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# Muon scattering tomography with laser-plasma-accelerator-driven muon source

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Laser plasma accelerators (LPAs) can generate GeV-scale electron beams in ultra-compact footprints, making them ideal drivers for various secondary sources. Among these is muon generation, with various groups measuring LPA-driven muons recently. Muons are unstable, heavy elementary particles, that interact mostly by scattering off nuclei as they propagate through matter. This means that they can penetrate large and/or dense objects, with the scattering angle of the emerging muon carrying information about the elemental composition of traversed material. Properties of muon beams driven by an optimised LPA will be presented, along with first simulations of muon scattering tomography and object reconstruction using LPA-driven muons.

**Primary author:** PODER, Kristjan (DESY)

**Co-authors:** Dr HEKTOR, Andi (GScan); Dr BARNES, Sarah (Deutsches Zentrum für Luft- und Raumfahrt)

**Presenter:** PODER, Kristjan (DESY)

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