



WHO International EMF Project

Report on EMF activities in Australia during 2022-2023

ARPANSA EMF Activities

In 2020, ARPANSA established an enhanced Electromagnetic Energy (EME) Program. The program aims to promote health and safety and address misinformation about EME emissions. Key initiatives of the program, and progress are detailed below:

Assess EME exposure in the community

A number of studies are underway to assess EME exposure from existing and new telecommunications technologies. In March 2023, a survey of the environmental EME in Melbourne was published in the peer-reviewed journal Radiation Protection Dosimetry ([Henderson et al., 2023](#)). The survey found that all measured EME levels were well below the permitted Australian standard limits for public EME exposure.

Upgrade ARPANSA's EME laboratory

ARPANSA's new anechoic chamber was officially opened in November 2022. The new chamber replaces ARPANSA's former anechoic chamber, which was built in 1979 and could only measure and calibrate equipment emitting EME up to 8 GHz. The new chamber will be able to calibrate equipment up to 40 GHz and undertake research up to 100 GHz, enabling health research into the current 5G network and future generations of high-frequency wireless technology.

Research – EME and health

As part of the EME Program, ARPANSA continues to promote, coordinate, fund, and lead research on EME and health. Numerous external studies and collaborative studies are currently supported under this program ([EME Program Research Framework | ARPANSA](#)). ARPANSA has also provided support to the WHO EHC and Systematic Review activities.

A number of studies within ARPANSA have also been completed or are currently underway ([Electromagnetic Energy Research | ARPANSA](#)). In May 2023, scientists at ARPANSA and Swinburne University published a systematic map presenting all the available research on the impact of EME on plants and animals in the environment ([Karipidis et al., 2023](#)). While there is currently no substantiated evidence of harm, it highlighted the need for more high-quality research into the effects of EME from high-frequency wireless technologies, such as 5G, on plants and animals.

ARPANSA has continued publishing on its website summaries (with select comments) of recent scientific papers dealing with electromagnetic fields (EMF) and health (as well as other radiation types). The papers are selected on the basis of importance to the protection of health, on perceived likely interest to the wider public or where the reported research is Australian. The summaries are available at [Radiation literature survey | ARPANSA](#)

Communications

ARPANSA provides the community with information and advice on radiation protection matters including issues related to EMF. ARPANSA held a public forum in August 2022 during National Science Week to address misinformation about EME and health. Plans are also underway to engage with the public during National Science Week in 2023.

ARPANSA also provides the “Talk to a Scientist” program so members of the public can call ARPANSA and speak with a scientist about radiation protection topics ([Talk to a Scientist | ARPANSA](#)). ARPANSA continues to review its website factsheets to ensure the information is current and easily understood.

Policies, Legislation and Standards

RPS S-1

Following the release of ICNIRP’s high frequency guidelines, ARPANSA revised its RF Standard adopting the new ICNIRP limits. The Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz (2021), RPS S-1 (Rev. 1) sets limits of exposure to radiofrequency (RF) electromagnetic energy (EME) for the public and workers. The exposure limits set out in the Standard provide protection against all known adverse health effects from RF EME exposure and are set well below the level at which harm may occur. The new RF Standard and supplementary material is available at [Radiation Protection Series S-1 \(Rev. 1\) | ARPANSA](#)