and only one curve is visible in the plot.

In iron, activated by high-energy hadrons, several isotopes give contributions to the dose and their relative importance depends both on the irradiation and the cooling time. For instance after 1 day of cooling ^{52}Mn is the dominant isotope if the irradiation lasted 30 days, but for an infinite irradiation ^{54}Mn dominates. After 1 year of cooling ^{54}Mn dominates in both cases, but while it contributes 98% for the 30 day irradiation, it gives only 73% for the infinite irradiation, ^{50}V making up for most of the rest.

For 1–20 MeV neutrons the curves suggest the presence of 2 isotopes. There are actually three: ^{56}Mn , which dominates at short cooling times and ^{59}Fe and ^{54}Mn which have half-lives times similar enough that they are not easily distinguishable in the curves. These two together dominate at cooling times longer than a day.

Thermal activation of iron produces ^{55}Fe and ^{59}Fe of which the first is radiologically almost insignificant and the second is produced in fairly small quantities due to the small natural abundance of ^{58}Fe . Thus the thermal activation of pure iron is very low – but beware of traces of cobalt in a real material.

Lead is the third material shown in Fig. 3. Here the high-energy activation is even more complicated than in the case of iron. According to FLUKA a total of 1812 residual nuclides are produced for spectrum 2 and similar amounts for the other spectra. The yields of these vary by orders of magnitude and not all are radioactive. However, from the mass of nuclides produced none alone is dominating the activation, no matter what the irradiation or cooling time is. Correspondingly the decay curves are very smooth without any step-like structure.

Also for the 1–20 MeV activation several isotopes contribute depending on the irradiation and cooling times.

The thermal activation of pure lead is essentially negligible – the only isotope of any significance is ^{205}Pb .

5.1.1 Effect of the spectrum

Four spectra have been used in this study in order to test the universality of the ω -factors. Ideally the definition should be such that there would be no dependence on the spectrum. In reality this condition is known to be difficult to achieve, especially for the 1–20 MeV neutrons. For the thermal neutrons – described by a single energy group – the ω -factors are by definition of universal validity.

Table 4 summarizes the ω -factors of high-energy activation for an irradiation of 30 days and a cooling of 1 day and for an irradiation of 10 years and a cooling of 30 days. It can be seen that there is no clear systematic dependence on the spectrum but the ratios between ω -factors depend on the spectrum, the

⁷⁾In this graphical representation, spanning many orders of magnitude, the differences between spectra would be barely visible

		Aluminium	Iron	Lead	
$t_i=30$ d	spectrum 1	5.8×10^{-9}	2.0×10^{-9}	1.4×10^{-9}	
	spectrum 2	$\times 0.81$	$\times 2.00$	$\times 2.14$	
	$t_c=1$ d	spectrum 3	$\times 1.22$	$\times 1.10$	$\times 1.21$
		spectrum 4	$\times 0.91$	$\times 0.80$	$\times 0.78$
		Aluminium	Iron	Lead	
$t_i=10$ yr	spectrum 1	1.3×10^{-8}	4.0×10^{-9}	6.9×10^{-11}	
	spectrum 2	$\times 0.85$	$\times 1.05$	$\times 5.36$	
	$t_c=30$ d	spectrum 3	$\times 1.08$	$\times 1.00$	$\times 1.06$
		spectrum 4	$\times 1.00$	$\times 1.03$	$\times 0.57$

Table 4: Comparison of high-energy ω -factors for different spectra after two irradiation/cooling conditions. The factors indicate the relative difference with respect to spectrum one.

		Aluminium	Iron	Lead	
$t_i=30$ d	spectrum 1	6.7×10^{-11}	9.5×10^{-12}	2.4×10^{-14}	
	spectrum 2	$\times 2.39$	$\times 0.43$	$\times 2.29$	
	$t_c=1$ d	spectrum 3	$\times 3.43$	$\times 0.35$	$\times 3.50$
		spectrum 4	$\times 1.79$	$\times 0.46$	$\times 1.67$
		Aluminium	Iron	Lead	
$t_i=10$ yr	spectrum 1	1.2×10^{-16}	2.9×10^{-11}	9.6×10^{-16}	
	spectrum 2	$\times 2.75$	$\times 1.14$	$\times 2.19$	
	$t_c=30$ d	spectrum 3	$\times 4.67$	$\times 1.21$	$\times 4.38$
		spectrum 4	$\times 1.42$	$\times 1.10$	$\times 1.67$

Table 5: Comparison of 1–20 MeV neutron ω -factors for different spectra after two irradiation/cooling conditions. The factors indicate the relative difference with respect to spectrum one.

material but also the irradiation and cooling conditions. In particular the ω -factors seem to get universal in aluminium and iron for long-lived isotopes, whereas in lead the spectrum dependence increases with long irradiation and cooling times.

Table 5 shows the corresponding comparison for the 1–20 MeV neutron activation.

A violation of universality for the 1–20 MeV neutron activation is due to the fact that the flux is scored over a wide energy range. If the activation reaction would have a step-like threshold at exactly 1 MeV and be constant thereafter, then the ω -factors would be universal by definition. In reality the activation thresholds are typically somewhere in this energy range and are not exactly step-like. Thus, unfortunately, the shape of the spectrum within the 1–20 MeV bin plays a significant role. From Fig. 2 it can be seen that spectrum 1 has in this range a shape totally different from the others. Thus it can be expected that this one deviates most significantly from the three other spectra, which are fairly similar between 1–20 MeV. Another feature of the normalization chosen is that it does not cover the resonance region

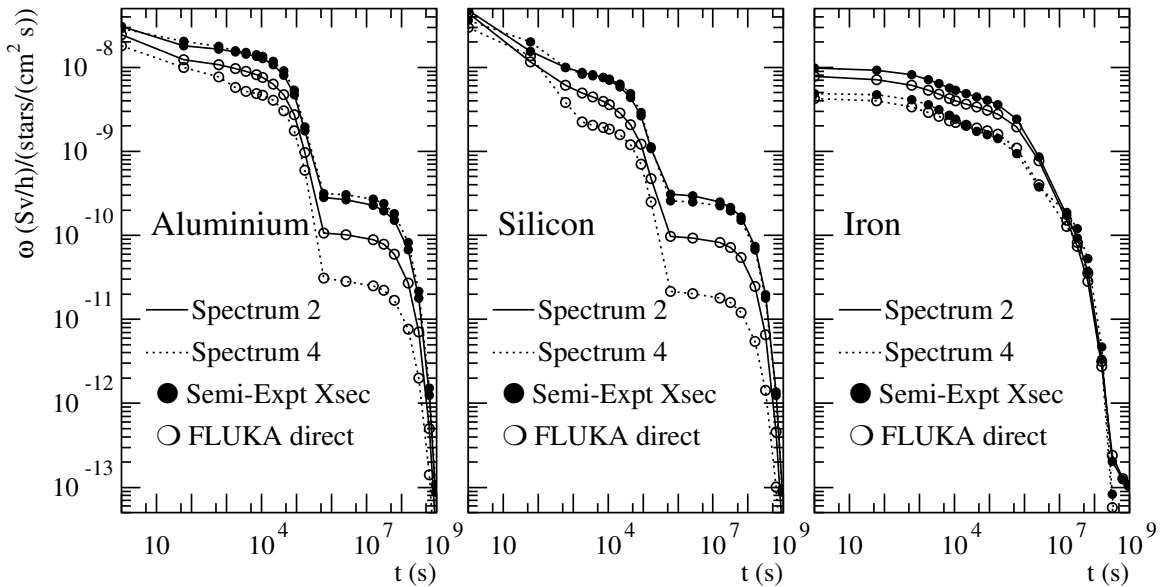


Figure 4: High-energy ω -factors for Al, Si and Fe, calculated directly with FLUKA and by using semi-experimental cross sections. Compared are spectrum 2 (mostly charged hadrons) and spectrum 4 (mostly soft neutrons).

where (n,γ) -reactions can also contribute some activation⁸⁾.

Indeed, an inspection of Table 5 reveals that spectrum 1 is in most cases the most significant out-lier, but also spectrum 3 differs from the others by a non-negligible amount. Like for the high-energy activation there is no clear systematic behavior.

5.1.2 Comparison with semi-experimental cross sections

As was stated before, for aluminium sufficient data on production of ^7Be , ^{22}Na and ^{24}Na exist to allow the use of these experimental cross sections. However, some extrapolation is needed, thus the finally used cross-sections are here referred to as semi-experimental. Fig.4 shows that the activity given by these cross sections is higher than that calculated directly with FLUKA and at certain cooling times the difference can be quite significant. This is also true for silicon, where the same three radionuclides dominate the activation. Thus, for aluminium and silicon, these semi-experimental cross sections have been used to determine the high-energy ω -factors.

It is shown in [8] that for iron a similar comparison indicates good agreement between such semi-experimental cross sections and FLUKA simulations. This observation is reproduced in Fig.4 using the spectra of this study. It should be remarked that due to the multitude of produced isotopes (experimental data was found for 29 isotopes [10, 12]), the extrapolation methods used were more rudimentary than for Al and Si. In fact the most pessimistic reasonable assumptions were used for energies and particles with unknown cross section. With a more detailed analysis the difference between FLUKA and the semi-experimental cross section probably would be even smaller. Concerning even heavier elements

⁸⁾All these reactions are of course included in the evaluation, but the normalization is with a flux from a totally different energy range.

a use of experimental cross section would become very tedious. The results in [3] indicate excellent agreement of FLUKA simulations and experimental data for 355 MeV/c pion irradiated PbWO₄. This observation, together with the good agreement seen for iron, supports the argument [6] that activation at accelerators can be treated “statistically” if the target element is heavy enough so that many residual nuclide species are produced and no single isotope can dominate over the others. In this case an error in the estimate of the yield of one isotope is usually compensated elsewhere.

6 Compound materials

Due to their definition the ω -factors of the elements can be used to construct ω -factors of any compound containing these elements.

For the high-energy activation, normalized by star density, the relative inelastic cross sections σ_i have to be used together with the atomic mass A_i and partial densities ρ_i^p (g/cm³) to derive from the total star density the fraction F_i corresponding to element i .

$$F_i = \frac{\frac{\sigma_i \rho_i^p}{A_i}}{\sum_i \frac{\sigma_i \rho_i^p}{A_i}} \quad (3)$$

The photon energy E_i (MeV) emitted can be derived from the ω -factor as

$$E_i = \frac{2\rho_i}{3600 \times 1.6 \times 10^{-10}} \omega_i, \quad (4)$$

where ρ_i is the density of the material.

This energy is proportional to the star density and thus the knowledge of F_i allows to calculate the energy fraction $F_i E_i$. The ω -factor of the compound can then be estimated as

$$\omega_{\text{comp}} = 3600 \times 1.6 \times 10^{-10} \times \frac{\sum_i F_i E_i}{2\rho_{\text{comp}}}, \quad (5)$$

which simplifies to

$$\omega_{\text{comp}} = \frac{\sum_i F_i \rho_i \omega_i}{\rho_{\text{comp}}}. \quad (6)$$

The two neutron activation “ ω -factors” are normalized with respect to the tracklength of neutrons. This tracklength is proportional to the density, thus – according to Eq. 4 – also the energy emitted is proportional to the tracklength and the factor F_i is now given by

$$F_i = \frac{\rho_i^p}{\rho_i}, \quad (7)$$

where ρ_i is the normal density of element i and ρ_i^p its partial density in the compound. With this definition of F_i , Eq. 6 is valid also for neutron activation “ ω -factors”.

Actually Eq. 4 is not exactly correct for the ω -factors which include the correction by the mass-absorption coefficients of the emitting material and tissue. But in most cases the error made by neglecting this effect is negligible. It can be taken properly into account if the full emitted spectrum is used to recompute the correction for the compound.

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A Tables of ω -factors

A.1 High-energy activation

The following tables give the ω -factors and total activities for 19 materials, the four different spectra and several combinations of irradiation and cooling times. The two quantities are separated by a slash, the first being the ω -factor and the second the total activity. The latter includes all decays, whether a γ is emitted or not, whereas the ω -factors refer only to the dose due to photons.

Except for the lightest elements, high-energy activation typically leads to a large number of different radionuclides. This leads to a fairly smooth dependence on irradiation and cooling times.

In cases where the produced nucleus has metastable states, equal share between all such states and the ground state is assumed.

Table 6 gives the activation of natural carbon ($\rho=2.0 \text{ g/cm}^3$).

Table 7 gives the activation for natural oxygen ($\rho=1.141 \text{ g/cm}^3$ (liquid)).

Table 8 gives the activation for natural sodium ($\rho=0.971 \text{ g/cm}^3$).

Table 9 gives the activation for natural magnesium ($\rho=1.738 \text{ g/cm}^3$).

Table 10 gives the activation for natural aluminium ($\rho=2.7 \text{ g/cm}^3$). These are based on experimental production rates of ^7Be , ^{22}Na and ^{24}Na . Production of other nuclides from FLUKA simulation.

Table 11 gives the activation for natural silicon ($\rho=2.33 \text{ g/cm}^3$). These are based on experimental production rates of ^7Be , ^{22}Na and ^{24}Na . Production of other nuclides from FLUKA simulation.

Table 12 gives the activation for natural potassium ($\rho=0.862 \text{ g/cm}^3$).

Table 13 gives the activation for natural calcium ($\rho=1.55 \text{ g/cm}^3$).

Table 14 gives the activation for natural chromium ($\rho=7.18 \text{ g/cm}^3$).

Table 15 gives the activation for natural manganese ($\rho=7.43 \text{ g/cm}^3$).

Table 16 gives the activation for natural iron ($\rho=7.87 \text{ g/cm}^3$).

Table 17 gives the activation for natural nickel ($\rho=8.902 \text{ g/cm}^3$).

Table 18 gives the activation for natural copper ($\rho=8.96 \text{ g/cm}^3$).

Table 19 gives the activation for natural niobium ($\rho=8.55 \text{ g/cm}^3$).

Table 20 gives the activation for natural silver ($\rho=10.5 \text{ g/cm}^3$).

Table 21 gives the activation for natural barium ($\rho=3.5 \text{ g/cm}^3$).

Table 22 gives the activation for natural tungsten ($\rho=19.3 \text{ g/cm}^3$).

Table 23 gives the activation for natural gold ($\rho=19.3 \text{ g/cm}^3$).

Table 24 gives the activation for natural lead ($\rho=11.35 \text{ g/cm}^3$).

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	1.4E-8 / 1.1E-1	1.4E-8 / 1.1E-1	1.4E-8 / 1.2E-1	1.4E-8 / 1.3E-1	1.4E-8 / 1.5E-1	1.4E-8 / 1.8E-1
	1 min	1.2E-8 / 7.1E-2	1.2E-8 / 7.1E-2	1.2E-8 / 7.7E-2	1.2E-8 / 9.1E-2	1.2E-8 / 1.1E-1	1.2E-8 / 1.4E-1
	10 min	8.5E-9 / 5.2E-2	8.5E-9 / 5.2E-2	8.5E-9 / 5.8E-2	8.6E-9 / 7.2E-2	8.6E-9 / 8.8E-2	8.6E-9 / 1.2E-1
	30 min	4.3E-9 / 2.6E-2	4.3E-9 / 2.7E-2	4.4E-9 / 3.2E-2	4.4E-9 / 4.6E-2	4.5E-9 / 6.2E-2	4.5E-9 / 9.7E-2
	1 h	1.6E-9 / 9.6E-3	1.6E-9 / 9.7E-3	1.6E-9 / 1.5E-2	1.7E-9 / 2.9E-2	1.7E-9 / 4.5E-2	1.7E-9 / 8.0E-2
	2 h	2.0E-10 / 1.4E-3	2.0E-10 / 1.5E-3	2.5E-10 / 7.2E-3	3.4E-10 / 2.1E-2	3.5E-10 / 3.7E-2	3.5E-10 / 7.2E-2
	3 h	2.7E-11 / 2.8E-4	2.8E-11 / 4.0E-4	7.3E-11 / 6.1E-3	1.7E-10 / 2.0E-2	1.7E-10 / 3.6E-2	1.7E-10 / 7.1E-2
	6 h	9.9E-13 / 1.2E-4	1.9E-12 / 2.4E-4	4.6E-11 / 5.9E-3	1.4E-10 / 2.0E-2	1.4E-10 / 3.6E-2	1.4E-10 / 7.1E-2
	12 h	9.3E-13 / 1.2E-4	1.8E-12 / 2.4E-4	4.6E-11 / 5.9E-3	1.4E-10 / 2.0E-2	1.4E-10 / 3.6E-2	1.4E-10 / 7.1E-2
	1 d	9.2E-13 / 1.2E-4	1.8E-12 / 2.3E-4	4.6E-11 / 5.9E-3	1.4E-10 / 2.0E-2	1.4E-10 / 3.6E-2	1.4E-10 / 7.0E-2
	2 d	9.1E-13 / 1.2E-4	1.8E-12 / 2.3E-4	4.5E-11 / 5.8E-3	1.4E-10 / 2.0E-2	1.4E-10 / 3.5E-2	1.4E-10 / 7.0E-2
	7 d	8.5E-13 / 1.1E-4	1.7E-12 / 2.2E-4	4.2E-11 / 5.5E-3	1.3E-10 / 1.8E-2	1.3E-10 / 3.4E-2	1.3E-10 / 6.9E-2
	30 d	6.3E-13 / 8.2E-5	1.3E-12 / 1.6E-4	3.2E-11 / 4.1E-3	9.7E-11 / 1.4E-2	9.8E-11 / 3.0E-2	9.8E-11 / 6.5E-2
	182 d	8.7E-14 / 1.4E-5	1.7E-13 / 2.8E-5	4.3E-12 / 7.2E-4	1.3E-11 / 3.9E-3	1.3E-11 / 1.9E-2	1.3E-11 / 5.3E-2
	1 yr	8.1E-15 / 4.0E-6	1.6E-14 / 8.1E-6	4.0E-13 / 2.3E-4	1.2E-12 / 2.3E-3	1.2E-12 / 1.7E-2	1.2E-12 / 5.1E-2
	2 yr	7.0E-17 / 2.9E-6	1.4E-16 / 5.8E-6	3.5E-15 / 1.7E-4	1.1E-14 / 2.0E-3	1.1E-14 / 1.6E-2	1.1E-14 / 4.8E-2
	5 yr	4.6E-23 / 2.4E-6	9.1E-23 / 4.9E-6	2.3E-21 / 1.5E-4	7.0E-21 / 1.7E-3	7.1E-21 / 1.4E-2	7.1E-21 / 4.3E-2
10 yr	0.0E+0 / 1.8E-6	0.0E+0 / 3.7E-6	0.0E+0 / 1.1E-4	0.0E+0 / 1.3E-3	0.0E+0 / 1.0E-2	0.0E+0 / 3.5E-2	
20 yr	0.0E+0 / 1.0E-6	0.0E+0 / 2.1E-6	0.0E+0 / 6.3E-5	0.0E+0 / 7.4E-4	0.0E+0 / 5.8E-3	0.0E+0 / 2.9E-2	
30 yr	0.0E+0 / 6.0E-7	0.0E+0 / 1.2E-6	0.0E+0 / 3.6E-5	0.0E+0 / 4.2E-4	0.0E+0 / 3.3E-3	0.0E+0 / 1.5E-2	
2)	0	2.2E-8 / 1.6E-1	2.2E-8 / 1.6E-1	2.2E-8 / 1.7E-1	2.2E-8 / 1.9E-1	2.2E-8 / 2.1E-1	2.2E-8 / 2.6E-1
	1 min	1.9E-8 / 1.2E-1	1.9E-8 / 1.2E-1	1.9E-8 / 1.3E-1	2.0E-8 / 1.5E-1	2.0E-8 / 1.8E-1	2.0E-8 / 2.2E-1
	10 min	1.4E-8 / 8.6E-2	1.4E-8 / 8.7E-2	1.4E-8 / 9.7E-2	1.4E-8 / 1.2E-1	1.4E-8 / 1.4E-1	1.4E-8 / 1.9E-1
	30 min	7.2E-9 / 4.4E-2	7.2E-9 / 4.4E-2	7.2E-9 / 5.4E-2	7.4E-9 / 7.8E-2	7.4E-9 / 1.0E-1	7.4E-9 / 1.5E-1
	1 h	2.6E-9 / 1.6E-2	2.6E-9 / 1.6E-2	2.7E-9 / 2.6E-2	2.8E-9 / 5.0E-2	2.8E-9 / 7.3E-2	2.8E-9 / 1.2E-1
	2 h	3.4E-10 / 2.3E-3	3.4E-10 / 2.5E-3	4.2E-10 / 1.2E-2	5.9E-10 / 3.6E-2	5.9E-10 / 6.0E-2	5.9E-10 / 1.1E-1
	3 h	4.5E-11 / 4.7E-4	4.7E-11 / 6.8E-4	1.3E-10 / 1.1E-2	2.9E-10 / 3.5E-2	3.0E-10 / 5.8E-2	3.0E-10 / 1.1E-1
	6 h	1.7E-12 / 2.1E-4	3.4E-12 / 4.1E-4	8.2E-11 / 1.0E-2	2.5E-10 / 3.4E-2	2.5E-10 / 5.7E-2	2.5E-10 / 1.1E-1
	12 h	1.6E-12 / 2.1E-4	3.2E-12 / 4.1E-4	8.1E-11 / 1.0E-2	2.5E-10 / 3.4E-2	2.5E-10 / 5.7E-2	2.5E-10 / 1.1E-1
	1 d	1.6E-12 / 2.1E-4	3.2E-12 / 4.1E-4	8.1E-11 / 1.0E-2	2.5E-10 / 3.4E-2	2.5E-10 / 5.7E-2	2.5E-10 / 1.0E-1
	2 d	1.6E-12 / 2.0E-4	3.2E-12 / 4.0E-4	8.0E-11 / 1.0E-2	2.4E-10 / 3.4E-2	2.5E-10 / 5.7E-2	2.5E-10 / 1.0E-1
	7 d	1.5E-12 / 1.9E-4	3.0E-12 / 3.8E-4	7.5E-11 / 9.5E-3	2.3E-10 / 3.2E-2	2.3E-10 / 5.5E-2	2.3E-10 / 1.0E-1
	30 d	1.1E-12 / 1.4E-4	2.2E-12 / 2.8E-4	5.5E-11 / 7.1E-3	1.7E-10 / 2.4E-2	1.7E-10 / 4.7E-2	1.7E-10 / 9.5E-2
	182 d	1.5E-13 / 2.3E-5	3.0E-13 / 4.7E-5	7.6E-12 / 1.2E-3	2.3E-11 / 6.1E-3	2.4E-11 / 2.8E-2	2.4E-11 / 7.5E-2
	1 yr	1.4E-14 / 6.2E-6	2.8E-14 / 1.2E-5	7.1E-13 / 3.5E-4	2.2E-12 / 3.4E-3	2.2E-12 / 2.5E-2	2.2E-12 / 7.1E-2
	2 yr	1.2E-16 / 4.2E-6	2.5E-16 / 8.4E-6	6.1E-15 / 2.5E-4	1.9E-14 / 3.0E-3	1.9E-14 / 2.3E-2	1.9E-14 / 6.7E-2
	5 yr	8.0E-23 / 3.5E-6	1.6E-22 / 7.1E-6	4.0E-21 / 2.1E-4	1.2E-20 / 2.5E-3	1.2E-20 / 2.0E-2	1.2E-20 / 5.9E-2
10 yr	0.0E+0 / 2.7E-6	0.0E+0 / 5.3E-6	0.0E+0 / 1.6E-4	0.0E+0 / 1.9E-3	0.0E+0 / 1.5E-2	0.0E+0 / 4.8E-2	
20 yr	0.0E+0 / 1.5E-6	0.0E+0 / 3.0E-6	0.0E+0 / 9.1E-5	0.0E+0 / 1.1E-3	0.0E+0 / 8.5E-3	0.0E+0 / 3.3E-2	
30 yr	0.0E+0 / 8.7E-7	0.0E+0 / 1.7E-6	0.0E+0 / 5.2E-5	0.0E+0 / 6.2E-4	0.0E+0 / 4.8E-3	0.0E+0 / 2.4E-2	
3)	0	1.5E-8 / 1.2E-1	1.5E-8 / 1.2E-1	1.6E-8 / 1.3E-1	1.6E-8 / 1.4E-1	1.6E-8 / 1.6E-1	1.6E-8 / 2.0E-1
	1 min	1.3E-8 / 8.0E-2	1.3E-8 / 8.0E-2	1.3E-8 / 8.6E-2	1.3E-8 / 1.0E-1	1.3E-8 / 1.2E-1	1.3E-8 / 1.6E-1
	10 min	9.6E-9 / 5.9E-2	9.6E-9 / 5.9E-2	9.6E-9 / 6.5E-2	9.7E-9 / 8.0E-2	9.7E-9 / 9.6E-2	9.7E-9 / 1.3E-1
	30 min	4.9E-9 / 3.0E-2	4.9E-9 / 3.0E-2	4.9E-9 / 3.6E-2	4.9E-9 / 5.1E-2	5.0E-9 / 6.7E-2	5.0E-9 / 1.1E-1
	1 h	1.8E-9 / 1.1E-2	1.8E-9 / 1.1E-2	1.8E-9 / 1.7E-2	1.9E-9 / 3.2E-2	1.9E-9 / 4.8E-2	1.9E-9 / 8.7E-2
	2 h	2.3E-10 / 1.5E-3	2.3E-10 / 1.6E-3	2.8E-10 / 7.7E-3	3.8E-10 / 2.3E-2	3.8E-10 / 3.9E-2	3.8E-10 / 7.7E-2
	3 h	3.1E-11 / 3.1E-4	3.2E-11 / 4.3E-4	7.9E-11 / 6.5E-3	1.8E-10 / 2.1E-2	1.8E-10 / 3.8E-2	1.8E-10 / 7.6E-2
	6 h	1.1E-12 / 1.3E-4	2.0E-12 / 2.5E-4	4.9E-11 / 6.3E-3	1.5E-10 / 2.1E-2	1.5E-10 / 3.8E-2	1.5E-10 / 7.6E-2
	12 h	9.8E-13 / 1.3E-4	2.0E-12 / 2.5E-4	4.9E-11 / 6.3E-3	1.5E-10 / 2.1E-2	1.5E-10 / 3.8E-2	1.5E-10 / 7.6E-2
	1 d	9.8E-13 / 1.2E-4	1.9E-12 / 2.5E-4	4.9E-11 / 6.2E-3	1.5E-10 / 2.1E-2	1.5E-10 / 3.7E-2	1.5E-10 / 7.6E-2
	2 d	9.6E-13 / 1.2E-4	1.9E-12 / 2.5E-4	4.8E-11 / 6.2E-3	1.5E-10 / 2.1E-2	1.5E-10 / 3.7E-2	1.5E-10 / 7.5E-2
	7 d	9.0E-13 / 1.2E-4	1.8E-12 / 2.3E-4	4.5E-11 / 5.8E-3	1.4E-10 / 2.0E-2	1.4E-10 / 3.6E-2	1.4E-10 / 7.4E-2
	30 d	6.7E-13 / 8.6E-5	1.3E-12 / 1.7E-4	3.3E-11 / 4.3E-3	1.0E-10 / 1.5E-2	1.0E-10 / 3.1E-2	1.0E-10 / 7.0E-2
	182 d	9.2E-14 / 1.5E-5	1.8E-13 / 2.9E-5	4.6E-12 / 7.6E-4	1.4E-11 / 4.1E-3	1.4E-11 / 2.0E-2	1.4E-11 / 5.7E-2
	1 yr	8.6E-15 / 4.2E-6	1.7E-14 / 8.4E-6	4.3E-13 / 2.4E-4	1.3E-12 / 2.4E-3	1.3E-12 / 1.8E-2	1.3E-12 / 5.5E-2
	2 yr	7.4E-17 / 3.0E-6	1.5E-16 / 6.0E-6	3.7E-15 / 1.8E-4	1.1E-14 / 2.1E-3	1.1E-14 / 1.7E-2	1.1E-14 / 5.2E-2
	5 yr	4.9E-23 / 2.5E-6	9.7E-23 / 5.0E-6	2.4E-21 / 1.5E-4	7.4E-21 / 1.8E-3	7.5E-21 / 1.4E-2	7.5E-21 / 4.6E-2
10 yr	0.0E+0 / 1.9E-6	0.0E+0 / 3.8E-6	0.0E+0 / 1.1E-4	0.0E+0 / 1.4E-3	0.0E+0 / 1.1E-2	0.0E+0 / 3.8E-2	
20 yr	0.0E+0 / 1.1E-6	0.0E+0 / 2.2E-6	0.0E+0 / 6.5E-5	0.0E+0 / 7.7E-4	0.0E+0 / 6.1E-3	0.0E+0 / 2.8E-2	
30 yr	0.0E+0 / 6.2E-7	0.0E+0 / 1.2E-6	0.0E+0 / 3.7E-5	0.0E+0 / 4.4E-4	0.0E+0 / 3.5E-3	0.0E+0 / 2.2E-2	
4)	0	1.1E-8 / 9.9E-2	1.1E-8 / 9.9E-2	1.1E-8 / 1.0E-1	1.2E-8 / 1.2E-1	1.2E-8 / 1.3E-1	1.2E-8 / 1.6E-1
	1 min	9.5E-9 / 5.8E-2	9.5E-9 / 5.8E-2	9.5E-9 / 6.3E-2	9.6E-9 / 7.4E-2	9.6E-9 / 8.8E-2	9.6E-9 / 1.2E-1
	10 min	6.9E-9 / 4.2E-2	6.9E-9 / 4.3E-2	7.0E-9 / 4.7E-2	7.0E-9 / 5.9E-2	7.0E-9 / 7.2E-2	7.0E-9 / 1.0E-1
	30 min	3.5E-9 / 2.2E-2	3.5E-9 / 2.2E-2	3.5E-9 / 2.6E-2	3.6E-9 / 3.8E-2	3.6E-9 / 5.2E-2	3.6E-9 / 8.2E-2
	1 h	1.3E-9 / 7.8E-3	1.3E-9 / 7.9E-3	1.3E-9 / 1.3E-2	1.4E-9 / 2.4E-2	1.4E-9 / 3.8E-2	1.4E-9 / 6.8E-2
	2 h	1.7E-10 / 1.1E-3	1.7E-10 / 1.2E-3	2.0E-10 / 5.9E-3	2.8E-10 / 1.8E-2	2.8E-10 / 3.1E-2	2.8E-10 / 6.1E-2
	3 h	2.2E-11 / 2.3E-4	2.3E-11 / 3.3E-4	6.0E-11 / 5.0E-3	1.4E-10 / 1.7E-2	1.4E-10 / 3.0E-2	1.4E-10 / 6.0E-2
	6 h	8.1E-13 / 9.8E-5	1.6E-12 / 2.0E-4	3.8E-11 / 4.9E-3	1.2E-10 / 1.6E-2	1.2E-10 / 3.0E-2	1.2E-10 / 6.0E-2
	12 h	7.6E-13 / 9.7E-5	1.5E-12 / 1.9E-4	3.8E-11 / 4.9E-3	1.2E-10 / 1.6E-2	1.2E-10 / 3.0E-2	1.2E-10 / 6.0E-2
	1 d	7.6E-13 / 9.7E-5	1.5E-12 / 1.9E-4	3.8E-11 / 4.9E-3	1.2E-10 / 1.6E-2	1.2E-10 / 3.0E-2	1.2E-10 / 6.0E-2
	2 d	7.5E-13 / 9.6E-5	1.5E-12 / 1.9E-4	3.7E-11 / 4.8E-3	1.1E-10 / 1.6E-2	1.2E-10 / 3.0E-2	1.2E-10 / 6.0E-2
	7 d	7.0E-13 / 9.0E-5	1.4E-12 / 1.8E-4	3.5E-11 / 4.5E-3	1.1E-10 / 1.5E-2	1.1E-10 / 2.9E-2	1.1E-10 / 5.9E-2
	30 d	5.2E-13 / 6.7E-5	1.0E-12 / 1.3E-4	2.6E-11 / 3.4E-3	8.0E-11 / 1.2E-2	8.0E-11 / 2.5E-2	8.0E-11 / 5.5E-2
	182 d	7.2E-14 / 1.2E-5	1.4E-13 / 2.3E-5	3.6E-12 / 6.0E-4	1.1E-11 / 3.3E-3	1.1E-11 / 1.6E-2	1.1E-11 / 4.6E-2
	1 yr	6.7E-15 / 3.4E-6	1.3E-14 / 6.9E-6	3.3E-13 / 2.0E-4	1.0E-12 / 2.0E-3	1.0E-12 / 1.5E-2	1.0E-12 / 4.4E-2
	2 yr	5.8E-17 / 2.5E-6	1.2E-16 / 5.0E-6	2.9E-15 / 1.5E-4	8.8E-15 / 1.8E-3	8.9E-15 / 1.4E-2	8.9E-15 / 4.2E-2
	5 yr	3.8E-23 / 2.1E-6	7.5E-23 / 4.2E-6	1.9E-21 / 1.2E-4	5.8E-21 / 1.5E-3	5.8E-21 / 1.2E-2	5.8E-21 / 3.7E-2
10 yr	0.0E+0 / 1.6E-6	0.0E+0 / 3.2E-6	0.0E+0 / 9.4E-5	0.0E+0 / 1.1E-3	0.0E+0 / 8.8E-3	0.0E+0 / 3.0E-2	
20 yr	0.0E+0 / 9.0E-7	0.0E+0 / 1.8E-6	0.0E+0 / 5.4E-5	0.0E+0 / 6.4E-4	0.0E+0 / 5.0E-3	0.0E+0 / 2.1E-2	
30 yr	0.0E+0 / 5.1E-7	0.0E+0 / 1.0E-6	0.0E+0 / 3.1E-5	0.0E+0 / 3.6E-4	0.0E+0 / 2.9E-3	0.0E+0 / 1.6E-2	

Table 6: Carbon (C) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	4.2E-8 / 1.2E-1	4.2E-8 / 1.2E-1	4.2E-8 / 1.2E-1	4.2E-8 / 1.2E-1	4.2E-8 / 1.3E-1	4.2E-8 / 1.7E-1
	1 min	2.3E-8 / 7.6E-2	2.3E-8 / 7.6E-2	2.3E-8 / 7.8E-2	2.3E-8 / 8.3E-2	2.3E-8 / 9.1E-2	2.3E-8 / 1.3E-1
	10 min	5.4E-9 / 1.9E-2	5.4E-9 / 1.9E-2	5.4E-9 / 2.1E-2	5.5E-9 / 2.6E-2	5.5E-9 / 3.3E-2	5.5E-9 / 6.8E-2
	30 min	2.2E-9 / 7.8E-3	2.2E-9 / 7.9E-3	2.3E-9 / 9.8E-3	2.3E-9 / 1.5E-2	2.3E-9 / 2.2E-2	2.3E-9 / 5.7E-2
	1 h	7.7E-10 / 2.7E-3	7.7E-10 / 2.8E-3	8.0E-10 / 4.7E-3	8.5E-10 / 9.8E-3	8.5E-10 / 1.7E-2	8.5E-10 / 5.2E-2
	2 h	9.9E-11 / 3.9E-4	1.0E-10 / 4.3E-4	1.3E-10 / 2.4E-3	1.8E-10 / 7.4E-3	1.8E-10 / 1.5E-2	1.8E-10 / 5.0E-2
	3 h	1.4E-11 / 8.8E-5	1.5E-11 / 1.3E-4	4.1E-11 / 2.1E-3	9.9E-11 / 7.1E-3	9.9E-11 / 1.4E-2	9.9E-11 / 4.9E-2
	6 h	8.6E-13 / 4.2E-5	1.4E-12 / 8.2E-5	2.8E-11 / 2.0E-3	8.5E-11 / 7.1E-3	8.6E-11 / 1.4E-2	8.6E-11 / 4.9E-2
	12 h	5.8E-13 / 4.1E-5	1.1E-12 / 8.1E-5	2.8E-11 / 2.0E-3	8.5E-11 / 7.0E-3	8.5E-11 / 1.4E-2	8.5E-11 / 4.9E-2
	1 d	5.5E-13 / 4.0E-5	1.1E-12 / 8.1E-5	2.7E-11 / 2.0E-3	8.4E-11 / 7.0E-3	8.5E-11 / 1.4E-2	8.5E-11 / 4.9E-2
	2 d	5.4E-13 / 4.0E-5	1.1E-12 / 8.0E-5	2.7E-11 / 2.0E-3	8.3E-11 / 6.9E-3	8.4E-11 / 1.4E-2	8.4E-11 / 4.9E-2
	7 d	5.1E-13 / 3.7E-5	1.0E-12 / 7.5E-5	2.5E-11 / 1.9E-3	7.8E-11 / 6.6E-3	7.8E-11 / 1.4E-2	7.8E-11 / 4.9E-2
	30 d	3.8E-13 / 2.8E-5	7.5E-13 / 5.6E-5	1.9E-11 / 1.4E-3	5.8E-11 / 5.1E-3	5.8E-11 / 1.2E-2	5.8E-11 / 4.7E-2
	182 d	5.2E-14 / 5.1E-6	1.0E-13 / 1.0E-5	2.6E-12 / 2.7E-4	7.9E-12 / 1.6E-3	8.0E-12 / 8.7E-3	8.0E-12 / 4.3E-2
	1 yr	4.8E-15 / 1.8E-6	9.6E-15 / 3.5E-6	2.4E-13 / 1.0E-4	7.4E-13 / 1.1E-3	7.4E-13 / 8.0E-3	7.4E-13 / 4.2E-2
	2 yr	4.2E-17 / 1.3E-6	8.3E-17 / 2.7E-6	2.1E-15 / 8.0E-5	6.4E-15 / 9.5E-4	6.5E-15 / 7.5E-3	6.5E-15 / 4.1E-2
	5 yr	2.7E-23 / 1.1E-6	5.4E-23 / 2.3E-6	1.4E-21 / 6.8E-5	4.2E-21 / 8.0E-4	4.2E-21 / 6.3E-3	4.2E-21 / 3.8E-2
	10 yr	0.0E+0 / 8.5E-7	0.0E+0 / 1.7E-6	0.0E+0 / 5.1E-5	0.0E+0 / 6.1E-4	0.0E+0 / 4.8E-3	0.0E+0 / 3.5E-2
	20 yr	0.0E+0 / 4.9E-7	0.0E+0 / 9.8E-7	0.0E+0 / 2.9E-5	0.0E+0 / 3.5E-4	0.0E+0 / 2.7E-3	0.0E+0 / 3.0E-2
30 yr	0.0E+0 / 2.8E-7	0.0E+0 / 5.6E-7	0.0E+0 / 1.7E-5	0.0E+0 / 2.0E-4	0.0E+0 / 1.6E-3	0.0E+0 / 2.7E-2	
2)	0	6.0E-8 / 1.9E-1	6.0E-8 / 1.9E-1	6.0E-8 / 1.9E-1	6.1E-8 / 2.0E-1	6.1E-8 / 2.2E-1	6.1E-8 / 2.7E-1
	1 min	3.9E-8 / 1.3E-1	3.9E-8 / 1.3E-1	3.9E-8 / 1.3E-1	3.9E-8 / 1.4E-1	3.9E-8 / 1.6E-1	3.9E-8 / 2.1E-1
	10 min	9.6E-9 / 3.4E-2	9.6E-9 / 3.4E-2	9.7E-9 / 3.8E-2	9.8E-9 / 4.9E-2	9.8E-9 / 6.3E-2	9.8E-9 / 1.1E-1
	30 min	4.0E-9 / 1.4E-2	4.0E-9 / 1.4E-2	4.0E-9 / 1.8E-2	4.2E-9 / 2.9E-2	4.2E-9 / 4.3E-2	4.2E-9 / 9.1E-2
	1 h	1.4E-9 / 4.8E-3	1.4E-9 / 4.9E-3	1.4E-9 / 9.3E-3	1.6E-9 / 2.0E-2	1.6E-9 / 3.4E-2	1.6E-9 / 8.2E-2
	2 h	1.7E-10 / 7.0E-4	1.8E-10 / 7.9E-4	2.4E-10 / 5.2E-3	3.7E-10 / 1.6E-2	3.7E-10 / 3.0E-2	3.7E-10 / 7.8E-2
	3 h	2.5E-11 / 1.7E-4	2.6E-11 / 2.7E-4	8.6E-11 / 4.7E-3	2.2E-10 / 1.6E-2	2.2E-10 / 2.9E-2	2.2E-10 / 7.7E-2
	6 h	1.7E-12 / 9.3E-5	3.0E-12 / 1.8E-4	6.3E-11 / 4.6E-3	1.9E-10 / 1.6E-2	1.9E-10 / 2.9E-2	1.9E-10 / 7.7E-2
	12 h	1.3E-12 / 9.2E-5	2.5E-12 / 1.8E-4	6.2E-11 / 4.6E-3	1.9E-10 / 1.5E-2	1.9E-10 / 2.9E-2	1.9E-10 / 7.7E-2
	1 d	1.2E-12 / 9.1E-5	2.5E-12 / 1.8E-4	6.2E-11 / 4.6E-3	1.9E-10 / 1.5E-2	1.9E-10 / 2.9E-2	1.9E-10 / 7.7E-2
	2 d	1.2E-12 / 9.0E-5	2.4E-12 / 1.8E-4	6.1E-11 / 4.5E-3	1.9E-10 / 1.5E-2	1.9E-10 / 2.9E-2	1.9E-10 / 7.7E-2
	7 d	1.2E-12 / 8.4E-5	2.3E-12 / 1.7E-4	5.7E-11 / 4.2E-3	1.8E-10 / 1.4E-2	1.8E-10 / 2.8E-2	1.8E-10 / 7.6E-2
	30 d	8.5E-13 / 6.3E-5	1.7E-12 / 1.3E-4	4.3E-11 / 3.2E-3	1.3E-10 / 1.1E-2	1.3E-10 / 2.5E-2	1.3E-10 / 7.3E-2
	182 d	1.2E-13 / 1.1E-5	2.3E-13 / 2.2E-5	5.8E-12 / 5.7E-4	1.8E-11 / 3.2E-3	1.8E-11 / 1.6E-2	1.8E-11 / 6.4E-2
	1 yr	1.1E-14 / 3.4E-6	2.2E-14 / 6.7E-6	5.4E-13 / 1.9E-4	1.7E-12 / 2.0E-3	1.7E-12 / 1.5E-2	1.7E-12 / 6.2E-2
	2 yr	9.5E-17 / 2.5E-6	1.9E-16 / 4.9E-6	4.7E-15 / 1.5E-4	1.4E-14 / 1.7E-3	1.5E-14 / 1.4E-2	1.5E-14 / 6.0E-2
	5 yr	6.2E-23 / 2.1E-6	1.2E-22 / 4.1E-6	3.1E-21 / 1.2E-4	9.5E-21 / 1.5E-3	9.5E-21 / 1.2E-2	9.5E-21 / 5.5E-2
	10 yr	0.0E+0 / 1.6E-6	0.0E+0 / 3.1E-6	0.0E+0 / 9.3E-5	0.0E+0 / 1.1E-3	0.0E+0 / 8.7E-3	0.0E+0 / 4.8E-2
	20 yr	0.0E+0 / 8.9E-7	0.0E+0 / 1.8E-6	0.0E+0 / 5.3E-5	0.0E+0 / 6.3E-4	0.0E+0 / 5.0E-3	0.0E+0 / 4.0E-2
30 yr	0.0E+0 / 5.1E-7	0.0E+0 / 1.0E-6	0.0E+0 / 3.1E-5	0.0E+0 / 3.6E-4	0.0E+0 / 2.9E-3	0.0E+0 / 3.5E-2	
3)	0	4.4E-8 / 1.2E-1	4.4E-8 / 1.2E-1	4.4E-8 / 1.3E-1	4.4E-8 / 1.3E-1	4.4E-8 / 1.4E-1	4.4E-8 / 1.8E-1
	1 min	2.5E-8 / 8.3E-2	2.5E-8 / 8.4E-2	2.5E-8 / 8.6E-2	2.5E-8 / 9.1E-2	2.5E-8 / 9.8E-2	2.5E-8 / 1.4E-1
	10 min	6.0E-9 / 2.1E-2	6.0E-9 / 2.1E-2	6.0E-9 / 2.3E-2	6.1E-9 / 2.8E-2	6.1E-9 / 3.5E-2	6.1E-9 / 7.4E-2
	30 min	2.5E-9 / 8.7E-3	2.5E-9 / 8.7E-3	2.5E-9 / 1.1E-2	2.6E-9 / 1.6E-2	2.6E-9 / 2.3E-2	2.6E-9 / 6.2E-2
	1 h	8.6E-10 / 3.0E-3	8.6E-10 / 3.1E-3	8.8E-10 / 5.1E-3	9.4E-10 / 1.0E-2	9.4E-10 / 1.8E-2	9.4E-10 / 5.6E-2
	2 h	1.1E-10 / 4.3E-4	1.1E-10 / 4.7E-4	1.4E-10 / 2.5E-3	2.0E-10 / 7.7E-3	2.0E-10 / 1.5E-2	2.0E-10 / 5.4E-2
	3 h	1.5E-11 / 9.4E-5	1.6E-11 / 1.4E-4	4.4E-11 / 2.2E-3	1.0E-10 / 7.4E-3	1.0E-10 / 1.5E-2	1.0E-10 / 5.3E-2
	6 h	8.4E-13 / 4.4E-5	1.4E-12 / 8.6E-5	2.9E-11 / 2.1E-3	8.9E-11 / 7.3E-3	9.0E-11 / 1.5E-2	9.0E-11 / 5.3E-2
	12 h	6.0E-13 / 4.3E-5	1.2E-12 / 8.5E-5	2.9E-11 / 2.1E-3	8.9E-11 / 7.3E-3	9.0E-11 / 1.5E-2	9.0E-11 / 5.3E-2
	1 d	5.8E-13 / 4.2E-5	1.2E-12 / 8.4E-5	2.9E-11 / 2.1E-3	8.8E-11 / 7.3E-3	8.9E-11 / 1.4E-2	8.9E-11 / 5.3E-2
	2 d	5.7E-13 / 4.2E-5	1.1E-12 / 8.3E-5	2.8E-11 / 2.1E-3	8.7E-11 / 7.2E-3	8.8E-11 / 1.4E-2	8.8E-11 / 5.3E-2
	7 d	5.3E-13 / 3.9E-5	1.1E-12 / 7.8E-5	2.7E-11 / 2.0E-3	8.2E-11 / 6.8E-3	8.2E-11 / 1.4E-2	8.2E-11 / 5.3E-2
	30 d	4.0E-13 / 2.9E-5	7.9E-13 / 5.9E-5	2.0E-11 / 1.5E-3	6.1E-11 / 5.3E-3	6.1E-11 / 1.2E-2	6.1E-11 / 5.1E-2
	182 d	5.4E-14 / 5.3E-6	1.1E-13 / 1.1E-5	2.7E-12 / 2.8E-4	8.3E-12 / 1.6E-3	8.4E-12 / 8.5E-3	8.4E-12 / 4.7E-2
	1 yr	5.1E-15 / 1.7E-6	1.0E-14 / 3.5E-6	2.5E-13 / 1.0E-4	7.8E-13 / 1.0E-3	7.8E-13 / 7.8E-3	7.8E-13 / 4.6E-2
	2 yr	4.4E-17 / 1.3E-6	8.8E-17 / 2.6E-6	2.2E-15 / 7.8E-5	6.7E-15 / 9.3E-4	6.8E-15 / 7.3E-3	6.8E-15 / 4.5E-2
	5 yr	2.9E-23 / 1.1E-6	5.7E-23 / 2.2E-6	1.4E-21 / 6.6E-5	4.4E-21 / 7.8E-4	4.4E-21 / 6.2E-3	4.4E-21 / 4.2E-2
	10 yr	0.0E+0 / 8.3E-7	0.0E+0 / 1.7E-6	0.0E+0 / 5.0E-5	0.0E+0 / 5.9E-4	0.0E+0 / 4.7E-3	0.0E+0 / 3.9E-2
	20 yr	0.0E+0 / 4.8E-7	0.0E+0 / 9.5E-7	0.0E+0 / 2.9E-5	0.0E+0 / 3.4E-4	0.0E+0 / 2.7E-3	0.0E+0 / 3.4E-2
30 yr	0.0E+0 / 2.7E-7	0.0E+0 / 5.5E-7	0.0E+0 / 1.6E-5	0.0E+0 / 1.9E-4	0.0E+0 / 1.5E-3	0.0E+0 / 3.1E-2	
4)	0	3.8E-8 / 9.9E-2	3.8E-8 / 9.9E-2	3.8E-8 / 1.0E-1	3.8E-8 / 1.1E-1	3.8E-8 / 1.1E-1	3.8E-8 / 1.4E-1
	1 min	1.9E-8 / 6.4E-2	1.9E-8 / 6.4E-2	1.9E-8 / 6.5E-2	1.9E-8 / 6.9E-2	1.9E-8 / 7.6E-2	1.9E-8 / 1.0E-1
	10 min	4.6E-9 / 1.6E-2	4.6E-9 / 1.6E-2	4.6E-9 / 1.8E-2	4.7E-9 / 2.2E-2	4.7E-9 / 2.8E-2	4.7E-9 / 5.7E-2
	30 min	1.9E-9 / 6.8E-3	1.9E-9 / 6.8E-3	2.0E-9 / 8.5E-3	2.0E-9 / 1.3E-2	2.0E-9 / 1.9E-2	2.0E-9 / 4.8E-2
	1 h	6.7E-10 / 2.4E-3	6.8E-10 / 2.4E-3	7.0E-10 / 4.1E-3	7.5E-10 / 8.3E-3	7.5E-10 / 1.4E-2	7.5E-10 / 4.3E-2
	2 h	8.7E-11 / 3.4E-4	8.7E-11 / 3.7E-4	1.1E-10 / 2.0E-3	1.6E-10 / 6.2E-3	1.6E-10 / 1.2E-2	1.6E-10 / 4.1E-2
	3 h	1.2E-11 / 7.3E-5	1.2E-11 / 1.1E-4	3.4E-11 / 1.8E-3	8.2E-11 / 5.9E-3	8.3E-11 / 1.2E-2	8.3E-11 / 4.1E-2
	6 h	4.9E-13 / 3.4E-5	9.5E-13 / 6.8E-5	2.3E-11 / 1.7E-3	7.1E-11 / 5.9E-3	7.2E-11 / 1.2E-2	7.2E-11 / 4.1E-2
	12 h	4.6E-13 / 3.4E-5	9.2E-13 / 6.8E-5	2.3E-11 / 1.7E-3	7.1E-11 / 5.9E-3	7.1E-11 / 1.2E-2	7.1E-11 / 4.1E-2
	1 d	4.6E-13 / 3.4E-5	9.2E-13 / 6.7E-5	2.3E-11 / 1.7E-3	7.0E-11 / 5.8E-3	7.1E-11 / 1.2E-2	7.1E-11 / 4.1E-2
	2 d	4.5E-13 / 3.3E-5	9.0E-13 / 6.6E-5	2.3E-11 / 1.7E-3	6.9E-11 / 5.8E-3	7.0E-11 / 1.2E-2	7.0E-11 / 4.1E-2
	7 d	4.2E-13 / 3.1E-5	8.5E-13 / 6.2E-5	2.1E-11 / 1.6E-3	6.5E-11 / 5.5E-3	6.6E-11 / 1.2E-2	6.6E-11 / 4.0E-2
	30 d	3.2E-13 / 2.4E-5	6.3E-13 / 4.7E-5	1.6E-11 / 1.2E-3	4.8E-11 / 4.3E-3	4.9E-11 / 1.0E-2	4.9E-11 / 3.9E-2
	182 d	4.3E-14 / 4.3E-6	8.6E-14 / 8.5E-6	2.2E-12 / 2.2E-4	6.6E-12 / 1.3E-3	6.7E-12 / 7.2E-3	6.7E-12 / 3.6E-2
	1 yr	4.0E-15 / 1.5E-6	8.0E-15 / 2.9E-6	2.0E-13 / 8.4E-5	6.2E-13 / 8.7E-4	6.2E-13 / 6.6E-3	6.2E-13 / 3.5E-2
	2 yr	3.5E-17 / 1.1E-6	7.0E-17 / 2.2E-6	1.7E-15 / 6.6E-5	5.4E-15 / 7.8E-4	5.4E-15 / 6.2E-3	5.4E-15 / 3.4E-2
	5 yr	2.3E-23 / 9.3E-7	4.6E-23 / 1.9E-6	1.1E-21 / 5.6E-5	3.5E-21 / 6.6E-4	3.5E-21 / 5.2E-3	3.5E-21 / 3.2E-2
	10 yr	0.0E+0 / 7.0E-7	0.0E+0 / 1.4E-6	0.0E+0 / 4.2E-5	0.0E+0 / 5.0E-4	0.0E+0 / 3.9E-3	0.0E+0 / 2.9E-2
	20 yr	0.0E+0 / 4.0E-7	0.0E+0 / 8.0E-7	0.0E+0 / 2.4E-5	0.0E+0 / 2.9E-4	0.0E+0 / 2.3E-3	0.0E+0 / 2.5E-2
30 yr	0.0E+0 / 2.3E-7	0.0E+0 / 4.6E-7	0.0E+0 / 1.4E-5	0.0E+0 / 1.6E-4	0.0E+0 / 1.3E-3	0.0E+0 / 2.3E-2	

Table 7: Oxygen (O) high-energy ω -factors ($\text{Sv h}^{-1}/(\text{stars cm}^{-3}\text{s}^{-1})$) / total activity ($\text{Bq}/(\text{stars s}^{-1})$) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	2.2E-8 / 7.3E-2	2.2E-8 / 7.3E-2	2.4E-8 / 7.5E-2	3.9E-8 / 9.5E-2	8.8E-8 / 1.6E-1	9.3E-8 / 1.7E-1
	1 min	9.0E-9 / 3.2E-2	9.1E-9 / 3.3E-2	1.1E-8 / 3.5E-2	2.6E-8 / 5.5E-2	7.5E-8 / 1.2E-1	8.0E-8 / 1.3E-1
	10 min	7.4E-9 / 2.1E-2	7.5E-9 / 2.1E-2	9.0E-9 / 2.3E-2	2.4E-8 / 4.4E-2	7.3E-8 / 1.1E-1	7.8E-8 / 1.2E-1
	30 min	6.4E-9 / 1.8E-2	6.5E-9 / 1.8E-2	8.0E-9 / 2.0E-2	2.3E-8 / 4.1E-2	7.2E-8 / 1.1E-1	7.7E-8 / 1.2E-1
	1 h	5.2E-9 / 1.5E-2	5.3E-9 / 1.5E-2	6.8E-9 / 1.7E-2	2.2E-8 / 3.7E-2	7.1E-8 / 1.0E-1	7.6E-8 / 1.1E-1
	2 h	3.6E-9 / 1.0E-2	3.6E-9 / 1.0E-2	5.1E-9 / 1.2E-2	2.0E-8 / 3.3E-2	6.9E-8 / 9.9E-2	7.4E-8 / 1.1E-1
	3 h	2.5E-9 / 6.9E-3	2.5E-9 / 7.1E-3	4.0E-9 / 9.1E-3	1.9E-8 / 2.9E-2	6.8E-8 / 9.6E-2	7.3E-8 / 1.1E-1
	6 h	8.1E-10 / 2.3E-3	8.4E-10 / 2.3E-3	2.3E-9 / 4.4E-3	1.7E-8 / 2.5E-2	6.6E-8 / 9.1E-2	7.1E-8 / 1.0E-1
	12 h	1.1E-10 / 2.6E-4	1.3E-10 / 3.0E-4	1.6E-9 / 2.4E-3	1.7E-8 / 2.3E-2	6.6E-8 / 8.9E-2	7.1E-8 / 9.9E-2
	1 d	2.7E-11 / 3.9E-5	5.2E-11 / 7.5E-5	1.5E-9 / 2.1E-3	1.6E-8 / 2.2E-2	6.6E-8 / 8.9E-2	7.1E-8 / 9.9E-2
	2 d	2.6E-11 / 3.6E-5	5.1E-11 / 7.3E-5	1.5E-9 / 2.1E-3	1.6E-8 / 2.2E-2	6.6E-8 / 8.9E-2	7.0E-8 / 9.9E-2
	7 d	2.6E-11 / 3.6E-5	5.1E-11 / 7.2E-5	1.5E-9 / 2.1E-3	1.6E-8 / 2.2E-2	6.5E-8 / 8.9E-2	7.0E-8 / 9.9E-2
	30 d	2.5E-11 / 3.5E-5	5.0E-11 / 7.0E-5	1.5E-9 / 2.1E-3	1.6E-8 / 2.2E-2	6.4E-8 / 8.7E-2	6.9E-8 / 9.7E-2
	182 d	2.3E-11 / 3.0E-5	4.5E-11 / 6.1E-5	1.3E-9 / 1.8E-3	1.4E-8 / 1.9E-2	5.7E-8 / 7.8E-2	6.2E-8 / 8.7E-2
	1 yr	2.0E-11 / 2.6E-5	3.9E-11 / 5.3E-5	1.2E-9 / 1.6E-3	1.3E-8 / 1.7E-2	5.0E-8 / 6.8E-2	5.4E-8 / 7.7E-2
	2 yr	1.5E-11 / 2.0E-5	3.0E-11 / 4.1E-5	9.0E-10 / 1.2E-3	9.7E-9 / 1.3E-2	3.9E-8 / 5.3E-2	4.1E-8 / 6.0E-2
	5 yr	6.8E-12 / 9.2E-6	1.4E-11 / 1.8E-5	4.0E-10 / 5.5E-4	4.4E-9 / 5.9E-3	1.7E-8 / 2.4E-2	1.9E-8 / 2.9E-2
	10 yr	1.8E-12 / 2.6E-6	3.6E-12 / 5.1E-6	1.1E-10 / 1.5E-4	1.2E-9 / 1.7E-3	4.6E-9 / 7.1E-3	4.9E-9 / 1.0E-2
20 yr	1.3E-13 / 2.7E-7	2.5E-13 / 5.5E-7	7.4E-12 / 1.6E-5	8.0E-11 / 1.8E-4	3.2E-10 / 1.0E-3	3.4E-10 / 2.9E-3	
30 yr	8.8E-15 / 7.3E-8	1.7E-14 / 1.5E-7	5.2E-13 / 4.4E-6	5.6E-12 / 5.1E-5	2.2E-11 / 3.7E-4	2.4E-11 / 1.9E-3	
2)	0	4.1E-8 / 1.1E-1	4.1E-8 / 1.1E-1	4.3E-8 / 1.1E-1	6.1E-8 / 1.4E-1	1.2E-7 / 2.2E-1	1.3E-7 / 2.5E-1
	1 min	2.0E-8 / 6.1E-2	2.1E-8 / 6.1E-2	2.2E-8 / 6.4E-2	4.0E-8 / 9.1E-2	1.0E-7 / 1.8E-1	1.1E-7 / 2.0E-1
	10 min	1.7E-8 / 4.9E-2	1.7E-8 / 5.0E-2	1.9E-8 / 5.3E-2	3.7E-8 / 7.9E-2	9.6E-8 / 1.7E-1	1.0E-7 / 1.9E-1
	30 min	1.4E-8 / 4.1E-2	1.5E-8 / 4.2E-2	1.6E-8 / 4.5E-2	3.4E-8 / 7.1E-2	9.4E-8 / 1.6E-1	9.9E-8 / 1.8E-1
	1 h	1.2E-8 / 3.3E-2	1.2E-8 / 3.3E-2	1.4E-8 / 3.7E-2	3.2E-8 / 6.3E-2	9.1E-8 / 1.5E-1	9.7E-8 / 1.7E-1
	2 h	7.9E-9 / 2.2E-2	8.0E-9 / 2.3E-2	9.8E-9 / 2.6E-2	2.8E-8 / 5.2E-2	8.7E-8 / 1.4E-1	9.3E-8 / 1.6E-1
	3 h	5.4E-9 / 1.5E-2	5.5E-9 / 1.5E-2	7.3E-9 / 1.9E-2	2.5E-8 / 4.5E-2	8.4E-8 / 1.3E-1	9.0E-8 / 1.6E-1
	6 h	1.7E-9 / 4.9E-3	1.8E-9 / 5.0E-3	3.6E-9 / 8.3E-3	2.2E-8 / 3.5E-2	8.1E-8 / 1.2E-1	8.7E-8 / 1.4E-1
	12 h	2.1E-10 / 5.6E-4	2.4E-10 / 6.3E-4	2.0E-9 / 3.9E-3	2.0E-8 / 3.0E-2	7.9E-8 / 1.2E-1	8.5E-8 / 1.4E-1
	1 d	3.3E-11 / 6.5E-5	6.4E-11 / 1.2E-4	1.9E-9 / 3.4E-3	2.0E-8 / 3.0E-2	7.9E-8 / 1.2E-1	8.5E-8 / 1.4E-1
	2 d	3.1E-11 / 5.9E-5	6.2E-11 / 1.2E-4	1.8E-9 / 3.4E-3	2.0E-8 / 3.0E-2	7.9E-8 / 1.2E-1	8.5E-8 / 1.4E-1
	7 d	3.1E-11 / 5.8E-5	6.2E-11 / 1.2E-4	1.8E-9 / 3.3E-3	2.0E-8 / 3.0E-2	7.9E-8 / 1.1E-1	8.4E-8 / 1.4E-1
	30 d	3.0E-11 / 5.3E-5	6.1E-11 / 1.1E-4	1.8E-9 / 3.0E-3	1.9E-8 / 2.9E-2	7.7E-8 / 1.1E-1	8.3E-8 / 1.4E-1
	182 d	2.7E-11 / 3.9E-5	5.4E-11 / 7.8E-5	1.6E-9 / 2.3E-3	1.7E-8 / 2.4E-2	6.9E-8 / 1.0E-1	7.4E-8 / 1.2E-1
	1 yr	2.4E-11 / 3.3E-5	4.7E-11 / 6.6E-5	1.4E-9 / 2.0E-3	1.5E-8 / 2.1E-2	6.0E-8 / 8.8E-2	6.5E-8 / 1.1E-1
	2 yr	1.8E-11 / 2.5E-5	3.6E-11 / 5.1E-5	1.1E-9 / 1.5E-3	1.2E-8 / 1.6E-2	4.6E-8 / 6.9E-2	5.0E-8 / 9.9E-2
	5 yr	8.2E-12 / 1.2E-5	1.6E-11 / 2.4E-5	4.9E-10 / 7.1E-4	5.2E-9 / 7.8E-3	2.1E-8 / 3.4E-2	2.2E-8 / 5.0E-2
	10 yr	2.2E-12 / 3.7E-6	4.3E-12 / 7.5E-6	1.3E-10 / 2.2E-4	1.4E-9 / 2.5E-3	5.5E-9 / 1.2E-2	5.9E-9 / 2.4E-2
20 yr	1.5E-13 / 7.1E-7	3.0E-13 / 1.4E-6	8.9E-12 / 4.2E-5	9.7E-11 / 4.9E-4	3.8E-10 / 3.3E-3	4.1E-10 / 1.2E-2	
30 yr	1.1E-14 / 3.0E-7	2.1E-14 / 6.1E-7	6.2E-13 / 1.8E-5	6.7E-12 / 2.1E-4	2.7E-11 / 1.7E-3	2.9E-11 / 8.8E-3	
3)	0	2.6E-8 / 7.9E-2	2.6E-8 / 7.9E-2	2.7E-8 / 8.1E-2	4.2E-8 / 1.0E-1	9.1E-8 / 1.7E-1	9.6E-8 / 1.8E-1
	1 min	1.0E-8 / 3.5E-2	1.0E-8 / 3.5E-2	1.2E-8 / 3.7E-2	2.6E-8 / 5.7E-2	7.5E-8 / 1.2E-1	8.0E-8 / 1.3E-1
	10 min	8.4E-9 / 2.4E-2	8.5E-9 / 2.4E-2	1.0E-8 / 2.6E-2	2.5E-8 / 4.6E-2	7.3E-8 / 1.1E-1	7.8E-8 / 1.2E-1
	30 min	7.3E-9 / 2.1E-2	7.4E-9 / 2.1E-2	8.8E-9 / 2.3E-2	2.4E-8 / 4.3E-2	7.2E-8 / 1.1E-1	7.7E-8 / 1.2E-1
	1 h	6.0E-9 / 1.7E-2	6.1E-9 / 1.7E-2	7.5E-9 / 1.9E-2	2.2E-8 / 3.9E-2	7.1E-8 / 1.0E-1	7.6E-8 / 1.1E-1
	2 h	4.1E-9 / 1.2E-2	4.2E-9 / 1.2E-2	5.6E-9 / 1.4E-2	2.0E-8 / 3.4E-2	6.9E-8 / 9.9E-2	7.4E-8 / 1.1E-1
	3 h	2.8E-9 / 8.0E-3	2.9E-9 / 8.1E-3	4.3E-9 / 1.0E-2	1.9E-8 / 3.0E-2	6.8E-8 / 9.5E-2	7.2E-8 / 1.0E-1
	6 h	9.2E-10 / 2.6E-3	9.6E-10 / 2.6E-3	2.4E-9 / 4.6E-3	1.7E-8 / 2.4E-2	6.6E-8 / 9.0E-2	7.1E-8 / 9.9E-2
	12 h	1.2E-10 / 3.0E-4	1.5E-10 / 3.4E-4	1.6E-9 / 2.3E-3	1.6E-8 / 2.2E-2	6.5E-8 / 8.8E-2	7.0E-8 / 9.7E-2
	1 d	2.7E-11 / 3.8E-5	5.3E-11 / 7.3E-5	1.5E-9 / 2.1E-3	1.6E-8 / 2.2E-2	6.5E-8 / 8.7E-2	7.0E-8 / 9.7E-2
	2 d	2.6E-11 / 3.5E-5	5.1E-11 / 7.0E-5	1.5E-9 / 2.0E-3	1.6E-8 / 2.2E-2	6.5E-8 / 8.7E-2	7.0E-8 / 9.6E-2
	7 d	2.5E-11 / 3.4E-5	5.1E-11 / 6.9E-5	1.5E-9 / 2.0E-3	1.6E-8 / 2.2E-2	6.4E-8 / 8.7E-2	6.9E-8 / 9.6E-2
	30 d	2.5E-11 / 3.4E-5	5.0E-11 / 6.7E-5	1.5E-9 / 2.0E-3	1.6E-8 / 2.1E-2	6.3E-8 / 8.5E-2	6.8E-8 / 9.5E-2
	182 d	2.2E-11 / 3.0E-5	4.4E-11 / 5.9E-5	1.3E-9 / 1.8E-3	1.4E-8 / 1.9E-2	5.7E-8 / 7.7E-2	6.1E-8 / 8.5E-2
	1 yr	1.9E-11 / 2.6E-5	3.9E-11 / 5.2E-5	1.2E-9 / 1.5E-3	1.2E-8 / 1.7E-2	5.0E-8 / 6.7E-2	5.3E-8 / 7.5E-2
	2 yr	1.5E-11 / 2.0E-5	3.0E-11 / 4.0E-5	8.9E-10 / 1.2E-3	9.6E-9 / 1.3E-2	3.8E-8 / 5.2E-2	4.1E-8 / 5.8E-2
	5 yr	6.7E-12 / 9.1E-6	1.3E-11 / 1.8E-5	4.0E-10 / 5.4E-4	4.3E-9 / 5.8E-3	1.7E-8 / 2.4E-2	1.8E-8 / 2.8E-2
	10 yr	1.8E-12 / 2.5E-6	3.5E-12 / 5.0E-6	1.1E-10 / 1.5E-4	1.1E-9 / 1.6E-3	4.5E-9 / 6.9E-3	4.9E-9 / 9.3E-3
20 yr	1.2E-13 / 2.5E-7	2.5E-13 / 5.0E-7	7.3E-12 / 1.5E-5	7.9E-11 / 1.7E-4	3.2E-10 / 9.1E-4	3.4E-10 / 2.4E-3	
30 yr	8.6E-15 / 6.2E-8	1.7E-14 / 1.2E-7	5.1E-13 / 3.7E-6	5.5E-12 / 4.3E-5	2.2E-11 / 3.1E-4	2.4E-11 / 1.5E-3	
4)	0	1.6E-8 / 6.2E-2	1.6E-8 / 6.2E-2	1.8E-8 / 6.4E-2	3.2E-8 / 8.4E-2	8.0E-8 / 1.5E-1	8.5E-8 / 1.5E-1
	1 min	6.1E-9 / 2.5E-2	6.2E-9 / 2.5E-2	7.6E-9 / 2.7E-2	2.2E-8 / 4.7E-2	7.0E-8 / 1.1E-1	7.5E-8 / 1.2E-1
	10 min	4.9E-9 / 1.4E-2	5.0E-9 / 1.4E-2	6.5E-9 / 1.6E-2	2.1E-8 / 3.5E-2	6.9E-8 / 9.9E-2	7.3E-8 / 1.1E-1
	30 min	4.3E-9 / 1.2E-2	4.4E-9 / 1.2E-2	5.8E-9 / 1.4E-2	2.0E-8 / 3.4E-2	6.8E-8 / 9.7E-2	7.2E-8 / 1.0E-1
	1 h	3.6E-9 / 1.0E-2	3.6E-9 / 1.0E-2	5.1E-9 / 1.2E-2	2.0E-8 / 3.1E-2	6.7E-8 / 9.5E-2	7.0E-8 / 1.0E-1
	2 h	2.5E-9 / 6.9E-3	2.5E-9 / 7.0E-3	3.9E-9 / 9.0E-3	1.8E-8 / 2.8E-2	6.6E-8 / 9.2E-2	7.1E-8 / 9.9E-2
	3 h	1.7E-9 / 4.8E-3	1.7E-9 / 4.8E-3	3.2E-9 / 6.8E-3	1.8E-8 / 2.6E-2	6.5E-8 / 9.0E-2	7.0E-8 / 9.7E-2
	6 h	5.6E-10 / 1.6E-3	5.9E-10 / 1.6E-3	2.0E-9 / 3.5E-3	1.7E-8 / 2.3E-2	6.4E-8 / 8.7E-2	6.9E-8 / 9.4E-2
	12 h	8.0E-11 / 1.9E-4	1.1E-10 / 2.2E-4	1.5E-9 / 2.1E-3	1.6E-8 / 2.1E-2	6.4E-8 / 8.5E-2	6.9E-8 / 9.3E-2
	1 d	2.6E-11 / 3.5E-5	5.1E-11 / 6.8E-5	1.5E-9 / 2.0E-3	1.6E-8 / 2.1E-2	6.4E-8 / 8.5E-2	6.8E-8 / 9.2E-2
	2 d	2.5E-11 / 3.3E-5	5.0E-11 / 6.7E-5	1.5E-9 / 2.0E-3	1.6E-8 / 2.1E-2	6.4E-8 / 8.5E-2	6.8E-8 / 9.2E-2
	7 d	2.5E-11 / 3.3E-5	5.0E-11 / 6.6E-5	1.5E-9 / 2.0E-3	1.6E-8 / 2.1E-2	6.3E-8 / 8.5E-2	6.8E-8 / 9.2E-2
	30 d	2.4E-11 / 3.3E-5	4.9E-11 / 6.5E-5	1.5E-9 / 1.9E-3	1.6E-8 / 2.1E-2	6.2E-8 / 8.3E-2	6.7E-8 / 9.1E-2
	182 d	2.2E-11 / 2.9E-5	4.4E-11 / 5.8E-5	1.3E-9 / 1.7E-3	1.4E-8 / 1.9E-2	5.6E-8 / 7.4E-2	6.0E-8 / 8.1E-2
	1 yr	1.9E-11 / 2.5E-5	3.8E-11 / 5.1E-5	1.1E-9 / 1.5E-3	1.2E-8 / 1.6E-2	4.9E-8 / 6.5E-2	5.3E-8 / 7.1E-2
	2 yr	1.5E-11 / 2.0E-5	2.9E-11 / 3.9E-5	8.7E-10 / 1.2E-3	9.4E-9 / 1.3E-2	3.7E-8 / 5.0E-2	4.0E-8 / 5.5E-2
	5 yr	6.6E-12 / 8.8E-6	1.3E-11 / 1.8E-5	3.9E-10 / 5.2E-4	4.2E-9 / 5.7E-3	1.7E-8 / 2.3E-2	1.8E-8 / 2.5E-2
	10 yr	1.7E-12 / 2.4E-6	3.5E-12 / 4.8E-6	1.0E-10 / 1.4E-4	1.1E-9 / 1.5E-3	4.4E-9 / 6.3E-3	4.8E-9 / 7.5E-3
20 yr	1.2E-13 / 2.0E-7	2.4E-13 / 4.1E-7	7.2E-12 / 1.2E-5	7.8E-11 / 1.3E-4	3.1E-10 / 6.5E-4	3.3E-10 / 1.2E-3	
30 yr	8.5E-15 / 3.6E-8	1.7E-14 / 7.1E-8	5.0E-13 / 2.1E-6	5.4E-12 / 2.4E-5	2.2E-11 / 1.6E-4	2.3E-11 / 5.4E-4	

Table 8: Sodium (Na) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	2.8E-8 / 1.1E-1	3.6E-8 / 1.2E-1	4.7E-8 / 1.3E-1	5.1E-8 / 1.4E-1	6.7E-8 / 1.8E-1	6.8E-8 / 1.9E-1
	1 min	1.7E-8 / 4.0E-2	2.4E-8 / 5.1E-2	3.5E-8 / 6.5E-2	4.0E-8 / 7.7E-2	5.5E-8 / 1.2E-1	5.7E-8 / 1.2E-1
	10 min	1.6E-8 / 3.0E-2	2.3E-8 / 4.0E-2	3.4E-8 / 5.5E-2	3.8E-8 / 6.6E-2	5.4E-8 / 1.1E-1	5.5E-8 / 1.1E-1
	30 min	1.5E-8 / 2.8E-2	2.2E-8 / 3.8E-2	3.3E-8 / 5.2E-2	3.8E-8 / 6.4E-2	5.3E-8 / 1.0E-1	5.5E-8 / 1.1E-1
	1 h	1.4E-8 / 2.5E-2	2.2E-8 / 3.5E-2	3.2E-8 / 4.9E-2	3.6E-8 / 6.1E-2	5.2E-8 / 1.0E-1	5.3E-8 / 1.1E-1
	2 h	1.3E-8 / 2.2E-2	2.0E-8 / 3.1E-2	3.0E-8 / 4.4E-2	3.5E-8 / 5.6E-2	5.0E-8 / 9.5E-2	5.2E-8 / 1.0E-1
	3 h	1.2E-8 / 1.9E-2	1.9E-8 / 2.8E-2	2.8E-8 / 4.1E-2	3.3E-8 / 5.3E-2	4.8E-8 / 9.2E-2	5.0E-8 / 9.9E-2
	6 h	1.0E-8 / 1.5E-2	1.6E-8 / 2.2E-2	2.4E-8 / 3.4E-2	2.9E-8 / 4.5E-2	4.4E-8 / 8.4E-2	4.6E-8 / 9.1E-2
	12 h	7.6E-9 / 1.0E-2	1.2E-8 / 1.6E-2	1.8E-8 / 2.5E-2	2.3E-8 / 3.7E-2	3.8E-8 / 7.6E-2	4.0E-8 / 8.3E-2
	1 d	4.4E-9 / 5.8E-3	6.9E-9 / 9.1E-3	1.1E-8 / 1.5E-2	1.5E-8 / 2.7E-2	3.1E-8 / 6.6E-2	3.2E-8 / 7.3E-2
	2 d	1.4E-9 / 1.9E-3	2.3E-9 / 3.0E-3	3.8E-9 / 5.7E-3	8.5E-9 / 1.7E-2	2.4E-8 / 5.7E-2	2.5E-8 / 6.4E-2
	7 d	1.4E-11 / 2.9E-5	2.5E-11 / 5.5E-5	4.9E-10 / 1.3E-3	5.1E-9 / 1.3E-2	2.0E-8 / 5.2E-2	2.2E-8 / 5.9E-2
	30 d	7.9E-12 / 2.1E-5	1.6E-11 / 4.2E-5	4.7E-10 / 1.2E-3	5.0E-9 / 1.3E-2	2.0E-8 / 5.1E-2	2.2E-8 / 5.8E-2
	182 d	7.0E-12 / 1.8E-5	1.4E-11 / 3.5E-5	4.2E-10 / 1.0E-3	4.5E-9 / 1.1E-2	1.8E-8 / 4.6E-2	1.9E-8 / 5.2E-2
	1 yr	6.2E-12 / 1.5E-5	1.2E-11 / 3.1E-5	3.7E-10 / 9.1E-4	3.9E-9 / 9.9E-3	1.6E-8 / 4.0E-2	1.7E-8 / 4.6E-2
	2 yr	4.7E-12 / 1.2E-5	9.4E-12 / 2.4E-5	2.8E-10 / 7.0E-4	3.0E-9 / 7.6E-3	1.2E-8 / 3.1E-2	1.3E-8 / 3.6E-2
	5 yr	2.1E-12 / 5.4E-6	4.2E-12 / 1.1E-5	1.3E-10 / 3.2E-4	1.4E-9 / 3.5E-3	5.4E-9 / 1.5E-2	5.9E-9 / 1.8E-2
10 yr	5.6E-13 / 1.6E-6	1.1E-12 / 3.1E-6	3.3E-11 / 9.2E-5	3.6E-10 / 1.0E-3	1.4E-9 / 4.5E-3	1.6E-9 / 7.0E-3	
20 yr	3.9E-14 / 2.0E-7	7.8E-14 / 4.0E-7	2.3E-12 / 1.2E-5	2.5E-11 / 1.4E-4	1.0E-10 / 8.3E-4	1.5E-10 / 2.5E-3	
30 yr	2.7E-15 / 6.7E-8	5.5E-15 / 1.3E-7	1.6E-13 / 4.0E-6	1.8E-12 / 4.7E-5	7.0E-12 / 3.5E-4	5.3E-11 / 1.7E-3	
2)	0	4.0E-8 / 1.7E-1	4.5E-8 / 1.7E-1	5.2E-8 / 1.9E-1	5.9E-8 / 2.1E-1	8.3E-8 / 2.7E-1	8.5E-8 / 2.9E-1
	1 min	1.8E-8 / 6.5E-2	2.3E-8 / 7.2E-2	3.1E-8 / 8.3E-2	3.8E-8 / 1.0E-1	6.1E-8 / 1.7E-1	6.4E-8 / 1.9E-1
	10 min	1.6E-8 / 5.0E-2	2.1E-8 / 5.7E-2	2.8E-8 / 6.8E-2	3.6E-8 / 8.8E-2	5.9E-8 / 1.5E-1	6.1E-8 / 1.7E-1
	30 min	1.5E-8 / 4.3E-2	2.0E-8 / 5.0E-2	2.7E-8 / 6.1E-2	3.4E-8 / 8.1E-2	5.7E-8 / 1.5E-1	6.0E-8 / 1.7E-1
	1 h	1.3E-8 / 3.6E-2	1.8E-8 / 4.3E-2	2.5E-8 / 5.4E-2	3.2E-8 / 7.4E-2	5.6E-8 / 1.4E-1	5.8E-8 / 1.6E-1
	2 h	1.1E-8 / 2.8E-2	1.6E-8 / 3.4E-2	2.3E-8 / 4.5E-2	3.0E-8 / 6.4E-2	5.3E-8 / 1.3E-1	5.6E-8 / 1.5E-1
	3 h	9.8E-9 / 2.2E-2	1.4E-8 / 2.8E-2	2.1E-8 / 3.8E-2	2.8E-8 / 5.8E-2	5.1E-8 / 1.2E-1	5.4E-8 / 1.4E-1
	6 h	7.3E-9 / 1.3E-2	1.1E-8 / 1.8E-2	1.7E-8 / 2.7E-2	2.4E-8 / 4.7E-2	4.7E-8 / 1.1E-1	5.0E-8 / 1.3E-1
	12 h	5.1E-9 / 7.0E-3	8.0E-9 / 1.1E-2	1.3E-8 / 1.8E-2	2.0E-8 / 3.8E-2	4.3E-8 / 1.0E-1	4.6E-8 / 1.2E-1
	1 d	2.9E-9 / 3.8E-3	4.5E-9 / 6.0E-3	7.5E-9 / 1.1E-2	1.5E-8 / 3.1E-2	3.8E-8 / 9.5E-2	4.0E-8 / 1.2E-1
	2 d	9.6E-10 / 1.3E-3	1.5E-9 / 2.0E-3	2.9E-9 / 5.5E-3	1.0E-8 / 2.5E-2	3.3E-8 / 8.9E-2	3.6E-8 / 1.1E-1
	7 d	1.6E-11 / 5.0E-5	3.0E-11 / 9.8E-5	7.4E-10 / 2.6E-3	7.8E-9 / 2.2E-2	3.1E-8 / 8.6E-2	3.4E-8 / 1.1E-1
	30 d	1.2E-11 / 4.1E-5	2.4E-11 / 8.2E-5	7.1E-10 / 2.3E-3	7.7E-9 / 2.1E-2	3.1E-8 / 8.4E-2	3.3E-8 / 1.1E-1
	182 d	1.1E-11 / 2.9E-5	2.1E-11 / 5.8E-5	6.4E-10 / 1.7E-3	6.9E-9 / 1.8E-2	2.7E-8 / 7.5E-2	3.0E-8 / 9.5E-2
	1 yr	9.4E-12 / 2.4E-5	1.9E-11 / 4.9E-5	5.6E-10 / 1.4E-3	6.0E-9 / 1.6E-2	2.4E-8 / 6.6E-2	2.6E-8 / 8.5E-2
	2 yr	7.2E-12 / 1.9E-5	1.4E-11 / 3.8E-5	4.3E-10 / 1.1E-3	4.6E-9 / 1.2E-2	1.8E-8 / 5.2E-2	2.0E-8 / 7.0E-2
	5 yr	3.2E-12 / 9.0E-6	6.5E-12 / 1.8E-5	1.9E-10 / 5.3E-4	2.1E-9 / 5.8E-3	8.2E-9 / 2.6E-2	9.0E-9 / 4.1E-2
10 yr	8.5E-13 / 2.9E-6	1.7E-12 / 5.8E-6	5.1E-11 / 1.7E-4	5.5E-10 / 1.9E-3	2.2E-9 / 1.0E-2	2.5E-9 / 2.1E-2	
20 yr	6.0E-14 / 6.2E-7	1.2E-13 / 1.2E-6	3.5E-12 / 3.7E-5	3.8E-11 / 4.3E-4	1.5E-10 / 3.0E-3	3.5E-10 / 1.1E-2	
30 yr	4.2E-15 / 2.8E-7	8.3E-15 / 5.6E-7	2.5E-13 / 1.7E-5	2.7E-12 / 2.0E-4	1.1E-11 / 1.5E-3	2.0E-10 / 8.4E-3	
3)	0	3.0E-8 / 1.1E-1	3.7E-8 / 1.2E-1	4.8E-8 / 1.4E-1	5.3E-8 / 1.5E-1	7.0E-8 / 1.9E-1	7.2E-8 / 2.0E-1
	1 min	1.7E-8 / 4.2E-2	2.5E-8 / 5.2E-2	3.5E-8 / 6.7E-2	4.1E-8 / 8.0E-2	5.8E-8 / 1.2E-1	5.9E-8 / 1.3E-1
	10 min	1.6E-8 / 3.0E-2	2.3E-8 / 4.1E-2	3.4E-8 / 5.5E-2	3.9E-8 / 6.8E-2	5.6E-8 / 1.1E-1	5.8E-8 / 1.2E-1
	30 min	1.5E-8 / 2.8E-2	2.3E-8 / 3.8E-2	3.3E-8 / 5.3E-2	3.8E-8 / 6.6E-2	5.5E-8 / 1.1E-1	5.7E-8 / 1.2E-1
	1 h	1.4E-8 / 2.6E-2	2.2E-8 / 3.5E-2	3.2E-8 / 5.0E-2	3.7E-8 / 6.3E-2	5.4E-8 / 1.1E-1	5.6E-8 / 1.1E-1
	2 h	1.3E-8 / 2.2E-2	2.0E-8 / 3.1E-2	3.0E-8 / 4.5E-2	3.5E-8 / 5.8E-2	5.2E-8 / 1.0E-1	5.4E-8 / 1.1E-1
	3 h	1.2E-8 / 1.9E-2	1.9E-8 / 2.8E-2	2.8E-8 / 4.1E-2	3.4E-8 / 5.4E-2	5.1E-8 / 9.8E-2	5.3E-8 / 1.0E-1
	6 h	1.0E-8 / 1.5E-2	1.6E-8 / 2.2E-2	2.4E-8 / 3.4E-2	3.0E-8 / 4.7E-2	4.7E-8 / 9.0E-2	4.9E-8 / 9.7E-2
	12 h	7.6E-9 / 1.0E-2	1.2E-8 / 1.6E-2	1.8E-8 / 2.5E-2	2.4E-8 / 3.8E-2	4.1E-8 / 8.1E-2	4.3E-8 / 8.8E-2
	1 d	4.4E-9 / 5.8E-3	6.9E-9 / 9.1E-3	1.1E-8 / 1.5E-2	1.6E-8 / 2.8E-2	3.3E-8 / 7.1E-2	3.5E-8 / 7.8E-2
	2 d	1.4E-9 / 1.9E-3	2.3E-9 / 3.0E-3	3.9E-9 / 5.8E-3	9.1E-9 / 1.9E-2	2.6E-8 / 6.2E-2	2.8E-8 / 6.9E-2
	7 d	1.4E-11 / 3.0E-5	2.7E-11 / 5.7E-5	5.4E-10 / 1.4E-3	5.7E-9 / 1.4E-2	2.3E-8 / 5.7E-2	2.5E-8 / 6.4E-2
	30 d	8.8E-12 / 2.2E-5	1.8E-11 / 4.5E-5	5.2E-10 / 1.3E-3	5.6E-9 / 1.4E-2	2.2E-8 / 5.6E-2	2.4E-8 / 6.3E-2
	182 d	7.9E-12 / 2.0E-5	1.6E-11 / 3.9E-5	4.7E-10 / 1.2E-3	5.0E-9 / 1.3E-2	2.0E-8 / 5.1E-2	2.2E-8 / 5.7E-2
	1 yr	6.9E-12 / 1.7E-5	1.4E-11 / 3.4E-5	4.1E-10 / 1.0E-3	4.4E-9 / 1.1E-2	1.8E-8 / 4.4E-2	1.9E-8 / 5.0E-2
	2 yr	5.3E-12 / 1.3E-5	1.1E-11 / 2.6E-5	3.1E-10 / 7.8E-4	3.4E-9 / 8.4E-3	1.3E-8 / 3.4E-2	1.5E-8 / 3.9E-2
	5 yr	2.4E-12 / 6.0E-6	4.7E-12 / 1.2E-5	1.4E-10 / 3.6E-4	1.5E-9 / 3.9E-3	6.1E-9 / 1.6E-2	6.6E-9 / 1.9E-2
10 yr	6.3E-13 / 1.7E-6	1.3E-12 / 3.4E-6	3.7E-11 / 1.0E-4	4.0E-10 / 1.1E-3	1.6E-9 / 4.8E-3	1.8E-9 / 6.9E-3	
20 yr	4.4E-14 / 2.0E-7	8.8E-14 / 3.9E-7	2.6E-12 / 1.2E-5	2.8E-11 / 1.3E-4	1.1E-10 / 7.7E-4	1.9E-10 / 2.1E-3	
30 yr	3.1E-15 / 5.8E-8	6.1E-15 / 1.2E-7	1.8E-13 / 3.5E-6	2.0E-12 / 4.1E-5	7.8E-12 / 3.0E-4	7.5E-11 / 1.3E-3	
4)	0	2.6E-8 / 9.3E-2	3.4E-8 / 1.0E-1	4.6E-8 / 1.2E-1	4.9E-8 / 1.3E-1	6.2E-8 / 1.6E-1	6.3E-8 / 1.6E-1
	1 min	1.6E-8 / 3.5E-2	2.5E-8 / 4.6E-2	3.6E-8 / 6.1E-2	4.0E-8 / 7.0E-2	5.2E-8 / 1.0E-1	5.3E-8 / 1.1E-1
	10 min	1.5E-8 / 2.6E-2	2.4E-8 / 3.7E-2	3.5E-8 / 5.2E-2	3.9E-8 / 6.1E-2	5.1E-8 / 9.2E-2	5.2E-8 / 9.7E-2
	30 min	1.5E-8 / 2.4E-2	2.3E-8 / 3.5E-2	3.4E-8 / 5.0E-2	3.8E-8 / 5.9E-2	5.0E-8 / 9.0E-2	5.2E-8 / 9.5E-2
	1 h	1.5E-8 / 2.3E-2	2.2E-8 / 3.3E-2	3.3E-8 / 4.8E-2	3.7E-8 / 5.7E-2	4.9E-8 / 8.8E-2	5.1E-8 / 9.3E-2
	2 h	1.4E-8 / 2.1E-2	2.1E-8 / 3.0E-2	3.1E-8 / 4.4E-2	3.5E-8 / 5.4E-2	4.8E-8 / 8.5E-2	4.9E-8 / 8.9E-2
	3 h	1.3E-8 / 1.9E-2	2.0E-8 / 2.8E-2	3.0E-8 / 4.1E-2	3.4E-8 / 5.1E-2	4.6E-8 / 8.2E-2	4.7E-8 / 8.6E-2
	6 h	1.1E-8 / 1.5E-2	1.7E-8 / 2.3E-2	2.6E-8 / 3.5E-2	3.0E-8 / 4.4E-2	4.2E-8 / 7.5E-2	4.3E-8 / 8.0E-2
	12 h	8.2E-9 / 1.1E-2	1.3E-8 / 1.7E-2	1.9E-8 / 2.6E-2	2.3E-8 / 3.5E-2	3.6E-8 / 6.7E-2	3.7E-8 / 7.1E-2
	1 d	4.7E-9 / 6.2E-3	7.4E-9 / 9.7E-3	1.1E-8 / 1.5E-2	1.5E-8 / 2.5E-2	2.8E-8 / 5.6E-2	2.9E-8 / 6.0E-2
	2 d	1.5E-9 / 2.0E-3	2.4E-9 / 3.2E-3	4.0E-9 / 5.7E-3	7.8E-9 / 1.5E-2	2.0E-8 / 4.6E-2	2.1E-8 / 5.1E-2
	7 d	1.2E-11 / 2.4E-5	2.2E-11 / 4.4E-5	4.0E-10 / 9.7E-4	4.2E-9 / 1.0E-2	1.7E-8 / 4.1E-2	1.8E-8 / 4.6E-2
	30 d	6.4E-12 / 1.6E-5	1.3E-11 / 3.1E-5	3.8E-10 / 9.3E-4	4.1E-9 / 1.0E-2	1.6E-8 / 4.0E-2	1.8E-8 / 4.5E-2
	182 d	5.7E-12 / 1.4E-5	1.1E-11 / 2.8E-5	3.4E-10 / 8.3E-4	3.6E-9 / 9.0E-3	1.5E-8 / 3.6E-2	1.6E-8 / 4.0E-2
	1 yr	5.0E-12 / 1.2E-5	1.0E-11 / 2.5E-5	3.0E-10 / 7.3E-4	3.2E-9 / 7.9E-3	1.3E-8 / 3.2E-2	1.4E-8 / 3.6E-2
	2 yr	3.8E-12 / 9.5E-6	7.6E-12 / 1.9E-5	2.3E-10 / 5.6E-4	2.4E-9 / 6.1E-3	9.7E-9 / 2.5E-2	1.1E-8 / 2.8E-2
	5 yr	1.7E-12 / 4.3E-6	3.4E-12 / 8.6E-6	1.0E-10 / 2.6E-4	1.1E-9 / 2.8E-3	4.4E-9 / 1.1E-2	4.8E-9 / 1.3E-2
10 yr	4.5E-13 / 1.2E-6	9.1E-13 / 2.4E-6	2.7E-11 / 7.1E-5	2.9E-10 / 7.7E-4	1.2E-9 / 3.3E-3	1.3E-9 / 4.5E-3	
20 yr	3.2E-14 / 1.3E-7	6.3E-14 / 2.5E-7	1.9E-12 / 7.5E-6	2.0E-11 / 8.5E-5	8.1E-11 / 4.7E-4	1.4E-10 / 1.1E-3	
30 yr	2.2E-15 / 3.4E-8	4.4E-15 / 6.7E-8	1.3E-13 / 2.0E-6	1.4E-12 / 2.3E-5	5.6E-12 / 1.7E-4	6.4E-11 / 6.8E-4	

Table 9: Magnesium (Mg) high-energy ω -factors ($\text{Sv h}^{-1}/(\text{stars cm}^{-3}\text{s}^{-1})$ / total activity ($\text{Bq}/(\text{stars s}^{-1})$) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	2.1E-8 / 1.4E-1	2.5E-8 / 1.4E-1	3.1E-8 / 1.6E-1	3.4E-8 / 1.7E-1	4.4E-8 / 2.1E-1	6.2E-8 / 2.6E-1
	1 min	1.2E-8 / 5.6E-2	1.6E-8 / 6.5E-2	2.2E-8 / 7.7E-2	2.5E-8 / 8.9E-2	3.5E-8 / 1.3E-1	5.3E-8 / 1.8E-1
	10 min	9.5E-9 / 3.5E-2	1.4E-8 / 4.4E-2	1.9E-8 / 5.6E-2	2.2E-8 / 6.8E-2	3.2E-8 / 1.1E-1	5.1E-8 / 1.6E-1
	30 min	7.7E-9 / 2.0E-2	1.2E-8 / 2.9E-2	1.7E-8 / 4.1E-2	2.0E-8 / 5.3E-2	3.0E-8 / 9.1E-2	4.9E-8 / 1.5E-1
	1 h	7.1E-9 / 1.6E-2	1.1E-8 / 2.4E-2	1.7E-8 / 3.6E-2	2.0E-8 / 4.8E-2	3.0E-8 / 8.6E-2	4.8E-8 / 1.4E-1
	2 h	6.7E-9 / 1.4E-2	1.0E-8 / 2.2E-2	1.6E-8 / 3.3E-2	1.9E-8 / 4.6E-2	2.9E-8 / 8.4E-2	4.7E-8 / 1.4E-1
	3 h	6.3E-9 / 1.3E-2	9.9E-9 / 2.0E-2	1.5E-8 / 3.2E-2	1.8E-8 / 4.4E-2	2.8E-8 / 8.2E-2	4.6E-8 / 1.4E-1
	6 h	5.5E-9 / 1.1E-2	8.6E-9 / 1.7E-2	1.3E-8 / 2.7E-2	1.6E-8 / 3.9E-2	2.6E-8 / 7.8E-2	4.4E-8 / 1.3E-1
	12 h	4.1E-9 / 8.2E-3	6.5E-9 / 1.3E-2	9.9E-9 / 2.1E-2	1.3E-8 / 3.3E-2	2.3E-8 / 7.1E-2	4.1E-8 / 1.3E-1
	1 d	2.4E-9 / 4.7E-3	3.7E-9 / 7.4E-3	5.8E-9 / 1.3E-2	8.9E-9 / 2.5E-2	1.9E-8 / 6.3E-2	3.7E-8 / 1.2E-1
	2 d	7.8E-10 / 1.6E-3	1.2E-9 / 2.5E-3	2.1E-9 / 5.2E-3	5.2E-9 / 1.7E-2	1.5E-8 / 5.6E-2	3.3E-8 / 1.1E-1
	7 d	8.2E-12 / 3.3E-5	1.5E-11 / 6.3E-5	3.2E-10 / 1.5E-3	3.3E-9 / 1.4E-2	1.3E-8 / 5.2E-2	3.2E-8 / 1.1E-1
	30 d	5.1E-12 / 2.5E-5	1.0E-11 / 4.9E-5	3.0E-10 / 1.4E-3	3.3E-9 / 1.3E-2	1.3E-8 / 5.1E-2	3.1E-8 / 1.1E-1
	182 d	4.6E-12 / 1.8E-5	9.1E-12 / 3.6E-5	2.7E-10 / 1.1E-3	2.9E-9 / 1.1E-2	1.2E-8 / 4.5E-2	3.0E-8 / 1.0E-1
	1 yr	4.0E-12 / 1.5E-5	8.0E-12 / 3.0E-5	2.4E-10 / 9.0E-4	2.6E-9 / 9.7E-3	1.0E-8 / 3.9E-2	2.8E-8 / 9.4E-2
	2 yr	3.1E-12 / 1.2E-5	6.1E-12 / 2.3E-5	1.8E-10 / 6.9E-4	2.0E-9 / 7.4E-3	7.8E-9 / 3.0E-2	2.6E-8 / 8.5E-2
	5 yr	1.4E-12 / 5.3E-6	2.8E-12 / 1.1E-5	8.2E-11 / 3.2E-4	8.8E-10 / 3.4E-3	3.5E-9 / 1.4E-2	2.1E-8 / 6.7E-2
	10 yr	3.6E-13 / 1.5E-6	7.3E-13 / 3.0E-6	2.2E-11 / 9.0E-5	2.3E-10 / 9.8E-4	9.3E-10 / 4.3E-3	1.8E-8 / 5.6E-2
	20 yr	2.5E-14 / 1.8E-7	5.1E-14 / 3.7E-7	1.5E-12 / 1.1E-5	1.6E-11 / 1.2E-4	6.5E-11 / 7.5E-4	1.7E-8 / 5.2E-2
30 yr	1.8E-15 / 5.8E-8	3.6E-15 / 1.2E-7	1.1E-13 / 3.5E-6	1.2E-12 / 4.1E-5	4.7E-12 / 3.1E-4	1.7E-8 / 5.1E-2	
2)	0	2.2E-8 / 1.4E-1	2.6E-8 / 1.5E-1	3.0E-8 / 1.6E-1	3.3E-8 / 1.8E-1	4.1E-8 / 2.2E-1	6.0E-8 / 2.9E-1
	1 min	1.0E-8 / 5.0E-2	1.3E-8 / 5.7E-2	1.8E-8 / 7.0E-2	2.1E-8 / 8.8E-2	2.9E-8 / 1.2E-1	4.8E-8 / 1.9E-1
	10 min	8.5E-9 / 3.5E-2	1.2E-8 / 4.1E-2	1.6E-8 / 5.5E-2	1.9E-8 / 7.2E-2	2.7E-8 / 1.1E-1	4.6E-8 / 1.8E-1
	30 min	7.3E-9 / 2.5E-2	1.1E-8 / 3.2E-2	1.5E-8 / 4.5E-2	1.8E-8 / 6.2E-2	2.6E-8 / 9.9E-2	4.5E-8 / 1.7E-1
	1 h	6.7E-9 / 2.1E-2	9.9E-9 / 2.7E-2	1.4E-8 / 4.0E-2	1.7E-8 / 5.8E-2	2.5E-8 / 9.5E-2	4.4E-8 / 1.6E-1
	2 h	6.1E-9 / 1.7E-2	9.1E-9 / 2.3E-2	1.3E-8 / 3.6E-2	1.6E-8 / 5.3E-2	2.4E-8 / 9.0E-2	4.3E-8 / 1.6E-1
	3 h	5.6E-9 / 1.4E-2	8.5E-9 / 2.0E-2	1.3E-8 / 3.2E-2	1.5E-8 / 5.0E-2	2.3E-8 / 8.7E-2	4.2E-8 / 1.5E-1
	6 h	4.6E-9 / 1.0E-2	7.1E-9 / 1.5E-2	1.1E-8 / 2.6E-2	1.3E-8 / 4.4E-2	2.2E-8 / 8.1E-2	4.0E-8 / 1.5E-1
	12 h	3.3E-9 / 6.8E-3	5.2E-9 / 1.1E-2	8.1E-9 / 2.0E-2	1.1E-8 / 3.8E-2	1.9E-8 / 7.5E-2	3.8E-8 / 1.4E-1
	1 d	1.9E-9 / 3.9E-3	3.0E-9 / 6.2E-3	4.7E-9 / 1.3E-2	7.3E-9 / 3.1E-2	1.6E-8 / 6.8E-2	3.4E-8 / 1.3E-1
	2 d	6.3E-10 / 1.3E-3	9.9E-10 / 2.1E-3	1.7E-9 / 7.4E-3	4.3E-9 / 2.5E-2	1.3E-8 / 6.2E-2	3.1E-8 / 1.3E-1
	7 d	7.1E-12 / 8.7E-5	1.3E-11 / 1.7E-4	2.8E-10 / 4.3E-3	2.8E-9 / 2.1E-2	1.1E-8 / 5.8E-2	3.0E-8 / 1.3E-1
	30 d	4.5E-12 / 6.5E-5	9.0E-12 / 1.3E-4	2.7E-10 / 3.4E-3	2.8E-9 / 1.8E-2	1.1E-8 / 5.5E-2	2.9E-8 / 1.2E-1
	182 d	3.8E-12 / 2.2E-5	7.6E-12 / 4.4E-5	2.3E-10 / 1.2E-3	2.4E-9 / 1.1E-2	9.7E-9 / 4.4E-2	2.8E-8 / 1.1E-1
	1 yr	3.3E-12 / 1.4E-5	6.6E-12 / 2.8E-5	2.0E-10 / 8.3E-4	2.1E-9 / 8.8E-3	8.4E-9 / 3.8E-2	2.7E-8 / 1.0E-1
	2 yr	2.5E-12 / 1.1E-5	5.1E-12 / 2.1E-5	1.5E-10 / 6.3E-4	1.6E-9 / 6.9E-3	6.5E-9 / 3.1E-2	2.5E-8 / 9.5E-2
	5 yr	1.1E-12 / 5.2E-6	2.3E-12 / 1.0E-5	6.8E-11 / 3.1E-4	7.3E-10 / 3.4E-3	2.9E-9 / 1.6E-2	2.1E-8 / 7.9E-2
	10 yr	3.0E-13 / 1.9E-6	6.0E-13 / 3.7E-6	1.8E-11 / 1.1E-4	1.9E-10 / 1.2E-3	7.7E-10 / 7.0E-3	1.9E-8 / 6.7E-2
	20 yr	2.1E-14 / 5.0E-7	4.2E-14 / 1.0E-6	1.3E-12 / 3.0E-5	1.4E-11 / 3.5E-4	5.4E-11 / 2.6E-3	1.8E-8 / 6.0E-2
30 yr	1.5E-15 / 2.5E-7	3.0E-15 / 5.0E-7	8.9E-14 / 1.5E-5	9.6E-13 / 1.8E-4	3.9E-12 / 1.4E-3	1.8E-8 / 5.7E-2	
3)	0	2.2E-8 / 1.4E-1	2.7E-8 / 1.5E-1	3.4E-8 / 1.6E-1	3.7E-8 / 1.8E-1	4.8E-8 / 2.2E-1	6.5E-8 / 2.7E-1
	1 min	1.3E-8 / 5.7E-2	1.8E-8 / 6.7E-2	2.5E-8 / 8.2E-2	2.8E-8 / 9.5E-2	3.9E-8 / 1.4E-1	5.7E-8 / 1.9E-1
	10 min	1.1E-8 / 3.7E-2	1.6E-8 / 4.7E-2	2.3E-8 / 6.2E-2	2.6E-8 / 7.4E-2	3.7E-8 / 1.2E-1	5.4E-8 / 1.7E-1
	30 min	9.3E-9 / 2.3E-2	1.4E-8 / 3.3E-2	2.1E-8 / 4.7E-2	2.5E-8 / 6.0E-2	3.5E-8 / 1.0E-1	5.3E-8 / 1.5E-1
	1 h	8.7E-9 / 1.9E-2	1.3E-8 / 2.8E-2	2.0E-8 / 4.3E-2	2.4E-8 / 5.5E-2	3.4E-8 / 9.6E-2	5.2E-8 / 1.5E-1
	2 h	8.2E-9 / 1.7E-2	1.3E-8 / 2.6E-2	1.9E-8 / 4.0E-2	2.3E-8 / 5.3E-2	3.3E-8 / 9.4E-2	5.1E-8 / 1.5E-1
	3 h	7.8E-9 / 1.6E-2	1.2E-8 / 2.5E-2	1.8E-8 / 3.8E-2	2.2E-8 / 5.1E-2	3.3E-8 / 9.2E-2	5.0E-8 / 1.4E-1
	6 h	6.7E-9 / 1.4E-2	1.1E-8 / 2.1E-2	1.6E-8 / 3.3E-2	1.9E-8 / 4.6E-2	3.0E-8 / 8.7E-2	4.7E-8 / 1.4E-1
	12 h	5.1E-9 / 1.0E-2	8.0E-9 / 1.6E-2	1.2E-8 / 2.5E-2	1.6E-8 / 3.8E-2	2.6E-8 / 7.9E-2	4.4E-8 / 1.3E-1
	1 d	2.9E-9 / 5.8E-3	4.6E-9 / 9.2E-3	7.1E-9 / 1.5E-2	1.0E-8 / 2.8E-2	2.1E-8 / 6.9E-2	3.9E-8 / 1.2E-1
	2 d	9.6E-10 / 1.9E-3	1.5E-9 / 3.0E-3	2.6E-9 / 5.9E-3	5.9E-9 / 1.8E-2	1.7E-8 / 6.0E-2	3.4E-8 / 1.1E-1
	7 d	9.3E-12 / 3.1E-5	1.7E-11 / 5.8E-5	3.4E-10 / 1.4E-3	3.6E-9 / 1.4E-2	1.4E-8 / 5.5E-2	3.2E-8 / 1.1E-1
	30 d	5.6E-12 / 2.3E-5	1.1E-11 / 4.5E-5	3.3E-10 / 1.3E-3	3.6E-9 / 1.4E-2	1.4E-8 / 5.4E-2	3.1E-8 / 1.1E-1
	182 d	5.0E-12 / 1.9E-5	9.9E-12 / 3.8E-5	2.9E-10 / 1.1E-3	3.2E-9 / 1.2E-2	1.3E-8 / 4.8E-2	3.0E-8 / 1.0E-1
	1 yr	4.3E-12 / 1.6E-5	8.7E-12 / 3.3E-5	2.6E-10 / 9.7E-4	2.8E-9 / 1.0E-2	1.1E-8 / 4.2E-2	2.8E-8 / 9.4E-2
	2 yr	3.3E-12 / 1.3E-5	6.7E-12 / 2.5E-5	2.0E-10 / 7.4E-4	2.1E-9 / 8.0E-3	8.5E-9 / 3.3E-2	2.5E-8 / 8.3E-2
	5 yr	1.5E-12 / 5.7E-6	3.0E-12 / 1.1E-5	8.9E-11 / 3.4E-4	9.6E-10 / 3.7E-3	3.8E-9 / 1.5E-2	2.0E-8 / 6.4E-2
	10 yr	4.0E-13 / 1.6E-6	7.9E-13 / 3.2E-6	2.3E-11 / 9.5E-5	2.5E-10 / 1.0E-3	1.0E-9 / 4.4E-3	1.7E-8 / 5.2E-2
	20 yr	2.8E-14 / 1.7E-7	5.5E-14 / 3.5E-7	1.6E-12 / 1.0E-5	1.8E-11 / 1.2E-4	7.1E-11 / 6.7E-4	1.6E-8 / 4.8E-2
30 yr	1.9E-15 / 4.8E-8	3.9E-15 / 9.7E-8	1.2E-13 / 2.9E-6	1.3E-12 / 3.4E-5	5.1E-12 / 2.5E-4	1.6E-8 / 4.7E-2	
4)	0	2.0E-8 / 1.3E-1	2.3E-8 / 1.4E-1	2.9E-8 / 1.5E-1	3.2E-8 / 1.6E-1	4.2E-8 / 2.0E-1	6.0E-8 / 2.6E-1
	1 min	1.1E-8 / 5.7E-2	1.5E-8 / 6.4E-2	2.0E-8 / 7.5E-2	2.3E-8 / 8.7E-2	3.3E-8 / 1.2E-1	5.2E-8 / 1.8E-1
	10 min	8.8E-9 / 3.5E-2	1.3E-8 / 4.2E-2	1.8E-8 / 5.3E-2	2.1E-8 / 6.4E-2	3.1E-8 / 1.0E-1	4.9E-8 / 1.6E-1
	30 min	7.0E-9 / 1.8E-2	1.1E-8 / 2.5E-2	1.6E-8 / 3.6E-2	1.9E-8 / 4.8E-2	2.9E-8 / 8.5E-2	4.7E-8 / 1.4E-1
	1 h	6.3E-9 / 1.3E-2	9.9E-9 / 2.1E-2	1.5E-8 / 3.1E-2	1.8E-8 / 4.3E-2	2.8E-8 / 8.0E-2	4.7E-8 / 1.4E-1
	2 h	6.0E-9 / 1.2E-2	9.4E-9 / 1.9E-2	1.4E-8 / 2.9E-2	1.7E-8 / 4.1E-2	2.7E-8 / 7.8E-2	4.6E-8 / 1.3E-1
	3 h	5.7E-9 / 1.2E-2	8.9E-9 / 1.8E-2	1.4E-8 / 2.8E-2	1.7E-8 / 3.9E-2	2.7E-8 / 7.7E-2	4.5E-8 / 1.3E-1
	6 h	4.9E-9 / 9.9E-3	7.8E-9 / 1.6E-2	1.2E-8 / 2.4E-2	1.5E-8 / 3.6E-2	2.5E-8 / 7.3E-2	4.3E-8 / 1.3E-1
	12 h	3.7E-9 / 7.5E-3	5.9E-9 / 1.2E-2	9.0E-9 / 1.9E-2	1.2E-8 / 3.0E-2	2.2E-8 / 6.8E-2	4.1E-8 / 1.2E-1
	1 d	2.1E-9 / 4.3E-3	3.4E-9 / 6.8E-3	5.3E-9 / 1.1E-2	8.4E-9 / 2.3E-2	1.8E-8 / 6.0E-2	3.7E-8 / 1.2E-1
	2 d	7.1E-10 / 1.4E-3	1.1E-9 / 2.2E-3	2.0E-9 / 4.5E-3	5.0E-9 / 1.6E-2	1.5E-8 / 5.3E-2	3.4E-8 / 1.1E-1
	7 d	7.9E-12 / 2.5E-5	1.5E-11 / 4.8E-5	3.1E-10 / 1.2E-3	3.3E-9 / 1.2E-2	1.3E-8 / 5.0E-2	3.2E-8 / 1.1E-1
	30 d	5.1E-12 / 1.9E-5	1.0E-11 / 3.9E-5	3.0E-10 / 1.1E-3	3.3E-9 / 1.2E-2	1.3E-8 / 4.9E-2	3.2E-8 / 1.0E-1
	182 d	4.6E-12 / 1.7E-5	9.1E-12 / 3.4E-5	2.7E-10 / 1.0E-3	2.9E-9 / 1.1E-2	1.2E-8 / 4.4E-2	3.0E-8 / 9.9E-2
	1 yr	4.0E-12 / 1.5E-5	8.0E-12 / 3.0E-5	2.4E-10 / 8.9E-4	2.6E-9 / 9.6E-3	1.0E-8 / 3.9E-2	2.9E-8 / 9.3E-2
	2 yr	3.1E-12 / 1.1E-5	6.1E-12 / 2.3E-5	1.8E-10 / 6.8E-4	2.0E-9 / 7.4E-3	7.8E-9 / 3.0E-2	2.6E-8 / 8.4E-2
	5 yr	1.4E-12 / 5.2E-6	2.8E-12 / 1.0E-5	8.2E-11 / 3.1E-4	8.8E-10 / 3.3E-3	3.5E-9 / 1.4E-2	2.1E-8 / 6.6E-2
	10 yr	3.6E-13 / 1.4E-6	7.3E-13 / 2.9E-6	2.2E-11 / 8.5E-5	2.3E-10 / 9.2E-4	9.3E-10 / 3.9E-3	1.9E-8 / 5.6E-2
	20 yr	2.5E-14 / 1.4E-7	5.1E-14 / 2.8E-7	1.5E-12 / 8.4E-6	1.6E-11 / 9.3E-5	6.5E-11 / 5.0E-4	1.8E-8 / 5.2E-2
30 yr	1.8E-15 / 3.3E-8	3.6E-15 / 6.6E-8	1.1E-13 / 2.0E-6	1.2E-12 / 2.3E-5	4.7E-12 / 1.6E-4	1.8E-8 / 5.1E-2	

Table 10: Aluminium (Al) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	3.5E-8 / 1.5E-1	3.7E-8 / 1.5E-1	4.0E-8 / 1.6E-1	4.2E-8 / 1.7E-1	5.1E-8 / 2.0E-1	6.4E-8 / 2.3E-1
	1 min	1.5E-8 / 5.1E-2	1.7E-8 / 5.5E-2	2.0E-8 / 6.1E-2	2.2E-8 / 7.2E-2	3.1E-8 / 1.0E-1	4.4E-8 / 1.4E-1
	10 min	5.4E-9 / 1.4E-2	7.4E-9 / 1.8E-2	1.0E-8 / 2.5E-2	1.3E-8 / 3.5E-2	2.2E-8 / 6.6E-2	3.5E-8 / 1.0E-1
	30 min	3.8E-9 / 8.6E-3	5.8E-9 / 1.2E-2	8.8E-9 / 1.9E-2	1.1E-8 / 2.9E-2	2.0E-8 / 6.0E-2	3.3E-8 / 9.6E-2
	1 h	3.6E-9 / 7.4E-3	5.5E-9 / 1.1E-2	8.4E-9 / 1.7E-2	1.1E-8 / 2.8E-2	2.0E-8 / 5.8E-2	3.3E-8 / 9.5E-2
	2 h	3.3E-9 / 6.7E-3	5.2E-9 / 1.0E-2	8.0E-9 / 1.6E-2	1.1E-8 / 2.7E-2	1.9E-8 / 5.7E-2	3.2E-8 / 9.3E-2
	3 h	3.2E-9 / 6.2E-3	4.9E-9 / 9.4E-3	7.6E-9 / 1.5E-2	1.0E-8 / 2.6E-2	1.9E-8 / 5.6E-2	3.2E-8 / 9.3E-2
	6 h	2.7E-9 / 5.1E-3	4.3E-9 / 7.9E-3	6.6E-9 / 1.3E-2	9.3E-9 / 2.4E-2	1.8E-8 / 5.4E-2	3.1E-8 / 9.0E-2
	12 h	2.0E-9 / 3.7E-3	3.2E-9 / 5.9E-3	5.1E-9 / 1.0E-2	7.8E-9 / 2.1E-2	1.7E-8 / 5.1E-2	3.0E-8 / 8.8E-2
	1 d	1.2E-9 / 2.2E-3	1.8E-9 / 3.4E-3	3.0E-9 / 7.1E-3	5.7E-9 / 1.7E-2	1.5E-8 / 4.8E-2	2.7E-8 / 8.4E-2
	2 d	3.9E-10 / 7.4E-4	6.2E-10 / 1.2E-3	1.2E-9 / 3.4E-3	3.9E-9 / 1.4E-2	1.3E-8 / 4.4E-2	2.6E-8 / 8.0E-2
	7 d	6.3E-12 / 3.3E-5	1.2E-11 / 6.5E-5	2.8E-10 / 1.7E-3	3.0E-9 / 1.2E-2	1.2E-8 / 4.2E-2	2.5E-8 / 7.8E-2
	30 d	4.6E-12 / 2.6E-5	9.2E-12 / 5.2E-5	2.7E-10 / 1.4E-3	2.9E-9 / 1.1E-2	1.2E-8 / 4.1E-2	2.4E-8 / 7.7E-2
	182 d	4.0E-12 / 1.5E-5	8.1E-12 / 3.0E-5	2.4E-10 / 8.8E-4	2.6E-9 / 9.0E-3	1.0E-8 / 3.6E-2	2.3E-8 / 7.1E-2
	1 yr	3.5E-12 / 1.2E-5	7.1E-12 / 2.4E-5	2.1E-10 / 7.1E-4	2.3E-9 / 7.7E-3	9.0E-9 / 3.1E-2	2.2E-8 / 6.6E-2
	2 yr	2.7E-12 / 9.2E-6	5.4E-12 / 1.8E-5	1.6E-10 / 5.4E-4	1.7E-9 / 5.9E-3	6.9E-9 / 2.4E-2	2.0E-8 / 5.9E-2
	5 yr	1.2E-12 / 4.2E-6	2.4E-12 / 8.4E-6	7.2E-11 / 2.5E-4	7.8E-10 / 2.7E-3	3.1E-9 / 1.1E-2	1.5E-8 / 4.5E-2
	10 yr	3.2E-13 / 1.2E-6	6.4E-13 / 2.4E-6	1.9E-11 / 7.1E-5	2.1E-10 / 7.8E-4	8.2E-10 / 3.5E-3	1.3E-8 / 3.6E-2
	20 yr	2.2E-14 / 1.5E-7	4.5E-14 / 3.0E-7	1.3E-12 / 9.0E-6	1.4E-11 / 1.0E-4	5.7E-11 / 6.2E-4	1.2E-8 / 3.3E-2
	30 yr	1.6E-15 / 4.9E-8	3.2E-15 / 9.8E-8	9.4E-14 / 2.9E-6	1.0E-12 / 3.5E-5	4.1E-12 / 2.6E-4	1.2E-8 / 3.2E-2
2)	0	4.4E-8 / 1.9E-1	4.5E-8 / 2.0E-1	4.8E-8 / 2.1E-1	5.1E-8 / 2.2E-1	6.0E-8 / 2.6E-1	7.6E-8 / 3.1E-1
	1 min	1.1E-8 / 4.4E-2	1.3E-8 / 4.7E-2	1.5E-8 / 5.6E-2	1.8E-8 / 7.5E-2	2.7E-8 / 1.1E-1	4.4E-8 / 1.6E-1
	10 min	5.6E-9 / 2.1E-2	7.4E-9 / 2.4E-2	1.0E-8 / 3.4E-2	1.3E-8 / 5.2E-2	2.2E-8 / 8.7E-2	3.8E-8 / 1.4E-1
	30 min	4.4E-9 / 1.6E-2	6.1E-9 / 1.9E-2	8.7E-9 / 2.8E-2	1.2E-8 / 4.6E-2	2.1E-8 / 8.2E-2	3.7E-8 / 1.3E-1
	1 h	4.0E-9 / 1.3E-2	5.7E-9 / 1.6E-2	8.2E-9 / 2.5E-2	1.1E-8 / 4.4E-2	2.0E-8 / 7.9E-2	3.6E-8 / 1.3E-1
	2 h	3.5E-9 / 1.0E-2	5.1E-9 / 1.3E-2	7.5E-9 / 2.2E-2	1.0E-8 / 4.1E-2	1.9E-8 / 7.6E-2	3.6E-8 / 1.3E-1
	3 h	3.1E-9 / 8.4E-3	4.6E-9 / 1.1E-2	7.0E-9 / 2.0E-2	9.8E-9 / 3.8E-2	1.9E-8 / 7.4E-2	3.5E-8 / 1.3E-1
	6 h	2.4E-9 / 5.4E-3	3.8E-9 / 7.9E-3	5.8E-9 / 1.6E-2	8.7E-9 / 3.4E-2	1.8E-8 / 7.0E-2	3.4E-8 / 1.2E-1
	12 h	1.8E-9 / 3.4E-3	2.8E-9 / 5.3E-3	4.4E-9 / 1.3E-2	7.2E-9 / 3.1E-2	1.6E-8 / 6.6E-2	3.3E-8 / 1.2E-1
	1 d	1.0E-9 / 1.9E-3	1.6E-9 / 3.0E-3	2.6E-9 / 9.4E-3	5.5E-9 / 2.8E-2	1.4E-8 / 6.3E-2	3.1E-8 / 1.2E-1
	2 d	3.3E-10 / 7.0E-4	5.3E-10 / 1.1E-3	1.1E-9 / 6.4E-3	3.9E-9 / 2.5E-2	1.3E-8 / 6.0E-2	2.9E-8 / 1.1E-1
	7 d	6.6E-12 / 9.5E-5	1.3E-11 / 1.9E-4	3.1E-10 / 4.8E-3	3.1E-9 / 2.2E-2	1.2E-8 / 5.8E-2	2.8E-8 / 1.1E-1
	30 d	5.0E-12 / 7.3E-5	1.0E-11 / 1.4E-4	2.9E-10 / 3.8E-3	3.0E-9 / 1.9E-2	1.2E-8 / 5.4E-2	2.8E-8 / 1.1E-1
	182 d	4.2E-12 / 2.3E-5	8.4E-12 / 4.5E-5	2.5E-10 / 1.3E-3	2.7E-9 / 1.1E-2	1.1E-8 / 4.2E-2	2.7E-8 / 9.5E-2
	1 yr	3.6E-12 / 1.4E-5	7.3E-12 / 2.8E-5	2.2E-10 / 8.1E-4	2.3E-9 / 8.6E-3	9.3E-9 / 3.7E-2	2.5E-8 / 8.9E-2
	2 yr	2.8E-12 / 1.0E-5	5.6E-12 / 2.0E-5	1.7E-10 / 6.1E-4	1.8E-9 / 6.6E-3	7.1E-9 / 2.9E-2	2.3E-8 / 8.0E-2
	5 yr	1.3E-12 / 5.0E-6	2.5E-12 / 1.0E-5	7.4E-11 / 3.0E-4	8.0E-10 / 3.3E-3	3.2E-9 / 1.5E-2	1.9E-8 / 6.4E-2
	10 yr	3.3E-13 / 1.7E-6	6.6E-13 / 3.5E-6	2.0E-11 / 1.0E-4	2.1E-10 / 1.2E-3	8.4E-10 / 6.3E-3	1.6E-8 / 5.3E-2
	20 yr	2.3E-14 / 4.4E-7	4.6E-14 / 8.8E-7	1.4E-12 / 2.6E-5	1.5E-11 / 3.1E-4	5.9E-11 / 2.2E-3	1.5E-8 / 4.7E-2
	30 yr	1.6E-15 / 2.1E-7	3.3E-15 / 4.3E-7	9.7E-14 / 1.3E-5	1.0E-12 / 1.5E-4	4.3E-12 / 1.2E-3	1.5E-8 / 4.5E-2
3)	0	3.6E-8 / 1.5E-1	3.8E-8 / 1.6E-1	4.2E-8 / 1.6E-1	4.5E-8 / 1.8E-1	5.6E-8 / 2.1E-1	7.0E-8 / 2.5E-1
	1 min	1.4E-8 / 4.9E-2	1.7E-8 / 5.3E-2	2.0E-8 / 6.0E-2	2.3E-8 / 7.2E-2	3.4E-8 / 1.1E-1	4.8E-8 / 1.5E-1
	10 min	5.5E-9 / 1.4E-2	7.7E-9 / 1.8E-2	1.1E-8 / 2.5E-2	1.4E-8 / 3.7E-2	2.5E-8 / 7.4E-2	3.9E-8 / 1.1E-1
	30 min	4.0E-9 / 8.6E-3	6.2E-9 / 1.2E-2	9.4E-9 / 1.9E-2	1.3E-8 / 3.2E-2	2.3E-8 / 6.8E-2	3.8E-8 / 1.1E-1
	1 h	3.8E-9 / 7.5E-3	5.9E-9 / 1.1E-2	9.0E-9 / 1.8E-2	1.2E-8 / 3.0E-2	2.3E-8 / 6.7E-2	3.7E-8 / 1.1E-1
	2 h	3.6E-9 / 6.9E-3	5.5E-9 / 1.1E-2	8.6E-9 / 1.7E-2	1.2E-8 / 2.9E-2	2.3E-8 / 6.6E-2	3.7E-8 / 1.1E-1
	3 h	3.4E-9 / 6.4E-3	5.3E-9 / 9.9E-3	8.2E-9 / 1.6E-2	1.1E-8 / 2.9E-2	2.2E-8 / 6.5E-2	3.7E-8 / 1.0E-1
	6 h	2.9E-9 / 5.4E-3	4.6E-9 / 8.4E-3	7.1E-9 / 1.4E-2	1.0E-8 / 2.6E-2	2.1E-8 / 6.3E-2	3.6E-8 / 1.0E-1
	12 h	2.2E-9 / 4.0E-3	3.4E-9 / 6.3E-3	5.5E-9 / 1.1E-2	8.8E-9 / 2.3E-2	2.0E-8 / 6.0E-2	3.4E-8 / 9.9E-2
	1 d	1.3E-9 / 2.3E-3	2.0E-9 / 3.7E-3	3.3E-9 / 7.1E-3	6.6E-9 / 1.9E-2	1.7E-8 / 5.6E-2	3.2E-8 / 9.5E-2
	2 d	4.2E-10 / 7.9E-4	6.6E-10 / 1.3E-3	1.3E-9 / 3.5E-3	4.6E-9 / 1.6E-2	1.5E-8 / 5.2E-2	3.0E-8 / 9.2E-2
	7 d	7.4E-12 / 3.4E-5	1.4E-11 / 6.6E-5	3.4E-10 / 1.7E-3	3.6E-9 / 1.4E-2	1.4E-8 / 5.0E-2	2.9E-8 / 9.0E-2
	30 d	5.6E-12 / 2.7E-5	1.1E-11 / 5.4E-5	3.3E-10 / 1.5E-3	3.5E-9 / 1.3E-2	1.4E-8 / 4.9E-2	2.8E-8 / 8.8E-2
	182 d	4.9E-12 / 1.8E-5	9.9E-12 / 3.5E-5	2.9E-10 / 1.0E-3	3.2E-9 / 1.1E-2	1.3E-8 / 4.3E-2	2.7E-8 / 8.2E-2
	1 yr	4.3E-12 / 1.5E-5	8.6E-12 / 2.9E-5	2.6E-10 / 8.7E-4	2.8E-9 / 9.3E-3	1.1E-8 / 3.8E-2	2.5E-8 / 7.6E-2
	2 yr	3.3E-12 / 1.1E-5	6.6E-12 / 2.2E-5	2.0E-10 / 6.6E-4	2.1E-9 / 7.1E-3	8.4E-9 / 2.9E-2	2.2E-8 / 6.7E-2
	5 yr	1.5E-12 / 5.1E-6	3.0E-12 / 1.0E-5	8.8E-11 / 3.0E-4	9.5E-10 / 3.3E-3	3.8E-9 / 1.3E-2	1.7E-8 / 5.0E-2
	10 yr	3.9E-13 / 1.4E-6	7.9E-13 / 2.8E-6	2.3E-11 / 8.4E-5	2.5E-10 / 9.1E-4	1.0E-9 / 4.0E-3	1.4E-8 / 3.9E-2
	20 yr	2.7E-14 / 1.6E-7	5.5E-14 / 3.1E-7	1.6E-12 / 9.2E-6	1.8E-11 / 1.0E-4	7.0E-11 / 5.9E-4	1.3E-8 / 3.5E-2
	30 yr	1.9E-15 / 4.3E-8	3.9E-15 / 8.6E-8	1.1E-13 / 2.6E-6	1.2E-12 / 3.0E-5	5.0E-12 / 2.2E-4	1.3E-8 / 3.5E-2
4)	0	3.2E-8 / 1.3E-1	3.4E-8 / 1.4E-1	3.7E-8 / 1.4E-1	3.9E-8 / 1.5E-1	4.7E-8 / 1.8E-1	5.9E-8 / 2.1E-1
	1 min	1.5E-8 / 5.2E-2	1.7E-8 / 5.6E-2	2.0E-8 / 6.2E-2	2.2E-8 / 7.0E-2	3.1E-8 / 9.8E-2	4.3E-8 / 1.3E-1
	10 min	5.1E-9 / 1.3E-2	7.0E-9 / 1.6E-2	9.9E-9 / 2.2E-2	1.2E-8 / 3.1E-2	2.1E-8 / 5.9E-2	3.2E-8 / 9.0E-2
	30 min	3.5E-9 / 7.1E-3	5.5E-9 / 1.1E-2	8.3E-9 / 1.6E-2	1.1E-8 / 2.5E-2	1.9E-8 / 5.3E-2	3.1E-8 / 8.4E-2
	1 h	3.3E-9 / 6.2E-3	5.2E-9 / 9.6E-3	7.9E-9 / 1.5E-2	1.0E-8 / 2.4E-2	1.9E-8 / 5.2E-2	3.1E-8 / 8.3E-2
	2 h	3.1E-9 / 5.8E-3	4.9E-9 / 9.0E-3	7.6E-9 / 1.4E-2	1.0E-8 / 2.3E-2	1.8E-8 / 5.1E-2	3.0E-8 / 8.3E-2
	3 h	3.0E-9 / 5.5E-3	4.7E-9 / 8.6E-3	7.2E-9 / 1.4E-2	9.7E-9 / 2.2E-2	1.8E-8 / 5.0E-2	3.0E-8 / 8.2E-2
	6 h	2.6E-9 / 4.7E-3	4.1E-9 / 7.4E-3	6.3E-9 / 1.2E-2	8.8E-9 / 2.1E-2	1.7E-8 / 4.8E-2	2.9E-8 / 8.0E-2
	12 h	2.0E-9 / 3.5E-3	3.1E-9 / 5.6E-3	4.8E-9 / 9.3E-3	7.3E-9 / 1.8E-2	1.6E-8 / 4.6E-2	2.7E-8 / 7.8E-2
	1 d	1.1E-9 / 2.0E-3	1.8E-9 / 3.2E-3	2.9E-9 / 5.8E-3	5.4E-9 / 1.4E-2	1.4E-8 / 4.2E-2	2.5E-8 / 7.4E-2
	2 d	3.7E-10 / 6.9E-4	5.9E-10 / 1.1E-3	1.1E-9 / 2.6E-3	3.6E-9 / 1.1E-2	1.2E-8 / 3.9E-2	2.4E-8 / 7.1E-2
	7 d	5.8E-12 / 2.0E-5	1.1E-11 / 3.9E-5	2.6E-10 / 1.0E-3	2.8E-9 / 9.6E-3	1.1E-8 / 3.7E-2	2.3E-8 / 6.9E-2
	30 d	4.2E-12 / 1.6E-5	8.5E-12 / 3.2E-5	2.5E-10 / 9.4E-4	2.7E-9 / 9.3E-3	1.1E-8 / 3.6E-2	2.3E-8 / 6.8E-2
	182 d	3.8E-12 / 1.3E-5	7.5E-12 / 2.6E-5	2.2E-10 / 7.6E-4	2.4E-9 / 8.1E-3	9.6E-9 / 3.2E-2	2.1E-8 / 6.4E-2
	1 yr	3.3E-12 / 1.1E-5	6.6E-12 / 2.2E-5	2.0E-10 / 6.6E-4	2.1E-9 / 7.1E-3	8.4E-9 / 2.8E-2	2.0E-8 / 6.0E-2
	2 yr	2.5E-12 / 8.5E-6	5.1E-12 / 1.7E-5	1.5E-10 / 5.0E-4	1.6E-9 / 5.4E-3	6.5E-9 / 2.2E-2	1.8E-8 / 5.3E-2
	5 yr	1.1E-12 / 3.8E-6	2.3E-12 / 7.7E-6	6.8E-11 / 2.3E-4	7.3E-10 / 2.5E-3	2.9E-9 / 1.0E-2	1.4E-8 / 4.0E-2
	10 yr	3.0E-13 / 1.0E-6	6.0E-13 / 2.1E-6	1.8E-11 / 6.2E-5	1.9E-10 / 6.8E-4	7.7E-10 / 2.8E-3	1.2E-8 / 3.2E-2
	20 yr	2.1E-14 / 1.0E-7	4.2E-14 / 2.0E-7	1.2E-12 / 6.0E-6	1.3E-11 / 6.7E-5	5.4E-11 / 3.5E-4	1.1E-8 / 2.9E-2
	30 yr	1.5E-15 / 2.3E-8	3.0E-15 / 4.5E-8	8.8E-14 / 1.3E-6	9.5E-13 / 1.6E-5	3.8E-12 / 1.1E-4	1.1E-8 / 2.9E-2

Table 11: Silicon (Si) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10yr	∞
1)	0	7.9E-8/7.8E-2	8.0E-8/8.0E-2	8.0E-8/1.6E-1	8.0E-8/2.5E-1	8.0E-8/2.5E-1	8.1E-8/4.0E-1
	1 min	7.0E-8/6.5E-2	7.0E-8/6.7E-2	7.0E-8/1.4E-1	7.0E-8/2.4E-1	7.0E-8/2.4E-1	7.2E-8/3.9E-1
	10 min	3.2E-8/3.2E-2	3.2E-8/3.4E-2	3.2E-8/1.1E-1	3.2E-8/2.0E-1	3.3E-8/2.1E-1	3.4E-8/3.5E-1
	30 min	7.1E-9/1.1E-2	7.2E-9/1.2E-2	7.3E-9/9.0E-2	7.3E-9/1.8E-1	7.3E-9/1.8E-1	8.4E-9/3.3E-1
	1 h	1.9E-9/5.4E-3	2.0E-9/7.3E-3	2.0E-9/8.4E-2	2.0E-9/1.8E-1	2.1E-9/1.8E-1	3.2E-9/3.3E-1
	2 h	7.8E-10/3.6E-3	8.3E-10/5.5E-3	8.9E-10/8.2E-2	9.1E-10/1.7E-1	9.6E-10/1.8E-1	2.1E-9/3.2E-1
	3 h	4.5E-10/2.9E-3	5.0E-10/4.8E-3	5.6E-10/8.2E-2	5.7E-10/1.7E-1	6.3E-10/1.8E-1	1.7E-9/3.2E-1
	6 h	1.6E-10/2.2E-3	2.0E-10/4.1E-3	2.5E-10/8.1E-2	2.7E-10/1.7E-1	3.2E-10/1.7E-1	1.4E-9/3.2E-1
	12 h	5.7E-11/1.9E-3	8.4E-11/3.7E-3	1.2E-10/8.0E-2	1.4E-10/1.7E-1	1.9E-10/1.7E-1	1.3E-9/3.2E-1
	1 d	2.7E-11/1.8E-3	4.2E-11/3.6E-3	6.6E-11 /7.9E-2	8.3E-11/1.7E-1	1.4E-10/1.7E-1	1.3E-9/3.2E-1
	2 d	9.0E-12/1.8E-3	1.4E-11/3.5E-3	2.4E-11/7.7E-2	4.1E-11/1.7E-1	9.4E-11/1.7E-1	1.2E-9/3.2E-1
	7 d	8.7E-14/1.6E-3	1.5E-13/3.1E-3	2.3E-12/6.9E-2	1.9E-11/1.5E-1	7.2E-11/1.5E-1	1.2E-9/3.0E-1
	30 d	3.5E-14/9.4E-4	7.0E-14/1.9E-3	2.0E-12/4.2E-2	1.8E-11/9.2E-2	7.0E-11/9.4E-2	1.2E-9/2.4E-1
	182 d	2.5E-14/4.5E-5	5.0E-14/9.0E-5	1.5E-12/2.1E-3	1.6E-11/5.5E-3	6.2E-11/7.4E-3	1.2E-9/1.5E-1
	1 yr	2.1E-14/2.7E-6	4.3E-14/5.4E-6	1.3E-12/1.4E-4	1.4E-11/6.6E-4	5.4E-11/2.4E-3	1.2E-9/1.5E-1
	2 yr	1.6E-14/3.9E-7	3.3E-14/7.7E-7	9.7E-13/2.3E-5	1.0E-11/2.4E-4	4.2E-11/1.9E-3	1.2E-9/1.5E-1
	5 yr	7.3E-15/2.8E-7	1.5E-14/5.5E-7	4.4E-13/1.7E-5	4.7E-12/2.0E-4	1.9E-11/1.7E-3	1.1E-9/1.5E-1
	10 yr	1.9E-15/2.4E-7	3.9E-15/4.7E-7	1.1E-13/1.4E-5	1.2E-12/1.7E-4	4.9E-12/1.5E-3	1.1E-9/1.5E-1
	20 yr	1.4E-16/1.9E-7	2.7E-16/3.8E-7	8.0E-15/1.1E-5	8.7E-14/1.4E-4	3.5E-13/1.3E-3	1.1E-9/1.5E-1
30 yr	9.7E-18/1.6E-7	1.9E-17/3.3E-7	5.7E-16/9.9E-6	6.2E-15/1.2E-4	2.6E-14/1.1E-3	1.1E-9/1.4E-1	
2)	0	1.1E-7/1.2E-1	1.1E-7/1.2E-1	1.1E-7/2.1E-1	1.1E-7/3.1E-1	1.1E-7/3.1E-1	1.1E-7/4.5E-1
	1 min	9.1E-8/8.9E-2	9.1E-8/9.1E-2	9.2E-8/1.8E-1	9.2E-8/2.8E-1	9.3E-8/2.8E-1	9.5E-8/4.2E-1
	10 min	4.1E-8/4.2E-2	4.1E-8/4.5E-2	4.2E-8/1.3E-1	4.2E-8/2.3E-1	4.3E-8/2.4E-1	4.5E-8/3.7E-1
	30 min	9.4E-9/1.4E-2	9.8E-9/1.7E-2	1.0E-8/1.0E-1	1.1E-8/2.0E-1	1.1E-8/2.1E-1	1.4E-8/3.4E-1
	1 h	2.8E-9/7.7E-3	3.3E-9/1.0E-2	3.9E-9/9.8E-2	4.1E-9/1.9E-1	4.8E-9/2.0E-1	6.9E-9/3.4E-1
	2 h	1.5E-9/5.3E-3	1.9E-9/7.8E-3	2.4E-9/9.5E-2	2.7E-9/1.9E-1	3.4E-9/2.0E-1	5.5E-9/3.3E-1
	3 h	1.1E-9/4.3E-3	1.4E-9/6.8E-3	2.0E-9/9.4E-2	2.2E-9/1.9E-1	2.9E-9/2.0E-1	5.1E-9/3.3E-1
	6 h	6.8E-10/3.2E-3	1.0E-9/5.6E-3	1.5E-9/9.3E-2	1.7E-9/1.9E-1	2.4E-9/1.9E-1	4.6E-9/3.3E-1
	12 h	4.5E-10/2.6E-3	7.0E-10/4.9E-3	1.1E-9/9.1E-2	1.3E-9/1.9E-1	2.0E-9/1.9E-1	4.1E-9/3.3E-1
	1 d	2.5E-10/2.3E-3	4.0E-10/4.5E-3	6.3E-10 /9.0E-2	8.6E-10/1.8E-1	1.6E-9/1.9E-1	3.7E-9/3.3E-1
	2 d	8.6E-11/2.1E-3	1.4E-10/4.2E-3	2.3E-10/8.7E-2	4.5E-10/1.8E-1	1.2E-9/1.9E-1	3.3E-9/3.2E-1
	7 d	8.7E-13/1.8E-3	1.6E-12/3.6E-3	2.7E-11/7.7E-2	2.5E-10/1.6E-1	9.6E-10/1.7E-1	3.1E-9/3.0E-1
	30 d	4.2E-13/1.0E-3	8.4E-13/2.0E-3	2.4E-11/4.5E-2	2.4E-10/9.7E-2	9.4E-10/1.0E-1	3.1E-9/2.4E-1
	182 d	3.3E-13/4.6E-5	6.7E-13/9.2E-5	2.0E-11/2.2E-3	2.1E-10/6.4E-3	8.4E-10/1.2E-2	3.0E-9/1.5E-1
	1 yr	2.9E-13/3.9E-6	5.7E-13/7.8E-6	1.7E-11/2.1E-4	1.8E-10/1.4E-3	7.3E-10/6.8E-3	2.8E-9/1.4E-1
	2 yr	2.2E-13/1.2E-6	4.4E-13/2.5E-6	1.3E-11/7.4E-5	1.4E-10/8.2E-4	5.6E-10/5.8E-3	2.7E-9/1.4E-1
	5 yr	9.9E-14/8.8E-7	2.0E-13/1.8E-6	5.9E-12/5.3E-5	6.3E-11/6.2E-4	2.5E-10/4.7E-3	2.3E-9/1.4E-1
	10 yr	2.6E-14/6.3E-7	5.2E-14/1.3E-6	1.5E-12/3.8E-5	1.7E-11/4.5E-4	6.7E-11/3.6E-3	2.1E-9/1.4E-1
	20 yr	1.8E-15/3.8E-7	3.6E-15/7.5E-7	1.1E-13/2.3E-5	1.2E-12/2.7E-4	4.7E-12/2.2E-3	2.1E-9/1.3E-1
30 yr	1.3E-16/2.5E-7	2.6E-16/4.9E-7	7.6E-15/1.5E-5	8.3E-14/1.8E-4	3.4E-13/1.5E-3	2.1E-9/1.3E-1	
3)	0	8.0E-8/7.8E-2	8.0E-8/8.0E-2	8.1E-8/1.6E-1	8.1E-8/2.5E-1	8.1E-8/2.5E-1	8.1E-8/4.1E-1
	1 min	7.1E-8/6.6E-2	7.1E-8/6.8E-2	7.1E-8/1.5E-1	7.1E-8/2.4E-1	7.1E-8/2.4E-1	7.2E-8/4.0E-1
	10 min	3.3E-8/3.3E-2	3.3E-8/3.5E-2	3.3E-8/1.1E-1	3.3E-8/2.1E-1	3.3E-8/2.1E-1	3.4E-8/3.6E-1
	30 min	7.1E-9/1.1E-2	7.1E-9/1.2E-2	7.2E-9/9.2E-2	7.2E-9/1.9E-1	7.2E-9/1.9E-1	8.0E-9/3.4E-1
	1 h	1.8E-9/5.3E-3	1.8E-9/7.2E-3	1.8E-9/8.7E-2	1.8E-9/1.8E-1	1.9E-9/1.8E-1	2.7E-9/3.4E-1
	2 h	7.1E-10/3.6E-3	7.3E-10/5.5E-3	7.5E-10/8.5E-2	7.5E-10/1.8E-1	7.6E-10/1.8E-1	1.6E-9/3.3E-1
	3 h	3.9E-10/2.9E-3	4.1E-10/4.8E-3	4.3E-10/8.4E-2	4.4E-10/1.8E-1	4.4E-10/1.8E-1	1.3E-9/3.3E-1
	6 h	1.2E-10/2.2E-3	1.3E-10/4.1E-3	1.5E-10/8.3E-2	1.5E-10/1.8E-1	1.6E-10/1.8E-1	1.0E-9/3.3E-1
	12 h	2.6E-11/2.0E-3	3.6E-11/3.8E-3	5.2E-11/8.2E-2	5.5E-11/1.8E-1	6.3E-11/1.8E-1	9.1E-10/3.3E-1
	1 d	9.9E-12/1.9E-3	1.6E-11/3.7E-3	2.6E-11 /8.1E-2	2.9E-11/1.7E-1	3.7E-11/1.8E-1	8.8E-10/3.3E-1
	2 d	3.7E-12/1.8E-3	5.9E-12/3.6E-3	1.0E-11/8.0E-2	1.3E-11/1.7E-1	2.1E-11/1.7E-1	8.7E-10/3.2E-1
	7 d	4.9E-14/1.6E-3	8.5E-14/3.2E-3	6.5E-13/7.1E-2	3.5E-12/1.5E-1	1.2E-11/1.5E-1	8.6E-10/3.1E-1
	30 d	8.2E-15/9.6E-4	1.6E-14/1.9E-3	4.3E-13/4.3E-2	3.1E-12/9.5E-2	1.1E-11/9.7E-2	8.5E-10/2.5E-1
	182 d	4.0E-15/4.7E-5	7.9E-15/9.3E-5	2.3E-13/2.2E-3	2.4E-12/5.8E-3	9.5E-12/7.3E-3	8.5E-10/1.6E-1
	1 yr	3.3E-15/2.9E-6	6.5E-15/5.8E-6	1.9E-13/1.5E-4	2.1E-12/6.7E-4	8.3E-12/2.1E-3	8.5E-10/1.5E-1
	2 yr	2.5E-15/3.3E-7	5.0E-15/6.5E-7	1.5E-13/1.9E-5	1.6E-12/1.9E-4	6.4E-12/1.5E-3	8.5E-10/1.5E-1
	5 yr	1.1E-15/2.2E-7	2.2E-15/4.3E-7	6.7E-14/1.3E-5	7.2E-13/1.6E-4	2.9E-12/1.4E-3	8.5E-10/1.5E-1
	10 yr	3.0E-16/1.9E-7	5.9E-16/3.9E-7	1.8E-14/1.2E-5	1.9E-13/1.4E-4	7.6E-13/1.3E-3	8.4E-10/1.5E-1
	20 yr	2.1E-17/1.6E-7	4.2E-17/3.2E-7	1.2E-15/9.7E-6	1.3E-14/1.2E-4	5.4E-14/1.1E-3	8.4E-10/1.5E-1
30 yr	1.5E-18/1.4E-7	3.1E-18/2.9E-7	9.1E-17/8.6E-6	9.9E-16/1.0E-4	4.3E-15/1.0E-3	8.4E-10/1.5E-1	
4)	0	7.4E-8/7.0E-2	7.4E-8/7.2E-2	7.4E-8/1.5E-1	7.4E-8/2.4E-1	7.4E-8/2.4E-1	7.5E-8/3.8E-1
	1 min	6.7E-8/6.1E-2	6.7E-8/6.2E-2	6.7E-8/1.4E-1	6.7E-8/2.3E-1	6.7E-8/2.3E-1	6.8E-8/3.7E-1
	10 min	3.1E-8/3.0E-2	3.1E-8/3.2E-2	3.1E-8/1.1E-1	3.1E-8/2.0E-1	3.1E-8/2.0E-1	3.2E-8/3.4E-1
	30 min	6.6E-9/9.3E-3	6.6E-9/1.1E-2	6.6E-9/8.6E-2	6.6E-9/1.8E-1	6.6E-9/1.8E-1	7.6E-9/3.2E-1
	1 h	1.6E-9/4.6E-3	1.6E-9/6.3E-3	1.6E-9/8.1E-2	1.6E-9/1.7E-1	1.6E-9/1.7E-1	2.7E-9/3.2E-1
	2 h	6.4E-10/3.1E-3	6.5E-10/4.8E-3	6.7E-10/7.9E-2	6.7E-10/1.7E-1	6.7E-10/1.7E-1	1.7E-9/3.2E-1
	3 h	3.6E-10/2.5E-3	3.7E-10/4.3E-3	3.9E-10/7.8E-2	3.9E-10/1.7E-1	3.9E-10/1.7E-1	1.4E-9/3.2E-1
	6 h	1.0E-10/2.0E-3	1.2E-10/3.7E-3	1.3E-10/7.8E-2	1.4E-10/1.7E-1	1.4E-10/1.7E-1	1.1E-9/3.1E-1
	12 h	2.3E-11/1.8E-3	3.1E-11/3.5E-3	4.6E-11/7.7E-2	4.6E-11/1.7E-1	4.6E-11/1.7E-1	1.1E-9/3.1E-1
	1 d	8.6E-12/1.7E-3	1.4E-11/3.4E-3	2.3E-11 /7.6E-2	2.3E-11/1.7E-1	2.3E-11/1.7E-1	1.0E-9/3.1E-1
	2 d	3.3E-12/1.7E-3	5.3E-12/3.4E-3	9.2E-12/7.5E-2	9.5E-12/1.6E-1	9.5E-12/1.6E-1	1.0E-9/3.1E-1
	7 d	4.4E-14/1.5E-3	7.5E-14/3.0E-3	3.7E-13/6.7E-2	6.9E-13/1.5E-1	6.9E-13/1.5E-1	1.0E-9/2.9E-1
	30 d	3.6E-15/9.2E-4	7.2E-15/1.8E-3	1.6E-13/4.1E-2	3.7E-13/9.2E-2	3.7E-13/9.4E-2	1.0E-9/2.4E-1
	182 d	1.8E-16/4.6E-5	3.5E-16/9.1E-5	8.0E-15/2.1E-3	1.8E-14/5.5E-3	1.8E-14/6.8E-3	1.0E-9/1.5E-1
	1 yr	4.8E-18/2.5E-6	9.6E-18/5.0E-6	2.2E-16/1.3E-4	5.2E-16/5.6E-4	8.1E-16/1.8E-3	1.0E-9/1.5E-1
	2 yr	4.8E-20/2.8E-7	9.7E-20/5.5E-7	2.9E-18/1.6E-5	3.3E-17/1.7E-4	3.3E-16/1.4E-3	1.0E-9/1.4E-1
	5 yr	4.5E-20/2.0E-7	9.0E-20/3.9E-7	2.7E-18/1.2E-5	3.3E-17/1.4E-4	3.3E-16/1.3E-3	1.0E-9/1.4E-1
	10 yr	4.5E-20/1.8E-7	9.0E-20/3.7E-7	2.7E-18/1.1E-5	3.3E-17/1.3E-4	3.3E-16/1.3E-3	1.0E-9/1.4E-1
	20 yr	4.5E-20/1.7E-7	9.0E-20/3.3E-7	2.7E-18/9.9E-6	3.3E-17/1.2E-4	3.3E-16/1.2E-3	1.0E-9/1.4E-1
30 yr	4.5E-20/1.5E-7	9.0E-20/3.1E-7	2.7E-18/9.2E-6	3.3E-17/1.1E-4	3.3E-16/1.1E-3	1.0E-9/1.4E-1	

Table 12: Potassium (K) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	4.0E-8 / 9.3E-2	4.0E-8 / 9.6E-2	4.0E-8 / 1.4E-1	4.0E-8 / 2.0E-1	4.0E-8 / 2.0E-1	4.2E-8 / 3.2E-1
	1 min	2.9E-8 / 4.9E-2	2.9E-8 / 5.1E-2	2.9E-8 / 9.8E-2	2.9E-8 / 1.5E-1	2.9E-8 / 1.5E-1	3.0E-8 / 2.7E-1
	10 min	1.3E-8 / 2.4E-2	1.3E-8 / 2.6E-2	1.3E-8 / 7.3E-2	1.3E-8 / 1.3E-1	1.3E-8 / 1.3E-1	1.5E-8 / 2.5E-1
	30 min	2.7E-9 / 7.5E-3	2.9E-9 / 9.5E-3	3.1E-9 / 5.6E-2	3.1E-9 / 1.1E-1	3.2E-9 / 1.1E-1	4.5E-9 / 2.3E-1
	1 h	6.4E-10 / 3.9E-3	7.8E-10 / 6.0E-3	1.0E-9 / 5.3E-2	1.1E-9 / 1.1E-1	1.1E-9 / 1.1E-1	2.4E-9 / 2.3E-1
	2 h	3.1E-10 / 3.1E-3	4.4E-10 / 5.1E-3	7.0E-10 / 5.2E-2	7.1E-10 / 1.1E-1	7.3E-10 / 1.1E-1	2.0E-9 / 2.3E-1
	3 h	2.4E-10 / 2.8E-3	3.7E-10 / 4.8E-3	6.3E-10 / 5.1E-2	6.3E-10 / 1.1E-1	6.6E-10 / 1.1E-1	2.0E-9 / 2.3E-1
	6 h	1.9E-10 / 2.5E-3	3.1E-10 / 4.3E-3	5.3E-10 / 5.0E-2	5.4E-10 / 1.0E-1	5.6E-10 / 1.1E-1	1.9E-9 / 2.2E-1
	12 h	1.5E-10 / 2.1E-3	2.4E-10 / 3.7E-3	4.3E-10 / 4.9E-2	4.3E-10 / 1.0E-1	4.5E-10 / 1.0E-1	1.8E-9 / 2.2E-1
	1 d	9.3E-11 / 1.7E-3	1.5E-10 / 3.1E-3	2.8E-10 / 4.8E-2	2.9E-10 / 1.0E-1	3.1E-10 / 1.0E-1	1.6E-9 / 2.2E-1
	2 d	4.0E-11 / 1.3E-3	6.7E-11 / 2.4E-3	1.3E-10 / 4.6E-2	1.3E-10 / 9.8E-2	1.6E-10 / 1.0E-1	1.5E-9 / 2.2E-1
	7 d	9.4E-13 / 9.2E-4	1.6E-12 / 1.8E-3	4.9E-12 / 4.0E-2	1.4E-11 / 8.8E-2	3.4E-11 / 8.9E-2	1.3E-9 / 2.1E-1
	30 d	2.5E-14 / 5.5E-4	5.1E-14 / 1.1E-3	1.4E-12 / 2.5E-2	9.6E-12 / 5.4E-2	3.0E-11 / 5.6E-2	1.3E-9 / 1.7E-1
	182 d	1.3E-14 / 2.6E-5	2.5E-14 / 5.2E-5	7.3E-13 / 1.2E-3	6.6E-12 / 3.2E-3	2.5E-11 / 4.5E-3	1.3E-9 / 1.2E-1
	1 yr	8.6E-15 / 1.6E-6	1.7E-14 / 3.1E-6	5.1E-13 / 8.1E-5	5.2E-12 / 4.3E-4	2.1E-11 / 1.7E-3	1.3E-9 / 1.2E-1
	2 yr	6.1E-15 / 3.0E-7	1.2E-14 / 5.9E-7	3.6E-13 / 1.7E-5	3.9E-12 / 1.8E-4	1.6E-11 / 1.3E-3	1.3E-9 / 1.2E-1
	5 yr	2.8E-15 / 1.9E-7	5.7E-15 / 3.8E-7	1.7E-13 / 1.1E-5	1.8E-12 / 1.4E-4	8.1E-12 / 1.2E-3	1.3E-9 / 1.2E-1
	10 yr	8.9E-16 / 1.6E-7	1.8E-15 / 3.2E-7	5.3E-14 / 9.7E-6	5.8E-13 / 1.2E-4	3.0E-12 / 1.0E-3	1.3E-9 / 1.2E-1
	20 yr	2.0E-16 / 1.3E-7	4.1E-16 / 2.6E-7	1.2E-14 / 7.7E-6	1.4E-13 / 9.3E-5	1.1E-12 / 8.6E-4	1.3E-9 / 1.2E-1
	30 yr	1.3E-16 / 1.1E-7	2.6E-16 / 2.2E-7	7.7E-15 / 6.5E-6	9.3E-14 / 7.9E-5	8.3E-13 / 7.5E-4	1.3E-9 / 1.2E-1
2)	0	6.7E-8 / 1.8E-1	6.8E-8 / 1.8E-1	6.8E-8 / 2.4E-1	6.8E-8 / 3.1E-1	6.9E-8 / 3.2E-1	7.0E-8 / 4.2E-1
	1 min	4.3E-8 / 7.6E-2	4.3E-8 / 7.9E-2	4.3E-8 / 1.4E-1	4.3E-8 / 2.1E-1	4.4E-8 / 2.2E-1	4.5E-8 / 3.2E-1
	10 min	1.9E-8 / 3.7E-2	2.0E-8 / 3.9E-2	2.0E-8 / 1.0E-1	2.0E-8 / 1.7E-1	2.1E-8 / 1.8E-1	2.2E-8 / 2.8E-1
	30 min	4.5E-9 / 1.2E-2	4.8E-9 / 1.5E-2	5.3E-9 / 8.0E-2	5.4E-9 / 1.5E-1	5.7E-9 / 1.6E-1	7.0E-9 / 2.6E-1
	1 h	1.4E-9 / 6.6E-3	1.6E-9 / 9.2E-3	2.1E-9 / 7.4E-2	2.2E-9 / 1.4E-1	2.6E-9 / 1.5E-1	3.8E-9 / 2.5E-1
	2 h	7.2E-10 / 4.7E-3	9.9E-10 / 7.3E-3	1.4E-9 / 7.2E-2	1.6E-9 / 1.4E-1	1.9E-9 / 1.5E-1	3.2E-9 / 2.5E-1
	3 h	5.6E-10 / 4.1E-3	8.2E-10 / 6.6E-3	1.2E-9 / 7.1E-2	1.4E-9 / 1.4E-1	1.7E-9 / 1.5E-1	3.0E-9 / 2.5E-1
	6 h	4.1E-10 / 3.3E-3	6.3E-10 / 5.6E-3	1.0E-9 / 7.0E-2	1.1E-9 / 1.4E-1	1.5E-9 / 1.5E-1	2.8E-9 / 2.5E-1
	12 h	2.9E-10 / 2.7E-3	4.7E-10 / 4.8E-3	7.8E-10 / 6.8E-2	8.9E-10 / 1.4E-1	1.2E-9 / 1.4E-1	2.5E-9 / 2.5E-1
	1 d	1.7E-10 / 2.2E-3	2.8E-10 / 4.1E-3	4.9E-10 / 6.7E-2	6.0E-10 / 1.4E-1	9.4E-10 / 1.4E-1	2.2E-9 / 2.4E-1
	2 d	6.6E-11 / 1.7E-3	1.1E-10 / 3.4E-3	2.1E-10 / 6.4E-2	3.2E-10 / 1.3E-1	6.6E-10 / 1.4E-1	1.9E-9 / 2.4E-1
	7 d	1.7E-12 / 1.3E-3	3.0E-12 / 2.6E-3	2.1E-11 / 5.6E-2	1.3E-10 / 1.2E-1	4.8E-10 / 1.2E-1	1.8E-9 / 2.2E-1
	30 d	2.3E-13 / 7.5E-4	4.5E-13 / 1.5E-3	1.3E-11 / 3.3E-2	1.2E-10 / 7.0E-2	4.6E-10 / 7.5E-2	1.7E-9 / 1.8E-1
	182 d	1.7E-13 / 3.3E-5	3.3E-13 / 6.6E-5	9.8E-12 / 1.5E-3	1.0E-10 / 4.5E-3	4.0E-10 / 9.2E-3	1.7E-9 / 1.1E-1
	1 yr	1.4E-13 / 2.7E-6	2.8E-13 / 5.4E-6	8.3E-12 / 1.5E-4	8.9E-11 / 1.1E-3	3.5E-10 / 5.6E-3	1.6E-9 / 1.1E-1
	2 yr	1.1E-13 / 1.1E-6	2.1E-13 / 2.1E-6	6.3E-12 / 6.3E-5	6.8E-11 / 7.0E-4	2.7E-10 / 4.8E-3	1.5E-9 / 1.1E-1
	5 yr	4.8E-14 / 7.4E-7	9.5E-14 / 1.5E-6	2.8E-12 / 4.4E-5	3.1E-11 / 5.2E-4	1.2E-10 / 3.9E-3	1.4E-9 / 1.0E-1
	10 yr	1.3E-14 / 5.2E-7	2.5E-14 / 1.0E-6	7.5E-13 / 3.1E-5	8.2E-12 / 3.7E-4	3.3E-11 / 2.9E-3	1.3E-9 / 1.0E-1
	20 yr	1.0E-15 / 3.0E-7	2.0E-15 / 6.1E-7	6.1E-14 / 1.8E-5	6.7E-13 / 2.2E-4	3.2E-12 / 1.8E-3	1.2E-9 / 1.0E-1
	30 yr	1.8E-16 / 1.9E-7	3.7E-16 / 3.9E-7	1.1E-14 / 1.2E-5	1.3E-13 / 1.4E-4	9.6E-13 / 1.2E-3	1.2E-9 / 9.8E-2
3)	0	4.3E-8 / 1.0E-1	4.4E-8 / 1.0E-1	4.4E-8 / 1.6E-1	4.4E-8 / 2.2E-1	4.4E-8 / 2.2E-1	4.5E-8 / 3.3E-1
	1 min	3.1E-8 / 5.2E-2	3.1E-8 / 5.5E-2	3.1E-8 / 1.1E-1	3.1E-8 / 1.7E-1	3.1E-8 / 1.7E-1	3.3E-8 / 2.9E-1
	10 min	1.4E-8 / 2.6E-2	1.4E-8 / 2.8E-2	1.5E-8 / 8.0E-2	1.5E-8 / 1.4E-1	1.5E-8 / 1.4E-1	1.6E-8 / 2.6E-1
	30 min	2.9E-9 / 8.0E-3	3.1E-9 / 1.0E-2	3.3E-9 / 6.2E-2	3.4E-9 / 1.2E-1	3.4E-9 / 1.2E-1	4.6E-9 / 2.4E-1
	1 h	6.6E-10 / 4.2E-3	8.1E-10 / 6.5E-3	1.1E-9 / 5.8E-2	1.1E-9 / 1.2E-1	1.1E-9 / 1.2E-1	2.3E-9 / 2.4E-1
	2 h	3.2E-10 / 3.3E-3	4.6E-10 / 5.6E-3	7.4E-10 / 5.7E-2	7.5E-10 / 1.2E-1	7.5E-10 / 1.2E-1	2.0E-9 / 2.4E-1
	3 h	2.5E-10 / 3.1E-3	3.9E-10 / 5.2E-3	6.6E-10 / 5.7E-2	6.7E-10 / 1.2E-1	6.7E-10 / 1.2E-1	1.9E-9 / 2.4E-1
	6 h	2.0E-10 / 2.7E-3	3.2E-10 / 4.8E-3	5.7E-10 / 5.6E-2	5.7E-10 / 1.2E-1	5.8E-10 / 1.2E-1	1.8E-9 / 2.3E-1
	12 h	1.5E-10 / 2.3E-3	2.5E-10 / 4.2E-3	4.5E-10 / 5.5E-2	4.6E-10 / 1.2E-1	4.7E-10 / 1.2E-1	1.7E-9 / 2.3E-1
	1 d	9.8E-11 / 1.8E-3	1.6E-10 / 3.4E-3	3.0E-10 / 5.3E-2	3.1E-10 / 1.1E-1	3.1E-10 / 1.1E-1	1.5E-9 / 2.3E-1
	2 d	4.3E-11 / 1.4E-3	7.2E-11 / 2.7E-3	1.4E-10 / 5.1E-2	1.4E-10 / 1.1E-1	1.5E-10 / 1.1E-1	1.4E-9 / 2.3E-1
	7 d	1.2E-12 / 1.0E-3	2.0E-12 / 2.0E-3	5.7E-12 / 4.5E-2	9.8E-12 / 9.8E-2	1.7E-11 / 9.9E-2	1.2E-9 / 2.2E-1
	30 d	1.5E-14 / 6.2E-4	3.0E-14 / 1.2E-3	7.8E-13 / 2.8E-2	4.5E-12 / 6.1E-2	1.2E-11 / 6.2E-2	1.2E-9 / 1.8E-1
	182 d	5.7E-15 / 2.9E-5	1.1E-14 / 5.9E-5	3.2E-13 / 1.4E-3	2.5E-12 / 3.5E-3	8.9E-12 / 4.5E-3	1.2E-9 / 1.2E-1
	1 yr	3.1E-15 / 1.6E-6	6.2E-15 / 3.3E-6	1.8E-13 / 8.3E-5	1.8E-12 / 4.0E-4	7.5E-12 / 1.3E-3	1.2E-9 / 1.2E-1
	2 yr	2.0E-15 / 2.4E-7	4.0E-15 / 4.7E-7	1.2E-13 / 1.4E-5	1.3E-12 / 1.4E-4	6.0E-12 / 1.0E-3	1.2E-9 / 1.2E-1
	5 yr	1.0E-15 / 1.4E-7	2.0E-15 / 2.8E-7	6.0E-14 / 8.5E-6	6.6E-13 / 1.0E-4	3.4E-12 / 9.0E-4	1.2E-9 / 1.2E-1
	10 yr	4.0E-16 / 1.2E-7	8.1E-16 / 2.5E-7	2.4E-14 / 7.4E-6	2.8E-13 / 8.9E-5	1.8E-12 / 8.1E-4	1.2E-9 / 1.2E-1
	20 yr	1.7E-16 / 1.0E-7	3.5E-16 / 2.0E-7	1.0E-14 / 6.0E-6	1.2E-13 / 7.2E-5	1.1E-12 / 6.7E-4	1.2E-9 / 1.2E-1
	30 yr	1.3E-16 / 8.5E-8	2.6E-16 / 1.7E-7	7.8E-15 / 5.1E-6	9.4E-14 / 6.2E-5	8.6E-13 / 5.9E-4	1.2E-9 / 1.2E-1
4)	0	3.3E-8 / 7.4E-2	3.3E-8 / 7.6E-2	3.3E-8 / 1.1E-1	3.3E-8 / 1.6E-1	3.3E-8 / 1.6E-1	3.5E-8 / 2.8E-1
	1 min	2.4E-8 / 4.1E-2	2.5E-8 / 4.3E-2	2.5E-8 / 8.2E-2	2.5E-8 / 1.3E-1	2.5E-8 / 1.3E-1	2.6E-8 / 2.5E-1
	10 min	1.1E-8 / 2.0E-2	1.1E-8 / 2.2E-2	1.2E-8 / 6.1E-2	1.2E-8 / 1.1E-1	1.2E-8 / 1.1E-1	1.3E-8 / 2.3E-1
	30 min	2.3E-9 / 6.5E-3	2.5E-9 / 8.3E-3	2.7E-9 / 4.7E-2	2.7E-9 / 9.3E-2	2.7E-9 / 9.4E-2	4.2E-9 / 2.2E-1
	1 h	5.5E-10 / 3.4E-3	6.7E-10 / 5.3E-3	9.2E-10 / 4.4E-2	9.3E-10 / 9.0E-2	9.3E-10 / 9.1E-2	2.4E-9 / 2.1E-1
	2 h	2.7E-10 / 2.7E-3	3.9E-10 / 4.5E-3	6.3E-10 / 4.3E-2	6.3E-10 / 8.9E-2	6.4E-10 / 9.0E-2	2.1E-9 / 2.1E-1
	3 h	2.2E-10 / 2.5E-3	3.3E-10 / 4.3E-3	5.7E-10 / 4.3E-2	5.7E-10 / 8.8E-2	5.7E-10 / 8.9E-2	2.0E-9 / 2.1E-1
	6 h	1.7E-10 / 2.2E-3	2.7E-10 / 3.9E-3	4.9E-10 / 4.2E-2	4.9E-10 / 8.7E-2	4.9E-10 / 8.9E-2	1.9E-9 / 2.1E-1
	12 h	1.3E-10 / 1.9E-3	2.1E-10 / 3.3E-3	3.9E-10 / 4.1E-2	3.9E-10 / 8.6E-2	3.9E-10 / 8.7E-2	1.8E-9 / 2.1E-1
	1 d	8.3E-11 / 1.5E-3	1.4E-10 / 2.7E-3	2.6E-10 / 3.9E-2	2.6E-10 / 8.4E-2	2.6E-10 / 8.6E-2	1.7E-9 / 2.1E-1
	2 d	3.7E-11 / 1.1E-3	6.2E-11 / 2.0E-3	1.2E-10 / 3.8E-2	1.2E-10 / 8.2E-2	1.2E-10 / 8.3E-2	1.6E-9 / 2.0E-1
	7 d	1.0E-12 / 7.5E-4	1.8E-12 / 1.5E-3	5.4E-12 / 3.3E-2	8.7E-12 / 7.3E-2	9.8E-12 / 7.4E-2	1.5E-9 / 2.0E-1
	30 d	1.6E-14 / 4.6E-4	3.2E-14 / 9.1E-4	8.2E-13 / 2.1E-2	3.5E-12 / 4.6E-2	4.6E-12 / 4.7E-2	1.4E-9 / 1.7E-1
	182 d	4.3E-15 / 2.3E-5	8.5E-15 / 4.5E-5	2.3E-13 / 1.0E-3	1.1E-12 / 2.7E-3	2.0E-12 / 3.7E-3	1.4E-9 / 1.3E-1
	1 yr	1.1E-15 / 1.3E-6	2.1E-15 / 2.7E-6	5.8E-14 / 6.9E-5	3.2E-13 / 3.6E-4	1.3E-12 / 1.3E-3	1.4E-9 / 1.2E-1
	2 yr	2.0E-16 / 2.3E-7	4.0E-16 / 4.6E-7	1.2E-14 / 1.4E-5	1.2E-13 / 1.4E-4	1.0E-12 / 1.0E-3	1.4E-9 / 1.2E-1
	5 yr	1.5E-16 / 1.4E-7	2.9E-16 / 2.8E-7	8.7E-15 / 8.4E-6	1.0E-13 / 1.0E-4	9.6E-13 / 9.5E-4	1.4E-9 / 1.2E-1
	10 yr	1.3E-16 / 1.3E-7	2.6E-16 / 2.6E-7	7.8E-15 / 7.7E-6	9.4E-14 / 9.4E-5	8.6E-13 / 8.9E-4	1.4E-9 / 1.2E-1
	20 yr	1.1E-16 / 1.2E-7	2.1E-16 / 2.3E-7	6.3E-15 / 6.9E-6	7.6E-14 / 8.4E-5	7.0E-13 / 8.1E-4	1.4E-9 / 1.2E-1
	30 yr	8.6E-17 / 1.1E-7	1.7E-16 / 2.1E-7	5.1E-15 / 6.4E-6	6.2E-14 / 7.7E-5	5.6E-13 / 7.5E-4	1.4E-9 / 1.2E-1

Table 13: Calcium (Ca) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	3.2E-9/7.0E-2	3.4E-9/7.6E-2	6.8E-9/1.9E-1	8.4E-9/3.4E-1	8.4E-9/3.9E-1	1.5E-8/6.0E-1
	1 min	2.8E-9/5.3E-2	3.0E-9/5.9E-2	6.4E-9/1.8E-1	8.0E-9/3.2E-1	8.0E-9/3.8E-1	1.4E-8/5.9E-1
	10 min	1.5E-9/3.3E-2	1.7E-9/3.8E-2	5.1E-9/1.6E-1	6.7E-9/3.0E-1	6.8E-9/3.6E-1	1.3E-8/5.7E-1
	30 min	1.0E-9/2.3E-2	1.2E-9/2.8E-2	4.6E-9/1.5E-1	6.2E-9/2.9E-1	6.2E-9/3.5E-1	1.2E-8/5.6E-1
	1 h	7.5E-10/1.7E-2	9.5E-10/2.2E-2	4.3E-9/1.4E-1	5.9E-9/2.8E-1	5.9E-9/3.4E-1	1.2E-8/5.5E-1
	2 h	5.0E-10/1.1E-2	6.9E-10/1.6E-2	4.0E-9/1.3E-1	5.6E-9/2.8E-1	5.7E-9/3.3E-1	1.2E-8/5.4E-1
	3 h	3.9E-10/8.9E-3	5.8E-10/1.4E-2	3.9E-9/1.3E-1	5.5E-9/2.7E-1	5.5E-9/3.3E-1	1.2E-8/5.4E-1
	6 h	2.8E-10/6.7E-3	4.5E-10/1.1E-2	3.7E-9/1.3E-1	5.3E-9/2.7E-1	5.4E-9/3.3E-1	1.2E-8/5.4E-1
	12 h	2.0E-10/5.2E-3	3.6E-10/9.6E-3	3.6E-9/1.2E-1	5.2E-9/2.7E-1	5.2E-9/3.2E-1	1.1E-8/5.3E-1
	1 d	1.6E-10/4.3E-3	3.0E-10/8.3E-3	3.4E-9 / 1.2E-1	5.0E-9/2.6E-1	5.0E-9/3.2E-1	1.1E-8/5.3E-1
	2 d	1.3E-10/3.7E-3	2.5E-10/7.2E-3	3.2E-9/1.1E-1	4.7E-9/2.5E-1	4.7E-9/3.1E-1	1.1E-8/5.2E-1
	7 d	7.6E-11/2.5E-3	1.5E-10/4.9E-3	2.4E-9/9.4E-2	3.7E-9/2.2E-1	3.7E-9/2.8E-1	9.9E-9/4.9E-1
	30 d	2.6E-11/1.2E-3	5.1E-11/2.4E-3	9.2E-10/5.2E-2	1.6E-9/1.5E-1	1.7E-9/2.0E-1	7.8E-9/4.1E-1
	182 d	6.6E-13/1.1E-4	1.3E-12/2.3E-4	3.4E-11/6.3E-3	1.4E-10/4.8E-2	1.6E-10/8.8E-2	6.3E-9/3.0E-1
	1 yr	1.4E-13/6.2E-5	2.7E-13/1.2E-4	7.2E-12/3.6E-3	3.2E-11/3.1E-2	4.2E-11/5.8E-2	6.2E-9/2.7E-1
	2 yr	8.2E-15/2.8E-5	1.6E-14/5.6E-5	4.5E-13/1.6E-3	2.6E-12/1.4E-2	1.0E-11/2.7E-2	6.2E-9/2.4E-1
	5 yr	1.2E-15/2.9E-6	2.5E-15/5.8E-6	7.5E-14/1.7E-4	8.9E-13/1.5E-3	8.0E-12/3.4E-3	6.2E-9/2.1E-1
	10 yr	1.1E-15/1.7E-7	2.2E-15/3.4E-7	6.6E-14/1.0E-5	7.9E-13/1.1E-4	7.4E-12/6.9E-4	6.2E-9/2.1E-1
	20 yr	9.4E-16/6.9E-8	1.9E-15/1.4E-7	5.6E-14/4.1E-6	6.8E-13/4.9E-5	6.4E-12/4.1E-4	6.2E-9/2.1E-1
	30 yr	8.1E-16/4.6E-8	1.6E-15/9.2E-8	4.9E-14/2.8E-6	5.9E-13/3.3E-5	5.5E-12/2.8E-4	6.2E-9/2.1E-1
2)	0	5.3E-9/1.3E-1	5.7E-9/1.4E-1	1.1E-8/2.7E-1	1.3E-8/4.1E-1	1.3E-8/4.8E-1	1.9E-8/6.8E-1
	1 min	4.5E-9/8.6E-2	5.0E-9/9.6E-2	1.0E-8/2.3E-1	1.3E-8/3.7E-1	1.3E-8/4.4E-1	1.8E-8/6.4E-1
	10 min	3.4E-9/6.6E-2	3.8E-9/7.6E-2	8.9E-9/2.1E-1	1.1E-8/3.5E-1	1.2E-8/4.2E-1	1.7E-8/6.2E-1
	30 min	2.6E-9/5.1E-2	3.0E-9/6.1E-2	8.1E-9/1.9E-1	1.1E-8/3.4E-1	1.1E-8/4.0E-1	1.6E-8/6.0E-1
	1 h	2.0E-9/3.9E-2	2.4E-9/4.9E-2	7.5E-9/1.8E-1	1.0E-8/3.3E-1	1.0E-8/3.9E-1	1.5E-8/5.9E-1
	2 h	1.4E-9/2.8E-2	1.8E-9/3.7E-2	6.9E-9/1.7E-1	9.4E-9/3.1E-1	9.5E-9/3.8E-1	1.5E-8/5.8E-1
	3 h	1.1E-9/2.2E-2	1.5E-9/3.1E-2	6.6E-9/1.6E-1	9.0E-9/3.1E-1	9.1E-9/3.7E-1	1.4E-8/5.7E-1
	6 h	7.6E-10/1.5E-2	1.1E-9/2.3E-2	6.1E-9/1.5E-1	8.5E-9/3.0E-1	8.7E-9/3.6E-1	1.4E-8/5.6E-1
	12 h	4.7E-10/1.0E-2	7.7E-10/1.7E-2	5.6E-9/1.4E-1	8.1E-9/2.9E-1	8.2E-9/3.5E-1	1.3E-8/5.5E-1
	1 d	3.1E-10/7.0E-3	5.7E-10/1.3E-2	5.2E-9 / 1.4E-1	7.6E-9/2.8E-1	7.7E-9/3.4E-1	1.3E-8/5.4E-1
	2 d	2.3E-10/5.4E-3	4.4E-10/1.0E-2	4.7E-9/1.2E-1	7.0E-9/2.6E-1	7.1E-9/3.3E-1	1.2E-8/5.3E-1
	7 d	1.2E-10/2.9E-3	2.3E-10/5.6E-3	3.3E-9/9.6E-2	5.4E-9/2.3E-1	5.5E-9/2.9E-1	1.1E-8/4.9E-1
	30 d	3.5E-11/1.2E-3	6.8E-11/2.3E-3	1.3E-9/5.0E-2	2.5E-9/1.5E-1	2.6E-9/2.1E-1	7.7E-9/4.1E-1
	182 d	1.4E-12/1.2E-4	2.8E-12/2.5E-4	7.5E-11/6.8E-3	3.2E-10/5.0E-2	3.7E-10/9.4E-2	5.5E-9/2.9E-1
	1 yr	3.1E-13/6.4E-5	6.2E-13/1.3E-4	1.6E-11/3.7E-3	7.4E-11/3.2E-2	1.1E-10/6.3E-2	5.2E-9/2.6E-1
	2 yr	2.1E-14/2.9E-5	4.3E-14/5.7E-5	1.2E-12/1.7E-3	8.0E-12/1.5E-2	4.0E-11/3.2E-2	5.1E-9/2.3E-1
	5 yr	5.2E-15/3.6E-6	1.0E-14/7.2E-6	3.1E-13/2.1E-4	3.7E-12/2.0E-3	3.3E-11/7.7E-3	5.1E-9/2.1E-1
	10 yr	4.5E-15/1.6E-7	9.0E-15/1.5E-6	2.7E-13/4.5E-5	3.3E-12/5.3E-4	3.0E-11/4.1E-3	5.1E-9/2.0E-1
	20 yr	3.8E-15/4.3E-7	7.7E-15/8.7E-7	2.3E-13/2.6E-5	2.8E-12/3.1E-4	2.6E-11/2.5E-3	5.1E-9/2.0E-1
	30 yr	3.3E-15/7.8E-7	6.6E-15/5.6E-7	2.0E-13/1.7E-5	2.4E-12/2.0E-4	2.3E-11/1.7E-3	5.0E-9/1.9E-1
3)	0	3.3E-9/7.3E-2	3.5E-9/7.8E-2	7.4E-9/1.9E-1	9.2E-9/3.3E-1	9.2E-9/4.0E-1	1.6E-8/6.0E-1
	1 min	2.9E-9/5.6E-2	3.1E-9/6.1E-2	7.0E-9/1.7E-1	8.8E-9/3.2E-1	8.9E-9/3.8E-1	1.5E-8/5.9E-1
	10 min	1.7E-9/3.5E-2	1.9E-9/4.0E-2	5.7E-9/1.5E-1	7.5E-9/3.0E-1	7.6E-9/3.6E-1	1.4E-8/5.7E-1
	30 min	1.1E-9/2.4E-2	1.3E-9/2.9E-2	5.2E-9/1.4E-1	7.0E-9/2.8E-1	7.0E-9/3.5E-1	1.3E-8/5.6E-1
	1 h	7.9E-10/1.7E-2	1.0E-9/2.2E-2	4.8E-9/1.4E-1	6.6E-9/2.8E-1	6.7E-9/3.4E-1	1.3E-8/5.5E-1
	2 h	5.0E-10/1.1E-2	7.1E-10/1.6E-2	4.5E-9/1.3E-1	6.3E-9/2.7E-1	6.4E-9/3.3E-1	1.3E-8/5.4E-1
	3 h	3.9E-10/8.5E-3	6.0E-10/1.3E-2	4.4E-9/1.3E-1	6.2E-9/2.7E-1	6.3E-9/3.3E-1	1.3E-8/5.4E-1
	6 h	2.9E-10/6.4E-3	4.8E-10/1.1E-2	4.3E-9/1.2E-1	6.1E-9/2.6E-1	6.1E-9/3.3E-1	1.2E-8/5.3E-1
	12 h	2.2E-10/5.2E-3	3.9E-10/9.5E-3	4.1E-9/1.2E-1	5.9E-9/2.6E-1	5.9E-9/3.2E-1	1.2E-8/5.3E-1
	1 d	1.7E-10/4.3E-3	3.3E-10/8.3E-3	3.9E-9 / 1.2E-1	5.7E-9/2.6E-1	5.7E-9/3.2E-1	1.2E-8/5.3E-1
	2 d	1.5E-10/3.7E-3	2.8E-10/7.1E-3	3.6E-9/1.1E-1	5.3E-9/2.5E-1	5.4E-9/3.1E-1	1.2E-8/5.2E-1
	7 d	8.7E-11/2.4E-3	1.7E-10/4.8E-3	2.7E-9/9.0E-2	4.2E-9/2.2E-1	4.2E-9/2.8E-1	1.1E-8/4.9E-1
	30 d	3.0E-11/1.1E-3	5.9E-11/2.3E-3	1.1E-9/4.9E-2	1.8E-9/1.5E-1	1.9E-9/2.1E-1	8.2E-9/4.1E-1
	182 d	7.0E-13/1.2E-4	1.4E-12/2.4E-4	3.6E-11/6.7E-3	1.5E-10/5.2E-2	1.7E-10/9.6E-2	6.5E-9/3.0E-1
	1 yr	1.4E-13/6.8E-5	2.9E-13/1.4E-4	7.6E-12/3.9E-3	3.4E-11/3.4E-2	4.3E-11/6.4E-2	6.4E-9/2.7E-1
	2 yr	8.5E-15/3.1E-5	1.7E-14/6.1E-5	4.6E-13/1.8E-3	2.6E-12/1.6E-2	9.5E-12/3.0E-2	6.4E-9/2.4E-1
	5 yr	1.1E-15/3.1E-6	2.2E-15/6.3E-6	6.5E-14/1.8E-4	7.8E-13/1.6E-3	7.1E-12/3.5E-3	6.4E-9/2.1E-1
	10 yr	9.6E-16/1.4E-7	1.9E-15/2.9E-7	5.8E-14/8.5E-6	7.0E-13/8.9E-5	6.5E-12/5.2E-4	6.4E-9/2.1E-1
	20 yr	8.3E-16/5.1E-8	1.7E-15/1.0E-7	5.0E-14/3.0E-6	6.0E-13/3.6E-5	5.7E-12/3.1E-4	6.4E-9/2.1E-1
	30 yr	7.2E-16/3.4E-8	1.4E-15/6.9E-8	4.3E-14/2.1E-6	5.2E-13/2.5E-5	4.9E-12/2.1E-4	6.4E-9/2.1E-1
4)	0	2.8E-9/5.7E-2	2.9E-9/6.1E-2	5.7E-9/1.8E-1	7.0E-9/3.2E-1	7.0E-9/3.7E-1	1.3E-8/5.9E-1
	1 min	2.4E-9/4.5E-2	2.5E-9/4.9E-2	5.3E-9/1.6E-1	6.6E-9/3.1E-1	6.6E-9/3.6E-1	1.3E-8/5.8E-1
	10 min	1.1E-9/2.5E-2	1.3E-9/2.9E-2	4.0E-9/1.4E-1	5.3E-9/2.9E-1	5.3E-9/3.4E-1	1.2E-8/5.6E-1
	30 min	6.8E-10/1.6E-2	8.1E-10/2.0E-2	3.6E-9/1.4E-1	4.8E-9/2.8E-1	4.9E-9/3.3E-1	1.1E-8/5.5E-1
	1 h	4.6E-10/1.1E-2	5.9E-10/1.6E-2	3.3E-9/1.3E-1	4.6E-9/2.7E-1	4.6E-9/3.3E-1	1.1E-8/5.4E-1
	2 h	2.8E-10/7.3E-3	4.1E-10/1.1E-2	3.2E-9/1.3E-1	4.4E-9/2.7E-1	4.4E-9/3.2E-1	1.1E-8/5.4E-1
	3 h	2.1E-10/5.8E-3	3.4E-10/9.7E-3	3.1E-9/1.2E-1	4.3E-9/2.7E-1	4.4E-9/3.2E-1	1.1E-8/5.4E-1
	6 h	1.6E-10/4.6E-3	2.8E-10/8.5E-3	3.0E-9/1.2E-1	4.3E-9/2.6E-1	4.3E-9/3.2E-1	1.1E-8/5.3E-1
	12 h	1.3E-10/4.1E-3	2.5E-10/7.8E-3	2.9E-9/1.2E-1	4.2E-9/2.6E-1	4.2E-9/3.2E-1	1.1E-8/5.3E-1
	1 d	1.1E-10/3.7E-3	2.2E-10/7.1E-3	2.8E-9 / 1.2E-1	4.0E-9/2.6E-1	4.1E-9/3.1E-1	1.0E-8/5.3E-1
	2 d	9.8E-11/3.3E-3	1.9E-10/6.4E-3	2.6E-9/1.1E-1	3.8E-9/2.5E-1	3.8E-9/3.0E-1	1.0E-8/5.2E-1
	7 d	6.3E-11/2.4E-3	1.2E-10/4.8E-3	2.0E-9/9.6E-2	3.0E-9/2.2E-1	3.1E-9/2.8E-1	9.4E-9/4.9E-1
	30 d	2.2E-11/1.2E-3	4.3E-11/2.5E-3	7.7E-10/5.3E-2	1.3E-9/1.5E-1	1.3E-9/2.0E-1	7.7E-9/4.1E-1
	182 d	4.0E-13/1.1E-4	7.9E-13/2.2E-4	2.0E-11/5.9E-3	8.3E-11/4.5E-2	9.0E-11/8.2E-2	6.5E-9/3.0E-1
	1 yr	7.7E-14/5.8E-5	1.5E-13/1.2E-4	4.1E-12/3.3E-3	1.8E-11/2.9E-2	2.2E-11/5.4E-2	6.4E-9/2.7E-1
	2 yr	4.3E-15/2.6E-5	8.7E-15/5.3E-5	2.4E-13/1.5E-3	1.3E-12/1.3E-2	4.1E-12/2.5E-2	6.4E-9/2.4E-1
	5 yr	4.5E-16/2.7E-6	8.9E-16/5.3E-6	2.7E-14/1.6E-4	3.2E-13/1.4E-3	2.9E-12/2.8E-3	6.4E-9/2.2E-1
	10 yr	4.0E-16/9.5E-8	7.9E-16/1.9E-7	2.4E-14/5.6E-6	2.9E-13/5.7E-5	2.7E-12/2.8E-4	6.4E-9/2.2E-1
	20 yr	3.4E-16/7.5E-8	6.9E-16/4.9E-8	2.1E-14/1.5E-6	2.5E-13/1.8E-5	2.3E-12/1.5E-4	6.4E-9/2.1E-1
	30 yr	3.0E-16/1.6E-8	6.0E-16/3.2E-8	1.8E-14/9.6E-7	2.2E-13/1.2E-5	2.0E-12/9.8E-5	6.4E-9/2.1E-1

Table 14: Chromium (Cr) high-energy ω -factors ($\text{Sv h}^{-1}/(\text{stars cm}^{-3}\text{s}^{-1})$) / total activity ($\text{Bq}/(\text{stars s}^{-1})$) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	2.1E-9 / 5.3E-2	2.2E-9 / 5.5E-2	4.3E-9 / 1.0E-1	8.4E-9 / 2.4E-1	1.2E-8 / 3.4E-1	1.3E-8 / 5.4E-1
	1 min	1.9E-9 / 4.4E-2	2.0E-9 / 4.6E-2	4.1E-9 / 9.5E-2	8.2E-9 / 2.3E-1	1.2E-8 / 3.3E-1	1.3E-8 / 5.4E-1
	10 min	1.2E-9 / 2.1E-2	1.3E-9 / 2.3E-2	3.4E-9 / 7.2E-2	7.5E-9 / 2.1E-1	1.1E-8 / 3.1E-1	1.2E-8 / 5.1E-1
	30 min	7.4E-10 / 1.3E-2	8.6E-10 / 1.5E-2	2.9E-9 / 6.4E-2	7.0E-9 / 2.0E-1	1.0E-8 / 3.0E-1	1.2E-8 / 5.0E-1
	1 h	4.6E-10 / 8.2E-3	5.7E-10 / 1.0E-2	2.7E-9 / 5.9E-2	6.7E-9 / 1.9E-1	1.0E-8 / 3.0E-1	1.2E-8 / 5.0E-1
	2 h	2.5E-10 / 4.7E-3	3.7E-10 / 6.6E-3	2.4E-9 / 5.6E-2	6.5E-9 / 1.9E-1	9.9E-9 / 2.9E-1	1.1E-8 / 5.0E-1
	3 h	1.9E-10 / 3.4E-3	3.0E-10 / 5.3E-3	2.4E-9 / 5.4E-2	6.5E-9 / 1.9E-1	9.8E-9 / 2.9E-1	1.1E-8 / 4.9E-1
	6 h	1.4E-10 / 2.4E-3	2.5E-10 / 4.2E-3	2.3E-9 / 5.3E-2	6.4E-9 / 1.9E-1	9.7E-9 / 2.9E-1	1.1E-8 / 4.9E-1
	12 h	1.2E-10 / 2.0E-3	2.2E-10 / 3.7E-3	2.2E-9 / 5.2E-2	6.3E-9 / 1.9E-1	9.7E-9 / 2.9E-1	1.1E-8 / 4.9E-1
	1 d	1.0E-10 / 1.7E-3	2.0E-10 / 3.3E-3	2.1E-9 / 5.0E-2	6.2E-9 / 1.8E-1	9.5E-9 / 2.9E-1	1.1E-8 / 4.9E-1
	2 d	8.8E-11 / 1.5E-3	1.7E-10 / 3.0E-3	1.9E-9 / 4.8E-2	6.0E-9 / 1.8E-1	9.3E-9 / 2.8E-1	1.1E-8 / 4.9E-1
	7 d	5.1E-11 / 1.0E-3	9.9E-11 / 2.1E-3	1.4E-9 / 4.0E-2	5.3E-9 / 1.7E-1	8.7E-9 / 2.7E-1	1.0E-8 / 4.7E-1
	30 d	1.5E-11 / 5.4E-4	2.9E-11 / 1.1E-3	6.7E-10 / 2.6E-2	4.3E-9 / 1.4E-1	7.5E-9 / 2.4E-1	8.9E-9 / 4.4E-1
	182 d	5.7E-12 / 1.8E-4	1.1E-11 / 3.5E-4	3.3E-10 / 1.0E-2	2.8E-9 / 8.5E-2	5.1E-9 / 1.5E-1	6.5E-9 / 3.6E-1
	1 yr	3.8E-12 / 1.1E-4	7.5E-12 / 2.3E-4	2.2E-10 / 6.5E-3	1.9E-9 / 5.6E-2	3.4E-9 / 1.0E-1	4.8E-9 / 3.1E-1
	2 yr	1.7E-12 / 5.0E-5	3.3E-12 / 1.0E-4	9.6E-11 / 2.9E-3	8.3E-10 / 2.5E-2	1.5E-9 / 4.7E-2	2.9E-9 / 2.5E-1
	5 yr	1.5E-13 / 4.7E-6	2.9E-13 / 9.4E-6	8.5E-12 / 2.7E-4	7.3E-11 / 2.4E-3	1.3E-10 / 5.1E-3	1.6E-9 / 2.1E-1
	10 yr	2.8E-15 / 7.2E-7	5.6E-15 / 4.1E-7	1.6E-13 / 1.2E-5	1.5E-12 / 1.3E-4	4.2E-12 / 6.6E-4	1.5E-9 / 2.0E-1
	20 yr	2.4E-16 / 5.3E-8	4.7E-16 / 1.1E-7	1.4E-14 / 3.2E-6	1.7E-13 / 3.7E-5	1.6E-12 / 2.9E-4	1.5E-9 / 2.0E-1
	30 yr	2.0E-16 / 3.0E-8	4.1E-16 / 6.1E-8	1.2E-14 / 1.8E-6	1.5E-13 / 2.2E-5	1.4E-12 / 1.8E-4	1.4E-9 / 2.0E-1
2)	0	3.9E-9 / 8.8E-2	4.2E-9 / 9.4E-2	7.8E-9 / 1.7E-1	1.2E-8 / 3.1E-1	1.4E-8 / 4.1E-1	1.7E-8 / 6.2E-1
	1 min	3.3E-9 / 6.4E-2	3.6E-9 / 6.9E-2	7.2E-9 / 1.4E-1	1.1E-8 / 2.8E-1	1.4E-8 / 3.8E-1	1.6E-8 / 6.0E-1
	10 min	2.3E-9 / 4.3E-2	2.6E-9 / 4.9E-2	6.3E-9 / 1.2E-1	1.0E-8 / 2.6E-1	1.3E-8 / 3.6E-1	1.5E-8 / 5.7E-1
	30 min	1.7E-9 / 3.1E-2	2.0E-9 / 3.7E-2	5.6E-9 / 1.1E-1	9.5E-9 / 2.5E-1	1.2E-8 / 3.5E-1	1.4E-8 / 5.6E-1
	1 h	1.2E-9 / 2.3E-2	1.5E-9 / 2.8E-2	5.1E-9 / 1.0E-1	9.0E-9 / 2.4E-1	1.2E-8 / 3.4E-1	1.4E-8 / 5.5E-1
	2 h	8.0E-10 / 1.5E-2	1.1E-9 / 2.0E-2	4.7E-9 / 9.5E-2	8.6E-9 / 2.3E-1	1.1E-8 / 3.3E-1	1.4E-8 / 5.5E-1
	3 h	6.4E-10 / 1.2E-2	9.1E-10 / 1.7E-2	4.5E-9 / 9.1E-2	8.4E-9 / 2.3E-1	1.1E-8 / 3.3E-1	1.3E-8 / 5.4E-1
	6 h	4.5E-10 / 8.2E-3	6.9E-10 / 1.3E-2	4.2E-9 / 8.6E-2	8.1E-9 / 2.2E-1	1.1E-8 / 3.2E-1	1.3E-8 / 5.4E-1
	12 h	3.0E-10 / 5.5E-3	5.1E-10 / 9.5E-3	3.9E-9 / 8.1E-2	7.9E-9 / 2.2E-1	1.0E-8 / 3.2E-1	1.3E-8 / 5.3E-1
	1 d	2.1E-10 / 4.0E-3	4.0E-10 / 7.3E-3	3.7E-9 / 7.6E-2	7.6E-9 / 2.1E-1	1.0E-8 / 3.1E-1	1.3E-8 / 5.3E-1
	2 d	1.7E-10 / 3.0E-3	3.2E-10 / 5.8E-3	3.2E-9 / 7.0E-2	7.2E-9 / 2.1E-1	9.7E-9 / 3.1E-1	1.2E-8 / 5.2E-1
	7 d	8.5E-11 / 1.6E-3	1.7E-10 / 3.2E-3	2.3E-9 / 5.4E-2	6.0E-9 / 1.8E-1	8.4E-9 / 2.8E-1	1.1E-8 / 5.0E-1
	30 d	2.3E-11 / 6.7E-4	4.7E-11 / 1.3E-3	9.5E-10 / 3.1E-2	4.1E-9 / 1.4E-1	6.4E-9 / 2.4E-1	8.9E-9 / 4.5E-1
	182 d	4.8E-12 / 1.7E-4	9.6E-12 / 3.4E-4	2.7E-10 / 9.6E-3	2.2E-9 / 8.0E-2	3.9E-9 / 1.5E-1	6.3E-9 / 3.6E-1
	1 yr	2.9E-12 / 1.0E-4	5.8E-12 / 2.1E-4	1.7E-10 / 6.1E-3	1.4E-9 / 5.3E-2	2.5E-9 / 1.0E-1	5.0E-9 / 3.1E-1
	2 yr	1.2E-12 / 4.7E-5	2.5E-12 / 9.4E-5	7.1E-11 / 2.7E-3	6.1E-10 / 2.4E-2	1.1E-9 / 4.9E-2	3.5E-9 / 2.6E-1
	5 yr	1.1E-13 / 5.4E-6	2.2E-13 / 1.1E-5	6.4E-12 / 3.2E-4	5.6E-11 / 3.0E-3	1.1E-10 / 9.6E-3	2.5E-9 / 2.2E-1
	10 yr	4.1E-15 / 8.3E-7	8.2E-15 / 1.7E-6	2.4E-13 / 5.0E-5	2.5E-12 / 5.7E-4	1.7E-11 / 4.0E-3	2.4E-9 / 2.1E-1
	20 yr	1.9E-15 / 3.8E-7	3.7E-15 / 7.6E-7	1.1E-13 / 2.3E-5	1.4E-12 / 2.7E-4	1.3E-11 / 2.2E-3	2.4E-9 / 2.1E-1
	30 yr	1.6E-15 / 2.3E-7	3.2E-15 / 4.6E-7	9.7E-14 / 1.4E-5	1.2E-12 / 1.6E-4	1.1E-11 / 1.3E-3	2.4E-9 / 2.1E-1
3)	0	2.3E-9 / 5.3E-2	2.4E-9 / 5.5E-2	4.5E-9 / 1.1E-1	8.0E-9 / 2.3E-1	1.1E-8 / 3.3E-1	1.3E-8 / 5.2E-1
	1 min	2.0E-9 / 4.5E-2	2.1E-9 / 4.7E-2	4.2E-9 / 9.8E-2	7.8E-9 / 2.2E-1	1.1E-8 / 3.2E-1	1.2E-8 / 5.1E-1
	10 min	1.2E-9 / 2.2E-2	1.4E-9 / 2.4E-2	3.4E-9 / 7.5E-2	7.0E-9 / 2.0E-1	9.9E-9 / 2.9E-1	1.2E-8 / 4.9E-1
	30 min	7.6E-10 / 1.3E-2	8.7E-10 / 1.5E-2	2.9E-9 / 6.6E-2	6.5E-9 / 1.9E-1	9.5E-9 / 2.9E-1	1.1E-8 / 4.8E-1
	1 h	4.5E-10 / 8.1E-3	5.7E-10 / 1.0E-2	2.6E-9 / 6.1E-2	6.2E-9 / 1.9E-1	9.1E-9 / 2.8E-1	1.1E-8 / 4.7E-1
	2 h	2.4E-10 / 4.4E-3	3.5E-10 / 6.2E-3	2.4E-9 / 5.7E-2	6.0E-9 / 1.8E-1	8.9E-9 / 2.8E-1	1.1E-8 / 4.7E-1
	3 h	1.7E-10 / 3.1E-3	2.8E-10 / 4.9E-3	2.3E-9 / 5.6E-2	5.9E-9 / 1.8E-1	8.8E-9 / 2.8E-1	1.0E-8 / 4.7E-1
	6 h	1.3E-10 / 2.2E-3	2.4E-10 / 4.0E-3	2.3E-9 / 5.5E-2	5.8E-9 / 1.8E-1	8.8E-9 / 2.7E-1	1.0E-8 / 4.7E-1
	12 h	1.1E-10 / 1.9E-3	2.2E-10 / 3.6E-3	2.2E-9 / 5.4E-2	5.8E-9 / 1.8E-1	8.7E-9 / 2.7E-1	1.0E-8 / 4.7E-1
	1 d	1.0E-10 / 1.7E-3	2.0E-10 / 3.3E-3	2.1E-9 / 5.3E-2	5.7E-9 / 1.8E-1	8.6E-9 / 2.7E-1	1.0E-8 / 4.6E-1
	2 d	8.9E-11 / 1.5E-3	1.7E-10 / 3.0E-3	1.9E-9 / 5.0E-2	5.5E-9 / 1.7E-1	8.4E-9 / 2.7E-1	1.0E-8 / 4.6E-1
	7 d	5.1E-11 / 1.1E-3	1.0E-10 / 2.2E-3	1.4E-9 / 4.2E-2	4.8E-9 / 1.6E-1	7.7E-9 / 2.5E-1	9.3E-9 / 4.5E-1
	30 d	1.4E-11 / 5.6E-4	2.7E-11 / 1.1E-3	6.1E-10 / 2.6E-2	3.8E-9 / 1.3E-1	6.5E-9 / 2.2E-1	8.2E-9 / 4.1E-1
	182 d	5.0E-12 / 1.6E-4	1.0E-11 / 3.2E-4	2.9E-10 / 9.1E-3	2.5E-9 / 7.6E-2	4.4E-9 / 1.4E-1	6.1E-9 / 3.3E-1
	1 yr	3.3E-12 / 1.0E-4	6.5E-12 / 2.0E-4	1.9E-10 / 5.9E-3	1.6E-9 / 5.1E-2	2.9E-9 / 9.3E-2	4.6E-9 / 2.9E-1
	2 yr	1.4E-12 / 4.5E-5	2.9E-12 / 9.0E-5	8.4E-11 / 2.6E-3	7.2E-10 / 2.3E-2	1.3E-9 / 4.2E-2	3.0E-9 / 2.4E-1
	5 yr	1.3E-13 / 4.3E-6	2.5E-13 / 8.5E-6	7.4E-12 / 2.5E-4	6.4E-11 / 2.2E-3	1.2E-10 / 4.5E-3	1.8E-9 / 2.0E-1
	10 yr	2.3E-15 / 1.8E-7	4.7E-15 / 3.5E-7	1.4E-13 / 1.0E-5	1.2E-12 / 1.1E-4	2.9E-12 / 4.9E-4	1.7E-9 / 1.9E-1
	20 yr	1.2E-16 / 3.4E-8	2.4E-16 / 6.8E-8	7.1E-15 / 2.0E-6	8.5E-14 / 2.4E-5	8.0E-13 / 1.8E-4	1.7E-9 / 1.9E-1
	30 yr	1.0E-16 / 1.8E-8	2.0E-16 / 3.6E-8	6.1E-15 / 1.1E-6	7.4E-14 / 1.3E-5	6.9E-13 / 1.0E-4	1.7E-9 / 1.9E-1
4)	0	1.7E-9 / 4.5E-2	1.8E-9 / 4.7E-2	3.4E-9 / 8.9E-2	7.7E-9 / 2.2E-1	1.1E-8 / 3.3E-1	1.3E-8 / 5.4E-1
	1 min	1.5E-9 / 3.9E-2	1.6E-9 / 4.0E-2	3.3E-9 / 8.2E-2	7.6E-9 / 2.2E-1	1.1E-8 / 3.3E-1	1.2E-8 / 5.3E-1
	10 min	9.2E-10 / 1.6E-2	1.0E-9 / 1.8E-2	2.7E-9 / 6.0E-2	7.0E-9 / 2.0E-1	1.1E-8 / 3.0E-1	1.2E-8 / 5.1E-1
	30 min	5.5E-10 / 8.9E-3	6.3E-10 / 1.0E-2	2.3E-9 / 5.2E-2	6.6E-9 / 1.9E-1	1.0E-8 / 3.0E-1	1.1E-8 / 5.0E-1
	1 h	3.2E-10 / 5.5E-3	3.9E-10 / 6.8E-3	2.1E-9 / 4.9E-2	6.4E-9 / 1.8E-1	1.0E-8 / 2.9E-1	1.1E-8 / 5.0E-1
	2 h	1.5E-10 / 2.8E-3	2.3E-10 / 4.1E-3	1.9E-9 / 4.6E-2	6.2E-9 / 1.8E-1	9.9E-9 / 2.9E-1	1.1E-8 / 5.0E-1
	3 h	1.1E-10 / 1.9E-3	1.9E-10 / 3.2E-3	1.8E-9 / 4.5E-2	6.1E-9 / 1.8E-1	9.9E-9 / 2.9E-1	1.1E-8 / 5.0E-1
	6 h	8.6E-11 / 1.4E-3	1.6E-10 / 2.7E-3	1.8E-9 / 4.4E-2	6.1E-9 / 1.8E-1	9.8E-9 / 2.9E-1	1.1E-8 / 4.9E-1
	12 h	8.0E-11 / 1.3E-3	1.5E-10 / 2.5E-3	1.8E-9 / 4.4E-2	6.0E-9 / 1.8E-1	9.8E-9 / 2.9E-1	1.1E-8 / 4.9E-1
	1 d	7.4E-11 / 1.2E-3	1.4E-10 / 2.4E-3	1.7E-9 / 4.3E-2	6.0E-9 / 1.8E-1	9.7E-9 / 2.9E-1	1.1E-8 / 4.9E-1
	2 d	6.6E-11 / 1.1E-3	1.3E-10 / 2.2E-3	1.6E-9 / 4.2E-2	5.8E-9 / 1.8E-1	9.6E-9 / 2.8E-1	1.1E-8 / 4.9E-1
	7 d	4.0E-11 / 8.8E-4	7.9E-11 / 1.7E-3	1.2E-9 / 3.6E-2	5.3E-9 / 1.7E-1	9.0E-9 / 2.7E-1	1.0E-8 / 4.8E-1
	30 d	1.3E-11 / 5.0E-4	2.5E-11 / 9.9E-4	6.2E-10 / 2.5E-2	4.5E-9 / 1.4E-1	8.0E-9 / 2.4E-1	9.1E-9 / 4.5E-1
	182 d	6.3E-12 / 1.8E-4	1.3E-11 / 3.6E-4	3.6E-10 / 1.1E-2	3.1E-9 / 8.9E-2	5.6E-9 / 1.6E-1	6.7E-9 / 3.7E-1
	1 yr	4.2E-12 / 1.2E-4	8.3E-12 / 2.4E-4	2.4E-10 / 6.9E-3	2.1E-9 / 5.9E-2	3.7E-9 / 1.1E-1	4.8E-9 / 3.1E-1
	2 yr	1.8E-12 / 5.3E-5	3.7E-12 / 1.1E-4	1.1E-10 / 3.1E-3	9.2E-10 / 2.7E-2	1.7E-9 / 4.9E-2	2.7E-9 / 2.5E-1
	5 yr	1.6E-13 / 4.9E-6	3.2E-13 / 9.7E-6	9.4E-12 / 2.8E-4	8.1E-11 / 2.5E-3	1.5E-10 / 4.8E-3	1.2E-9 / 2.1E-1
	10 yr	2.8E-15 / 1.5E-7	5.7E-15 / 3.1E-7	1.7E-13 / 9.1E-6	1.4E-12 / 8.9E-5	2.7E-12 / 3.4E-4	1.1E-9 / 2.1E-1
	20 yr	1.6E-17 / 1.8E-8	3.2E-17 / 3.6E-8	9.5E-16 / 1.1E-6	1.1E-14 / 1.3E-5	1.0E-13 / 9.0E-5	1.1E-9 / 2.1E-1
	30 yr	1.3E-17 / 8.5E-9	2.6E-17 / 1.7E-8	7.8E-16 / 5.1E-7	9.4E-15 / 6.1E-6	8.8E-14 / 4.7E-5	1.1E-9 / 2.1E-1

Table 15: Manganese (Mn) high-energy ω -factors ($\text{Sv h}^{-1}/(\text{stars cm}^{-3}\text{s}^{-1})$ / total activity ($\text{Bq}/(\text{stars s}^{-1})$) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	3.5E-9/5.4E-2	3.7E-9/5.7E-2	5.7E-9/9.9E-2	8.0E-9/2.1E-1	9.8E-9/3.8E-1	1.0E-8/5.6E-1
	1 min	3.3E-9/5.0E-2	3.5E-9/5.3E-2	5.5E-9/9.5E-2	7.8E-9/2.1E-1	9.6E-9/3.8E-1	1.0E-8/5.6E-1
	10 min	2.6E-9/4.0E-2	2.8E-9/4.3E-2	4.8E-9/8.5E-2	7.1E-9/2.0E-1	8.8E-9/3.7E-1	9.5E-9/5.5E-1
	30 min	2.0E-9/3.0E-2	2.2E-9/3.3E-2	4.2E-9/7.5E-2	6.5E-9/1.9E-1	8.2E-9/3.6E-1	8.8E-9/5.4E-1
	1 h	1.5E-9/2.3E-2	1.7E-9/2.5E-2	3.6E-9/6.7E-2	6.0E-9/1.8E-1	7.7E-9/3.5E-1	8.3E-9/5.3E-1
	2 h	1.0E-9/1.5E-2	1.2E-9/1.8E-2	3.2E-9/5.9E-2	5.5E-9/1.7E-1	7.2E-9/3.4E-1	7.8E-9/5.2E-1
	3 h	7.7E-10/1.1E-2	9.3E-10/1.4E-2	2.9E-9/5.5E-2	5.2E-9/1.7E-1	6.9E-9/3.4E-1	7.6E-9/5.2E-1
	6 h	4.2E-10/6.0E-3	5.6E-10/8.0E-3	2.5E-9/4.9E-2	4.8E-9/1.6E-1	6.5E-9/3.3E-1	7.2E-9/5.1E-1
	12 h	2.0E-10/2.8E-3	3.2E-10/4.6E-3	2.2E-9/4.5E-2	4.5E-9/1.6E-1	6.2E-9/3.3E-1	6.9E-9/5.1E-1
	1 d	1.2E-10/1.8E-3	2.3E-10/3.3E-3	2.0E-9 /4.3E-2	4.3E-9/1.6E-1	6.0E-9/3.3E-1	6.7E-9/5.1E-1
	2 d	9.3E-11/1.4E-3	1.8E-10/2.7E-3	1.8E-9/4.0E-2	4.1E-9/1.5E-1	5.8E-9/3.2E-1	6.4E-9/5.0E-1
	7 d	5.0E-11/9.0E-4	9.8E-11/1.8E-3	1.2E-9/3.3E-2	3.4E-9/1.4E-1	5.1E-9/3.1E-1	5.7E-9/4.9E-1
	30 d	1.1E-11/4.3E-4	2.1E-11/8.6E-4	4.5E-10/2.1E-2	2.4E-9/1.2E-1	4.0E-9/2.9E-1	4.7E-9/4.7E-1
	182 d	3.1E-12/1.5E-4	6.2E-12/3.0E-4	1.8E-10/8.7E-3	1.5E-9/8.0E-2	2.6E-9/2.2E-1	3.3E-9/4.0E-1
	1 yr	1.9E-12/1.1E-4	3.9E-12/2.1E-4	1.1E-10/6.3E-3	9.6E-10/6.0E-2	1.7E-9/1.7E-1	2.4E-9/3.5E-1
	2 yr	8.5E-13/6.2E-5	1.7E-12/1.2E-4	4.9E-11/3.7E-3	4.2E-10/3.6E-2	7.6E-10/1.2E-1	1.4E-9/2.9E-1
	5 yr	7.5E-14/1.9E-5	1.5E-13/3.7E-5	4.3E-12/1.1E-3	3.7E-11/1.2E-2	6.9E-11/4.5E-2	6.9E-10/2.2E-1
	10 yr	1.6E-15/4.6E-6	3.2E-15/9.3E-6	9.3E-14/2.8E-4	8.6E-13/3.0E-3	3.1E-12/1.2E-2	6.3E-10/1.8E-1
	20 yr	2.4E-16/4.0E-7	4.9E-16/8.0E-7	1.5E-14/2.4E-5	1.8E-13/2.6E-4	1.7E-12/1.2E-3	6.2E-10/1.7E-1
30 yr	2.1E-16/5.6E-8	4.2E-16/1.1E-7	1.3E-14/3.3E-6	1.5E-13/3.8E-5	1.4E-12/2.4E-4	6.2E-10/1.7E-1	
2)	0	5.4E-9/1.0E-1	5.8E-9/1.1E-1	9.8E-9/1.8E-1	1.3E-8/3.1E-1	1.4E-8/4.7E-1	1.5E-8/6.8E-1
	1 min	4.8E-9/8.0E-2	5.3E-9/8.7E-2	9.3E-9/1.6E-1	1.2E-8/2.9E-1	1.3E-8/4.5E-1	1.5E-8/6.6E-1
	10 min	3.7E-9/6.5E-2	4.1E-9/7.2E-2	8.1E-9/1.5E-1	1.1E-8/2.7E-1	1.2E-8/4.3E-1	1.4E-8/6.5E-1
	30 min	2.7E-9/4.8E-2	3.1E-9/5.5E-2	7.1E-9/1.3E-1	1.0E-8/2.6E-1	1.1E-8/4.1E-1	1.3E-8/6.3E-1
	1 h	2.0E-9/3.5E-2	2.4E-9/4.2E-2	6.4E-9/1.2E-1	9.2E-9/2.4E-1	1.1E-8/4.0E-1	1.2E-8/6.2E-1
	2 h	1.3E-9/2.3E-2	1.7E-9/2.9E-2	5.7E-9/1.0E-1	8.5E-9/2.3E-1	9.9E-9/3.9E-1	1.1E-8/6.0E-1
	3 h	1.1E-9/1.8E-2	1.4E-9/2.4E-2	5.4E-9/9.8E-2	8.2E-9/2.3E-1	9.5E-9/3.8E-1	1.1E-8/6.0E-1
	6 h	6.9E-10/1.1E-2	1.0E-9/1.6E-2	4.9E-9/8.9E-2	7.7E-9/2.2E-1	9.1E-9/3.7E-1	1.0E-8/5.9E-1
	12 h	4.3E-10/6.9E-3	7.1E-10/1.1E-2	4.4E-9/8.3E-2	7.3E-9/2.1E-1	8.6E-9/3.7E-1	1.0E-8/5.8E-1
	1 d	2.8E-10/4.5E-3	5.1E-10/8.1E-3	4.0E-9 /7.6E-2	6.9E-9/2.0E-1	8.2E-9/3.6E-1	9.6E-9/5.7E-1
	2 d	2.0E-10/3.1E-3	3.7E-10/5.9E-3	3.6E-9/6.9E-2	6.4E-9/2.0E-1	7.7E-9/3.5E-1	9.1E-9/5.7E-1
	7 d	9.5E-11/1.6E-3	1.8E-10/3.1E-3	2.4E-9/5.3E-2	5.0E-9/1.7E-1	6.3E-9/3.3E-1	7.7E-9/5.4E-1
	30 d	2.3E-11/6.5E-4	4.5E-11/1.3E-3	8.6E-10/2.9E-2	2.9E-9/1.3E-1	4.2E-9/2.8E-1	5.6E-9/5.0E-1
	182 d	3.1E-12/1.5E-4	6.1E-12/3.0E-4	1.7E-10/8.7E-3	1.3E-9/7.7E-2	2.1E-9/2.0E-1	3.5E-9/4.2E-1
	1 yr	1.6E-12/1.0E-4	3.2E-12/2.0E-4	9.2E-11/6.0E-3	7.5E-10/5.6E-2	1.3E-9/1.6E-1	2.7E-9/3.7E-1
	2 yr	6.4E-13/5.7E-5	1.3E-12/1.1E-4	3.7E-11/3.4E-3	3.2E-10/3.3E-2	5.9E-10/1.0E-1	2.0E-9/3.2E-1
	5 yr	5.8E-14/1.6E-5	1.2E-13/3.3E-5	3.4E-12/9.6E-4	3.0E-11/1.0E-2	6.8E-11/4.1E-2	1.4E-9/2.5E-1
	10 yr	3.4E-15/4.3E-6	6.8E-15/8.5E-6	2.0E-13/2.5E-4	2.2E-12/2.8E-3	1.7E-11/1.3E-2	1.4E-9/2.2E-1
	20 yr	2.0E-15/6.4E-7	4.1E-15/1.3E-6	1.2E-13/3.8E-5	1.5E-12/4.4E-4	1.4E-11/2.8E-3	1.4E-9/2.0E-1
30 yr	1.8E-15/2.4E-7	3.5E-15/4.8E-7	1.1E-13/1.4E-5	1.3E-12/1.7E-4	1.2E-11/1.3E-3	1.3E-9/2.0E-1	
3)	0	3.7E-9/5.2E-2	3.9E-9/5.9E-2	6.1E-9/1.0E-1	8.4E-9/2.2E-1	1.0E-8/3.7E-1	1.1E-8/6.6E-1
	1 min	3.5E-9/5.2E-2	3.7E-9/5.5E-2	5.9E-9/1.0E-1	8.2E-9/2.1E-1	9.9E-9/3.7E-1	1.1E-8/5.6E-1
	10 min	2.7E-9/4.1E-2	2.9E-9/4.4E-2	5.1E-9/8.9E-2	7.4E-9/2.0E-1	9.1E-9/3.6E-1	9.8E-9/5.5E-1
	30 min	2.0E-9/3.1E-2	2.2E-9/3.4E-2	4.4E-9/7.8E-2	6.7E-9/1.9E-1	8.4E-9/3.5E-1	9.1E-9/5.4E-1
	1 h	1.5E-9/2.3E-2	1.7E-9/2.5E-2	3.8E-9/7.0E-2	6.1E-9/1.8E-1	7.9E-9/3.4E-1	8.5E-9/5.3E-1
	2 h	9.9E-10/1.5E-2	1.2E-9/1.7E-2	3.3E-9/6.2E-2	5.6E-9/1.7E-1	7.4E-9/3.3E-1	8.0E-9/5.2E-1
	3 h	7.5E-10/1.1E-2	9.3E-10/1.3E-2	3.1E-9/5.8E-2	5.4E-9/1.7E-1	7.1E-9/3.3E-1	7.8E-9/5.2E-1
	6 h	4.2E-10/5.8E-3	5.8E-10/8.0E-3	2.7E-9/5.2E-2	5.0E-9/1.6E-1	6.7E-9/3.2E-1	7.4E-9/5.1E-1
	12 h	2.1E-10/2.9E-3	3.5E-10/4.8E-3	2.4E-9/4.8E-2	4.7E-9/1.6E-1	6.4E-9/3.2E-1	7.1E-9/5.1E-1
	1 d	1.4E-10/1.9E-3	2.5E-10/3.5E-3	2.2E-9 /4.6E-2	4.5E-9/1.6E-1	6.2E-9/3.1E-1	6.9E-9/5.1E-1
	2 d	1.0E-10/1.5E-3	2.0E-10/2.8E-3	2.0E-9/4.3E-2	4.2E-9/1.5E-1	6.0E-9/3.1E-1	6.6E-9/5.0E-1
	7 d	5.5E-11/9.7E-4	1.1E-10/1.9E-3	1.3E-9/3.6E-2	3.5E-9/1.4E-1	5.2E-9/3.0E-1	5.9E-9/4.9E-1
	30 d	1.1E-11/4.6E-4	2.2E-11/9.1E-4	4.5E-10/2.2E-2	2.4E-9/1.2E-1	4.0E-9/2.7E-1	4.7E-9/4.6E-1
	182 d	3.1E-12/1.4E-4	6.2E-12/2.9E-4	1.8E-10/8.3E-3	1.5E-9/7.6E-2	2.6E-9/2.0E-1	3.3E-9/3.9E-1
	1 yr	2.0E-12/1.0E-4	3.9E-12/2.0E-4	1.1E-10/5.9E-3	9.6E-10/5.6E-2	1.7E-9/1.6E-1	2.4E-9/3.5E-1
	2 yr	8.5E-13/5.8E-5	1.7E-12/1.2E-4	4.9E-11/3.4E-3	4.2E-10/3.3E-2	7.6E-10/1.1E-1	1.4E-9/2.9E-1
	5 yr	7.5E-14/1.7E-5	1.5E-13/3.3E-5	4.3E-12/9.8E-4	3.7E-11/1.0E-2	6.8E-11/4.0E-2	7.4E-10/2.2E-1
	10 yr	1.4E-15/4.0E-6	2.9E-15/8.1E-6	8.4E-14/2.4E-4	7.6E-13/2.6E-3	2.1E-12/1.1E-2	6.8E-10/1.9E-1
	20 yr	1.2E-16/3.4E-7	2.5E-16/6.8E-7	7.4E-15/2.0E-5	8.9E-14/2.2E-4	8.3E-13/9.9E-4	6.8E-10/1.8E-1
30 yr	1.1E-16/4.2E-8	2.1E-16/8.4E-8	6.4E-15/2.5E-6	7.7E-14/2.8E-5	7.2E-13/1.7E-4	6.8E-10/1.8E-1	
4)	0	3.2E-9/4.5E-2	3.3E-9/4.8E-2	4.9E-9/8.1E-2	7.2E-9/1.9E-1	9.0E-9/3.7E-1	9.4E-9/5.4E-1
	1 min	3.0E-9/4.3E-2	3.2E-9/4.5E-2	4.7E-9/7.9E-2	7.0E-9/1.9E-1	8.9E-9/3.7E-1	9.3E-9/5.3E-1
	10 min	2.4E-9/3.5E-2	2.6E-9/3.7E-2	4.1E-9/7.1E-2	6.4E-9/1.8E-1	8.3E-9/3.6E-1	8.7E-9/5.3E-1
	30 min	1.9E-9/2.7E-2	2.0E-9/2.9E-2	3.6E-9/6.2E-2	5.9E-9/1.7E-1	7.7E-9/3.5E-1	8.1E-9/5.2E-1
	1 h	1.4E-9/2.1E-2	1.6E-9/2.3E-2	3.1E-9/5.6E-2	5.4E-9/1.7E-1	7.3E-9/3.5E-1	7.7E-9/5.1E-1
	2 h	1.0E-9/1.4E-2	1.1E-9/1.6E-2	2.7E-9/4.9E-2	5.0E-9/1.6E-1	6.8E-9/3.4E-1	7.2E-9/5.1E-1
	3 h	7.6E-10/1.1E-2	8.9E-10/1.2E-2	2.4E-9/4.5E-2	4.7E-9/1.6E-1	6.6E-9/3.4E-1	7.0E-9/5.0E-1
	6 h	4.0E-10/5.4E-3	5.1E-10/6.9E-3	2.0E-9/4.0E-2	4.3E-9/1.5E-1	6.2E-9/3.3E-1	6.6E-9/5.0E-1
	12 h	1.7E-10/2.2E-3	2.6E-10/3.5E-3	1.7E-9/3.6E-2	4.0E-9/1.5E-1	5.9E-9/3.3E-1	6.3E-9/4.9E-1
	1 d	9.5E-11/1.3E-3	1.8E-10/2.4E-3	1.6E-9 /3.4E-2	3.9E-9/1.4E-1	5.7E-9/3.3E-1	6.1E-9/4.9E-1
	2 d	7.3E-11/1.0E-3	1.4E-10/2.0E-3	1.4E-9/3.2E-2	3.7E-9/1.4E-1	5.5E-9/3.2E-1	5.9E-9/4.9E-1
	7 d	3.9E-11/7.0E-4	7.7E-11/1.4E-3	9.4E-10/2.7E-2	3.2E-9/1.4E-1	5.0E-9/3.1E-1	5.4E-9/4.8E-1
	30 d	8.4E-12/3.6E-4	1.7E-11/7.3E-4	3.7E-10/1.8E-2	2.4E-9/1.2E-1	4.1E-9/2.9E-1	4.5E-9/4.6E-1
	182 d	3.2E-12/1.5E-4	6.5E-12/3.0E-4	1.9E-10/8.8E-3	1.6E-9/8.2E-2	2.8E-9/2.3E-1	3.2E-9/3.9E-1
	1 yr	2.1E-12/1.1E-4	4.2E-12/2.2E-4	1.2E-10/6.5E-3	1.0E-9/6.2E-2	1.9E-9/1.8E-1	2.3E-9/3.4E-1
	2 yr	9.1E-13/6.5E-5	1.8E-12/1.3E-4	5.3E-11/3.8E-3	4.6E-10/3.8E-2	8.2E-10/1.2E-1	1.2E-9/2.8E-1
	5 yr	8.0E-14/2.0E-5	1.6E-13/4.0E-5	4.7E-12/1.2E-3	4.0E-11/1.3E-2	7.3E-11/4.9E-2	4.7E-10/2.0E-1
	10 yr	1.4E-15/5.0E-6	2.9E-15/1.0E-5	8.3E-14/3.0E-4	7.3E-13/3.2E-3	1.5E-12/1.3E-2	4.0E-10/1.6E-1
	20 yr	2.8E-17/4.0E-7	5.7E-17/8.0E-7	1.7E-15/2.4E-5	2.0E-14/2.6E-4	1.9E-13/1.1E-3	4.0E-10/1.5E-1
30 yr	2.4E-17/3.8E-8	4.7E-17/7.5E-8	1.4E-15/2.2E-6	1.7E-14/2.5E-5	1.6E-13/1.2E-4	4.0E-10/1.5E-1	

Table 16: Iron (Fe) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	2.6E-9/6.2E-2	3.6E-9/8.3E-2	9.3E-9/1.8E-1	1.7E-8/4.4E-1	1.8E-8/6.2E-1	1.9E-8/7.2E-1
	1 min	2.4E-9/5.9E-2	3.5E-9/7.9E-2	9.2E-9/1.8E-1	1.7E-8/4.4E-1	1.8E-8/6.2E-1	1.9E-8/7.2E-1
	10 min	2.1E-9/5.2E-2	3.2E-9/7.3E-2	8.8E-9/1.7E-1	1.7E-8/4.3E-1	1.8E-8/6.1E-1	1.8E-8/7.1E-1
	30 min	1.9E-9/4.5E-2	2.9E-9/6.6E-2	8.6E-9/1.7E-1	1.6E-8/4.2E-1	1.8E-8/6.0E-1	1.8E-8/7.0E-1
	1 h	1.7E-9/4.1E-2	2.7E-9/6.1E-2	8.3E-9/1.6E-1	1.6E-8/4.2E-1	1.7E-8/6.0E-1	1.8E-8/7.0E-1
	2 h	1.5E-9/3.6E-2	2.5E-9/5.5E-2	8.1E-9/1.5E-1	1.6E-8/4.1E-1	1.7E-8/5.9E-1	1.7E-8/6.9E-1
	3 h	1.4E-9/3.3E-2	2.4E-9/5.1E-2	7.9E-9/1.5E-1	1.6E-8/4.0E-1	1.7E-8/5.9E-1	1.7E-8/6.8E-1
	6 h	1.3E-9/2.8E-2	2.2E-9/4.4E-2	7.5E-9/1.4E-1	1.5E-8/3.9E-1	1.7E-8/5.7E-1	1.7E-8/6.7E-1
	12 h	1.1E-9/2.1E-2	1.8E-9/3.4E-2	6.8E-9/1.2E-1	1.5E-8/3.8E-1	1.6E-8/5.6E-1	1.6E-8/6.6E-1
	1 d	7.6E-10/1.3E-2	1.3E-9/2.2E-2	5.8E-9 /1.0E-1	1.4E-8/3.6E-1	1.5E-8/5.4E-1	1.5E-8/6.4E-1
	2 d	4.2E-10/6.4E-3	7.5E-10/1.1E-2	4.5E-9/8.1E-2	1.2E-8/3.3E-1	1.3E-8/5.2E-1	1.4E-8/6.2E-1
	7 d	8.8E-11/1.5E-3	1.7E-10/3.0E-3	2.9E-9/5.9E-2	1.0E-8/3.1E-1	1.1E-8/4.9E-1	1.2E-8/5.8E-1
	30 d	3.9E-11/8.5E-4	7.8E-11/1.7E-3	2.0E-9/4.5E-2	8.1E-9/2.7E-1	9.1E-9/4.4E-1	9.4E-9/5.4E-1
	182 d	9.5E-12/3.5E-4	1.9E-11/7.0E-4	5.0E-10/2.0E-2	2.2E-9/1.5E-1	2.9E-9/2.8E-1	3.3E-9/3.7E-1
	1 yr	2.1E-12/1.9E-4	4.3E-12/3.7E-4	1.2E-10/1.1E-2	6.1E-10/8.8E-2	1.2E-9/1.8E-1	1.5E-9/2.8E-1
	2 yr	3.2E-13/7.7E-5	6.3E-13/1.5E-4	1.8E-11/4.5E-3	1.6E-10/4.0E-2	5.9E-10/9.7E-2	8.8E-10/1.9E-1
	5 yr	8.7E-14/1.3E-5	1.7E-13/2.5E-5	5.2E-12/7.4E-4	5.7E-11/7.5E-3	3.1E-10/2.8E-2	5.5E-10/1.2E-1
10 yr	3.9E-14/3.8E-6	7.8E-14/5.5E-6	2.3E-12/1.6E-4	2.7E-11/1.8E-3	1.6E-10/8.1E-3	3.4E-10/9.9E-2	
20 yr	1.1E-14/3.4E-7	2.1E-14/6.8E-7	6.3E-13/2.0E-5	7.2E-12/2.3E-4	4.3E-11/1.2E-3	1.8E-10/9.1E-2	
30 yr	2.9E-15/8.0E-8	5.8E-15/1.6E-7	1.7E-13/4.8E-6	2.0E-12/5.6E-5	1.2E-11/3.9E-4	1.4E-10/9.0E-2	
2)	0	5.5E-9/1.1E-1	7.0E-9/1.4E-1	1.5E-8/2.7E-1	2.3E-8/5.1E-1	2.4E-8/6.8E-1	2.5E-8/8.4E-1
	1 min	5.0E-9/9.7E-2	6.5E-9/1.2E-1	1.5E-8/2.6E-1	2.3E-8/4.9E-1	2.4E-8/6.7E-1	2.4E-8/8.2E-1
	10 min	4.1E-9/8.3E-2	5.6E-9/1.1E-1	1.4E-8/2.4E-1	2.2E-8/4.8E-1	2.3E-8/6.5E-1	2.4E-8/8.1E-1
	30 min	3.4E-9/6.8E-2	4.9E-9/9.3E-2	1.3E-8/2.3E-1	2.1E-8/4.6E-1	2.2E-8/6.4E-1	2.3E-8/7.9E-1
	1 h	2.8E-9/5.7E-2	4.3E-9/8.2E-2	1.2E-8/2.1E-1	2.1E-8/4.5E-1	2.2E-8/6.2E-1	2.2E-8/7.8E-1
	2 h	2.4E-9/4.6E-2	3.8E-9/7.0E-2	1.2E-8/2.0E-1	2.0E-8/4.4E-1	2.1E-8/6.1E-1	2.2E-8/7.7E-1
	3 h	2.2E-9/4.1E-2	3.6E-9/6.4E-2	1.1E-8/1.9E-1	2.0E-8/4.3E-1	2.1E-8/6.0E-1	2.1E-8/7.6E-1
	6 h	1.9E-9/3.4E-2	3.2E-9/5.4E-2	1.1E-8/1.8E-1	1.9E-8/4.2E-1	2.0E-8/5.9E-1	2.1E-8/7.5E-1
	12 h	1.5E-9/2.6E-2	2.6E-9/4.2E-2	9.7E-9/1.6E-1	1.8E-8/4.0E-1	1.9E-8/5.7E-1	1.9E-8/7.3E-1
	1 d	1.1E-9/1.7E-2	1.9E-9/2.9E-2	8.3E-9 /1.4E-1	1.6E-8/3.7E-1	1.7E-8/5.4E-1	1.8E-8/7.0E-1
	2 d	6.2E-10/9.0E-3	1.1E-9/1.6E-2	6.5E-9/1.1E-1	1.4E-8/3.4E-1	1.5E-8/5.2E-1	1.6E-8/6.7E-1
	7 d	1.4E-10/2.2E-3	2.7E-10/4.3E-3	3.9E-9/7.2E-2	1.1E-8/3.0E-1	1.2E-8/4.7E-1	1.3E-8/6.3E-1
	30 d	4.6E-11/9.5E-4	9.2E-11/1.9E-3	2.2E-9/4.7E-2	8.3E-9/2.5E-1	9.2E-9/4.1E-1	9.8E-9/5.7E-1
	182 d	9.4E-12/3.1E-4	1.9E-11/6.2E-4	5.0E-10/1.8E-2	2.2E-9/1.3E-1	2.8E-9/2.6E-1	3.4E-9/4.1E-1
	1 yr	2.1E-12/1.6E-4	4.2E-12/3.3E-4	1.1E-10/9.5E-3	5.9E-10/7.9E-2	1.0E-9/1.7E-1	1.6E-9/3.3E-1
	2 yr	2.9E-13/7.1E-5	5.8E-13/1.4E-4	1.7E-11/4.1E-3	1.4E-10/3.7E-2	4.4E-10/9.7E-2	1.0E-9/2.5E-1
	5 yr	6.0E-14/1.3E-5	1.2E-13/2.6E-5	3.6E-12/7.7E-4	3.9E-11/7.9E-3	2.1E-10/3.1E-2	7.3E-10/1.8E-1
10 yr	2.5E-14/3.2E-6	5.0E-14/6.4E-6	1.5E-12/1.9E-4	1.7E-11/2.1E-3	1.1E-10/1.0E-2	5.9E-10/1.6E-1	
20 yr	7.6E-15/5.6E-7	1.5E-14/1.1E-6	4.6E-13/3.4E-5	5.3E-12/3.9E-4	3.5E-11/2.6E-3	4.9E-10/1.5E-1	
30 yr	2.9E-15/2.3E-7	5.7E-15/4.5E-7	1.7E-13/1.3E-5	2.0E-12/1.6E-4	1.5E-11/1.2E-3	4.5E-10/1.4E-1	
3)	0	2.7E-9/6.2E-2	3.8E-9/8.4E-2	9.7E-9/1.8E-1	1.8E-8/4.3E-1	1.9E-8/6.1E-1	1.9E-8/7.1E-1
	1 min	2.6E-9/5.9E-2	3.7E-9/8.1E-2	9.6E-9/1.8E-1	1.8E-8/4.3E-1	1.9E-8/6.1E-1	1.9E-8/7.1E-1
	10 min	2.2E-9/5.3E-2	3.4E-9/7.4E-2	9.2E-9/1.7E-1	1.7E-8/4.2E-1	1.8E-8/6.0E-1	1.9E-8/7.0E-1
	30 min	2.0E-9/4.6E-2	3.1E-9/6.8E-2	8.9E-9/1.7E-1	1.7E-8/4.2E-1	1.8E-8/6.0E-1	1.8E-8/7.0E-1
	1 h	1.8E-9/4.2E-2	2.9E-9/6.3E-2	8.7E-9/1.6E-1	1.7E-8/4.1E-1	1.8E-8/5.9E-1	1.8E-8/6.9E-1
	2 h	1.6E-9/3.7E-2	2.7E-9/5.7E-2	8.4E-9/1.6E-1	1.6E-8/4.0E-1	1.8E-8/5.8E-1	1.8E-8/6.8E-1
	3 h	1.6E-9/3.4E-2	2.6E-9/5.3E-2	8.3E-9/1.5E-1	1.6E-8/4.0E-1	1.7E-8/5.8E-1	1.8E-8/6.8E-1
	6 h	1.4E-9/2.9E-2	2.4E-9/4.6E-2	7.8E-9/1.4E-1	1.6E-8/3.9E-1	1.7E-8/5.7E-1	1.7E-8/6.7E-1
	12 h	1.2E-9/2.2E-2	2.0E-9/3.5E-2	7.0E-9/1.2E-1	1.5E-8/3.7E-1	1.6E-8/5.5E-1	1.7E-8/6.5E-1
	1 d	8.2E-10/1.4E-2	1.4E-9/2.3E-2	5.9E-9 /1.0E-1	1.4E-8/3.5E-1	1.5E-8/5.3E-1	1.5E-8/6.3E-1
	2 d	4.5E-10/6.7E-3	7.9E-10/1.2E-2	4.6E-9/8.1E-2	1.2E-8/3.3E-1	1.4E-8/5.1E-1	1.4E-8/6.1E-1
	7 d	8.9E-11/1.5E-3	1.7E-10/2.9E-3	2.9E-9/5.7E-2	1.0E-8/3.0E-1	1.2E-8/4.8E-1	1.2E-8/5.8E-1
	30 d	3.9E-11/8.2E-4	7.8E-11/1.6E-3	2.0E-9/4.4E-2	8.2E-9/2.6E-1	9.2E-9/4.3E-1	9.6E-9/5.3E-1
	182 d	9.6E-12/3.4E-4	1.9E-11/6.8E-4	5.1E-10/1.9E-2	2.3E-9/1.4E-1	3.0E-9/2.7E-1	3.3E-9/3.7E-1
	1 yr	2.2E-12/1.8E-4	4.4E-12/3.6E-4	1.2E-10/1.0E-2	6.4E-10/8.5E-2	1.2E-9/1.8E-1	1.5E-9/2.8E-1
	2 yr	3.4E-13/7.5E-5	6.8E-13/1.5E-4	1.9E-11/4.4E-3	1.7E-10/3.9E-2	6.1E-10/1.0E-1	8.9E-10/2.0E-1
	5 yr	8.8E-14/1.3E-5	1.8E-13/2.7E-5	5.2E-12/7.9E-4	5.7E-11/8.1E-3	3.1E-10/3.0E-2	5.4E-10/1.2E-1
10 yr	3.8E-14/3.0E-6	7.7E-14/6.0E-6	2.3E-12/1.8E-4	2.6E-11/2.0E-3	1.6E-10/8.7E-3	3.3E-10/1.0E-1	
20 yr	1.0E-14/3.4E-7	2.1E-14/6.8E-7	6.2E-13/2.0E-5	7.1E-12/2.3E-4	4.2E-11/1.2E-3	1.7E-10/9.1E-2	
30 yr	2.8E-15/7.1E-8	5.6E-15/1.4E-7	1.7E-13/4.2E-6	1.9E-12/4.9E-5	1.1E-11/3.3E-4	1.3E-10/9.0E-2	
4)	0	1.9E-9/5.2E-2	2.8E-9/7.1E-2	7.9E-9/1.6E-1	1.6E-8/4.2E-1	1.7E-8/6.0E-1	1.7E-8/6.9E-1
	1 min	1.8E-9/5.0E-2	2.8E-9/6.9E-2	7.8E-9/1.6E-1	1.6E-8/4.2E-1	1.7E-8/6.0E-1	1.7E-8/6.9E-1
	10 min	1.6E-9/4.5E-2	2.6E-9/6.4E-2	7.6E-9/1.6E-1	1.5E-8/4.2E-1	1.7E-8/6.0E-1	1.7E-8/6.8E-1
	30 min	1.5E-9/4.0E-2	2.4E-9/5.9E-2	7.4E-9/1.5E-1	1.5E-8/4.1E-1	1.6E-8/5.9E-1	1.7E-8/6.8E-1
	1 h	1.4E-9/3.7E-2	2.3E-9/5.5E-2	7.3E-9/1.5E-1	1.5E-8/4.1E-1	1.6E-8/5.9E-1	1.7E-8/6.7E-1
	2 h	1.3E-9/3.3E-2	2.2E-9/5.1E-2	7.1E-9/1.4E-1	1.5E-8/4.0E-1	1.6E-8/5.8E-1	1.6E-8/6.7E-1
	3 h	1.2E-9/3.1E-2	2.1E-9/4.8E-2	6.9E-9/1.4E-1	1.5E-8/4.0E-1	1.6E-8/5.8E-1	1.6E-8/6.6E-1
	6 h	1.1E-9/2.6E-2	1.9E-9/4.1E-2	6.6E-9/1.3E-1	1.4E-8/3.9E-1	1.6E-8/5.7E-1	1.6E-8/6.5E-1
	12 h	9.3E-10/1.9E-2	1.6E-9/3.1E-2	6.0E-9/1.1E-1	1.4E-8/3.7E-1	1.5E-8/5.5E-1	1.5E-8/6.4E-1
	1 d	6.6E-10/1.2E-2	1.1E-9/2.0E-2	5.1E-9 /9.3E-2	1.3E-8/3.5E-1	1.4E-8/5.3E-1	1.4E-8/6.2E-1
	2 d	3.6E-10/5.7E-3	6.5E-10/1.0E-2	4.0E-9/7.5E-2	1.2E-8/3.3E-1	1.3E-8/5.1E-1	1.3E-8/6.0E-1
	7 d	7.6E-11/1.4E-3	1.5E-10/2.7E-3	2.7E-9/5.6E-2	1.0E-8/3.1E-1	1.1E-8/4.9E-1	1.1E-8/5.7E-1
	30 d	3.7E-11/8.3E-4	7.4E-11/1.6E-3	1.9E-9/4.5E-2	7.9E-9/2.7E-1	9.0E-9/4.4E-1	9.3E-9/5.3E-1
	182 d	9.4E-12/3.6E-4	1.9E-11/7.2E-4	5.0E-10/2.0E-2	2.2E-9/1.5E-1	2.9E-9/2.8E-1	3.2E-9/3.6E-1
	1 yr	2.1E-12/1.9E-4	4.2E-12/3.8E-4	1.1E-10/1.1E-2	5.9E-10/9.0E-2	1.2E-9/1.8E-1	1.4E-9/2.6E-1
	2 yr	3.1E-13/7.8E-5	6.2E-13/1.6E-4	1.8E-11/4.5E-3	1.6E-10/4.0E-2	6.1E-10/9.5E-2	8.5E-10/1.7E-1
	5 yr	9.1E-14/1.2E-5	1.8E-13/2.4E-5	5.4E-12/7.1E-4	6.0E-11/7.1E-3	3.4E-10/2.6E-2	5.1E-10/1.0E-1
10 yr	4.2E-14/2.6E-6	8.4E-14/5.1E-6	2.5E-12/1.5E-4	2.9E-11/1.7E-3	1.7E-10/7.5E-3	2.9E-10/8.3E-2	
20 yr	1.1E-14/3.1E-7	2.3E-14/6.1E-7	6.7E-13/1.8E-5	7.7E-12/2.0E-4	4.6E-11/1.1E-3	1.2E-10/7.6E-2	
30 yr	3.0E-15/6.7E-8	6.1E-15/1.3E-7	1.8E-13/4.0E-6	2.1E-12/4.6E-5	1.2E-11/3.1E-4	7.1E-11/7.5E-2	

Table 17: Nickel (Ni) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10yr	∞
1)	0	5.5E-9/2.0E-1	5.8E-9/2.3E-1	6.4E-9/2.5E-1	7.6E-9/2.9E-1	8.6E-9/3.2E-1	9.0E-9/3.9E-1
	1 min	5.2E-9/1.9E-1	5.5E-9/2.2E-1	6.1E-9/2.4E-1	7.3E-9/2.8E-1	8.3E-9/3.1E-1	8.8E-9/3.8E-1
	10 min	3.7E-9/1.5E-1	3.9E-9/1.7E-1	4.5E-9/2.0E-1	5.7E-9/2.4E-1	6.7E-9/2.6E-1	7.2E-9/3.3E-1
	30 min	2.3E-9/1.1E-1	2.5E-9/1.3E-1	3.1E-9/1.5E-1	4.3E-9/1.9E-1	5.3E-9/2.2E-1	5.8E-9/2.9E-1
	1 h	1.7E-9/8.7E-2	1.9E-9/1.1E-1	2.5E-9/1.3E-1	3.7E-9/1.7E-1	4.7E-9/2.0E-1	5.2E-9/2.7E-1
	2 h	1.3E-9/7.3E-2	1.5E-9/9.1E-2	2.1E-9/1.2E-1	3.3E-9/1.6E-1	4.3E-9/1.8E-1	4.8E-9/2.5E-1
	3 h	1.1E-9/6.2E-2	1.3E-9/7.9E-2	1.8E-9/1.0E-1	3.0E-9/1.4E-1	4.0E-9/1.7E-1	4.5E-9/2.4E-1
	6 h	6.5E-10/4.1E-2	7.9E-10/5.5E-2	1.3E-9/7.8E-2	2.5E-9/1.2E-1	3.5E-9/1.4E-1	4.0E-9/2.1E-1
	12 h	2.7E-10/2.2E-2	3.6E-10/3.1E-2	8.5E-10/5.0E-2	2.0E-9/8.8E-2	3.0E-9/1.2E-1	3.5E-9/1.9E-1
	1 d	8.8E-11/9.1E-3	1.4E-10/1.4E-2	5.8E-10 /2.9E-2	1.8E-9/6.6E-2	2.8E-9/9.4E-2	3.3E-9/1.6E-1
	2 d	3.0E-11/2.4E-3	5.0E-11/3.7E-3	4.6E-10/1.5E-2	1.6E-9/5.3E-2	2.6E-9/8.0E-2	3.1E-9/1.5E-1
	7 d	8.3E-12/2.1E-4	1.7E-11/4.1E-4	3.8E-10/1.0E-2	1.5E-9/4.6E-2	2.5E-9/7.3E-2	3.0E-9/1.4E-1
	30 d	5.5E-12/1.5E-4	1.1E-11/3.0E-4	2.8E-10/7.9E-3	1.2E-9/3.9E-2	2.2E-9/6.5E-2	2.7E-9/1.3E-1
	182 d	1.4E-12/4.8E-5	2.9E-12/9.7E-5	7.7E-11/2.7E-3	4.4E-10/1.7E-2	1.3E-9/3.9E-2	1.8E-9/1.1E-1
	1 yr	4.9E-13/2.1E-5	9.7E-13/4.2E-5	2.8E-11/1.2E-3	2.3E-10/9.9E-3	1.1E-9/2.8E-2	1.5E-9/9.7E-2
	2 yr	2.4E-13/9.0E-6	4.8E-13/1.8E-5	1.4E-11/5.3E-4	1.6E-10/5.1E-3	8.7E-10/1.9E-2	1.3E-9/8.7E-2
	5 yr	1.4E-13/2.8E-6	2.9E-13/5.6E-6	8.5E-12/1.7E-4	9.7E-11/1.8E-3	5.7E-10/1.0E-2	8.5E-10/7.6E-2
	10 yr	7.3E-14/1.3E-6	1.5E-13/2.6E-6	4.4E-12/7.6E-5	5.0E-11/8.8E-4	3.0E-10/5.9E-3	4.7E-10/7.0E-2
	20 yr	2.0E-14/5.1E-7	3.9E-14/1.0E-6	1.2E-12/3.1E-5	1.3E-11/3.6E-4	8.0E-11/2.9E-3	1.8E-10/6.4E-2
	30 yr	5.3E-15/3.2E-7	1.1E-14/6.4E-7	3.2E-13/1.9E-5	3.6E-12/2.3E-4	2.2E-11/2.0E-3	9.8E-11/6.1E-2
2)	0	6.0E-9/2.1E-1	6.4E-9/2.3E-1	7.9E-9/2.8E-1	1.0E-8/3.6E-1	1.2E-8/4.2E-1	1.2E-8/5.2E-1
	1 min	5.6E-9/1.9E-1	6.0E-9/2.2E-1	7.5E-9/2.6E-1	1.0E-8/3.5E-1	1.1E-8/4.1E-1	1.2E-8/5.1E-1
	10 min	4.0E-9/1.5E-1	4.4E-9/1.7E-1	6.0E-9/2.2E-1	8.4E-9/3.0E-1	9.6E-9/3.6E-1	1.0E-8/4.7E-1
	30 min	2.7E-9/1.1E-1	3.0E-9/1.3E-1	4.6E-9/1.8E-1	7.0E-9/2.6E-1	8.2E-9/3.2E-1	8.9E-9/4.3E-1
	1 h	2.0E-9/9.0E-2	2.4E-9/1.1E-1	3.9E-9/1.6E-1	6.3E-9/2.4E-1	7.5E-9/3.0E-1	8.3E-9/4.0E-1
	2 h	1.6E-9/7.4E-2	1.9E-9/9.4E-2	3.4E-9/1.4E-1	5.8E-9/2.2E-1	7.0E-9/2.8E-1	7.8E-9/3.9E-1
	3 h	1.3E-9/6.3E-2	1.6E-9/8.1E-2	3.1E-9/1.2E-1	5.5E-9/2.1E-1	6.7E-9/2.7E-1	7.4E-9/3.7E-1
	6 h	8.1E-10/4.2E-2	1.0E-9/5.7E-2	2.5E-9/9.8E-2	4.9E-9/1.8E-1	6.1E-9/2.4E-1	6.9E-9/3.5E-1
	12 h	3.9E-10/2.3E-2	5.6E-10/3.3E-2	2.0E-9/7.0E-2	4.4E-9/1.5E-1	5.6E-9/2.1E-1	6.3E-9/3.2E-1
	1 d	1.7E-10/9.8E-3	2.8E-10/1.5E-2	1.6E-9 /4.7E-2	4.0E-9/1.3E-1	5.2E-9/1.9E-1	5.9E-9/2.9E-1
	2 d	7.7E-11/2.9E-3	1.4E-10/4.8E-3	1.3E-9/3.3E-2	3.7E-9/1.2E-1	4.9E-9/1.8E-1	5.6E-9/2.8E-1
	7 d	2.8E-11/6.0E-4	5.5E-11/1.2E-3	1.0E-9/2.5E-2	3.3E-9/1.0E-1	4.5E-9/1.6E-1	5.2E-9/2.7E-1
	30 d	1.3E-11/3.5E-4	2.6E-11/7.1E-4	6.3E-10/1.8E-2	2.5E-9/8.6E-2	3.6E-9/1.4E-1	4.4E-9/2.5E-1
	182 d	2.8E-12/1.0E-4	5.6E-12/2.1E-4	1.5E-10/5.8E-3	8.1E-10/4.0E-2	1.8E-9/8.7E-2	2.5E-9/1.9E-1
	1 yr	8.7E-13/5.0E-5	1.7E-12/1.0E-4	4.9E-11/2.9E-3	3.6E-10/2.4E-2	1.3E-9/6.1E-2	1.9E-9/1.6E-1
	2 yr	3.2E-13/2.2E-5	6.5E-13/4.4E-5	1.9E-11/1.3E-3	2.0E-10/1.2E-2	9.4E-10/3.9E-2	1.6E-9/1.4E-1
	5 yr	1.5E-13/5.5E-6	3.0E-13/1.1E-5	8.8E-12/3.3E-4	1.0E-10/3.5E-3	5.7E-10/1.8E-2	1.1E-9/1.2E-1
	10 yr	7.3E-14/2.1E-6	1.5E-13/4.1E-6	4.3E-12/1.2E-4	5.0E-11/1.4E-3	3.0E-10/8.7E-3	7.3E-10/1.0E-1
	20 yr	2.0E-14/6.9E-7	3.9E-14/1.4E-6	1.2E-12/4.1E-5	1.3E-11/4.9E-4	8.1E-11/3.7E-3	4.3E-10/9.6E-2
	30 yr	5.5E-15/3.7E-7	1.1E-14/7.5E-7	3.3E-13/2.2E-5	3.8E-12/2.7E-4	2.3E-11/2.2E-3	3.5E-10/9.2E-2
3)	0	5.2E-9/1.9E-1	5.4E-9/2.2E-1	6.0E-9/2.4E-1	7.4E-9/2.8E-1	8.5E-9/3.1E-1	9.0E-9/3.9E-1
	1 min	4.9E-9/1.9E-1	5.2E-9/2.1E-1	5.8E-9/2.3E-1	7.1E-9/2.8E-1	8.2E-9/3.1E-1	8.8E-9/3.8E-1
	10 min	3.5E-9/1.4E-1	3.7E-9/1.6E-1	4.3E-9/1.9E-1	5.6E-9/2.3E-1	6.8E-9/2.6E-1	7.3E-9/3.3E-1
	30 min	2.1E-9/1.0E-1	2.4E-9/1.2E-1	3.0E-9/1.5E-1	4.3E-9/1.9E-1	5.4E-9/2.2E-1	6.0E-9/2.9E-1
	1 h	1.6E-9/8.4E-2	1.8E-9/1.0E-1	2.4E-9/1.3E-1	3.7E-9/1.7E-1	4.9E-9/2.0E-1	5.4E-9/2.7E-1
	2 h	1.3E-9/7.0E-2	1.5E-9/8.7E-2	2.0E-9/1.1E-1	3.3E-9/1.5E-1	4.5E-9/1.8E-1	5.0E-9/2.6E-1
	3 h	1.0E-9/6.0E-2	1.2E-9/7.6E-2	1.8E-9/1.0E-1	3.1E-9/1.4E-1	4.2E-9/1.7E-1	4.8E-9/2.4E-1
	6 h	6.2E-10/3.9E-2	7.5E-10/5.2E-2	1.3E-9/7.5E-2	2.6E-9/1.2E-1	3.8E-9/1.5E-1	4.3E-9/2.2E-1
	12 h	2.5E-10/2.1E-2	3.4E-10/2.9E-2	8.3E-10/4.9E-2	2.2E-9/9.0E-2	3.3E-9/1.2E-1	3.8E-9/1.9E-1
	1 d	8.2E-11/8.6E-3	1.3E-10/1.3E-2	5.9E-10 /2.8E-2	1.9E-9/7.0E-2	3.1E-9/9.8E-2	3.6E-9/1.7E-1
	2 d	2.7E-11/2.2E-3	4.6E-11/3.5E-3	4.7E-10/1.5E-2	1.8E-9/5.7E-2	2.9E-9/8.6E-2	3.5E-9/1.6E-1
	7 d	8.3E-12/2.1E-4	1.7E-11/4.2E-4	4.0E-10/1.1E-2	1.7E-9/5.1E-2	2.8E-9/7.9E-2	3.3E-9/1.5E-1
	30 d	6.0E-12/1.6E-4	1.2E-11/3.3E-4	3.1E-10/8.7E-3	1.4E-9/4.3E-2	2.5E-9/7.1E-2	3.0E-9/1.4E-1
	182 d	1.6E-12/5.4E-5	3.2E-12/1.1E-4	8.6E-11/3.0E-3	4.9E-10/1.9E-2	1.5E-9/4.2E-2	2.0E-9/1.1E-1
	1 yr	5.4E-13/2.3E-5	1.1E-12/4.5E-5	3.1E-11/1.3E-3	2.6E-10/1.1E-2	1.2E-9/3.0E-2	1.7E-9/1.0E-1
	2 yr	2.7E-13/9.6E-6	5.4E-13/1.9E-5	1.6E-11/5.6E-4	1.8E-10/5.3E-3	1.0E-9/2.0E-2	1.4E-9/9.1E-2
	5 yr	1.6E-13/3.0E-6	3.3E-13/5.9E-6	9.8E-12/1.8E-4	1.1E-10/1.9E-3	6.6E-10/1.1E-2	9.6E-10/7.9E-2
	10 yr	8.4E-14/1.4E-6	1.7E-13/2.7E-6	5.0E-12/8.1E-5	5.8E-11/9.3E-4	3.4E-10/6.1E-3	5.3E-10/7.2E-2
	20 yr	2.3E-14/5.2E-7	4.5E-14/1.0E-6	1.4E-12/3.1E-5	1.5E-11/3.7E-4	9.2E-11/2.9E-3	1.8E-10/6.6E-2
	30 yr	6.1E-15/3.1E-7	1.2E-14/6.2E-7	3.6E-13/1.9E-5	4.2E-12/2.2E-4	2.5E-11/2.0E-3	9.2E-11/6.3E-2
4)	0	5.6E-9/2.1E-1	5.9E-9/2.3E-1	6.3E-9/2.6E-1	7.1E-9/2.8E-1	8.0E-9/3.0E-1	8.4E-9/3.6E-1
	1 min	5.4E-9/2.0E-1	5.6E-9/2.2E-1	6.0E-9/2.5E-1	6.9E-9/2.7E-1	7.7E-9/2.9E-1	8.1E-9/3.5E-1
	10 min	3.8E-9/1.5E-1	4.0E-9/1.7E-1	4.4E-9/2.0E-1	5.2E-9/2.2E-1	6.1E-9/2.4E-1	6.5E-9/3.1E-1
	30 min	2.3E-9/1.1E-1	2.6E-9/1.3E-1	2.9E-9/1.5E-1	3.8E-9/1.8E-1	4.6E-9/2.0E-1	5.0E-9/2.6E-1
	1 h	1.7E-9/9.0E-2	2.0E-9/1.1E-1	2.4E-9/1.3E-1	3.2E-9/1.6E-1	4.0E-9/1.8E-1	4.4E-9/2.4E-1
	2 h	1.4E-9/7.5E-2	1.6E-9/9.4E-2	2.0E-9/1.2E-1	2.8E-9/1.4E-1	3.6E-9/1.6E-1	4.0E-9/2.2E-1
	3 h	1.1E-9/6.4E-2	1.3E-9/8.2E-2	1.7E-9/1.0E-1	2.5E-9/1.3E-1	3.4E-9/1.5E-1	3.8E-9/2.1E-1
	6 h	6.6E-10/4.3E-2	8.0E-10/5.7E-2	1.1E-9/7.6E-2	2.0E-9/1.0E-1	2.8E-9/1.2E-1	3.2E-9/1.8E-1
	12 h	2.7E-10/2.3E-2	3.4E-10/3.2E-2	6.6E-10/4.8E-2	1.5E-9/7.3E-2	2.4E-9/9.2E-2	2.7E-9/1.5E-1
	1 d	7.9E-11/9.4E-3	1.2E-10/1.4E-2	4.0E-10 /2.5E-2	1.2E-9/5.0E-2	2.1E-9/6.9E-2	2.5E-9/1.3E-1
	2 d	2.2E-11/2.4E-3	3.7E-11/3.7E-3	2.9E-10/1.2E-2	1.1E-9/3.7E-2	2.0E-9/5.5E-2	2.4E-9/1.2E-1
	7 d	4.8E-12/1.3E-4	9.5E-12/2.5E-4	2.4E-10/6.5E-3	1.0E-9/3.1E-2	1.9E-9/4.9E-2	2.3E-9/1.1E-1
	30 d	3.7E-12/1.0E-4	7.3E-12/2.0E-4	1.9E-10/5.3E-3	8.6E-10/2.6E-2	1.7E-9/4.4E-2	2.1E-9/1.1E-1
	182 d	1.0E-12/3.2E-5	2.0E-12/6.4E-5	5.5E-11/1.8E-3	3.2E-10/1.1E-2	1.1E-9/2.7E-2	1.5E-9/8.8E-2
	1 yr	3.6E-13/1.3E-5	7.3E-13/2.6E-5	2.1E-11/7.6E-4	1.8E-10/6.2E-3	9.0E-10/1.9E-2	1.3E-9/8.0E-2
	2 yr	2.0E-13/5.7E-6	4.0E-13/1.1E-5	1.2E-11/3.3E-4	1.3E-10/3.3E-3	7.6E-10/1.4E-2	1.1E-9/7.4E-2
	5 yr	1.3E-13/2.1E-6	2.5E-13/4.1E-6	7.5E-12/1.2E-4	8.6E-11/1.4E-3	5.1E-10/8.4E-3	7.3E-10/6.7E-2
	10 yr	6.5E-14/1.1E-6	1.3E-13/2.1E-6	3.9E-12/6.3E-5	4.4E-11/7.4E-4	2.6E-10/5.1E-3	3.9E-10/6.2E-2
	20 yr	1.7E-14/4.7E-7	3.5E-14/9.5E-7	1.0E-12/2.8E-5	1.2E-11/3.4E-4	7.1E-11/2.8E-3	1.3E-10/5.7E-2
	30 yr	4.7E-15/3.1E-7	9.3E-15/6.3E-7	2.8E-13/1.9E-5	3.2E-12/2.3E-4	1.9E-11/2.1E-3	5.9E-11/5.4E-2

Table 18: Copper (Cu) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	1.3E-8 / 4.0E-1	1.9E-8 / 4.9E-1	3.6E-8 / 9.3E-1	4.2E-8 / 1.1E+0	4.4E-8 / 1.2E+0	4.9E-8 / 1.5E+0
	1 min	1.3E-8 / 2.9E-1	1.8E-8 / 3.8E-1	3.5E-8 / 8.2E-1	4.1E-8 / 1.0E+0	4.3E-8 / 1.0E+0	4.8E-8 / 1.4E+0
	10 min	1.2E-8 / 2.5E-1	1.7E-8 / 3.4E-1	3.4E-8 / 7.8E-1	4.0E-8 / 9.8E-1	4.2E-8 / 1.0E+0	4.7E-8 / 1.3E+0
	30 min	1.1E-8 / 2.2E-1	1.6E-8 / 3.1E-1	3.3E-8 / 7.6E-1	3.9E-8 / 9.5E-1	4.1E-8 / 9.8E-1	4.6E-8 / 1.3E+0
	1 h	1.0E-8 / 2.0E-1	1.5E-8 / 2.9E-1	3.2E-8 / 7.3E-1	3.8E-8 / 9.3E-1	4.0E-8 / 9.6E-1	4.5E-8 / 1.3E+0
	2 h	9.1E-9 / 1.8E-1	1.4E-8 / 2.6E-1	3.0E-8 / 7.0E-1	3.7E-8 / 8.9E-1	3.8E-8 / 9.2E-1	4.3E-8 / 1.2E+0
	3 h	8.3E-9 / 1.6E-1	1.3E-8 / 2.4E-1	2.9E-8 / 6.7E-1	3.5E-8 / 8.6E-1	3.7E-8 / 8.9E-1	4.2E-8 / 1.2E+0
	6 h	6.8E-9 / 1.2E-1	1.1E-8 / 2.0E-1	2.6E-8 / 6.1E-1	3.2E-8 / 8.0E-1	3.4E-8 / 8.3E-1	3.9E-8 / 1.2E+0
	12 h	5.3E-9 / 9.3E-2	8.7E-9 / 1.6E-1	2.2E-8 / 5.4E-1	2.8E-8 / 7.3E-1	3.0E-8 / 7.6E-1	3.5E-8 / 1.1E+0
	1 d	3.4E-9 / 6.3E-2	5.7E-9 / 1.1E-1	1.7E-8 / 4.5E-1	2.3E-8 / 6.4E-1	2.5E-8 / 6.7E-1	3.0E-8 / 1.0E+0
	2 d	1.6E-9 / 3.5E-2	2.8E-9 / 6.3E-2	1.1E-8 / 3.4E-1	1.7E-8 / 5.3E-1	1.9E-8 / 5.6E-1	2.4E-8 / 8.9E-1
	7 d	2.9E-10 / 9.6E-3	5.5E-10 / 1.8E-2	4.3E-9 / 1.6E-1	1.0E-8 / 3.4E-1	1.2E-8 / 3.7E-1	1.7E-8 / 7.0E-1
	30 d	2.5E-11 / 1.2E-3	5.0E-11 / 2.4E-3	1.0E-9 / 5.2E-2	6.6E-9 / 2.0E-1	8.0E-9 / 2.3E-1	1.3E-8 / 5.5E-1
	182 d	9.7E-12 / 2.3E-4	1.9E-11 / 4.6E-4	5.5E-10 / 1.2E-2	3.7E-9 / 6.2E-2	4.3E-9 / 7.8E-2	9.2E-9 / 4.0E-1
	1 yr	4.6E-12 / 6.7E-5	9.2E-12 / 1.3E-4	2.6E-10 / 3.7E-3	1.5E-9 / 2.0E-2	1.7E-9 / 3.1E-2	6.6E-9 / 3.6E-1
	2 yr	6.2E-13 / 8.1E-6	1.2E-12 / 1.6E-5	3.4E-11 / 4.5E-4	1.8E-10 / 3.0E-3	2.1E-10 / 1.2E-2	5.1E-9 / 3.4E-1
	5 yr	7.4E-16 / 1.4E-6	1.5E-15 / 2.8E-6	4.1E-14 / 8.5E-5	2.4E-13 / 1.0E-3	5.3E-13 / 8.7E-3	4.9E-9 / 3.3E-1
	10 yr	4.1E-17 / 1.2E-6	8.3E-17 / 2.4E-6	2.5E-15 / 7.1E-5	2.9E-14 / 8.5E-4	2.4E-13 / 7.4E-3	4.9E-9 / 3.3E-1
	20 yr	2.3E-17 / 8.6E-7	5.4E-17 / 1.7E-6	1.6E-15 / 5.2E-5	1.9E-14 / 6.2E-4	1.8E-13 / 5.5E-3	4.9E-9 / 3.2E-1
	30 yr	2.7E-17 / 6.5E-7	4.5E-17 / 1.3E-6	1.4E-15 / 3.9E-5	1.6E-14 / 4.7E-4	1.6E-13 / 4.2E-3	4.9E-9 / 3.1E-1
2)	0	1.8E-8 / 5.6E-1	2.3E-8 / 6.8E-1	4.2E-8 / 1.2E+0	5.0E-8 / 1.5E+0	5.2E-8 / 1.5E+0	5.6E-8 / 1.8E+0
	1 min	1.7E-8 / 4.4E-1	2.2E-8 / 5.6E-1	4.1E-8 / 1.1E+0	4.9E-8 / 1.4E+0	5.1E-8 / 1.4E+0	5.5E-8 / 1.7E+0
	10 min	1.5E-8 / 3.8E-1	2.0E-8 / 5.0E-1	3.9E-8 / 1.0E+0	4.7E-8 / 1.3E+0	4.9E-8 / 1.3E+0	5.3E-8 / 1.6E+0
	30 min	1.3E-8 / 3.4E-1	1.9E-8 / 4.5E-1	3.8E-8 / 9.9E-1	4.6E-8 / 1.2E+0	4.8E-8 / 1.3E+0	5.2E-8 / 1.5E+0
	1 h	1.2E-8 / 3.0E-1	1.7E-8 / 4.1E-1	3.6E-8 / 9.5E-1	4.4E-8 / 1.2E+0	4.6E-8 / 1.2E+0	5.0E-8 / 1.5E+0
	2 h	1.0E-8 / 2.5E-1	1.6E-8 / 3.6E-1	3.4E-8 / 8.9E-1	4.2E-8 / 1.1E+0	4.4E-8 / 1.2E+0	4.8E-8 / 1.4E+0
	3 h	9.2E-9 / 2.2E-1	1.4E-8 / 3.3E-1	3.2E-8 / 8.5E-1	4.0E-8 / 1.1E+0	4.2E-8 / 1.1E+0	4.6E-8 / 1.4E+0
	6 h	7.4E-9 / 1.7E-1	1.2E-8 / 2.6E-1	2.9E-8 / 7.6E-1	3.7E-8 / 1.0E+0	3.9E-8 / 1.1E+0	4.3E-8 / 1.3E+0
	12 h	5.7E-9 / 1.2E-1	9.5E-9 / 2.0E-1	2.5E-8 / 6.6E-1	3.3E-8 / 9.2E-1	3.5E-8 / 9.5E-1	3.9E-8 / 1.2E+0
	1 d	3.8E-9 / 7.8E-2	6.5E-9 / 1.4E-1	1.9E-8 / 5.5E-1	2.7E-8 / 8.0E-1	2.9E-8 / 8.3E-1	3.3E-8 / 1.1E+0
	2 d	1.9E-9 / 4.5E-2	3.4E-9 / 8.0E-2	1.3E-8 / 4.1E-1	2.1E-8 / 6.6E-1	2.3E-8 / 7.0E-1	2.6E-8 / 9.6E-1
	7 d	3.0E-10 / 1.1E-2	5.7E-10 / 2.2E-2	4.6E-9 / 1.9E-1	1.2E-8 / 4.3E-1	1.4E-8 / 4.6E-1	1.8E-8 / 7.3E-1
	30 d	3.0E-11 / 1.5E-3	5.9E-11 / 2.9E-3	1.3E-9 / 6.6E-2	8.5E-9 / 2.6E-1	1.0E-8 / 2.9E-1	1.4E-8 / 5.5E-1
	182 d	1.2E-11 / 3.0E-4	2.4E-11 / 6.0E-4	6.9E-10 / 1.6E-2	4.4E-9 / 8.2E-2	5.2E-9 / 9.9E-2	8.9E-9 / 3.6E-1
	1 yr	5.5E-12 / 8.8E-5	1.1E-11 / 1.8E-4	3.1E-10 / 4.8E-3	1.8E-9 / 2.6E-2	2.0E-9 / 3.7E-2	5.8E-9 / 3.0E-1
	2 yr	7.3E-13 / 1.0E-5	1.5E-12 / 2.0E-5	4.0E-11 / 5.7E-4	2.2E-10 / 3.7E-3	2.5E-10 / 1.2E-2	4.0E-9 / 2.7E-1
	5 yr	1.7E-15 / 1.4E-6	3.4E-15 / 2.8E-6	9.7E-14 / 8.3E-5	7.7E-13 / 9.8E-4	2.7E-12 / 8.0E-3	3.7E-9 / 2.7E-1
	10 yr	2.8E-16 / 1.1E-6	5.5E-16 / 2.2E-6	1.7E-14 / 6.5E-5	1.9E-13 / 7.8E-4	1.2E-12 / 6.6E-3	3.7E-9 / 2.6E-1
	20 yr	8.7E-17 / 7.4E-7	1.7E-16 / 1.5E-6	5.2E-15 / 4.4E-5	6.0E-14 / 5.3E-4	4.1E-13 / 4.5E-3	3.7E-9 / 2.6E-1
	30 yr	3.7E-17 / 5.3E-7	7.3E-17 / 1.1E-6	2.2E-15 / 3.1E-5	2.6E-14 / 3.8E-4	2.1E-13 / 3.3E-3	3.7E-9 / 2.5E-1
3)	0	1.4E-8 / 4.3E-1	2.0E-8 / 5.3E-1	3.8E-8 / 1.0E+0	4.6E-8 / 1.2E+0	4.8E-8 / 1.2E+0	5.2E-8 / 1.5E+0
	1 min	1.4E-8 / 3.1E-1	2.0E-8 / 4.1E-1	3.8E-8 / 8.9E-1	4.5E-8 / 1.1E+0	4.7E-8 / 1.1E+0	5.1E-8 / 1.4E+0
	10 min	1.3E-8 / 2.7E-1	1.8E-8 / 3.7E-1	3.6E-8 / 8.4E-1	4.4E-8 / 1.0E+0	4.6E-8 / 1.1E+0	5.0E-8 / 1.4E+0
	30 min	1.2E-8 / 2.4E-1	1.7E-8 / 3.4E-1	3.5E-8 / 8.1E-1	4.3E-8 / 1.0E+0	4.5E-8 / 1.0E+0	4.9E-8 / 1.3E+0
	1 h	1.1E-8 / 2.1E-1	1.6E-8 / 3.2E-1	3.4E-8 / 7.9E-1	4.1E-8 / 9.9E-1	4.3E-8 / 1.0E+0	4.8E-8 / 1.3E+0
	2 h	9.6E-9 / 1.9E-1	1.5E-8 / 2.8E-1	3.2E-8 / 7.5E-1	4.0E-8 / 9.5E-1	4.2E-8 / 9.8E-1	4.6E-8 / 1.3E+0
	3 h	8.7E-9 / 1.7E-1	1.4E-8 / 2.6E-1	3.1E-8 / 7.2E-1	3.8E-8 / 9.2E-1	4.0E-8 / 9.5E-1	4.5E-8 / 1.2E+0
	6 h	7.2E-9 / 1.3E-1	1.2E-8 / 2.1E-1	2.8E-8 / 6.6E-1	3.5E-8 / 8.5E-1	3.7E-8 / 8.8E-1	4.2E-8 / 1.2E+0
	12 h	5.5E-9 / 9.9E-2	9.2E-9 / 1.7E-1	2.4E-8 / 5.8E-1	3.1E-8 / 7.8E-1	3.3E-8 / 8.1E-1	3.7E-8 / 1.1E+0
	1 d	3.6E-9 / 6.8E-2	6.1E-9 / 1.2E-1	1.8E-8 / 4.8E-1	2.6E-8 / 6.8E-1	2.8E-8 / 7.1E-1	3.2E-8 / 9.9E-1
	2 d	1.8E-9 / 3.9E-2	3.1E-9 / 7.0E-2	1.2E-8 / 3.6E-1	1.9E-8 / 5.6E-1	2.2E-8 / 5.9E-1	2.6E-8 / 8.7E-1
	7 d	3.1E-10 / 1.0E-2	6.0E-10 / 2.0E-2	4.5E-9 / 1.7E-1	1.2E-8 / 3.5E-1	1.4E-8 / 3.8E-1	1.8E-8 / 6.6E-1
	30 d	2.5E-11 / 1.1E-3	5.0E-11 / 2.2E-3	1.1E-9 / 4.9E-2	7.7E-9 / 2.0E-1	9.5E-9 / 2.3E-1	1.4E-8 / 5.1E-1
	182 d	1.2E-11 / 2.4E-4	2.3E-11 / 4.9E-4	6.7E-10 / 1.3E-2	4.4E-9 / 6.9E-2	5.2E-9 / 8.5E-2	9.5E-9 / 3.6E-1
	1 yr	5.6E-12 / 7.6E-5	1.1E-11 / 1.5E-4	3.1E-10 / 4.2E-3	1.8E-9 / 2.3E-2	2.1E-9 / 3.3E-2	6.3E-9 / 3.1E-1
	2 yr	7.6E-13 / 9.2E-6	1.5E-12 / 1.8E-5	4.2E-11 / 5.1E-4	2.2E-10 / 3.2E-3	2.5E-10 / 1.1E-2	4.5E-9 / 2.9E-1
	5 yr	8.2E-16 / 1.2E-6	1.6E-15 / 2.5E-6	4.5E-14 / 7.3E-5	2.4E-13 / 8.8E-4	4.0E-13 / 7.5E-3	4.3E-9 / 2.8E-1
	10 yr	2.0E-17 / 1.0E-6	4.1E-17 / 2.1E-6	1.2E-15 / 6.1E-5	1.5E-14 / 7.4E-4	1.4E-13 / 6.4E-3	4.3E-9 / 2.8E-1
	20 yr	1.8E-17 / 7.4E-7	3.6E-17 / 1.5E-6	1.1E-15 / 4.5E-5	1.3E-14 / 5.4E-4	1.3E-13 / 4.7E-3	4.3E-9 / 2.7E-1
	30 yr	1.7E-17 / 5.6E-7	3.4E-17 / 1.1E-6	1.0E-15 / 3.4E-5	1.2E-14 / 4.1E-4	1.2E-13 / 3.6E-3	4.3E-9 / 2.7E-1
4)	0	1.2E-8 / 3.4E-1	1.7E-8 / 4.2E-1	3.3E-8 / 8.2E-1	3.8E-8 / 1.0E+0	3.9E-8 / 1.0E+0	4.5E-8 / 1.4E+0
	1 min	1.2E-8 / 2.4E-1	1.7E-8 / 3.2E-1	3.2E-8 / 7.2E-1	3.8E-8 / 9.0E-1	3.9E-8 / 9.3E-1	4.4E-8 / 1.3E+0
	10 min	1.1E-8 / 2.1E-1	1.6E-8 / 2.9E-1	3.1E-8 / 6.9E-1	3.7E-8 / 8.6E-1	3.8E-8 / 8.9E-1	4.3E-8 / 1.3E+0
	30 min	1.0E-8 / 1.9E-1	1.5E-8 / 2.7E-1	3.0E-8 / 6.6E-1	3.6E-8 / 8.4E-1	3.7E-8 / 8.7E-1	4.2E-8 / 1.2E+0
	1 h	9.5E-9 / 1.7E-1	1.4E-8 / 2.5E-1	2.9E-8 / 6.5E-1	3.5E-8 / 8.2E-1	3.6E-8 / 8.5E-1	4.2E-8 / 1.2E+0
	2 h	8.5E-9 / 1.5E-1	1.3E-8 / 2.3E-1	2.8E-8 / 6.2E-1	3.3E-8 / 7.9E-1	3.5E-8 / 8.2E-1	4.0E-8 / 1.2E+0
	3 h	7.8E-9 / 1.4E-1	1.2E-8 / 2.1E-1	2.7E-8 / 5.9E-1	3.2E-8 / 7.7E-1	3.3E-8 / 8.0E-1	3.9E-8 / 1.2E+0
	6 h	6.5E-9 / 1.1E-1	1.0E-8 / 1.7E-1	2.4E-8 / 5.4E-1	2.9E-8 / 7.2E-1	3.1E-8 / 7.5E-1	3.6E-8 / 1.1E+0
	12 h	5.0E-9 / 8.2E-2	8.1E-9 / 1.4E-1	2.1E-8 / 4.8E-1	2.6E-8 / 6.6E-1	2.7E-8 / 6.9E-1	3.3E-8 / 1.1E+0
	1 d	3.2E-9 / 5.6E-2	5.3E-9 / 9.6E-2	1.6E-8 / 4.0E-1	2.1E-8 / 5.8E-1	2.2E-8 / 6.1E-1	2.8E-8 / 9.7E-1
	2 d	1.5E-9 / 3.1E-2	2.5E-9 / 5.5E-2	1.0E-8 / 3.1E-1	1.5E-8 / 4.8E-1	1.7E-8 / 5.1E-1	2.2E-8 / 8.8E-1
	7 d	2.7E-10 / 8.6E-3	5.1E-10 / 1.7E-2	4.1E-9 / 1.5E-1	9.1E-9 / 3.2E-1	1.0E-8 / 3.4E-1	1.6E-8 / 7.1E-1
	30 d	2.4E-11 / 1.2E-3	4.7E-11 / 2.3E-3	8.9E-10 / 4.9E-2	5.4E-9 / 1.8E-1	6.6E-9 / 2.1E-1	1.2E-8 / 5.7E-1
	182 d	7.9E-12 / 2.1E-4	1.6E-11 / 4.1E-4	4.6E-10 / 1.1E-2	3.0E-9 / 5.4E-2	3.5E-9 / 7.0E-2	9.0E-9 / 4.4E-1
	1 yr	3.8E-12 / 5.7E-5	7.6E-12 / 1.1E-4	2.1E-10 / 3.1E-3	1.2E-9 / 1.7E-2	1.4E-9 / 2.8E-2	6.8E-9 / 4.0E-1
	2 yr	5.2E-13 / 7.1E-6	1.0E-12 / 1.4E-5	2.9E-11 / 4.0E-4	1.5E-10 / 2.8E-3	1.7E-10 / 1.2E-2	5.6E-9 / 3.8E-1
	5 yr	5.7E-16 / 1.6E-6	1.1E-15 / 3.1E-6	3.1E-14 / 9.4E-5	1.7E-13 / 1.1E-3	3.5E-13 / 9.7E-3	5.4E-9 / 3.7E-1
	10 yr	2.5E-17 / 1.3E-6	5.0E-17 / 2.7E-6	1.5E-15 / 7.9E-5	1.8E-14 / 9.5E-4	1.8E-13 / 8.3E-3	5.4E-9 / 3.7E-1
	20 yr	2.4E-17 / 9.7E-7	4.8E-17 / 1.9E-6	1.5E-15 / 5.8E-5	1.8E-14 / 7.0E-4	1.7E-13 / 6.2E-3	5.4E-9 / 3.6E-1
	30 yr	2.4E-17 / 7.4E-7	4.7E-17 / 1.5E-6	1.4E-15 / 4.4E-5	1.7E-14 / 5.3E-4	1.7E-13 / 4.8E-3	5.4E-9 / 3.5E-1

Table 19: Niobium (Nb) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	9.1E-9/4.8E-1	9.6E-9/5.1E-1	1.6E-8/7.8E-1	1.7E-8/9.2E-1	1.7E-8/9.3E-1	1.8E-8/1.0E+0
	1 min	8.8E-9/3.8E-1	9.4E-9/4.1E-1	1.6E-8/6.8E-1	1.7E-8/8.2E-1	1.7E-8/8.3E-1	1.8E-8/9.0E-1
	10 min	7.3E-9/2.5E-1	7.9E-9/2.7E-1	1.4E-8/5.5E-1	1.5E-8/6.9E-1	1.6E-8/7.0E-1	1.7E-8/7.7E-1
	30 min	5.3E-9/1.7E-1	5.9E-9/1.9E-1	1.2E-8/4.7E-1	1.3E-8/6.1E-1	1.4E-8/6.2E-1	1.5E-8/6.8E-1
	1 h	3.7E-9/1.2E-1	4.2E-9/1.4E-1	1.0E-8/4.2E-1	1.0E-8/5.5E-1	1.2E-8/5.6E-1	1.3E-8/6.3E-1
	2 h	2.1E-9/7.2E-2	2.6E-9/9.5E-2	8.9E-9/3.7E-1	1.0E-8/5.1E-1	1.0E-8/5.2E-1	1.1E-8/5.9E-1
	3 h	1.4E-9/5.4E-2	1.9E-9/7.5E-2	8.1E-9/3.5E-1	9.4E-9/4.9E-1	9.6E-9/5.0E-1	1.1E-8/5.7E-1
	6 h	7.5E-10/3.4E-2	1.2E-9/5.4E-2	7.3E-9/3.2E-1	8.6E-9/4.6E-1	8.7E-9/4.7E-1	9.8E-9/5.4E-1
	12 h	5.4E-10/2.4E-2	9.7E-10/4.1E-2	6.9E-9/3.0E-1	8.1E-9/4.4E-1	8.3E-9/4.5E-1	9.4E-9/5.2E-1
	1 d	4.3E-10/1.7E-2	8.0E-10/3.1E-2	6.4E-9 /2.8E-1	7.6E-9/4.2E-1	7.7E-9/4.3E-1	8.8E-9/4.9E-1
	2 d	3.3E-10/1.2E-2	6.2E-10/2.3E-2	5.6E-9/2.6E-1	6.8E-9/3.9E-1	7.0E-9/4.0E-1	8.0E-9/4.6E-1
	7 d	1.6E-10/6.5E-3	3.2E-10/1.3E-2	3.4E-9/1.8E-1	4.4E-9/3.0E-1	4.6E-9/3.1E-1	5.7E-9/3.8E-1
	30 d	2.4E-11/1.9E-3	4.7E-11/3.7E-3	6.9E-10/7.1E-2	1.3E-9/1.4E-1	1.4E-9/1.5E-1	2.5E-9/2.2E-1
	182 d	6.3E-13/6.3E-5	1.3E-12/1.3E-4	3.1E-11/3.1E-3	1.3E-10/1.0E-2	2.7E-10/1.8E-2	1.4E-9/8.5E-2
	1 yr	1.2E-13/7.4E-6	2.3E-13/1.5E-5	6.6E-12/4.0E-4	5.2E-11/2.9E-3	1.8E-10/9.8E-3	1.3E-9/7.7E-2
	2 yr	4.9E-14/2.7E-6	9.9E-14/5.5E-6	2.9E-12/1.6E-4	3.0E-11/1.7E-3	1.3E-10/7.1E-3	1.2E-9/7.4E-2
	5 yr	2.1E-14/1.2E-6	4.3E-14/2.3E-6	1.3E-12/6.9E-5	1.4E-11/7.7E-4	7.0E-11/3.8E-3	1.1E-9/7.0E-2
	10 yr	8.2E-15/4.5E-7	1.6E-14/8.9E-7	4.9E-13/2.7E-5	5.5E-12/3.0E-4	3.4E-11/1.7E-3	1.1E-9/6.7E-2
	20 yr	2.9E-15/1.3E-7	5.8E-15/2.6E-7	1.7E-13/7.6E-6	2.1E-12/9.0E-5	1.9E-11/7.2E-4	1.1E-9/6.6E-2
	30 yr	2.4E-15/8.3E-8	4.8E-15/1.7E-7	1.4E-13/5.0E-6	1.7E-12/6.0E-5	1.7E-11/5.6E-4	1.0E-9/6.5E-2
2)	0	1.6E-8/6.4E-1	1.7E-8/7.0E-1	2.6E-8/1.1E+0	2.8E-8/1.3E+0	2.8E-8/1.3E+0	2.9E-8/1.4E+0
	1 min	1.5E-8/5.5E-1	1.7E-8/6.1E-1	2.6E-8/1.0E+0	2.7E-8/1.2E+0	2.8E-8/1.2E+0	2.9E-8/1.3E+0
	10 min	1.2E-8/4.1E-1	1.4E-8/4.7E-1	2.3E-8/9.0E-1	2.4E-8/1.0E+0	2.5E-8/1.1E+0	2.6E-8/1.2E+0
	30 min	8.9E-9/3.0E-1	1.0E-8/3.7E-1	2.0E-8/7.9E-1	2.1E-8/9.4E-1	2.2E-8/9.7E-1	2.2E-8/1.1E+0
	1 h	6.6E-9/2.4E-1	8.1E-9/2.9E-1	1.7E-8/7.2E-1	1.9E-8/8.7E-1	1.9E-8/9.0E-1	2.0E-8/1.0E+0
	2 h	4.5E-9/1.7E-1	5.9E-9/2.2E-1	1.5E-8/6.5E-1	1.6E-8/7.9E-1	1.7E-8/8.3E-1	1.8E-8/9.6E-1
	3 h	3.4E-9/1.3E-1	4.8E-9/1.9E-1	1.4E-8/6.1E-1	1.5E-8/7.5E-1	1.6E-8/7.9E-1	1.7E-8/9.2E-1
	6 h	2.1E-9/9.1E-2	3.4E-9/1.4E-1	1.2E-8/5.5E-1	1.3E-8/6.9E-1	1.4E-8/7.3E-1	1.5E-8/8.6E-1
	12 h	1.5E-9/6.2E-2	2.6E-9/1.0E-1	1.1E-8/4.9E-1	1.2E-8/6.4E-1	1.3E-8/6.7E-1	1.4E-8/8.0E-1
	1 d	1.1E-9/4.0E-2	1.9E-9/7.0E-2	9.2E-9 /4.3E-1	1.1E-8/5.8E-1	1.1E-8/6.1E-1	1.2E-8/7.4E-1
	2 d	6.7E-10/2.5E-2	1.2E-9/4.6E-2	7.4E-9/3.7E-1	8.8E-9/5.1E-1	9.3E-9/5.4E-1	1.0E-8/6.7E-1
	7 d	2.2E-10/1.0E-2	4.2E-10/2.0E-2	3.6E-9/2.2E-1	4.8E-9/3.5E-1	5.4E-9/3.8E-1	6.3E-9/5.1E-1
	30 d	1.9E-11/1.9E-3	3.8E-11/3.8E-3	5.8E-10/7.1E-2	1.5E-9/1.5E-1	2.0E-9/1.8E-1	2.9E-9/3.1E-1
	182 d	1.3E-12/8.0E-5	2.6E-12/1.6E-4	7.1E-11/4.1E-3	4.5E-10/2.1E-2	8.9E-10/4.7E-2	1.8E-9/1.8E-1
	1 yr	5.4E-13/2.2E-5	1.1E-12/4.4E-5	3.1E-11/1.3E-3	2.3E-10/1.0E-2	5.9E-10/3.3E-2	1.5E-9/1.6E-1
	2 yr	1.8E-13/9.4E-6	3.6E-13/1.9E-5	1.1E-11/5.5E-4	1.0E-10/5.6E-3	3.8E-10/2.4E-2	1.2E-9/1.5E-1
	5 yr	6.2E-14/3.9E-6	1.2E-13/7.7E-6	3.7E-12/2.3E-4	4.0E-11/2.5E-3	1.8E-10/1.3E-2	1.0E-9/1.4E-1
	10 yr	2.0E-14/1.5E-6	4.0E-14/3.0E-6	1.2E-12/8.9E-5	1.3E-11/1.0E-3	6.3E-11/5.7E-3	8.8E-10/1.3E-1
	20 yr	3.4E-15/4.0E-7	6.8E-15/7.9E-7	2.0E-13/2.4E-5	2.3E-12/2.8E-4	1.7E-11/2.0E-3	8.2E-10/1.2E-1
	30 yr	1.8E-15/2.0E-7	3.6E-15/4.0E-7	1.1E-13/1.2E-5	1.3E-12/1.4E-4	1.2E-11/1.2E-3	8.0E-10/1.2E-1
3)	0	9.0E-9/4.7E-1	9.6E-9/4.9E-1	1.6E-8/7.8E-1	1.7E-8/9.2E-1	1.7E-8/9.3E-1	1.8E-8/9.9E-1
	1 min	8.8E-9/3.7E-1	9.3E-9/4.0E-1	1.5E-8/6.9E-1	1.7E-8/8.3E-1	1.7E-8/8.4E-1	1.8E-8/9.0E-1
	10 min	7.3E-9/2.5E-1	7.8E-9/2.8E-1	1.4E-8/5.7E-1	1.5E-8/7.0E-1	1.5E-8/7.1E-1	1.6E-8/7.7E-1
	30 min	5.3E-9/1.7E-1	5.8E-9/2.0E-1	1.2E-8/4.9E-1	1.3E-8/6.2E-1	1.3E-8/6.3E-1	1.4E-8/6.9E-1
	1 h	3.7E-9/1.2E-1	4.2E-9/1.4E-1	1.0E-8/4.3E-1	1.1E-8/5.7E-1	1.1E-8/5.8E-1	1.2E-8/6.4E-1
	2 h	2.1E-9/7.6E-2	2.6E-9/1.0E-1	8.6E-9/3.9E-1	9.7E-9/5.2E-1	9.9E-9/5.3E-1	1.1E-8/6.0E-1
	3 h	1.4E-9/5.7E-2	1.9E-9/8.0E-2	7.8E-9/3.7E-1	8.9E-9/5.0E-1	9.1E-9/5.1E-1	1.0E-8/5.7E-1
	6 h	7.2E-10/3.7E-2	1.2E-9/5.7E-2	7.0E-9/3.4E-1	8.1E-9/4.8E-1	8.3E-9/4.9E-1	9.3E-9/5.5E-1
	12 h	5.2E-10/2.6E-2	9.3E-10/4.4E-2	6.6E-9/3.2E-1	7.7E-9/4.5E-1	7.9E-9/4.6E-1	8.9E-9/5.3E-1
	1 d	4.1E-10/1.8E-2	7.6E-10/3.2E-2	6.1E-9 /3.0E-1	7.2E-9/4.3E-1	7.4E-9/4.4E-1	8.4E-9/5.0E-1
	2 d	3.2E-10/1.2E-2	6.1E-10/2.4E-2	5.4E-9/2.7E-1	6.4E-9/4.0E-1	6.6E-9/4.1E-1	7.6E-9/4.7E-1
	7 d	1.6E-10/6.9E-3	3.1E-10/1.3E-2	3.2E-9/1.9E-1	4.1E-9/3.0E-1	4.3E-9/3.1E-1	5.3E-9/3.7E-1
	30 d	2.2E-11/1.9E-3	4.3E-11/3.8E-3	6.3E-10/7.2E-2	1.1E-9/1.4E-1	1.3E-9/1.5E-1	2.3E-9/2.1E-1
	182 d	5.4E-13/1.7E-5	1.1E-12/1.1E-4	2.7E-11/2.8E-3	1.1E-10/9.6E-3	2.6E-10/1.8E-2	1.3E-9/7.9E-2
	1 yr	1.0E-13/7.2E-6	2.0E-13/1.4E-5	5.7E-12/4.0E-4	4.9E-11/3.1E-3	1.8E-10/1.0E-2	1.2E-9/7.1E-2
	2 yr	5.1E-14/3.0E-6	1.0E-13/6.0E-6	3.0E-12/1.8E-4	3.2E-11/1.8E-3	1.4E-10/7.6E-3	1.1E-9/6.8E-2
	5 yr	2.3E-14/1.3E-6	4.6E-14/2.5E-6	1.4E-12/7.5E-5	1.5E-11/8.3E-4	7.4E-11/4.0E-3	1.1E-9/6.4E-2
	10 yr	8.6E-15/4.6E-7	1.7E-14/9.1E-7	5.1E-13/2.7E-5	5.8E-12/3.1E-4	3.4E-11/1.7E-3	1.0E-9/6.1E-2
	20 yr	2.8E-15/1.1E-7	5.6E-15/2.3E-7	1.7E-13/6.7E-6	2.0E-12/7.9E-5	1.7E-11/6.2E-4	9.7E-10/5.9E-2
	30 yr	2.2E-15/6.9E-8	4.4E-15/1.4E-7	1.3E-13/4.1E-6	1.6E-12/5.0E-5	1.6E-11/4.7E-4	9.5E-10/5.9E-2
4)	0	8.1E-9/4.7E-1	8.5E-9/4.9E-1	1.5E-8/7.5E-1	1.6E-8/8.9E-1	1.6E-8/8.9E-1	1.7E-8/9.6E-1
	1 min	8.0E-9/3.7E-1	8.3E-9/3.8E-1	1.4E-8/6.4E-1	1.6E-8/7.8E-1	1.6E-8/7.9E-1	1.7E-8/8.5E-1
	10 min	6.7E-9/2.3E-1	7.1E-9/2.5E-1	1.3E-8/5.0E-1	1.4E-8/6.4E-1	1.5E-8/6.5E-1	1.6E-8/7.1E-1
	30 min	4.9E-9/1.5E-1	5.3E-9/1.7E-1	1.1E-8/4.2E-1	1.3E-8/5.6E-1	1.3E-8/5.7E-1	1.4E-8/6.3E-1
	1 h	3.3E-9/9.8E-2	3.7E-9/1.2E-1	9.7E-9/3.7E-1	1.1E-8/5.1E-1	1.1E-8/5.2E-1	1.2E-8/5.8E-1
	2 h	1.8E-9/5.7E-2	2.2E-9/7.4E-2	8.2E-9/3.3E-1	9.5E-9/4.7E-1	9.6E-9/4.8E-1	1.1E-8/5.4E-1
	3 h	1.1E-9/4.1E-2	1.5E-9/5.7E-2	7.5E-9/3.1E-1	8.8E-9/4.5E-1	8.9E-9/4.6E-1	1.0E-8/5.2E-1
	6 h	5.3E-10/2.5E-2	8.9E-10/4.1E-2	6.8E-9/2.9E-1	8.1E-9/4.3E-1	8.2E-9/4.4E-1	9.4E-9/5.0E-1
	12 h	3.9E-10/1.8E-2	7.2E-10/3.2E-2	6.5E-9/2.7E-1	7.8E-9/4.2E-1	7.9E-9/4.2E-1	9.1E-9/4.8E-1
	1 d	3.3E-10/1.3E-2	6.3E-10/2.4E-2	6.1E-9 /2.6E-1	7.4E-9/4.0E-1	7.5E-9/4.0E-1	8.7E-9/4.6E-1
	2 d	2.8E-10/9.7E-3	5.3E-10/1.9E-2	5.5E-9/2.4E-1	6.8E-9/3.7E-1	6.9E-9/3.8E-1	8.1E-9/4.4E-1
	7 d	1.6E-10/5.9E-3	3.1E-10/1.2E-2	3.6E-9/1.8E-1	4.6E-9/3.0E-1	4.7E-9/3.0E-1	5.9E-9/3.6E-1
	30 d	2.6E-11/1.9E-3	5.1E-11/3.7E-3	7.6E-10/7.2E-2	1.3E-9/1.4E-1	1.4E-9/1.5E-1	2.6E-9/2.1E-1
	182 d	6.0E-13/6.6E-5	1.2E-12/1.3E-4	2.9E-11/3.1E-3	9.8E-11/9.5E-3	1.9E-10/1.5E-2	1.4E-9/7.5E-2
	1 yr	7.0E-14/5.7E-6	1.4E-13/1.1E-5	3.8E-12/3.0E-4	3.0E-11/2.0E-3	1.2E-10/6.4E-3	1.3E-9/6.7E-2
	2 yr	3.0E-14/1.8E-6	6.1E-14/3.5E-6	1.8E-12/1.0E-4	1.9E-11/1.1E-3	9.0E-11/4.6E-3	1.3E-9/6.5E-2
	5 yr	1.5E-14/7.5E-7	3.0E-14/1.5E-6	8.8E-13/4.5E-5	9.8E-12/4.9E-4	5.3E-11/2.5E-3	1.2E-9/6.2E-2
	10 yr	6.3E-15/2.9E-7	1.3E-14/5.8E-7	3.8E-13/1.7E-5	4.3E-12/2.0E-4	2.9E-11/1.2E-3	1.2E-9/6.0E-2
	20 yr	2.9E-15/9.8E-8	5.9E-15/2.0E-7	1.8E-13/5.9E-6	2.1E-12/7.0E-5	2.0E-11/6.0E-4	1.1E-9/5.9E-2
	30 yr	2.6E-15/7.3E-8	5.2E-15/1.5E-7	1.5E-13/4.4E-6	1.9E-12/5.3E-5	1.9E-11/5.2E-4	1.1E-9/5.9E-2

Table 20: Silver (Ag) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	2.2E-8/3.1E-1	2.2E-8/3.4E-1	2.7E-8/5.3E-1	2.9E-8/5.7E-1	3.1E-8/6.3E-1	3.3E-8/7.4E-1
	1 min	6.5E-9/1.9E-1	6.9E-9/2.2E-1	1.2E-8/4.1E-1	1.4E-8/4.5E-1	1.6E-8/5.1E-1	1.8E-8/6.1E-1
	10 min	4.2E-9/1.2E-1	4.6E-9/1.5E-1	9.6E-9/3.4E-1	1.1E-8/3.9E-1	1.4E-8/4.4E-1	1.5E-8/5.5E-1
	30 min	3.1E-9/9.6E-2	3.4E-9/1.3E-1	8.4E-9/3.1E-1	1.0E-8/3.6E-1	1.2E-8/4.1E-1	1.4E-8/5.2E-1
	1 h	2.2E-9/8.0E-2	2.6E-9/1.1E-1	7.5E-9/3.0E-1	9.3E-9/3.4E-1	1.2E-8/4.0E-1	1.3E-8/5.0E-1
	2 h	1.3E-9/6.4E-2	1.7E-9/9.3E-2	6.6E-9/2.8E-1	8.3E-9/3.2E-1	1.1E-8/3.8E-1	1.2E-8/4.9E-1
	3 h	9.1E-10/5.5E-2	1.2E-9/8.4E-2	6.2E-9/2.7E-1	7.9E-9/3.1E-1	1.0E-8/3.7E-1	1.2E-8/4.7E-1
	6 h	5.2E-10/4.2E-2	8.3E-10/6.8E-2	5.7E-9/2.4E-1	7.4E-9/2.9E-1	9.7E-9/3.4E-1	1.1E-8/4.5E-1
	12 h	3.6E-10/3.2E-2	6.4E-10/5.4E-2	5.4E-9/2.2E-1	7.1E-9/2.7E-1	9.4E-9/3.2E-1	1.1E-8/4.3E-1
	1 d	2.8E-10/2.3E-2	5.2E-10/4.1E-2	5.0E-9 /1.9E-1	6.7E-9/2.3E-1	9.0E-9/2.9E-1	1.1E-8/4.0E-1
	2 d	2.2E-10/1.4E-2	4.1E-10/2.6E-2	4.6E-9/1.5E-1	6.2E-9/1.9E-1	8.5E-9/2.5E-1	1.0E-8/3.6E-1
	7 d	1.2E-10/3.5E-3	2.3E-10/6.7E-3	3.2E-9/8.2E-2	4.6E-9/1.2E-1	6.9E-9/1.7E-1	8.7E-9/2.8E-1
	30 d	2.9E-11/7.7E-4	5.6E-11/1.5E-3	8.8E-10/2.5E-2	1.8E-9/4.8E-2	4.0E-9/1.0E-1	5.8E-9/2.1E-1
	182 d	1.1E-12/2.4E-5	2.2E-12/4.8E-5	6.6E-11/1.3E-3	6.9E-10/1.2E-2	2.7E-9/6.1E-2	4.5E-9/1.7E-1
	1 yr	9.4E-13/1.5E-5	1.9E-12/3.1E-5	5.5E-11/9.2E-4	5.9E-10/9.9E-3	2.4E-9/5.6E-2	4.1E-9/1.6E-1
	2 yr	6.9E-13/1.2E-5	1.4E-12/2.4E-5	4.1E-11/7.3E-4	4.4E-10/8.2E-3	1.8E-9/4.9E-2	3.5E-9/1.5E-1
	5 yr	3.0E-13/7.7E-6	6.1E-13/1.5E-5	1.8E-11/4.6E-4	2.0E-10/5.3E-3	9.8E-10/3.6E-2	2.5E-9/1.3E-1
10 yr	1.1E-13/4.7E-6	2.2E-13/9.5E-6	6.7E-12/2.8E-4	7.7E-11/3.3E-3	5.2E-10/2.6E-2	1.8E-9/1.1E-1	
20 yr	5.0E-14/2.6E-6	1.0E-13/5.2E-6	3.0E-12/1.6E-4	3.6E-11/1.8E-3	3.0E-10/1.5E-2	1.3E-9/8.3E-2	
30 yr	3.5E-14/1.6E-6	6.9E-14/3.2E-6	2.1E-12/9.5E-5	2.5E-11/1.1E-3	2.2E-10/9.3E-3	9.8E-10/6.8E-2	
2)	0	2.9E-8/5.0E-1	3.0E-8/5.5E-1	3.7E-8/8.4E-1	3.9E-8/9.2E-1	4.1E-8/9.7E-1	4.2E-8/1.1E+0
	1 min	1.8E-8/3.9E-1	1.9E-8/4.4E-1	2.6E-8/7.3E-1	2.8E-8/8.1E-1	3.0E-8/8.6E-1	3.1E-8/9.8E-1
	10 min	1.3E-8/2.8E-1	1.4E-8/3.3E-1	2.0E-8/6.2E-1	2.2E-8/7.0E-1	2.5E-8/7.5E-1	2.6E-8/8.7E-1
	30 min	9.4E-9/2.2E-1	1.0E-8/2.7E-1	1.7E-8/5.5E-1	1.9E-8/6.4E-1	2.1E-8/6.9E-1	2.3E-8/8.0E-1
	1 h	7.1E-9/1.8E-1	8.0E-9/2.3E-1	1.5E-8/5.1E-1	1.7E-8/5.9E-1	1.9E-8/6.4E-1	2.0E-8/7.6E-1
	2 h	4.6E-9/1.4E-1	5.4E-9/1.9E-1	1.2E-8/4.6E-1	1.4E-8/5.5E-1	1.6E-8/6.0E-1	1.8E-8/7.1E-1
	3 h	3.3E-9/1.2E-1	4.1E-9/1.6E-1	1.1E-8/4.4E-1	1.3E-8/5.2E-1	1.5E-8/5.7E-1	1.6E-8/6.9E-1
	6 h	1.7E-9/8.1E-2	2.5E-9/1.2E-1	8.9E-9/3.9E-1	1.1E-8/4.7E-1	1.3E-8/5.2E-1	1.5E-8/6.4E-1
	12 h	9.7E-10/5.4E-2	1.6E-9/8.9E-2	7.8E-9/3.4E-1	9.7E-9/4.2E-1	1.2E-8/4.7E-1	1.3E-8/5.9E-1
	1 d	5.9E-10/3.5E-2	1.0E-9/6.1E-2	6.8E-9 /2.8E-1	8.7E-9/3.7E-1	1.1E-8/4.2E-1	1.2E-8/5.3E-1
	2 d	3.7E-10/2.0E-2	6.8E-10/3.7E-2	5.9E-9/2.2E-1	7.7E-9/3.1E-1	9.9E-9/3.5E-1	1.1E-8/4.7E-1
	7 d	1.6E-10/5.4E-3	3.0E-10/1.0E-2	3.7E-9/1.3E-1	5.3E-9/2.0E-1	7.5E-9/2.5E-1	9.0E-9/3.6E-1
	30 d	3.1E-11/1.2E-3	6.1E-11/2.3E-3	9.6E-10/4.1E-2	2.0E-9/8.6E-2	4.1E-9/1.3E-1	5.7E-9/2.5E-1
	182 d	1.3E-12/5.4E-5	2.5E-12/1.1E-4	7.4E-11/2.9E-3	7.3E-10/1.8E-2	2.6E-9/6.2E-2	4.1E-9/1.8E-1
	1 yr	9.8E-13/2.0E-5	2.0E-12/4.0E-5	5.8E-11/1.2E-3	6.0E-10/1.1E-2	2.3E-9/5.2E-2	3.7E-9/1.7E-1
	2 yr	6.9E-13/1.2E-5	1.4E-12/2.4E-5	4.1E-11/7.1E-4	4.3E-10/7.7E-3	1.7E-9/4.3E-2	3.1E-9/1.6E-1
	5 yr	2.9E-13/6.8E-6	5.7E-13/1.4E-5	1.7E-11/4.0E-4	1.8E-10/4.6E-3	8.5E-10/3.1E-2	2.1E-9/1.4E-1
10 yr	9.4E-14/3.9E-6	1.9E-13/7.9E-6	5.6E-12/2.3E-4	6.4E-11/2.8E-3	4.1E-10/2.1E-2	1.5E-9/1.2E-1	
20 yr	3.7E-14/2.1E-6	7.5E-14/4.2E-6	2.2E-12/1.3E-4	2.7E-11/1.5E-3	2.2E-10/1.2E-2	1.1E-9/9.7E-2	
30 yr	2.6E-14/1.3E-6	5.1E-14/2.6E-6	1.5E-12/7.6E-5	1.8E-11/9.1E-4	1.6E-10/7.5E-3	9.1E-10/8.5E-2	
3)	0	1.9E-8/2.9E-1	1.9E-8/3.3E-1	2.4E-8/5.3E-1	2.6E-8/5.8E-1	2.9E-8/6.4E-1	3.1E-8/7.5E-1
	1 min	6.2E-9/1.9E-1	6.5E-9/2.2E-1	1.2E-8/4.3E-1	1.4E-8/4.8E-1	1.7E-8/5.4E-1	1.8E-8/6.5E-1
	10 min	4.1E-9/1.3E-1	4.4E-9/1.6E-1	9.8E-9/3.6E-1	1.2E-8/4.2E-1	1.4E-8/4.7E-1	1.6E-8/5.9E-1
	30 min	3.0E-9/1.0E-1	3.3E-9/1.3E-1	8.7E-9/3.3E-1	1.1E-8/3.9E-1	1.3E-8/4.4E-1	1.5E-8/5.6E-1
	1 h	2.1E-9/8.2E-2	2.5E-9/1.1E-1	7.9E-9/3.2E-1	9.8E-9/3.7E-1	1.2E-8/4.2E-1	1.4E-8/5.4E-1
	2 h	1.2E-9/6.5E-2	1.6E-9/9.5E-2	7.0E-9/3.0E-1	8.9E-9/3.5E-1	1.2E-8/4.0E-1	1.3E-8/5.2E-1
	3 h	8.6E-10/5.6E-2	1.2E-9/8.5E-2	6.6E-9/2.8E-1	8.5E-9/3.3E-1	1.1E-8/3.9E-1	1.3E-8/5.1E-1
	6 h	5.1E-10/4.3E-2	8.3E-10/7.0E-2	6.1E-9/2.6E-1	8.0E-9/3.1E-1	1.1E-8/3.7E-1	1.3E-8/4.9E-1
	12 h	3.7E-10/3.2E-2	6.7E-10/5.6E-2	5.8E-9/2.4E-1	7.7E-9/2.9E-1	1.0E-8/3.4E-1	1.2E-8/4.6E-1
	1 d	2.9E-10/2.3E-2	5.5E-10/4.2E-2	5.5E-9 /2.1E-1	7.4E-9/2.6E-1	1.0E-8/3.1E-1	1.2E-8/4.3E-1
	2 d	2.3E-10/1.5E-2	4.5E-10/2.7E-2	5.0E-9/1.7E-1	6.8E-9/2.1E-1	9.4E-9/2.7E-1	1.1E-8/3.9E-1
	7 d	1.3E-10/3.9E-3	2.6E-10/7.5E-3	3.5E-9/9.3E-2	5.0E-9/1.3E-1	7.7E-9/1.9E-1	9.6E-9/3.1E-1
	30 d	3.1E-11/8.8E-4	6.1E-11/1.7E-3	9.6E-10/2.9E-2	2.0E-9/5.2E-2	4.6E-9/1.1E-1	6.5E-9/2.3E-1
	182 d	1.3E-12/2.5E-5	2.6E-12/4.9E-5	7.6E-11/1.4E-3	8.0E-10/1.3E-2	3.1E-9/6.6E-2	5.0E-9/1.8E-1
	1 yr	1.1E-12/1.7E-5	2.2E-12/3.4E-5	6.4E-11/1.0E-3	6.8E-10/1.1E-2	2.7E-9/6.1E-2	4.6E-9/1.7E-1
	2 yr	8.0E-13/1.3E-5	1.6E-12/2.7E-5	4.7E-11/8.0E-4	5.1E-10/9.0E-3	2.1E-9/5.3E-2	3.9E-9/1.6E-1
	5 yr	3.5E-13/8.4E-6	7.0E-13/1.7E-5	2.1E-11/5.0E-4	2.2E-10/5.7E-3	1.1E-9/3.9E-2	2.7E-9/1.4E-1
10 yr	1.2E-13/5.1E-6	2.5E-13/1.0E-5	7.4E-12/3.0E-4	8.4E-11/3.6E-3	5.6E-10/2.7E-2	2.0E-9/1.2E-1	
20 yr	5.4E-14/2.8E-6	1.1E-13/5.5E-6	3.2E-12/1.6E-4	3.9E-11/2.0E-3	3.3E-10/1.6E-2	1.4E-9/9.0E-2	
30 yr	3.7E-14/1.7E-6	7.4E-14/3.4E-6	2.2E-12/1.0E-4	2.7E-11/1.2E-3	2.3E-10/9.9E-3	1.1E-9/7.4E-2	
4)	0	2.2E-8/2.8E-1	2.3E-8/3.0E-1	2.7E-8/4.6E-1	2.8E-8/5.0E-1	3.1E-8/5.5E-1	3.2E-8/6.6E-1
	1 min	4.8E-9/1.5E-1	5.0E-9/1.7E-1	9.4E-9/3.3E-1	1.1E-8/3.7E-1	1.3E-8/4.2E-1	1.5E-8/5.3E-1
	10 min	2.9E-9/9.0E-2	3.1E-9/1.2E-1	7.4E-9/2.8E-1	9.0E-9/3.1E-1	1.1E-8/3.6E-1	1.3E-8/4.7E-1
	30 min	2.0E-9/7.1E-2	2.3E-9/9.7E-2	6.6E-9/2.6E-1	8.2E-9/2.9E-1	1.0E-8/3.4E-1	1.2E-8/4.5E-1
	1 h	1.4E-9/5.9E-2	1.7E-9/8.6E-2	6.0E-9/2.4E-1	7.6E-9/2.8E-1	9.7E-9/3.3E-1	1.1E-8/4.4E-1
	2 h	8.0E-10/4.9E-2	1.0E-9/7.4E-2	5.3E-9/2.3E-1	6.9E-9/2.7E-1	9.0E-9/3.2E-1	1.1E-8/4.2E-1
	3 h	5.3E-10/4.3E-2	7.6E-10/6.8E-2	5.1E-9/2.2E-1	6.6E-9/2.6E-1	8.7E-9/3.1E-1	1.1E-8/4.1E-1
	6 h	3.1E-10/3.4E-2	5.3E-10/5.7E-2	4.8E-9/2.1E-1	6.4E-9/2.4E-1	8.5E-9/2.9E-1	1.0E-8/4.0E-1
	12 h	2.4E-10/2.7E-2	4.5E-10/4.7E-2	4.6E-9/1.9E-1	6.2E-9/2.2E-1	8.3E-9/2.7E-1	1.0E-8/3.8E-1
	1 d	2.1E-10/2.0E-2	3.9E-10/3.6E-2	4.4E-9 /1.6E-1	5.9E-9/1.9E-1	8.0E-9/2.5E-1	9.8E-9/3.5E-1
	2 d	1.7E-10/1.3E-2	3.3E-10/2.3E-2	4.0E-9/1.3E-1	5.5E-9/1.6E-1	7.6E-9/2.1E-1	9.5E-9/3.2E-1
	7 d	1.1E-10/2.8E-3	2.1E-10/5.4E-3	2.9E-9/6.6E-2	4.2E-9/9.4E-2	6.3E-9/1.5E-1	8.1E-9/2.5E-1
	30 d	2.7E-11/6.2E-4	5.3E-11/1.2E-3	8.3E-10/2.0E-2	1.6E-9/3.7E-2	3.7E-9/8.8E-2	5.5E-9/1.9E-1
	182 d	9.8E-13/1.7E-5	2.0E-12/3.5E-5	5.8E-11/1.0E-3	6.1E-10/1.1E-2	2.5E-9/6.0E-2	4.2E-9/1.6E-1
	1 yr	8.3E-13/1.4E-5	1.7E-12/2.8E-5	4.9E-11/8.4E-4	5.3E-10/9.4E-3	2.2E-9/5.6E-2	3.9E-9/1.6E-1
	2 yr	6.2E-13/1.2E-5	1.2E-12/2.3E-5	3.7E-11/7.0E-4	4.0E-10/7.9E-3	1.7E-9/5.0E-2	3.4E-9/1.5E-1
	5 yr	2.8E-13/7.7E-6	5.6E-13/1.5E-5	1.7E-11/4.6E-4	1.8E-10/5.3E-3	9.4E-10/3.7E-2	2.4E-9/1.3E-1
10 yr	1.1E-13/4.9E-6	2.2E-13/9.8E-6	6.5E-12/2.9E-4	7.5E-11/3.4E-3	5.2E-10/2.6E-2	1.8E-9/1.1E-1	
20 yr	5.1E-14/2.7E-6	1.0E-13/5.4E-6	3.1E-12/1.6E-4	3.7E-11/1.9E-3	3.1E-10/1.5E-2	1.3E-9/7.9E-2	
30 yr	3.5E-14/1.6E-6	7.1E-14/3.3E-6	2.1E-12/9.8E-5	2.5E-11/1.2E-3	2.2E-10/9.6E-3	9.8E-10/6.3E-2	

Table 21: Barium (Ba) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10yr	∞
1)	0	2.5E-9/4.9E-1	3.1E-9/5.3E-1	3.9E-9/7.6E-1	4.2E-9/9.9E-1	4.4E-9/1.1E+0	4.4E-9/1.2E+0
	1 min	2.5E-9/4.2E-1	3.0E-9/4.7E-1	3.8E-9/7.0E-1	4.1E-9/9.3E-1	4.3E-9/1.0E+0	4.4E-9/1.1E+0
	10 min	2.1E-9/3.4E-1	2.7E-9/3.9E-1	3.4E-9/6.1E-1	3.8E-9/8.5E-1	4.0E-9/9.6E-1	4.0E-9/1.1E+0
	30 min	1.8E-9/2.7E-1	2.4E-9/3.1E-1	3.1E-9/5.4E-1	3.4E-9/7.7E-1	3.6E-9/8.8E-1	3.7E-9/9.8E-1
	1 h	1.6E-9/2.1E-1	2.1E-9/2.5E-1	2.8E-9/4.8E-1	3.2E-9/7.1E-1	3.4E-9/8.2E-1	3.4E-9/9.2E-1
	2 h	1.3E-9/1.5E-1	1.8E-9/1.9E-1	2.5E-9/4.1E-1	2.9E-9/6.4E-1	3.1E-9/7.6E-1	3.1E-9/8.6E-1
	3 h	1.2E-9/1.2E-1	1.6E-9/1.6E-1	2.3E-9/3.8E-1	2.6E-9/6.1E-1	2.8E-9/7.2E-1	2.9E-9/8.2E-1
	6 h	9.0E-10/7.9E-2	1.3E-9/1.1E-1	1.9E-9/3.2E-1	2.2E-9/5.6E-1	2.4E-9/6.7E-1	2.4E-9/7.7E-1
	12 h	5.7E-10/4.8E-2	8.2E-10/7.4E-2	1.3E-9/2.8E-1	1.7E-9/5.1E-1	1.9E-9/6.2E-1	1.9E-9/7.2E-1
	1 d	2.4E-10/2.6E-2	3.6E-10/4.4E-2	7.7E-10 /2.3E-1	1.1E-9/4.6E-1	1.3E-9/5.7E-1	1.3E-9/6.7E-1
	2 d	6.6E-11/1.3E-2	1.1E-10/2.4E-2	4.1E-10/1.9E-1	7.3E-10/4.1E-1	9.3E-10/5.3E-1	9.6E-10/6.3E-1
	7 d	9.4E-12/4.4E-3	1.8E-11/8.4E-3	1.6E-10/1.3E-1	4.7E-10/3.4E-1	6.7E-10/4.5E-1	6.9E-10/5.5E-1
	30 d	1.5E-12/1.5E-3	3.0E-12/3.0E-3	7.2E-11/6.6E-2	3.4E-10/2.4E-1	5.3E-10/3.5E-1	5.5E-10/4.4E-1
	182 d	4.2E-13/2.5E-4	8.4E-13/5.0E-4	2.3E-11/1.4E-2	1.5E-10/8.9E-2	3.1E-10/1.7E-1	3.3E-10/2.7E-1
	1 yr	1.9E-13/1.1E-4	3.7E-13/2.1E-4	1.1E-11/6.1E-3	8.3E-11/4.7E-2	2.0E-10/1.1E-1	2.2E-10/2.1E-1
	2 yr	7.2E-14/4.2E-5	1.4E-13/8.3E-5	4.2E-12/2.4E-3	4.0E-11/2.3E-2	1.2E-10/6.8E-2	1.4E-10/1.6E-1
	5 yr	2.0E-14/1.1E-5	4.0E-14/2.2E-5	1.2E-12/6.6E-4	1.2E-11/6.8E-3	4.0E-11/2.1E-2	5.7E-11/1.2E-1
10 yr	3.4E-15/1.7E-6	6.8E-15/3.4E-6	2.0E-13/1.0E-4	2.1E-12/1.0E-3	7.8E-12/3.6E-3	2.3E-11/9.8E-2	
20 yr	2.9E-16/9.7E-8	5.9E-16/1.9E-7	1.8E-14/5.8E-6	2.0E-13/6.5E-5	1.6E-12/4.4E-4	1.6E-11/9.4E-2	
30 yr	1.7E-16/4.4E-8	3.5E-16/8.8E-8	1.0E-14/2.6E-6	1.3E-13/3.1E-5	1.1E-12/2.7E-4	1.4E-11/9.4E-2	
2)	0	8.0E-9/9.3E-1	8.9E-9/1.0E+0	1.1E-8/1.4E+0	1.2E-8/1.6E+0	1.2E-8/1.8E+0	1.2E-8/1.9E+0
	1 min	7.6E-9/8.3E-1	8.5E-9/9.2E-1	1.1E-8/1.3E+0	1.1E-8/1.5E+0	1.2E-8/1.7E+0	1.2E-8/1.8E+0
	10 min	5.5E-9/6.3E-1	6.4E-9/7.2E-1	8.7E-9/1.1E+0	9.2E-9/1.3E+0	9.7E-9/1.5E+0	9.7E-9/1.6E+0
	30 min	4.0E-9/4.7E-1	4.8E-9/5.6E-1	7.1E-9/9.3E-1	7.5E-9/1.2E+0	8.1E-9/1.3E+0	8.1E-9/1.5E+0
	1 h	3.0E-9/3.7E-1	3.9E-9/4.5E-1	6.0E-9/8.1E-1	6.5E-9/1.1E+0	7.1E-9/1.2E+0	7.1E-9/1.3E+0
	2 h	2.2E-9/2.6E-1	3.0E-9/3.5E-1	5.1E-9/7.0E-1	5.6E-9/9.5E-1	6.2E-9/1.1E+0	6.2E-9/1.2E+0
	3 h	1.8E-9/2.1E-1	2.6E-9/2.9E-1	4.7E-9/6.4E-1	5.2E-9/8.9E-1	5.7E-9/1.0E+0	5.8E-9/1.2E+0
	6 h	1.4E-9/1.4E-1	2.0E-9/2.1E-1	4.0E-9/5.5E-1	4.5E-9/7.9E-1	5.0E-9/9.5E-1	5.0E-9/1.1E+0
	12 h	9.1E-10/9.0E-2	1.4E-9/1.4E-1	3.1E-9/4.6E-1	3.6E-9/7.0E-1	4.2E-9/8.6E-1	4.2E-9/9.8E-1
	1 d	4.8E-10/5.4E-2	7.9E-10/9.1E-2	2.2E-9 /3.7E-1	2.7E-9/6.1E-1	3.3E-9/7.7E-1	3.3E-9/8.9E-1
	2 d	2.2E-10/2.8E-2	3.9E-10/5.1E-2	1.5E-9/2.8E-1	1.9E-9/5.2E-1	2.5E-9/6.8E-1	2.5E-9/8.0E-1
	7 d	3.9E-11/1.6E-3	7.2E-11/1.3E-2	4.3E-10/1.5E-1	8.9E-10/3.8E-1	1.4E-9/5.3E-1	1.5E-9/6.6E-1
	30 d	2.4E-12/1.7E-3	4.7E-12/3.2E-3	1.0E-10/6.8E-2	5.1E-10/2.5E-1	1.0E-9/4.0E-1	1.1E-9/5.3E-1
	182 d	6.4E-13/2.7E-4	1.3E-12/5.3E-4	3.6E-11/1.5E-2	2.8E-10/1.0E-1	7.1E-10/2.2E-1	7.6E-10/3.5E-1
	1 yr	3.6E-13/1.2E-4	7.2E-13/2.5E-4	2.1E-11/7.1E-3	1.9E-10/5.9E-2	5.4E-10/1.6E-1	5.9E-10/2.8E-1
	2 yr	1.9E-13/5.7E-5	3.8E-13/1.1E-4	1.1E-11/3.3E-3	1.1E-10/3.3E-2	3.5E-10/9.9E-2	4.0E-10/2.2E-1
	5 yr	6.0E-14/1.6E-5	1.2E-13/3.2E-5	3.5E-12/9.6E-4	3.7E-11/9.9E-3	1.2E-10/3.3E-2	1.6E-10/1.5E-1
10 yr	1.0E-14/1.2E-6	2.0E-14/5.6E-6	5.9E-13/1.7E-4	6.2E-12/1.8E-3	2.2E-11/7.5E-3	5.6E-11/1.3E-1	
20 yr	7.7E-16/4.1E-7	1.5E-15/8.2E-7	4.6E-14/2.4E-5	5.3E-13/2.9E-4	3.9E-12/2.2E-3	3.4E-11/1.2E-1	
30 yr	4.2E-16/2.4E-7	8.4E-16/4.7E-7	2.5E-14/1.4E-5	3.0E-13/1.7E-4	2.7E-12/1.4E-3	3.0E-11/1.2E-1	
3)	0	2.6E-9/5.1E-1	3.2E-9/5.6E-1	4.0E-9/8.0E-1	4.4E-9/1.0E+0	4.6E-9/1.2E+0	4.6E-9/1.2E+0
	1 min	2.5E-9/4.5E-1	3.2E-9/5.0E-1	4.0E-9/7.4E-1	4.3E-9/9.8E-1	4.5E-9/1.1E+0	4.5E-9/1.2E+0
	10 min	2.3E-9/3.7E-1	2.9E-9/4.2E-1	3.7E-9/6.6E-1	4.1E-9/9.0E-1	4.3E-9/1.0E+0	4.3E-9/1.1E+0
	30 min	2.0E-9/2.9E-1	2.7E-9/3.5E-1	3.4E-9/5.8E-1	3.8E-9/8.2E-1	4.0E-9/9.4E-1	4.0E-9/1.0E+0
	1 h	1.8E-9/2.3E-1	2.4E-9/2.8E-1	3.2E-9/5.2E-1	3.5E-9/7.6E-1	3.7E-9/8.7E-1	3.8E-9/9.6E-1
	2 h	1.6E-9/1.7E-1	2.1E-9/2.2E-1	2.8E-9/4.5E-1	3.2E-9/6.9E-1	3.4E-9/8.0E-1	3.4E-9/8.9E-1
	3 h	1.4E-9/1.4E-1	1.9E-9/1.8E-1	2.6E-9/4.1E-1	3.0E-9/6.5E-1	3.2E-9/7.6E-1	3.2E-9/8.5E-1
	6 h	1.1E-9/9.0E-2	1.5E-9/1.3E-1	2.1E-9/3.5E-1	2.5E-9/5.9E-1	2.7E-9/7.0E-1	2.7E-9/7.9E-1
	12 h	6.8E-10/5.4E-2	9.6E-10/8.3E-2	1.4E-9/2.9E-1	1.8E-9/5.3E-1	2.0E-9/6.5E-1	2.0E-9/7.3E-1
	1 d	2.8E-10/2.9E-2	4.0E-10/4.7E-2	7.7E-10 /2.4E-1	1.1E-9/4.8E-1	1.3E-9/5.9E-1	1.3E-9/6.8E-1
	2 d	6.4E-11/1.4E-2	1.0E-10/2.5E-2	3.7E-10/2.0E-1	7.2E-10/4.3E-1	9.2E-10/5.4E-1	9.4E-10/6.3E-1
	7 d	7.8E-12/4.6E-3	1.5E-11/8.9E-3	1.6E-10/1.3E-1	4.9E-10/3.5E-1	6.9E-10/4.7E-1	7.1E-10/5.5E-1
	30 d	1.6E-12/1.6E-3	3.3E-12/3.1E-3	7.8E-11/7.0E-2	3.7E-10/2.4E-1	5.6E-10/3.5E-1	5.8E-10/4.4E-1
	182 d	4.5E-13/2.9E-4	9.0E-13/5.0E-4	2.5E-11/1.4E-2	1.6E-10/8.8E-2	3.1E-10/1.8E-1	3.3E-10/2.6E-1
	1 yr	2.0E-13/1.1E-4	3.9E-13/2.1E-4	1.1E-11/6.0E-3	8.5E-11/4.8E-2	2.0E-10/1.2E-1	2.2E-10/2.0E-1
	2 yr	7.1E-14/4.2E-5	1.4E-13/8.5E-5	4.2E-12/2.5E-3	4.0E-11/2.4E-2	1.2E-10/7.0E-2	1.4E-10/1.6E-1
	5 yr	2.0E-14/1.2E-5	3.9E-14/2.3E-5	1.2E-12/6.8E-4	1.2E-11/7.0E-3	3.9E-11/2.2E-2	5.8E-11/1.1E-1
10 yr	3.3E-15/1.7E-6	6.6E-15/3.5E-6	2.0E-13/1.0E-4	2.0E-12/1.1E-3	7.6E-12/3.5E-3	2.4E-11/8.9E-2	
20 yr	3.0E-16/8.0E-8	5.9E-16/1.6E-7	1.8E-14/4.7E-6	2.1E-13/5.3E-5	1.6E-12/3.4E-4	1.7E-11/8.5E-2	
30 yr	1.8E-16/3.3E-8	3.6E-16/6.6E-8	1.1E-14/2.0E-6	1.3E-13/2.4E-5	1.2E-12/2.1E-4	1.5E-11/8.5E-2	
4)	0	1.4E-9/3.9E-1	1.9E-9/4.3E-1	2.3E-9/6.2E-1	2.6E-9/8.4E-1	2.6E-9/9.4E-1	2.7E-9/1.0E+0
	1 min	1.4E-9/3.4E-1	1.8E-9/3.7E-1	2.3E-9/5.6E-1	2.5E-9/7.8E-1	2.6E-9/8.8E-1	2.6E-9/9.8E-1
	10 min	1.3E-9/2.7E-1	1.8E-9/3.1E-1	2.2E-9/4.9E-1	2.4E-9/7.2E-1	2.5E-9/8.2E-1	2.6E-9/9.1E-1
	30 min	1.2E-9/2.1E-1	1.7E-9/2.5E-1	2.1E-9/4.3E-1	2.3E-9/6.6E-1	2.4E-9/7.6E-1	2.4E-9/8.5E-1
	1 h	1.1E-9/1.6E-1	1.5E-9/2.0E-1	1.9E-9/3.8E-1	2.2E-9/6.1E-1	2.3E-9/7.1E-1	2.3E-9/8.0E-1
	2 h	1.0E-9/1.2E-1	1.4E-9/1.5E-1	1.8E-9/3.3E-1	2.0E-9/5.5E-1	2.1E-9/6.5E-1	2.1E-9/7.5E-1
	3 h	9.1E-10/9.2E-2	1.3E-9/1.2E-1	1.6E-9/3.0E-1	1.9E-9/5.3E-1	2.0E-9/6.3E-1	2.0E-9/7.2E-1
	6 h	7.1E-10/6.0E-2	9.8E-10/8.4E-2	1.3E-9/2.6E-1	1.6E-9/4.9E-1	1.7E-9/5.8E-1	1.7E-9/6.8E-1
	12 h	4.4E-10/3.6E-2	6.1E-10/5.4E-2	8.6E-10/2.2E-1	1.1E-9/4.5E-1	1.2E-9/5.5E-1	1.2E-9/6.4E-1
	1 d	1.7E-10/1.9E-2	2.4E-10/3.1E-2	4.2E-10 /1.9E-1	6.9E-10/4.1E-1	7.8E-10/5.1E-1	8.0E-10/6.1E-1
	2 d	3.2E-11/9.4E-3	4.9E-11/1.7E-2	1.8E-10/1.6E-1	4.5E-10/3.8E-1	5.4E-10/4.8E-1	5.5E-10/5.8E-1
	7 d	3.3E-12/3.7E-3	6.5E-12/7.2E-3	9.9E-11/1.2E-1	3.5E-10/3.2E-1	4.4E-10/4.2E-1	4.6E-10/5.2E-1
	30 d	1.3E-12/1.4E-3	2.5E-12/2.8E-3	6.2E-11/6.4E-2	2.8E-10/2.3E-1	3.6E-10/3.2E-1	3.7E-10/4.2E-1
	182 d	3.4E-13/2.4E-4	6.8E-13/4.9E-4	1.9E-11/1.3E-2	1.1E-10/8.5E-2	1.7E-10/1.6E-1	1.8E-10/2.5E-1
	1 yr	1.3E-13/1.0E-4	2.6E-13/2.0E-4	7.2E-12/5.7E-3	4.8E-11/4.3E-2	9.3E-11/1.0E-1	1.1E-10/1.9E-1
	2 yr	3.2E-14/3.6E-5	6.5E-14/7.2E-5	1.9E-12/2.1E-3	1.7E-11/2.0E-2	4.6E-11/5.8E-2	5.8E-11/1.5E-1
	5 yr	7.3E-15/9.4E-6	1.5E-14/1.9E-5	4.3E-13/5.6E-4	4.5E-12/5.7E-3	1.5E-11/1.8E-2	2.5E-11/1.1E-1
10 yr	1.3E-15/1.4E-6	2.5E-15/2.8E-6	7.4E-14/8.3E-5	7.8E-13/8.6E-4	3.0E-12/2.7E-3	1.3E-11/9.5E-2	
20 yr	1.4E-16/5.0E-8	2.8E-16/9.9E-8	8.2E-15/2.9E-6	9.6E-14/3.2E-5	7.7E-13/1.8E-4	9.7E-12/9.2E-2	
30 yr	8.9E-17/1.6E-8	1.8E-16/3.1E-8	5.3E-15/9.3E-7	6.4E-14/1.1E-5	5.8E-13/9.8E-5	8.9E-12/9.2E-2	

Table 22: Tungsten (W) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	4.5E-9 / 6.7E-1	5.2E-9 / 7.9E-1	7.3E-9 / 1.2E+0	7.5E-9 / 1.4E+0	7.5E-9 / 1.4E+0	7.6E-9 / 1.7E+0
	1 min	4.3E-9 / 4.5E-1	5.0E-9 / 5.7E-1	7.1E-9 / 9.9E-1	7.3E-9 / 1.1E+0	7.3E-9 / 1.2E+0	7.4E-9 / 1.5E+0
	10 min	3.7E-9 / 3.8E-1	4.3E-9 / 4.9E-1	6.4E-9 / 9.2E-1	6.6E-9 / 1.1E+0	6.6E-9 / 1.1E+0	6.7E-9 / 1.4E+0
	30 min	3.0E-9 / 3.3E-1	3.7E-9 / 4.5E-1	5.8E-9 / 8.7E-1	5.9E-9 / 1.0E+0	5.9E-9 / 1.1E+0	6.0E-9 / 1.3E+0
	1 h	2.5E-9 / 3.0E-1	3.2E-9 / 4.1E-1	5.2E-9 / 8.3E-1	5.4E-9 / 9.8E-1	5.4E-9 / 1.1E+0	5.5E-9 / 1.3E+0
	2 h	2.0E-9 / 2.6E-1	2.6E-9 / 3.6E-1	4.6E-9 / 7.7E-1	4.8E-9 / 9.3E-1	4.8E-9 / 1.0E+0	4.9E-9 / 1.3E+0
	3 h	1.7E-9 / 2.3E-1	2.2E-9 / 3.3E-1	4.2E-9 / 7.4E-1	4.4E-9 / 8.9E-1	4.4E-9 / 9.6E-1	4.5E-9 / 1.2E+0
	6 h	1.2E-9 / 1.7E-1	1.7E-9 / 2.6E-1	3.6E-9 / 6.5E-1	3.7E-9 / 8.1E-1	3.7E-9 / 8.7E-1	3.8E-9 / 1.1E+0
	12 h	7.0E-10 / 1.2E-1	1.1E-9 / 1.9E-1	2.8E-9 / 5.5E-1	3.0E-9 / 7.0E-1	3.0E-9 / 7.7E-1	3.1E-9 / 1.0E+0
	1 d	3.6E-10 / 7.0E-2	6.1E-10 / 1.2E-1	2.1E-9 / 4.3E-1	2.3E-9 / 5.8E-1	2.3E-9 / 6.5E-1	2.4E-9 / 9.1E-1
	2 d	1.9E-10 / 3.6E-2	3.4E-10 / 6.4E-2	1.5E-9 / 3.1E-1	1.7E-9 / 4.6E-1	1.7E-9 / 5.3E-1	1.8E-9 / 7.9E-1
	7 d	3.6E-11 / 8.0E-3	6.9E-11 / 1.5E-2	6.2E-10 / 1.4E-1	7.4E-10 / 2.9E-1	7.5E-10 / 3.5E-1	8.5E-10 / 6.1E-1
	30 d	4.3E-12 / 1.0E-3	8.4E-12 / 2.1E-3	1.1E-10 / 3.8E-2	1.7E-10 / 1.6E-1	1.8E-10 / 2.2E-1	2.7E-10 / 4.8E-1
	182 d	6.5E-14 / 2.0E-4	1.3E-13 / 3.9E-4	3.5E-12 / 1.1E-2	1.9E-11 / 7.7E-2	2.7E-11 / 1.2E-1	1.2E-10 / 3.7E-1
	1 yr	2.1E-14 / 9.7E-5	4.2E-14 / 1.9E-4	1.2E-12 / 5.5E-3	7.1E-12 / 3.9E-2	1.3E-11 / 6.9E-2	1.0E-10 / 3.2E-1
	2 yr	4.3E-15 / 2.6E-5	8.6E-15 / 5.3E-5	2.5E-13 / 1.5E-3	2.1E-12 / 1.2E-2	5.8E-12 / 3.1E-2	9.8E-11 / 2.8E-1
	5 yr	8.7E-16 / 3.1E-6	1.7E-15 / 6.2E-6	5.1E-14 / 1.9E-4	5.4E-13 / 2.1E-3	2.0E-12 / 1.7E-2	9.4E-11 / 2.7E-1
10 yr	2.0E-16 / 2.3E-6	3.9E-16 / 4.7E-6	1.2E-14 / 1.4E-4	1.3E-13 / 1.7E-3	7.3E-13 / 1.6E-2	9.2E-11 / 2.6E-1	
20 yr	6.8E-17 / 2.0E-6	1.4E-16 / 4.0E-6	4.1E-15 / 1.2E-4	4.9E-14 / 1.4E-3	4.6E-13 / 1.4E-2	9.1E-11 / 2.4E-1	
30 yr	6.1E-17 / 1.7E-6	1.2E-16 / 3.4E-6	3.7E-15 / 1.0E-4	4.5E-14 / 1.2E-3	4.4E-13 / 1.2E-2	9.1E-11 / 2.3E-1	
2)	0	1.1E-8 / 1.1E+0	1.2E-8 / 1.2E+0	1.5E-8 / 1.7E+0	1.5E-8 / 1.9E+0	1.5E-8 / 2.0E+0	1.6E-8 / 2.3E+0
	1 min	1.0E-8 / 8.7E-1	1.1E-8 / 1.0E+0	1.4E-8 / 1.5E+0	1.4E-8 / 1.7E+0	1.5E-8 / 1.8E+0	1.5E-8 / 2.1E+0
	10 min	6.8E-9 / 6.7E-1	7.8E-9 / 8.1E-1	1.1E-8 / 1.3E+0	1.1E-8 / 1.5E+0	1.1E-8 / 1.6E+0	1.2E-8 / 1.9E+0
	30 min	4.6E-9 / 5.3E-1	5.6E-9 / 6.7E-1	8.6E-9 / 1.2E+0	9.0E-9 / 1.4E+0	9.1E-9 / 1.4E+0	9.5E-9 / 1.8E+0
	1 h	3.6E-9 / 4.4E-1	4.6E-9 / 5.8E-1	7.5E-9 / 1.1E+0	7.9E-9 / 1.3E+0	8.0E-9 / 1.3E+0	8.4E-9 / 1.7E+0
	2 h	2.8E-9 / 3.5E-1	3.7E-9 / 4.8E-1	6.6E-9 / 9.7E-1	7.0E-9 / 1.2E+0	7.1E-9 / 1.2E+0	7.4E-9 / 1.6E+0
	3 h	2.3E-9 / 3.0E-1	3.2E-9 / 4.2E-1	6.0E-9 / 9.0E-1	6.4E-9 / 1.1E+0	6.5E-9 / 1.2E+0	6.9E-9 / 1.5E+0
	6 h	1.6E-9 / 2.2E-1	2.4E-9 / 3.3E-1	5.1E-9 / 7.9E-1	5.5E-9 / 9.7E-1	5.6E-9 / 1.0E+0	5.9E-9 / 1.4E+0
	12 h	1.0E-9 / 1.5E-1	1.6E-9 / 2.3E-1	4.0E-9 / 6.5E-1	4.4E-9 / 8.4E-1	4.5E-9 / 9.1E-1	4.9E-9 / 1.3E+0
	1 d	5.5E-10 / 8.5E-2	9.1E-10 / 1.4E-1	3.0E-9 / 5.1E-1	3.4E-9 / 6.9E-1	3.5E-9 / 7.7E-1	3.9E-9 / 1.1E+0
	2 d	2.6E-10 / 4.1E-2	4.5E-10 / 7.2E-2	2.1E-9 / 3.7E-1	2.5E-9 / 5.5E-1	2.6E-9 / 6.3E-1	3.0E-9 / 9.8E-1
	7 d	5.0E-11 / 9.0E-3	9.6E-11 / 1.7E-2	1.0E-9 / 1.9E-1	1.3E-9 / 3.6E-1	1.4E-9 / 4.3E-1	1.8E-9 / 7.9E-1
	30 d	7.7E-12 / 1.6E-3	1.5E-11 / 3.1E-3	2.2E-10 / 5.8E-2	4.1E-10 / 2.0E-1	5.0E-10 / 2.6E-1	8.7E-10 / 6.2E-1
	182 d	2.5E-13 / 2.1E-4	5.1E-13 / 4.2E-4	1.4E-11 / 1.2E-2	8.4E-11 / 7.5E-2	1.6E-10 / 1.3E-1	5.3E-10 / 4.8E-1
	1 yr	9.8E-14 / 9.1E-5	1.9E-13 / 1.8E-4	5.5E-12 / 5.2E-3	4.1E-11 / 3.7E-2	1.0E-10 / 7.6E-2	4.7E-10 / 4.3E-1
	2 yr	3.4E-14 / 2.7E-5	6.9E-14 / 5.5E-5	2.0E-12 / 1.6E-3	2.0E-11 / 1.3E-2	6.0E-11 / 4.0E-2	4.3E-10 / 3.9E-1
	5 yr	1.0E-14 / 5.2E-6	2.0E-14 / 1.0E-5	5.9E-13 / 3.1E-4	6.1E-12 / 3.3E-3	2.1E-11 / 2.0E-2	3.9E-10 / 3.6E-1
10 yr	1.8E-15 / 2.4E-6	3.7E-15 / 4.7E-6	1.1E-13 / 1.4E-4	1.1E-12 / 1.7E-3	5.0E-12 / 1.4E-2	3.7E-10 / 3.5E-1	
20 yr	2.9E-16 / 1.6E-6	5.8E-16 / 3.2E-6	1.7E-14 / 9.6E-5	2.1E-13 / 1.2E-3	1.8E-12 / 1.1E-2	3.7E-10 / 3.4E-1	
30 yr	2.3E-16 / 1.3E-6	4.6E-16 / 2.6E-6	1.4E-14 / 7.9E-5	1.7E-13 / 9.6E-4	1.6E-12 / 8.9E-3	3.7E-10 / 3.3E-1	
3)	0	4.6E-9 / 6.6E-1	5.3E-9 / 7.8E-1	7.3E-9 / 1.2E+0	7.5E-9 / 1.3E+0	7.5E-9 / 1.4E+0	7.6E-9 / 1.7E+0
	1 min	4.4E-9 / 4.5E-1	5.1E-9 / 5.7E-1	7.2E-9 / 1.0E+0	7.3E-9 / 1.1E+0	7.3E-9 / 1.2E+0	7.5E-9 / 1.5E+0
	10 min	3.9E-9 / 3.9E-1	4.5E-9 / 5.1E-1	6.6E-9 / 9.4E-1	6.8E-9 / 1.1E+0	6.8E-9 / 1.1E+0	6.9E-9 / 1.4E+0
	30 min	3.2E-9 / 3.5E-1	3.9E-9 / 4.6E-1	5.9E-9 / 8.9E-1	6.1E-9 / 1.0E+0	6.1E-9 / 1.1E+0	6.2E-9 / 1.4E+0
	1 h	2.7E-9 / 3.1E-1	3.3E-9 / 4.2E-1	5.3E-9 / 8.5E-1	5.5E-9 / 9.8E-1	5.5E-9 / 1.0E+0	5.6E-9 / 1.3E+0
	2 h	2.1E-9 / 2.6E-1	2.7E-9 / 3.7E-1	4.6E-9 / 7.9E-1	4.8E-9 / 9.2E-1	4.8E-9 / 9.7E-1	4.9E-9 / 1.3E+0
	3 h	1.7E-9 / 2.4E-1	2.3E-9 / 3.4E-1	4.2E-9 / 7.5E-1	4.4E-9 / 8.8E-1	4.4E-9 / 9.3E-1	4.5E-9 / 1.2E+0
	6 h	1.2E-9 / 1.8E-1	1.7E-9 / 2.7E-1	3.5E-9 / 6.6E-1	3.7E-9 / 7.9E-1	3.7E-9 / 8.4E-1	3.8E-9 / 1.1E+0
	12 h	6.9E-10 / 1.2E-1	1.0E-9 / 1.9E-1	2.8E-9 / 5.5E-1	2.9E-9 / 6.8E-1	2.9E-9 / 7.4E-1	3.0E-9 / 1.0E+0
	1 d	3.4E-10 / 7.0E-2	5.6E-10 / 1.2E-1	2.1E-9 / 4.3E-1	2.2E-9 / 5.6E-1	2.3E-9 / 6.2E-1	2.4E-9 / 9.0E-1
	2 d	1.7E-10 / 3.5E-2	3.0E-10 / 6.3E-2	1.5E-9 / 3.2E-1	1.7E-9 / 4.4E-1	1.7E-9 / 5.0E-1	1.8E-9 / 7.8E-1
	7 d	3.8E-11 / 8.3E-3	7.2E-11 / 1.6E-2	7.1E-10 / 1.5E-1	8.3E-10 / 2.7E-1	8.4E-10 / 3.2E-1	9.4E-10 / 6.0E-1
	30 d	5.0E-12 / 1.0E-3	9.9E-12 / 2.1E-3	1.3E-10 / 3.6E-2	1.9E-10 / 1.3E-1	1.9E-10 / 1.8E-1	2.9E-10 / 4.7E-1
	182 d	5.6E-14 / 1.5E-4	1.1E-13 / 3.0E-4	3.0E-12 / 8.6E-3	1.5E-11 / 6.0E-2	1.9E-11 / 9.6E-2	1.2E-10 / 3.8E-1
	1 yr	1.7E-14 / 7.5E-5	3.4E-14 / 1.5E-4	9.2E-13 / 4.3E-3	5.2E-12 / 3.1E-2	7.7E-12 / 5.7E-2	1.1E-10 / 3.4E-1
	2 yr	2.5E-15 / 2.1E-5	4.9E-15 / 4.2E-5	1.4E-13 / 1.2E-3	1.0E-12 / 9.2E-3	2.7E-12 / 2.8E-2	1.0E-10 / 3.1E-1
	5 yr	3.2E-16 / 2.9E-6	6.5E-16 / 5.8E-6	1.9E-14 / 1.7E-4	2.1E-13 / 2.0E-3	1.2E-12 / 1.7E-2	1.0E-10 / 2.9E-1
10 yr	1.4E-16 / 2.4E-6	2.7E-16 / 4.7E-6	8.2E-15 / 1.4E-4	9.6E-14 / 1.7E-3	8.1E-13 / 1.6E-2	1.0E-10 / 2.8E-1	
20 yr	1.0E-16 / 2.0E-6	2.0E-16 / 4.1E-6	6.0E-15 / 1.2E-4	7.3E-14 / 1.5E-3	7.1E-13 / 1.4E-2	1.0E-10 / 2.7E-1	
30 yr	9.6E-17 / 1.8E-6	1.9E-16 / 3.6E-6	5.8E-15 / 1.1E-4	7.0E-14 / 1.3E-3	6.9E-13 / 1.2E-2	9.9E-11 / 2.5E-1	
4)	0	3.3E-9 / 5.9E-1	4.0E-9 / 7.0E-1	5.8E-9 / 1.1E+0	5.9E-9 / 1.3E+0	5.9E-9 / 1.3E+0	6.0E-9 / 1.5E+0
	1 min	3.2E-9 / 3.6E-1	3.9E-9 / 4.7E-1	5.7E-9 / 8.7E-1	5.8E-9 / 1.0E+0	5.8E-9 / 1.1E+0	5.9E-9 / 1.3E+0
	10 min	3.0E-9 / 3.1E-1	3.6E-9 / 4.2E-1	5.5E-9 / 8.2E-1	5.6E-9 / 9.8E-1	5.6E-9 / 1.1E+0	5.6E-9 / 1.3E+0
	30 min	2.6E-9 / 2.8E-1	3.2E-9 / 3.9E-1	5.0E-9 / 7.9E-1	5.1E-9 / 9.5E-1	5.1E-9 / 1.0E+0	5.2E-9 / 1.2E+0
	1 h	2.2E-9 / 2.6E-1	2.8E-9 / 3.7E-1	4.6E-9 / 7.6E-1	4.7E-9 / 9.2E-1	4.7E-9 / 9.9E-1	4.8E-9 / 1.2E+0
	2 h	1.8E-9 / 2.3E-1	2.3E-9 / 3.3E-1	4.1E-9 / 7.2E-1	4.2E-9 / 8.8E-1	4.2E-9 / 9.5E-1	4.3E-9 / 1.2E+0
	3 h	1.5E-9 / 2.1E-1	2.0E-9 / 3.0E-1	3.8E-9 / 6.9E-1	3.9E-9 / 8.4E-1	3.9E-9 / 9.2E-1	3.9E-9 / 1.1E+0
	6 h	1.1E-9 / 1.6E-1	1.5E-9 / 2.4E-1	3.2E-9 / 6.1E-1	3.3E-9 / 7.7E-1	3.3E-9 / 8.4E-1	3.3E-9 / 1.1E+0
	12 h	6.5E-10 / 1.1E-1	9.8E-10 / 1.8E-1	2.5E-9 / 5.1E-1	2.6E-9 / 6.7E-1	2.6E-9 / 7.5E-1	2.6E-9 / 9.6E-1
	1 d	3.4E-10 / 6.7E-2	5.7E-10 / 1.1E-1	1.9E-9 / 4.1E-1	2.0E-9 / 5.6E-1	2.0E-9 / 6.3E-1	2.0E-9 / 8.5E-1
	2 d	1.8E-10 / 3.5E-2	3.3E-10 / 6.2E-2	1.3E-9 / 2.9E-1	1.4E-9 / 4.5E-1	1.4E-9 / 5.2E-1	1.4E-9 / 7.3E-1
	7 d	3.2E-11 / 7.6E-3	5.9E-11 / 1.4E-2	4.4E-10 / 1.3E-1	5.0E-10 / 2.8E-1	5.1E-10 / 3.5E-1	5.4E-10 / 5.6E-1
	30 d	2.7E-12 / 8.9E-4	5.2E-12 / 1.8E-3	6.9E-11 / 3.4E-2	9.2E-11 / 1.6E-1	9.5E-11 / 2.3E-1	1.3E-10 / 4.4E-1
	182 d	2.2E-14 / 2.1E-4	4.4E-14 / 4.3E-4	1.2E-12 / 1.2E-2	6.4E-12 / 8.5E-2	7.9E-12 / 1.3E-1	4.0E-11 / 3.4E-1
	1 yr	7.2E-15 / 1.1E-4	1.4E-14 / 2.2E-4	3.9E-13 / 6.2E-3	2.3E-12 / 4.4E-2	3.1E-12 / 7.4E-2	3.6E-11 / 2.9E-1
	2 yr	1.1E-15 / 3.0E-5	2.2E-15 / 5.9E-5	6.2E-14 / 1.7E-3	4.2E-13 / 1.3E-2	8.6E-13 / 3.2E-2	3.3E-11 / 2.4E-1
	5 yr	6.7E-17 / 2.9E-6	1.3E-16 / 5.9E-6	4.0E-15 / 1.7E-4	4.4E-14 / 2.0E-3	3.5E-13 / 1.7E-2	3.3E-11 / 2.2E-1
10 yr	4.6E-17 / 2.3E-6	9.3E-17 / 4.6E-6	2.8E-15 / 1.4E-4	3.4E-14 / 1.7E-3	3.1E-13 / 1.6E-2	3.3E-11 / 2.1E-1	
20 yr	4.0E-17 / 2.0E-6	8.0E-17 / 4.0E-6	2.4E-15 / 1.2E-4	2.9E-14 / 1.5E-3	2.8E-13 / 1.4E-2	3.2E-11 / 2.0E-1	
30 yr	3.8E-17 / 1.7E-6	7.6E-17 / 3.5E-6	2.3E-15 / 1.0E-4	2.8E-14 / 1.3E-3	2.7E-13 / 1.2E-2	3.2E-11 / 1.8E-1	

Table 23: Gold (Au) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	9.4E-9 / 5.5E-1	1.0E-8 / 6.2E-1	1.2E-8 / 8.7E-1	1.2E-8 / 8.9E-1	1.2E-8 / 9.0E-1	1.2E-8 / 1.4E+0
	1 min	6.7E-9 / 3.9E-1	7.5E-9 / 4.6E-1	8.9E-9 / 7.1E-1	8.9E-9 / 7.2E-1	9.0E-9 / 7.4E-1	9.3E-9 / 1.2E+0
	10 min	5.9E-9 / 3.3E-1	6.6E-9 / 4.0E-1	8.0E-9 / 6.4E-1	8.1E-9 / 6.6E-1	8.1E-9 / 6.8E-1	8.4E-9 / 1.1E+0
	30 min	5.0E-9 / 2.8E-1	5.7E-9 / 3.5E-1	7.1E-9 / 5.9E-1	7.2E-9 / 6.1E-1	7.2E-9 / 6.2E-1	7.5E-9 / 1.1E+0
	1 h	4.2E-9 / 2.4E-1	4.9E-9 / 3.1E-1	6.2E-9 / 5.5E-1	6.3E-9 / 5.6E-1	6.3E-9 / 5.8E-1	6.7E-9 / 1.0E+0
	2 h	3.1E-9 / 1.9E-1	3.7E-9 / 2.6E-1	5.1E-9 / 4.9E-1	5.1E-9 / 5.1E-1	5.1E-9 / 5.3E-1	5.5E-9 / 9.9E-1
	3 h	2.4E-9 / 1.6E-1	3.0E-9 / 2.2E-1	4.3E-9 / 4.5E-1	4.4E-9 / 4.7E-1	4.4E-9 / 4.9E-1	4.7E-9 / 9.5E-1
	6 h	1.4E-9 / 1.1E-1	1.9E-9 / 1.6E-1	3.1E-9 / 3.8E-1	3.2E-9 / 4.0E-1	3.2E-9 / 4.2E-1	3.5E-9 / 8.9E-1
	12 h	7.3E-10 / 7.2E-2	1.1E-9 / 1.1E-1	2.1E-9 / 3.1E-1	2.2E-9 / 3.3E-1	2.2E-9 / 3.5E-1	2.6E-9 / 8.2E-1
	1 d	3.2E-10 / 4.3E-2	5.3E-10 / 7.3E-2	1.4E-9 / 2.4E-1	1.5E-9 / 2.6E-1	1.5E-9 / 2.8E-1	1.8E-9 / 7.4E-1
	2 d	1.5E-10 / 2.4E-2	2.7E-10 / 4.4E-2	8.9E-10 / 1.7E-1	9.4E-10 / 1.9E-1	9.5E-10 / 2.1E-1	1.3E-9 / 6.7E-1
	7 d	1.8E-11 / 4.6E-3	3.3E-11 / 8.6E-3	2.2E-10 / 5.0E-2	2.6E-10 / 6.5E-2	2.7E-10 / 8.3E-2	6.3E-10 / 5.5E-1
	30 d	1.4E-12 / 2.1E-4	2.8E-12 / 4.1E-4	4.1E-11 / 6.8E-3	6.0E-11 / 1.8E-2	6.9E-11 / 3.6E-2	4.2E-10 / 5.0E-1
	182 d	1.7E-14 / 1.6E-5	3.3E-14 / 3.3E-5	8.9E-13 / 9.4E-4	5.2E-12 / 7.5E-3	1.3E-11 / 2.3E-2	3.6E-10 / 4.9E-1
	1 yr	6.0E-15 / 9.6E-6	1.2E-14 / 1.9E-5	3.4E-13 / 5.6E-4	2.5E-12 / 5.1E-3	1.0E-11 / 1.9E-2	3.6E-10 / 4.8E-1
	2 yr	2.1E-15 / 5.2E-6	4.2E-15 / 1.0E-5	1.2E-13 / 3.0E-4	1.3E-12 / 3.1E-3	8.3E-12 / 1.4E-2	3.6E-10 / 4.8E-1
	5 yr	1.2E-15 / 2.4E-6	2.4E-15 / 4.7E-6	7.1E-14 / 1.4E-4	8.4E-13 / 1.6E-3	7.0E-12 / 8.4E-3	3.6E-10 / 4.7E-1
	10 yr	9.4E-16 / 1.0E-6	1.9E-15 / 2.0E-6	5.6E-14 / 6.1E-5	6.8E-13 / 6.9E-4	6.1E-12 / 3.9E-3	3.5E-10 / 4.7E-1
	20 yr	7.6E-16 / 2.7E-7	1.5E-15 / 5.4E-7	4.5E-14 / 1.6E-5	5.5E-13 / 1.9E-4	5.1E-12 / 1.3E-3	3.5E-10 / 4.6E-1
	30 yr	6.4E-16 / 1.3E-7	1.3E-15 / 2.6E-7	3.9E-14 / 7.9E-6	4.7E-13 / 9.4E-5	4.3E-12 / 8.2E-4	3.4E-10 / 4.6E-1
2)	0	1.6E-8 / 9.4E-1	1.7E-8 / 1.1E+0	2.0E-8 / 1.4E+0	2.1E-8 / 1.5E+0	2.1E-8 / 1.5E+0	2.2E-8 / 1.9E+0
	1 min	1.3E-8 / 7.6E-1	1.4E-8 / 8.8E-1	1.7E-8 / 1.2E+0	1.8E-8 / 1.3E+0	1.8E-8 / 1.3E+0	1.9E-8 / 1.8E+0
	10 min	1.0E-8 / 6.2E-1	1.2E-8 / 7.3E-1	1.5E-8 / 1.1E+0	1.5E-8 / 1.1E+0	1.5E-8 / 1.2E+0	1.6E-8 / 1.6E+0
	30 min	8.1E-9 / 5.0E-1	9.6E-9 / 6.2E-1	1.3E-8 / 9.6E-1	1.3E-8 / 1.0E+0	1.3E-8 / 1.1E+0	1.4E-8 / 1.5E+0
	1 h	6.7E-9 / 4.2E-1	8.1E-9 / 5.3E-1	1.1E-8 / 8.7E-1	1.1E-8 / 9.3E-1	1.1E-8 / 9.7E-1	1.2E-8 / 1.4E+0
	2 h	5.0E-9 / 3.3E-1	6.3E-9 / 4.3E-1	9.2E-9 / 7.7E-1	9.5E-9 / 8.3E-1	9.5E-9 / 8.7E-1	1.0E-8 / 1.3E+0
	3 h	4.1E-9 / 2.8E-1	5.2E-9 / 3.7E-1	8.0E-9 / 7.1E-1	8.4E-9 / 7.7E-1	8.4E-9 / 8.0E-1	9.3E-9 / 1.2E+0
	6 h	2.6E-9 / 1.9E-1	3.6E-9 / 2.7E-1	6.2E-9 / 5.9E-1	6.5E-9 / 6.5E-1	6.6E-9 / 6.8E-1	7.4E-9 / 1.1E+0
	12 h	1.5E-9 / 1.2E-1	2.2E-9 / 1.8E-1	4.5E-9 / 4.7E-1	4.8E-9 / 5.3E-1	4.9E-9 / 5.6E-1	5.7E-9 / 1.0E+0
	1 d	6.6E-10 / 6.4E-2	1.0E-9 / 1.1E-1	3.0E-9 / 3.5E-1	3.3E-9 / 4.1E-1	3.4E-9 / 4.5E-1	4.2E-9 / 8.9E-1
	2 d	2.6E-10 / 3.2E-2	4.6E-10 / 5.7E-2	2.0E-9 / 2.5E-1	2.3E-9 / 3.0E-1	2.3E-9 / 3.4E-1	3.2E-9 / 7.8E-1
	7 d	4.4E-11 / 6.4E-3	8.5E-11 / 1.2E-2	8.8E-10 / 9.4E-2	1.1E-9 / 1.5E-1	1.2E-9 / 1.8E-1	2.0E-9 / 6.2E-1
	30 d	6.7E-12 / 6.1E-4	1.3E-11 / 1.2E-3	1.9E-10 / 2.1E-2	3.2E-10 / 6.2E-2	3.7E-10 / 9.5E-2	1.2E-9 / 5.4E-1
	182 d	1.4E-13 / 6.0E-5	2.8E-13 / 1.2E-4	7.6E-12 / 3.3E-3	4.2E-11 / 2.2E-2	8.4E-11 / 5.0E-2	9.4E-10 / 4.9E-1
	1 yr	4.8E-14 / 2.7E-5	9.6E-14 / 5.5E-5	2.7E-12 / 1.6E-3	1.8E-11 / 1.2E-2	5.5E-11 / 3.6E-2	9.1E-10 / 4.7E-1
	2 yr	1.3E-14 / 1.0E-5	2.6E-14 / 2.1E-5	7.7E-13 / 6.1E-4	7.4E-12 / 5.8E-3	3.9E-11 / 2.5E-2	8.9E-10 / 4.6E-1
	5 yr	5.7E-15 / 3.7E-6	1.1E-14 / 7.4E-6	3.4E-13 / 2.2E-4	3.9E-12 / 2.5E-3	3.0E-11 / 1.5E-2	8.7E-10 / 4.5E-1
	10 yr	3.9E-15 / 1.9E-6	7.8E-15 / 3.7E-6	2.3E-13 / 1.1E-4	2.8E-12 / 1.3E-3	2.4E-11 / 9.1E-3	8.6E-10 / 4.4E-1
	20 yr	3.0E-15 / 8.6E-7	5.9E-15 / 1.7E-6	1.8E-13 / 5.2E-5	2.1E-12 / 6.1E-4	2.0E-11 / 5.1E-3	8.3E-10 / 4.3E-1
	30 yr	2.5E-15 / 5.9E-7	5.0E-15 / 1.2E-6	1.5E-13 / 3.5E-5	1.8E-12 / 4.2E-4	1.7E-11 / 3.8E-3	8.1E-10 / 4.3E-1
3)	0	9.3E-9 / 5.7E-1	1.0E-8 / 6.5E-1	1.2E-8 / 9.2E-1	1.2E-8 / 9.3E-1	1.2E-8 / 9.5E-1	1.2E-8 / 1.4E+0
	1 min	6.7E-9 / 4.1E-1	7.6E-9 / 4.9E-1	9.3E-9 / 7.6E-1	9.4E-9 / 7.8E-1	9.4E-9 / 8.0E-1	9.7E-9 / 1.2E+0
	10 min	6.0E-9 / 3.4E-1	6.8E-9 / 4.2E-1	8.5E-9 / 6.9E-1	8.6E-9 / 7.1E-1	8.6E-9 / 7.3E-1	8.9E-9 / 1.2E+0
	30 min	5.2E-9 / 3.0E-1	6.0E-9 / 3.7E-1	7.7E-9 / 6.4E-1	7.8E-9 / 6.6E-1	7.8E-9 / 6.8E-1	8.1E-9 / 1.1E+0
	1 h	4.4E-9 / 2.6E-1	5.2E-9 / 3.3E-1	6.9E-9 / 6.0E-1	6.9E-9 / 6.2E-1	6.9E-9 / 6.4E-1	7.3E-9 / 1.1E+0
	2 h	3.4E-9 / 2.1E-1	4.1E-9 / 2.8E-1	5.7E-9 / 5.4E-1	5.8E-9 / 5.6E-1	5.8E-9 / 5.8E-1	6.1E-9 / 1.0E+0
	3 h	2.7E-9 / 1.8E-1	3.3E-9 / 2.5E-1	4.9E-9 / 5.0E-1	5.0E-9 / 5.2E-1	5.0E-9 / 5.4E-1	5.4E-9 / 9.8E-1
	6 h	1.6E-9 / 1.2E-1	2.2E-9 / 1.8E-1	3.7E-9 / 4.3E-1	3.7E-9 / 4.4E-1	3.7E-9 / 4.6E-1	4.1E-9 / 9.1E-1
	12 h	8.6E-10 / 8.0E-2	1.2E-9 / 1.3E-1	2.6E-9 / 3.5E-1	2.6E-9 / 3.7E-1	2.6E-9 / 3.9E-1	3.0E-9 / 8.3E-1
	1 d	3.8E-10 / 4.8E-2	6.3E-10 / 8.2E-2	1.7E-9 / 2.7E-1	1.8E-9 / 2.9E-1	1.8E-9 / 3.1E-1	2.1E-9 / 7.5E-1
	2 d	1.9E-10 / 2.7E-2	3.3E-10 / 4.9E-2	1.1E-9 / 1.9E-1	1.1E-9 / 2.0E-1	1.1E-9 / 2.2E-1	1.5E-9 / 6.7E-1
	7 d	2.2E-11 / 5.1E-3	4.0E-11 / 9.5E-3	2.6E-10 / 5.4E-2	3.1E-10 / 6.9E-2	3.1E-10 / 8.8E-2	6.7E-10 / 5.3E-1
	30 d	1.6E-12 / 2.2E-4	3.2E-12 / 4.4E-4	4.7E-11 / 7.0E-3	6.5E-11 / 1.8E-2	7.3E-11 / 3.7E-2	4.3E-10 / 4.8E-1
	182 d	9.2E-15 / 1.5E-5	1.8E-14 / 3.0E-5	4.9E-13 / 8.5E-4	2.9E-12 / 7.2E-3	1.1E-11 / 2.4E-2	3.7E-10 / 4.7E-1
	1 yr	3.3E-15 / 9.4E-6	6.6E-15 / 1.9E-5	1.9E-13 / 5.5E-4	1.6E-12 / 5.1E-3	9.1E-12 / 2.0E-2	3.6E-10 / 4.6E-1
	2 yr	1.6E-15 / 5.5E-6	3.2E-15 / 1.1E-5	9.4E-14 / 3.2E-4	1.0E-12 / 3.4E-3	8.3E-12 / 1.6E-2	3.6E-10 / 4.6E-1
	5 yr	1.2E-15 / 2.6E-6	2.4E-15 / 5.3E-6	7.0E-14 / 1.6E-4	8.4E-13 / 1.8E-3	7.6E-12 / 9.2E-3	3.6E-10 / 4.5E-1
	10 yr	1.0E-15 / 1.1E-6	2.1E-15 / 2.2E-6	6.2E-14 / 6.6E-5	7.4E-13 / 7.5E-4	6.8E-12 / 4.1E-3	3.6E-10 / 4.4E-1
	20 yr	8.5E-16 / 2.6E-7	1.7E-15 / 5.2E-7	5.1E-14 / 1.5E-5	6.1E-13 / 1.8E-4	5.7E-12 / 1.2E-3	3.5E-10 / 4.4E-1
	30 yr	7.1E-16 / 1.1E-7	1.4E-15 / 2.2E-7	4.3E-14 / 6.7E-6	5.1E-13 / 8.0E-5	4.8E-12 / 6.8E-4	3.4E-10 / 4.4E-1
4)	0	8.4E-9 / 4.6E-1	8.9E-9 / 5.2E-1	1.0E-8 / 7.3E-1	1.0E-8 / 7.4E-1	1.0E-8 / 7.6E-1	1.0E-8 / 1.2E+0
	1 min	5.6E-9 / 3.0E-1	6.1E-9 / 3.6E-1	7.2E-9 / 5.7E-1	7.3E-9 / 5.8E-1	7.3E-9 / 6.0E-1	7.5E-9 / 1.1E+0
	10 min	4.9E-9 / 2.5E-1	5.4E-9 / 3.1E-1	6.6E-9 / 5.2E-1	6.6E-9 / 5.3E-1	6.6E-9 / 5.4E-1	6.9E-9 / 1.0E+0
	30 min	4.2E-9 / 2.2E-1	4.8E-9 / 2.7E-1	5.9E-9 / 4.8E-1	5.9E-9 / 4.9E-1	5.9E-9 / 5.1E-1	6.2E-9 / 9.9E-1
	1 h	3.5E-9 / 1.9E-1	4.0E-9 / 2.4E-1	5.1E-9 / 4.5E-1	5.1E-9 / 4.6E-1	5.1E-9 / 4.7E-1	5.4E-9 / 9.6E-1
	2 h	2.5E-9 / 1.5E-1	3.0E-9 / 2.0E-1	4.1E-9 / 4.0E-1	4.1E-9 / 4.1E-1	4.1E-9 / 4.3E-1	4.4E-9 / 9.2E-1
	3 h	1.9E-9 / 1.2E-1	2.3E-9 / 1.7E-1	3.4E-9 / 3.8E-1	3.4E-9 / 3.8E-1	3.4E-9 / 4.0E-1	3.7E-9 / 8.9E-1
	6 h	1.1E-9 / 8.7E-2	1.4E-9 / 1.3E-1	2.4E-9 / 3.2E-1	2.4E-9 / 3.3E-1	2.4E-9 / 3.5E-1	2.7E-9 / 8.3E-1
	12 h	5.4E-10 / 5.8E-2	7.8E-10 / 9.4E-2	1.7E-9 / 2.7E-1	1.7E-9 / 2.8E-1	1.7E-9 / 2.9E-1	2.0E-9 / 7.8E-1
	1 d	2.4E-10 / 3.6E-2	4.1E-10 / 6.3E-2	1.1E-9 / 2.1E-1	1.2E-9 / 2.2E-1	1.2E-9 / 2.3E-1	1.4E-9 / 7.2E-1
	2 d	1.3E-10 / 2.1E-2	2.3E-10 / 3.9E-2	7.2E-10 / 1.5E-1	7.5E-10 / 1.6E-1	7.6E-10 / 1.7E-1	1.0E-9 / 6.6E-1
	7 d	1.5E-11 / 4.1E-3	2.7E-11 / 7.6E-3	1.5E-10 / 4.0E-2	1.8E-10 / 4.8E-2	1.8E-10 / 6.3E-2	4.4E-10 / 5.5E-1
	30 d	8.6E-13 / 1.4E-4	1.7E-12 / 2.7E-4	2.5E-11 / 4.2E-3	3.3E-11 / 9.9E-3	3.9E-11 / 2.4E-2	3.0E-10 / 5.1E-1
	182 d	3.6E-15 / 7.7E-6	7.3E-15 / 1.5E-5	1.9E-13 / 4.5E-4	1.3E-12 / 4.2E-3	6.8E-12 / 1.7E-2	2.6E-10 / 5.0E-1
	1 yr	1.7E-15 / 5.6E-6	3.3E-15 / 1.1E-5	9.6E-14 / 3.3E-4	9.1E-13 / 3.4E-3	6.2E-12 / 1.5E-2	2.6E-10 / 5.0E-1
	2 yr	1.0E-15 / 3.9E-6	2.0E-15 / 7.8E-6	6.1E-14 / 2.3E-4	6.9E-13 / 2.5E-3	5.8E-12 / 1.2E-2	2.6E-10 / 5.0E-1
	5 yr	8.2E-16 / 2.1E-6	1.6E-15 / 4.1E-6	4.9E-14 / 1.2E-4	5.9E-13 / 1.4E-3	5.4E-12 / 7.1E-3	2.6E-10 / 4.9E-1
	10 yr	7.3E-16 / 8.5E-7	1.5E-15 / 1.7E-6	4.4E-14 / 5.1E-5	5.3E-13 / 5.7E-4	4.8E-12 / 3.0E-3	2.6E-10 / 4.9E-1
	20 yr	6.0E-16 / 1.7E-7	1.2E-15 / 3.4E-7	3.6E-14 / 1.0E-5	4.3E-13 / 1.2E-4	3.9E-12 / 7.1E-4	2.5E-10 / 4.8E-1
	30 yr	4.9E-16 / 5.5E-8	9.8E-16 / 1.1E-7	2.9E-14 / 3.3E-6	3.5E-13 / 3.9E-5	3.2E-12 / 3.0E-4	2.5E-10 / 4.8E-1

Table 24: Lead (Pb) high-energy ω -factors (Sv h⁻¹)/(stars cm⁻³s⁻¹) / total activity (Bq/(stars s⁻¹)) for the four spectra considered. Scaling is with respect to >20 MeV star densities.

A.2 Low-energy neutron activation (1–20 MeV)

The following tables contain the “ ω -factors” and total activities due to low-energy neutrons. The activation due to all neutrons between thermal energy and 20 MeV is taken into account, but normalization is with respect to the flux between 1–20 MeV. The “ ω -factors” and the total activity are separated by a slash. The latter includes all decay, whether a γ is emitted or not, whereas the ω -factors refer only to the dose due to photons.

Typically low-energy neutron activation produces a small number of radioisotopes. In several cases this means that after a certain cooling time there is no change. In such cases the tables have been reduced by removing the lines with no change to the preceding.

In cases where the produced nucleus has metastable states, equal share between all such states and the ground state is assumed.

Table 25 shows the activation of natural carbon. Due to lack of cross section data for ^{12}C and ^{13}C separately, natural carbon data has been used and assumed identical for both above thermal energy.

Table 26 shows the activation of natural oxygen.

Table 27 shows the activation of natural sodium.

Table 28 shows the activation of natural magnesium.

Table 29 shows the activation of natural aluminium.

Table 30 shows the activation of natural silicon.

Table 31 shows the activation of natural potassium.

Table 32 shows the activation of natural calcium.

Table 33 shows the activation of natural chromium.

Table 34 shows the activation of natural manganese.

Table 35 shows the activation of natural iron.

Table 36 shows the activation of natural nickel.

Table 37 shows the activation of natural copper.

Table 38 shows the activation of natural niobium.

Table 39 shows the activation of natural silver. In silver the (n,γ) reaction in the resonance region is dominating and thus the validity of the normalization by the 1-20 MeV flux is of doubtful validity. The correct share to the ground and metastable states of ^{108}Ag and ^{110}Ag is taken into account – assuming equal share would increase the ω -factor by about one order of magnitude for most cooling times.

Table 40 shows the activation of natural barium.

Table 41 shows the activation of natural tungsten.

Table 42 shows the activation of natural gold. The (n,γ) -reaction in the resonance region is assumed to lead 100% to the ground state of ^{198}Au .

Table 43 shows the activation of natural lead.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	1.1E-14 / 2.1E-5	1.1E-14 / 2.1E-5	1.1E-14 / 2.1E-5	1.1E-14 / 2.1E-5	1.1E-14 / 2.1E-5	1.1E-14 / 3.1E-5
	1 min	0.0E+0 / 2.0E-13	0.0E+0 / 4.0E-13	0.0E+0 / 1.2E-11	0.0E+0 / 1.5E-10	0.0E+0 / 1.5E-9	0.0E+0 / 9.6E-6
	30 yr	0.0E+0 / 2.0E-13	0.0E+0 / 4.0E-13	0.0E+0 / 1.2E-11	0.0E+0 / 1.5E-10	0.0E+0 / 1.5E-9	0.0E+0 / 9.6E-6
2)	0	2.6E-14 / 5.6E-5	2.6E-14 / 5.6E-5	2.6E-14 / 5.6E-5	2.6E-14 / 5.6E-5	2.6E-14 / 5.6E-5	2.6E-14 / 7.7E-5
	1 min	0.0E+0 / 7.5E-14	0.0E+0 / 1.5E-13	0.0E+0 / 4.5E-12	0.0E+0 / 5.5E-11	0.0E+0 / 5.5E-10	0.0E+0 / 2.1E-5
	30 yr	0.0E+0 / 7.5E-14	0.0E+0 / 1.5E-13	0.0E+0 / 4.5E-12	0.0E+0 / 5.4E-11	0.0E+0 / 5.4E-10	0.0E+0 / 2.1E-5
3)	0	4.6E-14 / 9.6E-5	4.6E-14 / 9.6E-5	4.6E-14 / 9.6E-5	4.6E-14 / 9.6E-5	4.6E-14 / 9.6E-5	4.6E-14 / 1.2E-4
	1 min	0.0E+0 / 5.1E-14	0.0E+0 / 1.0E-13	0.0E+0 / 3.0E-12	0.0E+0 / 3.7E-11	0.0E+0 / 3.7E-10	0.0E+0 / 2.8E-5
	30 yr	0.0E+0 / 5.1E-14	0.0E+0 / 1.0E-13	0.0E+0 / 3.0E-12	0.0E+0 / 3.7E-11	0.0E+0 / 3.7E-10	0.0E+0 / 2.8E-5
4)	0	1.6E-14 / 3.1E-5	1.6E-14 / 3.1E-5	1.6E-14 / 3.1E-5	1.6E-14 / 3.1E-5	1.6E-14 / 3.1E-5	1.6E-14 / 4.7E-5
	1 min	0.0E+0 / 9.4E-14	0.0E+0 / 1.9E-13	0.0E+0 / 5.7E-12	0.0E+0 / 6.9E-11	0.0E+0 / 6.9E-10	0.0E+0 / 1.6E-5
	30 yr	0.0E+0 / 9.4E-14	0.0E+0 / 1.9E-13	0.0E+0 / 5.6E-12	0.0E+0 / 6.9E-11	0.0E+0 / 6.9E-10	0.0E+0 / 1.6E-5

Table 25: Carbon (C) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	7.9E-11 / 6.3E-5	7.9E-11 / 6.3E-5	7.9E-11 / 6.3E-5	7.9E-11 / 6.3E-5	7.9E-11 / 6.3E-5	7.9E-11 / 7.2E-5
	1 min	2.3E-13 / 1.8E-7	2.3E-13 / 1.8E-7	2.3E-13 / 1.8E-7	2.3E-13 / 1.8E-7	2.3E-13 / 1.9E-7	2.3E-13 / 9.0E-6
	10 min	1.5E-22 / 1.5E-12	1.5E-22 / 2.9E-12	1.5E-22 / 8.8E-11	1.5E-22 / 1.1E-9	1.5E-22 / 1.1E-8	1.5E-22 / 8.8E-6
	30 min	0.0E+0 / 1.5E-12	0.0E+0 / 2.9E-12	0.0E+0 / 8.8E-11	0.0E+0 / 1.1E-9	0.0E+0 / 1.1E-8	0.0E+0 / 8.8E-6
	30 yr	0.0E+0 / 1.5E-12	0.0E+0 / 2.9E-12	0.0E+0 / 8.7E-11	0.0E+0 / 1.1E-9	0.0E+0 / 1.1E-8	0.0E+0 / 8.8E-6
2)	0	1.7E-10 / 1.4E-4	1.7E-10 / 1.4E-4	1.7E-10 / 1.4E-4	1.7E-10 / 1.4E-4	1.7E-10 / 1.4E-4	1.7E-10 / 1.4E-4
	1 min	4.9E-13 / 3.9E-7	4.9E-13 / 3.9E-7	4.9E-13 / 3.9E-7	4.9E-13 / 3.9E-7	4.9E-13 / 3.9E-7	4.9E-13 / 3.4E-6
	10 min	1.8E-22 / 4.9E-13	1.8E-22 / 9.8E-13	1.8E-22 / 2.9E-11	1.8E-22 / 3.6E-10	1.8E-22 / 3.6E-9	1.8E-22 / 3.0E-6
	30 min	0.0E+0 / 4.9E-13	0.0E+0 / 9.8E-13	0.0E+0 / 2.9E-11	0.0E+0 / 3.6E-10	0.0E+0 / 3.6E-9	0.0E+0 / 3.0E-6
	30 yr	0.0E+0 / 4.9E-13	0.0E+0 / 9.8E-13	0.0E+0 / 2.9E-11	0.0E+0 / 3.6E-10	0.0E+0 / 3.6E-9	0.0E+0 / 3.0E-6
3)	0	2.8E-10 / 2.2E-4	2.8E-10 / 2.2E-4	2.8E-10 / 2.2E-4	2.8E-10 / 2.2E-4	2.8E-10 / 2.2E-4	2.8E-10 / 2.3E-4
	1 min	8.1E-13 / 6.4E-7	8.1E-13 / 6.4E-7	8.1E-13 / 6.4E-7	8.1E-13 / 6.4E-7	8.1E-13 / 6.4E-7	8.1E-13 / 3.4E-6
	10 min	1.8E-23 / 4.6E-13	1.8E-23 / 9.1E-13	1.8E-23 / 2.7E-11	1.8E-23 / 3.3E-10	1.8E-23 / 3.3E-9	1.8E-23 / 2.8E-6
	30 min	0.0E+0 / 4.6E-13	0.0E+0 / 9.1E-13	0.0E+0 / 2.7E-11	0.0E+0 / 3.3E-10	0.0E+0 / 3.3E-9	0.0E+0 / 2.8E-6
	30 yr	0.0E+0 / 4.5E-13	0.0E+0 / 9.1E-13	0.0E+0 / 2.7E-11	0.0E+0 / 3.3E-10	0.0E+0 / 3.3E-9	0.0E+0 / 2.7E-6
4)	0	1.4E-10 / 1.1E-4	1.4E-10 / 1.1E-4	1.4E-10 / 1.1E-4	1.4E-10 / 1.1E-4	1.4E-10 / 1.1E-4	1.4E-10 / 1.2E-4
	1 min	4.0E-13 / 3.2E-7	4.0E-13 / 3.2E-7	4.0E-13 / 3.2E-7	4.0E-13 / 3.2E-7	4.0E-13 / 3.2E-7	4.0E-13 / 3.4E-6
	10 min	1.7E-22 / 5.1E-13	1.7E-22 / 1.0E-12	1.7E-22 / 3.1E-11	1.7E-22 / 3.7E-10	1.7E-22 / 3.7E-9	1.7E-22 / 3.1E-6
	30 min	0.0E+0 / 5.1E-13	0.0E+0 / 1.0E-12	0.0E+0 / 3.1E-11	0.0E+0 / 3.7E-10	0.0E+0 / 3.7E-9	0.0E+0 / 3.1E-6
	30 yr	0.0E+0 / 5.1E-13	0.0E+0 / 1.0E-12	0.0E+0 / 3.1E-11	0.0E+0 / 3.7E-10	0.0E+0 / 3.7E-9	0.0E+0 / 3.1E-6

Table 26: Oxygen (O) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	5.8E-9/8.0E-3	8.6E-9/1.0E-2	1.2E-8/1.3E-2	1.2E-8/1.3E-2	1.3E-8/1.3E-2	1.3E-8/1.3E-2
	1 min	5.0E-9/3.6E-3	7.8E-9/5.6E-3	1.2E-8/8.3E-3	1.2E-8/8.4E-3	1.2E-8/8.4E-3	1.2E-8/8.4E-3
	10 min	4.9E-9/3.5E-3	7.8E-9/5.5E-3	1.2E-8/8.2E-3	1.2E-8/8.2E-3	1.2E-8/8.3E-3	1.2E-8/8.3E-3
	30 min	4.9E-9/3.5E-3	7.7E-9/5.4E-3	1.1E-8/8.1E-3	1.1E-8/8.1E-3	1.1E-8/8.2E-3	1.1E-8/8.2E-3
	1 h	4.8E-9/3.4E-3	7.5E-9/5.3E-3	1.1E-8/7.9E-3	1.1E-8/7.9E-3	1.1E-8/8.0E-3	1.1E-8/8.0E-3
	2 h	4.5E-9/3.2E-3	7.1E-9/5.1E-3	1.1E-8/7.6E-3	1.1E-8/7.6E-3	1.1E-8/7.6E-3	1.1E-8/7.6E-3
	3 h	4.3E-9/3.1E-3	6.8E-9/4.8E-3	1.0E-8/7.2E-3	1.0E-8/7.2E-3	1.0E-8/7.3E-3	1.0E-8/7.3E-3
	6 h	3.8E-9/2.7E-3	5.9E-9/4.2E-3	8.8E-9/6.3E-3	8.9E-9/6.3E-3	8.9E-9/6.3E-3	8.9E-9/6.3E-3
	12 h	2.9E-9/2.0E-3	4.5E-9/3.2E-3	6.7E-9/4.8E-3	6.7E-9/4.8E-3	6.7E-9/4.8E-3	6.7E-9/4.8E-3
	1 d	1.6E-9/1.2E-3	2.6E-9/1.8E-3	3.8E-9 / 2.7E-3	3.9E-9/2.7E-3	3.9E-9/2.8E-3	3.9E-9/2.8E-3
	2 d	5.4E-10/3.8E-4	8.5E-10/6.0E-4	1.3E-9/9.0E-4	1.3E-9/9.1E-4	1.3E-9/9.6E-4	1.3E-9/9.6E-4
	7 d	2.1E-12/1.5E-6	3.3E-12/2.4E-6	5.9E-12/4.8E-6	1.6E-11/1.8E-5	4.9E-11/6.2E-5	5.3E-11/6.7E-5
	30 d	1.7E-14/2.3E-8	3.4E-14/4.5E-8	1.0E-12/1.3E-6	1.1E-11/1.5E-5	4.4E-11/5.8E-5	4.7E-11/6.2E-5
	182 d	1.5E-14/2.0E-8	3.1E-14/4.1E-8	9.1E-13/1.2E-6	9.8E-12/1.3E-5	3.9E-11/5.2E-5	4.2E-11/5.6E-5
	1 yr	1.3E-14/1.8E-8	2.7E-14/3.6E-8	8.0E-13/1.1E-6	8.6E-12/1.1E-5	3.4E-11/4.5E-5	3.7E-11/4.9E-5
	2 yr	1.0E-14/1.4E-8	2.1E-14/2.7E-8	6.1E-13/8.1E-7	6.6E-12/8.7E-6	2.6E-11/3.5E-5	2.8E-11/3.7E-5
	5 yr	4.6E-15/6.1E-9	9.3E-15/1.2E-8	2.8E-13/3.6E-7	3.0E-12/3.9E-6	1.2E-11/1.6E-5	1.3E-11/1.7E-5
	10 yr	1.2E-15/1.6E-9	2.4E-15/3.2E-9	7.3E-14/9.6E-8	7.8E-13/1.0E-6	3.1E-12/4.1E-6	3.4E-12/4.4E-6
	20 yr	8.5E-17/1.1E-10	1.7E-16/2.3E-10	5.1E-15/6.7E-9	5.5E-14/7.2E-8	2.2E-13/2.9E-7	2.3E-13/3.1E-7
	30 yr	6.0E-18/7.9E-12	1.2E-17/1.6E-11	3.5E-16/4.7E-10	3.8E-15/5.1E-9	1.5E-14/2.0E-8	1.6E-14/2.2E-8
2)	0	1.3E-9/2.2E-3	1.8E-9/2.5E-3	2.5E-9/3.0E-3	2.5E-9/3.1E-3	2.6E-9/3.2E-3	2.6E-9/3.2E-3
	1 min	9.0E-10/7.5E-4	1.4E-9/1.1E-3	2.1E-9/1.6E-3	2.1E-9/1.6E-3	2.2E-9/1.7E-3	2.2E-9/1.7E-3
	10 min	8.8E-10/6.2E-4	1.4E-9/9.8E-4	2.1E-9/1.5E-3	2.1E-9/1.5E-3	2.2E-9/1.6E-3	2.2E-9/1.6E-3
	30 min	8.7E-10/6.1E-4	1.4E-9/9.7E-4	2.0E-9/1.4E-3	2.1E-9/1.5E-3	2.1E-9/1.6E-3	2.1E-9/1.6E-3
	1 h	8.5E-10/6.0E-4	1.3E-9/9.4E-4	2.0E-9/1.4E-3	2.0E-9/1.4E-3	2.1E-9/1.6E-3	2.1E-9/1.6E-3
	2 h	8.1E-10/5.7E-4	1.3E-9/9.0E-4	1.9E-9/1.3E-3	1.9E-9/1.4E-3	2.0E-9/1.5E-3	2.0E-9/1.5E-3
	3 h	7.7E-10/5.5E-4	1.2E-9/8.6E-4	1.8E-9/1.3E-3	1.8E-9/1.3E-3	1.9E-9/1.4E-3	1.9E-9/1.4E-3
	6 h	6.7E-10/4.8E-4	1.1E-9/7.5E-4	1.6E-9/1.1E-3	1.6E-9/1.2E-3	1.7E-9/1.3E-3	1.7E-9/1.3E-3
	12 h	5.1E-10/3.6E-4	8.0E-10/5.7E-4	1.2E-9/8.5E-4	1.2E-9/8.8E-4	1.3E-9/9.9E-4	1.3E-9/1.0E-3
	1 d	2.9E-10/2.1E-4	4.6E-10/3.3E-4	6.9E-10 / 4.9E-4	7.1E-10/5.2E-4	7.9E-10/6.3E-4	8.0E-10/6.4E-4
	2 d	9.6E-11/6.8E-5	1.5E-10/1.1E-4	2.3E-10/1.6E-4	2.5E-10/2.0E-4	3.3E-10/3.0E-4	3.4E-10/3.2E-4
	7 d	4.1E-13/3.2E-7	6.7E-13/5.3E-7	3.4E-12/4.0E-6	2.8E-11/3.7E-5	1.1E-10/1.5E-4	1.2E-10/1.6E-4
	30 d	4.2E-14/5.6E-8	8.4E-14/1.1E-7	2.5E-12/3.3E-6	2.7E-11/3.6E-5	1.1E-10/1.4E-4	1.2E-10/1.5E-4
	182 d	3.8E-14/5.0E-8	7.5E-14/1.0E-7	2.2E-12/3.0E-6	2.4E-11/3.2E-5	9.6E-11/1.3E-4	1.0E-10/1.4E-4
	1 yr	3.3E-14/4.4E-8	6.6E-14/8.7E-8	2.0E-12/2.6E-6	2.1E-11/2.8E-5	8.4E-11/1.1E-4	9.1E-11/1.2E-4
	2 yr	2.5E-14/3.3E-8	5.1E-14/6.7E-8	1.5E-12/2.0E-6	1.6E-11/2.1E-5	6.5E-11/8.5E-5	6.9E-11/9.2E-5
	5 yr	1.1E-14/1.5E-8	2.3E-14/3.0E-8	6.8E-13/8.9E-7	7.3E-12/9.7E-6	2.9E-11/3.8E-5	3.1E-11/4.1E-5
	10 yr	3.0E-15/4.0E-9	6.0E-15/8.0E-9	1.8E-13/2.4E-7	1.9E-12/2.5E-6	7.7E-12/1.0E-5	8.3E-12/1.1E-5
	20 yr	2.1E-16/2.8E-10	4.2E-16/5.6E-10	1.2E-14/1.6E-8	1.3E-13/1.8E-7	5.4E-13/7.1E-7	5.8E-13/7.6E-7
	30 yr	1.5E-17/1.9E-11	2.9E-17/3.9E-11	8.7E-16/1.2E-9	9.4E-15/1.2E-8	3.7E-14/4.9E-8	4.0E-14/5.3E-8
3)	0	8.8E-10/1.4E-3	1.1E-9/2.0E-3	1.4E-9/2.2E-3	1.4E-9/2.2E-3	1.6E-9/2.4E-3	1.6E-9/2.4E-3
	1 min	4.0E-10/4.4E-4	6.1E-10/5.9E-4	9.1E-10/8.1E-4	9.6E-10/8.6E-4	1.1E-9/1.1E-3	1.1E-9/1.1E-3
	10 min	3.8E-10/2.7E-4	5.9E-10/4.2E-4	8.9E-10/6.3E-4	9.3E-10/6.9E-4	1.1E-9/8.8E-4	1.1E-9/9.0E-4
	30 min	3.7E-10/2.6E-4	5.8E-10/4.1E-4	8.7E-10/6.2E-4	9.2E-10/6.8E-4	1.1E-9/8.7E-4	1.1E-9/8.9E-4
	1 h	3.6E-10/2.6E-4	5.7E-10/4.1E-4	8.5E-10/6.1E-4	9.0E-10/6.7E-4	1.0E-9/8.6E-4	1.1E-9/8.7E-4
	2 h	3.5E-10/2.5E-4	5.4E-10/3.9E-4	8.2E-10/5.8E-4	8.6E-10/6.4E-4	1.0E-9/8.3E-4	1.0E-9/8.5E-4
	3 h	3.3E-10/2.3E-4	5.2E-10/3.7E-4	7.8E-10/5.6E-4	8.2E-10/6.1E-4	9.6E-10/8.0E-4	9.8E-10/8.2E-4
	6 h	2.9E-10/2.0E-4	4.5E-10/3.2E-4	6.8E-10/4.8E-4	7.2E-10/5.4E-4	8.6E-10/7.3E-4	8.8E-10/7.5E-4
	12 h	2.2E-10/1.5E-4	3.4E-10/2.4E-4	5.1E-10/3.7E-4	5.6E-10/4.3E-4	7.0E-10/6.1E-4	7.2E-10/6.3E-4
	1 d	1.2E-10/8.9E-5	2.0E-10/1.4E-4	3.0E-10 / 2.1E-4	3.4E-10/2.7E-4	4.8E-10/4.6E-4	5.0E-10/4.8E-4
	2 d	4.1E-11/2.9E-5	6.5E-11/4.6E-5	1.0E-10/7.4E-5	1.4E-10/1.3E-4	2.9E-10/3.2E-4	3.0E-10/3.4E-4
	7 d	2.3E-13/2.1E-7	4.0E-13/3.7E-7	4.8E-12/6.1E-6	4.8E-11/6.3E-5	1.9E-10/2.5E-4	2.0E-10/2.7E-4
	30 d	7.3E-14/9.7E-8	1.5E-13/1.9E-7	4.3E-12/5.7E-6	4.7E-11/6.2E-5	1.9E-10/2.5E-4	2.0E-10/2.7E-4
	182 d	6.5E-14/8.6E-8	1.3E-13/1.7E-7	3.9E-12/5.1E-6	4.2E-11/5.5E-5	1.7E-10/2.2E-4	1.8E-10/2.4E-4
	1 yr	5.7E-14/7.6E-8	1.1E-13/1.5E-7	3.4E-12/4.5E-6	3.7E-11/4.9E-5	1.5E-10/1.9E-4	1.6E-10/2.1E-4
	2 yr	4.4E-14/5.8E-8	8.8E-14/1.2E-7	2.6E-12/3.4E-6	2.8E-11/3.7E-5	1.1E-10/1.5E-4	1.2E-10/1.6E-4
	5 yr	2.0E-14/2.6E-8	3.9E-14/5.2E-8	1.2E-12/1.5E-6	1.3E-11/1.7E-5	5.0E-11/6.7E-5	5.4E-11/7.2E-5
	10 yr	5.2E-15/6.9E-9	1.0E-14/1.4E-8	3.1E-13/4.1E-7	3.3E-12/4.4E-6	1.3E-11/1.8E-5	1.4E-11/1.9E-5
	20 yr	3.6E-16/4.8E-10	7.3E-16/9.6E-10	2.2E-14/2.9E-8	2.3E-13/3.1E-7	9.3E-13/1.2E-6	1.0E-12/1.3E-6
	30 yr	2.5E-17/3.4E-11	5.1E-17/6.7E-11	1.5E-15/2.0E-9	1.6E-14/2.2E-8	6.5E-14/8.6E-8	7.0E-14/9.2E-8
4)	0	1.8E-9/2.8E-3	2.7E-9/3.4E-3	3.8E-9/4.2E-3	3.8E-9/4.2E-3	3.8E-9/4.3E-3	3.8E-9/4.3E-3
	1 min	1.4E-9/1.1E-3	2.3E-9/1.7E-3	3.4E-9/2.5E-3	3.4E-9/2.5E-3	3.4E-9/2.5E-3	3.4E-9/2.6E-3
	10 min	1.4E-9/1.0E-3	2.2E-9/1.6E-3	3.3E-9/2.4E-3	3.3E-9/2.4E-3	3.4E-9/2.4E-3	3.4E-9/2.4E-3
	30 min	1.4E-9/9.9E-4	2.2E-9/1.6E-3	3.3E-9/2.3E-3	3.3E-9/2.3E-3	3.3E-9/2.4E-3	3.3E-9/2.4E-3
	1 h	1.4E-9/9.7E-4	2.1E-9/1.5E-3	3.2E-9/2.3E-3	3.2E-9/2.3E-3	3.3E-9/2.4E-3	3.3E-9/2.4E-3
	2 h	1.3E-9/9.3E-4	2.1E-9/1.5E-3	3.1E-9/2.2E-3	3.1E-9/2.2E-3	3.1E-9/2.3E-3	3.1E-9/2.3E-3
	3 h	1.2E-9/8.8E-4	2.0E-9/1.4E-3	2.9E-9/2.1E-3	2.9E-9/2.1E-3	3.0E-9/2.2E-3	3.0E-9/2.2E-3
	6 h	1.1E-9/7.7E-4	1.7E-9/1.2E-3	2.5E-9/1.8E-3	2.6E-9/1.8E-3	2.6E-9/1.9E-3	2.6E-9/1.9E-3
	12 h	8.2E-10/5.8E-4	1.3E-9/9.2E-4	1.9E-9/1.4E-3	1.9E-9/1.4E-3	2.0E-9/1.4E-3	2.0E-9/1.5E-3
	1 d	4.7E-10/3.3E-4	7.4E-10/5.3E-4	1.1E-9 / 7.8E-4	1.1E-9/8.0E-4	1.2E-9/8.6E-4	1.2E-9/8.7E-4
	2 d	1.5E-10/1.1E-4	2.4E-10/1.7E-4	3.6E-10/2.6E-4	3.8E-10/2.8E-4	4.2E-10/3.4E-4	4.3E-10/3.4E-4
	7 d	6.2E-13/4.5E-7	9.8E-13/7.3E-7	2.8E-12/2.9E-6	1.7E-11/2.1E-5	6.2E-11/8.1E-5	6.7E-11/8.7E-5
	30 d	2.3E-14/3.1E-8	4.7E-14/6.2E-8	1.4E-12/1.8E-6	1.5E-11/2.0E-5	6.0E-11/7.9E-5	6.4E-11/8.5E-5
	182 d	2.1E-14/2.8E-8	4.2E-14/5.5E-8	1.2E-12/1.6E-6	1.3E-11/1.8E-5	5.3E-11/7.1E-5	5.7E-11/7.6E-5
	1 yr	1.8E-14/2.4E-8	3.7E-14/4.8E-8	1.1E-12/1.4E-6	1.2E-11/1.6E-5	4.7E-11/6.2E-5	5.0E-11/6.6E-5
	2 yr	1.4E-14/1.9E-8	2.8E-14/3.7E-8	8.3E-13/1.1E-6	9.0E-12/1.2E-5	3.6E-11/4.7E-5	3.8E-11/5.1E-5
	5 yr	6.3E-15/8.3E-9	1.3E-14/1.7E-8	3.7E-13/5.0E-7	4.0E-12/5.3E-6	1.6E-11/2.1E-5	1.7E-11/2.3E-5
	10 yr	1.7E-15/2.2E-9	3.3E-15/4.4E-9	9.9E-14/1.3E-7	1.1E-12/1.4E-6	4.3E-12/5.6E-6	4.6E-12/6.0E-6
	20 yr	1.2E-16/1.5E-10	2.3E-16/3.1E-10	6.9E-15/9.1E-9	7.5E-14/9.9E-8	3.0E-13/3.9E-7	3.2E-13/4.2E-7
	30 yr	8.1E-18/1.1E-11	1.6E-17/2.1E-11	4.8E-16/6.4E-10	5.2E-15/6.9E-9	2.1E-14/2.7E-8	2.2E-14/2.9E-8

Table 27: Sodium (Na) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time						
		12 h	1 d	30 d	1 yr	10 yr	∞	
1)	0	1.7E-10 / 5.0E-4	2.5E-10 / 6.0E-4	3.5E-10 / 7.4E-4	3.5E-10 / 7.4E-4	3.5E-10 / 7.4E-4	3.5E-10 / 7.4E-4	
	1 min	1.5E-10 / 2.5E-4	2.2E-10 / 3.5E-4	3.3E-10 / 4.9E-4	3.3E-10 / 4.9E-4	3.3E-10 / 4.9E-4	3.3E-10 / 4.9E-4	
	10 min	1.4E-10 / 2.1E-4	2.1E-10 / 3.1E-4	3.2E-10 / 4.4E-4	3.2E-10 / 4.4E-4	3.2E-10 / 4.4E-4	3.2E-10 / 4.4E-4	
	30 min	1.3E-10 / 1.8E-4	2.1E-10 / 2.8E-4	3.1E-10 / 4.1E-4	3.1E-10 / 4.1E-4	3.1E-10 / 4.1E-4	3.1E-10 / 4.1E-4	
	1 h	1.3E-10 / 1.7E-4	2.0E-10 / 2.7E-4	3.0E-10 / 4.0E-4	3.0E-10 / 4.0E-4	3.0E-10 / 4.0E-4	3.0E-10 / 4.0E-4	
	2 h	1.2E-10 / 1.6E-4	1.9E-10 / 2.5E-4	2.9E-10 / 3.8E-4	2.9E-10 / 3.8E-4	2.9E-10 / 3.8E-4	2.9E-10 / 3.8E-4	
	3 h	1.2E-10 / 1.5E-4	1.8E-10 / 2.4E-4	2.7E-10 / 3.6E-4	2.7E-10 / 3.6E-4	2.7E-10 / 3.6E-4	2.7E-10 / 3.6E-4	
	6 h	1.0E-10 / 1.3E-4	1.6E-10 / 2.1E-4	2.4E-10 / 3.1E-4	2.4E-10 / 3.1E-4	2.4E-10 / 3.1E-4	2.4E-10 / 3.1E-4	
	12 h	7.7E-11 / 1.0E-4	1.2E-10 / 1.6E-4	1.8E-10 / 2.4E-4	1.8E-10 / 2.4E-4	1.8E-10 / 2.4E-4	1.8E-10 / 2.4E-4	
	1 d	4.4E-11 / 5.8E-5	6.9E-11 / 9.1E-5	1.0E-10 / 1.4E-4	1.0E-10 / 1.4E-4	1.0E-10 / 1.4E-4	1.0E-10 / 1.4E-4	
	2 d	1.5E-11 / 1.9E-5	2.3E-11 / 3.0E-5	3.4E-11 / 4.5E-5	3.4E-11 / 4.5E-5	3.4E-11 / 4.5E-5	3.4E-11 / 4.5E-5	
	7 d	5.6E-14 / 7.3E-8	8.8E-14 / 1.2E-7	1.3E-13 / 1.7E-7	1.3E-13 / 1.7E-7	1.3E-13 / 1.7E-7	1.3E-13 / 1.7E-7	
	30 d	4.3E-25 / 5.7E-19	6.8E-25 / 9.0E-19	1.0E-24 / 1.3E-18	1.0E-24 / 1.3E-18	1.0E-24 / 1.3E-18	1.0E-24 / 1.3E-18	
	182 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	
	2)	0	3.6E-10 / 9.9E-4	5.3E-10 / 1.2E-3	7.6E-10 / 1.5E-3	7.6E-10 / 1.5E-3	7.6E-10 / 1.5E-3	7.6E-10 / 1.5E-3
		1 min	3.1E-10 / 4.4E-4	4.8E-10 / 6.7E-4	7.1E-10 / 9.7E-4	7.1E-10 / 9.7E-4	7.1E-10 / 9.7E-4	7.1E-10 / 9.7E-4
10 min		3.0E-10 / 4.0E-4	4.7E-10 / 6.2E-4	7.0E-10 / 9.3E-4	7.0E-10 / 9.3E-4	7.0E-10 / 9.3E-4	7.0E-10 / 9.3E-4	
30 min		2.9E-10 / 3.9E-4	4.6E-10 / 6.1E-4	6.9E-10 / 9.1E-4	6.9E-10 / 9.1E-4	6.9E-10 / 9.1E-4	6.9E-10 / 9.1E-4	
1 h		2.9E-10 / 3.8E-4	4.5E-10 / 5.9E-4	6.7E-10 / 8.8E-4	6.7E-10 / 8.8E-4	6.7E-10 / 8.8E-4	6.7E-10 / 8.8E-4	
2 h		2.7E-10 / 3.6E-4	4.3E-10 / 5.7E-4	6.4E-10 / 8.4E-4	6.4E-10 / 8.4E-4	6.4E-10 / 8.4E-4	6.4E-10 / 8.4E-4	
3 h		2.6E-10 / 3.4E-4	4.1E-10 / 5.4E-4	6.1E-10 / 8.1E-4	6.1E-10 / 8.1E-4	6.1E-10 / 8.1E-4	6.1E-10 / 8.1E-4	
6 h		2.3E-10 / 3.0E-4	3.6E-10 / 4.7E-4	5.3E-10 / 7.0E-4	5.3E-10 / 7.0E-4	5.3E-10 / 7.0E-4	5.3E-10 / 7.0E-4	
12 h		1.7E-10 / 2.3E-4	2.7E-10 / 3.6E-4	4.0E-10 / 5.3E-4	4.0E-10 / 5.3E-4	4.0E-10 / 5.3E-4	4.0E-10 / 5.3E-4	
1 d		9.9E-11 / 1.3E-4	1.6E-10 / 2.0E-4	2.3E-10 / 3.0E-4	2.3E-10 / 3.0E-4	2.3E-10 / 3.0E-4	2.3E-10 / 3.0E-4	
2 d		3.3E-11 / 4.3E-5	5.1E-11 / 6.7E-5	7.6E-11 / 1.0E-4	7.6E-11 / 1.0E-4	7.6E-11 / 1.0E-4	7.6E-11 / 1.0E-4	
7 d		1.3E-13 / 1.6E-7	2.0E-13 / 2.6E-7	2.9E-13 / 3.9E-7	2.9E-13 / 3.9E-7	2.9E-13 / 3.9E-7	2.9E-13 / 3.9E-7	
30 d		9.7E-25 / 1.3E-18	1.5E-24 / 2.0E-18	2.3E-24 / 3.0E-18	2.3E-24 / 3.0E-18	2.3E-24 / 3.0E-18	2.3E-24 / 3.0E-18	
182 d		0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	
30 yr		0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	
3)		0	5.3E-10 / 1.5E-3	7.9E-10 / 1.8E-3	1.1E-9 / 2.2E-3	1.1E-9 / 2.2E-3	1.1E-9 / 2.2E-3	1.1E-9 / 2.2E-3
		1 min	4.5E-10 / 6.5E-4	7.0E-10 / 9.8E-4	1.0E-9 / 1.4E-3	1.0E-9 / 1.4E-3	1.0E-9 / 1.4E-3	1.0E-9 / 1.4E-3
	10 min	4.4E-10 / 5.9E-4	7.0E-10 / 9.2E-4	1.0E-9 / 1.4E-3	1.0E-9 / 1.4E-3	1.0E-9 / 1.4E-3	1.0E-9 / 1.4E-3	
	30 min	4.3E-10 / 5.7E-4	6.8E-10 / 9.0E-4	1.0E-9 / 1.3E-3	1.0E-9 / 1.3E-3	1.0E-9 / 1.3E-3	1.0E-9 / 1.3E-3	
	1 h	4.2E-10 / 5.6E-4	6.7E-10 / 8.8E-4	1.0E-9 / 1.3E-3	1.0E-9 / 1.3E-3	1.0E-9 / 1.3E-3	1.0E-9 / 1.3E-3	
	2 h	4.1E-10 / 5.3E-4	6.4E-10 / 8.4E-4	9.5E-10 / 1.2E-3	9.5E-10 / 1.2E-3	9.5E-10 / 1.2E-3	9.5E-10 / 1.2E-3	
	3 h	3.9E-10 / 5.1E-4	6.1E-10 / 8.0E-4	9.1E-10 / 1.2E-3	9.1E-10 / 1.2E-3	9.1E-10 / 1.2E-3	9.1E-10 / 1.2E-3	
	6 h	3.4E-10 / 4.4E-4	5.3E-10 / 7.0E-4	7.9E-10 / 1.0E-3	7.9E-10 / 1.0E-3	7.9E-10 / 1.0E-3	7.9E-10 / 1.0E-3	
	12 h	2.6E-10 / 3.4E-4	4.0E-10 / 5.3E-4	6.0E-10 / 7.9E-4	6.0E-10 / 7.9E-4	6.0E-10 / 7.9E-4	6.0E-10 / 7.9E-4	
	1 d	1.5E-10 / 1.9E-4	2.3E-10 / 3.0E-4	3.4E-10 / 4.5E-4	3.4E-10 / 4.5E-4	3.4E-10 / 4.5E-4	3.4E-10 / 4.5E-4	
	2 d	4.8E-11 / 6.3E-5	7.6E-11 / 1.0E-4	1.1E-10 / 1.5E-4	1.1E-10 / 1.5E-4	1.1E-10 / 1.5E-4	1.1E-10 / 1.5E-4	
	7 d	1.9E-13 / 2.4E-7	2.9E-13 / 3.8E-7	4.3E-13 / 5.7E-7	4.3E-13 / 5.7E-7	4.3E-13 / 5.7E-7	4.3E-13 / 5.7E-7	
	30 d	1.4E-24 / 1.9E-18	2.3E-24 / 3.0E-18	3.4E-24 / 4.4E-18	3.4E-24 / 4.4E-18	3.4E-24 / 4.4E-18	3.4E-24 / 4.4E-18	
	182 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	
	4)	0	2.8E-10 / 7.9E-4	4.2E-10 / 9.7E-4	6.0E-10 / 1.2E-3	6.0E-10 / 1.2E-3	6.0E-10 / 1.2E-3	6.0E-10 / 1.2E-3
		1 min	2.4E-10 / 3.7E-4	3.8E-10 / 5.4E-4	5.6E-10 / 7.8E-4	5.6E-10 / 7.8E-4	5.6E-10 / 7.8E-4	5.6E-10 / 7.8E-4
10 min		2.4E-10 / 3.2E-4	3.7E-10 / 5.0E-4	5.5E-10 / 7.4E-4	5.5E-10 / 7.4E-4	5.5E-10 / 7.4E-4	5.5E-10 / 7.4E-4	
30 min		2.3E-10 / 3.1E-4	3.6E-10 / 4.8E-4	5.4E-10 / 7.1E-4	5.4E-10 / 7.1E-4	5.4E-10 / 7.1E-4	5.4E-10 / 7.1E-4	
1 h		2.3E-10 / 3.0E-4	3.5E-10 / 4.7E-4	5.3E-10 / 6.9E-4	5.3E-10 / 6.9E-4	5.3E-10 / 6.9E-4	5.3E-10 / 6.9E-4	
2 h		2.1E-10 / 2.8E-4	3.4E-10 / 4.4E-4	5.0E-10 / 6.6E-4	5.0E-10 / 6.6E-4	5.0E-10 / 6.6E-4	5.0E-10 / 6.6E-4	
3 h		2.1E-10 / 2.7E-4	3.2E-10 / 4.2E-4	4.8E-10 / 6.3E-4	4.8E-10 / 6.3E-4	4.8E-10 / 6.3E-4	4.8E-10 / 6.3E-4	
6 h		1.8E-10 / 2.3E-4	2.8E-10 / 3.7E-4	4.2E-10 / 5.5E-4	4.2E-10 / 5.5E-4	4.2E-10 / 5.5E-4	4.2E-10 / 5.5E-4	
12 h		1.4E-10 / 1.8E-4	2.1E-10 / 2.8E-4	3.2E-10 / 4.2E-4	3.2E-10 / 4.2E-4	3.2E-10 / 4.2E-4	3.2E-10 / 4.2E-4	
1 d		7.8E-11 / 1.0E-4	1.2E-10 / 1.6E-4	1.8E-10 / 2.4E-4	1.8E-10 / 2.4E-4	1.8E-10 / 2.4E-4	1.8E-10 / 2.4E-4	
2 d		2.5E-11 / 3.4E-5	4.0E-11 / 5.3E-5	6.0E-11 / 7.9E-5	6.0E-11 / 7.9E-5	6.0E-11 / 7.9E-5	6.0E-11 / 7.9E-5	
7 d		9.8E-14 / 1.3E-7	1.5E-13 / 2.0E-7	2.3E-13 / 3.0E-7	2.3E-13 / 3.0E-7	2.3E-13 / 3.0E-7	2.3E-13 / 3.0E-7	
30 d		7.6E-25 / 1.0E-18	1.2E-24 / 1.6E-18	1.8E-24 / 2.4E-18	1.8E-24 / 2.4E-18	1.8E-24 / 2.4E-18	1.8E-24 / 2.4E-18	
182 d		0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	
30 yr		0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	

Table 28: Magnesium (Mg 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	1.9E-9 / 8.8E-3	1.9E-9 / 8.9E-3	2.0E-9 / 9.1E-3	2.0E-9 / 9.1E-3	2.0E-9 / 9.1E-3	2.0E-9 / 9.1E-3
	1 min	1.4E-9 / 6.4E-3	1.5E-9 / 6.5E-3	1.5E-9 / 6.7E-3	1.5E-9 / 6.7E-3	1.5E-9 / 6.7E-3	1.5E-9 / 6.7E-3
	10 min	1.9E-10 / 7.7E-4	2.4E-10 / 8.7E-4	3.1E-10 / 1.0E-3	3.1E-10 / 1.0E-3	3.1E-10 / 1.0E-3	3.2E-10 / 1.0E-3
	30 min	9.1E-11 / 2.3E-4	1.4E-10 / 3.2E-4	2.1E-10 / 4.5E-4	2.1E-10 / 4.5E-4	2.1E-10 / 4.6E-4	2.2E-10 / 5.0E-4
	1 h	8.4E-11 / 1.7E-4	1.3E-10 / 2.7E-4	2.0E-10 / 3.9E-4	2.0E-10 / 4.0E-4	2.0E-10 / 4.0E-4	2.1E-10 / 4.4E-4
	2 h	7.9E-11 / 1.6E-4	1.2E-10 / 2.5E-4	1.9E-10 / 3.7E-4	1.9E-10 / 3.7E-4	1.9E-10 / 3.7E-4	2.0E-10 / 4.2E-4
	3 h	7.6E-11 / 1.5E-4	1.2E-10 / 2.4E-4	1.8E-10 / 3.5E-4	1.8E-10 / 3.5E-4	1.8E-10 / 3.6E-4	1.9E-10 / 4.0E-4
	6 h	6.6E-11 / 1.3E-4	1.0E-10 / 2.1E-4	1.5E-10 / 3.1E-4	1.5E-10 / 3.1E-4	1.5E-10 / 3.1E-4	1.7E-10 / 3.5E-4
	12 h	5.0E-11 / 1.0E-4	7.8E-11 / 1.6E-4	1.2E-10 / 2.3E-4	1.2E-10 / 2.3E-4	1.2E-10 / 2.4E-4	1.3E-10 / 2.8E-4
	1 d	2.9E-11 / 5.7E-5	4.5E-11 / 9.0E-5	6.7E-11 / 1.3E-4	6.7E-11 / 1.3E-4	6.7E-11 / 1.4E-4	8.0E-11 / 1.8E-4
	2 d	9.4E-12 / 1.9E-5	1.5E-11 / 3.0E-5	2.2E-11 / 4.4E-5	2.2E-11 / 4.4E-5	2.2E-11 / 4.7E-5	3.5E-11 / 9.0E-5
	7 d	3.6E-14 / 7.3E-8	5.7E-14 / 1.1E-7	8.5E-14 / 2.0E-7	8.5E-14 / 5.9E-7	8.5E-14 / 3.5E-6	1.3E-11 / 4.6E-5
	30 d	1.7E-20 / 5.9E-10	3.4E-20 / 1.2E-9	1.0E-18 / 3.5E-8	1.2E-17 / 4.2E-7	1.2E-16 / 3.3E-6	5.8E-11 / 4.6E-5
	182 d	1.7E-20 / 5.8E-10	3.4E-20 / 1.2E-9	1.0E-18 / 3.4E-8	1.2E-17 / 4.1E-7	1.2E-16 / 3.2E-6	1.3E-11 / 4.6E-5
	1 yr	1.7E-20 / 5.6E-10	3.4E-20 / 1.1E-9	1.0E-18 / 3.4E-8	1.2E-17 / 4.0E-7	1.2E-16 / 3.1E-6	1.3E-11 / 4.6E-5
	2 yr	1.7E-20 / 5.3E-10	3.4E-20 / 1.1E-9	1.0E-18 / 3.2E-8	1.2E-17 / 3.8E-7	1.2E-16 / 3.0E-6	1.3E-11 / 4.5E-5
	5 yr	1.7E-20 / 4.5E-10	3.4E-20 / 8.9E-10	1.0E-18 / 2.7E-8	1.2E-17 / 3.2E-7	1.2E-16 / 2.5E-6	1.3E-11 / 4.4E-5
	10 yr	1.7E-20 / 3.4E-10	3.4E-20 / 6.8E-10	1.0E-18 / 2.0E-8	1.2E-17 / 2.4E-7	1.2E-16 / 1.9E-6	1.3E-11 / 4.3E-5
	20 yr	1.7E-20 / 1.9E-10	3.4E-20 / 3.9E-10	1.0E-18 / 1.2E-8	1.2E-17 / 1.4E-7	1.2E-16 / 1.1E-6	1.3E-11 / 4.1E-5
	30 yr	1.7E-20 / 1.1E-10	3.4E-20 / 2.2E-10	1.0E-18 / 6.6E-9	1.2E-17 / 7.8E-8	1.2E-16 / 6.1E-7	1.3E-11 / 4.0E-5
2)	0	7.3E-10 / 3.8E-3	8.5E-10 / 4.0E-3	1.0E-9 / 4.3E-3	1.0E-9 / 4.3E-3	1.0E-9 / 4.4E-3	1.0E-9 / 4.5E-3
	1 min	5.9E-10 / 2.7E-3	7.0E-10 / 2.9E-3	8.6E-10 / 3.2E-3	8.6E-10 / 3.2E-3	8.6E-10 / 3.2E-3	8.9E-10 / 3.4E-3
	10 min	2.9E-10 / 1.0E-3	3.9E-10 / 1.3E-3	5.5E-10 / 1.6E-3	5.5E-10 / 1.6E-3	5.5E-10 / 1.6E-3	5.8E-10 / 1.7E-3
	30 min	2.1E-10 / 5.2E-4	3.2E-10 / 7.5E-4	4.8E-10 / 1.1E-3	4.8E-10 / 1.1E-3	4.8E-10 / 1.1E-3	5.1E-10 / 1.2E-3
	1 h	1.9E-10 / 4.0E-4	3.1E-10 / 6.2E-4	4.5E-10 / 9.2E-4	4.5E-10 / 9.2E-4	4.5E-10 / 9.3E-4	4.9E-10 / 1.0E-3
	2 h	1.8E-10 / 3.7E-4	2.9E-10 / 5.8E-4	4.3E-10 / 8.6E-4	4.3E-10 / 8.6E-4	4.3E-10 / 8.7E-4	4.7E-10 / 9.9E-4
	3 h	1.8E-10 / 3.5E-4	2.8E-10 / 5.5E-4	4.1E-10 / 8.2E-4	4.1E-10 / 8.2E-4	4.1E-10 / 8.3E-4	4.5E-10 / 9.5E-4
	6 h	1.5E-10 / 3.1E-4	2.4E-10 / 4.8E-4	3.6E-10 / 7.2E-4	3.6E-10 / 7.2E-4	3.6E-10 / 7.3E-4	3.9E-10 / 8.4E-4
	12 h	1.2E-10 / 2.3E-4	1.8E-10 / 3.6E-4	2.7E-10 / 5.4E-4	2.7E-10 / 5.4E-4	2.7E-10 / 5.5E-4	3.1E-10 / 6.7E-4
	1 d	6.6E-11 / 1.3E-4	1.0E-10 / 2.1E-4	1.6E-10 / 3.1E-4	1.6E-10 / 3.1E-4	1.6E-10 / 3.2E-4	1.9E-10 / 4.4E-4
	2 d	2.2E-11 / 4.4E-5	3.4E-11 / 6.9E-5	5.1E-11 / 1.0E-4	5.1E-11 / 1.0E-4	5.1E-11 / 1.1E-4	8.7E-11 / 2.3E-4
	7 d	8.4E-14 / 1.7E-7	1.3E-13 / 2.7E-7	2.0E-13 / 4.9E-7	2.0E-13 / 1.6E-6	2.0E-13 / 9.6E-6	3.6E-11 / 1.2E-4
	30 d	4.6E-20 / 1.6E-9	9.1E-20 / 3.3E-9	2.7E-18 / 9.8E-8	3.3E-17 / 1.2E-6	3.3E-16 / 9.2E-6	3.6E-11 / 1.2E-4
	182 d	4.6E-20 / 1.6E-9	9.1E-20 / 3.2E-9	2.7E-18 / 9.6E-8	3.3E-17 / 1.1E-6	3.3E-16 / 9.0E-6	3.6E-11 / 1.2E-4
	1 yr	4.6E-20 / 1.6E-9	9.1E-20 / 3.1E-9	2.7E-18 / 9.3E-8	3.3E-17 / 1.1E-6	3.3E-16 / 8.7E-6	3.6E-11 / 1.2E-4
	2 yr	4.6E-20 / 1.5E-9	9.1E-20 / 2.9E-9	2.7E-18 / 8.8E-8	3.3E-17 / 1.0E-6	3.3E-16 / 8.2E-6	3.6E-11 / 1.2E-4
	5 yr	4.6E-20 / 1.2E-9	9.1E-20 / 2.5E-9	2.7E-18 / 7.5E-8	3.3E-17 / 8.8E-7	3.3E-16 / 7.0E-6	3.6E-11 / 1.2E-4
	10 yr	4.6E-20 / 9.4E-10	9.1E-20 / 1.9E-9	2.7E-18 / 5.6E-8	3.3E-17 / 6.7E-7	3.3E-16 / 5.3E-6	3.6E-11 / 1.1E-4
	20 yr	4.6E-20 / 5.4E-10	9.1E-20 / 1.1E-9	2.7E-18 / 3.2E-8	3.3E-17 / 3.8E-7	3.3E-16 / 3.0E-6	3.6E-11 / 1.1E-4
	30 yr	4.6E-20 / 3.1E-10	9.1E-20 / 6.1E-10	2.7E-18 / 1.8E-8	3.3E-17 / 2.2E-7	3.3E-16 / 1.7E-6	3.6E-11 / 1.1E-4
3)	0	6.8E-10 / 3.7E-3	8.5E-10 / 4.0E-3	1.1E-9 / 4.5E-3	1.1E-9 / 4.5E-3	1.1E-9 / 4.5E-3	1.1E-9 / 4.7E-3
	1 min	5.6E-10 / 2.5E-3	7.3E-10 / 2.8E-3	9.6E-10 / 3.3E-3	9.6E-10 / 3.3E-3	9.6E-10 / 3.3E-3	1.0E-9 / 3.5E-3
	10 min	3.8E-10 / 1.3E-3	5.5E-10 / 1.7E-3	7.7E-10 / 2.1E-3	7.7E-10 / 2.1E-3	7.7E-10 / 2.1E-3	8.3E-10 / 2.3E-3
	30 min	3.1E-10 / 7.4E-4	4.7E-10 / 1.1E-3	6.9E-10 / 1.5E-3	6.9E-10 / 1.5E-3	6.9E-10 / 1.5E-3	7.5E-10 / 1.7E-3
	1 h	2.8E-10 / 5.8E-4	4.5E-10 / 9.0E-4	6.6E-10 / 1.3E-3	6.6E-10 / 1.3E-3	6.6E-10 / 1.4E-3	7.2E-10 / 1.5E-3
	2 h	2.7E-10 / 5.4E-4	4.2E-10 / 8.5E-4	6.3E-10 / 1.3E-3	6.3E-10 / 1.3E-3	6.3E-10 / 1.3E-3	6.9E-10 / 1.5E-3
	3 h	2.6E-10 / 5.1E-4	4.0E-10 / 8.1E-4	6.0E-10 / 1.2E-3	6.0E-10 / 1.2E-3	6.0E-10 / 1.2E-3	6.6E-10 / 1.4E-3
	6 h	2.2E-10 / 4.5E-4	3.5E-10 / 7.0E-4	5.2E-10 / 1.0E-3	5.2E-10 / 1.0E-3	5.2E-10 / 1.1E-3	5.8E-10 / 1.2E-3
	12 h	1.7E-10 / 3.4E-4	2.7E-10 / 5.3E-4	4.0E-10 / 7.9E-4	4.0E-10 / 7.9E-4	4.0E-10 / 8.1E-4	4.6E-10 / 1.0E-3
	1 d	9.7E-11 / 1.9E-4	1.5E-10 / 3.0E-4	2.3E-10 / 4.5E-4	2.3E-10 / 4.6E-4	2.3E-10 / 4.7E-4	2.9E-10 / 6.6E-4
	2 d	3.2E-11 / 6.4E-5	5.0E-11 / 1.0E-4	7.5E-11 / 1.5E-4	7.5E-11 / 1.5E-4	7.5E-11 / 1.6E-4	1.3E-10 / 3.5E-4
	7 d	1.2E-13 / 2.5E-7	1.9E-13 / 3.9E-7	2.9E-13 / 7.2E-7	2.9E-13 / 2.3E-6	2.9E-13 / 1.4E-5	6.0E-11 / 2.0E-4
	30 d	7.6E-20 / 2.4E-9	1.5E-19 / 4.9E-9	4.6E-18 / 1.5E-7	5.6E-17 / 1.7E-6	5.6E-16 / 1.4E-5	5.9E-11 / 2.0E-4
	182 d	7.6E-20 / 2.4E-9	1.5E-19 / 4.8E-9	4.6E-18 / 1.4E-7	5.6E-17 / 1.7E-6	5.6E-16 / 1.3E-5	5.9E-11 / 2.0E-4
	1 yr	7.6E-20 / 2.3E-9	1.5E-19 / 4.6E-9	4.6E-18 / 1.4E-7	5.6E-17 / 1.6E-6	5.6E-16 / 1.3E-5	5.9E-11 / 2.0E-4
	2 yr	7.6E-20 / 2.2E-9	1.5E-19 / 4.4E-9	4.6E-18 / 1.3E-7	5.6E-17 / 1.6E-6	5.6E-16 / 1.2E-5	5.9E-11 / 2.0E-4
	5 yr	7.6E-20 / 1.9E-9	1.5E-19 / 3.7E-9	4.6E-18 / 1.1E-7	5.6E-17 / 1.3E-6	5.6E-16 / 1.0E-5	5.9E-11 / 2.0E-4
	10 yr	7.6E-20 / 1.4E-9	1.5E-19 / 2.8E-9	4.6E-18 / 8.4E-8	5.6E-17 / 9.9E-7	5.6E-16 / 7.8E-6	5.9E-11 / 1.9E-4
	20 yr	7.6E-20 / 8.0E-10	1.5E-19 / 1.6E-9	4.6E-18 / 4.8E-8	5.6E-17 / 5.7E-7	5.6E-16 / 4.5E-6	5.9E-11 / 1.8E-4
	30 yr	7.6E-20 / 4.6E-10	1.5E-19 / 9.1E-10	4.6E-18 / 2.7E-8	5.6E-17 / 3.2E-7	5.6E-16 / 2.5E-6	5.9E-11 / 1.8E-4
4)	0	7.6E-10 / 3.8E-3	8.5E-10 / 4.0E-3	9.6E-10 / 4.2E-3	9.6E-10 / 4.2E-3	9.6E-10 / 4.2E-3	9.8E-10 / 4.3E-3
	1 min	6.0E-10 / 2.8E-3	6.8E-10 / 3.0E-3	8.0E-10 / 3.2E-3	8.0E-10 / 3.2E-3	8.0E-10 / 3.2E-3	8.2E-10 / 3.2E-3
	10 min	2.2E-10 / 8.4E-4	3.0E-10 / 1.0E-3	4.2E-10 / 1.2E-3	4.2E-10 / 1.2E-3	4.2E-10 / 1.2E-3	4.4E-10 / 1.3E-3
	30 min	1.6E-10 / 3.9E-4	2.4E-10 / 5.6E-4	3.5E-10 / 7.9E-4	3.5E-10 / 7.9E-4	3.5E-10 / 7.9E-4	3.7E-10 / 8.5E-4
	1 h	1.4E-10 / 3.0E-4	2.3E-10 / 4.6E-4	3.4E-10 / 6.8E-4	3.4E-10 / 6.8E-4	3.4E-10 / 6.8E-4	3.5E-10 / 7.4E-4
	2 h	1.4E-10 / 2.7E-4	2.1E-10 / 4.3E-4	3.2E-10 / 6.4E-4	3.2E-10 / 6.4E-4	3.2E-10 / 6.4E-4	3.4E-10 / 7.0E-4
	3 h	1.3E-10 / 2.6E-4	2.0E-10 / 4.1E-4	3.0E-10 / 6.1E-4	3.0E-10 / 6.1E-4	3.0E-10 / 6.1E-4	3.2E-10 / 6.7E-4
	6 h	1.1E-10 / 2.3E-4	1.8E-10 / 3.6E-4	2.7E-10 / 5.3E-4	2.7E-10 / 5.3E-4	2.7E-10 / 5.3E-4	2.8E-10 / 5.9E-4
	12 h	8.6E-11 / 1.7E-4	1.3E-10 / 2.7E-4	2.0E-10 / 4.0E-4	2.0E-10 / 4.0E-4	2.0E-10 / 4.1E-4	2.2E-10 / 4.7E-4
	1 d	4.9E-11 / 9.8E-5	7.7E-11 / 1.5E-4	1.2E-10 / 2.3E-4	1.2E-10 / 2.3E-4	1.2E-10 / 2.3E-4	1.3E-10 / 3.0E-4
	2 d	1.6E-11 / 3.2E-5	2.5E-11 / 5.1E-5	3.8E-11 / 7.6E-5	3.8E-11 / 7.6E-5	3.8E-11 / 8.1E-5	5.6E-11 / 1.4E-4
	7 d	6.2E-14 / 1.3E-7	9.8E-14 / 2.0E-7	1.5E-13 / 3.4E-7	1.5E-13 / 9.2E-7	1.5E-13 / 5.3E-6	1.9E-11 / 6.5E-5
	30 d	2.4E-20 / 8.9E-10	4.7E-20 / 1.8E-9	1.4E-18 / 5.3E-8	1.7E-17 / 6.3E-7	1.7E-16 / 5.0E-6	1.9E-11 / 6.5E-5
	182 d	2.4E-20 / 8.7E-10	4.7E-20 / 1.7E-9	1.4E-18 / 5.2E-8	1.7E-17 / 6.2E-7	1.7E-16 / 4.8E-6	1.9E-11 / 6.5E-5
	1 yr	2.4E-20 / 8.4E-10	4.7E-20 / 1.7E-9	1.4E-18 / 5.0E-8	1.7E-17 / 6.0E-7	1.7E-16 / 4.7E-6	1.9E-11 / 6.4E-5
	2 yr	2.4E-20 / 8.0E-10	4.7E-20 / 1.6E-9	1.4E-18 / 4.8E-8	1.7E-17 / 5.7E-7	1.7E-16 / 4.5E-6	1.9E-11 / 6.4E-5
	5 yr	2.4E-20 / 6.7E-10	4.7E-20 / 1.3E-9	1.4E-18 / 4.0E-8	1.7E-17 / 4.8E-7	1.7E-16 / 3.8E-6	1.9E-11 / 6.2E-5
	10 yr	2.4E-20 / 5.1E-10	4.7E-20 / 1.0E-9	1.4E-18 / 3.0E-8	1.7E-17 / 3.6E-7	1.7E-16 / 2.8E-6	1.9E-11 / 6.0E-5
	20 yr	2.4E-20 / 2.9E-10	4.7E-20 / 5.8E-10	1.4E-18 / 1.7E-8	1.7E-17 / 2.1E-7	1.7E-16 / 1.6E-6	1.9E-11 / 5.7E-5
	30 yr	2.4E-20 / 1.7E-10	4.7E-20 / 3.3E-10	1.4E-18 / 9.9E-9	1.7E-17 / 1.2E-7	1.7E-16 / 9.2E-7	1.9E-11 / 5.6E-5

Table 29: Aluminium (Al) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	2.9E-10 / 2.9E-3	2.9E-10 / 2.9E-3	2.9E-10 / 2.9E-3	2.9E-10 / 2.9E-3	2.9E-10 / 2.9E-3	2.9E-10 / 2.9E-3
	1 min	2.2E-10 / 2.6E-3	2.2E-10 / 2.6E-3	2.2E-10 / 2.6E-3	2.2E-10 / 2.6E-3	2.2E-10 / 2.6E-3	2.2E-10 / 2.6E-3
	10 min	1.8E-11 / 1.7E-3	1.8E-11 / 1.8E-3	1.8E-11 / 1.8E-3	1.8E-11 / 1.8E-3	1.8E-11 / 1.8E-3	1.8E-11 / 1.8E-3
	30 min	9.0E-13 / 1.5E-3	9.0E-13 / 1.6E-3	9.0E-13 / 1.6E-3	9.0E-13 / 1.6E-3	9.0E-13 / 1.6E-3	9.0E-13 / 1.6E-3
	1 h	1.9E-13 / 1.3E-3	2.0E-13 / 1.4E-3	2.0E-13 / 1.4E-3	2.0E-13 / 1.4E-3	2.0E-13 / 1.4E-3	2.0E-13 / 1.4E-3
	2 h	1.2E-13 / 1.0E-3	1.3E-13 / 1.1E-3	1.3E-13 / 1.1E-3	1.3E-13 / 1.1E-3	1.3E-13 / 1.1E-3	1.3E-13 / 1.1E-3
	3 h	9.5E-14 / 7.7E-4	9.9E-14 / 8.1E-4	9.9E-14 / 8.1E-4	9.9E-14 / 8.1E-4	9.9E-14 / 8.1E-4	9.9E-14 / 8.1E-4
	6 h	4.3E-14 / 3.5E-4	4.5E-14 / 3.7E-4	4.5E-14 / 3.7E-4	4.5E-14 / 3.7E-4	4.5E-14 / 3.7E-4	4.5E-14 / 3.7E-4
	12 h	8.8E-15 / 7.2E-5	9.2E-15 / 7.5E-5	9.2E-15 / 7.5E-5	9.2E-15 / 7.5E-5	9.2E-15 / 7.5E-5	9.2E-15 / 7.5E-5
	1 d	3.7E-16 / 3.0E-6	3.8E-16 / 3.1E-6	3.8E-16 / 3.1E-6	3.8E-16 / 3.1E-6	3.8E-16 / 3.1E-6	3.8E-16 / 3.1E-6
	2 d	6.5E-19 / 5.5E-9	6.7E-19 / 5.5E-9	6.7E-19 / 5.5E-9	6.7E-19 / 5.5E-9	6.7E-19 / 5.5E-9	6.7E-19 / 5.5E-9
	7 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
2)	0	6.5E-10 / 2.8E-3	6.5E-10 / 2.8E-3	6.5E-10 / 2.8E-3	6.5E-10 / 2.8E-3	6.5E-10 / 2.8E-3	6.5E-10 / 2.8E-3
	1 min	4.8E-10 / 2.1E-3	4.8E-10 / 2.1E-3	4.8E-10 / 2.1E-3	4.8E-10 / 2.1E-3	4.8E-10 / 2.1E-3	4.8E-10 / 2.1E-3
	10 min	4.0E-11 / 3.0E-4	4.0E-11 / 3.0E-4	4.0E-11 / 3.0E-4	4.0E-11 / 3.0E-4	4.0E-11 / 3.0E-4	4.0E-11 / 3.0E-4
	30 min	1.6E-12 / 1.5E-4	1.6E-12 / 1.5E-4	1.6E-12 / 1.5E-4	1.6E-12 / 1.5E-4	1.6E-12 / 1.5E-4	1.6E-12 / 1.5E-4
	1 h	9.0E-14 / 1.2E-4	9.0E-14 / 1.3E-4	9.0E-14 / 1.3E-4	9.0E-14 / 1.3E-4	9.0E-14 / 1.3E-4	9.0E-14 / 1.3E-4
	2 h	1.2E-14 / 9.5E-5	1.2E-14 / 9.9E-5	1.2E-14 / 9.9E-5	1.2E-14 / 9.9E-5	1.2E-14 / 9.9E-5	1.2E-14 / 9.9E-5
	3 h	8.9E-15 / 7.3E-5	9.3E-15 / 7.6E-5	9.3E-15 / 7.6E-5	9.3E-15 / 7.6E-5	9.3E-15 / 7.6E-5	9.3E-15 / 7.6E-5
	6 h	4.0E-15 / 3.3E-5	4.2E-15 / 3.4E-5	4.2E-15 / 3.4E-5	4.2E-15 / 3.4E-5	4.2E-15 / 3.4E-5	4.2E-15 / 3.4E-5
	12 h	8.3E-16 / 6.7E-6	8.6E-16 / 7.0E-6	8.6E-16 / 7.0E-6	8.6E-16 / 7.0E-6	8.6E-16 / 7.0E-6	8.6E-16 / 7.0E-6
	1 d	3.5E-17 / 2.8E-7	3.6E-17 / 2.9E-7	3.6E-17 / 2.9E-7	3.6E-17 / 2.9E-7	3.6E-17 / 2.9E-7	3.6E-17 / 2.9E-7
	2 d	6.1E-20 / 5.0E-10	6.3E-20 / 5.2E-10	6.3E-20 / 5.2E-10	6.3E-20 / 5.2E-10	6.3E-20 / 5.2E-10	6.3E-20 / 5.2E-10
	7 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
3)	0	9.1E-10 / 3.7E-3	9.1E-10 / 3.7E-3	9.1E-10 / 3.7E-3	9.1E-10 / 3.7E-3	9.1E-10 / 3.7E-3	9.1E-10 / 3.7E-3
	1 min	6.8E-10 / 2.8E-3	6.8E-10 / 2.8E-3	6.8E-10 / 2.8E-3	6.8E-10 / 2.8E-3	6.8E-10 / 2.8E-3	6.8E-10 / 2.8E-3
	10 min	5.6E-11 / 2.7E-4	5.6E-11 / 2.7E-4	5.6E-11 / 2.7E-4	5.6E-11 / 2.7E-4	5.6E-11 / 2.7E-4	5.6E-11 / 2.7E-4
	30 min	2.3E-12 / 6.7E-5	2.3E-12 / 7.0E-5	2.3E-12 / 7.0E-5	2.3E-12 / 7.0E-5	2.3E-12 / 7.0E-5	2.3E-12 / 7.0E-5
	1 h	1.2E-13 / 5.3E-5	1.2E-13 / 5.6E-5	1.2E-13 / 5.6E-5	1.2E-13 / 5.6E-5	1.2E-13 / 5.6E-5	1.2E-13 / 5.6E-5
	2 h	5.5E-15 / 4.1E-5	5.7E-15 / 4.2E-5	5.7E-15 / 4.2E-5	5.7E-15 / 4.2E-5	5.7E-15 / 4.2E-5	5.7E-15 / 4.2E-5
	3 h	3.8E-15 / 3.1E-5	4.0E-15 / 3.3E-5	4.0E-15 / 3.3E-5	4.0E-15 / 3.3E-5	4.0E-15 / 3.3E-5	4.0E-15 / 3.3E-5
	6 h	1.7E-15 / 1.4E-5	1.8E-15 / 1.5E-5	1.8E-15 / 1.5E-5	1.8E-15 / 1.5E-5	1.8E-15 / 1.5E-5	1.8E-15 / 1.5E-5
	12 h	3.5E-16 / 2.9E-6	3.7E-16 / 3.0E-6	3.7E-16 / 3.0E-6	3.7E-16 / 3.0E-6	3.7E-16 / 3.0E-6	3.7E-16 / 3.0E-6
	1 d	1.5E-17 / 1.2E-7	1.5E-17 / 1.3E-7	1.5E-17 / 1.3E-7	1.5E-17 / 1.3E-7	1.5E-17 / 1.3E-7	1.5E-17 / 1.3E-7
	2 d	2.6E-20 / 2.1E-10	2.7E-20 / 2.2E-10	2.7E-20 / 2.2E-10	2.7E-20 / 2.2E-10	2.7E-20 / 2.2E-10	2.7E-20 / 2.2E-10
	7 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
4)	0	5.3E-10 / 2.4E-3	5.3E-10 / 2.4E-3	5.3E-10 / 2.4E-3	5.3E-10 / 2.4E-3	5.3E-10 / 2.4E-3	5.3E-10 / 2.4E-3
	1 min	3.9E-10 / 1.8E-3	3.9E-10 / 1.9E-3	3.9E-10 / 1.9E-3	3.9E-10 / 1.9E-3	3.9E-10 / 1.9E-3	3.9E-10 / 1.9E-3
	10 min	3.2E-11 / 3.9E-4	3.2E-11 / 4.0E-4	3.2E-11 / 4.0E-4	3.2E-11 / 4.0E-4	3.2E-11 / 4.0E-4	3.2E-11 / 4.0E-4
	30 min	1.3E-12 / 2.5E-4	1.3E-12 / 2.6E-4	1.3E-12 / 2.6E-4	1.3E-12 / 2.6E-4	1.3E-12 / 2.6E-4	1.3E-12 / 2.6E-4
	1 h	8.5E-14 / 2.2E-4	8.6E-14 / 2.3E-4	8.6E-14 / 2.3E-4	8.6E-14 / 2.3E-4	8.6E-14 / 2.3E-4	8.6E-14 / 2.3E-4
	2 h	2.1E-14 / 1.7E-4	2.1E-14 / 1.7E-4	2.2E-14 / 1.7E-4	2.2E-14 / 1.7E-4	2.2E-14 / 1.7E-4	2.2E-14 / 1.7E-4
	3 h	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4
	6 h	7.1E-15 / 5.8E-5	7.4E-15 / 6.0E-5	7.4E-15 / 6.0E-5	7.4E-15 / 6.0E-5	7.4E-15 / 6.0E-5	7.4E-15 / 6.0E-5
	12 h	1.5E-15 / 1.2E-5	1.5E-15 / 1.2E-5	1.5E-15 / 1.2E-5	1.5E-15 / 1.2E-5	1.5E-15 / 1.2E-5	1.5E-15 / 1.2E-5
	1 d	6.1E-17 / 5.0E-7	6.3E-17 / 5.2E-7	6.3E-17 / 5.2E-7	6.3E-17 / 5.2E-7	6.3E-17 / 5.2E-7	6.3E-17 / 5.2E-7
	2 d	1.1E-19 / 8.7E-10	1.1E-19 / 9.1E-10	1.1E-19 / 9.1E-10	1.1E-19 / 9.1E-10	1.1E-19 / 9.1E-10	1.1E-19 / 9.1E-10
	7 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Table 30: Silicon (Si) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	1.3E-10 / 1.1E-3	1.9E-10 / 1.7E-3	2.5E-10 / 2.3E-3	2.5E-10 / 2.3E-3	2.5E-10 / 2.3E-3	7.1E-10 / 1.2E-2
	1 min	1.3E-10 / 1.1E-3	1.9E-10 / 1.7E-3	2.5E-10 / 2.3E-3	2.5E-10 / 2.3E-3	2.5E-10 / 2.3E-3	7.1E-10 / 1.2E-2
	10 min	1.2E-10 / 1.1E-3	1.8E-10 / 1.7E-3	2.4E-10 / 2.2E-3	2.4E-10 / 2.2E-3	2.4E-10 / 2.3E-3	7.1E-10 / 1.2E-2
	30 min	1.2E-10 / 1.1E-3	1.8E-10 / 1.6E-3	2.4E-10 / 2.2E-3	2.4E-10 / 2.2E-3	2.4E-10 / 2.2E-3	7.0E-10 / 1.2E-2
	1 h	1.1E-10 / 1.0E-3	1.7E-10 / 1.6E-3	2.3E-10 / 2.1E-3	2.3E-10 / 2.1E-3	2.3E-10 / 2.2E-3	6.9E-10 / 1.2E-2
	2 h	1.1E-10 / 9.9E-4	1.6E-10 / 1.5E-3	2.2E-10 / 2.0E-3	2.2E-10 / 2.0E-3	2.2E-10 / 2.0E-3	6.8E-10 / 1.2E-2
	3 h	1.0E-10 / 9.3E-4	1.5E-10 / 1.4E-3	2.0E-10 / 1.9E-3	2.0E-10 / 1.9E-3	2.0E-10 / 1.9E-3	6.7E-10 / 1.2E-2
	6 h	8.4E-11 / 7.9E-4	1.3E-10 / 1.2E-3	1.7E-10 / 1.6E-3	1.7E-10 / 1.6E-3	1.7E-10 / 1.6E-3	6.4E-10 / 1.2E-2
	12 h	6.0E-11 / 5.6E-4	9.0E-11 / 8.5E-4	1.2E-10 / 1.1E-3	1.2E-10 / 1.2E-3	1.2E-10 / 1.2E-3	5.9E-10 / 1.1E-2
	1 d	3.1E-11 / 2.9E-4	4.6E-11 / 4.3E-4	6.2E-11 / 5.9E-4	6.2E-11 / 5.9E-4	6.2E-11 / 6.2E-4	5.3E-10 / 1.0E-2
	2 d	8.0E-12 / 7.5E-5	1.2E-11 / 1.1E-4	1.6E-11 / 1.5E-4	1.6E-11 / 1.6E-4	1.6E-11 / 1.9E-4	4.8E-10 / 1.0E-2
	7 d	9.5E-15 / 9.4E-8	1.4E-14 / 1.4E-7	1.9E-14 / 4.9E-7	1.9E-14 / 4.0E-6	1.9E-14 / 3.8E-5	4.6E-10 / 9.9E-3
	30 d	4.5E-22 / 5.2E-9	9.1E-22 / 1.0E-8	2.7E-20 / 3.1E-7	3.3E-19 / 3.8E-6	3.3E-18 / 3.7E-5	4.6E-10 / 9.9E-3
	182 d	4.5E-22 / 5.2E-9	9.1E-22 / 1.0E-8	2.7E-20 / 3.1E-7	3.3E-19 / 3.8E-6	3.3E-18 / 3.7E-5	4.6E-10 / 9.9E-3
	1 yr	4.5E-22 / 5.2E-9	9.1E-22 / 1.0E-8	2.7E-20 / 3.1E-7	3.3E-19 / 3.8E-6	3.3E-18 / 3.7E-5	4.6E-10 / 9.9E-3
	2 yr	4.5E-22 / 5.2E-9	9.1E-22 / 1.0E-8	2.7E-20 / 3.1E-7	3.3E-19 / 3.8E-6	3.3E-18 / 3.7E-5	4.6E-10 / 9.9E-3
	5 yr	4.5E-22 / 5.1E-9	9.1E-22 / 1.0E-8	2.7E-20 / 3.1E-7	3.3E-19 / 3.7E-6	3.3E-18 / 3.7E-5	4.6E-10 / 9.9E-3
	10 yr	4.5E-22 / 5.1E-9	9.1E-22 / 1.0E-8	2.7E-20 / 3.0E-7	3.3E-19 / 3.7E-6	3.3E-18 / 3.7E-5	4.6E-10 / 9.9E-3
	20 yr	4.5E-22 / 4.9E-9	9.1E-22 / 9.9E-9	2.7E-20 / 3.0E-7	3.3E-19 / 3.6E-6	3.3E-18 / 3.6E-5	4.6E-10 / 9.8E-3
	30 yr	4.5E-22 / 4.8E-9	9.1E-22 / 9.6E-9	2.7E-20 / 2.9E-7	3.3E-19 / 3.5E-6	3.3E-18 / 3.5E-5	4.6E-10 / 9.8E-3
2)	0	3.6E-11 / 1.5E-4	4.3E-11 / 2.1E-4	5.0E-11 / 2.8E-4	5.0E-11 / 2.8E-4	5.0E-11 / 3.4E-4	2.2E-10 / 6.8E-3
	1 min	3.4E-11 / 1.5E-4	4.1E-11 / 2.1E-4	4.8E-11 / 2.7E-4	4.8E-11 / 2.8E-4	4.8E-11 / 3.3E-4	2.2E-10 / 6.8E-3
	10 min	2.5E-11 / 1.4E-4	3.2E-11 / 2.0E-4	3.9E-11 / 2.6E-4	3.9E-11 / 2.7E-4	3.9E-11 / 3.2E-4	2.1E-10 / 6.7E-3
	30 min	1.9E-11 / 1.3E-4	2.5E-11 / 1.9E-4	3.2E-11 / 2.5E-4	3.2E-11 / 2.6E-4	3.2E-11 / 3.1E-4	2.0E-10 / 6.7E-3
	1 h	1.6E-11 / 1.2E-4	2.2E-11 / 1.8E-4	2.9E-11 / 2.4E-4	2.9E-11 / 2.5E-4	2.9E-11 / 3.0E-4	2.0E-10 / 6.7E-3
	2 h	1.4E-11 / 1.1E-4	2.0E-11 / 1.7E-4	2.6E-11 / 2.3E-4	2.6E-11 / 2.3E-4	2.6E-11 / 2.9E-4	1.9E-10 / 6.7E-3
	3 h	1.2E-11 / 1.1E-4	1.8E-11 / 1.6E-4	2.4E-11 / 2.1E-4	2.4E-11 / 2.2E-4	2.4E-11 / 2.7E-4	1.9E-10 / 6.7E-3
	6 h	9.7E-12 / 8.7E-5	1.4E-11 / 1.3E-4	1.9E-11 / 1.8E-4	1.9E-11 / 1.8E-4	1.9E-11 / 2.4E-4	1.9E-10 / 6.7E-3
	12 h	6.6E-12 / 6.2E-5	1.0E-11 / 9.3E-5	1.3E-11 / 1.3E-4	1.3E-11 / 1.3E-4	1.3E-11 / 1.9E-4	1.8E-10 / 6.6E-3
	1 d	3.4E-12 / 3.2E-5	5.1E-12 / 4.8E-5	6.9E-12 / 6.5E-5	6.9E-12 / 7.1E-5	6.9E-12 / 1.3E-4	1.8E-10 / 6.6E-3
	2 d	8.7E-13 / 8.2E-6	1.3E-12 / 1.2E-5	1.8E-12 / 1.7E-5	1.8E-12 / 2.3E-5	1.8E-12 / 7.8E-5	1.7E-10 / 6.5E-3
	7 d	1.0E-15 / 1.8E-8	1.6E-15 / 3.2E-8	2.1E-15 / 5.3E-7	2.1E-15 / 6.2E-6	2.1E-15 / 6.1E-5	1.7E-10 / 6.5E-3
	30 d	3.4E-22 / 8.5E-9	6.8E-22 / 1.7E-8	8.2E-22 / 1.7E-8	2.5E-19 / 6.2E-6	2.5E-18 / 6.1E-5	1.7E-10 / 6.5E-3
	182 d	3.4E-22 / 8.5E-9	6.8E-22 / 1.7E-8	2.1E-20 / 5.1E-7	2.5E-19 / 6.2E-6	2.5E-18 / 6.1E-5	1.7E-10 / 6.5E-3
	1 yr	3.4E-22 / 8.4E-9	6.8E-22 / 1.7E-8	2.1E-20 / 5.1E-7	2.5E-19 / 6.2E-6	2.5E-18 / 6.1E-5	1.7E-10 / 6.5E-3
	2 yr	3.4E-22 / 8.4E-9	6.8E-22 / 1.7E-8	2.1E-20 / 5.1E-7	2.5E-19 / 6.1E-6	2.5E-18 / 6.1E-5	1.7E-10 / 6.5E-3
	5 yr	3.4E-22 / 8.4E-9	6.8E-22 / 1.7E-8	2.1E-20 / 5.0E-7	2.5E-19 / 6.1E-6	2.5E-18 / 6.0E-5	1.7E-10 / 6.5E-3
	10 yr	3.4E-22 / 8.2E-9	6.8E-22 / 1.6E-8	2.1E-20 / 4.9E-7	2.5E-19 / 6.0E-6	2.5E-18 / 5.9E-5	1.7E-10 / 6.4E-3
	20 yr	3.4E-22 / 8.0E-9	6.8E-22 / 1.6E-8	2.1E-20 / 4.8E-7	2.5E-19 / 5.9E-6	2.5E-18 / 5.8E-5	1.7E-10 / 6.4E-3
	30 yr	3.4E-22 / 7.8E-9	6.8E-22 / 1.6E-8	2.1E-20 / 4.7E-7	2.5E-19 / 5.7E-6	2.5E-18 / 5.6E-5	1.7E-10 / 6.3E-3
3)	0	4.9E-11 / 1.2E-4	5.3E-11 / 1.6E-4	5.7E-11 / 2.0E-4	5.7E-11 / 2.0E-4	5.7E-11 / 2.7E-4	1.3E-10 / 5.8E-3
	1 min	4.5E-11 / 1.2E-4	4.9E-11 / 1.5E-4	5.3E-11 / 1.9E-4	5.3E-11 / 2.0E-4	5.3E-11 / 2.6E-4	1.2E-10 / 5.8E-3
	10 min	2.9E-11 / 1.0E-4	3.3E-11 / 1.4E-4	3.7E-11 / 1.8E-4	3.7E-11 / 1.8E-4	3.7E-11 / 2.5E-4	1.1E-10 / 5.8E-3
	30 min	1.7E-11 / 8.7E-5	2.1E-11 / 1.2E-4	2.5E-11 / 1.6E-4	2.5E-11 / 1.7E-4	2.5E-11 / 2.3E-4	9.3E-11 / 5.8E-3
	1 h	1.3E-11 / 8.0E-5	1.7E-11 / 1.2E-4	2.1E-11 / 1.5E-4	2.1E-11 / 1.6E-4	2.1E-11 / 2.2E-4	8.9E-11 / 5.8E-3
	2 h	1.0E-11 / 7.2E-5	1.4E-11 / 1.0E-4	1.8E-11 / 1.4E-4	1.8E-11 / 1.5E-4	1.8E-11 / 2.1E-4	8.6E-11 / 5.7E-3
	3 h	8.7E-12 / 6.6E-5	1.2E-11 / 9.7E-5	1.6E-11 / 1.3E-4	1.6E-11 / 1.4E-4	1.6E-11 / 2.0E-4	8.4E-11 / 5.7E-3
	6 h	6.2E-12 / 5.3E-5	9.0E-12 / 7.9E-5	1.2E-11 / 1.1E-4	1.2E-11 / 1.1E-4	1.2E-11 / 1.8E-4	8.0E-11 / 5.7E-3
	12 h	4.0E-12 / 3.7E-5	6.0E-12 / 5.6E-5	8.1E-12 / 7.6E-5	8.1E-12 / 8.3E-5	8.1E-12 / 1.5E-4	7.6E-11 / 5.7E-3
	1 d	2.0E-12 / 1.9E-5	3.0E-12 / 2.8E-5	4.1E-12 / 3.9E-5	4.1E-12 / 4.6E-5	4.1E-12 / 1.1E-4	7.2E-11 / 5.6E-3
	2 d	5.2E-13 / 4.9E-6	7.9E-13 / 7.4E-6	1.1E-12 / 1.1E-5	1.1E-12 / 1.7E-5	1.1E-12 / 8.3E-5	6.9E-11 / 5.6E-3
	7 d	6.2E-16 / 1.6E-8	9.4E-16 / 2.9E-8	1.3E-15 / 6.2E-7	1.3E-15 / 7.4E-6	1.3E-15 / 7.3E-5	6.8E-11 / 5.6E-3
	30 d	3.2E-22 / 1.0E-8	6.5E-22 / 2.0E-8	1.9E-20 / 6.0E-7	2.4E-19 / 7.3E-6	2.4E-18 / 7.3E-5	6.8E-11 / 5.6E-3
	182 d	3.2E-22 / 1.0E-8	6.5E-22 / 2.0E-8	1.9E-20 / 6.0E-7	2.4E-19 / 7.3E-6	2.4E-18 / 7.3E-5	6.8E-11 / 5.6E-3
	1 yr	3.2E-22 / 1.0E-8	6.5E-22 / 2.0E-8	1.9E-20 / 6.0E-7	2.4E-19 / 7.3E-6	2.4E-18 / 7.2E-5	6.8E-11 / 5.6E-3
	2 yr	3.2E-22 / 1.0E-8	6.5E-22 / 2.0E-8	1.9E-20 / 6.0E-7	2.4E-19 / 7.3E-6	2.4E-18 / 7.2E-5	6.8E-11 / 5.6E-3
	5 yr	3.2E-22 / 1.0E-8	6.5E-22 / 2.0E-8	1.9E-20 / 6.0E-7	2.4E-19 / 7.3E-6	2.4E-18 / 7.2E-5	6.8E-11 / 5.6E-3
	10 yr	3.2E-22 / 9.8E-9	6.5E-22 / 2.0E-8	1.9E-20 / 5.9E-7	2.4E-19 / 7.2E-6	2.4E-18 / 7.1E-5	6.8E-11 / 5.5E-3
	20 yr	3.2E-22 / 9.6E-9	6.5E-22 / 1.9E-8	1.9E-20 / 5.7E-7	2.4E-19 / 7.0E-6	2.4E-18 / 6.9E-5	6.8E-11 / 5.5E-3
	30 yr	3.2E-22 / 9.3E-9	6.5E-22 / 1.9E-8	1.9E-20 / 5.6E-7	2.4E-19 / 6.8E-6	2.4E-18 / 6.7E-5	6.8E-11 / 5.4E-3
4)	0	4.0E-11 / 2.5E-4	5.2E-11 / 3.6E-4	6.5E-11 / 4.8E-4	6.5E-11 / 4.9E-4	6.5E-11 / 5.4E-4	2.7E-10 / 7.6E-3
	1 min	3.8E-11 / 2.4E-4	5.1E-11 / 3.6E-4	6.3E-11 / 4.8E-4	6.3E-11 / 4.8E-4	6.3E-11 / 5.4E-4	2.7E-10 / 7.6E-3
	10 min	3.3E-11 / 2.4E-4	4.5E-11 / 3.5E-4	5.8E-11 / 4.7E-4	5.8E-11 / 4.8E-4	5.8E-11 / 5.3E-4	2.6E-10 / 7.6E-3
	30 min	2.9E-11 / 2.3E-4	4.1E-11 / 3.4E-4	5.3E-11 / 4.6E-4	5.3E-11 / 4.6E-4	5.3E-11 / 5.2E-4	2.6E-10 / 7.6E-3
	1 h	2.6E-11 / 2.2E-4	3.8E-11 / 3.3E-4	5.0E-11 / 4.4E-4	5.0E-11 / 4.5E-4	5.0E-11 / 5.0E-4	2.5E-10 / 7.6E-3
	2 h	2.4E-11 / 2.1E-4	3.4E-11 / 3.1E-4	4.6E-11 / 4.2E-4	4.6E-11 / 4.2E-4	4.6E-11 / 4.8E-4	2.5E-10 / 7.5E-3
	3 h	2.2E-11 / 1.9E-4	3.2E-11 / 2.9E-4	4.3E-11 / 3.9E-4	4.3E-11 / 4.0E-4	4.3E-11 / 4.5E-4	2.5E-10 / 7.5E-3
	6 h	1.8E-11 / 1.6E-4	2.6E-11 / 2.4E-4	3.5E-11 / 3.3E-4	3.5E-11 / 3.4E-4	3.5E-11 / 3.9E-4	2.4E-10 / 7.4E-3
	12 h	1.2E-11 / 1.1E-4	1.9E-11 / 1.7E-4	2.5E-11 / 2.3E-4	2.5E-11 / 2.4E-4	2.5E-11 / 3.0E-4	2.3E-10 / 7.3E-3
	1 d	6.2E-12 / 5.9E-5	9.4E-12 / 8.8E-5	1.3E-11 / 1.2E-4	1.3E-11 / 1.3E-4	1.3E-11 / 1.8E-4	2.2E-10 / 7.2E-3
	2 d	1.6E-12 / 1.5E-5	2.5E-12 / 2.3E-5	3.3E-12 / 3.2E-5	3.3E-12 / 3.7E-5	3.3E-12 / 9.4E-5	2.1E-10 / 7.1E-3
	7 d	1.9E-15 / 1.7E-8	2.9E-15 / 4.5E-8	4.0E-15 / 5.6E-7	4.0E-15 / 6.4E-6	4.0E-15 / 6.3E-5	2.0E-10 / 7.1E-3
	30 d	3.6E-22 / 8.7E-9	7.2E-22 / 1.7E-8	2.2E-20 / 5.2E-7	2.6E-19 / 6.4E-6	2.6E-18 / 6.3E-5	2.0E-10 / 7.1E-3
	182 d	3.6E-22 / 8.7E-9	7.2E-22 / 1.7E-8	2.2E-20 / 5.2E-7	2.6E-19 / 6.4E-6	2.6E-18 / 6.3E-5	2.0E-10 / 7.1E-3
	1 yr	3.6E-22 / 8.7E-9	7.2E-22 / 1.7E-8	2.2E-20 / 5.2E-7	2.6E-19 / 6.3E-6	2.6E-18 / 6.3E-5	2.0E-10 / 7.1E-3
	2 yr	3.6E-22 / 8.7E-9	7.2E-22 / 1.7E-8	2.2E-20 / 5.2E-7	2.6E-19 / 6.3E-6	2.6E-18 / 6.3E-5	2.0E-10 / 7.1E-3
	5 yr	3.6E-22 / 8.6E-9	7.2E-22 / 1.7E-8	2.2E-20 / 5.2E-7	2.6E-19 / 6.3E-6	2.6E-18 / 6.2E-5	2.0E-10 / 7.1E-3
	10 yr	3.6E-22 / 8.5E-9	7.2E-22 / 1.7E-8	2.2E-20 / 5.1E-7	2.6E-19 / 6.2E-6	2.6E-18 / 6.1E-5	2.0E-10 / 7.1E-3
	20 yr	3.6E-22 / 8.3E-9	7.2E-22 / 1.7E-8	2.2E-20 / 5.0E-7	2.6E-19 / 6.0E-6	2.6E-18 / 6.0E-5	2.0E-10 / 7.0E-3
	30 yr	3.6E-22 / 8.1E-9	7.2E-22 / 1.6E-8	2.2E-20 / 4.8E-7	2.6E-19 / 5.9E-6	2.6E-18 / 5.8E-5	2.0E-10 / 6.9E-3

Table 31: Potassium (K) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	6.4E-12/3.5E-5	6.6E-12/4.7E-5	8.1E-12/5.3E-4	8.1E-12/1.2E-3	8.1E-12/1.2E-3	8.8E-11/7.0E-3
	1 min	5.0E-12/2.9E-5	5.2E-12/4.1E-5	6.7E-12/5.2E-4	6.7E-12/1.2E-3	6.7E-12/1.2E-3	8.7E-11/7.0E-3
	10 min	2.8E-12/2.5E-5	3.0E-12/3.7E-5	4.5E-12/5.2E-4	4.5E-12/1.2E-3	4.5E-12/1.2E-3	8.5E-11/7.0E-3
	30 min	1.0E-12/2.1E-5	1.2E-12/3.3E-5	2.7E-12/5.2E-4	2.7E-12/1.2E-3	2.7E-12/1.2E-3	8.3E-11/7.0E-3
	1 h	5.3E-13/1.8E-5	7.2E-13/3.0E-5	2.2E-12/5.1E-4	2.2E-12/1.2E-3	2.2E-12/1.2E-3	8.2E-11/7.0E-3
	2 h	3.8E-13/1.5E-5	5.7E-13/2.8E-5	2.0E-12/5.1E-4	2.1E-12/1.2E-3	2.1E-12/1.2E-3	8.2E-11/7.0E-3
	3 h	3.3E-13/1.4E-5	5.2E-13/2.6E-5	2.0E-12/5.1E-4	2.0E-12/1.2E-3	2.0E-12/1.2E-3	8.2E-11/7.0E-3
	6 h	2.6E-13/1.3E-5	4.3E-13/2.5E-5	1.8E-12/5.1E-4	1.9E-12/1.2E-3	1.9E-12/1.2E-3	8.2E-11/7.0E-3
	12 h	2.0E-13/1.2E-5	3.5E-13/2.4E-5	1.7E-12/5.0E-4	1.7E-12/1.2E-3	1.7E-12/1.2E-3	8.2E-11/7.0E-3
	1 d	1.5E-13/1.2E-5	2.7E-13/2.3E-5	1.5E-12 /5.0E-4	1.5E-12/1.2E-3	1.5E-12/1.2E-3	8.2E-11/6.9E-3
	2 d	1.0E-13/1.1E-5	1.9E-13/2.2E-5	1.2E-12/4.8E-4	1.2E-12/1.1E-3	1.2E-12/1.2E-3	8.1E-11/6.9E-3
	7 d	4.0E-14/9.8E-6	7.8E-14/1.9E-5	5.6E-13/4.4E-4	5.7E-13/1.0E-3	5.7E-13/1.1E-3	8.1E-11/6.8E-3
	30 d	1.3E-15/6.0E-6	2.5E-15/1.2E-5	1.8E-14/2.8E-4	1.9E-14/6.8E-4	1.9E-14/7.0E-4	8.0E-11/6.5E-3
	182 d	6.0E-19/4.1E-7	1.2E-18/8.2E-7	2.7E-17/2.0E-5	6.1E-17/7.6E-5	6.3E-17/9.1E-5	8.0E-11/5.9E-3
	1 yr	1.6E-20/6.7E-8	3.3E-20/1.3E-7	7.5E-19/3.7E-6	1.8E-18/2.3E-5	2.9E-18/3.0E-5	8.0E-11/5.8E-3
	2 yr	1.9E-22/1.3E-8	3.8E-22/2.5E-8	1.1E-20/7.1E-7	1.3E-19/4.8E-6	1.3E-18/7.5E-6	8.0E-11/5.8E-3
	5 yr	1.8E-22/3.5E-10	3.5E-22/6.9E-10	1.1E-20/2.0E-8	1.3E-19/2.1E-7	1.3E-18/1.7E-6	8.0E-11/5.8E-3
10 yr	1.8E-22/2.3E-10	3.5E-22/4.5E-10	1.1E-20/1.4E-8	1.3E-19/1.7E-7	1.3E-18/1.6E-6	8.0E-11/5.8E-3	
20 yr	1.8E-22/2.2E-10	3.5E-22/4.4E-10	1.1E-20/1.3E-8	1.3E-19/1.6E-7	1.3E-18/1.6E-6	8.0E-11/5.8E-3	
30 yr	1.8E-22/2.2E-10	3.5E-22/4.3E-10	1.1E-20/1.3E-8	1.3E-19/1.6E-7	1.3E-18/1.6E-6	8.0E-11/5.8E-3	
2)	0	9.7E-12/5.9E-5	1.0E-11/8.1E-5	1.1E-11/9.5E-4	1.1E-11/2.1E-3	1.1E-11/2.1E-3	1.6E-10/7.9E-3
	1 min	6.5E-12/4.5E-5	6.8E-12/6.7E-5	8.0E-12/9.4E-4	8.1E-12/2.1E-3	8.1E-12/2.1E-3	1.6E-10/7.9E-3
	10 min	3.9E-12/4.0E-5	4.2E-12/6.2E-5	5.5E-12/9.3E-4	5.5E-12/2.1E-3	5.5E-12/2.1E-3	1.6E-10/7.9E-3
	30 min	1.8E-12/3.5E-5	2.1E-12/5.7E-5	3.3E-12/9.3E-4	3.3E-12/2.1E-3	3.3E-12/2.1E-3	1.6E-10/7.9E-3
	1 h	1.1E-12/3.1E-5	1.4E-12/5.4E-5	2.6E-12/9.2E-4	2.6E-12/2.1E-3	2.6E-12/2.1E-3	1.5E-10/7.9E-3
	2 h	7.9E-13/2.8E-5	1.1E-12/5.0E-5	2.3E-12/9.2E-4	2.3E-12/2.1E-3	2.3E-12/2.1E-3	1.5E-10/7.9E-3
	3 h	6.5E-13/2.6E-5	9.1E-13/4.8E-5	2.1E-12/9.1E-4	2.1E-12/2.0E-3	2.1E-12/2.1E-3	1.5E-10/7.9E-3
	6 h	4.4E-13/2.4E-5	6.8E-13/4.6E-5	1.8E-12/9.1E-4	1.8E-12/2.0E-3	1.8E-12/2.1E-3	1.5E-10/7.9E-3
	12 h	3.0E-13/2.3E-5	4.9E-13/4.4E-5	1.5E-12/9.0E-4	1.5E-12/2.0E-3	1.5E-12/2.0E-3	1.5E-10/7.9E-3
	1 d	2.0E-13/2.1E-5	3.3E-13/4.1E-5	1.2E-12 /8.9E-4	1.2E-12/2.0E-3	1.2E-12/2.0E-3	1.5E-10/7.8E-3
	2 d	1.0E-13/2.0E-5	1.9E-13/3.9E-5	9.0E-13/8.7E-4	9.1E-13/2.0E-3	9.1E-13/2.0E-3	1.5E-10/7.8E-3
	7 d	2.7E-14/1.7E-5	5.2E-14/3.5E-5	3.7E-13/7.9E-4	3.8E-13/1.8E-3	3.8E-13/1.8E-3	1.5E-10/7.6E-3
	30 d	8.8E-16/1.1E-5	1.7E-15/2.2E-5	1.3E-14/5.0E-4	1.4E-14/1.1E-3	1.4E-14/1.1E-3	1.5E-10/7.0E-3
	182 d	1.1E-18/5.9E-7	2.2E-18/1.2E-6	5.1E-17/2.7E-5	1.1E-16/7.5E-5	1.2E-16/8.4E-5	1.5E-10/5.9E-3
	1 yr	3.1E-20/4.0E-8	6.1E-20/8.1E-8	1.4E-18/2.1E-6	3.2E-18/1.1E-5	4.2E-18/1.7E-5	1.5E-10/5.8E-3
	2 yr	1.7E-22/5.9E-9	3.4E-22/1.2E-8	9.9E-21/3.4E-7	1.1E-19/2.4E-6	1.1E-18/6.1E-6	1.5E-10/5.8E-3
	5 yr	1.5E-22/5.4E-10	3.0E-22/1.1E-9	8.9E-21/3.2E-8	1.1E-19/3.8E-7	1.1E-18/3.6E-6	1.5E-10/5.8E-3
10 yr	1.5E-22/4.9E-10	3.0E-22/9.7E-10	8.9E-21/2.9E-8	1.1E-19/3.6E-7	1.1E-18/3.5E-6	1.5E-10/5.8E-3	
20 yr	1.5E-22/4.8E-10	3.0E-22/9.5E-10	8.9E-21/2.9E-8	1.1E-19/3.5E-7	1.1E-18/3.4E-6	1.5E-10/5.8E-3	
30 yr	1.5E-22/4.6E-10	3.0E-22/9.3E-10	8.9E-21/2.8E-8	1.1E-19/3.4E-7	1.1E-18/3.3E-6	1.5E-10/5.8E-3	
3)	0	8.4E-12/6.1E-5	8.8E-12/8.6E-5	1.0E-11/1.1E-3	1.0E-11/2.3E-3	1.0E-11/2.3E-3	1.8E-10/8.2E-3
	1 min	3.0E-12/3.5E-5	3.3E-12/6.1E-5	4.9E-12/1.0E-3	4.9E-12/2.3E-3	4.9E-12/2.3E-3	1.7E-10/8.2E-3
	10 min	2.4E-12/3.4E-5	2.8E-12/5.9E-5	4.3E-12/1.0E-3	4.4E-12/2.3E-3	4.4E-12/2.3E-3	1.7E-10/8.2E-3
	30 min	1.8E-12/3.2E-5	2.1E-12/5.8E-5	3.7E-12/1.0E-3	3.7E-12/2.3E-3	3.7E-12/2.3E-3	1.7E-10/8.2E-3
	1 h	1.3E-12/3.1E-5	1.7E-12/5.6E-5	3.2E-12/1.0E-3	3.2E-12/2.3E-3	3.2E-12/2.3E-3	1.7E-10/8.2E-3
	2 h	9.5E-13/2.9E-5	1.3E-12/5.5E-5	2.8E-12/1.0E-3	2.8E-12/2.3E-3	2.8E-12/2.3E-3	1.7E-10/8.2E-3
	3 h	7.8E-13/2.9E-5	1.1E-12/5.3E-5	2.6E-12/1.0E-3	2.6E-12/2.3E-3	2.6E-12/2.3E-3	1.7E-10/8.2E-3
	6 h	5.4E-13/2.7E-5	8.3E-13/5.1E-5	2.3E-12/1.0E-3	2.3E-12/2.2E-3	2.3E-12/2.3E-3	1.7E-10/8.1E-3
	12 h	3.7E-13/2.5E-5	6.1E-13/4.9E-5	1.9E-12/1.0E-3	2.0E-12/2.2E-3	2.0E-12/2.2E-3	1.7E-10/8.1E-3
	1 d	2.4E-13/2.4E-5	4.1E-13/4.6E-5	1.6E-12 /9.9E-4	1.6E-12/2.2E-3	1.6E-12/2.2E-3	1.7E-10/8.1E-3
	2 d	1.3E-13/2.2E-5	2.3E-13/4.4E-5	1.2E-12/9.7E-4	1.2E-12/2.2E-3	1.2E-12/2.2E-3	1.7E-10/8.1E-3
	7 d	3.5E-14/1.9E-5	6.7E-14/3.9E-5	4.8E-13/8.7E-4	4.9E-13/2.0E-3	4.9E-13/2.0E-3	1.7E-10/7.9E-3
	30 d	1.1E-15/1.2E-5	2.2E-15/2.4E-5	1.6E-14/5.5E-4	1.8E-14/1.2E-3	1.8E-14/1.3E-3	1.7E-10/7.1E-3
	182 d	1.3E-18/6.2E-7	2.5E-18/1.2E-6	5.7E-17/2.8E-5	1.3E-16/7.1E-5	1.3E-16/7.9E-5	1.7E-10/6.0E-3
	1 yr	3.4E-20/3.0E-8	6.8E-20/5.9E-8	1.6E-18/1.5E-6	3.6E-18/7.1E-6	4.5E-18/1.4E-5	1.7E-10/5.9E-3
	2 yr	1.7E-22/3.6E-9	3.3E-22/7.2E-9	9.6E-21/2.0E-7	1.1E-19/1.6E-6	1.0E-18/7.2E-6	1.7E-10/5.9E-3
	5 yr	1.4E-22/8.4E-10	2.8E-22/1.7E-9	8.5E-21/5.0E-8	1.0E-19/6.0E-7	1.0E-18/5.8E-6	1.7E-10/5.9E-3
10 yr	1.4E-22/8.0E-10	2.8E-22/1.6E-9	8.5E-21/4.8E-8	1.0E-19/5.8E-7	1.0E-18/5.8E-6	1.7E-10/5.9E-3	
20 yr	1.4E-22/7.8E-10	2.8E-22/1.6E-9	8.5E-21/4.7E-8	1.0E-19/5.7E-7	1.0E-18/5.6E-6	1.7E-10/5.9E-3	
30 yr	1.4E-22/7.6E-10	2.8E-22/1.5E-9	8.5E-21/4.6E-8	1.0E-19/5.5E-7	1.0E-18/5.5E-6	1.7E-10/5.9E-3	
4)	0	7.0E-12/4.8E-5	7.3E-12/7.0E-5	9.1E-12/9.6E-4	9.1E-12/2.1E-3	9.1E-12/2.1E-3	1.7E-10/8.3E-3
	1 min	5.0E-12/3.9E-5	5.3E-12/6.2E-5	7.1E-12/9.5E-4	7.1E-12/2.1E-3	7.1E-12/2.1E-3	1.6E-10/8.3E-3
	10 min	3.0E-12/3.6E-5	3.3E-12/5.8E-5	5.1E-12/9.5E-4	5.1E-12/2.1E-3	5.1E-12/2.1E-3	1.6E-10/8.3E-3
	30 min	1.3E-12/3.2E-5	1.6E-12/5.4E-5	3.4E-12/9.5E-4	3.4E-12/2.1E-3	3.4E-12/2.1E-3	1.6E-10/8.3E-3
	1 h	7.9E-13/2.9E-5	1.1E-12/5.1E-5	2.8E-12/9.4E-4	2.9E-12/2.1E-3	2.9E-12/2.1E-3	1.6E-10/8.3E-3
	2 h	5.8E-13/2.6E-5	8.5E-13/4.9E-5	2.6E-12/9.4E-4	2.6E-12/2.1E-3	2.6E-12/2.1E-3	1.6E-10/8.3E-3
	3 h	5.0E-13/2.5E-5	7.6E-13/4.7E-5	2.5E-12/9.4E-4	2.5E-12/2.1E-3	2.5E-12/2.1E-3	1.6E-10/8.3E-3
	6 h	3.8E-13/2.4E-5	6.2E-13/4.5E-5	2.3E-12/9.3E-4	2.3E-12/2.1E-3	2.3E-12/2.1E-3	1.6E-10/8.3E-3
	12 h	2.9E-13/2.3E-5	5.0E-13/4.4E-5	2.1E-12/9.3E-4	2.1E-12/2.1E-3	2.1E-12/2.1E-3	1.6E-10/8.3E-3
	1 d	2.1E-13/2.1E-5	3.7E-13/4.2E-5	1.8E-12 /9.1E-4	1.8E-12/2.1E-3	1.8E-12/2.1E-3	1.6E-10/8.2E-3
	2 d	1.3E-13/2.0E-5	2.4E-13/4.0E-5	1.4E-12/8.9E-4	1.4E-12/2.0E-3	1.4E-12/2.0E-3	1.6E-10/8.2E-3
	7 d	4.6E-14/1.8E-5	8.8E-14/3.6E-5	6.3E-13/8.1E-4	6.4E-13/1.8E-3	6.4E-13/1.8E-3	1.6E-10/8.0E-3
	30 d	1.5E-15/1.1E-5	2.9E-15/2.2E-5	2.1E-14/5.1E-4	2.3E-14/1.2E-3	2.3E-14/1.2E-3	1.6E-10/7.3E-3
	182 d	1.2E-18/6.0E-7	2.3E-18/1.2E-6	5.2E-17/2.8E-5	1.2E-16/7.8E-5	1.2E-16/8.7E-5	1.6E-10/6.2E-3
	1 yr	3.1E-20/4.4E-8	6.2E-20/8.7E-8	1.4E-18/2.3E-6	3.3E-18/1.2E-5	4.3E-18/1.7E-5	1.6E-10/6.2E-3
	2 yr	1.8E-22/6.4E-9	3.7E-22/1.3E-8	1.1E-20/3.6E-7	1.2E-19/2.5E-6	1.2E-18/5.0E-6	1.6E-10/6.2E-3
	5 yr	1.6E-22/3.5E-10	3.2E-22/7.0E-10	9.6E-21/2.1E-8	1.2E-19/2.3E-7	1.2E-18/2.1E-6	1.6E-10/6.2E-3
10 yr	1.6E-22/2.9E-10	3.2E-22/5.8E-10	9.6E-21/1.7E-8	1.2E-19/2.1E-7	1.2E-18/2.1E-6	1.6E-10/6.2E-3	
20 yr	1.6E-22/2.8E-10	3.2E-22/5.6E-10	9.6E-21/1.7E-8	1.2E-19/2.1E-7	1.2E-18/2.0E-6	1.6E-10/6.2E-3	
30 yr	1.6E-22/2.8E-10	3.2E-22/5.5E-10	9.6E-21/1.7E-8	1.2E-19/2.0E-7	1.2E-18/2.0E-6	1.6E-10/6.2E-3	

Table 32: Calcium (Ca) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	2.8E-11 / 1.2E-3	2.9E-11 / 1.3E-3	3.9E-11 / 9.3E-3	4.8E-11 / 1.7E-2	4.8E-11 / 1.7E-2	6.3E-11 / 1.7E-2
	1 min	2.3E-11 / 9.8E-4	2.4E-11 / 1.2E-3	3.4E-11 / 9.1E-3	4.3E-11 / 1.7E-2	4.3E-11 / 1.7E-2	5.8E-11 / 1.7E-2
	10 min	4.6E-12 / 3.4E-4	4.9E-12 / 5.3E-4	1.5E-11 / 8.5E-3	2.5E-11 / 1.6E-2	2.5E-11 / 1.6E-2	4.0E-11 / 1.6E-2
	30 min	4.7E-13 / 2.0E-4	7.2E-13 / 4.0E-4	1.1E-11 / 8.4E-3	2.0E-11 / 1.6E-2	2.0E-11 / 1.6E-2	3.5E-11 / 1.6E-2
	1 h	3.2E-13 / 2.0E-4	5.7E-13 / 3.9E-4	1.1E-11 / 8.4E-3	2.0E-11 / 1.6E-2	2.0E-11 / 1.6E-2	3.5E-11 / 1.6E-2
	2 h	2.8E-13 / 2.0E-4	5.2E-13 / 3.9E-4	1.1E-11 / 8.3E-3	2.0E-11 / 1.6E-2	2.0E-11 / 1.6E-2	3.5E-11 / 1.6E-2
	3 h	2.6E-13 / 2.0E-4	5.1E-13 / 3.9E-4	1.1E-11 / 8.3E-3	2.0E-11 / 1.6E-2	2.0E-11 / 1.6E-2	3.5E-11 / 1.6E-2
	6 h	2.5E-13 / 2.0E-4	5.0E-13 / 3.9E-4	1.1E-11 / 8.3E-3	2.0E-11 / 1.6E-2	2.0E-11 / 1.6E-2	3.5E-11 / 1.6E-2
	12 h	2.5E-13 / 1.9E-4	4.9E-13 / 3.9E-4	1.1E-11 / 8.3E-3	2.0E-11 / 1.6E-2	2.0E-11 / 1.6E-2	3.5E-11 / 1.6E-2
	1 d	2.5E-13 / 1.9E-4	4.9E-13 / 3.8E-4	1.0E-11 / 8.2E-3	2.0E-11 / 1.5E-2	2.0E-11 / 1.5E-2	3.5E-11 / 1.6E-2
	2 d	2.4E-13 / 1.9E-4	4.8E-13 / 3.7E-4	1.0E-11 / 7.9E-3	1.9E-11 / 1.5E-2	1.9E-11 / 1.5E-2	3.4E-11 / 1.5E-2
	7 d	2.1E-13 / 1.7E-4	4.2E-13 / 3.3E-4	9.0E-12 / 7.0E-3	1.7E-11 / 1.3E-2	1.7E-11 / 1.3E-2	3.2E-11 / 1.4E-2
	30 d	1.2E-13 / 9.3E-5	2.4E-13 / 1.8E-4	5.0E-12 / 3.9E-3	9.6E-12 / 7.5E-3	9.6E-12 / 7.5E-3	2.5E-11 / 7.8E-3
	182 d	2.6E-15 / 2.1E-6	5.2E-15 / 4.2E-6	1.1E-13 / 9.0E-5	2.1E-13 / 1.9E-4	2.1E-13 / 2.1E-4	1.5E-11 / 4.7E-4
	1 yr	2.7E-17 / 5.3E-8	5.4E-17 / 1.1E-7	1.2E-15 / 2.8E-6	2.2E-15 / 1.8E-5	2.2E-15 / 3.2E-5	1.5E-11 / 3.0E-4
	2 yr	2.3E-20 / 1.5E-8	4.6E-20 / 3.0E-8	1.3E-18 / 8.6E-7	1.0E-17 / 7.5E-6	1.9E-17 / 1.4E-5	1.5E-11 / 2.8E-4
	5 yr	2.0E-21 / 1.5E-9	4.0E-21 / 3.0E-9	1.2E-19 / 8.6E-8	1.0E-18 / 7.6E-7	1.9E-18 / 1.4E-6	1.5E-11 / 2.7E-4
	10 yr	4.3E-23 / 3.2E-11	8.7E-23 / 6.4E-11	2.5E-21 / 1.9E-9	2.2E-20 / 1.6E-8	4.1E-20 / 3.1E-8	1.5E-11 / 2.6E-4
	20 yr	2.0E-26 / 1.5E-14	4.1E-26 / 3.0E-14	1.2E-24 / 8.7E-13	1.0E-23 / 7.7E-12	1.9E-23 / 1.4E-11	1.5E-11 / 2.6E-4
	30 yr	9.5E-30 / 7.0E-18	1.9E-29 / 1.4E-17	5.5E-28 / 4.1E-16	4.8E-27 / 3.6E-15	9.8E-27 / 6.7E-15	1.5E-11 / 2.6E-4
2)	0	6.5E-11 / 1.2E-3	6.5E-11 / 1.3E-3	7.0E-11 / 5.1E-3	7.5E-11 / 8.8E-3	7.5E-11 / 8.8E-3	1.1E-10 / 9.4E-3
	1 min	5.3E-11 / 9.8E-4	5.4E-11 / 1.1E-3	5.8E-11 / 4.9E-3	6.3E-11 / 8.6E-3	6.3E-11 / 8.7E-3	9.6E-11 / 9.2E-3
	10 min	1.0E-11 / 2.6E-4	1.0E-11 / 4.2E-3	1.5E-11 / 4.2E-3	2.0E-11 / 7.9E-3	2.0E-11 / 7.9E-3	5.3E-11 / 8.5E-3
	30 min	6.6E-13 / 1.1E-4	7.8E-13 / 2.0E-4	5.7E-12 / 4.0E-3	1.0E-11 / 7.7E-3	1.0E-11 / 7.8E-3	4.3E-11 / 8.4E-3
	1 h	3.1E-13 / 9.9E-5	4.3E-13 / 1.9E-4	5.3E-12 / 4.0E-3	9.9E-12 / 7.7E-3	9.9E-12 / 7.8E-3	4.3E-11 / 8.3E-3
	2 h	1.9E-13 / 9.6E-5	3.1E-13 / 1.9E-4	5.2E-12 / 4.0E-3	9.8E-12 / 7.7E-3	9.8E-12 / 7.8E-3	4.3E-11 / 8.3E-3
	3 h	1.5E-13 / 9.5E-5	2.7E-13 / 1.9E-4	5.2E-12 / 4.0E-3	9.7E-12 / 7.7E-3	9.7E-12 / 7.7E-3	4.2E-11 / 8.3E-3
	6 h	1.2E-13 / 9.4E-5	2.4E-13 / 1.9E-4	5.1E-12 / 4.0E-3	9.7E-12 / 7.7E-3	9.7E-12 / 7.7E-3	4.2E-11 / 8.3E-3
	12 h	1.2E-13 / 9.4E-5	2.4E-13 / 1.9E-4	5.1E-12 / 4.0E-3	9.6E-12 / 7.6E-3	9.6E-12 / 7.7E-3	4.2E-11 / 8.3E-3
	1 d	1.2E-13 / 9.3E-5	2.3E-13 / 1.8E-4	5.0E-12 / 3.9E-3	9.5E-12 / 7.5E-3	9.5E-12 / 7.6E-3	4.2E-11 / 8.2E-3
	2 d	1.2E-13 / 9.0E-5	2.3E-13 / 1.8E-4	4.9E-12 / 3.8E-3	9.3E-12 / 7.3E-3	9.3E-12 / 7.4E-3	4.2E-11 / 8.0E-3
	7 d	1.0E-13 / 8.0E-5	2.0E-13 / 1.6E-4	4.3E-12 / 3.4E-3	8.2E-12 / 6.5E-3	8.2E-12 / 6.5E-3	4.1E-11 / 7.1E-3
	30 d	5.7E-14 / 4.5E-5	1.1E-13 / 8.9E-5	2.4E-12 / 1.9E-3	4.6E-12 / 3.7E-3	4.6E-12 / 3.7E-3	3.7E-11 / 4.3E-3
	182 d	1.3E-15 / 1.1E-6	2.5E-15 / 2.2E-6	5.3E-14 / 4.8E-5	1.0E-13 / 1.3E-4	1.0E-13 / 1.8E-4	3.3E-11 / 7.6E-4
	1 yr	1.3E-17 / 8.4E-8	2.6E-17 / 1.7E-7	5.6E-16 / 4.7E-6	1.1E-15 / 3.8E-5	1.1E-15 / 7.1E-5	3.3E-11 / 6.5E-4
	2 yr	4.8E-20 / 3.4E-8	9.5E-20 / 6.9E-8	2.8E-18 / 2.0E-6	2.4E-17 / 1.7E-5	4.4E-17 / 3.3E-5	3.3E-11 / 6.1E-4
	5 yr	4.6E-21 / 3.4E-9	9.3E-21 / 6.9E-9	2.7E-19 / 2.0E-7	2.4E-18 / 1.8E-6	4.4E-18 / 3.3E-6	3.3E-11 / 5.8E-4
	10 yr	1.0E-22 / 7.4E-11	2.0E-22 / 1.5E-10	5.8E-21 / 4.3E-9	5.1E-20 / 3.8E-8	9.6E-20 / 7.1E-8	3.3E-11 / 5.8E-4
	20 yr	4.7E-26 / 3.5E-14	9.4E-26 / 7.0E-14	2.7E-24 / 2.0E-12	2.4E-23 / 1.8E-11	4.5E-23 / 3.3E-11	3.3E-11 / 5.8E-4
	30 yr	2.2E-29 / 1.6E-17	4.4E-29 / 3.3E-17	1.3E-27 / 9.5E-16	1.1E-26 / 8.3E-15	2.3E-26 / 1.6E-14	3.3E-11 / 5.8E-4
3)	0	9.2E-11 / 1.5E-3	9.2E-11 / 1.6E-3	9.6E-11 / 4.6E-3	9.9E-11 / 7.5E-3	9.9E-11 / 7.6E-3	1.4E-10 / 8.3E-3
	1 min	7.5E-11 / 1.2E-3	7.6E-11 / 1.3E-3	7.9E-11 / 4.3E-3	8.3E-11 / 7.2E-3	8.3E-11 / 7.3E-3	1.2E-10 / 8.0E-3
	10 min	1.4E-11 / 3.0E-4	1.4E-11 / 3.7E-4	1.8E-11 / 3.4E-3	2.2E-11 / 6.3E-3	2.2E-11 / 6.4E-3	6.1E-11 / 7.1E-3
	30 min	8.8E-13 / 8.9E-5	9.7E-13 / 1.6E-4	9.7E-12 / 3.1E-3	8.3E-12 / 6.1E-3	8.3E-12 / 6.2E-3	4.7E-11 / 6.9E-3
	1 h	3.7E-13 / 8.0E-5	4.6E-13 / 1.5E-4	4.3E-12 / 3.1E-3	7.8E-12 / 6.0E-3	7.8E-12 / 6.2E-3	4.7E-11 / 6.8E-3
	2 h	2.0E-13 / 7.6E-5	2.9E-13 / 1.5E-4	4.1E-12 / 3.1E-3	7.6E-12 / 6.0E-3	7.6E-12 / 6.2E-3	4.7E-11 / 6.8E-3
	3 h	1.3E-13 / 7.4E-5	2.2E-13 / 1.5E-4	4.0E-12 / 3.1E-3	7.6E-12 / 6.0E-3	7.6E-12 / 6.1E-3	4.6E-11 / 6.8E-3
	6 h	9.5E-14 / 7.3E-5	1.9E-13 / 1.5E-4	4.0E-12 / 3.1E-3	7.5E-12 / 6.0E-3	7.5E-12 / 6.1E-3	4.6E-11 / 6.8E-3
	12 h	9.3E-14 / 7.3E-5	1.8E-13 / 1.4E-4	3.9E-12 / 3.1E-3	7.5E-12 / 6.0E-3	7.5E-12 / 6.1E-3	4.6E-11 / 6.8E-3
	1 d	9.2E-14 / 7.2E-5	1.8E-13 / 1.4E-4	3.9E-12 / 3.1E-3	7.4E-12 / 5.9E-3	7.4E-12 / 6.0E-3	4.6E-11 / 6.7E-3
	2 d	8.9E-14 / 7.0E-5	1.8E-13 / 1.4E-4	3.8E-12 / 3.0E-3	7.2E-12 / 5.8E-3	7.2E-12 / 5.9E-3	4.6E-11 / 6.6E-3
	7 d	7.9E-14 / 6.2E-5	1.6E-13 / 1.2E-4	3.3E-12 / 2.6E-3	6.3E-12 / 5.1E-3	6.3E-12 / 5.2E-3	4.5E-11 / 5.9E-3
	30 d	4.4E-14 / 3.5E-5	8.8E-14 / 6.9E-5	1.9E-12 / 1.5E-3	3.6E-12 / 2.9E-3	3.6E-12 / 3.0E-3	4.2E-11 / 3.7E-3
	182 d	9.8E-16 / 9.4E-7	1.9E-15 / 1.9E-6	4.1E-14 / 4.3E-5	7.9E-14 / 1.5E-4	7.9E-14 / 2.3E-4	3.9E-11 / 9.2E-4
	1 yr	1.0E-17 / 1.3E-7	2.1E-17 / 2.6E-7	4.4E-16 / 7.5E-6	9.0E-16 / 6.3E-5	9.7E-16 / 1.2E-4	3.9E-11 / 8.0E-4
	2 yr	7.8E-20 / 5.7E-8	1.6E-19 / 1.1E-7	4.5E-18 / 3.3E-6	3.9E-17 / 2.9E-5	7.3E-17 / 5.4E-5	3.9E-11 / 7.4E-4
	5 yr	7.7E-21 / 5.7E-9	1.5E-20 / 1.1E-8	4.5E-19 / 3.3E-7	3.9E-18 / 2.9E-6	7.3E-18 / 5.4E-6	3.9E-11 / 6.9E-4
	10 yr	1.7E-22 / 1.2E-10	3.3E-22 / 2.5E-10	9.7E-21 / 7.2E-9	8.5E-20 / 6.3E-8	1.6E-19 / 1.2E-7	3.9E-11 / 6.9E-4
	20 yr	7.8E-26 / 5.8E-14	1.6E-25 / 1.2E-13	4.5E-24 / 3.4E-12	4.0E-23 / 3.0E-11	7.4E-23 / 5.5E-11	3.9E-11 / 6.9E-4
	30 yr	3.7E-29 / 2.7E-17	7.3E-29 / 5.4E-17	2.1E-27 / 1.6E-15	1.9E-26 / 1.4E-14	3.7E-26 / 2.6E-14	3.9E-11 / 6.9E-4
4)	0	4.9E-11 / 1.0E-3	4.9E-11 / 1.1E-3	5.5E-11 / 5.6E-3	6.0E-11 / 9.8E-3	6.0E-11 / 9.8E-3	9.1E-11 / 1.0E-2
	1 min	4.0E-11 / 8.4E-4	4.1E-11 / 9.5E-4	4.6E-11 / 5.4E-3	5.2E-11 / 9.6E-3	5.2E-11 / 9.6E-3	8.2E-11 / 1.0E-2
	10 min	7.7E-12 / 2.5E-4	7.8E-12 / 3.5E-4	1.4E-11 / 4.8E-3	1.9E-11 / 9.0E-3	1.9E-11 / 9.1E-3	4.9E-11 / 9.6E-3
	30 min	4.7E-13 / 1.2E-4	6.0E-13 / 2.2E-4	6.3E-12 / 4.7E-3	1.2E-11 / 8.9E-3	1.2E-11 / 8.9E-3	4.2E-11 / 9.5E-3
	1 h	2.3E-13 / 1.1E-4	3.7E-13 / 2.2E-4	6.0E-12 / 4.7E-3	1.1E-11 / 8.9E-3	1.1E-11 / 8.9E-3	4.2E-11 / 9.4E-3
	2 h	1.7E-13 / 1.1E-4	3.1E-13 / 2.2E-4	6.0E-12 / 4.7E-3	1.1E-11 / 8.9E-3	1.1E-11 / 8.9E-3	4.2E-11 / 9.4E-3
	3 h	1.5E-13 / 1.1E-4	2.9E-13 / 2.2E-4	5.9E-12 / 4.6E-3	1.1E-11 / 8.8E-3	1.1E-11 / 8.8E-3	4.2E-11 / 9.4E-3
	6 h	1.4E-13 / 1.1E-4	2.8E-13 / 2.2E-4	5.9E-12 / 4.6E-3	1.1E-11 / 8.8E-3	1.1E-11 / 8.9E-3	4.2E-11 / 9.4E-3
	12 h	1.4E-13 / 1.1E-4	2.8E-13 / 2.2E-4	5.9E-12 / 4.6E-3	1.1E-11 / 8.8E-3	1.1E-11 / 8.8E-3	4.1E-11 / 9.3E-3
	1 d	1.4E-13 / 1.1E-4	2.7E-13 / 2.1E-4	5.8E-12 / 4.5E-3	1.1E-11 / 8.7E-3	1.1E-11 / 8.7E-3	4.1E-11 / 9.2E-3
	2 d	1.3E-13 / 1.0E-4	2.7E-13 / 2.1E-4	5.7E-12 / 4.4E-3	1.1E-11 / 8.4E-3	1.1E-11 / 8.5E-3	4.1E-11 / 9.0E-3
	7 d	1.2E-13 / 9.2E-5	2.3E-13 / 1.8E-4	5.0E-12 / 3.9E-3	9.5E-12 / 7.5E-3	9.5E-12 / 7.5E-3	4.0E-11 / 8.0E-3
	30 d	6.6E-14 / 5.2E-5	1.3E-13 / 1.0E-4	2.8E-12 / 2.2E-3	5.3E-12 / 4.2E-3	5.3E-12 / 4.3E-3	3.6E-11 / 4.8E-3
	182 d	1.5E-15 / 1.2E-6	2.9E-15 / 2.4E-6	6.2E-14 / 5.2E-5	1.2E-13 / 1.3E-4	1.2E-13 / 1.6E-4	3.0E-11 / 6.9E-4
	1 yr	1.5E-17 / 5.9E-8	3.0E-17 / 1.2E-7	6.5E-16 / 3.3E-6	1.3E-15 / 2.5E-5	1.3E-15 / 4.6E-5	3.0E-11 / 5.8E-4
	2 yr	3.1E-20 / 2.2E-8	6.3E-20 / 4.4E-8	1.8E-18 / 1.3E-6	1.5E-17 / 1.1E-5	2.9E-17 / 2.1E-5	3.0E-11 / 5.6E-4
	5 yr	3.0E-21 / 2.2E-9	6.0E-21 / 4.4E-9	1.7E-19 / 1.3E-7	1.5E-18 / 1.1E-6	2.8E-18 / 2.1E-6	3.0E-11 / 5.4E-4
	10 yr	6.5E-23 / 4.8E-11	1.3E-22 / 9.6E-11	3.8E-21 / 2.8E-9	3.3E-20 / 2.4E-8	6.2E-20 / 4.6E-8	3.0E-11 / 5.4E-4
	20 yr	3.0E-26 / 2.2E-14	6.1E-26 / 4.5E-14	1.8E-24 / 1.3E-12	1.5E-23 / 1.1E-11	2.9E-23 / 2.1E-11	3.0E-11 / 5.4E-4
	30 yr	1.4E-29 / 1.1E-17	2.8E-29 / 2.1E-17	8.2E-28 / 6.1E-16	7.2E-27 / 5.4E-15	1.5E-26 / 1.0E-14	3.0E-11 / 5.4E-4

Table 33: Chromium (Cr) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	8.5E-8 / 1.1E+0	8.8E-8 / 1.2E+0	8.8E-8 / 1.2E+0	8.8E-8 / 1.2E+0	8.8E-8 / 1.2E+0	8.8E-8 / 1.2E+0
	1 min	8.4E-8 / 1.1E+0	8.8E-8 / 1.1E+0	8.8E-8 / 1.2E+0	8.8E-8 / 1.2E+0	8.8E-8 / 1.2E+0	8.8E-8 / 1.2E+0
	10 min	8.1E-8 / 1.1E+0	8.4E-8 / 1.1E+0	8.4E-8 / 1.1E+0	8.4E-8 / 1.1E+0	8.4E-8 / 1.1E+0	8.4E-8 / 1.1E+0
	30 min	7.4E-8 / 9.7E-1	7.7E-8 / 1.0E+0	7.7E-8 / 1.0E+0	7.7E-8 / 1.0E+0	7.7E-8 / 1.0E+0	7.7E-8 / 1.0E+0
	1 h	6.5E-8 / 8.5E-1	6.7E-8 / 8.8E-1	6.7E-8 / 8.8E-1	6.7E-8 / 8.8E-1	6.7E-8 / 8.8E-1	6.7E-8 / 8.8E-1
	2 h	4.9E-8 / 6.5E-1	5.1E-8 / 6.7E-1	5.1E-8 / 6.7E-1	5.1E-8 / 6.8E-1	5.2E-8 / 6.8E-1	5.2E-8 / 6.8E-1
	3 h	3.8E-8 / 5.0E-1	3.9E-8 / 5.1E-1	3.9E-8 / 5.2E-1	3.9E-8 / 5.2E-1	3.9E-8 / 5.2E-1	3.9E-8 / 5.2E-1
	6 h	1.7E-8 / 2.2E-1	1.8E-8 / 2.3E-1	1.8E-8 / 2.3E-1	1.8E-8 / 2.3E-1	1.8E-8 / 2.3E-1	1.8E-8 / 2.3E-1
	12 h	3.4E-9 / 4.4E-2	3.5E-9 / 4.6E-2	3.5E-9 / 4.6E-2	3.5E-9 / 4.7E-2	3.6E-9 / 4.8E-2	3.6E-9 / 4.8E-2
	1 d	1.3E-10 / 1.8E-3	1.4E-10 / 1.8E-3	1.4E-10 / 2.0E-3	1.8E-10 / 3.0E-3	2.2E-10 / 4.0E-3	2.2E-10 / 4.0E-3
	2 d	3.0E-13 / 5.1E-6	4.0E-13 / 7.6E-6	5.4E-12 / 1.4E-4	4.5E-11 / 1.2E-3	8.0E-11 / 2.1E-3	8.0E-11 / 2.1E-3
	7 d	8.8E-14 / 2.3E-6	1.8E-13 / 4.7E-6	5.1E-12 / 1.4E-4	4.4E-11 / 1.2E-3	7.9E-11 / 2.1E-3	7.9E-11 / 2.1E-3
	30 d	8.3E-14 / 2.2E-6	1.7E-13 / 4.4E-6	4.8E-12 / 1.3E-4	4.2E-11 / 1.1E-3	7.5E-11 / 2.0E-3	7.5E-11 / 2.0E-3
	182 d	5.9E-14 / 1.6E-6	1.2E-13 / 3.2E-6	3.4E-12 / 9.2E-5	3.0E-11 / 7.9E-4	5.4E-11 / 1.4E-3	5.4E-11 / 1.4E-3
	1 yr	4.0E-14 / 1.1E-6	7.9E-14 / 2.1E-6	2.3E-12 / 6.1E-5	2.0E-11 / 5.3E-4	3.6E-11 / 9.5E-4	3.6E-11 / 9.6E-4
	2 yr	1.8E-14 / 4.7E-7	3.5E-14 / 9.4E-7	1.0E-12 / 2.7E-5	8.8E-12 / 2.4E-4	1.6E-11 / 4.2E-4	1.6E-11 / 4.3E-4
	5 yr	1.6E-15 / 4.2E-8	3.1E-15 / 8.3E-8	9.0E-14 / 2.4E-6	7.8E-13 / 2.1E-5	1.4E-12 / 3.8E-5	1.4E-12 / 4.0E-5
10 yr	2.7E-17 / 8.7E-10	5.4E-17 / 1.7E-9	1.6E-15 / 5.1E-8	1.4E-14 / 4.7E-7	2.4E-14 / 1.5E-6	2.4E-14 / 2.7E-6	
20 yr	8.2E-21 / 8.8E-11	1.6E-20 / 1.8E-10	4.8E-19 / 5.3E-9	4.1E-18 / 6.3E-8	7.4E-18 / 4.9E-7	7.4E-18 / 1.1E-6	
30 yr	2.5E-24 / 5.0E-11	5.0E-24 / 1.0E-10	1.4E-22 / 3.0E-9	1.2E-21 / 3.6E-8	2.2E-21 / 2.8E-7	2.2E-21 / 6.5E-7	
2)	0	1.7E-8 / 2.2E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1
	1 min	1.7E-8 / 2.2E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1	1.7E-8 / 2.3E-1
	10 min	1.6E-8 / 2.2E-1	1.6E-8 / 2.2E-1	1.7E-8 / 2.2E-1	1.7E-8 / 2.2E-1	1.7E-8 / 2.2E-1	1.7E-8 / 2.2E-1
	30 min	1.4E-8 / 1.9E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1
	1 h	1.3E-8 / 1.7E-1	1.3E-8 / 1.7E-1	1.3E-8 / 1.7E-1	1.3E-8 / 1.8E-1	1.3E-8 / 1.8E-1	1.3E-8 / 1.8E-1
	2 h	9.7E-9 / 1.3E-1	1.0E-8 / 1.3E-1	1.0E-8 / 1.3E-1	1.0E-8 / 1.3E-1	1.0E-8 / 1.4E-1	1.0E-8 / 1.4E-1
	3 h	7.4E-9 / 9.7E-2	7.7E-9 / 1.0E-1	7.7E-9 / 1.0E-1	7.8E-9 / 1.0E-1	7.9E-9 / 1.1E-1	7.9E-9 / 1.1E-1
	6 h	3.3E-9 / 4.3E-2	3.4E-9 / 4.5E-2	3.5E-9 / 4.5E-2	3.5E-9 / 4.8E-2	3.6E-9 / 5.0E-2	3.6E-9 / 5.0E-2
	12 h	6.6E-10 / 8.6E-3	6.8E-10 / 9.0E-3	7.0E-10 / 9.3E-3	7.9E-10 / 1.2E-2	8.7E-10 / 1.4E-2	8.7E-10 / 1.4E-2
	1 d	2.6E-11 / 3.5E-4	2.8E-11 / 3.7E-4	3.9E-11 / 6.7E-4	1.3E-10 / 3.0E-3	2.1E-10 / 5.2E-3	2.1E-10 / 5.2E-3
	2 d	2.4E-13 / 5.9E-6	4.4E-13 / 1.1E-5	1.2E-11 / 3.1E-4	1.0E-10 / 2.7E-3	1.8E-10 / 4.8E-3	1.8E-10 / 4.8E-3
	7 d	2.0E-13 / 5.3E-6	3.9E-13 / 1.1E-5	1.1E-11 / 3.1E-4	9.9E-11 / 2.6E-3	1.8E-10 / 4.7E-3	1.8E-10 / 4.8E-3
	30 d	1.9E-13 / 5.0E-6	3.8E-13 / 1.0E-5	1.1E-11 / 2.9E-4	9.4E-11 / 2.5E-3	1.7E-10 / 4.5E-3	1.7E-10 / 4.5E-3
	182 d	1.3E-13 / 3.6E-6	2.7E-13 / 7.1E-6	7.8E-12 / 2.1E-4	6.7E-11 / 1.8E-3	1.2E-10 / 3.2E-3	1.2E-10 / 3.2E-3
	1 yr	8.9E-14 / 2.4E-6	1.8E-13 / 4.8E-6	5.2E-12 / 1.4E-4	4.5E-11 / 1.2E-3	8.0E-11 / 2.1E-3	8.0E-11 / 2.2E-3
	2 yr	4.0E-14 / 1.1E-6	7.9E-14 / 2.1E-6	2.3E-12 / 6.1E-5	2.0E-11 / 5.3E-4	3.6E-11 / 9.6E-4	3.6E-11 / 9.6E-4
	5 yr	3.5E-15 / 9.4E-8	7.0E-15 / 1.9E-7	2.0E-13 / 5.4E-6	1.7E-12 / 4.7E-5	3.1E-12 / 8.7E-5	3.1E-12 / 9.0E-5
10 yr	6.1E-17 / 2.0E-9	1.2E-16 / 3.9E-9	3.5E-15 / 1.2E-7	3.0E-14 / 1.1E-6	5.5E-14 / 3.4E-6	5.5E-14 / 6.1E-6	
20 yr	1.8E-20 / 2.0E-10	3.7E-20 / 4.1E-10	1.1E-18 / 1.2E-8	9.2E-18 / 1.4E-7	1.7E-17 / 1.1E-6	1.7E-17 / 2.6E-6	
30 yr	5.6E-24 / 1.2E-10	1.1E-23 / 2.3E-10	3.2E-22 / 6.9E-9	2.8E-21 / 8.2E-8	5.0E-21 / 6.4E-7	5.0E-21 / 1.5E-6	
3)	0	8.5E-9 / 1.1E-1	8.9E-9 / 1.2E-1	8.9E-9 / 1.2E-1	9.0E-9 / 1.2E-1	9.2E-9 / 1.3E-1	9.2E-9 / 1.3E-1
	1 min	8.5E-9 / 1.1E-1	8.8E-9 / 1.2E-1	8.8E-9 / 1.2E-1	9.0E-9 / 1.2E-1	9.1E-9 / 1.2E-1	9.1E-9 / 1.2E-1
	10 min	8.1E-9 / 1.1E-1	8.4E-9 / 1.1E-1	8.5E-9 / 1.1E-1	8.6E-9 / 1.2E-1	8.8E-9 / 1.2E-1	8.8E-9 / 1.2E-1
	30 min	7.4E-9 / 9.7E-2	7.7E-9 / 1.0E-1	7.7E-9 / 1.0E-1	7.9E-9 / 1.1E-1	8.0E-9 / 1.1E-1	8.0E-9 / 1.1E-1
	1 h	6.5E-9 / 8.5E-2	6.7E-9 / 8.8E-2	6.8E-9 / 8.9E-2	6.9E-9 / 9.3E-2	7.1E-9 / 9.7E-2	7.1E-9 / 9.7E-2
	2 h	5.0E-9 / 6.5E-2	5.2E-9 / 6.8E-2	5.2E-9 / 6.8E-2	5.3E-9 / 7.2E-2	5.5E-9 / 7.6E-2	5.5E-9 / 7.6E-2
	3 h	3.8E-9 / 5.0E-2	3.9E-9 / 5.2E-2	4.0E-9 / 5.2E-2	4.1E-9 / 5.6E-2	4.3E-9 / 6.0E-2	4.3E-9 / 6.0E-2
	6 h	1.7E-9 / 2.2E-2	1.8E-9 / 2.3E-2	1.8E-9 / 2.4E-2	1.9E-9 / 2.8E-2	2.1E-9 / 3.1E-2	2.1E-9 / 3.1E-2
	12 h	3.4E-10 / 4.4E-3	3.5E-10 / 4.6E-3	3.7E-10 / 5.1E-3	5.2E-10 / 9.2E-3	6.6E-10 / 1.3E-2	6.6E-10 / 1.3E-2
	1 d	1.4E-11 / 1.8E-4	1.5E-11 / 2.0E-4	3.4E-11 / 7.2E-4	1.9E-10 / 4.8E-3	3.2E-10 / 8.5E-3	3.2E-10 / 8.5E-3
	2 d	3.7E-13 / 9.5E-6	7.1E-13 / 1.9E-5	2.0E-11 / 5.3E-4	1.7E-10 / 4.6E-3	3.1E-10 / 8.3E-3	3.1E-10 / 8.3E-3
	7 d	3.4E-13 / 9.1E-6	6.8E-13 / 1.8E-5	2.0E-11 / 5.3E-4	1.7E-10 / 4.5E-3	3.1E-10 / 8.2E-3	3.1E-10 / 8.2E-3
	30 d	3.2E-13 / 8.6E-6	6.5E-13 / 1.7E-5	1.9E-11 / 5.0E-4	1.6E-10 / 4.3E-3	2.9E-10 / 7.8E-3	2.9E-10 / 7.8E-3
	182 d	2.3E-13 / 6.1E-6	4.6E-13 / 1.2E-5	1.3E-11 / 3.6E-4	1.2E-10 / 3.1E-3	2.1E-10 / 5.5E-3	2.1E-10 / 5.6E-3
	1 yr	1.5E-13 / 4.1E-6	3.1E-13 / 8.2E-6	8.9E-12 / 2.4E-4	7.7E-11 / 2.1E-3	1.4E-10 / 3.7E-3	1.4E-10 / 3.7E-3
	2 yr	6.8E-14 / 1.8E-6	1.4E-13 / 3.6E-6	4.0E-12 / 1.1E-4	3.4E-11 / 9.1E-4	6.2E-11 / 1.6E-3	6.2E-11 / 1.7E-3
	5 yr	6.0E-15 / 1.6E-7	1.2E-14 / 3.2E-7	3.5E-13 / 9.4E-6	3.0E-12 / 8.1E-5	5.4E-12 / 1.6E-4	5.4E-12 / 1.6E-4
10 yr	1.0E-16 / 3.5E-9	2.1E-16 / 6.9E-9	6.1E-15 / 2.0E-7	5.2E-14 / 1.9E-6	9.4E-14 / 6.3E-6	9.4E-14 / 1.1E-5	
20 yr	3.2E-20 / 3.9E-10	6.4E-20 / 7.8E-10	1.8E-18 / 2.3E-8	1.6E-17 / 2.8E-7	2.9E-17 / 2.2E-6	2.9E-17 / 5.0E-6	
30 yr	9.6E-24 / 2.2E-10	1.9E-23 / 4.4E-10	5.6E-22 / 1.3E-8	4.8E-21 / 1.6E-7	8.7E-21 / 1.2E-6	8.7E-21 / 2.9E-6	
4)	0	2.5E-8 / 3.3E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1
	1 min	2.5E-8 / 3.3E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1	2.6E-8 / 3.4E-1
	10 min	2.4E-8 / 3.1E-1	2.5E-8 / 3.2E-1	2.5E-8 / 3.3E-1	2.5E-8 / 3.3E-1	2.5E-8 / 3.3E-1	2.5E-8 / 3.3E-1
	30 min	2.2E-8 / 2.9E-1	2.3E-8 / 3.0E-1	2.3E-8 / 3.0E-1	2.3E-8 / 3.0E-1	2.3E-8 / 3.0E-1	2.3E-8 / 3.0E-1
	1 h	1.9E-8 / 2.5E-1	2.0E-8 / 2.6E-1	2.0E-8 / 2.6E-1	2.0E-8 / 2.6E-1	2.0E-8 / 2.6E-1	2.0E-8 / 2.6E-1
	2 h	1.5E-8 / 1.9E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1	1.5E-8 / 2.0E-1
	3 h	1.1E-8 / 1.5E-1	1.2E-8 / 1.5E-1	1.2E-8 / 1.5E-1	1.2E-8 / 1.5E-1	1.2E-8 / 1.6E-1	1.2E-8 / 1.6E-1
	6 h	5.0E-9 / 6.5E-2	5.2E-9 / 6.8E-2	5.2E-9 / 6.8E-2	5.2E-9 / 7.0E-2	5.3E-9 / 7.1E-2	5.3E-9 / 7.1E-2
	12 h	9.9E-10 / 1.3E-2	1.0E-9 / 1.3E-2	1.0E-9 / 1.4E-2	1.1E-9 / 1.5E-2	1.2E-9 / 1.7E-2	1.2E-9 / 1.7E-2
	1 d	3.9E-11 / 5.2E-4	4.1E-11 / 5.4E-4	4.9E-11 / 7.6E-4	1.1E-10 / 2.4E-3	1.7E-10 / 4.0E-3	1.7E-10 / 4.0E-3
	2 d	2.0E-13 / 4.6E-6	3.5E-13 / 8.4E-6	8.3E-12 / 2.2E-4	7.1E-11 / 1.9E-3	1.3E-10 / 3.4E-3	1.3E-10 / 3.4E-3
	7 d	1.4E-13 / 3.8E-6	2.8E-13 / 7.5E-6	8.2E-12 / 2.2E-4	7.1E-11 / 1.9E-3	1.3E-10 / 3.4E-3	1.3E-10 / 3.4E-3
	30 d	1.3E-13 / 3.6E-6	2.7E-13 / 7.1E-6	7.8E-12 / 2.1E-4	6.7E-11 / 1.8E-3	1.2E-10 / 3.2E-3	1.2E-10 / 3.2E-3
	182 d	9.6E-14 / 2.5E-6	1.9E-13 / 5.1E-6	5.5E-12 / 1.5E-4	4.8E-11 / 1.3E-3	8.6E-11 / 2.3E-3	8.6E-11 / 2.3E-3
	1 yr	6.4E-14 / 1.7E-6	1.3E-13 / 3.4E-6	3.7E-12 / 9.9E-5	3.2E-11 / 8.5E-4	5.7E-11 / 1.5E-3	5.7E-11 / 1.5E-3
	2 yr	2.8E-14 / 7.6E-7	5.7E-14 / 1.5E-6	1.6E-12 / 4.4E-5	1.4E-11 / 3.8E-4	2.6E-11 / 6.8E-4	2.6E-11 / 6.9E-4
	5 yr	2.5E-15 / 6.7E-8	5.0E-15 / 1.3E-7	1.4E-13 / 3.9E-6	1.2E-12 / 3.3E-5	2.2E-12 / 6.2E-5	2.2E-12 / 6.4E-5
10 yr	4.3E-17 / 1.4E-9	8.7E-17 / 2.8E-9	2.5E-15 / 8.1E-8	2.2E-14 / 7.4E-7	3.9E-14 / 2.3E-6	3.9E-14 / 4.0E-6	
20 yr	1.3E-20 / 1.3E-10	2.6E-20 / 2.6E-10	7.6E-19 / 7.7E-9	6.6E-18 / 9.1E-8	1.2E-17 / 7.1E-7	1.2E-17 / 7.1E-7	
30 yr	4.0E-24 / 7.3E-11	8.0E-24 / 1.5E-10	2.3E-22 / 4.4E-9	2.0E-21 / 5.2E-8	3.6E-21 / 4.1E-7	3.6E-21 / 9.5E-7	

Table 34: Manganese (Mn) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	3.6E-11 / 5.1E-4	3.8E-11 / 5.3E-4	4.7E-11 / 8.5E-4	6.9E-11 / 2.5E-3	7.6E-11 / 6.7E-3	7.6E-11 / 7.2E-3
	1 min	3.6E-11 / 5.0E-4	3.8E-11 / 5.3E-4	4.7E-11 / 8.4E-4	6.9E-11 / 2.5E-3	7.5E-11 / 6.7E-3	7.5E-11 / 7.2E-3
	10 min	3.4E-11 / 4.7E-4	3.6E-11 / 5.0E-4	4.5E-11 / 8.1E-4	6.7E-11 / 2.5E-3	7.4E-11 / 6.6E-3	7.4E-11 / 7.2E-3
	30 min	3.1E-11 / 4.3E-4	3.3E-11 / 4.6E-4	4.2E-11 / 7.7E-4	6.4E-11 / 2.4E-3	7.1E-11 / 6.6E-3	7.1E-11 / 7.2E-3
	1 h	2.7E-11 / 3.8E-4	2.9E-11 / 4.0E-4	3.8E-11 / 7.1E-4	6.0E-11 / 2.4E-3	6.6E-11 / 6.5E-3	6.6E-11 / 7.1E-3
	2 h	2.1E-11 / 2.9E-4	2.2E-11 / 3.1E-4	3.1E-11 / 6.2E-4	5.3E-11 / 2.3E-3	6.0E-11 / 6.4E-3	6.0E-11 / 7.0E-3
	3 h	1.6E-11 / 2.2E-4	1.7E-11 / 2.4E-4	2.6E-11 / 5.5E-4	4.8E-11 / 2.2E-3	5.5E-11 / 6.4E-3	5.5E-11 / 6.9E-3
	6 h	7.3E-12 / 1.0E-4	7.7E-12 / 1.1E-4	1.7E-11 / 4.3E-4	3.9E-11 / 2.1E-3	4.6E-11 / 6.3E-3	4.6E-11 / 6.8E-3
	12 h	1.6E-12 / 2.6E-5	1.9E-12 / 3.3E-5	1.1E-11 / 3.5E-4	3.3E-11 / 2.0E-3	4.0E-11 / 6.2E-3	4.0E-11 / 6.7E-3
	1 d	2.5E-13 / 7.0E-6	4.4E-13 / 1.3E-5	9.5E-12 / 3.2E-4	3.1E-11 / 2.0E-3	3.8E-11 / 6.1E-3	3.8E-11 / 6.7E-3
	2 d	1.9E-13 / 6.1E-6	3.8E-13 / 1.2E-5	9.4E-12 / 3.2E-4	3.1E-11 / 2.0E-3	3.8E-11 / 6.1E-3	3.8E-11 / 6.7E-3
	7 d	1.8E-13 / 5.8E-6	3.5E-13 / 1.2E-5	8.7E-12 / 3.1E-4	2.9E-11 / 1.9E-3	3.6E-11 / 6.1E-3	3.6E-11 / 6.6E-3
	30 d	1.3E-13 / 4.7E-6	2.6E-13 / 9.4E-6	6.3E-12 / 2.5E-4	2.2E-11 / 1.8E-3	2.9E-11 / 5.8E-3	2.9E-11 / 6.4E-3
	182 d	2.2E-14 / 2.3E-6	4.3E-14 / 4.5E-6	1.2E-12 / 1.3E-4	6.9E-12 / 1.3E-3	1.1E-11 / 4.9E-3	1.1E-11 / 5.4E-3
	1 yr	8.1E-15 / 1.8E-6	1.6E-14 / 3.5E-6	4.6E-13 / 1.0E-4	3.8E-12 / 1.1E-3	6.8E-12 / 4.3E-3	6.8E-12 / 4.7E-3
	2 yr	3.3E-15 / 1.3E-6	6.6E-15 / 2.6E-6	1.9E-13 / 7.6E-5	1.7E-12 / 8.2E-4	3.0E-12 / 3.2E-3	3.0E-12 / 3.6E-3
	5 yr	2.9E-16 / 5.7E-7	5.9E-16 / 1.1E-6	1.7E-14 / 3.4E-5	1.5E-13 / 3.6E-4	2.7E-13 / 1.5E-3	2.7E-13 / 1.7E-3
	10 yr	5.4E-18 / 1.6E-7	1.1E-17 / 3.1E-7	3.1E-16 / 9.3E-6	2.8E-15 / 1.0E-4	5.4E-15 / 4.2E-4	5.7E-15 / 5.6E-4
	20 yr	2.7E-20 / 1.2E-8	5.3E-20 / 2.5E-8	1.6E-18 / 7.4E-7	1.7E-17 / 8.0E-6	6.8E-17 / 3.3E-5	2.6E-16 / 1.5E-4
	30 yr	2.0E-21 / 9.9E-10	4.0E-21 / 2.0E-9	1.2E-19 / 5.9E-8	1.3E-18 / 6.4E-7	5.3E-18 / 2.6E-6	1.9E-16 / 1.2E-4
2)	0	8.3E-11 / 1.2E-3	8.6E-11 / 1.2E-3	9.0E-11 / 1.4E-3	1.1E-10 / 2.8E-3	1.2E-10 / 6.0E-3	1.2E-10 / 6.6E-3
	1 min	8.2E-11 / 1.1E-3	8.5E-11 / 1.2E-3	8.9E-11 / 1.4E-3	1.1E-10 / 2.7E-3	1.2E-10 / 6.0E-3	1.2E-10 / 6.6E-3
	10 min	7.8E-11 / 1.1E-3	8.1E-11 / 1.1E-3	8.5E-11 / 1.3E-3	1.0E-10 / 2.7E-3	1.2E-10 / 5.9E-3	1.2E-10 / 6.5E-3
	30 min	7.1E-11 / 9.8E-4	7.4E-11 / 1.0E-3	7.8E-11 / 1.2E-3	9.6E-11 / 2.6E-3	1.1E-10 / 5.8E-3	1.1E-10 / 6.4E-3
	1 h	6.2E-11 / 8.6E-4	6.5E-11 / 8.9E-4	6.8E-11 / 1.1E-3	8.7E-11 / 2.5E-3	1.0E-10 / 5.7E-3	1.0E-10 / 6.3E-3
	2 h	4.7E-11 / 6.5E-4	4.9E-11 / 6.8E-4	5.3E-11 / 8.9E-4	7.2E-11 / 2.2E-3	8.6E-11 / 5.5E-3	8.6E-11 / 6.1E-3
	3 h	3.6E-11 / 5.0E-4	3.8E-11 / 5.2E-4	4.2E-11 / 7.3E-4	6.0E-11 / 2.1E-3	7.4E-11 / 5.3E-3	7.4E-11 / 5.9E-3
	6 h	1.6E-11 / 2.3E-4	1.7E-11 / 2.4E-4	2.1E-11 / 4.4E-4	3.9E-11 / 1.8E-3	5.3E-11 / 5.0E-3	5.3E-11 / 5.6E-3
	12 h	3.3E-12 / 4.8E-5	3.5E-12 / 5.4E-5	7.3E-12 / 2.6E-4	2.6E-11 / 1.6E-3	4.0E-11 / 4.9E-3	4.0E-11 / 5.5E-3
	1 d	2.0E-13 / 5.6E-6	2.8E-13 / 9.6E-6	4.1E-12 / 2.1E-4	2.3E-11 / 1.6E-3	3.7E-11 / 4.8E-3	3.7E-11 / 5.4E-3
	2 d	7.4E-14 / 3.8E-6	1.5E-13 / 7.7E-6	3.9E-12 / 2.1E-4	2.2E-11 / 1.6E-3	3.6E-11 / 4.8E-3	3.6E-11 / 5.4E-3
	7 d	7.0E-14 / 3.7E-6	1.4E-13 / 7.4E-6	3.7E-12 / 2.0E-4	2.2E-11 / 1.5E-3	3.5E-11 / 4.8E-3	3.6E-11 / 5.4E-3
	30 d	5.8E-14 / 3.1E-6	1.2E-13 / 6.3E-6	3.1E-12 / 1.7E-4	2.0E-11 / 1.4E-3	3.3E-11 / 4.6E-3	3.3E-11 / 5.2E-3
	182 d	2.6E-14 / 2.0E-6	5.1E-14 / 3.9E-6	1.5E-12 / 1.1E-4	1.2E-11 / 1.1E-3	2.1E-11 / 3.9E-3	2.1E-11 / 4.5E-3
	1 yr	1.6E-14 / 1.5E-6	3.1E-14 / 3.1E-6	9.1E-13 / 9.1E-5	7.8E-12 / 9.3E-4	1.4E-11 / 3.3E-3	1.4E-11 / 3.8E-3
	2 yr	6.9E-15 / 1.1E-6	1.4E-14 / 2.1E-6	4.0E-13 / 6.2E-5	3.4E-12 / 6.5E-4	6.2E-12 / 2.5E-3	6.2E-12 / 2.9E-3
	5 yr	6.1E-16 / 4.2E-7	1.2E-15 / 8.4E-7	3.5E-14 / 2.5E-5	3.0E-13 / 2.7E-4	5.5E-13 / 1.1E-3	5.5E-13 / 1.4E-3
	10 yr	1.1E-17 / 1.1E-7	2.2E-17 / 2.3E-7	6.3E-16 / 6.7E-6	5.4E-15 / 7.3E-5	1.0E-14 / 3.0E-4	1.1E-14 / 5.9E-4
	20 yr	2.1E-20 / 9.0E-9	4.2E-20 / 1.8E-8	1.3E-18 / 5.3E-7	1.3E-17 / 5.8E-6	5.1E-17 / 2.4E-5	4.9E-16 / 2.9E-4
	30 yr	1.4E-21 / 7.3E-10	2.9E-21 / 1.5E-9	8.5E-20 / 4.3E-8	9.2E-19 / 4.7E-7	3.8E-18 / 2.0E-6	4.4E-16 / 2.7E-4
3)	0	1.2E-10 / 1.7E-3	1.3E-10 / 1.8E-3	1.3E-10 / 2.0E-3	1.5E-10 / 3.6E-3	1.6E-10 / 7.8E-3	1.6E-10 / 8.7E-3
	1 min	1.2E-10 / 1.7E-3	1.3E-10 / 1.7E-3	1.3E-10 / 2.0E-3	1.5E-10 / 3.6E-3	1.6E-10 / 7.8E-3	1.6E-10 / 8.7E-3
	10 min	1.1E-10 / 1.6E-3	1.2E-10 / 1.6E-3	1.2E-10 / 1.9E-3	1.4E-10 / 3.5E-3	1.6E-10 / 7.7E-3	1.6E-10 / 8.6E-3
	30 min	1.0E-10 / 1.4E-3	1.1E-10 / 1.5E-3	1.1E-10 / 1.7E-3	1.3E-10 / 3.4E-3	1.5E-10 / 7.6E-3	1.5E-10 / 8.4E-3
	1 h	9.1E-11 / 1.3E-3	9.4E-11 / 1.3E-3	9.8E-11 / 1.5E-3	1.2E-10 / 3.2E-3	1.3E-10 / 7.4E-3	1.3E-10 / 8.2E-3
	2 h	6.9E-11 / 9.6E-4	7.2E-11 / 1.0E-3	7.5E-11 / 1.2E-3	9.5E-11 / 2.9E-3	1.1E-10 / 7.1E-3	1.1E-10 / 7.9E-3
	3 h	5.3E-11 / 7.3E-4	5.5E-11 / 7.7E-4	5.8E-11 / 1.0E-3	7.8E-11 / 2.6E-3	9.4E-11 / 6.8E-3	9.4E-11 / 7.7E-3
	6 h	2.4E-11 / 3.3E-4	2.5E-11 / 3.5E-4	2.8E-11 / 5.8E-4	4.7E-11 / 2.2E-3	6.3E-11 / 6.4E-3	6.3E-11 / 7.3E-3
	12 h	4.8E-12 / 6.9E-5	5.0E-12 / 7.6E-5	8.1E-12 / 3.0E-4	2.7E-11 / 2.0E-3	4.4E-11 / 6.1E-3	4.4E-11 / 7.0E-3
	1 d	2.4E-13 / 6.9E-6	3.1E-13 / 1.1E-5	3.3E-12 / 2.4E-4	2.3E-11 / 1.9E-3	3.9E-11 / 6.1E-3	3.9E-11 / 6.9E-3
	2 d	5.7E-14 / 4.3E-6	1.1E-13 / 8.6E-6	3.1E-12 / 2.3E-4	2.2E-11 / 1.9E-3	3.8E-11 / 6.1E-3	3.8E-11 / 6.9E-3
	7 d	5.5E-14 / 4.2E-6	1.1E-13 / 8.3E-6	3.0E-12 / 2.3E-4	2.2E-11 / 1.9E-3	3.8E-11 / 6.0E-3	3.8E-11 / 6.9E-3
	30 d	4.8E-14 / 3.6E-6	9.6E-14 / 7.2E-6	2.7E-12 / 2.0E-4	2.0E-11 / 1.8E-3	3.5E-11 / 5.8E-3	3.6E-11 / 6.7E-3
	182 d	2.8E-14 / 2.4E-6	5.6E-14 / 4.8E-6	1.6E-12 / 1.4E-4	1.4E-11 / 1.4E-3	2.4E-11 / 5.0E-3	2.5E-11 / 5.8E-3
	1 yr	1.8E-14 / 1.9E-6	3.6E-14 / 3.9E-6	1.1E-12 / 1.1E-4	9.0E-12 / 1.2E-3	1.6E-11 / 4.3E-3	1.6E-11 / 5.1E-3
	2 yr	8.0E-15 / 1.3E-6	1.6E-14 / 2.7E-6	4.7E-13 / 7.9E-5	4.0E-12 / 8.3E-4	7.2E-12 / 3.2E-3	7.2E-12 / 3.9E-3
	5 yr	7.1E-16 / 5.4E-7	1.4E-15 / 1.1E-6	4.1E-14 / 3.2E-5	3.5E-13 / 3.5E-4	6.4E-13 / 1.4E-3	6.4E-13 / 2.0E-3
	10 yr	1.3E-17 / 1.5E-7	2.5E-17 / 2.9E-7	7.3E-16 / 8.7E-6	6.3E-15 / 9.5E-5	1.2E-14 / 3.9E-4	1.3E-14 / 8.7E-4
	20 yr	2.7E-20 / 1.2E-8	5.4E-20 / 2.3E-8	1.6E-18 / 6.9E-7	1.7E-17 / 7.5E-6	6.6E-17 / 3.1E-5	8.1E-16 / 4.9E-4
	30 yr	1.9E-21 / 9.5E-10	3.7E-21 / 1.9E-9	1.1E-19 / 5.7E-8	1.2E-18 / 6.2E-7	4.9E-18 / 2.6E-6	7.4E-16 / 4.5E-4
4)	0	6.2E-11 / 8.6E-4	6.4E-11 / 9.0E-4	6.9E-11 / 1.1E-3	8.7E-11 / 2.3E-3	1.0E-10 / 5.3E-3	1.0E-10 / 5.7E-3
	1 min	6.1E-11 / 8.5E-4	6.4E-11 / 8.9E-4	6.8E-11 / 1.1E-3	8.7E-11 / 2.3E-3	1.0E-10 / 5.3E-3	1.0E-10 / 5.7E-3
	10 min	5.8E-11 / 8.1E-4	6.1E-11 / 8.4E-4	6.5E-11 / 1.0E-3	8.4E-11 / 2.3E-3	9.7E-11 / 5.2E-3	9.7E-11 / 5.7E-3
	30 min	5.3E-11 / 7.4E-4	5.6E-11 / 7.7E-4	6.0E-11 / 9.6E-4	7.9E-11 / 2.2E-3	9.2E-11 / 5.1E-3	9.2E-11 / 5.6E-3
	1 h	4.7E-11 / 6.4E-4	4.9E-11 / 6.7E-4	5.3E-11 / 8.7E-4	7.2E-11 / 2.1E-3	8.5E-11 / 5.1E-3	8.5E-11 / 5.5E-3
	2 h	3.6E-11 / 4.9E-4	3.7E-11 / 5.2E-4	4.1E-11 / 7.1E-4	6.0E-11 / 2.0E-3	7.3E-11 / 4.9E-3	7.3E-11 / 5.4E-3
	3 h	2.7E-11 / 3.8E-4	2.8E-11 / 4.0E-4	3.3E-11 / 5.9E-4	5.1E-11 / 1.8E-3	6.5E-11 / 4.8E-3	6.5E-11 / 5.2E-3
	6 h	1.2E-11 / 1.7E-4	1.3E-11 / 1.8E-4	1.7E-11 / 3.7E-4	3.6E-11 / 1.6E-3	4.9E-11 / 4.6E-3	4.9E-11 / 5.0E-3
	12 h	2.5E-12 / 3.7E-5	2.7E-12 / 4.2E-5	6.9E-12 / 2.3E-4	2.6E-11 / 1.5E-3	3.9E-11 / 4.4E-3	3.9E-11 / 4.9E-3
	1 d	1.8E-13 / 5.0E-6	2.7E-13 / 8.8E-6	4.4E-12 / 2.0E-4	2.3E-11 / 1.5E-3	3.6E-11 / 4.4E-3	3.6E-11 / 4.8E-3
	2 d	8.3E-14 / 3.7E-6	1.7E-13 / 7.4E-6	4.3E-12 / 2.0E-4	2.3E-11 / 1.4E-3	3.6E-11 / 4.4E-3	3.6E-11 / 4.8E-3
	7 d	7.9E-14 / 3.5E-6	1.6E-13 / 7.1E-6	4.1E-12 / 1.9E-4	2.2E-11 / 1.4E-3	3.5E-11 / 4.3E-3	3.5E-11 / 4.8E-3
	30 d	6.3E-14 / 3.0E-6	1.3E-13 / 6.0E-6	3.3E-12 / 1.7E-4	2.0E-11 / 1.3E-3	3.2E-11 / 4.2E-3	3.2E-11 / 4.6E-3
	182 d	2.5E-14 / 1.8E-6	5.0E-14 / 3.6E-6	1.4E-12 / 1.1E-4	1.1E-11 / 1.0E-3	2.0E-11 / 3.5E-3	2.0E-11 / 4.0E-3
	1 yr	1.5E-14 / 1.4E-6	3.0E-14 / 2.8E-6	8.6E-13 / 8.3E-5	7.4E-12 / 8.4E-4	1.3E-11 / 3.0E-3	1.3E-11 / 3.4E-3
	2 yr	6.5E-15 / 9.5E-7	1.3E-14 / 1.9E-6	3.8E-13 / 5.6E-5	3.3E-12 / 5.9E-4	5.9E-12 / 2.2E-3	5.9E-12 / 2.5E-3
	5 yr	5.7E-16 / 3.8E-7	1.1E-15 / 7.5E-7	3.3E-14 / 2.2E-5	2.9E-13 / 2.4E-4	5.2E-13 / 9.7E-4	5.2E-13 / 1.2E-3
	10 yr	1.0E-17 / 1.0E-7	2.0E-17 / 2.0E-7	5.9E-16 / 6.0E-6	5.1E-15 / 6.5E-5	9.6E-15 / 2.7E-4	9.9E-15 / 4.6E-4
	20 yr	1.9E-20 / 8.0E-9	3.8E-20 / 1.6E-8	1.1E-18 / 4.8E-7	1.2E-17 / 5.2E-6	4.6E-17 / 2.1E-5	3.3E-16 / 1.9E-4
	30 yr	1.3E-21 / 6.4E-10	2.6E-21 / 1.3E-9	7.6E-20 / 3.8E-8	8.2E-19 / 4.1E-7	3.4E-18 / 1.7E-6	2.8E-16 / 1.7E-4

Table 35: Iron (Fe) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10yr	∞
1)	0	1.6E-11 / 2.9E-3	1.9E-11 / 3.9E-3	8.7E-11 / 6.4E-3	2.8E-10 / 1.3E-2	3.0E-10 / 1.5E-2	3.1E-10 / 1.4E-1
	1 min	1.6E-11 / 2.9E-3	1.9E-11 / 3.9E-3	8.7E-11 / 6.4E-3	2.8E-10 / 1.3E-2	3.0E-10 / 1.5E-2	3.1E-10 / 1.4E-1
	10 min	1.5E-11 / 2.8E-3	1.8E-11 / 3.7E-3	8.6E-11 / 6.3E-3	2.8E-10 / 1.3E-2	3.0E-10 / 1.5E-2	3.1E-10 / 1.4E-1
	30 min	1.4E-11 / 2.7E-3	1.7E-11 / 3.6E-3	8.5E-11 / 6.1E-3	2.8E-10 / 1.2E-2	3.0E-10 / 1.5E-2	3.0E-10 / 1.4E-1
	1 h	1.2E-11 / 2.5E-3	1.5E-11 / 3.4E-3	8.3E-11 / 5.9E-3	2.8E-10 / 1.2E-2	3.0E-10 / 1.4E-2	3.0E-10 / 1.4E-1
	2 h	1.0E-11 / 2.2E-3	1.2E-11 / 3.0E-3	8.1E-11 / 5.5E-3	2.7E-10 / 1.2E-2	2.9E-10 / 1.4E-2	3.0E-10 / 1.4E-1
	3 h	8.1E-12 / 2.0E-3	1.0E-11 / 2.8E-3	7.9E-11 / 5.2E-3	2.7E-10 / 1.1E-2	2.9E-10 / 1.4E-2	3.0E-10 / 1.4E-1
	6 h	4.8E-12 / 1.5E-3	6.9E-12 / 2.1E-3	7.5E-11 / 4.4E-3	2.7E-10 / 1.1E-2	2.9E-10 / 1.3E-2	2.9E-10 / 1.4E-1
	12 h	2.6E-12 / 9.3E-4	4.7E-12 / 1.3E-3	7.2E-11 / 3.5E-3	2.6E-10 / 9.8E-3	2.8E-10 / 1.2E-2	2.9E-10 / 1.3E-1
	1 d	2.0E-12 / 3.9E-4	3.9E-12 / 5.8E-4	7.0E-11 / 2.6E-3	2.6E-10 / 8.8E-3	2.8E-10 / 1.1E-2	2.9E-10 / 1.3E-1
	2 d	1.8E-12 / 1.0E-4	3.4E-12 / 1.6E-4	6.8E-11 / 2.1E-3	2.6E-10 / 8.3E-3	2.8E-10 / 1.1E-2	2.8E-10 / 1.3E-1
	7 d	1.3E-12 / 3.6E-5	2.5E-12 / 7.1E-5	6.3E-11 / 1.9E-3	2.4E-10 / 7.8E-3	2.6E-10 / 1.0E-2	2.7E-10 / 1.3E-1
	30 d	9.6E-13 / 2.8E-5	1.9E-12 / 5.7E-5	5.0E-11 / 1.5E-3	1.9E-10 / 6.4E-3	2.1E-10 / 8.6E-3	2.2E-10 / 1.3E-1
	182 d	2.2E-13 / 7.7E-6	4.4E-13 / 1.5E-5	1.1E-11 / 4.1E-4	4.6E-11 / 2.1E-3	6.0E-11 / 3.9E-3	6.5E-11 / 1.3E-1
	1 yr	4.0E-14 / 2.2E-6	8.0E-14 / 4.4E-6	2.1E-12 / 1.2E-4	9.8E-12 / 8.6E-4	2.2E-11 / 2.4E-3	2.7E-11 / 1.2E-1
	2 yr	4.2E-15 / 6.9E-7	8.4E-15 / 1.4E-6	2.4E-13 / 4.0E-5	2.4E-12 / 3.9E-4	1.3E-11 / 1.7E-3	1.7E-11 / 1.2E-1
	5 yr	2.0E-15 / 2.4E-7	4.1E-15 / 4.8E-7	1.2E-13 / 1.4E-5	1.4E-12 / 1.6E-4	8.3E-12 / 1.1E-3	1.2E-11 / 1.2E-1
	10 yr	1.1E-15 / 1.4E-7	2.1E-15 / 2.7E-7	6.3E-14 / 8.1E-6	7.2E-13 / 9.6E-5	4.3E-12 / 8.1E-4	6.1E-12 / 1.2E-1
	20 yr	2.8E-16 / 9.7E-8	5.7E-16 / 1.9E-7	1.7E-14 / 5.8E-6	1.9E-13 / 7.0E-5	1.2E-12 / 6.6E-4	1.8E-12 / 1.2E-1
30 yr	7.6E-17 / 8.7E-8	1.5E-16 / 1.7E-7	4.5E-15 / 5.2E-6	5.2E-14 / 6.3E-5	3.1E-13 / 6.1E-4	6.9E-13 / 1.2E-1	
2)	0	9.2E-12 / 4.7E-3	1.4E-11 / 6.5E-3	1.5E-10 / 1.1E-2	5.3E-10 / 2.4E-2	5.7E-10 / 2.8E-2	5.9E-10 / 6.7E-2
	1 min	9.0E-12 / 4.7E-3	1.4E-11 / 6.5E-3	1.5E-10 / 1.1E-2	5.3E-10 / 2.4E-2	5.7E-10 / 2.8E-2	5.9E-10 / 6.7E-2
	10 min	8.4E-12 / 4.5E-3	1.3E-11 / 6.3E-3	1.5E-10 / 1.1E-2	5.3E-10 / 2.4E-2	5.7E-10 / 2.8E-2	5.8E-10 / 6.7E-2
	30 min	7.9E-12 / 4.3E-3	1.3E-11 / 6.0E-3	1.5E-10 / 1.1E-2	5.2E-10 / 2.4E-2	5.7E-10 / 2.8E-2	5.8E-10 / 6.7E-2
	1 h	7.4E-12 / 4.1E-3	1.2E-11 / 5.7E-3	1.5E-10 / 1.1E-2	5.2E-10 / 2.3E-2	5.7E-10 / 2.7E-2	5.8E-10 / 6.6E-2
	2 h	6.8E-12 / 3.8E-3	1.2E-11 / 5.3E-3	1.5E-10 / 1.0E-2	5.2E-10 / 2.3E-2	5.7E-10 / 2.7E-2	5.8E-10 / 6.6E-2
	3 h	6.3E-12 / 3.5E-3	1.1E-11 / 4.9E-3	1.5E-10 / 9.7E-3	5.2E-10 / 2.2E-2	5.7E-10 / 2.6E-2	5.8E-10 / 6.5E-2
	6 h	5.5E-12 / 2.8E-3	1.0E-11 / 3.9E-3	1.4E-10 / 8.5E-3	5.2E-10 / 2.1E-2	5.7E-10 / 2.5E-2	5.8E-10 / 6.4E-2
	12 h	4.9E-12 / 1.8E-3	9.3E-12 / 2.6E-3	1.4E-10 / 6.9E-3	5.2E-10 / 1.9E-2	5.6E-10 / 2.3E-2	5.8E-10 / 6.2E-2
	1 d	4.4E-12 / 7.7E-4	8.5E-12 / 1.1E-3	1.4E-10 / 5.1E-3	5.1E-10 / 1.8E-2	5.6E-10 / 2.2E-2	5.7E-10 / 6.1E-2
	2 d	3.7E-12 / 2.0E-4	7.2E-12 / 3.3E-4	1.4E-10 / 4.1E-3	5.0E-10 / 1.7E-2	5.5E-10 / 2.1E-2	5.6E-10 / 6.0E-2
	7 d	2.5E-12 / 7.1E-5	4.9E-12 / 1.4E-4	1.2E-10 / 3.7E-3	4.7E-10 / 1.6E-2	5.2E-10 / 2.0E-2	5.3E-10 / 5.9E-2
	30 d	1.9E-12 / 5.6E-5	3.8E-12 / 1.1E-4	9.8E-11 / 3.0E-3	3.8E-10 / 1.3E-2	4.2E-10 / 1.7E-2	4.4E-10 / 5.6E-2
	182 d	4.3E-13 / 1.5E-5	8.6E-13 / 3.1E-5	2.3E-11 / 8.2E-4	9.0E-11 / 4.3E-3	1.2E-10 / 7.2E-3	1.3E-10 / 4.6E-2
	1 yr	8.0E-14 / 4.6E-6	1.6E-13 / 9.2E-6	4.2E-12 / 2.6E-4	2.0E-11 / 1.8E-3	4.8E-11 / 4.1E-3	6.0E-11 / 4.3E-2
	2 yr	9.4E-15 / 1.4E-6	1.9E-14 / 2.8E-6	5.4E-13 / 8.2E-5	5.4E-12 / 7.5E-4	2.9E-11 / 2.4E-3	4.0E-11 / 4.1E-2
	5 yr	4.7E-15 / 3.5E-7	9.4E-15 / 7.0E-7	2.8E-13 / 2.1E-5	3.2E-12 / 2.2E-4	1.9E-11 / 1.1E-3	2.6E-11 / 4.0E-2
	10 yr	2.4E-15 / 1.3E-7	4.9E-15 / 2.5E-7	1.5E-13 / 7.5E-6	1.7E-12 / 8.6E-5	9.9E-12 / 5.5E-4	1.4E-11 / 3.9E-2
	20 yr	6.5E-16 / 4.9E-8	1.3E-15 / 9.8E-8	3.9E-14 / 2.9E-6	4.5E-13 / 3.5E-5	2.7E-12 / 3.1E-4	3.7E-12 / 3.8E-2
30 yr	1.8E-16 / 3.7E-8	3.5E-16 / 7.5E-8	1.0E-14 / 2.2E-6	1.2E-13 / 2.7E-5	7.1E-13 / 2.6E-4	1.1E-12 / 3.8E-2	
3)	0	9.8E-12 / 5.3E-3	1.6E-11 / 7.3E-3	1.8E-10 / 1.3E-2	6.0E-10 / 2.9E-2	6.6E-10 / 3.4E-2	6.8E-10 / 5.2E-2
	1 min	9.5E-12 / 5.3E-3	1.6E-11 / 7.3E-3	1.8E-10 / 1.3E-2	6.0E-10 / 2.9E-2	6.6E-10 / 3.4E-2	6.8E-10 / 5.2E-2
	10 min	8.8E-12 / 5.1E-3	1.6E-11 / 7.1E-3	1.7E-10 / 1.3E-2	6.0E-10 / 2.8E-2	6.6E-10 / 3.4E-2	6.8E-10 / 5.2E-2
	30 min	8.3E-12 / 4.8E-3	1.5E-11 / 6.7E-3	1.7E-10 / 1.3E-2	6.0E-10 / 2.8E-2	6.6E-10 / 3.3E-2	6.8E-10 / 5.1E-2
	1 h	8.0E-12 / 4.6E-3	1.5E-11 / 6.5E-3	1.7E-10 / 1.2E-2	6.0E-10 / 2.8E-2	6.6E-10 / 3.3E-2	6.8E-10 / 5.1E-2
	2 h	7.8E-12 / 4.2E-3	1.4E-11 / 6.0E-3	1.7E-10 / 1.2E-2	6.0E-10 / 2.7E-2	6.6E-10 / 3.2E-2	6.8E-10 / 5.0E-2
	3 h	7.6E-12 / 3.9E-3	1.4E-11 / 5.6E-3	1.7E-10 / 1.1E-2	6.0E-10 / 2.6E-2	6.6E-10 / 3.2E-2	6.8E-10 / 5.0E-2
	6 h	7.2E-12 / 3.1E-3	1.4E-11 / 4.5E-3	1.7E-10 / 9.8E-3	6.0E-10 / 2.5E-2	6.6E-10 / 3.1E-2	6.8E-10 / 4.9E-2
	12 h	6.7E-12 / 2.0E-3	1.3E-11 / 2.9E-3	1.7E-10 / 8.0E-3	5.9E-10 / 2.3E-2	6.5E-10 / 2.9E-2	6.7E-10 / 4.7E-2
	1 d	6.0E-12 / 8.9E-4	1.1E-11 / 1.3E-3	1.6E-10 / 6.0E-3	5.9E-10 / 2.1E-2	6.5E-10 / 2.7E-2	6.7E-10 / 4.5E-2
	2 d	4.9E-12 / 2.4E-4	9.3E-12 / 3.9E-4	1.6E-10 / 4.8E-3	5.8E-10 / 2.0E-2	6.4E-10 / 2.5E-2	6.6E-10 / 4.3E-2
	7 d	2.9E-12 / 8.4E-5	5.7E-12 / 1.7E-4	1.4E-10 / 4.3E-3	5.4E-10 / 1.9E-2	6.0E-10 / 2.4E-2	6.2E-10 / 4.2E-2
	30 d	2.1E-12 / 6.6E-5	4.3E-12 / 1.3E-4	1.1E-10 / 3.5E-3	4.3E-10 / 1.6E-2	4.9E-10 / 2.1E-2	5.1E-10 / 3.9E-2
	182 d	4.9E-13 / 1.9E-5	9.8E-13 / 3.8E-5	2.6E-11 / 1.0E-3	1.0E-10 / 5.6E-3	1.5E-10 / 9.5E-3	1.7E-10 / 2.7E-2
	1 yr	9.3E-14 / 6.2E-6	1.9E-13 / 1.2E-5	4.9E-12 / 3.5E-4	2.5E-11 / 2.5E-3	6.4E-11 / 5.5E-3	8.1E-11 / 2.3E-2
	2 yr	1.3E-14 / 2.0E-6	2.6E-14 / 4.0E-6	7.6E-13 / 1.2E-4	7.6E-12 / 1.1E-3	4.2E-11 / 3.0E-3	5.7E-11 / 2.1E-2
	5 yr	6.8E-15 / 4.3E-7	1.4E-14 / 8.6E-7	4.1E-13 / 2.5E-5	4.6E-12 / 2.7E-4	2.7E-11 / 1.2E-3	3.8E-11 / 1.9E-2
	10 yr	3.5E-15 / 1.3E-7	7.0E-15 / 2.6E-7	2.1E-13 / 7.7E-6	2.4E-12 / 8.6E-5	1.4E-11 / 4.7E-4	1.9E-11 / 1.8E-2
	20 yr	9.4E-16 / 3.2E-8	1.9E-15 / 6.5E-8	5.6E-14 / 1.9E-6	6.4E-13 / 2.3E-5	3.8E-12 / 1.7E-4	5.3E-12 / 1.8E-2
30 yr	2.5E-16 / 1.9E-8	5.0E-16 / 3.8E-8	1.5E-14 / 1.1E-6	1.7E-13 / 1.4E-5	1.0E-12 / 1.2E-4	1.4E-12 / 1.7E-2	
4)	0	8.9E-12 / 4.5E-3	1.3E-11 / 6.1E-3	1.4E-10 / 1.1E-2	4.9E-10 / 2.2E-2	5.3E-10 / 2.5E-2	5.4E-10 / 7.8E-2
	1 min	8.8E-12 / 4.4E-3	1.3E-11 / 6.1E-3	1.4E-10 / 1.1E-2	4.9E-10 / 2.2E-2	5.3E-10 / 2.5E-2	5.4E-10 / 7.8E-2
	10 min	8.3E-12 / 4.3E-3	1.2E-11 / 5.9E-3	1.4E-10 / 1.1E-2	4.9E-10 / 2.2E-2	5.3E-10 / 2.5E-2	5.4E-10 / 7.8E-2
	30 min	7.7E-12 / 4.1E-3	1.1E-11 / 5.7E-3	1.4E-10 / 1.0E-2	4.9E-10 / 2.2E-2	5.3E-10 / 2.5E-2	5.4E-10 / 7.8E-2
	1 h	7.1E-12 / 3.9E-3	1.1E-11 / 5.5E-3	1.4E-10 / 1.0E-2	4.9E-10 / 2.1E-2	5.3E-10 / 2.5E-2	5.4E-10 / 7.7E-2
	2 h	6.3E-12 / 3.6E-3	9.9E-12 / 5.0E-3	1.3E-10 / 9.5E-3	4.9E-10 / 2.1E-2	5.3E-10 / 2.4E-2	5.4E-10 / 7.7E-2
	3 h	5.6E-12 / 3.3E-3	9.2E-12 / 4.7E-3	1.3E-10 / 9.0E-3	4.9E-10 / 2.0E-2	5.2E-10 / 2.4E-2	5.3E-10 / 7.6E-2
	6 h	4.5E-12 / 2.6E-3	8.0E-12 / 3.7E-3	1.3E-10 / 7.9E-3	4.8E-10 / 1.9E-2	5.2E-10 / 2.2E-2	5.3E-10 / 7.5E-2
	12 h	3.7E-12 / 1.7E-3	7.1E-12 / 2.4E-3	1.3E-10 / 6.3E-3	4.8E-10 / 1.8E-2	5.2E-10 / 2.1E-2	5.3E-10 / 7.4E-2
	1 d	3.4E-12 / 7.2E-4	6.6E-12 / 1.1E-3	1.3E-10 / 4.7E-3	4.8E-10 / 1.6E-2	5.2E-10 / 1.9E-2	5.3E-10 / 7.2E-2
	2 d	3.0E-12 / 1.8E-4	5.9E-12 / 3.0E-4	1.3E-10 / 3.8E-3	4.7E-10 / 1.5E-2	5.1E-10 / 1.8E-2	5.2E-10 / 7.1E-2
	7 d	2.3E-12 / 6.5E-5	4.6E-12 / 1.3E-4	1.2E-10 / 3.4E-3	4.5E-10 / 1.4E-2	4.8E-10 / 1.7E-2	4.9E-10 / 7.0E-2
	30 d	1.8E-12 / 5.2E-5	3.5E-12 / 1.0E-4	9.3E-11 / 2.7E-3	3.6E-10 / 1.1E-2	3.9E-10 / 1.5E-2	4.0E-10 / 6.7E-2
	182 d	4.1E-13 / 1.4E-5	8.1E-13 / 2.7E-5	2.1E-11 / 7.2E-4	8.4E-11 / 3.6E-3	1.1E-10 / 6.0E-3	1.2E-10 / 5.9E-2
	1 yr	7.3E-14 / 3.7E-6	1.5E-13 / 7.4E-6	3.9E-12 / 2.0E-4	1.8E-11 / 1.4E-3	3.9E-11 / 3.4E-3	4.8E-11 / 5.6E-2
	2 yr	7.4E-15 / 1.1E-6	1.5E-14 / 2.1E-6	4.3E-13 / 6.1E-5	4.1E-12 / 5.8E-4	2.2E-11 / 2.1E-3	3.0E-11 / 5.5E-2
	5 yr	3.6E-15 / 3.1E-7	7.2E-15 / 6.1E-7	2.1E-13 / 1.8E-5	2.4E-12 / 2.0E-4	1.4E-11 / 1.1E-3	2.0E-11 / 5.3E-2
	10 yr	1.8E-15 / 1.3E-7	3.7E-15 / 2.6E-7	1.1E-13 / 7.6E-6	1.3E-12 / 8.8E-5	7.5E-12 / 6.2E-4	1.0E-11 / 5.3E-2
	20 yr	5.0E-16 / 6.4E-8	9.9E-16 / 1.3E-7	3.0E-14 / 3.8E-6	3.4E-13 / 4.6E-5	2.0E-12 / 4.2E-4	2.9E-12 / 5.2E-2
30 yr	1.3E-16 / 5.3E-8	2.7E-16 / 1.1E-7	8.0E-15 / 3.2E-6	9.1E-14 / 3.8E-5	5.4E-13 / 3.7E-4	8.5E-13 / 5.2E-2	

Table 36: Nickel (Ni) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10yr	∞
1)	0	1.5E-9/2.6E-1	2.2E-9/3.6E-1	2.9E-9/4.6E-1	2.9E-9/4.6E-1	2.9E-9/4.6E-1	2.9E-9/4.6E-1
	1 min	1.5E-9/2.5E-1	2.1E-9/3.5E-1	2.8E-9/4.5E-1	2.8E-9/4.5E-1	2.9E-9/4.5E-1	2.9E-9/4.5E-1
	10 min	1.3E-9/2.0E-1	2.0E-9/3.0E-1	2.7E-9/4.0E-1	2.7E-9/4.0E-1	2.7E-9/4.0E-1	2.7E-9/4.0E-1
	30 min	1.2E-9/1.8E-1	1.9E-9/2.8E-1	2.6E-9/3.8E-1	2.6E-9/3.8E-1	2.6E-9/3.8E-1	2.6E-9/3.8E-1
	1 h	1.2E-9/1.8E-1	1.8E-9/2.7E-1	2.5E-9/3.7E-1	2.5E-9/3.7E-1	2.5E-9/3.7E-1	2.5E-9/3.7E-1
	2 h	1.1E-9/1.7E-1	1.7E-9/2.5E-1	2.3E-9/3.5E-1	2.4E-9/3.5E-1	2.4E-9/3.5E-1	2.4E-9/3.5E-1
	3 h	1.1E-9/1.6E-1	1.6E-9/2.4E-1	2.2E-9/3.3E-1	2.2E-9/3.3E-1	2.2E-9/3.3E-1	2.2E-9/3.3E-1
	6 h	9.1E-10/1.3E-1	1.4E-9/2.0E-1	1.9E-9/2.8E-1	1.9E-9/2.8E-1	1.9E-9/2.8E-1	1.9E-9/2.8E-1
	12 h	6.5E-10/9.6E-2	9.9E-10/1.5E-1	1.4E-9/2.0E-1	1.4E-9/2.0E-1	1.4E-9/2.0E-1	1.4E-9/2.0E-1
	1 d	3.4E-10/5.0E-2	5.2E-10/7.6E-2	7.1E-10 /1.0E-1	7.1E-10/1.0E-1	7.2E-10/1.0E-1	7.2E-10/1.1E-1
	2 d	9.2E-11/1.4E-2	1.4E-10/2.1E-2	1.9E-10/2.8E-2	1.9E-10/2.8E-2	2.0E-10/2.8E-2	2.1E-10/2.9E-2
	7 d	1.3E-13/1.9E-5	2.0E-13/2.9E-5	4.3E-13/4.3E-5	2.1E-12/6.7E-5	1.1E-11/2.3E-4	1.5E-11/1.4E-3
	30 d	2.7E-15/3.9E-8	5.4E-15/7.7E-8	1.6E-13/2.3E-6	1.8E-12/2.7E-5	1.1E-11/1.9E-4	1.5E-11/1.3E-3
	182 d	2.5E-15/3.7E-8	5.1E-15/7.4E-8	1.5E-13/2.2E-6	1.7E-12/2.6E-5	1.0E-11/1.8E-4	1.4E-11/1.3E-3
	1 yr	2.4E-15/3.5E-8	4.7E-15/7.1E-8	1.4E-13/2.1E-6	1.6E-12/2.5E-5	9.6E-12/1.8E-4	1.3E-11/1.3E-3
	2 yr	2.1E-15/3.2E-8	4.2E-15/6.5E-8	1.2E-13/1.9E-6	1.4E-12/2.3E-5	8.5E-12/1.6E-4	1.2E-11/1.3E-3
	5 yr	1.4E-15/2.5E-8	2.8E-15/5.0E-8	8.4E-14/1.5E-6	9.6E-13/1.8E-5	5.7E-12/1.3E-4	7.8E-12/1.2E-3
	10 yr	7.3E-16/1.8E-8	1.5E-15/3.6E-8	4.3E-14/1.1E-6	5.0E-13/1.3E-5	3.0E-12/1.0E-4	4.0E-12/1.1E-3
	20 yr	2.0E-16/1.2E-8	3.9E-16/2.3E-8	1.2E-14/7.0E-7	1.3E-13/8.4E-6	7.9E-13/7.6E-5	1.1E-12/1.0E-3
30 yr	5.3E-17/9.6E-9	1.1E-16/1.9E-8	3.1E-15/5.7E-7	3.6E-14/6.9E-6	2.1E-13/6.6E-5	2.9E-13/9.5E-4	
2)	0	3.3E-10/4.4E-2	4.3E-10/5.9E-2	5.5E-10/7.6E-2	5.5E-10/7.6E-2	5.7E-10/7.6E-2	5.8E-10/7.8E-2
	1 min	3.2E-10/4.2E-2	4.2E-10/5.7E-2	5.3E-10/7.4E-2	5.4E-10/7.4E-2	5.6E-10/7.4E-2	5.7E-10/7.6E-2
	10 min	2.5E-10/3.4E-2	3.6E-10/4.9E-2	4.7E-10/6.5E-2	4.7E-10/6.5E-2	4.9E-10/6.5E-2	5.0E-10/6.7E-2
	30 min	2.1E-10/2.9E-2	3.1E-10/4.4E-2	4.2E-10/6.0E-2	4.2E-10/6.0E-2	4.4E-10/6.1E-2	4.5E-10/6.2E-2
	1 h	1.9E-10/2.8E-2	2.9E-10/4.2E-2	4.0E-10/5.8E-2	4.0E-10/5.8E-2	4.2E-10/5.8E-2	4.3E-10/6.0E-2
	2 h	1.8E-10/2.6E-2	2.7E-10/4.0E-2	3.7E-10/5.5E-2	3.8E-10/5.5E-2	4.0E-10/5.5E-2	4.1E-10/5.7E-2
	3 h	1.7E-10/2.5E-2	2.6E-10/3.8E-2	3.5E-10/5.2E-2	3.6E-10/5.2E-2	3.8E-10/5.2E-2	3.9E-10/5.4E-2
	6 h	1.4E-10/2.1E-2	2.2E-10/3.2E-2	3.0E-10/4.4E-2	3.0E-10/4.4E-2	3.2E-10/4.5E-2	3.3E-10/4.6E-2
	12 h	1.0E-10/1.5E-2	1.6E-10/2.3E-2	2.2E-10/3.2E-2	2.2E-10/3.2E-2	2.4E-10/3.2E-2	2.5E-10/3.4E-2
	1 d	5.4E-11/7.9E-3	8.2E-11/1.2E-2	1.1E-10 /1.7E-2	1.2E-10/1.7E-2	1.4E-10/1.7E-2	1.5E-10/1.9E-2
	2 d	1.5E-11/2.1E-3	2.2E-11/3.3E-3	3.1E-11/4.5E-3	3.4E-11/4.5E-3	5.5E-11/4.8E-3	6.4E-11/6.8E-3
	7 d	2.7E-14/3.1E-6	4.4E-14/4.8E-6	4.1E-13/1.1E-5	4.2E-12/6.3E-5	2.5E-11/3.9E-4	3.4E-11/2.3E-3
	30 d	6.0E-15/8.1E-8	1.2E-14/1.6E-7	3.6E-13/4.8E-6	4.1E-12/5.6E-5	2.5E-11/3.8E-4	3.4E-11/2.3E-3
	182 d	5.7E-15/7.7E-8	1.1E-14/1.5E-7	3.4E-13/4.6E-6	3.9E-12/5.4E-5	2.3E-11/3.7E-4	3.2E-11/2.3E-3
	1 yr	5.3E-15/7.3E-8	1.1E-14/1.5E-7	3.2E-13/4.4E-6	3.7E-12/5.1E-5	2.2E-11/3.5E-4	3.0E-11/2.3E-3
	2 yr	4.7E-15/6.7E-8	9.4E-15/1.3E-7	2.8E-13/4.0E-6	3.2E-12/4.6E-5	1.9E-11/3.3E-4	2.6E-11/2.2E-3
	5 yr	3.2E-15/5.0E-8	6.3E-15/1.0E-7	1.9E-13/3.0E-6	2.2E-12/3.5E-5	1.3E-11/2.6E-4	1.8E-11/2.1E-3
	10 yr	1.6E-15/3.4E-8	3.3E-15/6.8E-8	9.8E-14/2.0E-6	1.1E-12/2.4E-5	6.7E-12/1.9E-4	9.1E-12/1.9E-3
	20 yr	4.4E-16/2.1E-8	8.8E-16/4.1E-8	2.6E-14/1.2E-6	3.0E-13/1.5E-5	1.8E-12/1.3E-4	2.4E-12/1.7E-3
30 yr	1.2E-16/1.6E-8	2.4E-16/3.3E-8	7.1E-15/9.8E-7	8.1E-14/1.2E-5	4.8E-13/1.1E-4	6.6E-13/1.6E-3	
3)	0	2.8E-10/2.5E-2	3.3E-10/3.3E-2	3.9E-10/4.2E-2	4.0E-10/4.2E-2	4.3E-10/4.2E-2	4.4E-10/4.4E-2
	1 min	2.7E-10/2.4E-2	3.2E-10/3.2E-2	3.8E-10/4.0E-2	3.8E-10/4.1E-2	4.1E-10/4.1E-2	4.3E-10/4.3E-2
	10 min	1.9E-10/1.9E-2	2.4E-10/2.6E-2	2.9E-10/3.5E-2	3.0E-10/3.5E-2	3.3E-10/3.5E-2	3.4E-10/3.7E-2
	30 min	1.2E-10/1.5E-2	1.7E-10/2.3E-2	2.3E-10/3.1E-2	2.3E-10/3.1E-2	2.6E-10/3.2E-2	2.8E-10/3.4E-2
	1 h	1.0E-10/1.4E-2	1.5E-10/2.2E-2	2.1E-10/3.0E-2	2.1E-10/3.0E-2	2.4E-10/3.0E-2	2.5E-10/3.2E-2
	2 h	9.3E-11/1.3E-2	1.4E-10/2.0E-2	1.9E-10/2.8E-2	2.0E-10/2.8E-2	2.3E-10/2.9E-2	2.4E-10/3.1E-2
	3 h	8.7E-11/1.3E-2	1.3E-10/1.9E-2	1.8E-10/2.6E-2	1.9E-10/2.7E-2	2.2E-10/2.7E-2	2.3E-10/2.9E-2
	6 h	7.4E-11/1.1E-2	1.1E-10/1.6E-2	1.5E-10/2.2E-2	1.6E-10/2.3E-2	1.9E-10/2.3E-2	2.0E-10/2.5E-2
	12 h	5.3E-11/7.8E-3	8.0E-11/1.2E-2	1.1E-10/1.6E-2	1.2E-10/1.6E-2	1.5E-10/1.7E-2	1.6E-10/1.9E-2
	1 d	2.7E-11/4.0E-3	4.2E-11/6.1E-3	5.8E-11 /8.4E-3	6.3E-11/8.5E-3	9.3E-11/8.9E-3	1.1E-10/1.1E-2
	2 d	7.4E-12/1.1E-3	1.1E-11/1.7E-3	1.6E-11/2.3E-3	2.2E-11/2.3E-3	5.2E-11/2.8E-3	6.5E-11/5.0E-3
	7 d	2.0E-14/1.7E-6	3.4E-14/2.6E-6	5.6E-13/1.0E-5	6.2E-12/8.1E-5	3.6E-11/5.2E-4	5.0E-11/2.7E-3
	30 d	8.9E-15/1.1E-7	1.8E-14/2.2E-7	5.3E-13/6.7E-6	6.1E-12/7.8E-5	3.6E-11/5.2E-4	4.9E-11/2.7E-3
	182 d	8.4E-15/1.1E-7	1.7E-14/2.1E-7	5.0E-13/6.4E-6	5.8E-12/7.4E-5	3.4E-11/5.0E-4	4.7E-11/2.7E-3
	1 yr	7.9E-15/1.0E-7	1.6E-14/2.0E-7	4.7E-13/6.1E-6	5.4E-12/7.1E-5	3.2E-11/4.8E-4	4.4E-11/2.6E-3
	2 yr	6.9E-15/9.2E-8	1.4E-14/1.8E-7	4.1E-13/5.5E-6	4.7E-12/6.4E-5	2.8E-11/4.3E-4	3.8E-11/2.6E-3
	5 yr	4.7E-15/6.8E-8	9.3E-15/1.4E-7	2.8E-13/4.1E-6	3.2E-12/4.7E-5	1.9E-11/3.4E-4	2.6E-11/2.4E-3
	10 yr	2.4E-15/4.4E-8	4.8E-15/8.9E-8	1.4E-13/2.6E-6	1.7E-12/3.1E-5	9.8E-12/2.4E-4	1.3E-11/2.2E-3
	20 yr	6.5E-16/2.5E-8	1.3E-15/5.0E-8	3.9E-14/1.5E-6	4.4E-13/1.8E-5	2.6E-12/1.6E-4	3.6E-12/1.9E-3
30 yr	1.7E-16/1.9E-8	3.5E-16/3.7E-8	1.0E-14/1.1E-6	1.2E-13/1.4E-5	7.1E-13/1.3E-4	9.7E-13/1.8E-3	
4)	0	3.7E-10/5.6E-2	5.0E-10/7.6E-2	6.5E-10/9.7E-2	6.5E-10/9.7E-2	6.7E-10/9.8E-2	6.7E-10/1.0E-1
	1 min	3.6E-10/5.4E-2	4.9E-10/7.4E-2	6.4E-10/9.5E-2	6.4E-10/9.5E-2	6.6E-10/9.5E-2	6.6E-10/9.7E-2
	10 min	3.0E-10/4.3E-2	4.3E-10/6.2E-2	5.7E-10/8.3E-2	5.8E-10/8.3E-2	5.9E-10/8.4E-2	6.0E-10/8.6E-2
	30 min	2.6E-10/3.7E-2	3.9E-10/5.7E-2	5.3E-10/7.7E-2	5.3E-10/7.7E-2	5.5E-10/7.8E-2	5.6E-10/8.0E-2
	1 h	2.5E-10/3.6E-2	3.7E-10/5.5E-2	5.1E-10/7.5E-2	5.1E-10/7.5E-2	5.3E-10/7.5E-2	5.4E-10/7.7E-2
	2 h	2.3E-10/3.4E-2	3.5E-10/5.2E-2	4.8E-10/7.1E-2	4.8E-10/7.1E-2	5.0E-10/7.1E-2	5.1E-10/7.3E-2
	3 h	2.2E-10/3.2E-2	3.3E-10/4.9E-2	4.6E-10/6.7E-2	4.6E-10/6.7E-2	4.7E-10/6.7E-2	4.8E-10/6.9E-2
	6 h	1.9E-10/2.7E-2	2.8E-10/4.2E-2	3.9E-10/5.7E-2	3.9E-10/5.7E-2	4.1E-10/5.7E-2	4.1E-10/5.9E-2
	12 h	1.3E-10/2.0E-2	2.0E-10/3.0E-2	2.8E-10/4.1E-2	2.8E-10/4.1E-2	3.0E-10/4.1E-2	3.0E-10/4.3E-2
	1 d	6.9E-11/1.0E-2	1.1E-10/1.6E-2	1.4E-10 /2.1E-2	1.5E-10/2.1E-2	1.6E-10/2.2E-2	1.7E-10/2.4E-2
	2 d	1.9E-11/2.8E-3	2.9E-11/4.2E-3	3.9E-11/5.8E-3	4.2E-11/5.8E-3	5.8E-11/6.1E-3	6.5E-11/8.0E-3
	7 d	3.2E-14/4.0E-6	5.0E-14/6.1E-6	3.4E-13/1.2E-5	3.3E-12/5.5E-5	1.9E-11/3.4E-4	2.6E-11/2.3E-3
	30 d	4.7E-15/6.7E-8	9.4E-15/1.3E-7	2.8E-13/4.0E-6	3.2E-12/4.7E-5	1.9E-11/3.3E-4	2.6E-11/2.3E-3
	182 d	4.4E-15/6.5E-8	8.9E-15/1.3E-7	2.7E-13/3.9E-6	3.0E-12/4.5E-5	1.8E-11/3.2E-4	2.5E-11/2.2E-3
	1 yr	4.2E-15/6.2E-8	8.3E-15/1.2E-7	2.5E-13/3.7E-6	2.9E-12/4.3E-5	1.7E-11/3.1E-4	2.3E-11/2.2E-3
	2 yr	3.7E-15/5.6E-8	7.3E-15/1.1E-7	2.2E-13/3.4E-6	2.5E-12/3.9E-5	1.5E-11/2.8E-4	2.0E-11/2.2E-3
	5 yr	2.5E-15/4.4E-8	4.9E-15/8.7E-8	1.5E-13/2.6E-6	1.7E-12/3.1E-5	1.0E-11/2.3E-4	1.4E-11/2.1E-3
	10 yr	1.3E-15/3.1E-8	2.6E-15/6.1E-8	7.6E-14/1.8E-6	8.7E-13/2.2E-5	5.2E-12/1.8E-4	7.1E-12/1.9E-3
	20 yr	3.4E-16/2.0E-8	6.9E-16/4.0E-8	2.0E-14/1.2E-6	2.3E-13/1.4E-5	1.4E-12/1.3E-4	1.9E-12/1.8E-3
30 yr	9.2E-17/1.6E-8	1.8E-16/3.3E-8	5.5E-15/9.8E-7	6.3E-14/1.2E-5	3.7E-13/1.1E-4	5.1E-13/1.6E-3	

Table 37: Copper (Cu) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1 d	30 d	1 yr	10 yr	∞
1)	0	8.6E-11 / 4.7E-1	8.8E-11 / 4.7E-1	1.4E-10 / 4.8E-1	1.5E-10 / 4.8E-1	1.7E-10 / 4.8E-1	5.5E-8 / 1.4E+0
	1 min	7.7E-11 / 4.2E-1	7.9E-11 / 4.3E-1	1.3E-10 / 4.3E-1	1.4E-10 / 4.3E-1	1.6E-10 / 4.3E-1	5.5E-8 / 1.4E+0
	10 min	3.0E-11 / 1.6E-1	3.2E-11 / 1.6E-1	8.3E-11 / 1.6E-1	9.3E-11 / 1.6E-1	1.1E-10 / 1.6E-1	5.5E-8 / 1.1E+0
	30 min	5.3E-12 / 1.7E-2	7.4E-12 / 1.7E-2	5.8E-11 / 1.9E-2	6.8E-11 / 1.9E-2	8.5E-11 / 1.9E-2	5.5E-8 / 9.7E-1
	1 h	2.4E-12 / 6.9E-4	4.5E-12 / 7.5E-4	5.5E-11 / 2.1E-3	6.5E-11 / 2.4E-3	8.2E-11 / 2.7E-3	5.5E-8 / 9.5E-1
	2 h	2.2E-12 / 7.0E-5	4.3E-12 / 1.3E-4	5.5E-11 / 1.5E-3	6.5E-11 / 1.8E-3	8.2E-11 / 2.1E-3	5.5E-8 / 9.5E-1
	3 h	2.2E-12 / 6.7E-5	4.3E-12 / 1.3E-4	5.5E-11 / 1.5E-3	6.5E-11 / 1.8E-3	8.1E-11 / 2.0E-3	5.5E-8 / 9.5E-1
	6 h	2.1E-12 / 6.3E-5	4.2E-12 / 1.2E-4	5.4E-11 / 1.5E-3	6.4E-11 / 1.7E-3	8.1E-11 / 2.0E-3	5.5E-8 / 9.5E-1
	12 h	2.1E-12 / 5.9E-5	4.0E-12 / 1.2E-4	5.3E-11 / 1.4E-3	6.3E-11 / 1.7E-3	8.0E-11 / 2.0E-3	5.5E-8 / 9.5E-1
	1 d	2.0E-12 / 5.6E-5	3.9E-12 / 1.1E-4	5.1E-11 / 1.4E-3	6.1E-11 / 1.6E-3	7.8E-11 / 1.9E-3	5.5E-8 / 9.5E-1
	2 d	1.8E-12 / 5.2E-5	3.6E-12 / 1.0E-4	4.8E-11 / 1.3E-3	5.7E-11 / 1.5E-3	7.4E-11 / 1.8E-3	5.5E-8 / 9.5E-1
	7 d	1.3E-12 / 3.6E-5	2.6E-12 / 7.0E-5	3.4E-11 / 9.2E-4	4.1E-11 / 1.1E-3	5.8E-11 / 1.4E-3	5.5E-8 / 9.5E-1
	30 d	2.8E-13 / 7.4E-6	5.4E-13 / 1.4E-5	7.2E-12 / 1.9E-4	1.0E-11 / 2.6E-4	2.7E-11 / 5.5E-4	5.5E-8 / 9.5E-1
	182 d	2.6E-15 / 5.5E-8	5.2E-15 / 1.1E-7	1.6E-13 / 3.2E-6	1.9E-12 / 3.4E-5	1.9E-11 / 3.3E-4	5.5E-8 / 9.5E-1
	1 yr	2.6E-15 / 4.6E-8	5.2E-15 / 9.1E-8	1.5E-13 / 2.7E-6	1.9E-12 / 3.3E-5	1.9E-11 / 3.2E-4	5.5E-8 / 9.5E-1
	2 yr	2.6E-15 / 4.4E-8	5.2E-15 / 8.9E-8	1.5E-13 / 2.7E-6	1.9E-12 / 3.2E-5	1.9E-11 / 3.2E-4	5.5E-8 / 9.5E-1
	5 yr	2.6E-15 / 4.4E-8	5.2E-15 / 8.9E-8	1.5E-13 / 2.7E-6	1.9E-12 / 3.2E-5	1.9E-11 / 3.2E-4	5.5E-8 / 9.5E-1
	10 yr	2.6E-15 / 4.4E-8	5.2E-15 / 8.9E-8	1.5E-13 / 2.7E-6	1.9E-12 / 3.2E-5	1.9E-11 / 3.2E-4	5.5E-8 / 9.5E-1
	20 yr	2.6E-15 / 4.4E-8	5.1E-15 / 8.9E-8	1.5E-13 / 2.7E-6	1.9E-12 / 3.2E-5	1.9E-11 / 3.2E-4	5.5E-8 / 9.5E-1
	30 yr	2.6E-15 / 4.4E-8	5.1E-15 / 8.9E-8	1.5E-13 / 2.7E-6	1.9E-12 / 3.2E-5	1.9E-11 / 3.2E-4	5.5E-8 / 9.5E-1
2)	0	1.5E-11 / 5.4E-2	2.0E-11 / 5.4E-2	1.3E-10 / 5.7E-2	1.5E-10 / 5.7E-2	1.5E-10 / 5.7E-2	6.6E-9 / 1.7E-1
	1 min	1.4E-11 / 4.8E-2	1.8E-11 / 4.8E-2	1.3E-10 / 5.1E-2	1.5E-10 / 5.2E-2	1.5E-10 / 5.2E-2	6.6E-9 / 1.6E-1
	10 min	8.2E-12 / 1.8E-2	1.3E-11 / 1.8E-2	1.3E-10 / 2.1E-2	1.5E-10 / 2.2E-2	1.5E-10 / 2.2E-2	6.6E-9 / 1.3E-1
	30 min	5.5E-12 / 2.1E-3	1.0E-11 / 2.2E-3	1.2E-10 / 5.3E-3	1.4E-10 / 5.8E-3	1.5E-10 / 5.9E-3	6.6E-9 / 1.2E-1
	1 h	5.1E-12 / 2.2E-4	9.7E-12 / 3.6E-4	1.2E-10 / 3.5E-3	1.4E-10 / 4.0E-3	1.4E-10 / 4.0E-3	6.6E-9 / 1.1E-1
	2 h	5.0E-12 / 1.5E-4	9.6E-12 / 2.8E-4	1.2E-10 / 3.4E-3	1.4E-10 / 3.9E-3	1.4E-10 / 3.9E-3	6.6E-9 / 1.1E-1
	3 h	4.9E-12 / 1.5E-4	9.5E-12 / 2.8E-4	1.2E-10 / 3.4E-3	1.4E-10 / 3.9E-3	1.4E-10 / 3.9E-3	6.6E-9 / 1.1E-1
	6 h	4.8E-12 / 1.4E-4	9.4E-12 / 2.7E-4	1.2E-10 / 3.3E-3	1.4E-10 / 3.8E-3	1.4E-10 / 3.8E-3	6.6E-9 / 1.1E-1
	12 h	4.7E-12 / 1.3E-4	9.1E-12 / 2.6E-4	1.2E-10 / 3.3E-3	1.4E-10 / 3.8E-3	1.4E-10 / 3.8E-3	6.6E-9 / 1.1E-1
	1 d	4.5E-12 / 1.2E-4	8.8E-12 / 2.4E-4	1.2E-10 / 3.1E-3	1.3E-10 / 3.6E-3	1.4E-10 / 3.7E-3	6.6E-9 / 1.1E-1
	2 d	4.2E-12 / 1.2E-4	8.2E-12 / 2.3E-4	1.1E-10 / 2.9E-3	1.2E-10 / 3.4E-3	1.3E-10 / 3.4E-3	6.5E-9 / 1.1E-1
	7 d	3.0E-12 / 8.0E-5	5.8E-12 / 1.6E-4	7.7E-11 / 2.1E-3	8.9E-11 / 2.4E-3	9.0E-11 / 2.4E-3	6.5E-9 / 1.1E-1
	30 d	6.2E-13 / 1.7E-5	1.2E-12 / 3.3E-5	1.6E-11 / 4.3E-4	1.9E-11 / 5.2E-4	2.1E-11 / 5.5E-4	6.4E-9 / 1.1E-1
	182 d	3.5E-16 / 3.4E-8	6.9E-16 / 6.7E-8	2.0E-14 / 1.8E-6	2.2E-13 / 8.7E-6	2.1E-12 / 4.3E-5	6.4E-9 / 1.1E-1
	1 yr	2.9E-16 / 8.7E-9	5.9E-16 / 1.7E-8	1.8E-14 / 4.9E-7	2.1E-13 / 4.4E-6	2.1E-12 / 3.9E-5	6.4E-9 / 1.1E-1
	2 yr	2.9E-16 / 5.3E-9	5.8E-16 / 1.1E-8	1.7E-14 / 3.2E-7	2.1E-13 / 3.8E-6	2.1E-12 / 3.8E-5	6.4E-9 / 1.1E-1
	5 yr	2.9E-16 / 5.2E-9	5.8E-16 / 1.0E-8	1.7E-14 / 3.1E-7	2.1E-13 / 3.8E-6	2.1E-12 / 3.8E-5	6.4E-9 / 1.1E-1
	10 yr	2.9E-16 / 5.2E-9	5.8E-16 / 1.0E-8	1.7E-14 / 3.1E-7	2.1E-13 / 3.8E-6	2.1E-12 / 3.8E-5	6.4E-9 / 1.1E-1
	20 yr	2.9E-16 / 5.1E-9	5.8E-16 / 1.0E-8	1.7E-14 / 3.1E-7	2.1E-13 / 3.7E-6	2.1E-12 / 3.7E-5	6.4E-9 / 1.1E-1
	30 yr	2.9E-16 / 5.1E-9	5.8E-16 / 1.0E-8	1.7E-14 / 3.1E-7	2.1E-13 / 3.7E-6	2.1E-12 / 3.7E-5	6.4E-9 / 1.1E-1
3)	0	1.4E-11 / 2.9E-2	2.1E-11 / 3.0E-2	2.0E-10 / 3.4E-2	2.3E-10 / 3.5E-2	2.3E-10 / 3.5E-2	4.0E-9 / 1.0E-1
	1 min	1.3E-11 / 2.6E-2	2.0E-11 / 2.6E-2	2.0E-10 / 3.1E-2	2.2E-10 / 3.2E-2	2.3E-10 / 3.2E-2	4.0E-9 / 9.7E-2
	10 min	9.6E-12 / 9.9E-3	1.7E-11 / 1.0E-2	1.9E-10 / 1.5E-2	2.2E-10 / 1.6E-2	2.2E-10 / 1.6E-2	4.0E-9 / 8.0E-2
	30 min	8.0E-12 / 1.3E-3	1.5E-11 / 1.5E-3	1.9E-10 / 6.3E-3	2.2E-10 / 7.1E-3	2.2E-10 / 7.1E-3	3.9E-9 / 7.2E-2
	1 h	7.8E-12 / 2.7E-4	1.5E-11 / 4.7E-4	1.9E-10 / 5.2E-3	2.2E-10 / 6.0E-3	2.2E-10 / 6.1E-3	3.9E-9 / 7.1E-2
	2 h	7.7E-12 / 2.3E-4	1.5E-11 / 4.3E-4	1.9E-10 / 5.2E-3	2.2E-10 / 6.0E-3	2.2E-10 / 6.0E-3	3.9E-9 / 7.1E-2
	3 h	7.6E-12 / 2.2E-4	1.5E-11 / 4.2E-4	1.9E-10 / 5.2E-3	2.2E-10 / 5.9E-3	2.2E-10 / 6.0E-3	3.9E-9 / 7.1E-2
	6 h	7.4E-12 / 2.1E-4	1.4E-11 / 4.1E-4	1.9E-10 / 5.1E-3	2.2E-10 / 5.9E-3	2.2E-10 / 5.9E-3	3.9E-9 / 7.0E-2
	12 h	7.1E-12 / 2.0E-4	1.4E-11 / 3.9E-4	1.8E-10 / 5.0E-3	2.1E-10 / 5.8E-3	2.1E-10 / 5.8E-3	3.9E-9 / 7.0E-2
	1 d	6.9E-12 / 1.9E-4	1.3E-11 / 3.8E-4	1.8E-10 / 4.8E-3	2.0E-10 / 5.6E-3	2.1E-10 / 5.6E-3	3.9E-9 / 7.0E-2
	2 d	6.4E-12 / 1.8E-4	1.3E-11 / 3.5E-4	1.7E-10 / 4.5E-3	1.9E-10 / 5.2E-3	1.9E-10 / 5.2E-3	3.9E-9 / 7.0E-2
	7 d	4.6E-12 / 1.2E-4	8.9E-12 / 2.4E-4	1.2E-10 / 3.2E-3	1.4E-10 / 3.7E-3	1.4E-10 / 3.7E-3	3.9E-9 / 6.8E-2
	30 d	9.5E-13 / 2.5E-5	1.9E-12 / 5.0E-5	2.5E-11 / 6.7E-4	2.8E-11 / 8.0E-4	2.9E-11 / 8.2E-4	3.8E-9 / 6.5E-2
	182 d	2.6E-16 / 5.5E-8	5.2E-16 / 1.1E-7	1.4E-14 / 2.8E-6	1.3E-13 / 1.1E-5	1.2E-12 / 3.2E-5	3.7E-9 / 6.5E-2
	1 yr	1.7E-16 / 9.6E-9	3.3E-16 / 1.9E-8	9.9E-15 / 5.2E-7	1.2E-13 / 3.4E-6	1.2E-12 / 2.4E-5	3.7E-9 / 6.5E-2
	2 yr	1.6E-16 / 3.3E-9	3.2E-16 / 6.6E-9	9.5E-15 / 2.0E-7	1.2E-13 / 2.3E-6	1.2E-12 / 2.3E-5	3.7E-9 / 6.5E-2
	5 yr	1.6E-16 / 3.1E-9	3.2E-16 / 6.3E-9	9.5E-15 / 1.9E-7	1.2E-13 / 2.3E-6	1.2E-12 / 2.3E-5	3.7E-9 / 6.5E-2
	10 yr	1.6E-16 / 3.1E-9	3.2E-16 / 6.2E-9	9.5E-15 / 1.8E-7	1.2E-13 / 2.2E-6	1.2E-12 / 2.2E-5	3.7E-9 / 6.5E-2
	20 yr	1.6E-16 / 3.0E-9	3.2E-16 / 6.0E-9	9.5E-15 / 1.8E-7	1.2E-13 / 2.2E-6	1.2E-12 / 2.2E-5	3.7E-9 / 6.5E-2
	30 yr	1.6E-16 / 3.0E-9	3.2E-16 / 5.9E-9	9.5E-15 / 1.8E-7	1.2E-13 / 2.2E-6	1.2E-12 / 2.1E-5	3.7E-9 / 6.5E-2
4)	0	1.8E-11 / 8.2E-2	2.2E-11 / 8.2E-2	1.1E-10 / 8.4E-2	1.2E-10 / 8.5E-2	1.2E-10 / 8.5E-2	9.8E-9 / 2.5E-1
	1 min	1.7E-11 / 7.3E-2	2.0E-11 / 7.3E-2	1.0E-10 / 7.6E-2	1.2E-10 / 7.6E-2	1.2E-10 / 7.6E-2	9.8E-9 / 2.4E-1
	10 min	8.5E-12 / 2.7E-2	1.2E-11 / 2.7E-2	9.6E-11 / 3.0E-2	1.1E-10 / 3.0E-2	1.1E-10 / 3.0E-2	9.8E-9 / 2.0E-1
	30 min	4.3E-12 / 3.1E-3	7.7E-12 / 3.2E-3	9.1E-11 / 5.4E-3	1.0E-10 / 5.8E-3	1.1E-10 / 5.9E-3	9.8E-9 / 1.7E-1
	1 h	3.7E-12 / 2.2E-4	7.1E-12 / 3.2E-4	9.1E-11 / 2.6E-3	1.0E-10 / 3.0E-3	1.1E-10 / 3.0E-3	9.8E-9 / 1.7E-1
	2 h	3.7E-12 / 1.1E-4	7.0E-12 / 2.1E-4	9.0E-11 / 2.5E-3	1.0E-10 / 2.8E-3	1.1E-10 / 2.9E-3	9.8E-9 / 1.7E-1
	3 h	3.6E-12 / 1.1E-4	7.0E-12 / 2.0E-4	9.0E-11 / 2.5E-3	1.0E-10 / 2.8E-3	1.1E-10 / 2.9E-3	9.8E-9 / 1.7E-1
	6 h	3.5E-12 / 1.0E-4	6.8E-12 / 2.0E-4	8.9E-11 / 2.4E-3	1.0E-10 / 2.8E-3	1.1E-10 / 2.8E-3	9.8E-9 / 1.7E-1
	12 h	3.4E-12 / 9.6E-5	6.7E-12 / 1.9E-4	8.8E-11 / 2.4E-3	1.0E-10 / 2.7E-3	1.0E-10 / 2.8E-3	9.8E-9 / 1.7E-1
	1 d	3.3E-12 / 9.1E-5	6.4E-12 / 1.8E-4	8.5E-11 / 2.3E-3	9.7E-11 / 2.6E-3	1.0E-10 / 2.7E-3	9.8E-9 / 1.7E-1
	2 d	3.0E-12 / 8.4E-5	6.0E-12 / 1.7E-4	7.9E-11 / 2.1E-3	9.1E-11 / 2.5E-3	9.4E-11 / 2.5E-3	9.8E-9 / 1.7E-1
	7 d	2.2E-12 / 5.9E-5	4.3E-12 / 1.2E-4	5.6E-11 / 1.5E-3	6.5E-11 / 1.7E-3	6.8E-11 / 1.8E-3	9.7E-9 / 1.7E-1
	30 d	4.5E-13 / 1.2E-5	8.9E-13 / 2.4E-5	1.2E-11 / 3.2E-4	1.4E-11 / 3.8E-4	1.7E-11 / 4.3E-4	9.7E-9 / 1.7E-1
	182 d	4.8E-16 / 2.4E-8	9.6E-16 / 4.8E-8	2.8E-14 / 1.3E-6	3.3E-13 / 8.4E-6	3.2E-12 / 5.9E-5	9.7E-9 / 1.7E-1
	1 yr	4.5E-16 / 9.7E-9	8.9E-16 / 1.9E-8	2.7E-14 / 5.7E-7	3.2E-13 / 6.0E-6	3.2E-12 / 5.7E-5	9.7E-9 / 1.7E-1
	2 yr	4.4E-16 / 7.8E-9	8.9E-16 / 1.6E-8	2.7E-14 / 4.7E-7	3.2E-13 / 5.7E-6	3.2E-12 / 5.7E-5	9.7E-9 / 1.7E-1
	5 yr	4.4E-16 / 7.7E-9	8.9E-16 / 1.5E-8	2.7E-14 / 4.6E-7	3.2E-13 / 5.7E-6	3.2E-12 / 5.6E-5	9.7E-9 / 1.7E-1
	10 yr	4.4E-16 / 7.7E-9	8.9E-16 / 1.5E-8	2.7E-14 / 4.6E-7	3.2E-13 / 5.6E-6	3.2E-12 / 5.6E-5	9.7E-9 / 1.7E-1
	20 yr	4.4E-16 / 7.7E-9	8.9E-16 / 1.5E-8	2.7E-14 / 4.6E-7	3.2E-13 / 5.6E-6	3.2E-12 / 5.6E-5	9.7E-9 / 1.7E-1
	30 yr	4.4E-16 / 7.7E-9	8.9E-16 / 1.5E-8	2.7E-14 / 4.6E-7	3.2E-13 / 5.6E-6	3.2E-12 / 5.6E-5	9.7E-9 / 1.7E-1

Table 38: Niobium (Nb) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	5.5E-9 / 7.6E+0	5.5E-9 / 7.6E+0	7.3E-9 / 7.6E+0	2.0E-8 / 7.8E+0	2.8E-8 / 7.9E+0	3.6E-8 / 8.1E+0
	1 min	1.6E-9 / 2.7E+0	1.7E-9 / 2.7E+0	3.4E-9 / 2.7E+0	1.6E-8 / 2.9E+0	2.4E-8 / 3.0E+0	3.2E-8 / 3.2E+0
	10 min	9.9E-11 / 1.2E-1	1.3E-10 / 1.3E-1	1.9E-9 / 1.5E-1	1.4E-8 / 3.0E-1	2.2E-8 / 4.0E-1	3.1E-8 / 6.2E-1
	30 min	3.8E-11 / 1.1E-3	7.1E-11 / 1.5E-3	1.8E-9 / 2.3E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.8E-1	3.0E-8 / 4.9E-1
	1 h	3.5E-11 / 5.5E-4	6.8E-11 / 9.6E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	2 h	3.4E-11 / 4.4E-4	6.6E-11 / 8.5E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	3 h	3.3E-11 / 4.2E-4	6.6E-11 / 8.3E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	6 h	3.3E-11 / 4.2E-4	6.6E-11 / 8.2E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	12 h	3.3E-11 / 4.1E-4	6.6E-11 / 8.2E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	1 d	3.3E-11 / 4.1E-4	6.5E-11 / 8.1E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	2 d	3.3E-11 / 4.0E-4	6.5E-11 / 8.0E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	7 d	3.1E-11 / 3.8E-4	6.3E-11 / 7.7E-4	1.8E-9 / 2.2E-2	1.4E-8 / 1.7E-1	2.2E-8 / 2.7E-1	3.0E-8 / 4.9E-1
	30 d	2.8E-11 / 3.5E-4	5.7E-11 / 6.9E-4	1.6E-9 / 2.0E-2	1.3E-8 / 1.6E-1	2.0E-8 / 2.5E-1	2.9E-8 / 4.7E-1
	182 d	1.9E-11 / 2.3E-4	3.7E-11 / 4.5E-4	1.1E-9 / 1.3E-2	8.5E-9 / 1.0E-1	1.3E-8 / 1.7E-1	2.2E-8 / 3.8E-1
	1 yr	1.1E-11 / 1.4E-4	2.2E-11 / 2.7E-4	6.4E-10 / 7.9E-3	5.1E-9 / 6.3E-2	8.2E-9 / 1.0E-1	1.6E-8 / 3.2E-1
	2 yr	4.1E-12 / 5.0E-5	8.1E-12 / 1.0E-4	2.3E-10 / 2.9E-3	1.9E-9 / 2.3E-2	3.1E-9 / 3.9E-2	1.1E-8 / 2.6E-1
	5 yr	2.1E-13 / 2.9E-6	4.2E-13 / 5.7E-6	1.2E-11 / 1.7E-4	1.0E-10 / 1.4E-3	2.7E-10 / 5.3E-3	8.4E-9 / 2.2E-1
	10 yr	2.0E-14 / 5.1E-7	3.9E-14 / 1.0E-6	1.2E-12 / 3.0E-5	1.4E-11 / 3.7E-4	1.3E-10 / 3.6E-3	8.2E-9 / 2.2E-1
	20 yr	1.8E-14 / 4.8E-7	3.6E-14 / 9.7E-7	1.1E-12 / 2.9E-5	1.3E-11 / 3.5E-4	1.3E-10 / 3.5E-3	8.0E-9 / 2.1E-1
30 yr	1.8E-14 / 4.8E-7	3.6E-14 / 9.5E-7	1.1E-12 / 2.9E-5	1.3E-11 / 3.5E-4	1.3E-10 / 3.4E-3	7.9E-9 / 2.1E-1	
2)	0	1.8E-9 / 2.3E+0	1.8E-9 / 2.3E+0	2.5E-9 / 2.3E+0	6.7E-9 / 2.4E+0	9.4E-9 / 2.4E+0	1.1E-8 / 2.5E+0
	1 min	5.0E-10 / 7.4E-1	5.2E-10 / 7.4E-1	1.2E-9 / 7.5E-1	5.4E-9 / 8.0E-1	8.1E-9 / 8.3E-1	1.0E-8 / 8.8E-1
	10 min	4.9E-11 / 3.1E-2	6.4E-11 / 3.1E-2	7.5E-10 / 3.9E-2	4.9E-9 / 9.0E-2	7.7E-9 / 1.2E-1	9.6E-9 / 1.8E-1
	30 min	2.7E-11 / 1.0E-3	4.2E-11 / 1.2E-3	7.2E-10 / 9.6E-3	4.9E-9 / 6.1E-2	7.6E-9 / 9.4E-2	9.6E-9 / 1.5E-1
	1 h	2.1E-11 / 5.2E-4	3.6E-11 / 7.3E-4	7.2E-10 / 9.1E-3	4.9E-9 / 6.0E-2	7.6E-9 / 9.4E-2	9.6E-9 / 1.5E-1
	2 h	1.7E-11 / 2.8E-4	3.2E-11 / 4.9E-4	7.1E-10 / 8.9E-3	4.9E-9 / 6.0E-2	7.6E-9 / 9.4E-2	9.6E-9 / 1.5E-1
	3 h	1.6E-11 / 2.4E-4	3.1E-11 / 4.4E-4	7.1E-10 / 8.8E-3	4.9E-9 / 6.0E-2	7.6E-9 / 9.4E-2	9.6E-9 / 1.4E-1
	6 h	1.6E-11 / 2.2E-4	3.1E-11 / 4.2E-4	7.1E-10 / 8.8E-3	4.9E-9 / 6.0E-2	7.6E-9 / 9.4E-2	9.5E-9 / 1.4E-1
	12 h	1.5E-11 / 2.1E-4	3.0E-11 / 4.1E-4	7.1E-10 / 8.7E-3	4.9E-9 / 6.0E-2	7.6E-9 / 9.3E-2	9.5E-9 / 1.4E-1
	1 d	1.5E-11 / 2.0E-4	3.0E-11 / 3.9E-4	7.0E-10 / 8.6E-3	4.9E-9 / 5.9E-2	7.6E-9 / 9.3E-2	9.5E-9 / 1.4E-1
	2 d	1.5E-11 / 1.8E-4	2.9E-11 / 3.6E-4	6.9E-10 / 8.5E-3	4.8E-9 / 5.9E-2	7.6E-9 / 9.3E-2	9.5E-9 / 1.4E-1
	7 d	1.3E-11 / 1.6E-4	2.6E-11 / 3.2E-4	6.5E-10 / 8.0E-3	4.7E-9 / 5.8E-2	7.4E-9 / 9.1E-2	9.4E-9 / 1.4E-1
	30 d	1.0E-11 / 1.2E-4	2.0E-11 / 2.4E-4	5.6E-10 / 6.8E-3	4.4E-9 / 5.4E-2	6.9E-9 / 8.5E-2	8.8E-9 / 1.4E-1
	182 d	6.2E-12 / 7.6E-5	1.2E-11 / 1.5E-4	3.6E-10 / 4.4E-3	2.9E-9 / 3.5E-2	4.5E-9 / 5.6E-2	6.5E-9 / 1.1E-1
	1 yr	3.8E-12 / 4.6E-5	7.5E-12 / 9.2E-5	2.2E-10 / 2.7E-3	1.7E-9 / 2.1E-2	2.7E-9 / 3.4E-2	4.7E-9 / 8.5E-2
	2 yr	1.4E-12 / 1.7E-5	2.7E-12 / 3.4E-5	7.9E-11 / 9.7E-4	6.3E-10 / 7.7E-3	1.0E-9 / 1.3E-2	2.9E-9 / 6.4E-2
	5 yr	7.0E-14 / 9.2E-7	1.4E-13 / 1.8E-6	4.0E-12 / 5.3E-5	3.3E-11 / 4.5E-4	7.9E-11 / 1.4E-3	2.0E-9 / 5.2E-2
	10 yr	4.8E-15 / 1.2E-7	9.6E-15 / 2.5E-7	2.9E-13 / 7.4E-6	3.4E-12 / 8.9E-5	3.2E-11 / 8.6E-4	1.9E-9 / 5.1E-2
	20 yr	4.3E-15 / 1.2E-7	8.6E-15 / 2.3E-7	2.6E-13 / 7.0E-6	3.1E-12 / 8.4E-5	3.1E-11 / 8.4E-4	1.9E-9 / 5.0E-2
30 yr	4.2E-15 / 1.1E-7	8.5E-15 / 2.3E-7	2.5E-13 / 6.8E-6	3.1E-12 / 8.3E-5	3.1E-11 / 8.2E-4	1.9E-9 / 5.0E-2	
3)	0	8.7E-10 / 1.1E+0	8.8E-10 / 1.1E+0	1.3E-9 / 1.1E+0	3.4E-9 / 1.1E+0	4.7E-9 / 1.1E+0	5.4E-9 / 1.1E+0
	1 min	2.5E-10 / 3.0E-1	2.6E-10 / 3.0E-1	7.2E-10 / 3.0E-1	2.8E-9 / 3.3E-1	4.1E-9 / 3.4E-1	4.7E-9 / 3.6E-1
	10 min	5.0E-11 / 1.2E-2	6.3E-11 / 1.2E-2	5.2E-10 / 1.8E-2	2.6E-9 / 4.3E-2	3.9E-9 / 5.9E-2	4.5E-9 / 7.6E-2
	30 min	3.2E-11 / 1.4E-3	4.5E-11 / 1.6E-3	5.0E-10 / 7.2E-3	2.6E-9 / 3.2E-2	3.9E-9 / 4.9E-2	4.5E-9 / 6.6E-2
	1 h	2.2E-11 / 7.0E-4	3.5E-11 / 9.0E-4	4.9E-10 / 6.5E-3	2.5E-9 / 3.2E-2	3.9E-9 / 4.8E-2	4.5E-9 / 6.5E-2
	2 h	1.5E-11 / 3.2E-4	2.8E-11 / 5.1E-4	4.8E-10 / 6.1E-3	2.5E-9 / 3.1E-2	3.9E-9 / 4.8E-2	4.5E-9 / 6.5E-2
	3 h	1.4E-11 / 2.4E-4	2.7E-11 / 4.3E-4	4.8E-10 / 6.0E-3	2.5E-9 / 3.1E-2	3.9E-9 / 4.8E-2	4.5E-9 / 6.5E-2
	6 h	1.4E-11 / 2.1E-4	2.7E-11 / 4.0E-4	4.8E-10 / 6.0E-3	2.5E-9 / 3.1E-2	3.9E-9 / 4.8E-2	4.5E-9 / 6.5E-2
	12 h	1.3E-11 / 2.0E-4	2.6E-11 / 3.7E-4	4.7E-10 / 5.9E-3	2.5E-9 / 3.1E-2	3.9E-9 / 4.7E-2	4.5E-9 / 6.4E-2
	1 d	1.3E-11 / 1.8E-4	2.5E-11 / 3.4E-4	4.7E-10 / 5.8E-3	2.5E-9 / 3.1E-2	3.8E-9 / 4.7E-2	4.5E-9 / 6.4E-2
	2 d	1.2E-11 / 1.6E-4	2.4E-11 / 3.1E-4	4.5E-10 / 5.6E-3	2.5E-9 / 3.0E-2	3.8E-9 / 4.7E-2	4.5E-9 / 6.4E-2
	7 d	9.7E-12 / 1.2E-4	1.9E-11 / 2.4E-4	3.9E-10 / 4.8E-3	2.4E-9 / 2.9E-2	3.7E-9 / 4.5E-2	4.3E-9 / 6.3E-2
	30 d	5.3E-12 / 6.6E-5	1.1E-11 / 1.3E-4	2.8E-10 / 3.5E-3	2.2E-9 / 2.6E-2	3.4E-9 / 4.2E-2	4.0E-9 / 5.9E-2
	182 d	3.1E-12 / 3.7E-5	6.1E-12 / 7.5E-5	1.8E-10 / 2.1E-3	1.4E-9 / 1.7E-2	2.2E-9 / 2.7E-2	2.8E-9 / 4.4E-2
	1 yr	1.8E-12 / 2.2E-5	3.7E-12 / 4.5E-5	1.1E-10 / 1.3E-3	8.5E-10 / 1.0E-2	1.3E-9 / 1.7E-2	2.0E-9 / 3.4E-2
	2 yr	6.7E-13 / 8.2E-6	1.3E-12 / 1.6E-5	3.9E-11 / 4.7E-4	3.1E-10 / 3.8E-3	4.9E-10 / 6.2E-3	1.1E-9 / 2.3E-2
	5 yr	3.3E-14 / 4.4E-7	6.7E-14 / 8.7E-7	1.9E-12 / 2.5E-5	1.6E-11 / 2.1E-4	3.4E-11 / 6.0E-4	6.6E-10 / 1.7E-2
	10 yr	1.6E-15 / 4.5E-8	3.3E-15 / 9.1E-8	9.8E-14 / 2.7E-6	1.1E-12 / 3.2E-5	1.1E-11 / 3.0E-4	6.3E-10 / 1.7E-2
	20 yr	1.4E-15 / 4.0E-8	2.8E-15 / 8.1E-8	8.5E-14 / 2.4E-6	1.0E-12 / 2.9E-5	1.0E-11 / 2.9E-4	6.2E-10 / 1.7E-2
30 yr	1.4E-15 / 3.9E-8	2.8E-15 / 7.7E-8	8.4E-14 / 2.3E-6	1.0E-12 / 2.8E-5	1.0E-11 / 2.8E-4	6.1E-10 / 1.6E-2	
4)	0	2.7E-9 / 3.5E+0	2.7E-9 / 3.5E+0	3.7E-9 / 3.5E+0	1.0E-8 / 3.6E+0	1.4E-8 / 3.6E+0	1.7E-8 / 3.7E+0
	1 min	7.1E-10 / 1.1E+0	7.3E-10 / 1.1E+0	1.7E-9 / 1.1E+0	8.1E-9 / 1.1E+0	1.2E-8 / 1.2E+0	1.5E-8 / 1.3E+0
	10 min	5.2E-11 / 4.0E-2	7.2E-11 / 4.1E-2	1.0E-9 / 5.2E-2	7.5E-9 / 1.3E-1	1.2E-8 / 1.8E-1	1.4E-8 / 2.5E-1
	30 min	2.8E-11 / 8.8E-4	4.8E-11 / 1.1E-3	1.0E-9 / 1.3E-2	7.4E-9 / 9.1E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	1 h	2.3E-11 / 4.8E-4	4.3E-11 / 7.3E-4	1.0E-9 / 1.3E-2	7.4E-9 / 9.1E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	2 h	2.1E-11 / 3.7E-4	4.0E-11 / 5.6E-4	1.0E-9 / 1.2E-2	7.4E-9 / 9.1E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	3 h	2.0E-11 / 2.1E-4	3.9E-11 / 5.2E-4	1.0E-9 / 1.2E-2	7.4E-9 / 9.1E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	6 h	2.0E-11 / 2.6E-4	3.9E-11 / 5.1E-4	1.0E-9 / 1.2E-2	7.4E-9 / 9.1E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	12 h	2.0E-11 / 2.5E-4	3.9E-11 / 5.0E-4	1.0E-9 / 1.2E-2	7.4E-9 / 9.1E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	1 d	1.9E-11 / 2.5E-4	3.9E-11 / 4.9E-4	9.9E-10 / 1.2E-2	7.4E-9 / 9.0E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	2 d	1.9E-11 / 2.4E-4	3.8E-11 / 4.7E-4	9.9E-10 / 1.2E-2	7.4E-9 / 9.0E-2	1.2E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	7 d	1.8E-11 / 2.2E-4	3.5E-11 / 4.3E-4	9.5E-10 / 1.2E-2	7.2E-9 / 8.8E-2	1.1E-8 / 1.4E-1	1.4E-8 / 2.1E-1
	30 d	1.5E-11 / 1.8E-4	3.0E-11 / 3.7E-4	8.5E-10 / 1.0E-2	6.8E-9 / 8.2E-2	1.1E-8 / 1.3E-1	1.3E-8 / 2.0E-1
	182 d	9.6E-12 / 1.2E-4	1.9E-11 / 2.3E-4	5.5E-10 / 6.8E-3	4.4E-9 / 5.4E-2	7.0E-9 / 8.6E-2	9.6E-9 / 1.5E-1
	1 yr	5.8E-12 / 7.1E-5	1.2E-11 / 1.4E-4	3.3E-10 / 4.1E-3	2.7E-9 / 3.3E-2	4.2E-9 / 5.2E-2	6.8E-9 / 1.2E-1
	2 yr	2.1E-12 / 2.6E-5	4.2E-12 / 5.2E-5	1.2E-10 / 1.5E-3	9.7E-10 / 1.2E-2	1.6E-9 / 2.0E-2	4.1E-9 / 8.8E-2
	5 yr	1.1E-13 / 1.4E-6	2.1E-13 / 2.8E-6	6.2E-12 / 8.0E-5	5.1E-11 / 6.8E-4	1.2E-10 / 2.0E-3	2.7E-9 / 7.0E-2
	10 yr	6.5E-15 / 1.6E-7	1.3E-14 / 3.3E-7	3.9E-13 / 9.9E-6	4.6E-12 / 1.2E-4	4.3E-11 / 1.1E-3	2.6E-9 / 6.9E-2
	20 yr	5.8E-15 / 1.5E-7	1.2E-14 / 3.1E-7	3.5E-13 / 9.2E-6	4.2E-12 / 1.1E-4	4.2E-11 / 1.1E-3	2.5E-9 / 6.7E-2
30 yr	5.7E-15 / 1.5E-7	1.1E-14 / 3.0E-7	3.4E-13 / 9.1E-6	4.1E-12 / 1.1E-4	4.1E-11 / 1.1E-3	2.5E-9 / 6.6E-2	

Table 39: Silver (Ag) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12h	1d	30d	1yr	10yr	∞
1)	0	9.9E-9/6.9E-2	1.0E-8/7.0E-2	1.0E-8/7.7E-2	1.0E-8/7.9E-2	1.0E-8/7.9E-2	1.0E-8/7.9E-2
	1 min	7.7E-11/7.5E-3	7.9E-11/8.6E-3	1.2E-10/1.5E-2	1.2E-10/1.7E-2	1.3E-10/1.7E-2	1.3E-10/1.7E-2
	10 min	1.1E-11/5.1E-3	1.3E-11/6.2E-3	5.0E-11/1.3E-2	5.7E-11/1.4E-2	6.0E-11/1.5E-2	6.3E-11/1.5E-2
	30 min	4.0E-12/4.0E-3	5.9E-12/5.1E-3	4.3E-11/1.2E-2	5.1E-11/1.3E-2	5.3E-11/1.3E-2	5.7E-11/1.4E-2
	1 h	3.5E-12/3.3E-3	5.4E-12/4.4E-3	4.2E-11/1.1E-2	5.0E-11/1.2E-2	5.3E-11/1.3E-2	5.6E-11/1.3E-2
	2 h	2.9E-12/2.5E-3	4.8E-12/3.5E-3	4.2E-11/1.0E-2	4.9E-11/1.1E-2	5.2E-11/1.2E-2	5.5E-11/1.2E-2
	3 h	2.6E-12/2.0E-3	4.5E-12/3.1E-3	4.1E-11/9.4E-3	4.9E-11/1.1E-2	5.1E-11/1.1E-2	5.5E-11/1.2E-2
	6 h	2.2E-12/1.4E-3	4.0E-12/2.4E-3	4.0E-11/8.6E-3	4.8E-11/1.0E-2	5.1E-11/1.0E-2	5.4E-11/1.1E-2
	12 h	2.0E-12/1.1E-3	3.7E-12/2.0E-3	3.9E-11/7.7E-3	4.7E-11/9.2E-3	4.9E-11/9.5E-3	5.3E-11/9.8E-3
	1 d	1.8E-12/8.6E-4	3.4E-12/1.5E-3	3.7E-11 /6.7E-3	4.5E-11/8.1E-3	4.7E-11/8.3E-3	5.1E-11/8.7E-3
	2 d	1.5E-12/5.2E-4	2.8E-12/9.3E-4	3.5E-11/5.2E-3	4.1E-11/6.5E-3	4.4E-11/6.8E-3	4.7E-11/7.2E-3
	7 d	8.9E-13/9.9E-5	1.8E-12/1.9E-4	2.5E-11/3.0E-3	3.0E-11/4.1E-3	3.3E-11/4.4E-3	3.6E-11/4.7E-3
	30 d	2.2E-13/3.5E-5	4.3E-13/6.8E-5	6.2E-12/1.1E-3	7.8E-12/1.5E-3	1.0E-11/1.8E-3	1.4E-11/2.1E-3
	182 d	5.8E-16/6.6E-8	1.2E-15/1.3E-7	3.4E-14/3.7E-6	4.0E-13/4.1E-5	2.9E-12/3.1E-4	6.1E-12/6.5E-4
	1 yr	5.4E-16/5.6E-8	1.1E-15/1.1E-7	3.2E-14/3.4E-6	3.8E-13/4.0E-5	2.8E-12/3.0E-4	5.9E-12/6.3E-4
	2 yr	5.0E-16/5.3E-8	1.0E-15/1.1E-7	3.0E-14/3.2E-6	3.5E-13/3.7E-5	2.7E-12/2.8E-4	5.5E-12/5.9E-4
	5 yr	4.1E-16/4.3E-8	8.2E-16/8.6E-8	2.4E-14/2.6E-6	2.9E-13/3.1E-5	2.2E-12/2.3E-4	4.5E-12/4.8E-4
	10 yr	2.9E-16/3.1E-8	5.8E-16/6.2E-8	1.7E-14/1.9E-6	2.1E-13/2.2E-5	1.6E-12/1.7E-4	3.3E-12/3.5E-4
	20 yr	1.5E-16/1.6E-8	3.0E-16/3.2E-8	9.0E-15/9.6E-7	1.1E-13/1.1E-5	8.1E-13/8.6E-5	1.7E-12/1.8E-4
30 yr	7.9E-17/8.3E-9	1.6E-16/1.7E-8	4.7E-15/5.0E-7	5.6E-14/5.9E-6	4.2E-13/4.5E-5	8.9E-13/9.4E-5	
2)	0	2.2E-9/1.6E-2	2.2E-9/1.6E-2	2.2E-9/1.7E-2	2.2E-9/1.8E-2	2.2E-9/1.8E-2	2.2E-9/1.8E-2
	1 min	3.4E-11/2.1E-3	3.4E-11/2.3E-3	4.3E-11/3.7E-3	4.5E-11/4.1E-3	4.6E-11/4.1E-3	4.7E-11/4.2E-3
	10 min	4.5E-12/1.2E-3	4.9E-12/1.4E-3	1.4E-11/2.8E-3	1.6E-11/3.1E-3	1.6E-11/3.2E-3	1.7E-11/3.2E-3
	30 min	1.4E-12/8.6E-4	1.8E-12/1.1E-3	1.1E-11/2.5E-3	1.3E-11/2.8E-3	1.3E-11/2.9E-3	1.4E-11/2.9E-3
	1 h	1.0E-12/6.9E-4	1.5E-12/9.0E-4	1.0E-11/2.3E-3	1.2E-11/2.6E-3	1.3E-11/2.7E-3	1.4E-11/2.8E-3
	2 h	7.4E-13/5.1E-4	1.2E-12/7.1E-4	1.0E-11/2.1E-3	1.2E-11/2.4E-3	1.3E-11/2.5E-3	1.3E-11/2.6E-3
	3 h	6.1E-13/4.1E-4	1.0E-12/6.1E-4	1.0E-11/2.0E-3	1.2E-11/2.3E-3	1.2E-11/2.4E-3	1.3E-11/2.4E-3
	6 h	4.9E-13/2.8E-4	9.2E-13/4.6E-4	9.8E-12/1.8E-3	1.2E-11/2.1E-3	1.2E-11/2.2E-3	1.3E-11/2.2E-3
	12 h	4.5E-13/2.1E-4	8.5E-13/3.8E-4	9.5E-12/1.6E-3	1.1E-11/2.0E-3	1.2E-11/2.0E-3	1.3E-11/2.1E-3
	1 d	4.0E-13/1.6E-4	7.8E-13/2.9E-4	9.1E-12 /1.4E-3	1.1E-11/1.8E-3	1.2E-11/1.8E-3	1.2E-11/1.9E-3
	2 d	3.5E-13/1.0E-4	6.7E-13/1.8E-4	8.5E-12/1.1E-3	1.0E-11/1.5E-3	1.1E-11/1.5E-3	1.1E-11/1.6E-3
	7 d	2.2E-13/2.2E-5	4.3E-13/4.3E-5	6.1E-12/7.2E-4	7.4E-12/9.7E-4	8.0E-12/1.0E-3	8.6E-12/1.1E-3
	30 d	5.5E-14/8.3E-6	1.1E-13/1.6E-5	1.5E-12/2.7E-4	1.9E-12/3.5E-4	2.5E-12/4.0E-4	3.1E-12/4.7E-4
	182 d	1.4E-16/1.2E-8	2.9E-16/2.5E-8	8.4E-15/6.8E-7	9.4E-14/7.4E-6	6.1E-13/5.5E-5	1.2E-12/1.2E-4
	1 yr	1.3E-16/1.0E-8	2.6E-16/2.0E-8	7.7E-15/6.0E-7	8.8E-14/7.1E-6	5.8E-13/5.3E-5	1.2E-12/1.1E-4
	2 yr	1.1E-16/9.3E-9	2.3E-16/1.9E-8	6.7E-15/5.6E-7	7.8E-14/6.6E-6	5.3E-13/4.9E-5	1.1E-12/1.1E-4
	5 yr	8.2E-17/7.6E-9	1.6E-16/1.5E-8	4.9E-15/4.5E-7	5.7E-14/5.3E-6	4.1E-13/4.0E-5	9.0E-13/8.9E-5
	10 yr	5.4E-17/5.4E-9	1.1E-16/1.1E-8	3.3E-15/3.2E-7	3.8E-14/3.8E-6	2.9E-13/2.9E-5	6.5E-13/6.5E-5
	20 yr	2.8E-17/2.8E-9	5.6E-17/5.6E-9	1.7E-15/1.7E-7	2.0E-14/2.0E-6	1.5E-13/1.5E-5	3.7E-13/3.6E-5
30 yr	1.5E-17/1.5E-9	3.1E-17/3.0E-9	9.2E-16/8.8E-8	1.1E-14/1.0E-6	8.4E-14/8.0E-6	2.1E-13/2.1E-5	
3)	0	1.3E-9/9.8E-3	1.3E-9/9.8E-3	1.3E-9/1.0E-2	1.3E-9/1.1E-2	1.3E-9/1.1E-2	1.3E-9/1.1E-2
	1 min	4.7E-11/1.8E-3	4.8E-11/2.0E-3	5.1E-11/2.7E-3	5.2E-11/2.8E-3	5.3E-11/2.9E-3	5.4E-11/3.0E-3
	10 min	5.9E-12/6.3E-4	6.1E-12/7.7E-4	1.0E-11/1.5E-3	1.1E-11/1.6E-3	1.2E-11/1.7E-3	1.3E-11/1.8E-3
	30 min	1.5E-12/4.4E-4	1.7E-12/5.7E-4	5.6E-12/1.3E-3	6.5E-12/1.4E-3	7.3E-12/1.5E-3	8.3E-12/1.6E-3
	1 h	9.4E-13/3.6E-4	1.2E-12/4.9E-4	5.1E-12/1.2E-3	6.0E-12/1.3E-3	6.7E-12/1.4E-3	7.7E-12/1.5E-3
	2 h	5.0E-13/2.8E-4	7.1E-13/4.0E-4	4.6E-12/1.1E-3	5.5E-12/1.2E-3	6.3E-12/1.3E-3	7.3E-12/1.4E-3
	3 h	3.5E-13/2.3E-4	5.6E-13/3.5E-4	4.4E-12/1.0E-3	5.4E-12/1.2E-3	6.1E-12/1.2E-3	7.1E-12/1.3E-3
	6 h	2.5E-13/1.7E-4	4.6E-13/2.8E-4	4.3E-12/9.3E-4	5.2E-12/1.1E-3	6.0E-12/1.1E-3	6.9E-12/1.2E-3
	12 h	2.2E-13/1.3E-4	4.2E-13/2.3E-4	4.2E-12/8.3E-4	5.1E-12/9.7E-4	5.8E-12/1.0E-3	6.8E-12/1.1E-3
	1 d	1.9E-13/1.0E-4	3.7E-13/1.8E-4	4.0E-12 /7.0E-4	4.8E-12/8.4E-4	5.6E-12/9.1E-4	6.6E-12/1.0E-3
	2 d	1.6E-13/6.0E-5	3.1E-13/1.1E-4	3.6E-12/5.3E-4	4.5E-12/6.6E-4	5.2E-12/7.3E-4	6.2E-12/8.2E-4
	7 d	9.3E-14/1.0E-5	1.8E-13/1.9E-5	2.6E-12/2.8E-4	3.3E-12/3.9E-4	4.0E-12/4.6E-4	5.0E-12/5.5E-4
	30 d	2.3E-14/3.2E-6	4.6E-14/6.3E-6	6.7E-13/1.1E-4	9.4E-13/1.4E-4	1.7E-12/2.1E-4	2.7E-12/3.0E-4
	182 d	2.0E-16/1.5E-8	4.0E-16/3.0E-8	1.2E-14/8.7E-7	1.3E-13/1.0E-5	8.6E-13/7.5E-5	1.8E-12/1.6E-4
	1 yr	1.8E-16/1.4E-8	3.6E-16/2.7E-8	1.1E-14/8.2E-7	1.2E-13/9.6E-6	8.1E-13/7.2E-5	1.7E-12/1.6E-4
	2 yr	1.6E-16/1.3E-8	3.2E-16/2.5E-8	9.5E-15/7.6E-7	1.1E-13/9.0E-6	7.4E-13/6.7E-5	1.6E-12/1.5E-4
	5 yr	1.1E-16/1.0E-8	2.3E-16/2.1E-8	6.9E-15/6.2E-7	8.0E-14/7.3E-6	5.8E-13/5.5E-5	1.3E-12/1.2E-4
	10 yr	7.7E-17/7.4E-9	1.5E-16/1.5E-8	4.6E-15/4.4E-7	5.4E-14/5.2E-6	4.1E-13/4.0E-5	9.8E-13/9.3E-5
	20 yr	4.1E-17/3.9E-9	8.1E-17/7.8E-9	2.4E-15/2.3E-7	2.9E-14/2.7E-6	2.2E-13/2.1E-5	5.7E-13/5.3E-5
30 yr	2.3E-17/2.1E-9	4.5E-17/4.1E-9	1.4E-15/1.2E-7	1.6E-14/1.5E-6	1.3E-13/1.1E-5	3.5E-13/3.2E-5	
4)	0	3.7E-9/2.5E-2	3.7E-9/2.5E-2	3.7E-9/2.7E-2	3.7E-9/2.8E-2	3.7E-9/2.8E-2	3.7E-9/2.8E-2
	1 min	3.1E-11/2.3E-3	3.1E-11/2.6E-3	4.2E-11/4.4E-3	4.4E-11/4.8E-3	4.5E-11/4.9E-3	4.6E-11/5.0E-3
	10 min	4.1E-12/1.4E-3	4.6E-12/1.7E-3	1.5E-11/3.5E-3	1.8E-11/3.9E-3	1.9E-11/4.0E-3	1.9E-11/4.1E-3
	30 min	1.3E-12/1.0E-3	1.9E-12/1.3E-3	1.3E-11/3.2E-3	1.5E-11/3.6E-3	1.6E-11/3.7E-3	1.7E-11/3.8E-3
	1 h	1.1E-12/8.5E-4	1.6E-12/1.1E-3	1.2E-11/3.0E-3	1.5E-11/3.4E-3	1.5E-11/3.5E-3	1.6E-11/3.6E-3
	2 h	8.5E-13/6.4E-4	1.4E-12/9.3E-4	1.2E-11/2.7E-3	1.4E-11/3.2E-3	1.5E-11/3.2E-3	1.6E-11/3.3E-3
	3 h	7.4E-13/5.3E-4	1.3E-12/8.1E-4	1.2E-11/2.6E-3	1.4E-11/3.0E-3	1.5E-11/3.1E-3	1.6E-11/3.2E-3
	6 h	6.2E-13/3.8E-4	1.1E-12/6.4E-4	1.2E-11/2.4E-3	1.4E-11/2.8E-3	1.5E-11/2.9E-3	1.6E-11/3.0E-3
	12 h	5.6E-13/3.0E-4	1.1E-12/5.3E-4	1.1E-11/2.1E-3	1.4E-11/2.6E-3	1.4E-11/2.6E-3	1.5E-11/2.7E-3
	1 d	5.0E-13/2.3E-4	9.6E-13/4.1E-4	1.1E-11 /1.9E-3	1.3E-11/2.3E-3	1.4E-11/2.3E-3	1.5E-11/2.4E-3
	2 d	4.2E-13/1.4E-4	8.2E-13/2.5E-4	1.0E-11/1.5E-3	1.2E-11/1.9E-3	1.3E-11/1.9E-3	1.4E-11/2.0E-3
	7 d	2.6E-13/2.8E-5	5.2E-13/5.5E-5	7.3E-12/8.8E-4	8.8E-12/1.2E-3	9.6E-12/1.3E-3	1.1E-11/1.4E-3
	30 d	6.5E-14/1.0E-5	1.3E-13/2.0E-5	1.8E-12/3.3E-4	2.3E-12/4.3E-4	3.1E-12/5.1E-4	4.0E-12/6.1E-4
	182 d	1.8E-16/1.8E-8	3.5E-16/3.6E-8	1.0E-14/1.0E-6	1.2E-13/1.1E-5	8.5E-13/8.5E-5	1.8E-12/1.8E-4
	1 yr	1.6E-16/1.5E-8	3.2E-16/3.1E-8	9.7E-15/9.2E-7	1.1E-13/1.1E-5	8.1E-13/8.2E-5	1.7E-12/1.7E-4
	2 yr	1.5E-16/1.4E-8	3.0E-16/2.9E-8	8.8E-15/8.6E-7	1.0E-13/1.0E-5	7.5E-13/7.7E-5	1.6E-12/1.6E-4
	5 yr	1.2E-16/1.2E-8	2.3E-16/2.3E-8	6.9E-15/7.0E-7	8.2E-14/8.3E-6	6.1E-13/6.3E-5	1.3E-12/1.3E-4
	10 yr	8.1E-17/8.4E-9	1.6E-16/1.7E-8	4.9E-15/5.1E-7	5.8E-14/6.0E-6	4.4E-13/4.5E-5	9.5E-13/9.7E-5
	20 yr	4.2E-17/4.4E-9	8.5E-17/8.8E-9	2.5E-15/2.6E-7	3.0E-14/3.1E-6	2.3E-13/2.3E-5	5.1E-13/5.2E-5
30 yr	2.3E-17/2.3E-9	4.5E-17/4.6E-9	1.3E-15/1.4E-7	1.6E-14/1.6E-6	1.2E-13/1.2E-5	2.8E-13/2.8E-5	

Table 40: Barium (Ba) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	1.8E-9/2.0E+0	3.1E-9/2.4E+0	6.1E-9/3.4E+0	6.1E-9/3.8E+0	6.1E-9/3.9E+0	6.1E-9/8.5E+0
	1 min	1.8E-9/7.4E-1	3.0E-9/1.1E+0	6.0E-9/2.2E+0	6.0E-9/2.6E+0	6.0E-9/2.6E+0	6.0E-9/7.2E+0
	10 min	1.8E-9/5.5E-1	3.0E-9/9.4E-1	6.0E-9/2.0E+0	6.0E-9/2.4E+0	6.0E-9/2.4E+0	6.0E-9/7.0E+0
	30 min	1.8E-9/5.4E-1	3.0E-9/9.2E-1	6.0E-9/2.0E+0	6.0E-9/2.4E+0	6.0E-9/2.4E+0	6.0E-9/7.0E+0
	1 h	1.7E-9/5.3E-1	3.0E-9/9.1E-1	5.9E-9/1.9E+0	5.9E-9/2.3E+0	5.9E-9/2.4E+0	5.9E-9/7.0E+0
	2 h	1.7E-9/5.2E-1	2.9E-9/8.8E-1	5.7E-9/1.9E+0	5.7E-9/2.3E+0	5.7E-9/2.3E+0	5.7E-9/6.9E+0
	3 h	1.6E-9/5.0E-1	2.8E-9/8.6E-1	5.5E-9/1.8E+0	5.5E-9/2.2E+0	5.5E-9/2.3E+0	5.5E-9/6.9E+0
	6 h	1.5E-9/4.6E-1	2.6E-9/7.9E-1	5.1E-9/1.7E+0	5.1E-9/2.1E+0	5.1E-9/2.1E+0	5.1E-9/6.7E+0
	12 h	1.3E-9/3.9E-1	2.1E-9/6.6E-1	4.3E-9/1.4E+0	4.3E-9/1.8E+0	4.3E-9/1.9E+0	4.3E-9/6.5E+0
	1 d	8.9E-10/2.7E-1	1.5E-9/4.7E-1	3.0E-9 / 1.1E+0	3.0E-9/1.5E+0	3.0E-9/1.5E+0	3.0E-9/6.1E+0
	2 d	4.4E-10/1.4E-1	7.5E-10/2.3E-1	1.5E-9/5.9E-1	1.5E-9/9.9E-1	1.5E-9/1.0E+0	1.5E-9/5.6E+0
	7 d	1.3E-11/6.5E-3	2.2E-11/1.2E-2	4.5E-11/1.4E-1	4.5E-11/5.3E-1	4.5E-11/5.4E-1	4.5E-11/5.1E+0
	30 d	3.0E-16/2.0E-3	6.1E-16/3.9E-3	1.6E-14/1.0E-1	8.2E-14/4.1E-1	9.1E-14/4.3E-1	9.2E-14/5.0E+0
	182 d	1.1E-16/4.8E-4	2.1E-16/9.6E-4	5.9E-15/2.5E-2	3.1E-14/1.0E-1	3.5E-14/1.1E-1	3.5E-14/4.7E+0
	1 yr	3.4E-17/9.0E-5	6.9E-17/1.8E-4	1.9E-15/4.7E-3	1.0E-14/1.9E-2	1.1E-14/2.0E-2	1.2E-14/4.6E+0
	2 yr	3.7E-18/3.2E-6	7.5E-18/6.3E-6	2.1E-16/1.7E-4	1.1E-15/6.7E-4	1.2E-15/6.9E-4	1.9E-15/4.6E+0
	5 yr	5.1E-21/2.7E-10	1.0E-20/5.4E-10	2.8E-19/1.4E-8	1.5E-18/7.0E-8	1.7E-18/7.7E-8	6.6E-16/4.6E+0
	10 yr	9.1E-26/4.4E-14	1.8E-25/8.9E-14	5.0E-24/2.6E-12	2.7E-23/3.1E-11	3.0E-23/3.1E-10	6.5E-16/4.6E+0
	20 yr	1.4E-29/4.0E-14	2.8E-29/8.1E-14	8.6E-28/2.4E-12	1.0E-26/2.9E-11	1.0E-25/2.9E-10	6.5E-16/4.6E+0
	30 yr	1.4E-29/4.0E-14	2.8E-29/8.1E-14	8.6E-28/2.4E-12	1.0E-26/2.9E-11	1.0E-25/2.9E-10	6.5E-16/4.6E+0
2)	0	4.8E-10/5.0E-1	8.1E-10/6.0E-1	1.6E-9/8.6E-1	1.6E-9/9.2E-1	1.6E-9/9.2E-1	1.6E-9/2.0E+0
	1 min	4.7E-10/1.7E-1	8.0E-10/2.7E-1	1.6E-9/5.3E-1	1.6E-9/5.8E-1	1.6E-9/5.9E-1	1.6E-9/1.6E+0
	10 min	4.7E-10/1.4E-1	8.0E-10/2.4E-1	1.6E-9/5.0E-1	1.6E-9/5.6E-1	1.6E-9/5.6E-1	1.6E-9/1.6E+0
	30 min	4.6E-10/1.4E-1	7.9E-10/2.4E-1	1.6E-9/5.0E-1	1.6E-9/5.5E-1	1.6E-9/5.6E-1	1.6E-9/1.6E+0
	1 h	4.6E-10/1.4E-1	7.8E-10/2.4E-1	1.5E-9/4.9E-1	1.5E-9/5.5E-1	1.5E-9/5.5E-1	1.5E-9/1.6E+0
	2 h	4.4E-10/1.4E-1	7.6E-10/2.3E-1	1.5E-9/4.8E-1	1.5E-9/5.3E-1	1.5E-9/5.3E-1	1.5E-9/1.6E+0
	3 h	4.3E-10/1.3E-1	7.3E-10/2.2E-1	1.5E-9/4.6E-1	1.5E-9/5.2E-1	1.5E-9/5.2E-1	1.5E-9/1.6E+0
	6 h	3.9E-10/1.2E-1	6.7E-10/2.1E-1	1.3E-9/4.3E-1	1.3E-9/4.8E-1	1.3E-9/4.8E-1	1.3E-9/1.5E+0
	12 h	3.3E-10/1.0E-1	5.6E-10/1.7E-1	1.1E-9/3.6E-1	1.1E-9/4.2E-1	1.1E-9/4.2E-1	1.1E-9/1.5E+0
	1 d	2.3E-10/7.2E-2	4.0E-10/1.2E-1	7.9E-10 / 2.6E-1	7.9E-10/3.1E-1	7.9E-10/3.2E-1	7.9E-10/1.4E+0
	2 d	1.2E-10/3.6E-2	2.0E-10/6.1E-2	3.9E-10/1.4E-1	3.9E-10/1.9E-1	3.9E-10/1.9E-1	3.9E-10/1.2E+0
	7 d	3.5E-12/1.4E-3	5.9E-12/2.5E-3	1.2E-11/2.1E-2	1.2E-11/7.3E-2	1.2E-11/7.5E-2	1.2E-11/1.1E+0
	30 d	6.3E-16/2.6E-4	1.3E-15/5.2E-4	3.4E-14/1.4E-2	1.7E-13/5.6E-2	1.9E-13/5.8E-2	1.9E-13/1.1E+0
	182 d	2.2E-16/6.6E-5	4.5E-16/1.3E-4	1.2E-14/3.5E-3	6.6E-14/1.4E-2	7.4E-14/1.5E-2	7.4E-14/1.1E+0
	1 yr	7.4E-17/1.3E-5	1.5E-16/2.6E-5	4.0E-15/6.8E-4	2.2E-14/2.8E-3	2.4E-14/3.0E-3	2.5E-14/1.0E+0
	2 yr	8.1E-18/5.6E-7	1.6E-17/1.1E-6	4.5E-16/3.0E-5	2.4E-15/1.3E-4	2.7E-15/1.3E-4	2.9E-15/1.0E+0
	5 yr	1.1E-20/3.4E-10	2.2E-20/6.7E-10	6.2E-19/1.9E-8	3.3E-18/1.0E-7	3.7E-18/1.2E-7	1.8E-16/1.0E+0
	10 yr	2.0E-25/2.0E-14	4.0E-25/4.0E-14	1.1E-23/1.2E-12	5.9E-23/1.1E-11	6.7E-23/8.1E-11	1.7E-16/1.0E+0
	20 yr	3.7E-30/1.1E-14	7.5E-30/2.1E-14	2.2E-28/6.4E-13	2.7E-27/7.7E-12	2.7E-26/7.7E-11	1.7E-16/1.0E+0
	30 yr	3.7E-30/1.1E-14	7.5E-30/2.1E-14	2.2E-28/6.4E-13	2.7E-27/7.7E-12	2.7E-26/7.7E-11	1.7E-16/1.0E+0
3)	0	1.9E-10/2.3E-1	3.2E-10/2.7E-1	6.3E-10/3.7E-1	6.3E-10/4.1E-1	6.3E-10/4.1E-1	6.3E-10/9.3E-1
	1 min	1.8E-10/7.2E-2	3.1E-10/1.1E-1	6.2E-10/2.2E-1	6.2E-10/2.6E-1	6.2E-10/2.6E-1	6.2E-10/7.7E-1
	10 min	1.8E-10/5.7E-2	3.1E-10/9.6E-2	6.2E-10/2.0E-1	6.2E-10/2.4E-1	6.2E-10/2.4E-1	6.2E-10/7.6E-1
	30 min	1.8E-10/5.6E-2	3.1E-10/9.5E-2	6.1E-10/2.0E-1	6.1E-10/2.4E-1	6.1E-10/2.4E-1	6.1E-10/7.5E-1
	1 h	1.8E-10/5.5E-2	3.1E-10/9.4E-2	6.1E-10/2.0E-1	6.1E-10/2.4E-1	6.1E-10/2.4E-1	6.1E-10/7.5E-1
	2 h	1.7E-10/5.3E-2	3.0E-10/9.1E-2	5.9E-10/1.9E-1	5.9E-10/2.3E-1	5.9E-10/2.3E-1	5.9E-10/7.5E-1
	3 h	1.7E-10/5.2E-2	2.9E-10/8.8E-2	5.7E-10/1.9E-1	5.7E-10/2.2E-1	5.7E-10/2.3E-1	5.7E-10/7.4E-1
	6 h	1.5E-10/4.7E-2	2.6E-10/8.1E-2	5.2E-10/1.7E-1	5.2E-10/2.1E-1	5.2E-10/2.1E-1	5.2E-10/7.3E-1
	12 h	1.3E-10/4.0E-2	2.2E-10/6.8E-2	4.4E-10/1.5E-1	4.4E-10/1.8E-1	4.4E-10/1.9E-1	4.4E-10/7.0E-1
	1 d	9.1E-11/2.8E-2	1.6E-10/4.8E-2	3.1E-10 / 1.1E-1	3.1E-10/1.4E-1	3.1E-10/1.5E-1	3.1E-10/6.6E-1
	2 d	4.5E-11/1.4E-2	7.7E-11/2.4E-2	1.5E-10/5.9E-2	1.5E-10/9.7E-2	1.5E-10/9.9E-2	1.5E-10/6.1E-1
	7 d	1.4E-12/6.4E-4	2.3E-12/1.1E-3	4.7E-12/1.3E-2	4.9E-12/4.9E-2	5.0E-12/5.1E-2	5.0E-12/5.6E-1
	30 d	1.1E-15/1.8E-4	2.1E-15/3.6E-4	5.7E-14/9.4E-3	2.9E-13/3.9E-2	3.3E-13/4.1E-2	3.3E-13/5.5E-1
	182 d	3.8E-16/4.6E-5	7.6E-16/9.2E-5	2.1E-14/2.4E-3	1.1E-13/1.0E-2	1.3E-13/1.1E-2	1.3E-13/5.2E-1
	1 yr	1.3E-16/9.5E-6	2.5E-16/1.9E-5	6.9E-15/5.0E-4	3.7E-14/2.2E-3	4.2E-14/2.3E-3	4.2E-14/5.2E-1
	2 yr	1.4E-17/5.1E-7	2.8E-17/1.0E-6	7.6E-16/2.7E-5	4.1E-15/1.3E-4	4.6E-15/1.4E-4	4.7E-15/5.1E-1
	5 yr	1.9E-20/4.9E-10	3.8E-20/9.8E-10	1.0E-18/2.7E-8	5.6E-18/1.5E-7	6.3E-18/1.7E-7	7.4E-17/5.1E-1
	10 yr	3.3E-25/1.8E-14	6.6E-25/3.6E-14	1.8E-23/1.0E-12	9.9E-23/7.3E-12	1.1E-22/3.5E-11	6.7E-17/5.1E-1
	20 yr	0.0E+0/4.2E-15	0.0E+0/8.3E-15	8.8E-29/2.5E-13	1.1E-27/3.0E-12	1.1E-26/3.0E-11	6.7E-17/5.1E-1
	30 yr	0.0E+0/4.2E-15	0.0E+0/8.3E-15	8.8E-29/2.5E-13	1.1E-27/3.0E-12	1.1E-26/3.0E-11	6.7E-17/5.1E-1
4)	0	6.2E-10/8.2E-1	1.0E-9/9.5E-1	2.0E-9/1.3E+0	2.0E-9/1.4E+0	2.0E-9/1.4E+0	2.0E-9/3.1E+0
	1 min	6.0E-10/2.2E-1	1.0E-9/3.5E-1	2.0E-9/6.8E-1	2.0E-9/7.5E-1	2.0E-9/7.5E-1	2.0E-9/2.5E+0
	10 min	6.0E-10/1.8E-1	1.0E-9/3.1E-1	2.0E-9/6.4E-1	2.0E-9/7.2E-1	2.0E-9/7.2E-1	2.0E-9/2.5E+0
	30 min	5.9E-10/1.8E-1	1.0E-9/3.1E-1	2.0E-9/6.4E-1	2.0E-9/7.1E-1	2.0E-9/7.2E-1	2.0E-9/2.5E+0
	1 h	5.8E-10/1.8E-1	1.0E-9/3.1E-1	2.0E-9/6.3E-1	2.0E-9/7.0E-1	2.0E-9/7.1E-1	2.0E-9/2.5E+0
	2 h	5.7E-10/1.7E-1	9.7E-10/3.0E-1	1.9E-9/6.1E-1	1.9E-9/6.9E-1	1.9E-9/6.9E-1	1.9E-9/2.5E+0
	3 h	5.5E-10/1.7E-1	9.4E-10/2.9E-1	1.9E-9/5.9E-1	1.9E-9/6.7E-1	1.9E-9/6.7E-1	1.9E-9/2.4E+0
	6 h	5.1E-10/1.5E-1	8.6E-10/2.6E-1	1.7E-9/5.5E-1	1.7E-9/6.2E-1	1.7E-9/6.2E-1	1.7E-9/2.4E+0
	12 h	4.2E-10/1.3E-1	7.2E-10/2.2E-1	1.4E-9/4.6E-1	1.4E-9/5.4E-1	1.4E-9/5.4E-1	1.4E-9/2.3E+0
	1 d	3.0E-10/9.2E-2	5.1E-10/1.6E-1	1.0E-9 / 3.3E-1	1.0E-9/4.1E-1	1.0E-9/4.1E-1	1.0E-9/2.2E+0
	2 d	1.5E-10/4.6E-2	2.5E-10/7.8E-2	5.0E-10/1.8E-1	5.0E-10/2.5E-1	5.0E-10/2.5E-1	5.0E-10/2.0E+0
	7 d	4.4E-12/1.8E-3	7.6E-12/3.2E-3	1.5E-11/2.8E-2	1.5E-11/9.8E-2	1.5E-11/1.0E-1	1.5E-11/1.9E+0
	30 d	3.7E-16/3.6E-4	7.4E-16/7.1E-4	2.0E-14/1.9E-2	1.0E-13/7.5E-2	1.1E-13/7.8E-2	1.1E-13/1.8E+0
	182 d	1.3E-16/8.8E-5	2.6E-16/1.8E-4	7.2E-15/4.7E-3	3.8E-14/1.9E-2	4.3E-14/2.0E-2	4.3E-14/1.8E+0
	1 yr	4.3E-17/1.7E-5	8.6E-17/3.4E-5	2.4E-15/8.9E-4	1.3E-14/3.6E-3	1.4E-14/3.8E-3	1.4E-14/1.8E+0
	2 yr	4.7E-18/6.7E-7	9.5E-18/1.3E-6	2.6E-16/3.5E-5	1.4E-15/1.5E-4	1.6E-15/1.6E-4	1.8E-15/1.8E+0
	5 yr	6.6E-21/2.5E-10	1.3E-20/5.1E-10	3.6E-19/1.4E-8	2.0E-18/7.6E-8	2.2E-18/8.6E-8	2.2E-16/1.8E+0
	10 yr	1.2E-25/2.0E-14	2.4E-25/4.1E-14	6.6E-24/1.2E-12	3.6E-23/1.2E-11	4.0E-23/1.0E-10	2.2E-16/1.8E+0
	20 yr	4.8E-30/1.4E-14	9.6E-30/2.7E-14	2.9E-28/8.1E-13	3.5E-27/9.9E-12	3.5E-26/9.9E-11	2.2E-16/1.8E+0
	30 yr	4.8E-30/1.4E-14	9.6E-30/2.7E-14	2.9E-28/8.1E-13	3.5E-27/9.9E-12	3.5E-26/9.9E-11	2.2E-16/1.8E+0

Table 41: Tungsten (W) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	1.7E-9 / 1.1E+0	3.2E-9 / 2.0E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0
	1 min	1.7E-9 / 1.1E+0	3.2E-9 / 2.0E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0
	10 min	1.7E-9 / 1.1E+0	3.1E-9 / 2.0E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0
	30 min	1.7E-9 / 1.1E+0	3.1E-9 / 2.0E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0	1.4E-8 / 8.9E+0
	1 h	1.7E-9 / 1.1E+0	3.1E-9 / 2.0E+0	1.4E-8 / 8.8E+0	1.4E-8 / 8.8E+0	1.4E-8 / 8.8E+0	1.4E-8 / 8.8E+0
	2 h	1.6E-9 / 1.1E+0	3.1E-9 / 2.0E+0	1.4E-8 / 8.7E+0	1.4E-8 / 8.7E+0	1.4E-8 / 8.7E+0	1.4E-8 / 8.7E+0
	3 h	1.6E-9 / 1.0E+0	3.1E-9 / 2.0E+0	1.3E-8 / 8.6E+0	1.3E-8 / 8.6E+0	1.3E-8 / 8.6E+0	1.3E-8 / 8.6E+0
	6 h	1.6E-9 / 1.0E+0	3.0E-9 / 1.9E+0	1.3E-8 / 8.4E+0	1.3E-8 / 8.4E+0	1.3E-8 / 8.4E+0	1.3E-8 / 8.4E+0
	12 h	1.5E-9 / 9.5E-1	2.8E-9 / 1.8E+0	1.2E-8 / 7.8E+0	1.2E-8 / 7.8E+0	1.2E-8 / 7.8E+0	1.2E-8 / 7.8E+0
	1 d	1.3E-9 / 8.3E-1	2.4E-9 / 1.6E+0	1.1E-8 / 6.9E+0	1.1E-8 / 6.9E+0	1.1E-8 / 6.9E+0	1.1E-8 / 6.9E+0
	2 d	1.0E-9 / 6.4E-1	1.9E-9 / 1.2E+0	8.3E-9 / 5.3E+0	8.3E-9 / 5.3E+0	8.3E-9 / 5.3E+0	8.3E-9 / 5.3E+0
	7 d	2.8E-10 / 1.8E-1	5.2E-10 / 3.3E-1	2.3E-9 / 1.5E+0	2.3E-9 / 1.5E+0	2.3E-9 / 1.5E+0	2.3E-9 / 1.5E+0
	30 d	7.6E-13 / 4.9E-4	1.4E-12 / 9.2E-4	6.4E-12 / 4.2E-3	6.4E-12 / 4.4E-3	6.5E-12 / 4.5E-3	6.5E-12 / 4.5E-3
	182 d	1.6E-17 / 3.1E-7	3.1E-17 / 6.1E-7	8.8E-16 / 1.7E-5	6.0E-15 / 1.2E-4	7.9E-15 / 1.7E-4	7.9E-15 / 1.7E-4
	1 yr	7.6E-18 / 1.6E-7	1.5E-17 / 3.1E-7	4.3E-16 / 8.9E-6	2.9E-15 / 6.2E-5	3.8E-15 / 8.4E-5	3.8E-15 / 8.4E-5
	2 yr	1.8E-18 / 4.0E-8	3.6E-18 / 8.0E-8	1.0E-16 / 2.3E-6	6.9E-16 / 1.6E-5	9.1E-16 / 2.2E-5	9.1E-16 / 2.2E-5
	5 yr	2.4E-20 / 6.8E-10	4.8E-20 / 1.4E-9	1.4E-18 / 3.8E-8	9.3E-18 / 2.7E-7	1.2E-17 / 3.6E-7	1.2E-17 / 3.6E-7
	10 yr	2.0E-23 / 7.9E-13	3.9E-23 / 1.5E-12	1.1E-21 / 4.3E-11	7.7E-21 / 3.0E-10	1.0E-20 / 4.1E-10	1.0E-20 / 4.1E-10
	20 yr	1.3E-29 / 9.4E-19	2.7E-29 / 1.9E-18	9.5E-28 / 5.4E-17	6.6E-27 / 3.8E-16	8.9E-27 / 5.1E-16	8.9E-27 / 5.1E-16
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
2)	0	4.5E-10 / 3.0E-1	8.5E-10 / 5.5E-1	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0
	1 min	4.5E-10 / 2.9E-1	8.5E-10 / 5.5E-1	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0
	10 min	4.5E-10 / 2.9E-1	8.5E-10 / 5.5E-1	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0
	30 min	4.5E-10 / 2.9E-1	8.4E-10 / 5.5E-1	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0
	1 h	4.5E-10 / 2.9E-1	8.4E-10 / 5.4E-1	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0
	2 h	4.4E-10 / 2.9E-1	8.3E-10 / 5.4E-1	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0	3.7E-9 / 2.4E+0
	3 h	4.4E-10 / 2.8E-1	8.2E-10 / 5.3E-1	3.6E-9 / 2.3E+0	3.6E-9 / 2.3E+0	3.6E-9 / 2.3E+0	3.6E-9 / 2.3E+0
	6 h	4.2E-10 / 2.7E-1	7.9E-10 / 5.1E-1	3.5E-9 / 2.3E+0	3.5E-9 / 2.3E+0	3.5E-9 / 2.3E+0	3.5E-9 / 2.3E+0
	12 h	4.0E-10 / 2.6E-1	7.4E-10 / 4.8E-1	3.3E-9 / 2.1E+0	3.3E-9 / 2.1E+0	3.3E-9 / 2.1E+0	3.3E-9 / 2.1E+0
	1 d	3.5E-10 / 2.2E-1	6.5E-10 / 4.2E-1	2.9E-9 / 1.9E+0	2.9E-9 / 1.9E+0	2.9E-9 / 1.9E+0	2.9E-9 / 1.9E+0
	2 d	2.7E-10 / 1.7E-1	5.1E-10 / 3.3E-1	2.2E-9 / 1.4E+0	2.2E-9 / 1.4E+0	2.2E-9 / 1.4E+0	2.2E-9 / 1.4E+0
	7 d	7.5E-11 / 4.8E-2	1.4E-10 / 9.0E-2	6.2E-10 / 4.0E-1	6.2E-10 / 4.0E-1	6.2E-10 / 4.0E-1	6.2E-10 / 4.0E-1
	30 d	2.3E-13 / 1.5E-4	4.3E-13 / 2.9E-4	2.2E-12 / 1.6E-3	2.2E-12 / 2.1E-3	2.2E-12 / 2.3E-3	2.2E-12 / 2.3E-3
	182 d	3.6E-17 / 8.2E-7	7.2E-17 / 1.6E-6	2.0E-15 / 4.7E-5	1.4E-14 / 3.3E-4	1.8E-14 / 4.4E-4	1.8E-14 / 4.4E-4
	1 yr	1.8E-17 / 4.1E-7	3.5E-17 / 8.3E-7	9.9E-16 / 2.4E-5	6.8E-15 / 1.7E-4	8.9E-15 / 2.2E-4	8.9E-15 / 2.2E-4
	2 yr	4.2E-18 / 1.1E-7	8.3E-18 / 2.1E-7	2.4E-16 / 6.0E-6	1.6E-15 / 4.3E-5	2.1E-15 / 5.7E-5	2.1E-15 / 5.7E-5
	5 yr	5.7E-20 / 1.8E-9	1.1E-19 / 3.6E-9	3.2E-18 / 1.0E-7	2.2E-17 / 7.2E-7	2.9E-17 / 9.7E-7	2.9E-17 / 9.7E-7
	10 yr	4.8E-23 / 2.0E-12	9.6E-23 / 4.0E-12	2.7E-21 / 1.1E-10	1.9E-20 / 8.0E-10	2.5E-20 / 1.1E-9	2.5E-20 / 1.1E-9
	20 yr	3.6E-29 / 2.5E-18	7.1E-29 / 5.0E-18	2.4E-27 / 1.4E-16	1.7E-26 / 1.0E-15	2.3E-26 / 1.3E-15	2.3E-26 / 1.3E-15
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
3)	0	2.1E-10 / 1.5E-1	4.0E-10 / 2.7E-1	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0
	1 min	2.1E-10 / 1.4E-1	4.0E-10 / 2.7E-1	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0
	10 min	2.1E-10 / 1.4E-1	4.0E-10 / 2.7E-1	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0
	30 min	2.1E-10 / 1.4E-1	4.0E-10 / 2.7E-1	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0	1.8E-9 / 1.2E+0
	1 h	2.1E-10 / 1.4E-1	4.0E-10 / 2.6E-1	1.8E-9 / 1.1E+0	1.8E-9 / 1.1E+0	1.8E-9 / 1.1E+0	1.8E-9 / 1.1E+0
	2 h	2.1E-10 / 1.4E-1	3.9E-10 / 2.6E-1	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0
	3 h	2.1E-10 / 1.4E-1	3.9E-10 / 2.6E-1	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0
	6 h	2.0E-10 / 1.3E-1	3.8E-10 / 2.5E-1	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0	1.7E-9 / 1.1E+0
	12 h	1.9E-10 / 1.2E-1	3.5E-10 / 2.3E-1	1.6E-9 / 1.0E+0	1.6E-9 / 1.0E+0	1.6E-9 / 1.0E+0	1.6E-9 / 1.0E+0
	1 d	1.6E-10 / 1.1E-1	3.1E-10 / 2.0E-1	1.4E-9 / 8.9E-1	1.4E-9 / 8.9E-1	1.4E-9 / 8.9E-1	1.4E-9 / 8.9E-1
	2 d	1.3E-10 / 8.2E-2	2.4E-10 / 1.5E-1	1.1E-9 / 6.9E-1	1.1E-9 / 6.9E-1	1.1E-9 / 6.9E-1	1.1E-9 / 6.9E-1
	7 d	3.6E-11 / 2.3E-2	6.7E-11 / 4.3E-2	3.0E-10 / 1.9E-1	3.0E-10 / 2.0E-1	3.0E-10 / 2.0E-1	3.0E-10 / 2.0E-1
	30 d	1.4E-13 / 9.9E-5	2.6E-13 / 1.9E-4	1.5E-12 / 1.3E-3	1.6E-12 / 2.2E-3	1.6E-12 / 2.5E-3	1.6E-12 / 2.5E-3
	182 d	6.4E-17 / 1.4E-6	1.3E-16 / 2.8E-6	3.6E-15 / 7.9E-5	2.5E-14 / 7.5E-4	3.2E-14 / 7.5E-4	3.2E-14 / 7.5E-4
	1 yr	3.1E-17 / 7.1E-7	6.2E-17 / 1.4E-6	1.8E-15 / 4.0E-5	1.2E-14 / 2.8E-4	1.6E-14 / 3.8E-4	1.6E-14 / 3.8E-4
	2 yr	7.4E-18 / 1.8E-7	1.5E-17 / 3.6E-7	4.2E-16 / 1.0E-5	2.9E-15 / 7.2E-5	3.8E-15 / 9.7E-5	3.8E-15 / 9.7E-5
	5 yr	1.0E-19 / 3.1E-9	2.0E-19 / 6.1E-9	5.7E-18 / 1.7E-7	3.9E-17 / 1.2E-6	5.1E-17 / 1.6E-6	5.1E-17 / 1.6E-6
	10 yr	8.4E-23 / 4.3E-12	1.7E-22 / 6.8E-12	4.7E-21 / 1.9E-10	3.3E-20 / 1.4E-9	4.3E-20 / 1.8E-9	4.3E-20 / 1.8E-9
	20 yr	6.1E-29 / 3.4E-18	1.2E-28 / 8.5E-18	4.2E-27 / 2.4E-16	2.9E-26 / 1.7E-15	3.9E-26 / 2.3E-15	3.9E-26 / 2.3E-15
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
4)	0	7.8E-10 / 5.1E-1	1.5E-9 / 9.5E-1	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0
	1 min	7.8E-10 / 5.1E-1	1.5E-9 / 9.5E-1	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0
	10 min	7.8E-10 / 5.1E-1	1.5E-9 / 9.5E-1	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0
	30 min	7.8E-10 / 5.0E-1	1.5E-9 / 9.5E-1	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0	6.5E-9 / 4.2E+0
	1 h	7.8E-10 / 5.0E-1	1.5E-9 / 9.4E-1	6.4E-9 / 4.1E+0	6.4E-9 / 4.1E+0	6.4E-9 / 4.1E+0	6.4E-9 / 4.1E+0
	2 h	7.7E-10 / 5.0E-1	1.4E-9 / 9.3E-1	6.4E-9 / 4.1E+0	6.4E-9 / 4.1E+0	6.4E-9 / 4.1E+0	6.4E-9 / 4.1E+0
	3 h	7.6E-10 / 4.9E-1	1.4E-9 / 9.2E-1	6.3E-9 / 4.0E+0	6.3E-9 / 4.0E+0	6.3E-9 / 4.0E+0	6.3E-9 / 4.0E+0
	6 h	7.4E-10 / 4.7E-1	1.4E-9 / 8.9E-1	6.1E-9 / 3.9E+0	6.1E-9 / 3.9E+0	6.1E-9 / 3.9E+0	6.1E-9 / 3.9E+0
	12 h	6.9E-10 / 4.4E-1	1.3E-9 / 8.3E-1	5.7E-9 / 3.7E+0	5.7E-9 / 3.7E+0	5.7E-9 / 3.7E+0	5.7E-9 / 3.7E+0
	1 d	6.1E-10 / 3.9E-1	1.1E-9 / 7.3E-1	5.0E-9 / 3.2E+0	5.0E-9 / 3.2E+0	5.0E-9 / 3.2E+0	5.0E-9 / 3.2E+0
	2 d	4.7E-10 / 3.0E-1	8.8E-10 / 5.7E-1	3.9E-9 / 2.5E+0	3.9E-9 / 2.5E+0	3.9E-9 / 2.5E+0	3.9E-9 / 2.5E+0
	7 d	1.3E-10 / 8.3E-2	2.4E-10 / 1.6E-1	1.1E-9 / 6.9E-1	1.1E-9 / 6.9E-1	1.1E-9 / 6.9E-1	1.1E-9 / 6.9E-1
	30 d	3.7E-13 / 2.4E-4	7.0E-13 / 4.6E-4	3.3E-12 / 2.2E-3	3.3E-12 / 2.5E-3	3.3E-12 / 2.6E-3	3.3E-12 / 2.6E-3
	182 d	2.4E-17 / 4.7E-7	4.8E-17 / 9.4E-7	1.4E-15 / 2.7E-5	9.2E-15 / 1.9E-4	1.2E-14 / 2.5E-4	1.2E-14 / 2.5E-4
	1 yr	1.2E-17 / 2.4E-7	2.3E-17 / 4.8E-7	6.6E-16 / 1.4E-5	4.5E-15 / 9.6E-5	5.9E-15 / 1.3E-4	5.9E-15 / 1.3E-4
	2 yr	2.7E-18 / 6.1E-8	5.5E-18 / 1.2E-7	1.6E-16 / 3.5E-6	1.1E-15 / 2.5E-5	1.4E-15 / 3.3E-5	1.4E-15 / 3.3E-5
	5 yr	3.7E-20 / 1.0E-9	7.4E-20 / 2.1E-9	2.1E-18 / 5.9E-8	1.4E-17 / 4.2E-7	1.9E-17 / 5.6E-7	1.9E-17 / 5.6E-7
	10 yr	3.0E-23 / 1.2E-12	6.0E-23 / 2.3E-12	1.7E-21 / 6.6E-11	1.2E-20 / 4.6E-10	1.6E-20 / 6.2E-10	1.6E-20 / 6.2E-10
	20 yr	2.1E-29 / 1.4E-18	4.1E-29 / 2.9E-18	1.5E-27 / 8.2E-17	1.0E-26 / 5.8E-16	1.4E-26 / 7.8E-16	1.4E-26 / 7.8E-16
	30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Table 42: Gold (Au) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra analyzed. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

Sp.	t_c	Irradiation Time					
		12 h	1 d	30 d	1 yr	10 yr	∞
1)	0	7.3E-11 / 2.8E-3	7.3E-11 / 2.9E-3	7.3E-11 / 2.9E-3	7.3E-11 / 2.9E-3	7.3E-11 / 2.9E-3	7.3E-11 / 5.5E-3
	1 min	3.3E-13 / 3.4E-4	3.4E-13 / 3.7E-4	3.6E-13 / 4.0E-4	3.6E-13 / 4.0E-4	3.6E-13 / 4.0E-4	3.7E-13 / 3.0E-3
	10 min	2.3E-13 / 3.2E-4	2.4E-13 / 3.5E-4	2.6E-13 / 3.8E-4	2.6E-13 / 3.9E-4	2.6E-13 / 3.9E-4	2.7E-13 / 3.0E-3
	30 min	1.8E-13 / 3.0E-4	1.9E-13 / 3.2E-4	2.1E-13 / 3.6E-4	2.1E-13 / 3.6E-4	2.1E-13 / 3.6E-4	2.2E-13 / 3.0E-3
	1 h	1.4E-13 / 2.7E-4	1.4E-13 / 2.9E-4	1.6E-13 / 3.3E-4	1.6E-13 / 3.3E-4	1.6E-13 / 3.3E-4	1.7E-13 / 3.0E-3
	2 h	7.7E-14 / 2.1E-4	8.1E-14 / 2.4E-4	1.0E-13 / 2.7E-4	1.1E-13 / 2.7E-4	1.1E-13 / 2.7E-4	1.1E-13 / 2.9E-3
	3 h	4.5E-14 / 1.7E-4	4.9E-14 / 1.9E-4	7.2E-14 / 2.3E-4	7.3E-14 / 2.3E-4	7.3E-14 / 2.3E-4	8.0E-14 / 2.9E-3
	6 h	1.2E-14 / 9.4E-5	1.6E-14 / 1.1E-4	3.8E-14 / 1.4E-4	3.9E-14 / 1.4E-4	3.9E-14 / 1.4E-4	4.6E-14 / 2.8E-3
	12 h	4.9E-15 / 3.0E-5	8.4E-15 / 3.7E-5	2.8E-14 / 6.6E-5	2.9E-14 / 6.8E-5	2.9E-14 / 6.8E-5	3.7E-14 / 2.7E-3
	1 d	3.5E-15 / 6.8E-6	6.4E-15 / 1.1E-5	2.4E-14 / 3.6E-5	2.5E-14 / 3.8E-5	2.5E-14 / 3.8E-5	3.2E-14 / 2.7E-3
	2 d	2.5E-15 / 3.5E-6	4.6E-15 / 6.6E-6	1.7E-14 / 2.5E-5	1.8E-14 / 2.7E-5	1.8E-14 / 2.7E-5	2.6E-14 / 2.7E-3
	7 d	5.1E-16 / 7.3E-7	9.4E-16 / 1.3E-6	3.9E-15 / 5.7E-6	4.7E-15 / 7.3E-6	4.7E-15 / 8.0E-6	1.2E-14 / 2.6E-3
	30 d	7.7E-18 / 1.4E-8	1.5E-17 / 2.7E-8	3.5E-16 / 6.4E-7	9.5E-16 / 1.9E-6	9.6E-16 / 2.5E-6	8.3E-15 / 2.6E-3
	182 d	7.2E-19 / 1.5E-9	1.4E-18 / 3.0E-9	3.5E-17 / 7.4E-8	9.7E-17 / 2.9E-7	9.7E-17 / 9.6E-7	7.5E-15 / 2.6E-3
	1 yr	4.8E-20 / 2.5E-10	9.5E-20 / 4.9E-10	2.3E-18 / 1.4E-8	6.4E-18 / 1.2E-7	6.7E-18 / 7.6E-7	7.4E-15 / 2.6E-3
	2 yr	2.6E-22 / 1.4E-10	5.1E-22 / 2.9E-10	1.3E-20 / 8.5E-9	6.1E-20 / 9.9E-8	3.0E-19 / 6.8E-7	7.4E-15 / 2.6E-3
	5 yr	3.9E-23 / 1.1E-10	7.7E-23 / 2.1E-10	2.3E-21 / 6.4E-9	2.8E-20 / 7.4E-8	2.4E-19 / 5.3E-7	7.4E-15 / 2.6E-3
	10 yr	3.3E-23 / 7.0E-11	6.5E-23 / 1.4E-10	6.0E-21 / 4.2E-9	2.4E-20 / 4.9E-8	2.2E-19 / 3.6E-7	7.4E-15 / 2.6E-3
	20 yr	2.9E-23 / 3.5E-11	5.8E-23 / 7.0E-11	1.7E-21 / 2.1E-9	2.1E-20 / 2.5E-8	2.1E-19 / 1.9E-7	7.4E-15 / 2.6E-3
30 yr	2.9E-23 / 1.9E-11	5.7E-23 / 3.9E-11	1.7E-21 / 1.2E-9	2.1E-20 / 1.4E-8	2.1E-19 / 1.1E-7	7.4E-15 / 2.6E-3	
2)	0	6.2E-11 / 2.2E-3	6.2E-11 / 2.2E-3	6.2E-11 / 2.3E-3	6.2E-11 / 2.3E-3	6.2E-11 / 2.3E-3	6.2E-11 / 4.2E-3
	1 min	9.0E-13 / 8.5E-5	9.1E-13 / 1.0E-4	9.7E-13 / 1.8E-4	9.7E-13 / 1.8E-4	9.7E-13 / 1.9E-4	9.8E-13 / 2.1E-3
	10 min	6.5E-13 / 7.6E-5	6.5E-13 / 8.3E-5	7.0E-13 / 1.6E-4	7.1E-13 / 1.7E-4	7.1E-13 / 1.7E-4	7.2E-13 / 2.1E-3
	30 min	5.0E-13 / 5.7E-5	5.1E-13 / 7.2E-5	5.6E-13 / 1.5E-4	5.6E-13 / 1.5E-4	5.6E-13 / 1.6E-4	5.7E-13 / 2.1E-3
	1 h	3.7E-13 / 5.0E-5	3.8E-13 / 6.5E-5	4.4E-13 / 1.4E-4	4.4E-13 / 1.5E-4	4.4E-13 / 1.5E-4	4.5E-13 / 2.1E-3
	2 h	2.1E-13 / 4.0E-5	2.2E-13 / 5.5E-5	2.7E-13 / 1.3E-4	2.8E-13 / 1.4E-4	2.8E-13 / 1.4E-4	2.8E-13 / 2.0E-3
	3 h	1.2E-13 / 3.4E-5	1.3E-13 / 4.8E-5	1.9E-13 / 1.2E-4	1.9E-13 / 1.3E-4	1.9E-13 / 1.3E-4	2.0E-13 / 2.0E-3
	6 h	3.3E-14 / 2.3E-5	4.2E-14 / 3.6E-5	9.3E-14 / 1.1E-4	9.5E-14 / 1.2E-4	9.5E-14 / 1.2E-4	1.0E-13 / 2.0E-3
	12 h	1.2E-14 / 1.6E-5	2.0E-14 / 2.7E-5	6.7E-14 / 9.5E-5	6.9E-14 / 9.9E-5	6.9E-14 / 1.0E-4	7.8E-14 / 2.0E-3
	1 d	8.2E-15 / 1.2E-5	1.5E-14 / 2.1E-5	5.5E-14 / 7.9E-5	5.7E-14 / 8.3E-5	5.7E-14 / 8.5E-5	6.6E-14 / 2.0E-3
	2 d	5.8E-15 / 8.3E-6	1.1E-14 / 1.5E-5	4.0E-14 / 5.8E-5	4.2E-14 / 6.2E-5	4.2E-14 / 6.2E-5	5.1E-14 / 2.0E-3
	7 d	1.2E-15 / 1.7E-6	2.2E-15 / 3.1E-6	9.0E-15 / 1.3E-5	1.1E-14 / 1.7E-5	1.1E-14 / 1.9E-5	2.0E-14 / 1.9E-3
	30 d	1.7E-17 / 3.0E-8	3.4E-17 / 6.1E-8	7.9E-16 / 1.4E-6	2.1E-15 / 4.2E-6	2.1E-15 / 6.0E-6	1.1E-14 / 1.9E-3
	182 d	1.6E-18 / 3.4E-9	3.2E-18 / 6.8E-9	7.8E-17 / 1.7E-7	2.2E-16 / 7.1E-7	2.2E-16 / 2.5E-6	8.8E-15 / 1.9E-3
	1 yr	1.1E-19 / 6.2E-10	2.1E-19 / 1.2E-9	5.2E-18 / 3.5E-8	1.4E-17 / 3.2E-7	1.5E-17 / 2.0E-6	8.6E-15 / 1.9E-3
	2 yr	6.0E-22 / 3.8E-10	1.2E-21 / 7.6E-10	3.1E-20 / 2.3E-8	1.6E-19 / 2.6E-7	8.2E-19 / 1.8E-6	8.6E-15 / 1.9E-3
	5 yr	1.1E-22 / 2.8E-10	2.2E-22 / 5.6E-10	6.6E-21 / 1.7E-8	7.9E-20 / 2.0E-7	6.9E-19 / 1.4E-6	8.6E-15 / 1.9E-3
	10 yr	9.2E-23 / 1.8E-10	1.8E-22 / 3.6E-10	5.5E-21 / 1.1E-8	6.7E-20 / 1.3E-7	6.3E-19 / 9.3E-7	8.6E-15 / 1.9E-3
	20 yr	8.2E-23 / 8.9E-11	1.6E-22 / 1.8E-10	4.9E-21 / 5.3E-9	6.0E-20 / 6.3E-8	5.9E-19 / 4.8E-7	8.6E-15 / 1.9E-3
30 yr	8.1E-23 / 4.8E-11	1.6E-22 / 9.7E-11	4.9E-21 / 2.9E-9	5.9E-20 / 3.4E-8	5.9E-19 / 2.7E-7	8.6E-15 / 1.9E-3	
3)	0	9.2E-11 / 3.3E-3	9.2E-11 / 3.3E-3	9.2E-11 / 3.4E-3	9.2E-11 / 3.4E-3	9.2E-11 / 3.4E-3	9.2E-11 / 6.3E-3
	1 min	1.6E-12 / 1.2E-4	1.6E-12 / 1.5E-4	1.7E-12 / 2.7E-4	1.7E-12 / 2.7E-4	1.7E-12 / 2.8E-4	1.7E-12 / 3.1E-3
	10 min	1.2E-12 / 9.2E-5	1.2E-12 / 1.1E-4	1.3E-12 / 2.3E-4	1.3E-12 / 2.4E-4	1.3E-12 / 2.4E-4	1.3E-12 / 3.1E-3
	30 min	9.0E-13 / 7.4E-5	9.2E-13 / 9.6E-5	1.0E-12 / 2.2E-4	1.0E-12 / 2.3E-4	1.0E-12 / 2.3E-4	1.0E-12 / 3.1E-3
	1 h	6.8E-13 / 6.4E-5	6.9E-13 / 8.6E-5	7.8E-13 / 2.0E-4	7.8E-13 / 2.1E-4	7.8E-13 / 2.2E-4	8.0E-13 / 3.1E-3
	2 h	3.8E-13 / 5.1E-5	4.0E-13 / 7.3E-5	4.8E-13 / 1.9E-4	4.9E-13 / 2.0E-4	4.9E-13 / 2.0E-4	5.0E-13 / 3.1E-3
	3 h	2.2E-13 / 4.3E-5	2.4E-13 / 6.4E-5	3.2E-13 / 1.8E-4	3.2E-13 / 1.9E-4	3.2E-13 / 1.9E-4	3.4E-13 / 3.0E-3
	6 h	5.9E-14 / 3.1E-5	7.3E-14 / 5.0E-5	1.5E-13 / 1.6E-4	1.5E-13 / 1.7E-4	1.5E-13 / 1.7E-4	1.7E-13 / 3.0E-3
	12 h	2.0E-14 / 2.2E-5	3.2E-14 / 4.0E-5	1.0E-13 / 1.5E-4	1.1E-13 / 1.5E-4	1.1E-13 / 1.5E-4	1.2E-13 / 3.0E-3
	1 d	1.3E-14 / 1.7E-5	2.3E-14 / 3.2E-5	8.4E-14 / 1.2E-4	8.8E-14 / 1.3E-4	8.8E-14 / 1.3E-4	1.0E-13 / 3.0E-3
	2 d	8.8E-15 / 1.3E-5	1.6E-14 / 2.3E-5	6.1E-14 / 8.8E-5	6.5E-14 / 9.6E-5	6.5E-14 / 9.9E-5	8.1E-14 / 3.0E-3
	7 d	1.8E-15 / 2.6E-6	3.3E-15 / 4.8E-6	1.4E-14 / 2.1E-5	1.8E-14 / 2.8E-5	1.8E-14 / 3.1E-5	3.4E-14 / 2.9E-3
	30 d	3.4E-17 / 5.9E-8	6.7E-17 / 1.2E-7	1.5E-15 / 2.8E-6	4.2E-15 / 8.1E-6	4.2E-15 / 1.1E-5	2.0E-14 / 2.9E-3
	182 d	3.1E-18 / 6.5E-9	6.2E-18 / 1.3E-8	1.5E-16 / 3.2E-7	4.2E-16 / 1.3E-6	4.2E-16 / 4.1E-6	1.6E-14 / 2.9E-3
	1 yr	2.1E-19 / 1.1E-9	4.1E-19 / 2.1E-9	1.0E-17 / 6.0E-8	2.8E-17 / 5.3E-7	3.0E-17 / 3.2E-6	1.6E-14 / 2.9E-3
	2 yr	1.2E-21 / 6.2E-10	2.3E-21 / 1.2E-9	6.0E-20 / 3.7E-8	3.1E-19 / 4.3E-7	1.7E-18 / 2.9E-6	1.6E-14 / 2.9E-3
	5 yr	2.2E-22 / 4.5E-10	4.5E-22 / 9.1E-10	1.3E-20 / 2.7E-8	1.6E-19 / 3.2E-7	1.4E-18 / 2.2E-6	1.6E-14 / 2.9E-3
	10 yr	2.0E-22 / 2.9E-10	3.9E-22 / 5.9E-10	1.2E-20 / 1.8E-8	1.4E-19 / 2.1E-7	1.3E-18 / 1.5E-6	1.6E-14 / 2.9E-3
	20 yr	1.8E-22 / 1.4E-10	3.6E-22 / 2.9E-10	1.1E-20 / 8.6E-9	1.3E-19 / 1.0E-7	1.3E-18 / 7.9E-7	1.6E-14 / 2.9E-3
30 yr	1.8E-22 / 7.9E-11	3.5E-22 / 1.6E-10	1.1E-20 / 4.7E-9	1.3E-19 / 5.6E-8	1.3E-18 / 4.4E-7	1.6E-14 / 2.9E-3	
4)	0	5.1E-11 / 1.8E-3	5.1E-11 / 1.8E-3	5.1E-11 / 1.9E-3	5.1E-11 / 1.9E-3	5.1E-11 / 1.9E-3	5.1E-11 / 3.5E-3
	1 min	5.1E-13 / 7.7E-5	5.1E-13 / 9.0E-5	5.5E-13 / 1.5E-4	5.5E-13 / 1.5E-4	5.5E-13 / 1.5E-4	5.6E-13 / 1.8E-3
	10 min	3.6E-13 / 6.5E-5	3.7E-13 / 7.7E-5	4.0E-13 / 1.3E-4	4.1E-13 / 1.4E-4	4.1E-13 / 1.4E-4	4.1E-13 / 1.8E-3
	30 min	2.8E-13 / 5.7E-5	2.8E-13 / 6.9E-5	3.2E-13 / 1.3E-4	3.3E-13 / 1.3E-4	3.3E-13 / 1.3E-4	3.3E-13 / 1.8E-3
	1 h	2.1E-13 / 5.0E-5	2.1E-13 / 6.3E-5	2.5E-13 / 1.2E-4	2.6E-13 / 1.2E-4	2.6E-13 / 1.2E-4	2.6E-13 / 1.8E-3
	2 h	1.2E-13 / 4.1E-5	1.3E-13 / 5.3E-5	1.6E-13 / 1.1E-4	1.7E-13 / 1.1E-4	1.7E-13 / 1.1E-4	1.7E-13 / 1.7E-3
	3 h	7.0E-14 / 3.5E-5	7.7E-14 / 4.5E-5	1.1E-13 / 1.0E-4	1.2E-13 / 1.0E-4	1.2E-13 / 1.0E-4	1.2E-13 / 1.7E-3
	6 h	2.0E-14 / 2.2E-5	2.7E-14 / 3.2E-5	6.3E-14 / 8.4E-5	6.5E-14 / 8.8E-5	6.5E-14 / 8.9E-5	7.1E-14 / 1.7E-3
	12 h	8.2E-15 / 1.3E-5	1.4E-14 / 2.1E-5	4.8E-14 / 7.0E-5	4.9E-14 / 7.3E-5	4.9E-14 / 7.4E-5	5.6E-14 / 1.7E-3
	1 d	5.8E-15 / 8.4E-6	1.1E-14 / 1.5E-5	4.0E-14 / 5.7E-5	4.1E-14 / 6.0E-5	4.1E-14 / 6.1E-5	4.7E-14 / 1.7E-3
	2 d	4.2E-15 / 5.9E-6	7.7E-15 / 1.1E-5	2.9E-14 / 4.1E-5	3.0E-14 / 4.4E-5	3.0E-14 / 4.6E-5	3.7E-14 / 1.7E-3
	7 d	8.5E-16 / 1.2E-6	1.6E-15 / 2.3E-6	6.5E-15 / 9.5E-6	7.9E-15 / 1.2E-5	7.9E-15 / 1.3E-5	1.4E-14 / 1.6E-3
	30 d	1.3E-17 / 2.3E-8	2.5E-17 / 4.5E-8	5.9E-16 / 1.1E-6	1.6E-15 / 3.1E-6	1.6E-15 / 4.2E-6	7.8E-15 / 1.6E-3
	182 d	1.2E-18 / 2.5E-9	2.4E-18 / 5.0E-9	5.8E-17 / 1.2E-7	1.6E-16 / 4.9E-7	1.6E-16 / 1.6E-6	6.4E-15 / 1.6E-3
	1 yr	7.9E-20 / 4.2E-10	1.6E-19 / 8.3E-10	3.9E-18 / 2.3E-8	1.1E-17 / 2.1E-7	1.1E-17 / 1.3E-6	6.2E-15 / 1.6E-3
	2 yr	4.3E-22 / 2.4E-10	8.6E-22 / 4.9E-10	2.2E-20 / 1.4E-8	1.0E-19 / 1.7E-7	5.1E-19 / 1.1E-6	6.2E-15 / 1.6E-3
	5 yr	6.7E-23 / 1.8E-10	1.3E-22 / 3.5E-10	4.0E-21 / 1.1E-8	4.8E-20 / 1.2E-7	4.1E-19 / 8.6E-7	6.2E-15 / 1.6E-3
	10 yr	5.5E-23 / 1.1E-10	1.1E-22 / 2.3E-10	3.3E-21 / 6.8E-9	4.0E-20 / 7.9E-8	3.7E-19 / 5.8E-7	6.2E-15 / 1.6E-3
	20 yr	4.9E-23 / 5.5E-11	9.7E-23 / 1.1E-10	2.9E-21 / 3.3E-9	3.5E-20 / 3.9E-8	3.5E-19 / 3.0E-7	6.2E-15 / 1.6E-3
30 yr	4.8E-23 / 3.0E-11	9.5E-23 / 6.0E-11	2.9E-21 / 1.8E-9	3.5E-20 / 2.1E-8	3.5E-19 / 1.7E-7	6.2E-15 / 1.6E-3	

Table 43: Lead (Pb) 1–20 MeV neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)) for the four spectra considered. Scaling is with respect to neutron flux in the energy range 1–20 MeV.

A.3 Thermal neutron activation

The following tables give the activation due to thermal neutrons. In these particular simulations only the thermal group of FLUKA, which ranges from 10^{-5} eV to 0.414 eV and is based on $T=293$ K, has been considered. Thermal neutron activation is the simplest case because, except for a few special cases with α -emission, it always leads to the nuclide of same charge and $A=A_T+1$, where A_T is the mass number of the target isotope. Thus there are always only a few isotopes produced.

Table 44 shows the thermal neutron activation for C, O, Na, Mg, Al and Si. In carbon the only isotope produced is ^{14}C , which does not emit any photons and thus the thermal neutron “ ω -factor” is zero. Although natural carbon was assumed for neutrons above thermal energy, the thermal cross sections have been used separately for both carbon isotopes.

In sodium the different production rates of ^{24m}Na and ^{24}Na have not been considered because ^{24m}Na decays mostly by internal conversion and has a very short half-life.

Table 45 shows the thermal neutron activation for K, Ca, Cr and Mn. Potassium and calcium are among those rare cases where thermal neutron capture leads (n,p) and (n, α) reactions. These are properly taken into account.

Table 46 shows the thermal neutron activation for Fe, Ni, Cu and Nb. In niobium equal share between ^{94m}Nb and ^{94}Nb is assumed. The metastable state decays predominantly by internal conversion, but has a half-life of 6.3 minutes. Thus the results for the shortest cooling times are slightly approximate.

Table 47 shows the thermal neutron activation for Ag, Ba and W. Silver is one of the worst elements in terms of thermal neutron activation. In total 4 radioisotopes are produced, which have very different decay characteristics, cooling times and production rates. These have been taken properly into account. The most significant isotopes are the two metastable states ^{108m}Ag and ^{110m}Ag which have much longer half-lives than the ground states.

In barium equal share has been assumed for the production of the states of ^{131}Ba and ^{133}Ba . The comments made for niobium apply also here.

Table 48 shows the thermal neutron activation for Au and Pb. Gold is well known for its high thermal neutron activation cross section. However, the produced radioisotopes have half-lives of a few days only. Thus, although the initial activity may be high, the decay is relatively fast and in the longer term Gold is not as harmful as Silver. The state ^{198m}Au decays by internal conversion, but has a half-life comparable to the ground state. In order to get the decay characteristics correct the correct share of production must be used. Actually 100% of thermal captures lead directly to the ground state.

It is noteworthy that pure Lead is characterized by extremely low thermal neutron activation. It should be reminded, however, that already small amounts of impurities like Hg or Sb can change this significantly.

Carbon (C)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	0.0E+0 / 1.5E-13	0.0E+0 / 3.1E-13	0.0E+0 / 9.2E-12	0.0E+0 / 1.1E-10	0.0E+0 / 1.1E-9	0.0E+0 / 9.2E-7
30 yr	0.0E+0 / 1.5E-13	0.0E+0 / 3.1E-13	0.0E+0 / 9.2E-12	0.0E+0 / 1.1E-10	0.0E+0 / 1.1E-9	0.0E+0 / 9.2E-7

Oxygen (O)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	3.5E-15 / 1.3E-8	3.5E-15 / 1.3E-8	3.5E-15 / 1.3E-8	3.5E-15 / 1.4E-8	3.5E-15 / 1.7E-8	3.5E-15 / 3.4E-6
1 min	7.6E-16 / 2.8E-9	7.6E-16 / 2.8E-9	7.6E-16 / 2.9E-9	7.6E-16 / 3.2E-9	7.6E-16 / 6.9E-9	7.6E-16 / 3.3E-6
10 min	6.9E-22 / 5.6E-13	6.9E-22 / 1.1E-12	6.9E-22 / 3.3E-11	6.9E-22 / 4.0E-10	6.9E-22 / 4.0E-9	6.9E-22 / 3.3E-6
30 min	0.0E+0 / 5.5E-13	0.0E+0 / 1.1E-12	0.0E+0 / 3.3E-11	0.0E+0 / 4.0E-10	0.0E+0 / 4.0E-9	0.0E+0 / 3.3E-6
30 yr	0.0E+0 / 5.5E-13	0.0E+0 / 1.1E-12	0.0E+0 / 3.3E-11	0.0E+0 / 4.0E-10	0.0E+0 / 4.0E-9	0.0E+0 / 3.3E-6

Sodium (Na)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	8.2E-9 / 1.1E-2	1.2E-8 / 1.4E-2	1.8E-8 / 1.8E-2	1.8E-8 / 1.8E-2	1.8E-8 / 1.8E-2	1.8E-8 / 1.8E-2
1 min	7.2E-9 / 5.1E-3	1.1E-8 / 8.1E-3	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2
10 min	7.2E-9 / 5.1E-3	1.1E-8 / 8.0E-3	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2
30 min	7.1E-9 / 5.0E-3	1.1E-8 / 7.9E-3	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2	1.7E-8 / 1.2E-2
1 h	6.9E-9 / 4.9E-3	1.1E-8 / 7.7E-3	1.6E-8 / 1.1E-2	1.6E-8 / 1.1E-2	1.6E-8 / 1.1E-2	1.6E-8 / 1.1E-2
2 h	6.6E-9 / 4.7E-3	1.0E-8 / 7.4E-3	1.5E-8 / 1.1E-2	1.5E-8 / 1.1E-2	1.5E-8 / 1.1E-2	1.5E-8 / 1.1E-2
3 h	6.3E-9 / 4.5E-3	9.9E-9 / 7.0E-3	1.5E-8 / 1.0E-2	1.5E-8 / 1.0E-2	1.5E-8 / 1.0E-2	1.5E-8 / 1.0E-2
6 h	5.5E-9 / 3.9E-3	8.6E-9 / 6.1E-3	1.3E-8 / 9.1E-3	1.3E-8 / 9.1E-3	1.3E-8 / 9.1E-3	1.3E-8 / 9.1E-3
12 h	4.1E-9 / 2.9E-3	6.5E-9 / 4.6E-3	9.7E-9 / 6.9E-3	9.7E-9 / 6.9E-3	9.7E-9 / 6.9E-3	9.7E-9 / 6.9E-3
1 d	2.4E-9 / 1.7E-3	3.7E-9 / 2.7E-3	5.6E-9 / 4.0E-3	5.6E-9 / 4.0E-3	5.6E-9 / 4.0E-3	5.6E-9 / 4.0E-3
2 d	7.8E-10 / 5.5E-4	1.2E-9 / 8.7E-4	1.8E-9 / 1.3E-3	1.8E-9 / 1.3E-3	1.8E-9 / 1.3E-3	1.8E-9 / 1.3E-3
7 d	3.0E-12 / 2.1E-6	4.7E-12 / 3.4E-6	7.0E-12 / 5.0E-6	7.0E-12 / 5.0E-6	7.0E-12 / 5.0E-6	7.0E-12 / 5.0E-6
30 d	2.3E-23 / 1.7E-17	3.7E-23 / 2.6E-17	5.5E-23 / 3.9E-17	5.5E-23 / 3.9E-17	5.5E-23 / 3.9E-17	5.5E-23 / 3.9E-17
182 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Magnesium (Mg)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	2.7E-11 / 1.6E-4	2.7E-11 / 1.6E-4	2.7E-11 / 1.6E-4	2.7E-11 / 1.6E-4	2.7E-11 / 1.6E-4	2.7E-11 / 1.6E-4
1 min	2.5E-11 / 1.5E-4	2.5E-11 / 1.5E-4	2.5E-11 / 1.5E-4	2.5E-11 / 1.5E-4	2.5E-11 / 1.5E-4	2.5E-11 / 1.5E-4
10 min	1.3E-11 / 7.9E-5	1.3E-11 / 7.9E-5	1.3E-11 / 7.9E-5	1.3E-11 / 7.9E-5	1.3E-11 / 7.9E-5	1.3E-11 / 7.9E-5
30 min	3.0E-12 / 1.8E-5	3.0E-12 / 1.8E-5	3.0E-12 / 1.8E-5	3.0E-12 / 1.8E-5	3.0E-12 / 1.8E-5	3.0E-12 / 1.8E-5
1 h	3.4E-13 / 2.0E-6	3.4E-13 / 2.0E-6	3.4E-13 / 2.0E-6	3.4E-13 / 2.0E-6	3.4E-13 / 2.0E-6	3.4E-13 / 2.0E-6
2 h	4.1E-15 / 2.5E-8	4.1E-15 / 2.5E-8	4.1E-15 / 2.5E-8	4.1E-15 / 2.5E-8	4.1E-15 / 2.5E-8	4.1E-15 / 2.5E-8
3 h	5.1E-17 / 3.1E-10	5.1E-17 / 3.1E-10	5.1E-17 / 3.1E-10	5.1E-17 / 3.1E-10	5.1E-17 / 3.1E-10	5.1E-17 / 3.1E-10
6 h	9.5E-23 / 5.7E-16	9.5E-23 / 5.7E-16	9.5E-23 / 5.7E-16	9.5E-23 / 5.7E-16	9.5E-23 / 5.7E-16	9.5E-23 / 5.7E-16
12 h	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Aluminium (Al)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	2.7E-9 / 1.3E-2	2.7E-9 / 1.3E-2	2.7E-9 / 1.3E-2	2.7E-9 / 1.3E-2	2.7E-9 / 1.3E-2	2.7E-9 / 1.3E-2
1 min	2.0E-9 / 9.2E-3	2.0E-9 / 9.2E-3	2.0E-9 / 9.2E-3	2.0E-9 / 9.2E-3	2.0E-9 / 9.2E-3	2.0E-9 / 9.2E-3
10 min	1.2E-10 / 5.7E-4	1.2E-10 / 5.7E-4	1.2E-10 / 5.7E-4	1.2E-10 / 5.7E-4	1.2E-10 / 5.7E-4	1.2E-10 / 5.7E-4
30 min	2.6E-13 / 1.2E-6	2.6E-13 / 1.2E-6	2.6E-13 / 1.2E-6	2.6E-13 / 1.2E-6	2.6E-13 / 1.2E-6	2.6E-13 / 1.2E-6
1 h	2.4E-17 / 1.1E-10	2.4E-17 / 1.1E-10	2.4E-17 / 1.1E-10	2.4E-17 / 1.1E-10	2.4E-17 / 1.1E-10	2.4E-17 / 1.1E-10
2 h	2.1E-25 / 9.6E-19	2.1E-25 / 9.6E-19	2.1E-25 / 9.6E-19	2.1E-25 / 9.6E-19	2.1E-25 / 9.6E-19	2.1E-25 / 9.6E-19
3 h	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Silicon (Si)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	1.7E-14 / 1.4E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4
1 min	1.7E-14 / 1.4E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4	1.8E-14 / 1.5E-4
10 min	1.7E-14 / 1.4E-4	1.7E-14 / 1.4E-4	1.7E-14 / 1.4E-4	1.7E-14 / 1.4E-4	1.7E-14 / 1.4E-4	1.7E-14 / 1.4E-4
30 min	1.5E-14 / 1.2E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4	1.6E-14 / 1.3E-4
1 h	1.3E-14 / 1.1E-4	1.4E-14 / 1.1E-4	1.4E-14 / 1.1E-4	1.4E-14 / 1.1E-4	1.4E-14 / 1.1E-4	1.4E-14 / 1.1E-4
2 h	1.0E-14 / 8.4E-5	1.1E-14 / 8.7E-5	1.1E-14 / 8.8E-5	1.1E-14 / 8.8E-5	1.1E-14 / 8.8E-5	1.1E-14 / 8.8E-5
3 h	7.9E-15 / 6.4E-5	8.2E-15 / 6.7E-5	8.2E-15 / 6.7E-5	8.2E-15 / 6.7E-5	8.2E-15 / 6.7E-5	8.2E-15 / 6.7E-5
6 h	3.6E-15 / 2.9E-5	3.7E-15 / 3.0E-5	3.7E-15 / 3.0E-5	3.7E-15 / 3.0E-5	3.7E-15 / 3.0E-5	3.7E-15 / 3.0E-5
12 h	7.3E-16 / 6.0E-6	7.6E-16 / 6.2E-6	7.6E-16 / 6.2E-6	7.6E-16 / 6.2E-6	7.6E-16 / 6.2E-6	7.6E-16 / 6.2E-6
1 d	3.1E-17 / 2.5E-7	3.2E-17 / 2.6E-7	3.2E-17 / 2.6E-7	3.2E-17 / 2.6E-7	3.2E-17 / 2.6E-7	3.2E-17 / 2.6E-7
2 d	5.4E-20 / 4.4E-10	5.6E-20 / 4.6E-10	5.6E-20 / 4.6E-10	5.6E-20 / 4.6E-10	5.6E-20 / 4.6E-10	5.6E-20 / 4.6E-10
7 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Table 44: Carbon, Oxygen, Sodium, Magnesium, Aluminium and Silicon thermal neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)). Scaling is with respect to neutron flux in the thermal energy range.

Potassium (K)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	6.2E-11 / 5.8E-4	9.4E-11 / 8.8E-4	1.3E-10 / 1.2E-3	1.3E-10 / 1.2E-3	1.3E-10 / 1.2E-3	1.5E-9 / 2.4E-2
1 min	6.2E-11 / 5.8E-4	9.4E-11 / 8.8E-4	1.3E-10 / 1.2E-3	1.3E-10 / 1.2E-3	1.3E-10 / 1.2E-3	1.5E-9 / 2.4E-2
10 min	6.2E-11 / 5.8E-4	9.3E-11 / 8.7E-4	1.3E-10 / 1.2E-3	1.3E-10 / 1.2E-3	1.3E-10 / 1.2E-3	1.5E-9 / 2.4E-2
30 min	6.1E-11 / 5.7E-4	9.1E-11 / 8.6E-4	1.2E-10 / 1.2E-3	1.2E-10 / 1.2E-3	1.2E-10 / 1.2E-3	1.5E-9 / 2.4E-2
1 h	5.9E-11 / 5.5E-4	8.9E-11 / 8.3E-4	1.2E-10 / 1.1E-3	1.2E-10 / 1.1E-3	1.2E-10 / 1.1E-3	1.5E-9 / 2.4E-2
2 h	5.6E-11 / 5.2E-4	8.4E-11 / 7.9E-4	1.1E-10 / 1.1E-3	1.1E-10 / 1.1E-3	1.1E-10 / 1.1E-3	1.5E-9 / 2.4E-2
3 h	5.3E-11 / 4.9E-4	7.9E-11 / 7.5E-4	1.1E-10 / 1.0E-3	1.1E-10 / 1.0E-3	1.1E-10 / 1.0E-3	1.5E-9 / 2.4E-2
6 h	4.4E-11 / 4.2E-4	6.7E-11 / 6.3E-4	9.1E-11 / 8.5E-4	9.1E-11 / 8.5E-4	9.1E-11 / 8.5E-4	1.5E-9 / 2.4E-2
12 h	3.2E-11 / 3.0E-4	4.8E-11 / 4.5E-4	6.5E-11 / 6.1E-4	6.5E-11 / 6.1E-4	6.5E-11 / 6.1E-4	1.4E-9 / 2.4E-2
1 d	1.6E-11 / 1.5E-4	2.4E-11 / 2.3E-4	3.3E-11 / 3.1E-4	3.3E-11 / 3.1E-4	3.3E-11 / 3.1E-4	1.4E-9 / 2.4E-2
2 d	4.2E-12 / 4.0E-5	6.4E-12 / 6.0E-5	8.6E-12 / 8.1E-5	8.6E-12 / 8.1E-5	8.6E-12 / 8.1E-5	1.4E-9 / 2.3E-2
7 d	5.0E-15 / 4.7E-8	7.6E-15 / 7.1E-8	1.0E-14 / 9.7E-8	1.0E-14 / 9.7E-8	1.0E-14 / 9.8E-8	1.4E-9 / 2.3E-2
30 d	1.0E-21 / 1.7E-13	2.1E-21 / 3.4E-13	6.2E-20 / 1.0E-11	7.6E-19 / 1.2E-10	7.6E-18 / 1.2E-9	1.4E-9 / 2.3E-2
30 yr	1.0E-21 / 1.7E-13	2.1E-21 / 3.4E-13	6.2E-20 / 1.0E-11	7.6E-19 / 1.2E-10	7.6E-18 / 1.2E-9	1.4E-9 / 2.3E-2

Calcium (Ca)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	2.6E-11 / 8.5E-5	2.6E-11 / 8.8E-5	3.2E-11 / 1.8E-4	3.2E-11 / 4.4E-4	3.2E-11 / 5.3E-4	3.2E-11 / 8.7E-3
1 min	2.4E-11 / 8.1E-5	2.4E-11 / 8.5E-5	3.0E-11 / 1.8E-4	3.0E-11 / 4.4E-4	3.0E-11 / 5.2E-4	3.0E-11 / 8.7E-3
10 min	1.2E-11 / 6.1E-5	1.2E-11 / 6.4E-5	1.8E-11 / 1.6E-4	1.8E-11 / 4.2E-4	1.8E-11 / 5.0E-4	1.8E-11 / 8.7E-3
30 min	2.8E-12 / 4.3E-5	3.2E-12 / 4.3E-5	8.8E-12 / 1.4E-4	8.9E-12 / 4.0E-4	8.9E-12 / 4.8E-4	9.0E-12 / 8.7E-3
1 h	6.8E-13 / 2.7E-5	1.1E-12 / 3.0E-5	6.7E-12 / 1.3E-4	6.8E-12 / 3.9E-4	6.8E-12 / 4.7E-4	6.8E-12 / 8.7E-3
2 h	4.6E-13 / 1.4E-5	8.9E-13 / 1.7E-5	6.5E-12 / 1.1E-4	6.5E-12 / 3.7E-4	6.5E-12 / 4.5E-4	6.6E-12 / 8.7E-3
3 h	4.6E-13 / 6.4E-6	8.8E-13 / 1.2E-5	6.4E-12 / 1.1E-4	6.5E-12 / 3.7E-4	6.5E-12 / 4.5E-4	6.5E-12 / 8.7E-3
6 h	4.5E-13 / 3.7E-6	8.6E-13 / 6.8E-6	6.3E-12 / 1.0E-4	6.4E-12 / 3.6E-4	6.4E-12 / 4.4E-4	6.4E-12 / 8.7E-3
12 h	4.3E-13 / 3.1E-6	8.3E-13 / 6.2E-6	6.1E-12 / 1.0E-4	6.1E-12 / 3.6E-4	6.1E-12 / 4.4E-4	6.2E-12 / 8.7E-3
1 d	4.0E-13 / 3.1E-6	7.7E-13 / 6.2E-6	5.7E-12 / 9.8E-5	5.7E-12 / 3.6E-4	5.7E-12 / 4.4E-4	5.8E-12 / 8.7E-3
2 d	3.5E-13 / 3.1E-6	6.7E-13 / 6.1E-6	4.9E-12 / 9.4E-5	4.9E-12 / 3.5E-4	4.9E-12 / 4.3E-4	5.0E-12 / 8.7E-3
7 d	1.7E-13 / 2.4E-6	3.3E-13 / 4.8E-6	2.3E-12 / 7.3E-5	2.4E-12 / 3.2E-4	2.4E-12 / 4.0E-4	2.4E-12 / 8.6E-3
30 d	5.5E-15 / 8.1E-7	1.1E-14 / 1.6E-6	7.5E-14 / 4.2E-5	7.5E-14 / 2.7E-4	7.5E-14 / 3.4E-4	1.1E-13 / 8.6E-3
182 d	3.4E-22 / 3.8E-7	6.8E-22 / 7.5E-7	2.0E-20 / 2.1E-5	2.2E-19 / 1.4E-4	2.2E-18 / 1.8E-4	3.2E-14 / 8.4E-3
1 yr	3.2E-22 / 1.7E-7	6.3E-22 / 3.5E-7	1.9E-20 / 9.8E-6	2.2E-19 / 6.4E-5	2.2E-18 / 8.2E-5	3.2E-14 / 8.3E-3
2 yr	3.0E-22 / 3.7E-8	6.0E-22 / 7.3E-8	1.8E-20 / 2.1E-6	2.2E-19 / 1.4E-5	2.2E-18 / 1.8E-5	3.2E-14 / 8.2E-3
5 yr	3.0E-22 / 4.2E-10	5.9E-22 / 8.4E-10	1.8E-20 / 2.4E-8	2.2E-19 / 1.8E-7	2.2E-18 / 7.1E-7	3.2E-14 / 8.2E-3
10 yr	3.0E-22 / 7.6E-11	5.9E-22 / 1.5E-10	1.8E-20 / 4.6E-9	2.2E-19 / 5.5E-8	2.2E-18 / 5.5E-7	3.2E-14 / 8.2E-3
20 yr	3.0E-22 / 7.6E-11	5.9E-22 / 1.5E-10	1.8E-20 / 4.5E-9	2.2E-19 / 5.5E-8	2.2E-18 / 5.5E-7	3.2E-14 / 8.2E-3
30 yr	3.0E-22 / 7.6E-11	5.9E-22 / 1.5E-10	1.8E-20 / 4.5E-9	2.2E-19 / 5.5E-8	2.2E-18 / 5.5E-7	3.2E-14 / 8.2E-3

Chromium (Cr)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	8.3E-13 / 1.3E-3	1.6E-12 / 1.9E-3	3.4E-11 / 2.8E-2	6.5E-11 / 5.2E-2	6.5E-11 / 5.2E-2	6.5E-11 / 5.2E-2
1 min	8.3E-13 / 1.2E-3	1.6E-12 / 1.8E-3	3.4E-11 / 2.7E-2	6.5E-11 / 5.2E-2	6.5E-11 / 5.2E-2	6.5E-11 / 5.2E-2
10 min	8.1E-13 / 7.2E-4	1.6E-12 / 1.3E-3	3.4E-11 / 2.7E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2
30 min	8.1E-13 / 6.4E-4	1.6E-12 / 1.3E-3	3.4E-11 / 2.7E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2
1 h	8.1E-13 / 6.3E-4	1.6E-12 / 1.3E-3	3.4E-11 / 2.7E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2
2 h	8.1E-13 / 6.3E-4	1.6E-12 / 1.3E-3	3.4E-11 / 2.7E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2
3 h	8.1E-13 / 6.3E-4	1.6E-12 / 1.3E-3	3.4E-11 / 2.7E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2
6 h	8.1E-13 / 6.3E-4	1.6E-12 / 1.3E-3	3.4E-11 / 2.7E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2	6.5E-11 / 5.1E-2
12 h	8.0E-13 / 6.3E-4	1.6E-12 / 1.2E-3	3.4E-11 / 2.7E-2	6.4E-11 / 5.0E-2	6.4E-11 / 5.0E-2	6.4E-11 / 5.0E-2
1 d	7.9E-13 / 6.2E-4	1.6E-12 / 1.2E-3	3.4E-11 / 2.6E-2	6.4E-11 / 5.0E-2	6.4E-11 / 5.0E-2	6.4E-11 / 5.0E-2
2 d	7.7E-13 / 6.0E-4	1.5E-12 / 1.2E-3	3.3E-11 / 2.6E-2	6.2E-11 / 4.9E-2	6.2E-11 / 4.9E-2	6.2E-11 / 4.9E-2
7 d	6.8E-13 / 5.3E-4	1.4E-12 / 1.1E-3	2.9E-11 / 2.3E-2	5.5E-11 / 4.3E-2	5.5E-11 / 4.3E-2	5.5E-11 / 4.3E-2
30 d	3.8E-13 / 3.0E-4	7.6E-13 / 6.0E-4	1.6E-11 / 1.3E-2	3.1E-11 / 2.4E-2	3.1E-11 / 2.4E-2	3.1E-11 / 2.4E-2
182 d	8.4E-15 / 6.6E-6	1.7E-14 / 1.3E-5	3.6E-13 / 2.8E-4	6.8E-13 / 5.3E-4	6.8E-13 / 5.3E-4	6.8E-13 / 5.3E-4
1 yr	8.8E-17 / 6.9E-8	1.7E-16 / 1.4E-7	3.7E-15 / 2.9E-6	7.1E-15 / 5.5E-6	7.1E-15 / 5.5E-6	7.1E-15 / 5.5E-6
2 yr	9.5E-21 / 7.4E-12	1.9E-20 / 1.5E-11	4.0E-19 / 3.1E-10	7.6E-19 / 6.0E-10	7.6E-19 / 6.0E-10	7.6E-19 / 6.0E-10
5 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Manganese (Mn)						
Irradiation Time						
t_c	12 h	1 d	30 d	1 yr	10 yr	∞
0	7.2E-8 / 9.4E-1	7.4E-8 / 9.8E-1	7.5E-8 / 9.8E-1	7.5E-8 / 9.8E-1	7.5E-8 / 9.8E-1	7.5E-8 / 9.8E-1
1 min	7.1E-8 / 9.3E-1	7.4E-8 / 9.7E-1	7.4E-8 / 9.7E-1	7.4E-8 / 9.7E-1	7.4E-8 / 9.7E-1	7.4E-8 / 9.7E-1
10 min	6.8E-8 / 9.0E-1	7.1E-8 / 9.3E-1	7.1E-8 / 9.3E-1	7.1E-8 / 9.3E-1	7.1E-8 / 9.3E-1	7.1E-8 / 9.3E-1
30 min	6.3E-8 / 8.2E-1	6.5E-8 / 8.5E-1	6.5E-8 / 8.5E-1	6.5E-8 / 8.5E-1	6.5E-8 / 8.5E-1	6.5E-8 / 8.5E-1
1 h	5.5E-8 / 7.2E-1	5.7E-8 / 7.5E-1	5.7E-8 / 7.5E-1	5.7E-8 / 7.5E-1	5.7E-8 / 7.5E-1	5.7E-8 / 7.5E-1
2 h	4.2E-8 / 5.5E-1	4.3E-8 / 5.7E-1	4.4E-8 / 5.7E-1	4.4E-8 / 5.7E-1	4.4E-8 / 5.7E-1	4.4E-8 / 5.7E-1
3 h	3.2E-8 / 4.2E-1	3.3E-8 / 4.4E-1	3.3E-8 / 4.4E-1	3.3E-8 / 4.4E-1	3.3E-8 / 4.4E-1	3.3E-8 / 4.4E-1
6 h	1.4E-8 / 1.9E-1	1.5E-8 / 1.9E-1	1.5E-8 / 1.9E-1	1.5E-8 / 1.9E-1	1.5E-8 / 1.9E-1	1.5E-8 / 1.9E-1
12 h	2.8E-9 / 3.7E-2	3.0E-9 / 3.9E-2	3.0E-9 / 3.9E-2	3.0E-9 / 3.9E-2	3.0E-9 / 3.9E-2	3.0E-9 / 3.9E-2
1 d	1.1E-10 / 1.5E-3	1.2E-10 / 1.5E-3	1.2E-10 / 1.5E-3	1.2E-10 / 1.5E-3	1.2E-10 / 1.5E-3	1.2E-10 / 1.5E-3
2 d	1.8E-13 / 2.3E-6	1.9E-13 / 2.4E-6	1.9E-13 / 2.4E-6	1.9E-13 / 2.4E-6	1.9E-13 / 2.4E-6	1.9E-13 / 2.4E-6
7 d	1.7E-27 / 2.3E-20	1.8E-27 / 2.4E-20	1.8E-27 / 2.4E-20	1.8E-27 / 2.4E-20	1.8E-27 / 2.4E-20	1.8E-27 / 2.4E-20
30 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Table 45: Potassium, Calcium, Chromium and Manganese thermal neutron “ ω -factors” ($\text{Sv h}^{-1}/(\text{cm}^{-2}\text{s}^{-1}) / \text{total activity (Bq}/(\text{cm}^{-2}\text{s}^{-1}))$). Scaling is with respect to neutron flux in the thermal energy range.

Iron (Fe)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.5E-3	1.5E-11 / 1.0E-2
1 min	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.5E-3	1.5E-11 / 1.0E-2
10 min	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.5E-3	1.5E-11 / 1.0E-2
30 min	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.5E-3	1.5E-11 / 1.0E-2
1 h	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.4E-3	1.5E-11 / 1.0E-2
2 h	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.4E-3	1.5E-11 / 1.0E-2
3 h	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.4E-3	1.5E-11 / 1.0E-2
6 h	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.4E-3	1.5E-11 / 1.0E-2
12 h	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.5E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.4E-3	1.5E-11 / 1.0E-2
1 d	1.1E-13 / 5.7E-6	2.3E-13 / 1.1E-5	5.4E-12 / 3.1E-4	1.5E-11 / 2.5E-3	1.5E-11 / 9.4E-3	1.5E-11 / 1.0E-2
2 d	1.1E-13 / 5.6E-6	2.2E-13 / 1.1E-5	5.4E-12 / 3.1E-4	1.4E-11 / 2.5E-3	1.4E-11 / 9.4E-3	1.4E-11 / 1.0E-2
7 d	1.0E-13 / 5.4E-6	2.1E-13 / 1.1E-5	5.0E-12 / 3.0E-4	1.3E-11 / 2.5E-3	1.3E-11 / 9.4E-3	1.3E-11 / 1.0E-2
30 d	7.2E-14 / 4.8E-6	1.4E-13 / 9.6E-6	3.5E-12 / 2.7E-4	9.2E-12 / 2.4E-3	9.3E-12 / 9.2E-3	9.3E-12 / 9.9E-3
182 d	6.7E-15 / 3.2E-6	1.3E-14 / 6.3E-6	3.2E-13 / 1.9E-4	8.6E-13 / 2.0E-3	8.8E-13 / 8.1E-3	8.8E-13 / 8.8E-3
1 yr	4.0E-16 / 2.7E-6	7.9E-16 / 5.4E-6	1.9E-14 / 1.6E-4	5.4E-14 / 1.7E-3	6.5E-14 / 7.1E-3	6.6E-14 / 7.7E-3
2 yr	5.5E-18 / 2.1E-6	1.1E-17 / 4.2E-6	3.1E-16 / 1.2E-4	2.9E-15 / 1.3E-3	1.1E-14 / 5.5E-3	1.2E-14 / 6.0E-3
5 yr	2.0E-18 / 9.7E-7	3.9E-18 / 1.9E-6	1.2E-16 / 5.8E-5	1.3E-15 / 6.3E-4	5.2E-15 / 2.6E-3	5.7E-15 / 2.8E-3
10 yr	5.5E-19 / 2.7E-7	1.1E-18 / 5.5E-7	3.3E-17 / 1.6E-5	3.6E-16 / 1.8E-4	1.5E-15 / 7.2E-4	1.6E-15 / 7.9E-4
20 yr	4.4E-20 / 2.2E-8	8.7E-20 / 4.3E-8	2.6E-18 / 1.3E-6	2.8E-17 / 1.4E-5	1.2E-16 / 5.7E-5	1.3E-16 / 6.2E-5
30 yr	3.5E-21 / 1.7E-9	6.9E-21 / 3.4E-9	2.1E-19 / 1.0E-7	2.2E-18 / 1.1E-6	9.2E-18 / 4.5E-6	9.9E-18 / 4.9E-6

Nickel (Ni)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	2.3E-11 / 1.1E-3	2.4E-11 / 1.1E-3	2.4E-11 / 1.1E-3	2.4E-11 / 1.4E-3	2.4E-11 / 4.0E-3	2.4E-11 / 3.0E-1
1 min	2.3E-11 / 1.1E-3	2.4E-11 / 1.1E-3	2.4E-11 / 1.1E-3	2.4E-11 / 1.4E-3	2.4E-11 / 4.0E-3	2.4E-11 / 3.0E-1
10 min	2.2E-11 / 1.0E-3	2.3E-11 / 1.1E-3	2.3E-11 / 1.1E-3	2.3E-11 / 1.4E-3	2.3E-11 / 3.9E-3	2.3E-11 / 3.0E-1
30 min	2.0E-11 / 9.4E-4	2.1E-11 / 9.8E-4	2.1E-11 / 1.0E-3	2.1E-11 / 1.3E-3	2.1E-11 / 3.8E-3	2.1E-11 / 3.0E-1
1 h	1.7E-11 / 8.2E-4	1.8E-11 / 8.5E-4	1.8E-11 / 8.8E-4	1.8E-11 / 1.1E-3	1.8E-11 / 3.7E-3	1.9E-11 / 3.0E-1
2 h	1.3E-11 / 6.2E-4	1.4E-11 / 6.5E-4	1.4E-11 / 6.7E-4	1.4E-11 / 9.4E-4	1.4E-11 / 3.5E-3	1.4E-11 / 3.0E-1
3 h	1.0E-11 / 4.7E-4	1.0E-11 / 4.9E-4	1.0E-11 / 5.2E-4	1.0E-11 / 7.9E-4	1.0E-11 / 3.3E-3	1.1E-11 / 3.0E-1
6 h	4.4E-12 / 2.1E-4	4.6E-12 / 2.2E-4	4.6E-12 / 2.4E-4	4.6E-12 / 5.1E-4	4.6E-12 / 3.1E-3	5.2E-12 / 3.0E-1
12 h	8.4E-13 / 4.0E-5	8.7E-13 / 4.2E-5	8.8E-13 / 6.5E-5	8.8E-13 / 3.4E-4	8.8E-13 / 2.9E-3	1.5E-12 / 3.0E-1
1 d	3.1E-14 / 1.9E-6	3.2E-14 / 2.3E-6	3.2E-14 / 2.6E-5	3.2E-14 / 3.0E-4	3.2E-14 / 2.9E-3	6.4E-13 / 3.0E-1
2 d	4.2E-17 / 4.1E-7	4.3E-17 / 8.1E-7	4.4E-17 / 2.4E-5	4.9E-17 / 2.9E-4	9.9E-17 / 2.9E-3	6.1E-13 / 3.0E-1
7 d	7.6E-21 / 4.0E-7	1.5E-20 / 8.1E-7	4.6E-19 / 2.4E-5	5.5E-18 / 2.9E-4	5.5E-17 / 2.9E-3	6.1E-13 / 3.0E-1
30 d	7.6E-21 / 4.0E-7	1.5E-20 / 8.1E-7	4.6E-19 / 2.4E-5	5.5E-18 / 2.9E-4	5.5E-17 / 2.9E-3	6.1E-13 / 3.0E-1
182 d	7.6E-21 / 4.0E-7	1.5E-20 / 8.1E-7	4.6E-19 / 2.4E-5	5.5E-18 / 2.9E-4	5.5E-17 / 2.8E-3	6.1E-13 / 3.0E-1
1 yr	7.6E-21 / 4.0E-7	1.5E-20 / 8.0E-7	4.6E-19 / 2.4E-5	5.5E-18 / 2.9E-4	5.5E-17 / 2.8E-3	6.1E-13 / 3.0E-1
2 yr	7.6E-21 / 4.0E-7	1.5E-20 / 8.0E-7	4.6E-19 / 2.4E-5	5.5E-18 / 2.9E-4	5.5E-17 / 2.8E-3	6.1E-13 / 3.0E-1
5 yr	7.6E-21 / 3.9E-7	1.5E-20 / 7.8E-7	4.6E-19 / 2.3E-5	5.5E-18 / 2.8E-4	5.5E-17 / 2.8E-3	6.1E-13 / 3.0E-1
10 yr	7.6E-21 / 3.8E-7	1.5E-20 / 7.5E-7	4.6E-19 / 2.3E-5	5.5E-18 / 2.7E-4	5.5E-17 / 2.7E-3	6.1E-13 / 3.0E-1
20 yr	7.6E-21 / 3.5E-7	1.5E-20 / 7.0E-7	4.6E-19 / 2.1E-5	5.5E-18 / 2.6E-4	5.5E-17 / 2.5E-3	6.1E-13 / 2.9E-1
30 yr	7.6E-21 / 3.3E-7	1.5E-20 / 6.6E-7	4.6E-19 / 2.0E-5	5.5E-18 / 2.4E-4	5.5E-17 / 2.3E-3	6.1E-13 / 2.9E-1

Copper (Cu)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	9.2E-10 / 1.6E-1	1.3E-9 / 2.2E-1	1.7E-9 / 2.8E-1	1.7E-9 / 2.8E-1	1.7E-9 / 2.8E-1	1.7E-9 / 2.8E-1
1 min	9.0E-10 / 1.6E-1	1.3E-9 / 2.2E-1	1.7E-9 / 2.8E-1	1.7E-9 / 2.8E-1	1.7E-9 / 2.8E-1	1.7E-9 / 2.8E-1
10 min	8.0E-10 / 1.2E-1	1.2E-9 / 1.8E-1	1.6E-9 / 2.5E-1	1.6E-9 / 2.5E-1	1.6E-9 / 2.5E-1	1.6E-9 / 2.5E-1
30 min	7.5E-10 / 1.1E-1	1.1E-9 / 1.7E-1	1.6E-9 / 2.3E-1	1.6E-9 / 2.3E-1	1.6E-9 / 2.3E-1	1.6E-9 / 2.3E-1
1 h	7.2E-10 / 1.1E-1	1.1E-9 / 1.6E-1	1.5E-9 / 2.2E-1	1.5E-9 / 2.2E-1	1.5E-9 / 2.2E-1	1.5E-9 / 2.2E-1
2 h	6.9E-10 / 1.0E-1	1.0E-9 / 1.5E-1	1.4E-9 / 2.1E-1	1.4E-9 / 2.1E-1	1.4E-9 / 2.1E-1	1.4E-9 / 2.1E-1
3 h	6.5E-10 / 9.6E-2	9.9E-10 / 1.5E-1	1.4E-9 / 2.0E-1	1.4E-9 / 2.0E-1	1.4E-9 / 2.0E-1	1.4E-9 / 2.0E-1
6 h	5.5E-10 / 8.1E-2	8.4E-10 / 1.2E-1	1.1E-9 / 1.7E-1	1.1E-9 / 1.7E-1	1.1E-9 / 1.7E-1	1.1E-9 / 1.7E-1
12 h	4.0E-10 / 5.9E-2	6.0E-10 / 8.9E-2	8.3E-10 / 1.2E-1	8.3E-10 / 1.2E-1	8.3E-10 / 1.2E-1	8.3E-10 / 1.2E-1
1 d	2.1E-10 / 3.0E-2	3.1E-10 / 4.6E-2	4.3E-10 / 6.3E-2	4.3E-10 / 6.3E-2	4.3E-10 / 6.3E-2	4.3E-10 / 6.3E-2
2 d	5.6E-11 / 8.2E-3	8.5E-11 / 1.2E-2	1.2E-10 / 1.7E-2	1.2E-10 / 1.7E-2	1.2E-10 / 1.7E-2	1.2E-10 / 1.7E-2
7 d	8.0E-14 / 1.2E-5	1.2E-13 / 1.8E-5	1.7E-13 / 2.4E-5	1.7E-13 / 2.4E-5	1.7E-13 / 2.4E-5	1.7E-13 / 2.4E-5
30 d	6.6E-27 / 9.7E-19	1.0E-26 / 1.5E-18	1.4E-26 / 2.0E-18	1.4E-26 / 2.0E-18	1.4E-26 / 2.0E-18	1.4E-26 / 2.0E-18
182 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Niobium (Nb)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	5.0E-12 / 2.9E-2	5.0E-12 / 2.9E-2	5.0E-12 / 2.9E-2	5.1E-12 / 2.9E-2	6.2E-12 / 2.9E-2	3.3E-9 / 8.6E-2
1 min	4.5E-12 / 2.6E-2	4.5E-12 / 2.6E-2	4.5E-12 / 2.6E-2	4.6E-12 / 2.6E-2	5.6E-12 / 2.6E-2	3.3E-9 / 8.3E-2
10 min	1.7E-12 / 9.5E-3	1.7E-12 / 9.5E-3	1.7E-12 / 9.5E-3	1.8E-12 / 9.5E-3	2.8E-12 / 9.5E-3	3.3E-9 / 6.7E-2
30 min	1.8E-13 / 1.0E-3	1.8E-13 / 1.0E-3	1.9E-13 / 1.0E-3	3.0E-13 / 1.0E-3	1.3E-12 / 1.1E-3	3.3E-9 / 5.8E-2
1 h	6.7E-15 / 3.8E-5	6.9E-15 / 3.8E-5	1.6E-14 / 3.8E-5	1.2E-13 / 4.0E-5	1.1E-12 / 5.7E-5	3.3E-9 / 5.7E-2
2 h	1.6E-16 / 5.2E-8	3.2E-16 / 5.5E-8	9.4E-15 / 2.1E-7	1.1E-13 / 2.0E-6	1.1E-12 / 2.0E-5	3.3E-9 / 5.7E-2
3 h	1.6E-16 / 2.7E-9	3.1E-16 / 5.4E-9	9.4E-15 / 1.6E-7	1.1E-13 / 2.0E-6	1.1E-12 / 2.0E-5	3.3E-9 / 5.7E-2
30 yr	1.6E-16 / 2.7E-9	3.1E-16 / 5.4E-9	9.4E-15 / 1.6E-7	1.1E-13 / 2.0E-6	1.1E-12 / 2.0E-5	3.3E-9 / 5.7E-2

Table 46: Iron, Nickel, Copper and Niobium thermal neutron " ω -factors" (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)). Scaling is with respect to neutron flux in the thermal energy range.

Silver (Ag)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	2.3E-9 / 3.1E+0	2.3E-9 / 3.1E+0	3.0E-9 / 3.1E+0	8.1E-9 / 3.2E+0	1.2E-8 / 3.2E+0	1.5E-8 / 3.3E+0
1 min	6.7E-10 / 1.1E+0	6.9E-10 / 1.1E+0	1.4E-9 / 1.1E+0	6.5E-9 / 1.2E+0	9.9E-9 / 1.2E+0	1.3E-8 / 1.3E+0
10 min	3.6E-11 / 5.1E-2	4.9E-11 / 5.1E-2	7.6E-10 / 5.9E-2	5.9E-9 / 1.2E-1	9.3E-9 / 1.6E-1	1.3E-8 / 2.5E-1
30 min	1.3E-11 / 3.0E-4	2.6E-11 / 4.6E-4	7.4E-10 / 9.1E-3	5.9E-9 / 7.2E-2	9.3E-9 / 1.1E-1	1.3E-8 / 2.0E-1
1 h	1.3E-11 / 1.6E-4	2.6E-11 / 3.1E-4	7.4E-10 / 9.0E-3	5.9E-9 / 7.2E-2	9.3E-9 / 1.1E-1	1.3E-8 / 2.0E-1
2 h	1.3E-11 / 1.6E-4	2.6E-11 / 3.1E-4	7.4E-10 / 9.0E-3	5.9E-9 / 7.2E-2	9.3E-9 / 1.1E-1	1.3E-8 / 2.0E-1
3 h	1.3E-11 / 1.6E-4	2.6E-11 / 3.1E-4	7.4E-10 / 9.0E-3	5.9E-9 / 7.2E-2	9.3E-9 / 1.1E-1	1.3E-8 / 2.0E-1
6 h	1.3E-11 / 1.6E-4	2.6E-11 / 3.1E-4	7.4E-10 / 9.0E-3	5.9E-9 / 7.2E-2	9.3E-9 / 1.1E-1	1.3E-8 / 2.0E-1
12 h	1.3E-11 / 1.6E-4	2.5E-11 / 3.1E-4	7.3E-10 / 9.0E-3	5.9E-9 / 7.2E-2	9.3E-9 / 1.1E-1	1.3E-8 / 2.0E-1
1 d	1.3E-11 / 1.6E-4	2.5E-11 / 3.1E-4	7.3E-10 / 9.0E-3	5.9E-9 / 7.2E-2	9.2E-9 / 1.1E-1	1.3E-8 / 2.0E-1
2 d	1.3E-11 / 1.6E-4	2.5E-11 / 3.1E-4	7.3E-10 / 8.9E-3	5.8E-9 / 7.1E-2	9.2E-9 / 1.1E-1	1.3E-8 / 2.0E-1
7 d	1.3E-11 / 1.5E-4	2.5E-11 / 3.1E-4	7.2E-10 / 8.8E-3	5.8E-9 / 7.0E-2	9.1E-9 / 1.1E-1	1.2E-8 / 2.0E-1
30 d	1.2E-11 / 1.4E-4	2.3E-11 / 2.9E-4	6.8E-10 / 8.3E-3	5.4E-9 / 6.6E-2	8.5E-9 / 1.0E-1	1.2E-8 / 1.9E-1
182 d	7.7E-12 / 9.4E-5	1.5E-11 / 1.9E-4	4.4E-10 / 5.4E-3	3.5E-9 / 4.3E-2	5.6E-9 / 6.9E-2	8.9E-9 / 1.6E-1
1 yr	4.6E-12 / 5.7E-5	9.3E-12 / 1.1E-4	2.7E-10 / 3.3E-3	2.1E-9 / 2.6E-2	3.4E-9 / 4.2E-2	6.7E-9 / 1.3E-1
2 yr	1.7E-12 / 2.1E-5	3.4E-12 / 4.1E-5	9.7E-11 / 1.2E-3	7.8E-10 / 9.6E-3	1.3E-9 / 1.6E-2	4.6E-9 / 1.0E-1
5 yr	8.8E-14 / 1.2E-6	1.8E-13 / 2.4E-6	5.1E-12 / 6.9E-5	4.3E-11 / 6.0E-4	1.1E-10 / 2.2E-3	3.4E-9 / 8.9E-2
10 yr	8.0E-15 / 2.1E-7	1.6E-14 / 4.1E-7	4.8E-13 / 1.2E-5	5.7E-12 / 1.5E-4	5.5E-11 / 1.5E-3	3.3E-9 / 8.8E-2
20 yr	7.4E-15 / 2.0E-7	1.5E-14 / 3.9E-7	4.4E-13 / 1.2E-5	5.4E-12 / 1.4E-4	5.4E-11 / 1.4E-3	3.3E-9 / 8.7E-2
30 yr	7.3E-15 / 1.9E-7	1.5E-14 / 3.9E-7	4.4E-13 / 1.2E-5	5.3E-12 / 1.4E-4	5.3E-11 / 1.4E-3	3.2E-9 / 8.5E-2

Barium (Ba)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	4.3E-10 / 6.5E-3	4.3E-10 / 6.6E-3	4.4E-10 / 7.0E-3	4.4E-10 / 7.1E-3	4.4E-10 / 7.1E-3	4.4E-10 / 7.1E-3
1 min	8.4E-12 / 3.8E-3	8.5E-12 / 3.9E-3	1.1E-11 / 4.3E-3	1.1E-11 / 4.4E-3	1.1E-11 / 4.4E-3	1.1E-11 / 4.4E-3
10 min	2.8E-12 / 3.4E-3	2.9E-12 / 3.5E-3	5.2E-12 / 3.9E-3	5.7E-12 / 4.0E-3	5.7E-12 / 4.0E-3	5.7E-12 / 4.0E-3
30 min	1.9E-12 / 2.9E-3	2.1E-12 / 2.9E-3	4.4E-12 / 3.3E-3	4.8E-12 / 3.4E-3	4.8E-12 / 3.4E-3	4.8E-12 / 3.4E-3
1 h	1.5E-12 / 2.2E-3	1.7E-12 / 2.3E-3	3.9E-12 / 2.7E-3	4.4E-12 / 2.8E-3	4.4E-12 / 2.8E-3	4.4E-12 / 2.8E-3
2 h	9.8E-13 / 1.4E-3	1.1E-12 / 1.4E-3	3.4E-12 / 1.8E-3	3.8E-12 / 1.9E-3	3.8E-12 / 1.9E-3	3.8E-12 / 1.9E-3
3 h	6.5E-13 / 8.7E-4	7.6E-13 / 9.3E-4	3.0E-12 / 1.3E-3	3.5E-12 / 1.4E-3	3.5E-12 / 1.4E-3	3.5E-12 / 1.4E-3
6 h	2.4E-13 / 2.5E-4	3.6E-13 / 3.1E-4	2.6E-12 / 6.8E-4	3.1E-12 / 7.7E-4	3.1E-12 / 7.7E-4	3.1E-12 / 7.7E-4
12 h	1.3E-13 / 7.6E-5	2.3E-13 / 1.3E-4	2.4E-12 / 4.8E-4	2.9E-12 / 5.7E-4	2.9E-12 / 5.7E-4	2.9E-12 / 5.7E-4
1 d	1.1E-13 / 5.2E-5	2.1E-13 / 9.2E-5	2.3E-12 / 4.0E-4	2.8E-12 / 4.9E-4	2.8E-12 / 4.9E-4	2.8E-12 / 4.9E-4
2 d	9.0E-14 / 3.1E-5	1.7E-13 / 5.5E-5	2.1E-12 / 3.2E-4	2.6E-12 / 4.0E-4	2.6E-12 / 4.0E-4	2.6E-12 / 4.0E-4
7 d	5.5E-14 / 6.0E-6	1.1E-13 / 1.2E-5	1.5E-12 / 1.9E-4	1.8E-12 / 2.5E-4	1.8E-12 / 2.5E-4	1.8E-12 / 2.5E-4
30 d	1.4E-14 / 2.2E-6	2.7E-14 / 4.3E-6	3.8E-13 / 7.1E-5	4.6E-13 / 9.1E-5	4.6E-13 / 9.1E-5	4.6E-13 / 9.1E-5
182 d	1.4E-18 / 5.1E-10	2.7E-18 / 1.0E-9	3.9E-17 / 1.4E-8	4.7E-17 / 1.7E-8	4.7E-17 / 1.7E-8	4.7E-17 / 1.7E-8
1 yr	2.3E-23 / 9.4E-15	4.6E-23 / 1.8E-14	6.6E-22 / 2.6E-13	7.9E-22 / 3.2E-13	7.9E-22 / 3.2E-13	7.9E-22 / 3.2E-13
2 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Tungsten (W)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	5.9E-10 / 3.5E-1	1.0E-9 / 4.7E-1	2.0E-9 / 7.8E-1	2.0E-9 / 8.0E-1	2.0E-9 / 8.0E-1	2.0E-9 / 1.5E+0
1 min	5.8E-10 / 1.9E-1	9.9E-10 / 3.1E-1	2.0E-9 / 6.2E-1	2.0E-9 / 6.4E-1	2.0E-9 / 6.4E-1	2.0E-9 / 1.3E+0
10 min	5.8E-10 / 1.8E-1	9.9E-10 / 3.0E-1	2.0E-9 / 6.1E-1	2.0E-9 / 6.3E-1	2.0E-9 / 6.3E-1	2.0E-9 / 1.3E+0
30 min	5.7E-10 / 1.8E-1	9.8E-10 / 3.0E-1	1.9E-9 / 6.0E-1	1.9E-9 / 6.2E-1	1.9E-9 / 6.2E-1	1.9E-9 / 1.3E+0
1 h	5.7E-10 / 1.7E-1	9.7E-10 / 3.0E-1	1.9E-9 / 5.9E-1	1.9E-9 / 6.1E-1	1.9E-9 / 6.2E-1	1.9E-9 / 1.3E+0
2 h	5.5E-10 / 1.7E-1	9.4E-10 / 2.9E-1	1.9E-9 / 5.8E-1	1.9E-9 / 6.0E-1	1.9E-9 / 6.0E-1	1.9E-9 / 1.3E+0
3 h	5.3E-10 / 1.6E-1	9.1E-10 / 2.8E-1	1.8E-9 / 5.6E-1	1.8E-9 / 5.8E-1	1.8E-9 / 5.8E-1	1.8E-9 / 1.3E+0
6 h	4.9E-10 / 1.5E-1	8.3E-10 / 2.6E-1	1.7E-9 / 5.1E-1	1.7E-9 / 5.4E-1	1.7E-9 / 5.4E-1	1.7E-9 / 1.2E+0
12 h	4.1E-10 / 1.3E-1	7.0E-10 / 2.1E-1	1.4E-9 / 4.3E-1	1.4E-9 / 4.5E-1	1.4E-9 / 4.5E-1	1.4E-9 / 1.1E+0
1 d	2.9E-10 / 8.9E-2	4.9E-10 / 1.5E-1	9.8E-10 / 3.1E-1	9.8E-10 / 3.3E-1	9.8E-10 / 3.3E-1	9.8E-10 / 1.0E+0
2 d	1.4E-10 / 4.4E-2	2.4E-10 / 7.5E-2	4.8E-10 / 1.6E-1	4.8E-10 / 1.8E-1	4.8E-10 / 1.8E-1	4.8E-10 / 8.6E-1
7 d	4.3E-12 / 1.4E-3	7.3E-12 / 2.5E-3	1.5E-11 / 1.1E-2	1.5E-11 / 3.2E-2	1.5E-11 / 3.3E-2	1.5E-11 / 7.2E-1
30 d	5.2E-18 / 1.1E-4	1.0E-17 / 2.1E-4	2.6E-16 / 5.6E-3	1.4E-15 / 2.2E-2	1.5E-15 / 2.3E-2	1.7E-15 / 7.1E-1
182 d	1.8E-18 / 2.6E-5	3.6E-18 / 5.2E-5	9.9E-17 / 1.4E-3	5.3E-16 / 5.5E-3	6.0E-16 / 5.7E-3	8.1E-16 / 6.9E-1
1 yr	6.0E-19 / 4.9E-6	1.2E-18 / 9.8E-6	3.3E-17 / 2.6E-4	1.8E-16 / 1.0E-3	2.0E-16 / 1.1E-3	4.2E-16 / 6.9E-1
2 yr	7.0E-20 / 1.8E-7	1.4E-19 / 3.6E-7	3.8E-18 / 9.4E-6	2.1E-17 / 3.9E-5	2.4E-17 / 4.1E-5	2.4E-16 / 6.8E-1
5 yr	1.3E-22 / 3.3E-11	2.6E-22 / 6.5E-11	7.2E-21 / 1.8E-9	4.0E-20 / 9.3E-9	4.5E-20 / 1.1E-8	2.1E-16 / 6.8E-1
10 yr	3.8E-27 / 1.4E-14	7.6E-27 / 2.8E-14	2.1E-25 / 8.3E-13	1.2E-24 / 9.8E-12	1.4E-24 / 9.6E-11	2.1E-16 / 6.8E-1
20 yr	0.0E+0 / 1.3E-14	0.0E+0 / 2.6E-14	2.8E-28 / 7.9E-13	3.4E-27 / 9.6E-12	3.4E-26 / 9.6E-11	2.1E-16 / 6.8E-1
30 yr	0.0E+0 / 1.3E-14	0.0E+0 / 2.6E-14	2.8E-28 / 7.9E-13	3.4E-27 / 9.6E-12	3.4E-26 / 9.6E-11	2.1E-16 / 6.8E-1

Table 47: Silver, Barium and Tungsten thermal neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)). Scaling is with respect to neutron flux in the thermal energy range.

Gold (Au)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	9.9E-10 / 6.3E-1	1.9E-9 / 1.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0
1 min	9.9E-10 / 6.3E-1	1.9E-9 / 1.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0
10 min	9.8E-10 / 6.3E-1	1.8E-9 / 1.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0	8.2E-9 / 5.2E+0
30 min	9.8E-10 / 6.3E-1	1.8E-9 / 1.2E+0	8.1E-9 / 5.2E+0	8.1E-9 / 5.2E+0	8.1E-9 / 5.2E+0	8.1E-9 / 5.2E+0
1 h	9.8E-10 / 6.3E-1	1.8E-9 / 1.2E+0	8.1E-9 / 5.2E+0	8.1E-9 / 5.2E+0	8.1E-9 / 5.2E+0	8.1E-9 / 5.2E+0
2 h	9.6E-10 / 6.2E-1	1.8E-9 / 1.2E+0	8.0E-9 / 5.1E+0	8.0E-9 / 5.1E+0	8.0E-9 / 5.1E+0	8.0E-9 / 5.1E+0
3 h	9.5E-10 / 6.1E-1	1.8E-9 / 1.2E+0	7.9E-9 / 5.1E+0	7.9E-9 / 5.1E+0	7.9E-9 / 5.1E+0	7.9E-9 / 5.1E+0
6 h	9.2E-10 / 5.9E-1	1.7E-9 / 1.1E+0	7.7E-9 / 4.9E+0	7.7E-9 / 4.9E+0	7.7E-9 / 4.9E+0	7.7E-9 / 4.9E+0
12 h	8.7E-10 / 5.6E-1	1.6E-9 / 1.0E+0	7.2E-9 / 4.6E+0	7.2E-9 / 4.6E+0	7.2E-9 / 4.6E+0	7.2E-9 / 4.6E+0
1 d	7.6E-10 / 4.9E-1	1.4E-9 / 9.2E-1	6.3E-9 / 4.1E+0	6.3E-9 / 4.1E+0	6.3E-9 / 4.1E+0	6.3E-9 / 4.1E+0
2 d	5.9E-10 / 3.8E-1	1.1E-9 / 7.1E-1	4.9E-9 / 3.1E+0	4.9E-9 / 3.1E+0	4.9E-9 / 3.1E+0	4.9E-9 / 3.1E+0
7 d	1.6E-10 / 1.0E-1	3.1E-10 / 2.0E-1	1.3E-9 / 8.7E-1	1.4E-9 / 8.7E-1	1.4E-9 / 8.7E-1	1.4E-9 / 8.7E-1
30 d	4.4E-13 / 2.8E-4	8.3E-13 / 5.3E-4	3.6E-12 / 2.3E-3	3.6E-12 / 2.3E-3	3.6E-12 / 2.3E-3	3.6E-12 / 2.3E-3
182 d	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	3.4E-29 / 2.2E-20	3.4E-29 / 2.2E-20	3.4E-29 / 2.2E-20	3.4E-29 / 2.2E-20
1 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0
30 yr	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0	0.0E+0 / 0.0E+0

Lead (Pb)						
t_c	Irradiation Time					
	12 h	1 d	30 d	1 yr	10 yr	∞
0	4.0E-26 / 7.1E-6	8.0E-26 / 7.6E-6	2.4E-24 / 7.6E-6	2.9E-23 / 7.6E-6	2.9E-22 / 7.6E-6	6.5E-16 / 3.0E-4
1 min	4.0E-26 / 7.0E-6	8.0E-26 / 7.6E-6	2.4E-24 / 7.6E-6	2.9E-23 / 7.6E-6	2.9E-22 / 7.6E-6	6.5E-16 / 3.0E-4
10 min	4.0E-26 / 6.8E-6	8.0E-26 / 7.3E-6	2.4E-24 / 7.4E-6	2.9E-23 / 7.4E-6	2.9E-22 / 7.4E-6	6.5E-16 / 3.0E-4
30 min	4.0E-26 / 6.3E-6	8.0E-26 / 6.8E-6	2.4E-24 / 6.9E-6	2.9E-23 / 6.9E-6	2.9E-22 / 6.9E-6	6.5E-16 / 3.0E-4
1 h	4.0E-26 / 5.7E-6	8.0E-26 / 6.1E-6	2.4E-24 / 6.2E-6	2.9E-23 / 6.2E-6	2.9E-22 / 6.2E-6	6.5E-16 / 2.9E-4
2 h	4.0E-26 / 4.6E-6	8.0E-26 / 5.0E-6	2.4E-24 / 5.0E-6	2.9E-23 / 5.0E-6	2.9E-22 / 5.0E-6	6.5E-16 / 2.9E-4
3 h	4.0E-26 / 3.7E-6	8.0E-26 / 4.0E-6	2.4E-24 / 4.0E-6	2.9E-23 / 4.0E-6	2.9E-22 / 4.0E-6	6.5E-16 / 2.9E-4
6 h	4.0E-26 / 2.0E-6	8.0E-26 / 2.1E-6	2.4E-24 / 2.1E-6	2.9E-23 / 2.1E-6	2.9E-22 / 2.1E-6	6.5E-16 / 2.9E-4
12 h	4.0E-26 / 5.5E-7	8.0E-26 / 5.9E-7	2.4E-24 / 5.9E-7	2.9E-23 / 5.9E-7	2.9E-22 / 5.9E-7	6.5E-16 / 2.9E-4
1 d	4.0E-26 / 4.2E-8	8.0E-26 / 4.6E-8	2.4E-24 / 4.6E-8	2.9E-23 / 4.6E-8	2.9E-22 / 4.6E-8	6.5E-16 / 2.9E-4
2 d	4.0E-26 / 2.5E-10	8.0E-26 / 2.7E-10	2.4E-24 / 2.8E-10	2.9E-23 / 2.9E-10	2.9E-22 / 4.1E-10	6.5E-16 / 2.9E-4
7 d	4.0E-26 / 1.8E-14	8.0E-26 / 3.6E-14	2.4E-24 / 1.1E-12	2.9E-23 / 1.3E-11	2.9E-22 / 1.3E-10	6.5E-16 / 2.9E-4
30 yr	4.0E-26 / 1.8E-14	8.0E-26 / 3.6E-14	2.4E-24 / 1.1E-12	2.9E-23 / 1.3E-11	2.9E-22 / 1.3E-10	6.5E-16 / 2.9E-4

Table 48: Gold and Lead thermal neutron “ ω -factors” (Sv h⁻¹)/(cm⁻²s⁻¹) / total activity (Bq/(cm⁻²s⁻¹)). Scaling is with respect to neutron flux in the thermal energy range.