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Construction and readout systems of gaseous muography detectors

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Muography instrumentation presents a wide range of practical challenges, since the implementation environment differs from the high energy physics laboratory conditions. The presentation will briefly overview the pros and cons of existing technologies, and gaseous detectors in particular. The practical challenges are partially environmental, such as thermal cycling or high humidity, partially connected to the installation such as mechanical shocks, and also include the human factor stipulating minimal non-expert maintenance and troubleshooting. The presentation aims to introduce various solutions to address these challenges, based on the examples of the detectors developed jointly by Wigner RCP and ERI at the University of Tokyo, with operational experience spanning five years.

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