Challenge
Open Innovation #66

Detection of powder diffusion not visible to the naked eye

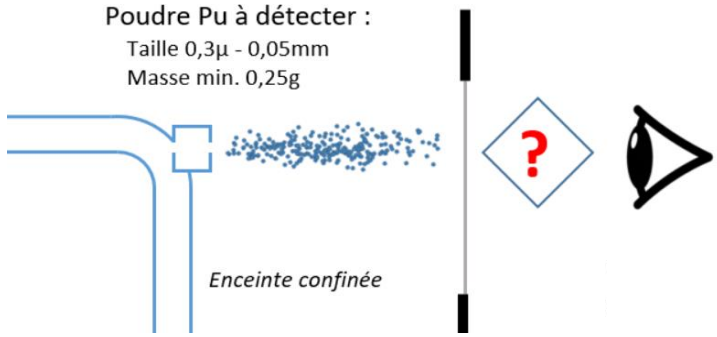

Diagram of the problem to be solved

Dates of challenge

Opening date: 19 09 2022
Closing date: 19 12 2022

Purpose of challenge

Orano is looking for innovative solutions to detect Pu particles in a confined space. The size of the particles prevents direct detection (particle size from 0.3 µ to 0.05 mm).

Description and expectations

Goals:

- Detect Pu powder and its associated emission point
- Visualize Pu powder invisible to the naked eye

Constraints:

- Powder located in a confined enclosure
- Hand operated solution
- Minimum mass to be detected: 0.25 g of powder

The proposed solutions could be based for example on polarizing lighting techniques (through the light halo around the particle itself). However, all other relevant solutions will be evaluated.

orano