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# Muography and Nuclear Safety: Reactors surveillance, and monitoring and waste qualification

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**Abstract:** The use of muons produced at the Earth's atmosphere as radiation source for the scanning of big structures is usually referred as muography. Since first muography attempts by Alvarez in the 1970s, the range of applications of this technique has been broadened in the last years mainly due to the advances on the particle detectors used and to the improvements on the analysis techniques. Thus, different muography measurements have been done for vulcanology, archaeology, geotechnics or civil engineering. Among these different applications, the IRFU group (Institut de recherche sur les lois fondamentales de l'Univers – CEA – France) is developing since the last years several projects regarding Nuclear Safety. They include the characterisation of nuclear reactors and their real-time surveillance or the verification of waste containers. After a general introduction to muography, this seminar will be focused on these activities carried out at CEA and their main results, including those about first 3D reconstructions using this technique, passing from muography to muon tomography.

On-line  
[\(Zoom\)](#)

Jueves 5 mayo, 12 horas, seminario de Física Nuclear



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