

Commission K (Electromagnetics in Biology & Medicine) Activity Report

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by

Tsukasa Shigemitsu

1. Update on EMF safety issue

During the period from last regular meeting of Japanese URSI to this meeting, we had two advanced topics in both ELF and RF fields. Concerning ELF field, METI had invited comments on the setting of the limited value of the magnetic field regulation, its value 200 μ T, in electric equipments. The invitation of public comment ended on 16 March 2011. After arrangement of public comments, the announcement appeared in the official on 31 March. Its announcement is that the new regulation-setting of magnetic field will be started on 1 October, 2011.

The second topic is that International Agency for Research on Cancer (IARC) classifies radiofrequency electromagnetic fields as possibly carcinogenic to humans, group 2B. From May 24-31, 2011, a working group meeting with 31 scientists was held in Lyon, France to assess the potential carcinogenic hazards from exposure to radiofrequency electromagnetic fields. As a result, working group discussed the possibility that RF exposures might induce long-term health effects, in particular an increased risk of cancer. The cancer evidence was evaluated as being limited among users of wireless telephones for glioma and acoustic neuroma, and inadequate to draw conclusions for other types of cancers. The assessment of this carcinogenic hazard will be published as Volume 102 of the IARC Monographs.

2. Meetings

(a) Past meetings

- (1) 5th course: "Medical applications of electromagnetic fields". 22-23 November 2010, Erice (Sicily), Italy (http://www.ebea.org/ebea_schol_2010.htm)
- (2) 10th EBEEA International Congress, February 21-24, 2011, Rome, Italy (http://www.ebea.org/ebea_2011.htm)
- (3) 29th Progress in Electromagnetics Research Symposium (PIERS). 20-23 March 20-23, Marrakesh, MOROCCO (<http://piers.org/piers2011Marrakesh>)
- (4) 2nd International Conference on EMF-ELF, 24-25 March, 2011, Paris (<http://www.emf-elf-2011.org/>)
- (5) International Conference on non-ionizing radiation and children's health, 18-20 May, 2011, Ljubljana, Slovenia (<http://www.incirp.org/Kids/kids&NIR2010a.htm>).
- (6) 33th BEEMS Annual Meeting, June 12-17, 2011, Halifax, Nova Scotia, Canada (<http://www.bioelectromagnetic.org/>)

(b) Future meetings

- (1) 14th International Congress of Radiation Research (14th ICRR 2011). 28 August – 1 September, 2011, Warsaw, Poland (<http://www.icrr2011.org>)
- (2) International Workshop on Electroporation-based Technology and Treatments. 13-19 November, 2011, Ljubljana, Slovenia (<http://www.cliniporator.com/ect/>)
- (3) XXX URSI General Assembly and Scientific Symposium, Istanbul, Turkey, 13-20. August, 2011 (<http://www.ursiga2011.org/>)
- (4) 6th International EMF Seminar in China: Electromagnetic Fields and Biological Effects. 20-23 October, 2011, Chongqing, China (<http://www.emfchannel.org/>)
- (5) 7th ICNIRP International NIR Workshop. 9-11, May, Edinburgh, Scotland, United Kingdom, 2012.
- (6) 34th BEEMS Annual Meeting, 17-22 June 2012, Brisbane, Australia
- (7) 11th International Congress of Hyperthermic Oncology (ICHO) & 29th Japanese Congress of

Thermal Medicine (JCTM) 28-31, August, 2012, Kyoto, Japan
(<http://www.jsho.jp/images/stories/info/2012taikei-eng.pdf>)

- (8) IEEE Antennas and Propagation Society International Symposium and USNC-URSI National Radio Science Meeting, July 8-14, 2012, Chicago, Illinois, USA
(<http://www.ece.uic.edu/2012aps-ursi>)

3. Publications

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