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**Radiation protection instrumentation – Data format for radiation instruments
used in the detection of illicit trafficking of radioactive materials**

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ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RADIATION PROTECTION INSTRUMENTATION –
DATA FORMAT FOR RADIATION INSTRUMENTS USED IN THE DETECTION
OF ILLICIT TRAFFICKING OF RADIOACTIVE MATERIALS**

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International Standard IEC 62755 has been prepared by subcommittee 45B: Radiation protection instrumentation, of IEC technical committee 45: Nuclear instrumentation.

The text of this standard is based on the following documents:

FDIS	Report on voting
45B/739/FDIS	45B/748/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This standard contains attached files in the form of a zip file. These files are intended to be used as a complement and do not form an integral part of the standard.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

RADIATION PROTECTION INSTRUMENTATION – DATA FORMAT FOR RADIATION INSTRUMENTS USED IN THE DETECTION OF ILLICIT TRAFFICKING OF RADIOACTIVE MATERIALS

1 Scope and object

The purpose of this International Standard is to provide a uniform format for data to be output from radiation measurement instruments for use in detection of illicit trafficking of radioactive materials. This enables interpretation of data without reference to manufacturer's documentation.

This standard specifies the data format used for both required and optional data available at the output of radiation measurement instruments that are used for the detection of illicit trafficking of radioactive materials. The performance requirements for these types of radiation measurement instruments are described in other standards such as IEC 62401, IEC 62533, IEC 62694, IEC 62244, IEC 62327, IEC 62484, and IEC 62618 [26]¹.

The output consists of measurement data and results of any analysis performed by the radiation measurement instrument.

This standard does not address instrument control, data transmission protocols, or the physical media used for communications.

To ensure the largest interoperability of radiation instruments and worldwide operations, the technical content (e.g. data elements and attributes, document structure) of this standard matches the ANSI/IEEE N42.42 standard [28].

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-393:2003, *International Electrotechnical Vocabulary – Part 393: Nuclear instrumentation – Physical phenomena and basic concepts*

IEC 60050-394:2007, *International Electrotechnical Vocabulary – Part 394: Nuclear instrumentation – Instruments, systems, equipment and detectors*

ISO/IEC 10646-1, *Information technology – Universal Multiple-Octet Coded Character Set (UCS) – Part 1: Architecture and Basic Multilingual Plane*²

ISO/IEC 11578, *Information technology – Open Systems Interconnect – Remote Procedure Call (RPC)*³

¹ Numbers in square brackets refer to the Bibliography.

² The Unicode Consortium's Unicode Standard 4.0 is equivalent to the ISO document.

³ The Universally Unique Identifier (UUID) URN Namespace from W3C RFC 4122 is an equivalent standard covering the format of the UUID. Available at <http://www.ietf.org/rfc/rfc4122.txt>

ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*