Dear Contributor,

Thank you for participating in the public consultation of the ICNIRP draft guidelines.

Please note that it is important that ICNIRP understands exactly the points that you are making. To facilitate our task and avoid misunderstandings, please:

* be concise
* be precise
* provide supporting evidence (reference to publication, etc.) if available and helpful.

**How to complete the comments table:**

Please use 1 row per comment. If required, please add extra rows to the table.

This response document asks you to provide your ‘comment’, your ‘proposed change’, and the ‘context’ to this comment and proposed change. What is meant by these is the following:

**Comment :** A brief statement describing the issue that you have identified (and that you would like ICNIRP to take into account in the final version of the guidelines).

**Proposed Change:** A brief statement describing how you would like the document changed to account for this issue.

**Context:** A brief statement identifying relevant documents in support of your comment and proposed change.

**Please, provide your details below as per the online form and the provision of the privacy policy**

|  |  |  |
| --- | --- | --- |
| Last name, first name: LAST NAME, First name | Email address: Your email address. | Affiliation (if relevant): Your affiliation |
| If you are providing these comments officially **on behalf** of an organization/company, please name this here: Study Group on the Possible Adverse Health Effects of RF Electromagnetic Fields in the Ministry of Internal Affairs and Communications, Japan | | |
| I hereby agree that, for the purpose of transparency, **my identity (last and first names, affiliation and organization where relevant) will be displayed** on the ICNIRP website after the consultation phase along with my comments.  I want my comments to be displayed anonymously. | | |

|  | **Document**  **(Guidelines, App A,**  **App B)** | **Line Number**  **#** | **Type of comment (General/ Technical/ Editorial)** | **Comment. Proposed change. Context.** |
| --- | --- | --- | --- | --- |
| **1** | Guidelines | 39-40 | Technical | EMC related to the electrical equipment has been mentioned but not for implanted metal (induction heating). Please clarify this is the scope of ICNIRP guidelines.  Insert your proposed change.  Please add the sentence if this is within the scope of the ICNIRP guidelines. |
| **2** | Guidelines | 396-424 | Editorial | 1. The limit of SA (specific absorption) was considered as a footnote of the table in the ICNIRP 1998. No new finding has been mentioned after 1998; at least not cited as a rationale. This section may be more suitable to move the note of ICNIRP as a new basic restricion. 2. How to apply SA in real compliance (product safety) is unclear. Please add explanation so that the product safety community can adopt the metric.     a)　This section may be more suitable to move the note of ICNIRP rather the new basic restricion.  b)　Please add explanation so that the product safety community can adopt the metric easily. |
| **3** | Guidelines | 386-390 | Technical | The averaging area was changed from 4 cm^2 to 1 cm^2 abruptly at 30 GHz. In the ICNIRP 1998, the notation of the beam was listed in the note of the corresponding table (in addition to 20 cm^2 averaging area, additional limit for 1 cm^2 beam was given).  Insert your proposed change.  Please clarify the rational for this abruput change or redefine so as to keep the continuity at 30 GHz. |
| **4** | Appendix A | 156 | Editorial | Physical quantities and symbols are listed in Table 1. It is not clear whether those quantities are scalar or vector quantities. Usually bold font indicates vector quantity. Those vector quantities are often used for the magnitude of the vector quantities in the text. In contrast magnitude of vector is correctly described in Appendix A.  Revise the symbols in the guidelines in accordance with Appendix A.  Explain the context of your comment. |
| **5** | Guidelines | 156 | Editorial | The symbol for transmitted energy density Htr is confusing. The symbol H is used for the fundamental quantity of magnetic field strength in this guideline and others.  Use a differnt symbol for transmitted energy density other than H.  Explain the context of your comment. |
| **6** | Guidelines | 32 | Editorial | It is mentioned that the guideline is not applicable to volunteer research participants. However, it would be very helpful if the guideline provides relevant information for criteria in ethical review for volunteer studies.  Tabulate the operational threshold for convenience in the decision of cases that are outside the scope of the guideline  Volunteer studies should not be restricted by this guideline. Operational threshold will provide useful information for ethical review. |
| **7** | Guidelines | all | General | Operational threshold is a new concept that forms the rationale of restrictions in these guidelines. The evaluation of operational threshold values are fundamental for this guideline. More stress should be put on the operational thresholds in the guidelines.  A list of operational thresholds should be tabulated in parallel with basic restrictions and reference levels. A list of dosimetric exposure quantites corresponding to the operational threshold is also necessary.  The exposure guidelines are set based on the harm. Harm caused by electroiomagnetic field exposures is not clear, however. Even though the harm is unclear, the EMF exposures are restricted. This situation makes people fear from EMF more than reality. It should be helpful to be clarified what harm is to be protected by the guidelines. |

Add further rows if needed. For this copy the above row.

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| **8** | Guidelines | 395 | General | A transmitted power density of 200 W/m2 is determined as the exposure value corresponding to the operational threshold >6GHz. At a glance the value itself does not seem relevant as the threshold of warmth sensation is about this value. Sensation is not an adverse health effect according to the treatment of microwave hearing. So the value is apparently too conservative. However, it is understood that harm could occur at this threshold value in consideration of focused exposures.  Add descriptions of hazardous cases of focused exposures in the explanation of the value of transmitted power density corresponding to the operational threshold of surface heating.  This will clarify how much conservativeness is considered in the millimeter wave exposure guideline. |
| **9** | Appendix A |  | Technical | The dielectric properties listed in Table 3.1 are referred from not only the reference (Sasaki et al., 2017) but also another reference as follows;  Sasaki K, Wake K and Watanabe S 2014a Measurement of the dielectric properties of the epidermis and dermis at frequencies from 0.5 GHz to  110 GHz Phys. Med. Biol. 59 4739–47 |