

PAUL SCHERRER INSTITUT



Gianluca Janka :: MIXE :: Paul Scherrer Institute

The GIANT setup for MIXE

MIXE mid-term meeting, 05.12.2022

- **1980s:** First pioneering work, but low muon rates...
- **2018:** Rebirth of MIXE at PSI through first tests with MuX collaboration
- **2019:** More tests with MuX setup
- **2020:** First tests with own, improvised setup

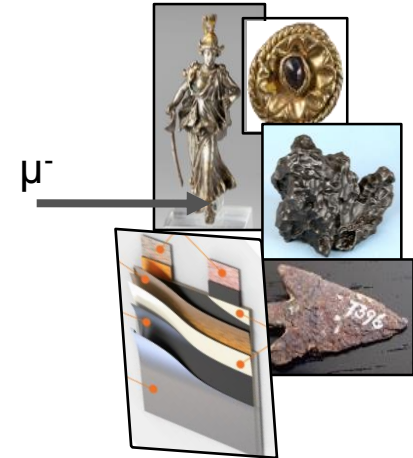
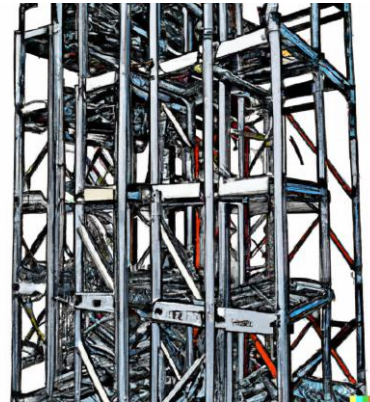
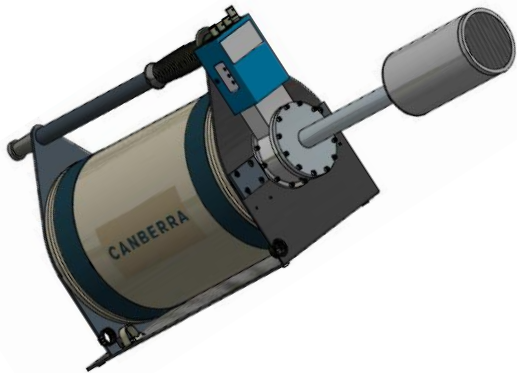


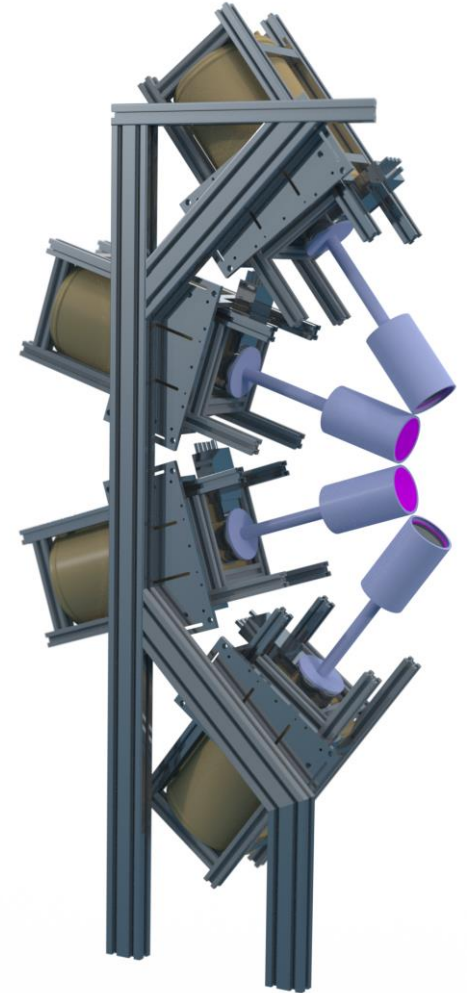
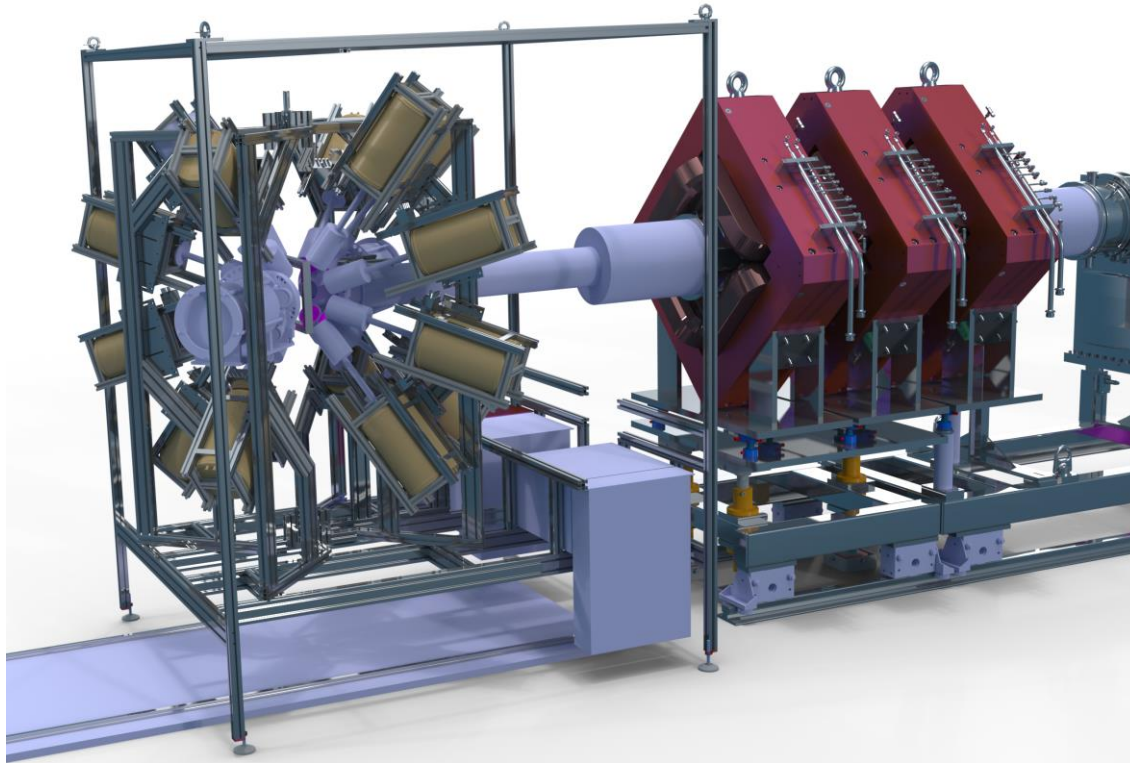
Goals and Requirements

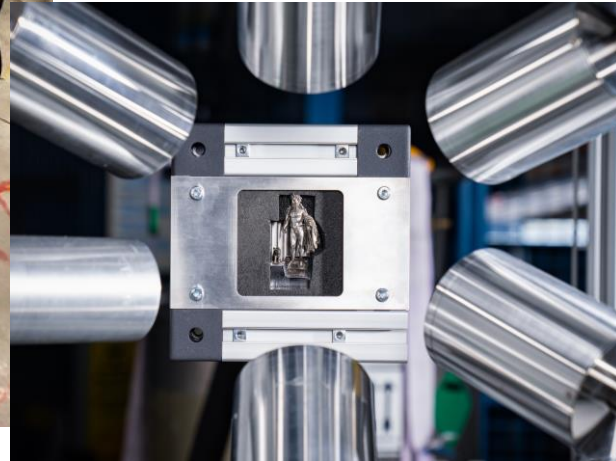
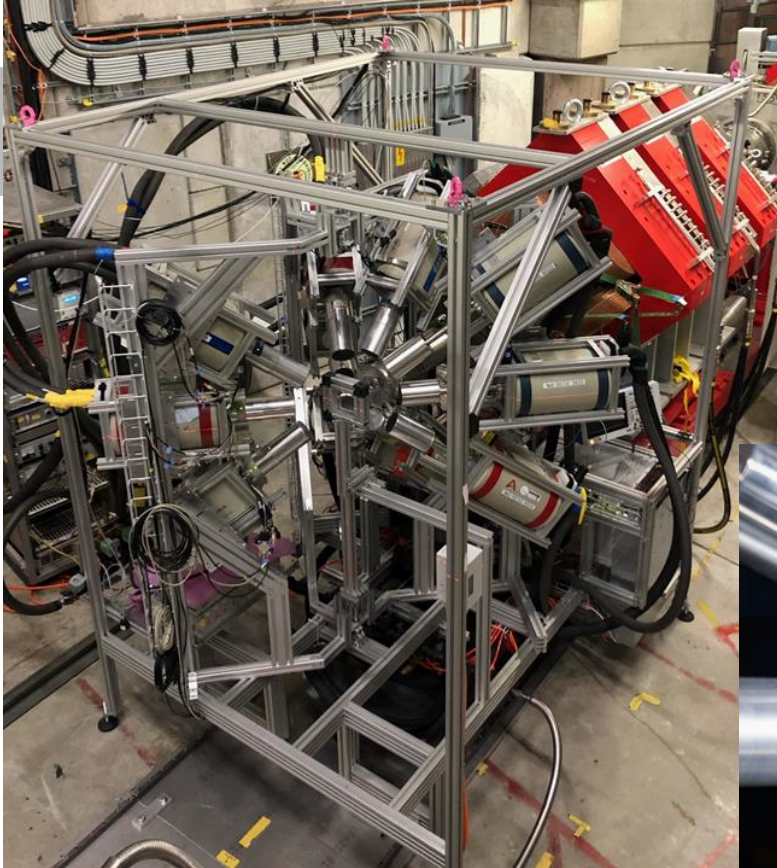
- **Flexibility:** can be used in different configurations
(number of detectors, different sample mounts etc.)
- **Reproducibility:** a well-defined geometry
(for following campaigns and simulations)
- **Simplicity:** operation as a non-stationary experiment
(fast set-up time, easy to move)
- **Efficiency:** high beam(-time) utilization
(cover large solid angle, fast sample change, ...)

GIANT

Germanium Array for Non-destructive Testing







- (Nearly) complete setup
 - Setup time roughly 6 hours
- Reproducible
- (Semi-)automatic LN2 refill
- Sample station twin in control room
 - Roughly 5 min sample change
 - Linear mover in discussion
- Max 8 freely rotating arms (currently 5)
- Max 4 BigMac HPGe per arm