ID: Type: **Poster**

New Gamma Camcorder

Nowadays, gamma dose rate images are created by “gamma cameras”, commercially available, unsuitable to be used in many cases of verification of undeclared activities and detection of radioactive hot spots. The new gamma camcorder developed by INVAP, change the way you see gamma radiation fields, allowing to scan and film a gamma radiation field at 1 frame/second, with a compact, affordable, lightweight and highly efficient device. Unlike current gamma cameras, the device is not used to form the classic concepts of lens and focus. INVAP concept was tested using experimental measurements in a nuclear reactor. Design flexibility enables the use of several types of detectors. The gamma field was reconstructed with very good resolution in those gamma dose rate ranges suitable for Nuclear Power Plants, namely from 10μSv/h up to 1Sv/h. But the technology does not limit camcorder velocity, and presented results shows that a real time image could be obtained from nuclear reactor up to natural background. Camera concept could be applied to neutron fields also. Using this concept, production of a remote equipment for mapping and monitoring high gamma radiation fields is currently in progress, aiming to provide real time information of radiation fields inside Nuclear Power Plants.

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Track Classification: Theme 3. Verification Technologies and Technique Application