

IRPA9
1996 International Congress on
Radiation Protection
April 14-19, 1996
Vienna, Austria

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PAPER TITLE Monitoring of Moving Objects for Radioactivity

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MAJOR SCIENTIFIC TOPIC NUMBER (see page 7)

ABSTRACT (See instructions overleaf)

Quick measurements of objects which are large in size if compared to the detector system, can only be carried out, if the objects are moved past the measurement system. This procedure is to be applied for objects such as vehicles of all kind, waste or recylclates on conveyor belts, or even people.

Especially for large and heavy objects - we like to mention trucks and trains - systems are required, that combine high detector sensitivity with high operation safety. The measurement system must be exact and provide a decision within half a second. Object recognition and measurement start have to be automatic in order not to endanger a smooth operation.

No standardized concepts, for judging the measuement results have been worked out yet. The criteria may be based on dose rate or activity or a combination of both. In many applications these values may have only little to do with each other.

The use of a metal box, in which a defined activity is positioned and with walls that allow to read off a defined dose rate at the outside, has proven to be an optimum for judging the measurement sensitivity of different systems. In practise this procedure rather presents a function test.