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Muography at Low Background Noise Underground Research Laboratory of Rustrel.

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Muon trackers are used for both scattering and transmission muography. When the properties of the object change over time, event timestamping is essential to study the temporal dynamics of the system. In addition, underground measurements present supplementary deployment constraints in terms of volume, weight and gas management, among others. The T2DM2 project at the Low Background Noise Underground Research Laboratory of Rustrel (LSBB) has developed a compact muon tracker for dynamic tomography of density based on a thin time projection chamber with Micromegas readout to work under these conditions and with a performance analogue to classic geophysics methods.

This contribution presents (i) the working principle of the detector, (ii) a former study case as performance and application example, (iii) the recent detector hardware updates, (iv) the status of the project, (v) other Muographic activities at the LSBB and the (iv) short term objectives and valorization strategy. Temporal Tomography of the Density by the Measurement of Muons.

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