

# URSI Related Stuff

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## 1 Preamble

For my sins, I am in charge of Commission B of the South African chapter of URSI. Commission B is concerned with fields and waves. This means that I attempt to gather a report of all the activity in South Africa that falls under that ambit. Usually this means publications :-)

As a newcomer to URSI, unsure of what was expected, I have drafted a draft of the Duties of a Commission Chair. I hope this is of some use to others.

## 2 The annual reports (Calendar year)

2007

2006

2005

2004

2003

## 3 What is “URSI”?

URSI, or *Union Radio-Scientifique Internationale*, or (the) International Union of Radio Science was established in 1919 and is a foundation member of the International Council of Scientific Unions (ICSU). In South Africa, ICSU affairs are administered by the NRF—National Research Foundation—and represents over 30 Scientific Unions present in South Africa. It is effectively an international “Window of Science” of activities in South Africa. Although we all would perhaps like to see the South African ICSU to be doing a lot more for South African Science, it is to be pointed out that ICSU-SA is (or should be, and that’s up to us!) a showcase for South African Science.

URSI attempts to bring together all aspects of “Radio Science”, and is therefore multi-disciplined in nature, pulling together disciplines that would not ordinarily be “talking to each other”, but should be. (Mainly the Electrical Engineering and the Physics fraternities.)

URSI consists of 10 “Commissions” that overview specific areas of “Radio Science”. The full list of the Commissions, and their interest areas is to be found at [www.ursi.org](http://www.ursi.org).

In short:

Commission A:	Electromagnetic Metrology
Commission B:	Fields and Waves
Commission C:	Signals and Systems
Commission D:	Electronics and Photonics
Commission E:	Electromagnetic Noise and Interference
Commission F:	Wave propagation and Remote Sensing
Commission G:	Ionospheric Radio and Propagation
Commission H:	Waves in Plasmas
Commission J:	Radio Astronomy
Commission K:	Electromagnetics in Biology & Medicine

which is a *vast* area of research. Indeed, one of the great advantages of being an URSI RadioScientist is the broadening of the mind by the simple exposure to the fantastic work done by other RadioScientists in South Africa. No, I have no idea about Commission “I” :-)

## 4 What is Commission “B”?

Cut and Paste from the primary Commission B web site:

### **Commission B—FIELDS AND WAVES, Electromagnetic theory and applications.**

The interests of Commission B is fields and waves, encompassing theory, analysis, computation, experiments, and validation. Areas of emphasis are:

- Time-domain and frequency-domain phenomena;
- Scattering and diffraction;
- General propagation including waves in specialised media;
- Guided waves;
- Antennas and radiation;
- Inverse scattering.

The Commission fosters the creation, development, and refinement of analytical, numerical, and measurement techniques to understand these phenomena. It encourages innovation and seeks to apply interdisciplinary concepts and methods.