Contribution ID: **69** Type: **not specified**

Compton imaging for radionuclide therapy: ICOR results

Wednesday 26 November 2025 12:45 (15 minutes)

The project ICOR aims at the improvement of the assessment of targeted radionuclide therapy (TRT) treatments through the visualization of the radiopharmaceutical distribution in the patients body. The IRIS group of IFIC (Valencia) has developed a Compton camera and is evaluating its performance for this application. The project focuses on the improvement of the system performance with scintillator crystals, the development of a system with a silicon detector as scatterer, and the system test with different compounds in hospitals. The project has succeeded in imaging the alpha emitter Ac-225 in collaboration with the hospital Léon Bérard in Lyon, allowing to visualize such radionuclide, which was not possible with the gamma cameras available in the hospital. Also, in collaboration with La Fe hospital, tests with a 3D printed thyroid-shaped phantom have been carried out. The phantom was filled with 131I- MIBG, both uniformly and including hot spots. The images obtained with the system clearly distinguish those two situations. Finally, a Compton camera employing a silicon detector as scatterer employing the AliVATA board as readout system for both detectors has been assembled and its functionality verified. Results will be shown.

Authors: LLOSA LLACER, Gabriela (Univ. of Valencia and CSIC (ES)); LLOSÁ, Gabriela (IFIC (CSIC-UV))

Co-authors: TORRES-ESPALLARDO, Irene (HUiP La Fe); BRZEZINSKI, Karol (IFIC (CSIC-UV)); BARRIENTOS, Luis (IFIC (CSIC-UV)); STRUGARI, Matthew (IFIC (CSIC-UV))

Presenters: LLOSA LLACER, Gabriela (Univ. of Valencia and CSIC (ES)); LLOSÁ, Gabriela (IFIC (CSIC-UV))

Session Classification: Parallel HEP