

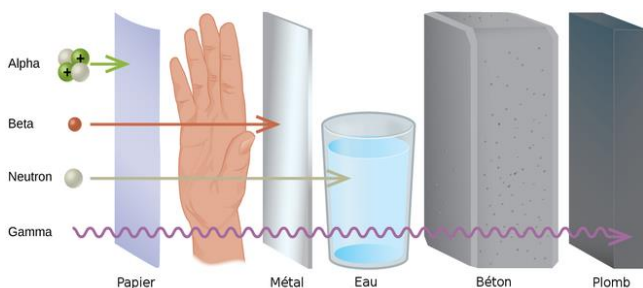
Challenge

Open Innovation #65

Optimization of Neutron and Gamma biological shielding for operators



Nuclear Industry



Dates of challenge

Opening date: 11 05 2022
Closing date: 11 09 2022

Example of neutron and gamma shielding

Purpose of challenge

Solutions for protection against neutron and gamma radiation allowing the dosimetry of operators to be reduced

Description and expectations

We are looking for partners capable of defining and designing innovative shielding solutions to provide collective and individual protection against neutron and gamma radiation, adapted to the neutron and x/gamma-ray spectrums emanating from MOX (Mixture of uranium and plutonium oxides) fuel.

The partners will be capable of:

- Defining optimized shielding solutions (constituents and design) adapted to the radiation spectrums (type and energies)
- Preparing, in an initial phase, test prototypes for the purposes of qualification and to validate the effectiveness of attenuation, the mechanical strength and performance under conditions of exposure
- Manufacturing of the validated solutions on an industrial scale

Depending on their locations and use, the shielding solutions designed may be:

- Opaque or transparent
- Adapted to one type of radiation or to both