

3D Imaging with Muon Tomography



Reference

MuonGaz [D01635]

Key words

Screening, 3D imaging, tomography, inspection



APPLICATIONS

- Container inspection
- Geological analysis
- Industrial process control



TARGET MARKETS

- Security screening
- Threat detection
- Large structure study

Technology readiness level

TRL 3 → TRL 4-5 by 2020



INTELLECTUAL PROPERTY

Patent pending



LABORATORY

IP2I - Institut de Physique des 2 Infinis

DESCRIPTION

Exploiting cosmic rays, such as muons, is now possible, opening the way to new imaging possibilities.

The laboratory has developed a new device capable of following the trajectories of muons in the air, thus making it possible to locate and characterize objects that they may encounter.

An innovative electronic design as well as an original detector panel allow a simple and efficient implementation while allowing high spatial resolution.

To illustrate the use of this technology, it can make it possible to detect dangerous or undeclared materials in containers, making it possible to more systematically identify suspicious loads in circulation.

COMPETITIVE ADVANTAGES

- Radiation penetrating capacity.
- Ability to determine an object density or thickness
- Locating small dense objects (Tungsten, Uranium, Platinum, Gold, Lead...), not visible or accessible
- An alternative to ionizing sources and tomography systems
- Contactless
- Low manufacturing cost
- Allows large volume scanning
- Good spatial resolution with few electronic channels.

STAGE OF DEVELOPMENT

An imager is currently operational

PARTNERSHIP TYPE

PULSALYS is looking for industrial partners for the commercialization of the technology.



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