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PAPER TITLE ENVIRONMENTAL GAMMA DOSE RATE MONITORING STATIONS:  
DISCUSSION ON DOSE ~~RATE~~ QUANTITIES; SITE LOCATION  
AND CALIBRATION SCHEMES

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ABSTRACT (See instructions overleaf)

**ENVIRONMENTAL GAMMA DOSE RATE MONITORING STATIONS: DISCUSSION  
ON DOSE QUANTITIES, SITE LOCATION AND CALIBRATION SCHEMES**

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In view of decreasing tolerance levels for ionizing radiation, there is a great effort all over the world to advance environmental monitoring equipment close to its physical and technological limits. The author proposes a new concept for high precision monitoring of environmental gamma dose rate, together with decision schemes for the "efficient" operation of these devices.

- ☐ Which of the dose quantities (as preferred in different countries today) is most appropriate: exposure (USA), air kerma (F), photon dose equivalent (D) or ambient dose equivalent (potential future standard) ?
- ☐ Where exactly is an appropriate site for the placement of an environmental gamma dose rate probe? Which "structures" in the vicinity of the probe should be avoided?
- ☐ How can environmental measurement systems be calibrated in-situ? What about the cosmic components of natural background radiation? Which methods for automatic quality assurance can be provided?