QUESTION ITU-R 239/1[[1]](#footnote-1)\*, [[2]](#footnote-2)\*\*

Electromagnetic field measurements to assess human exposure

The ITU Radiocommunication Assembly,

considering

*a)* ITU Plenipotentiary Resolution 176 ([Rev. Busan, 2014](http://www.itu.int/en/plenipotentiary/2014/Documents/final-acts/pp14-final-acts-en.pdf)) on “Human exposure to and measurement of electromagnetic fields”;

*b)* ITU WTDC-14 [Resolution 62](https://www.itu.int/en/ITU-D/TIES_Protected/WTDC14/WTDC14-FinalReport-E.pdf) (Rev. Dubai, 2014) on “Measurement concerns related to human exposure to electromagnetic fields”;

*c)* ITU WTSA-12 [Resolution 72](http://www.itu.int/en/ITU-T/wtsa12/Documents/resolutions/Resolution%2072.pdf) (Johannesburg, 2008; Dubai, 2012) on “Measurement concerns related to human exposure to electromagnetic fields”;

*d)* ITU-T Study Group 5 (Environment and Climate Change) Question [7/5](http://www.itu.int/en/ITU-T/studygroups/2013-2016/05/Pages/q7.aspx) on “Human exposure to electromagnetic fields (EMFs) due to radio systems and mobile equipment”;

*e)* the ITU [Handbook on Spectrum Monitoring](http://www.itu.int/pub/R-HDB-23-2011) (Edition 2011), section 5.6 on “Non‑ionizing radiation measurements”,

noting

*a)* that Electromagnetic Field (EMF) exposure limits are implemented at a national level;

*b)* that the exposure limits are different for the general public and workers accessing areas close to wireless installations;

*c)* that the ITU and the World Health Organization encourage Member States to adopt the EMF exposure guidelines developed by the International Commission for Non-Ionizing Radiation Protection (ICNIRP);

*d)* that compliance with EMF limits should be assessed;

*e)* that power density and field strength are aggregated from different sources;

*f)* that exposure levels in the close proximity of wireless installations may occur in the near-field;

*g)* that may be a need to measure exposure levels in the main beam;

*h)* that there may be a need for separate measurements of both the E and the H fields, especially when in the near-field domain, which behaves differently to the far field;

*i)* that wireless installations may not transmit with their maximum power at the time of measurement;

*j)* that the results of the measurements may be presented in a variety of formats with reference to the intended use and potential audience;

*k)* the work already covered by existing ITU-T K-series Recommendations or IEC 62232 or IEC 62311,

noting further

*a)* the proliferation of wireless installations of all types around the world;

*b)* that compliance of portable wireless devices intended for use close to the head or body is outside the scope of this question,

decides that the following Questions should be studied

1 What are the measurements techniques to assess the human exposure from wireless installations of all types?

2 How can measurement results be presented?

further decides

1that the results of the above studies shall be included in (a) Recommendation(s) and/or (a) Report(s);

2that the above studies should be completed by 2023.

Category: S3

1. \* This Question should be brought to the attention of ITU-T Study Group 5 and ITU-D Study Group 2. [↑](#footnote-ref-1)
2. \*\* In the years 2018 and 2019, Radiocommunication Study Group 1 extended the completion date of studies for this Question. [↑](#footnote-ref-2)