ID: Type: **Oral**

T2.4-O1. Development of a xenon mitigation prototype

The aim of the xenon mitigation project is to design a mobile system for the reduction of radioxenon emissions from Radiopharmaceutical Production Facilities (RPF). The reduction of noble gas emissions from large RPF is a key issue in increasing the sensitivity of the International Noble Gas Monitoring System. In a first part of the project, the adsorption properties of different adsorbent materials like Activated Carbons and Silver Zeolites were investigated. In a second phase, a study of specific design characteristics of a xenon abatement system on the operational conditions at the Institute of RadioElements was realized. Based on these investigations, a final prototype will be built and tested at IRE. Resulting from the two first phases of the project, the technical design of the xenon mitigation prototype that will be tested at IRE was developed. The shielding and the dimensions constraints (i.e. available space) of the prototype were elaborated in close collaboration with IRE. Due to the constraints on dimensions, the system is very compact and can be used at various places. The key results of the first two phases of the project will be presented as well as the full description of the technical design and the prototype.

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Track Classification: 2. Events and their characterization