

# HISTORY AND ROLE OF ICNIRP

**Paolo Vecchia**

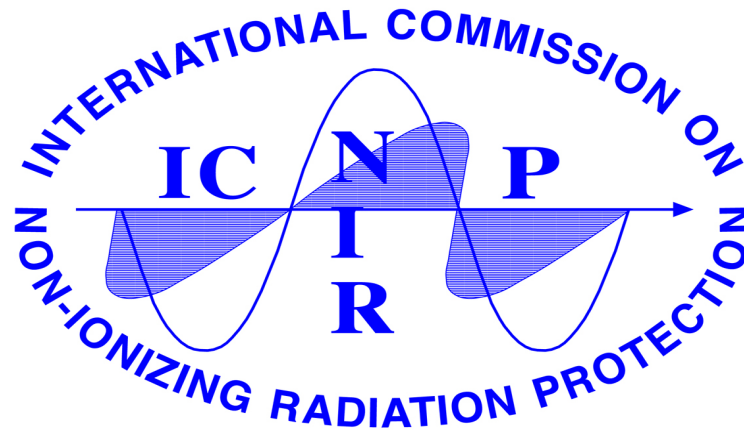
*National Institute of Health, Rome, Italy*

*Chairman of ICNIRP*

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**6th International NIR Workshop**  
*Rio de Janeiro, Brazil, 15-17 October 2008*





The International Non Ionizing Radiation Protection Commission (ICNIRP) is an independent group of experts established to evaluate the state of knowledge about the effects of non-ionizing radiation (NIR) on human health and well being and to provide science-based advice on protection against harmful effects of NIR

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## THE VERY BEGINNING

In June 1974, IRPA President Carlo Polvani (1973-1977), proposed *"a possible role of IRPA in establishing criteria and standards in the field of health protection against non-ionizing radiations"* and the IRPA Executive Council decided to set up a Working Group to review the health protection problems arising from different NIR

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## RECOMMENDATIONS OF AN *AD HOC* WORKING GROUP

"a separate and independent International Commission on NIR Protection (ICNIRP) be established...The ICNIRP would look to IRPA as the sponsoring international scientific organization in a similar way that ICRP looks to the International Congress of Radiology...".

“IRPA should consider broadening its institutional authority to include NIR”



## RESOLUTION OF THE IRPA ASSEMBLY (PARIS 1977)

The General Assembly amends the Constitution of IRPA in order that IRPA may apply its objectives and purposes also in the field of non-ionizing radiation protection

The General Assembly directs the Executive Council to extend the work of the Study Group to establish an International NIR Committee [...] with the objective of developing background documents and international accepted recommendations

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# SCOPE OF ACTIVITIES OF ICNIRP

- analysing physical characteristics of NIR and reports of biological effects from exposure to NIR;
- recommending appropriate terminology, quantities, units and methods of measurement;
- developing protection criteria;
- recommending systems of protection against NIR, including appropriate exposure limits;
- giving guidance for the protection of workers, members of the public, patients and the environment;
- issuing statements, recommendations or papers on selected topics as appropriate, including reports on the application of Commission recommendations;
- collating and reporting of information and coordination of studies;
- initiating and participating in educational and research programmes, and pursuing any other activities that allow the Commission to carry out its work.

*ICNIRP Charter, 1992*

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# CHARTER

International Commission on  
Non-Ionizing Radiation Protection

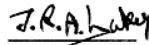
## ICNIRP

adopted by the  
General Assembly  
of the

International Radiation Protection Association

## IRPA

Montreal, 20 May 1992



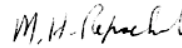
John R.A. Lakey,  
President IRPA



Charles B. Meinhold,  
Vice President IRPA



Chris J. Huyskens,  
Executive Officer IRPA



Michael H. Repacholi,  
Chairman ICNIRP

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# STRUCTURE OF ICNIRP

ICNIRP operates through:

- A Main Commission (14 Members, including a Chairperson and a Vice-chairperson)
- Four standing committees
- Consulting experts

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# THE CHAIRMEN



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# MAIN COMMISSION 2004-2008

P. Vecchia Italy Chairperson  
M. Hietanen Finland Vice Chairperson

- A. Ahlbom Sweden
- E. Breitbart Germany
- F. De Gruijl The Netherlands
- J. Lin USA
- R. Matthes Germany
- A. Peralta Philippines
- R. Saunders UK
- P. Soederberg Sweden
- B. Stuck USA
- A. Swerdlow UK
- M. Taki Japan
- B. Veyret France

G. Ziegelberger Germany Scientific Secretary  
M.H. Repacholi Switzerland Chairman Emeritus

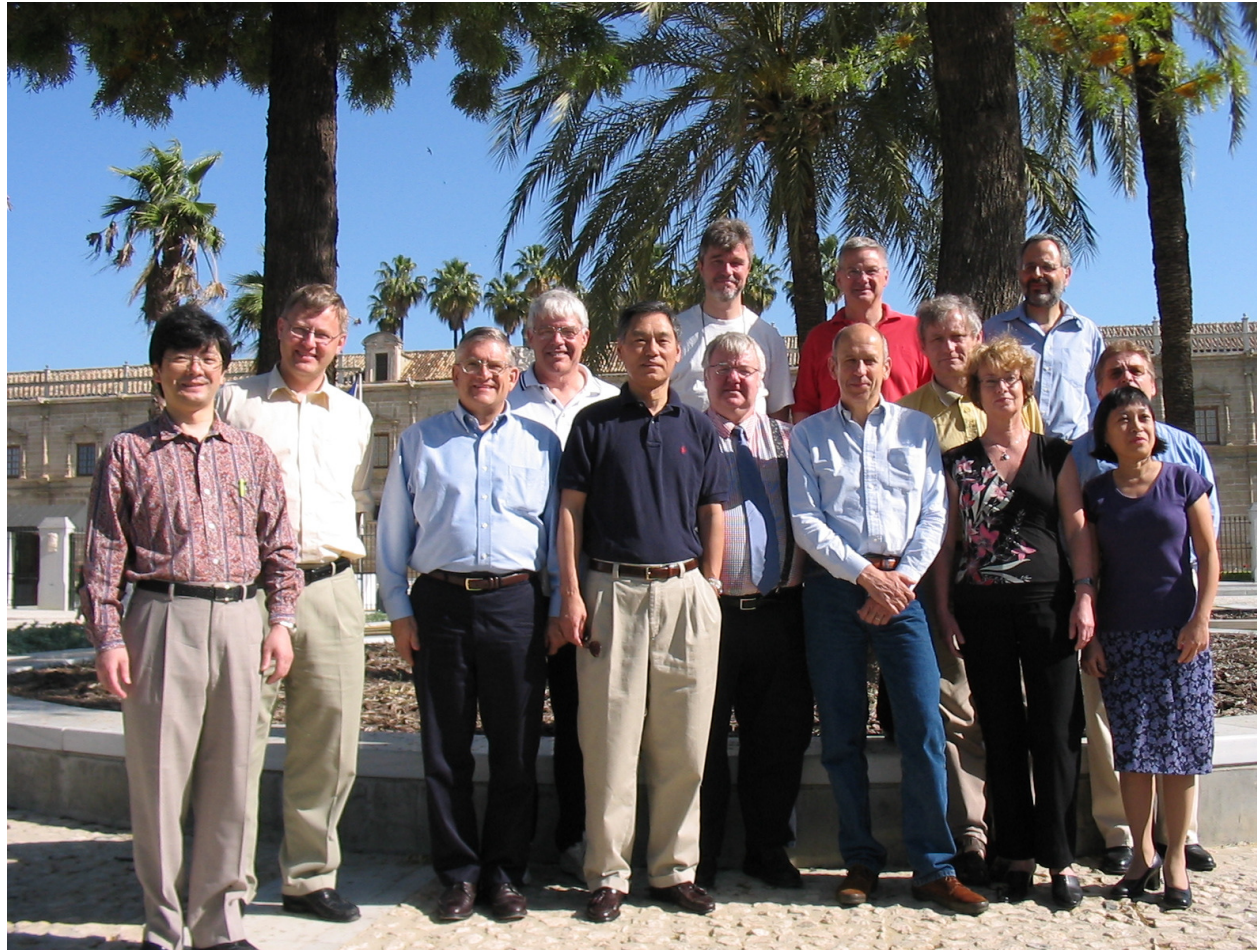
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# ICNIRP 2004-2008



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# STANDING COMMITTEES

- SC I – Epidemiology  
Chairman: Anders Ahlbom (Sweden)
- SC II – Biology and Medicine  
Chairman: Richard Saunders (UK)
- SC III – Physics and Engineering  
Chairman: Rüdiger Matthes (Germany)
- SC IV – Optical radiation  
Chairman: Bruce Stuck (USA)

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# MAIN COMMISSION 2008-2012

P. Vecchia      Italy      Chairman  
R. Matthes      Germany      Vice Chairman

- R. Saunders      UK
- A. Green      Australia
- M. Feychting      Sweden
- J. Lin      USA
- A. Peralta      Philippines
- K. Schulmeister      Austria
- P. Soederberg      Sweden
- B. Stuck      USA
- A. Swerdlow      UK
- B. Veyret      France

G. Ziegelberger      Germany      Scientific Secretary  
M.H. Repacholi      Switzerland      Chairman Emeritus

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# SCOPE OF ICNIRP

## ICNIRP:

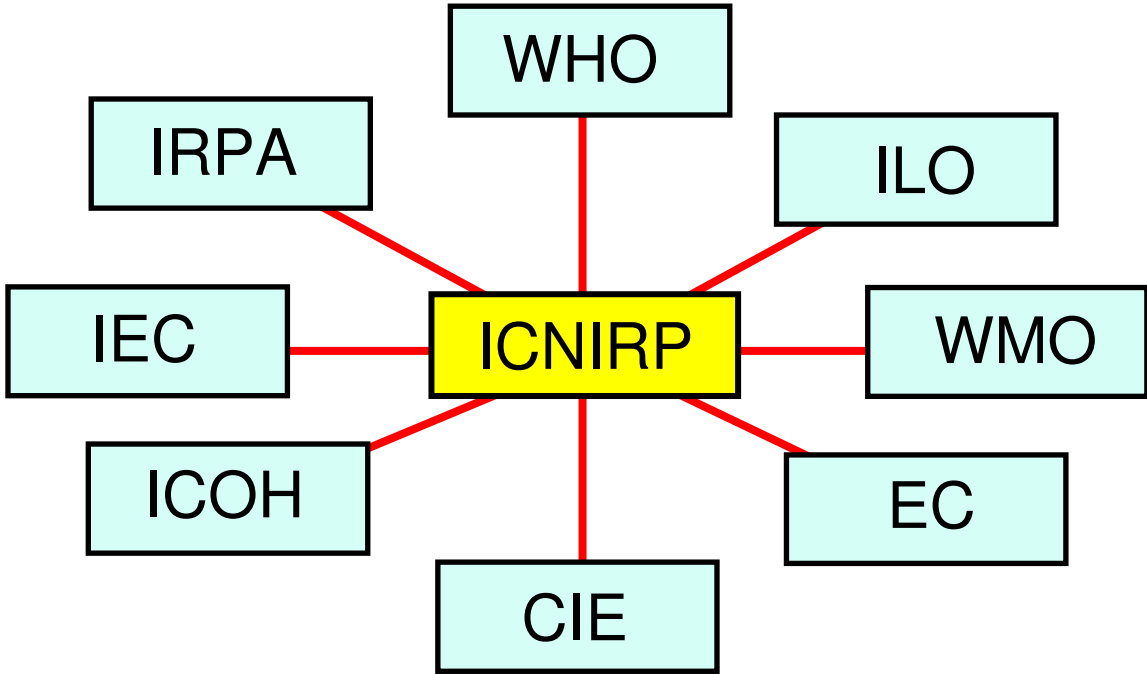
- provides **guidance and advice** on the health hazards of non-ionizing radiation
- develops **international guidelines** on limiting exposure to non-ionizing radiation that are independent and science based
- provides **science based guidance** and recommendations on protection from non-ionizing radiation exposure

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# ICNIRP'S PARTNERS



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## *ICNIRP Statement*

# **GENERAL APPROACH TO PROTECTION AGAINST NON-IONIZING RADIATION**

Health Physics 82:540-548 (2002)  
[www.icnirp.org](http://www.icnirp.org)

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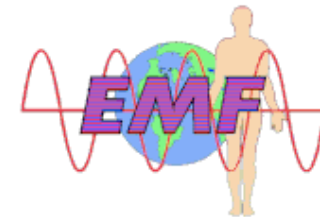
# ICNIRP AND WHO

1996 WHO launches the International EMF Project

ICNIRP is full member of the Project

Collaboration in the assessment of science

- Joint seminars
- Blue books
- Environmental Health Criteria Documents



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# THE INTERSUN PROGRAMME

Launched following a resolution of the United Nations Conference on Environment and Development (UNCED) in 1992

A WHO Project in collaboration with

- IARC
- ICNIRP
- UNEP
- WMO

[www.who.int/uv/intersunprogramme/en](http://www.who.int/uv/intersunprogramme/en)



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# ACTIVITIES AND DELIVERABLES

- Review of science (Blue Books, Scientific papers)
- Assessment of health effects (EHC)
- Assessment of exposure (Statements, Concerted Actions)
- Recommendations on exposure restrictions (Guidelines)
- Guidance on specific issues (Statements)
- Organization of workshops and seminars
- Advice to national authorities
- Participation in scientific events

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# ICNIRP PUBLICATIONS

**Reviews of the published scientific literature.** Set out the science base and provide ICNIRP's interpretations in respect of understanding effects on human health.

**Exposure Guidelines.** Summarise scientific results and set out the basis for limiting exposure and recommend exposure limits.

**Statements.** Provide information and advice on specific topics of non-ionizing radiation protection and/or radiation protection issues related to specific devices or exposure situations.

**Occupational Practical Guides.** Address specific topics on occupational exposure to NIR. Published by ILO in its "Occupational Safety and Health Series".

**General Documents.** Documents setting out general policy issues such as the basis for exposure guidelines and reviews of the science.

**Proceedings.** Publications resulting from scientific seminars, workshops and conferences organised by ICNIRP and/or its partner organization.

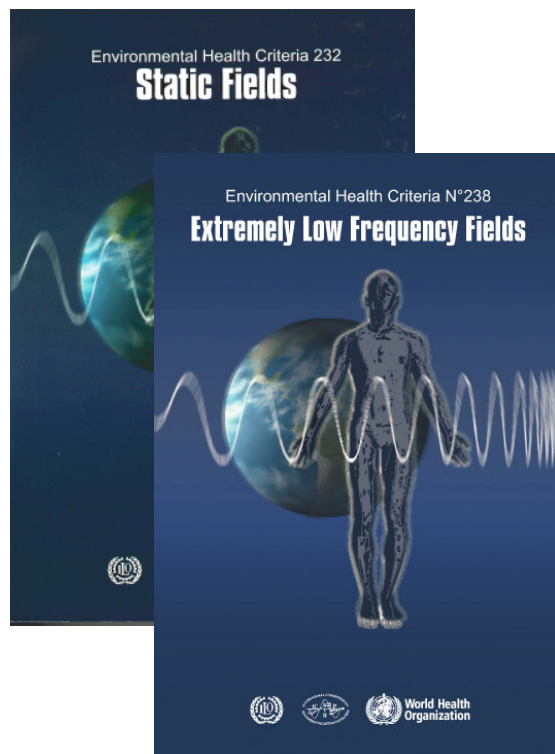
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# ENVIRONMENTAL HEALTH CRITERIA (EHC)



[www.inchem.org/pages/ehc.html](http://www.inchem.org/pages/ehc.html)



INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY

## ENVIRONMENTAL HEALTH CRITERIA 160

### ULTRAVIOLET RADIATION

This report contains the views of experts and does not necessarily represent the policy of the United Nations Environment Programme, the International Labour Organisation, or the World Health Organization.

Published under the joint sponsorship of the United Nations Environment Programme, the International Labour Organisation and the World Health Organization, Geneva, 1994



INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY

## ENVIRONMENTAL HEALTH CRITERIA 23

### LASERS AND OPTICAL RADIATION

This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of either the World Health Organization, United Nations Environment Programme, or the International Radiation Protection Association.

Published under the joint sponsorship of the United Nations Environment Programme, the International Labour Organisation and the International Radiation Protection Association, Geneva, 1982

ISBN 92 4 154083 4



INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY

## ENVIRONMENTAL HEALTH CRITERIA 16

### RADIOFREQUENCY AND MICROWAVES

This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of either the World Health Organization, United Nations Environment Programme, or the International Radiation Protection Association.

Published under the joint sponsorship of the United Nations Environment Programme, World Health Organization and the International Radiation Protection Association

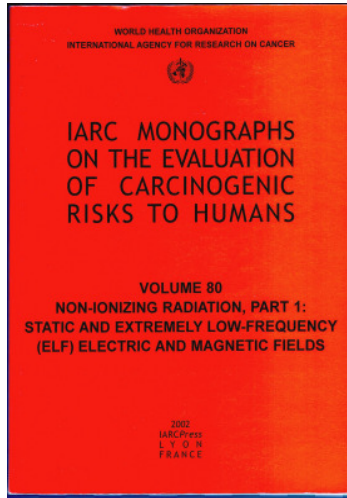
World Health Organization  
Geneva, 1981

ISBN 92 4 154076 1

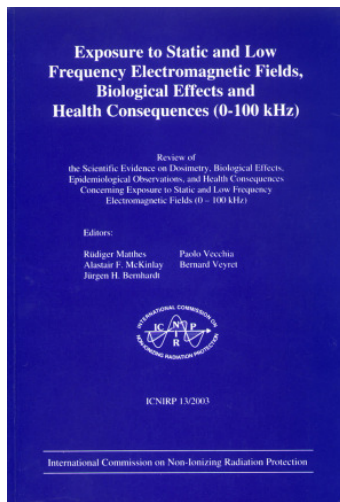
(c) World Health Organization 1981

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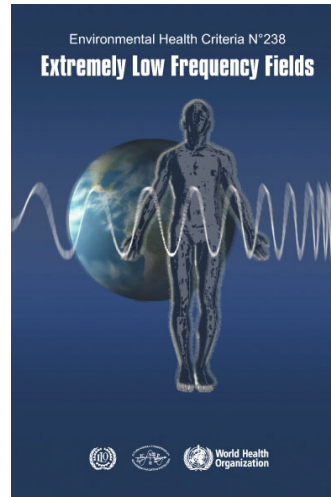




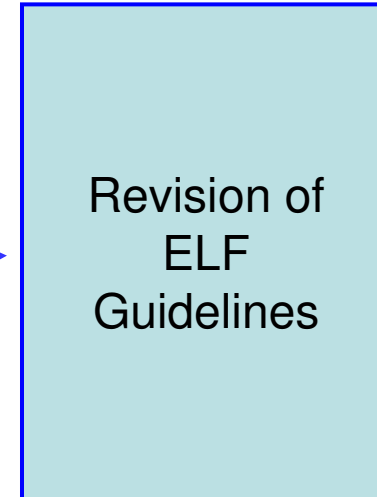
IARC 2002



ICNIRP 2003



WHO 2007



ICNIRP 2009 (?)

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# EMF GUIDELINES

ICNIRP Guidelines

## GUIDELINES FOR LIMITING EXPOSURE TO TIME-VARYING ELECTRIC, MAGNETIC, AND ELECTROMAGNETIC FIELDS (UP TO 300 GHz)

International Commission on Non-Ionizing Radiation Protection\*

### INTRODUCTION

In 1974, the International Radiation Protection Association (IRPA) formed a working group on non-ionizing radiation (NIR), which examined the problems arising in the field of protection against the various types of NIR. At the IRPA Congress in Paris in 1977, this working group became the International Non-Ionizing Radiation Committee (INIRC).

In cooperation with the Environmental Health Division of the World Health Organization (WHO), the IRPA/INIRC developed a number of health criteria documents on NIR as part of WHO's Health Criteria Programme, sponsored by Nations Environment Programme (UNEP). This document includes an overview of the physical facts, measurement and instrumentation, applications of NIR, a thorough review of the biological effects, and an evaluation of the exposure to NIR. These health criteria form the scientific database for the subsequent development of exposure limits and codes of practice relating to the various types of NIR.



INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION S.r.l.

RECOMENDAZIONE PER LA LIMITAZIONE DELL'ESPOSIZIONE A CAMPI ELETTRICI, MAGNETICI E ELETTROMAGNETICI (fino a 300 GHz)

### PREFAZIO

Nel 1974, la Associazione Internazionale per la Protezione contro le Radiazioni Non Ionizzanti (IRPA) ha formato un gruppo di lavoro per studiare i problemi che si presentano in merito alla protezione contro le varie tipologie di radiazioni non ionizzanti (NIR). Nel 1977, al Congresso IRPA a Parigi, questo gruppo di lavoro è diventato il Comitato Internazionale per la Protezione contro le Radiazioni Non Ionizzanti (INIRC).

In collaborazione con la Divisione di Salute Ambientale dell'Organizzazione Mondiale della Sanità (OMS), l'IRPA/INIRC ha sviluppato una serie di documenti sui criteri di salute per le NIR come parte del Programma di Criteri di Salute Ambientale promosso dal Programma delle Nazioni Unite per l'ambiente (UNEP). Questo documento include un'analisi delle caratteristiche fisiche, delle misurazioni e dell' strumentazione, delle applicazioni delle NIR, una revisione esauriente degli effetti biologici e una valutazione dell'esposizione alle NIR. Questi criteri di salute costituiscono la base scientifica per lo sviluppo successivo di limiti di esposizione e di codici di pratica relativi alle diverse tipologie di NIR.

\* ICNIRP Secretariat, c/o Dept. Ing. Rüdiger M. J. Schwan, Institute for Electrodynamics, The Center for Electrodynamics, Garmisch, Germany. (For the purposes of their guidelines, the Commission was led by Dr. Albert Schwab, Chairman of the Commission from 1974 until 1997, and succeeded by Dr. E. A. Cour, from 1997 until 2004, and by Dr. H. S. G. Othman, from 2004 until 2007. The Commission was replaced by ICNIRP in 2007. The Commission's Secretariat is located at the following address: ICNIRP Secretariat, c/o Dept. Ing. Rüdiger M. J. Schwan, Institute for Electrodynamics, The Center for Electrodynamics, Garmisch, Germany.)

English

Spanish

Russian

Chinese

## LINEE GUIDA PER LA LIMITAZIONE DELL'ESPOSIZIONE A CAMPI ELETTRICI E MAGNETICI VARIABILI NEL TEMPO ED A CAMPI ELETTROMAGNETICI (FINO A 300 GHz)

Commissione Internazionale per la Protezione dalle Radiazioni Non Ionizzanti (ICNIRP)\*

(Traduzione italiana di Guidelines for Limiting Exposure to Time-varying Electric, Magnetic, and Electromagnetic Fields up to 300 GHz, Health Physics 74: 494-522 (1998))



Nel 1974, l'Associazione Internaz. Radiaz. Protezione Associaz. IRI ionizzanti (Non Ionizing Radiation, NI) campo della protezione dai diversi tipi questo gruppo di lavoro diventò il Coi (International Non Ionizing Radiation C).

In collaborazione con la Divisione della Sanità (OMS), l'IRPA/INIRC s' criteri sanitari nei confronti delle NI Ambientale (Environmental Health C.)

Questo documento ha lo scopo di definire i limiti di esposizione e di codici di pratica per le diverse tipologie di NIR.

La Segreteria della Commissione ICNIRP, c/o Schwan/Rüdiger, Institut für Elektrodynamik, The Center for Electrodynamics, Garmisch, Germany, fino a maggio 1997. Il Presidente della Commissione ICNIRP, Dr. Albert Schwab, fino a maggio 1997. Il Presidente della Commissione ICNIRP, Dr. E. A. Cour, fino a maggio 1997. Il Presidente della Commissione ICNIRP, Dr. H. S. G. Othman, dal maggio 1997.

Italian

French

German

Japanese

## GUIDELINES FOR LIMITING EXPOSURE TO TIME-VARYING ELECTRIC, MAGNETIC, AND ELECTROMAGNETIC FIELDS (UP TO 300 GHz)

The main objective of this publication is to provide a scientific basis for the development of exposure limits and codes of practice for the various types of NIR.

In 1974, the International Radiation Protection Association (IRPA) formed a working group on non-ionizing radiation (NIR), which examined the problems arising in the field of protection against the various types of NIR.

The Commission was replaced by ICNIRP in 2007. The Commission's Secretariat is located at the following address: ICNIRP Secretariat, c/o Dept. Ing. Rüdiger M. J. Schwan, Institute for Electrodynamics, The Center for Electrodynamics, Garmisch, Germany.

\* ICNIRP Secretariat, c/o Dept. Ing. Rüdiger M. J. Schwan, Institute for Electrodynamics, The Center for Electrodynamics, Garmisch, Germany.

## Guide pour l'établissement de limites d'exposition aux champs électriques, magnétiques et électromagnétiques

Champs alternatifs (de 0 à 300 GHz)

Rechtlinien für die Begrenzung der Exposition durch zeitlich veränderliche elektrische, magnetische und elektromagnetische Felder (bis 300 GHz)

ICNIRP-Richtlinien

RICHTLINIEN FÜR DIE BEGRENZUNG DER EXPOSITION DURCH ZEITLICH VERÄNDERLICHE ELEKTRISCHE, MAGNETISCHE UND ELEKTROMAGNETISCHE FELDER (BIS 300 GHz)

International Commission on Non-Ionizing Radiation Protection\*

VORWORT

Die Internationale Strahlenschutz-Vereinigung hat 1974 eine Arbeitsgruppe die sich mit Problemen des Schutzes gegen Strahlung befasst. Beim Pariser IRPA-Kongress 1977 wurde eine Arbeitsgruppe für nicht ionisierende Strahlung gebildet.

International Commission on Non-Ionizing Radiation Protection\*

Limiting Exposure to Time-varying Electric, Magnetic, and Electromagnetic Fields (Up to 300 GHz)

International Commission on Non-Ionizing Radiation Protection\*

中文版ICNIRP导则由信息产业部电信研究院李朝晖、李朝晖在2002年11月20日8月完成翻译工作。其间会议修改了十七次之多。原李、孙参与了编辑管理工作。王洪桥进行了金源校对和核稿。王洪桥守夜了生物医学部分。在校对修改过程中，校对者参考了2002年第《华电电气》上的译文(该译文系翻译参考文献部分)以及2002年8月校道提供给他中国电业工程标准出版社的参考性译文文稿。

中文版ICNIRP导则于2004年2月20日以电子版提交ICNIRP。ICNIRP译稿中文数据以繁体字为基础进行了金源修改。提出了许多宝贵意见。ICNIRP译稿Kane Chahai女士于2004年12月10日向译者传达了林教授修改的草稿。译者根据林教授的意见仔细校对后进行了第14次金源修改。ICNIRP进行最终审核。Kane Chahai女士于2005年4月1日通过传真向译者传达了林教授再次审查后的修改意见。译者进行了本翻译稿发布前最后一次修改。

本翻译稿在ICNIRP网站上所有感兴趣的人免费享用。仅供参考之用。以任何形式出版或未经ICNIRP和英文出版者的授权及注册译者姓名。

限于译者水平，错误之处难免。如有任何意见，请读者不吝赐教。

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## 6th International NIR Workshop Rio de Janeiro, Brazil, 15-17 October 2008





# “BLUE BOOKS”



6th International NIR Workshop  
Rio de Janeiro, Brazil, 15-17 October 2008



# THE INTERNATIONAL NIR WORKSHOPS

1988	Melbourne
2002	Vancouver
2006	Baden
2000	Kyoto
2004	Seville
2008	Rio de Janeiro

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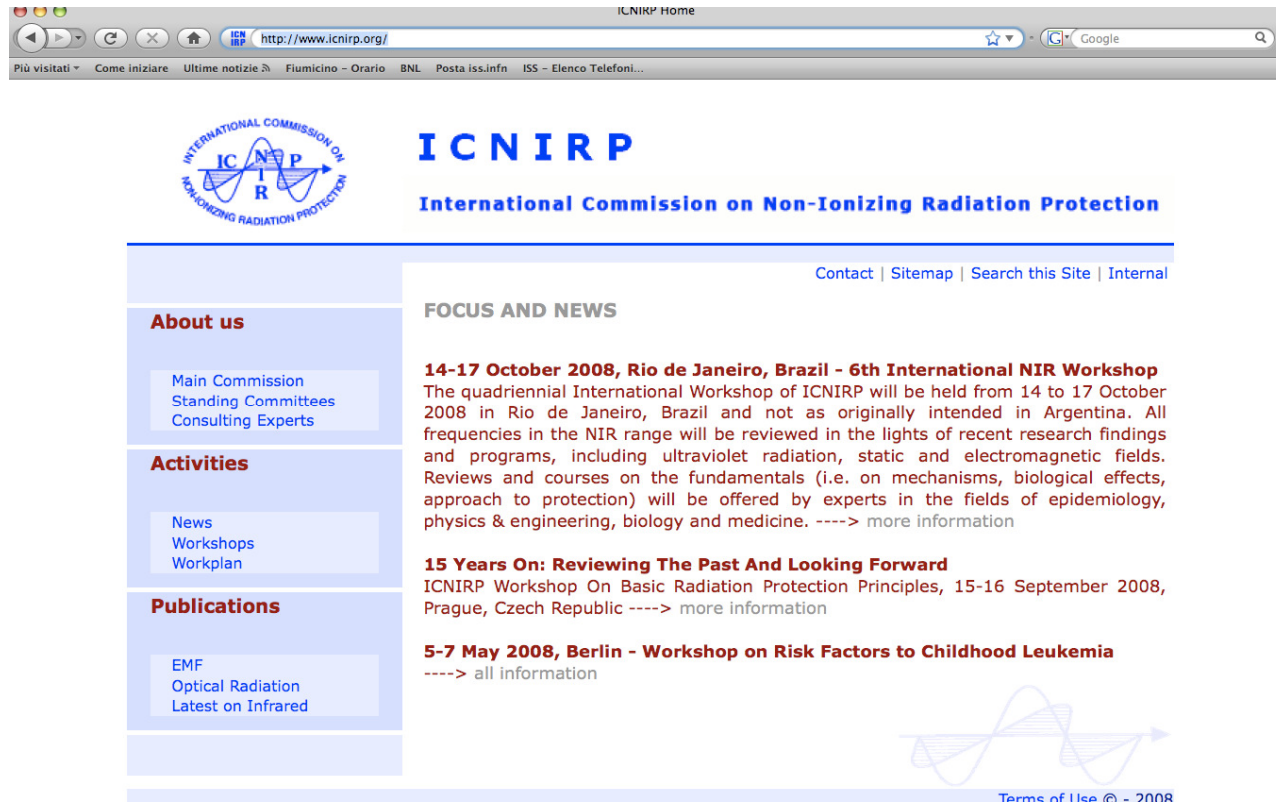
# ADVICE TO NATIONAL GOVERNMENTS



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*Rio de Janeiro, Brazil, 15-17 October 2008*



# FOR MORE INFORMATION...



The screenshot shows the ICNIRP website homepage. At the top, there is a navigation bar with links for 'Più visitati', 'Come iniziare', 'Ultime notizie', 'Fiumicino - Orario', 'BNL', 'Posta Iss.infn', 'ISS - Elenco Telefoni...', 'Contact', 'Sitemap', 'Search this Site', and 'Internal'. The main header features the ICNIRP logo and the text 'ICNIRP International Commission on Non-Ionizing Radiation Protection'. Below the header, there is a 'FOCUS AND NEWS' section with three main items: '14-17 October 2008, Rio de Janeiro, Brazil - 6th International NIR Workshop', '15 Years On: Reviewing The Past And Looking Forward', and '5-7 May 2008, Berlin - Workshop on Risk Factors to Childhood Leukemia'. A sidebar on the left contains sections for 'About us', 'Activities', and 'Publications'. At the bottom right, there is a 'Terms of Use © - 2008' link.

**ICNIRP**  
International Commission on Non-Ionizing Radiation Protection

Contact | Sitemap | Search this Site | Internal

**FOCUS AND NEWS**

**14-17 October 2008, Rio de Janeiro, Brazil - 6th International NIR Workshop**  
The quadriennial International Workshop of ICNIRP will be held from 14 to 17 October 2008 in Rio de Janeiro, Brazil and not as originally intended in Argentina. All frequencies in the NIR range will be reviewed in the lights of recent research findings and programs, including ultraviolet radiation, static and electromagnetic fields. Reviews and courses on the fundamentals (i.e. on mechanisms, biological effects, approach to protection) will be offered by experts in the fields of epidemiology, physics & engineering, biology and medicine. ----> [more information](#)

**15 Years On: Reviewing The Past And Looking Forward**  
ICNIRP Workshop On Basic Radiation Protection Principles, 15-16 September 2008, Prague, Czech Republic ----> [more information](#)

**5-7 May 2008, Berlin - Workshop on Risk Factors to Childhood Leukemia**  
----> [all information](#)

**About us**  
Main Commission  
Standing Committees  
Consulting Experts

**Activities**  
News  
Workshops  
Workplan

**Publications**  
EMF  
Optical Radiation  
Latest on Infrared

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[www.icnirp.org](http://www.icnirp.org)

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