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Title: Nuclear Applications of Cosmic-ray Muography

Abstract:

Cosmic-ray muon are naturally occurring high-energy particles that are highly penetrating, ubiquitous and cost-free. They also are health-and-safety neutral. Muon imaging, or muography, has found applications in very diverse areas, ranging from archaeology over volcanology and mining to nuclear security. Due to the low rate of cosmic-ray muons of about 100 Hz per m<sup>2</sup> at sea level, applications that combine thick shielding with sufficient imaging time are especially well suited to muography. In some of these cases muography can be the only viable option of non-destructive testing.

This talk will introduce the key concepts and and give an overview of UK activities in muography, with an emphasis on nuclear applications.