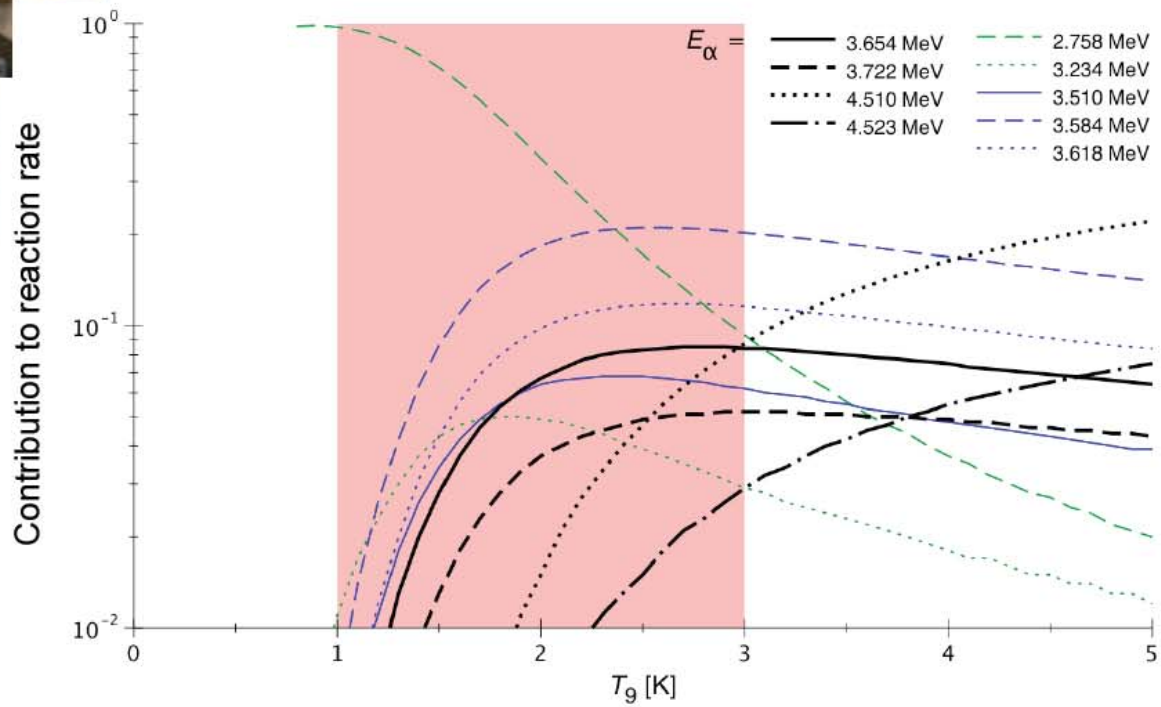
$^{40}Ca(\alpha,\gamma)^{44}Ti$, planned experiment at FZD Dresden

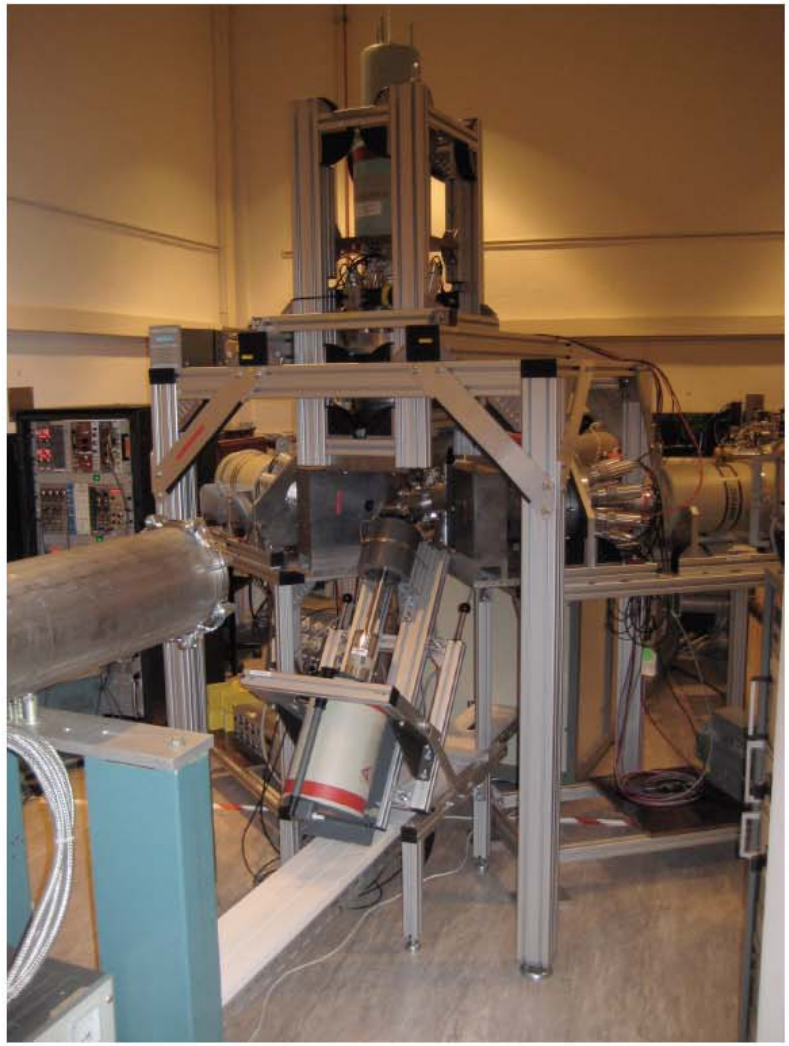
1. Concentrate on the resonances that contribute most to the reaction rate.
2. In-beam γ-spectroscopy study at the FZD high-current Tandetron.
3. In parallel, activation.



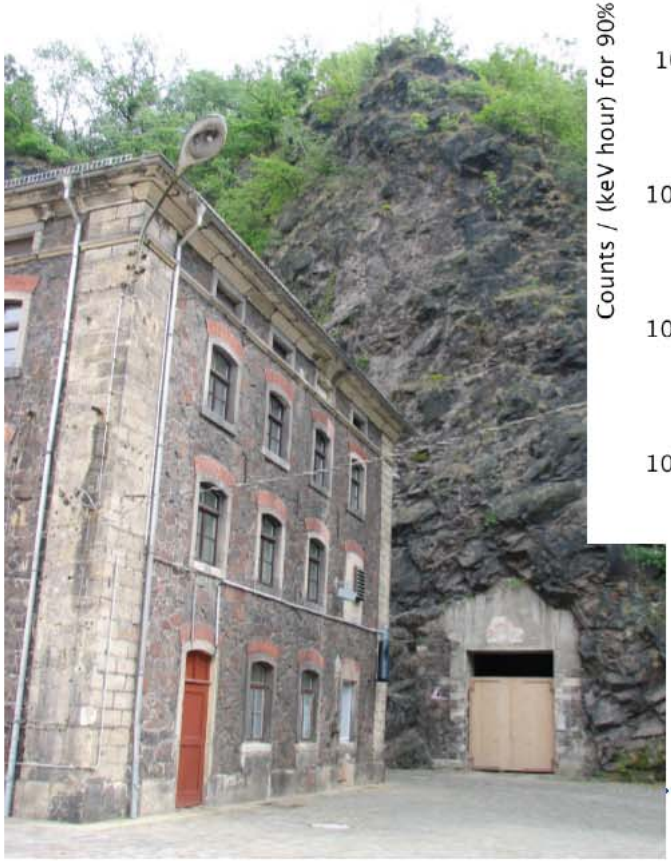
4. ^{44}Ti activity determination
   - Felsenkeller Dresden or Gran Sasso low-level counting lab
   - AMS

Planned in-beam experiment at FZD

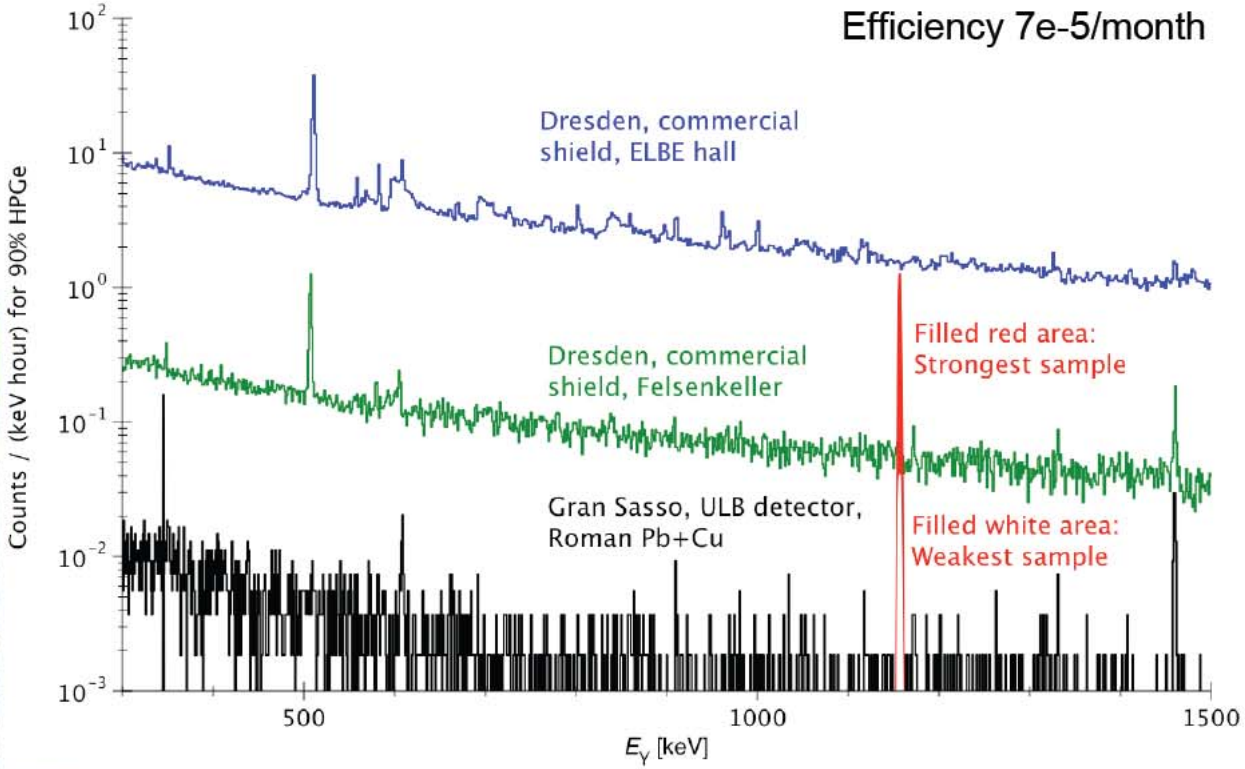
- 3.3 MV Tandetron (HVEE, 1993)
- Removable target station for astrophysics built and used in 2008
- Routine α-implantations for industry
- α-intensity 0.5-1.0 pμA
- New 6 MV Tandetron+AMS under construction



^{44}Ti activity determination at Felsenkeller Dresden



Efficiency 7e-5/month



Low-background counting facility (est. 1982) in central Dresden

45 m of rock shield against cosmic rays

New 90% HPGe detector online since 2008

FZD has dedicated weak ^{44}Ti calibration sources (D. Schumann/PSI)