

# Laboratori Nazionali del Gran Sasso

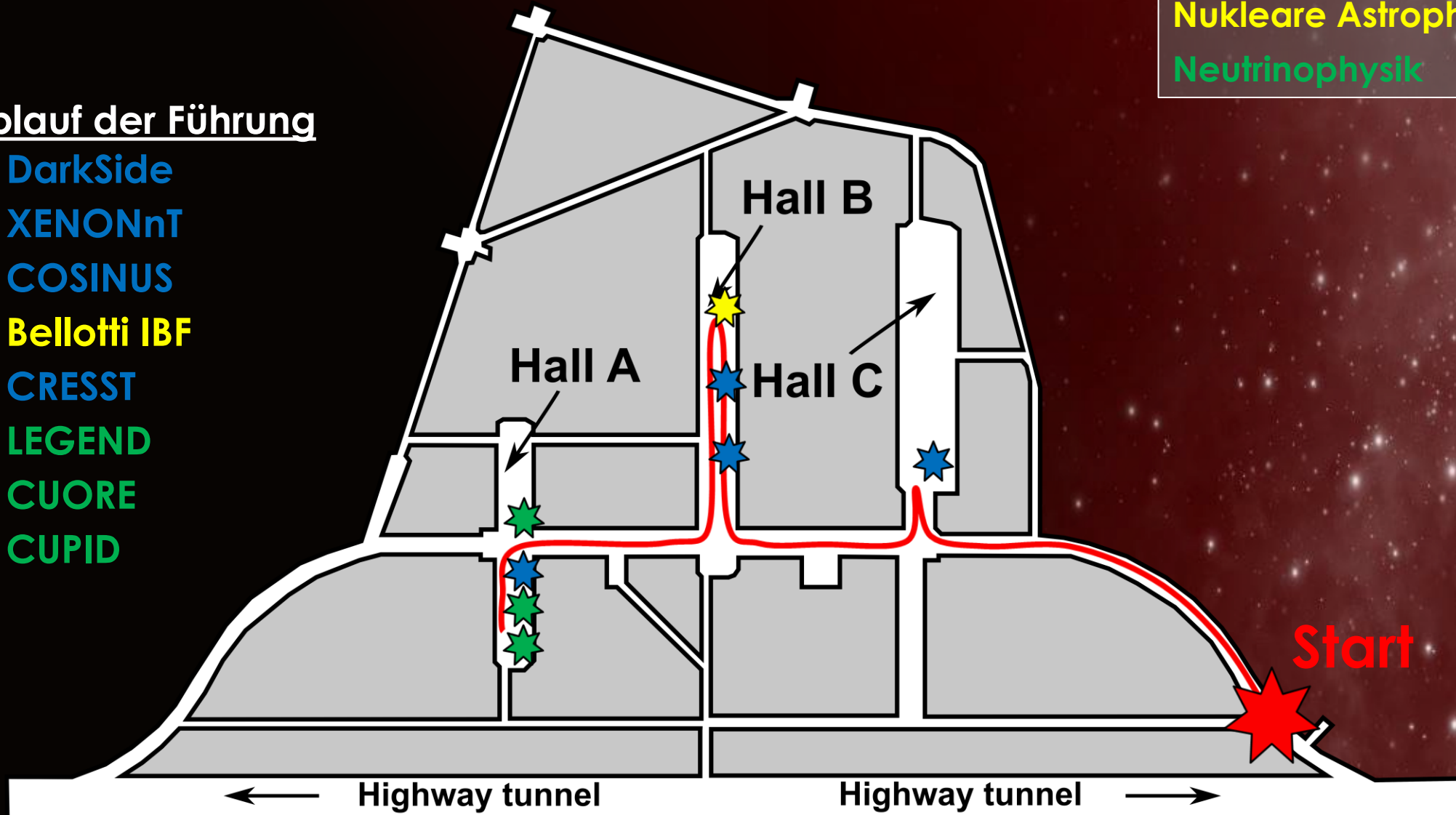
Dunkle Materie

Nukleare Astrophysik

Neutrinoophysik

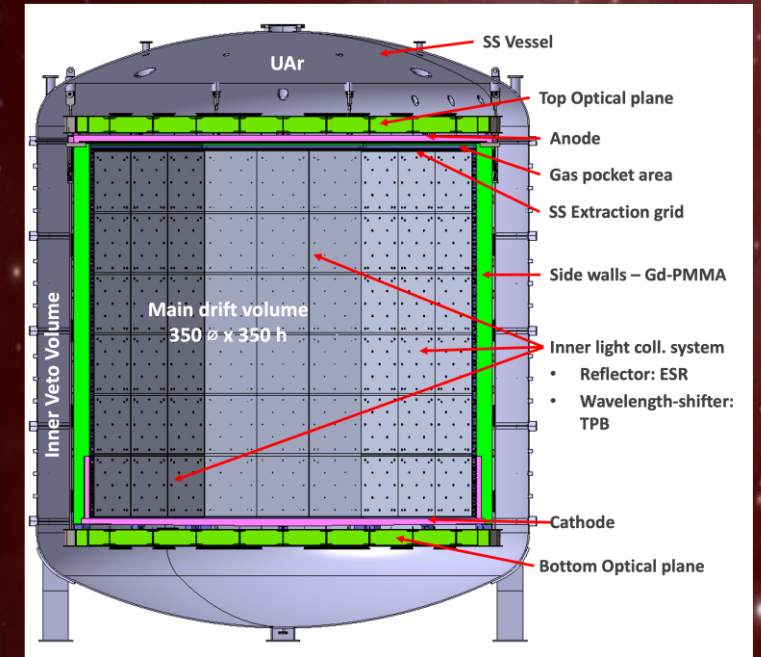
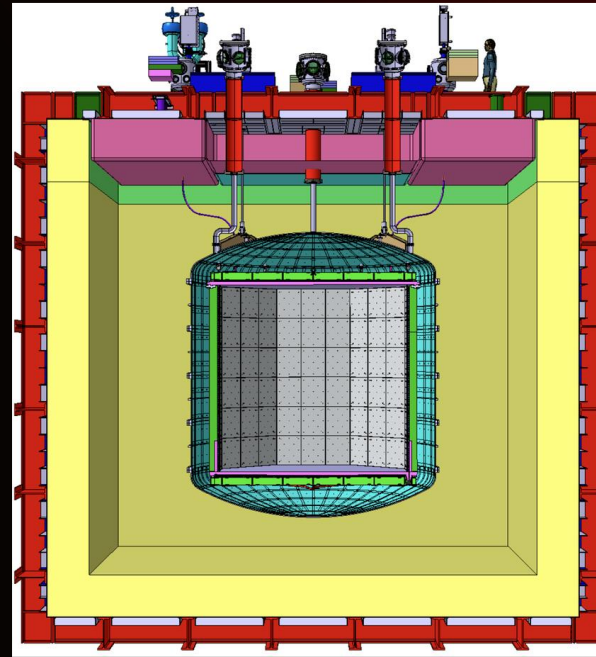
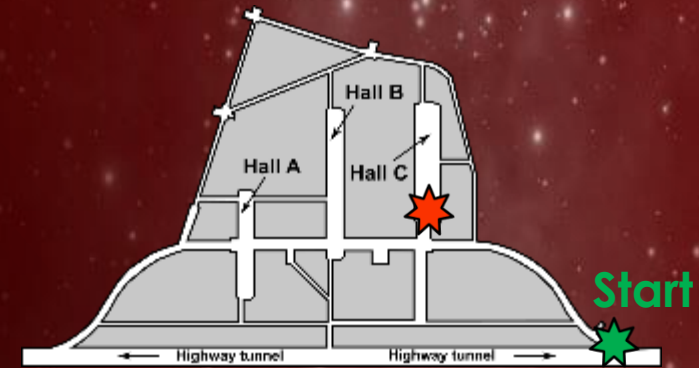
## Ablauf der Führung

- 1) DarkSide
- 2) XENONnT
- 3) COSINUS
- 4) Bellotti IBF
- 5) CRESST
- 6) LEGEND
- 7) CUORE
- 8) CUPID



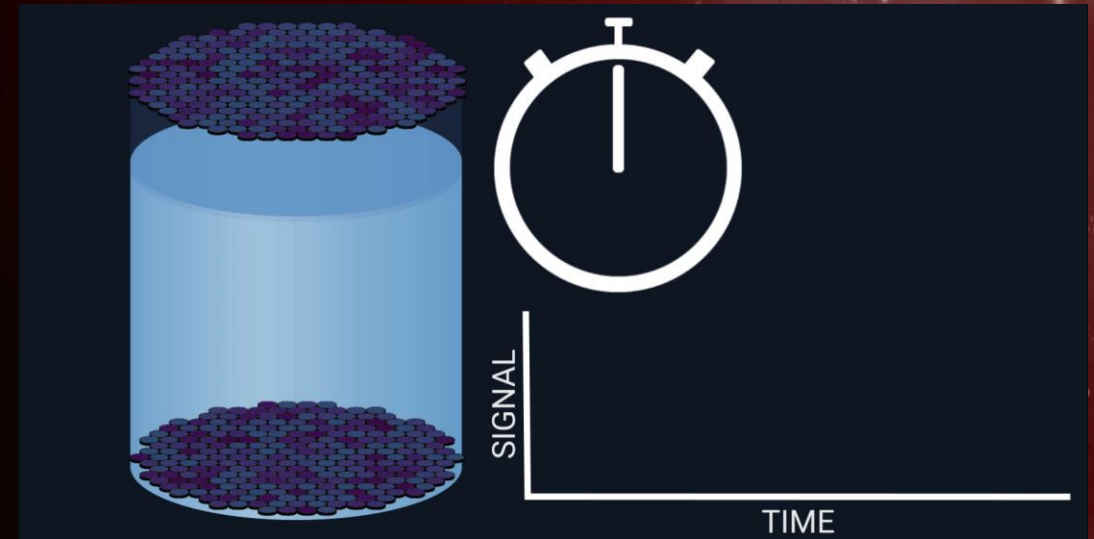
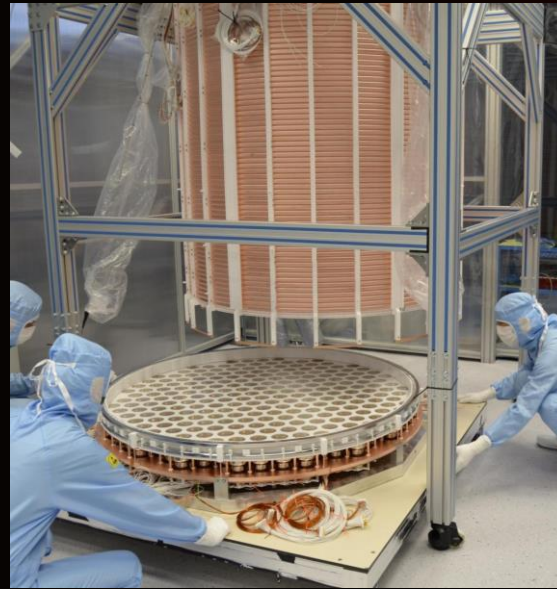
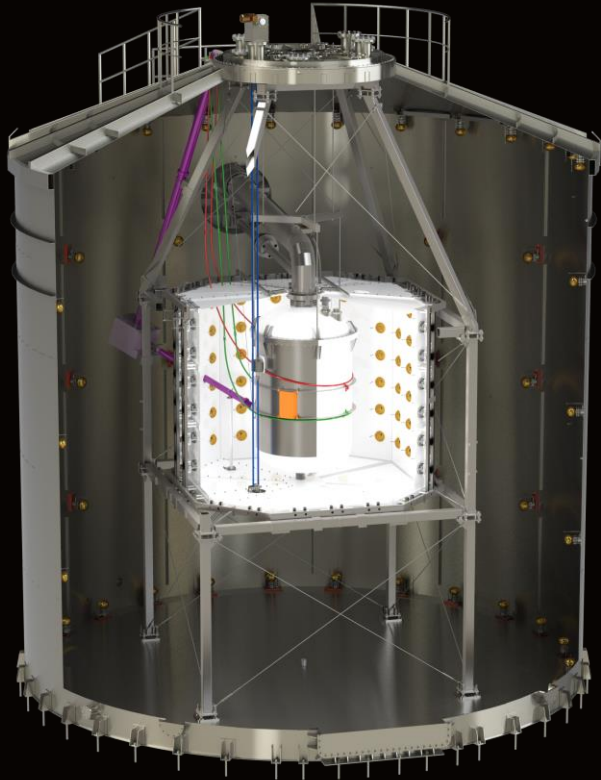
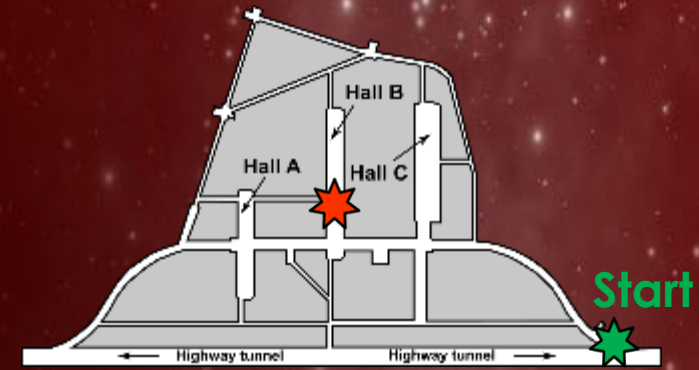
# DarkSide

- **Thema:** “Dark matter”-Experiment
- **Detektor:** 50 t Flüssig-Argon & Time-projection chamber
- **Signal:** Szintillation + Ionisationen



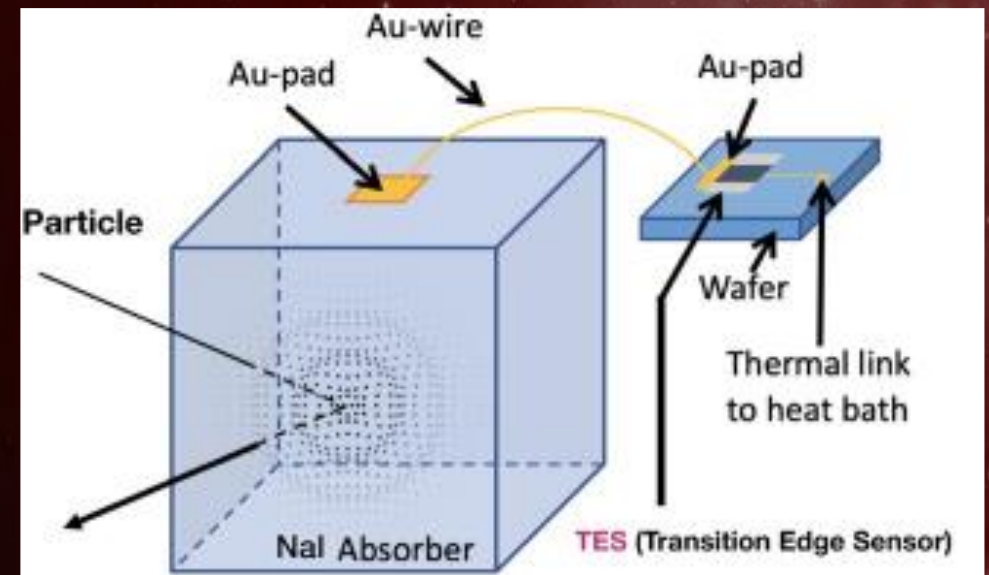
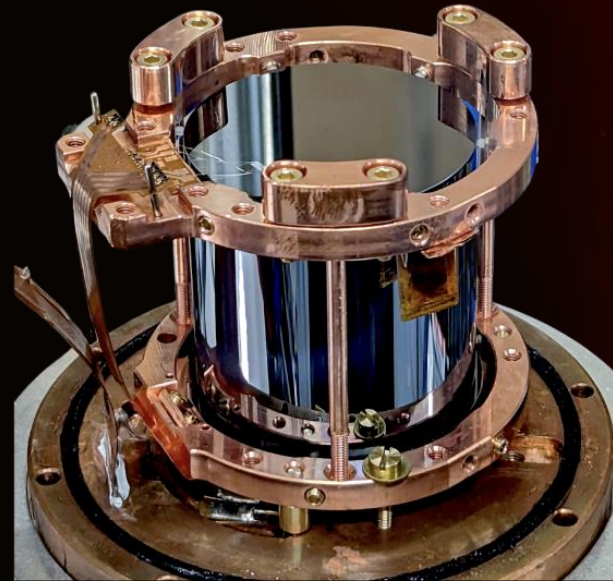
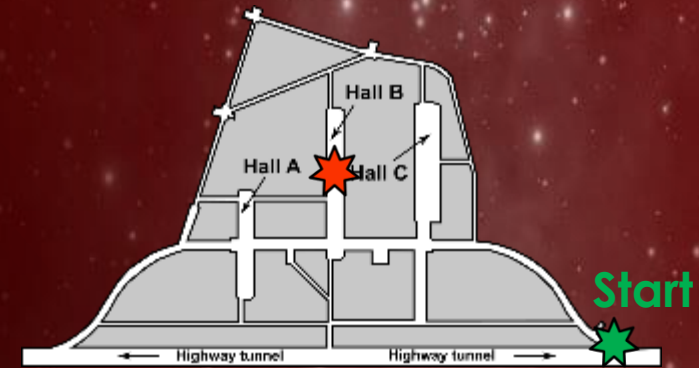
# XENONnT

- **Thema:** “Dark matter”-Experiment
- **Detektor:** 8.6 t Flüssig-Xenon & Time-Projection chamber
- **Signal:** Szintillation + Ionisationen



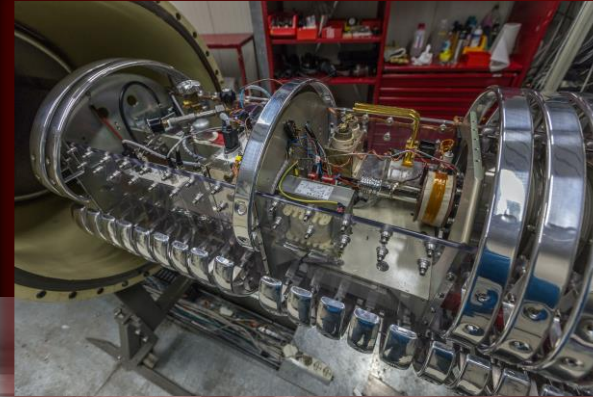
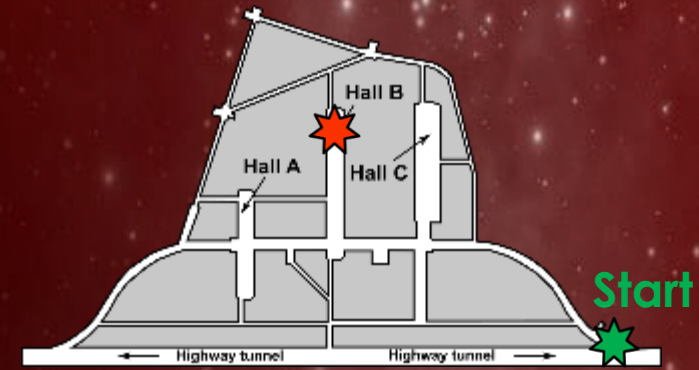
# COSINUS

- **Thema:** “Dark matter”-Experiment
- **Detektor:** Kryogener NaI-Kristall
- **Signal:** Phononen & Szintillationslicht



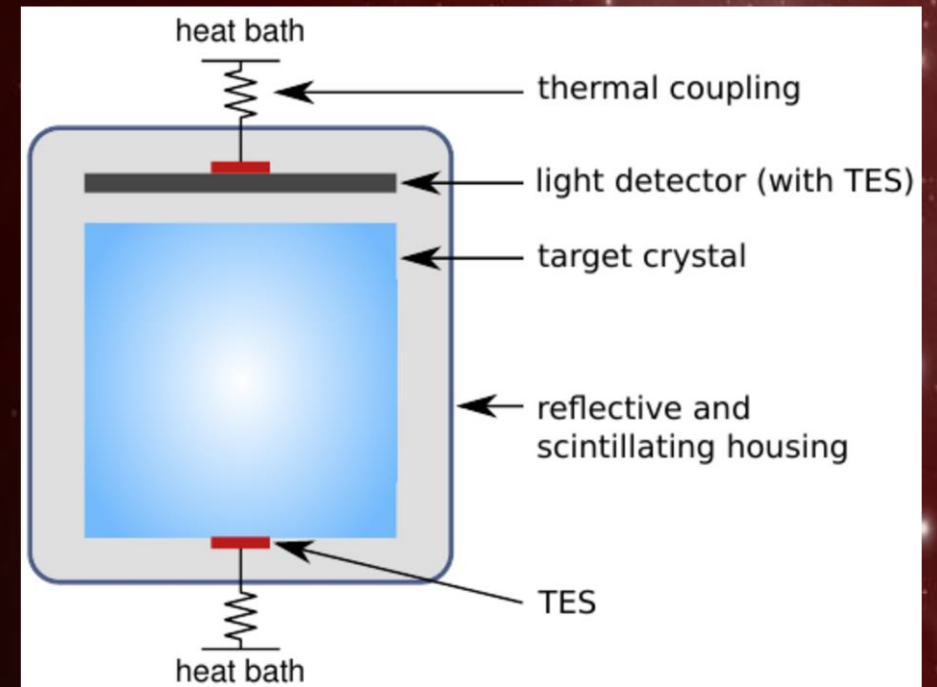
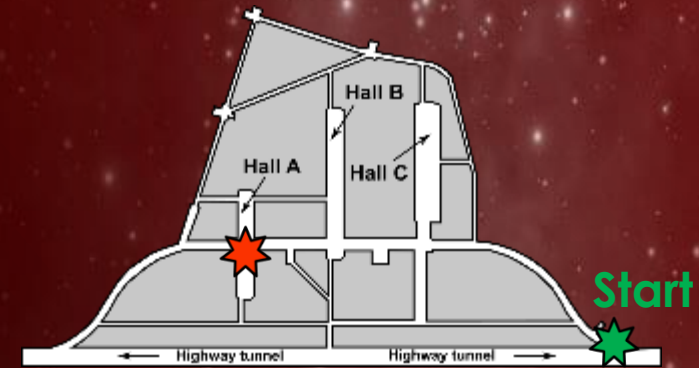
# Bellotti Ion Beam Facility

- **Thema:** Nukleare Astrophysik
- **Beschleuniger:** 3.5 MV Singletron
- **Detektion:** Gamma-/Teilchenstrahlung von Kernreaktionen



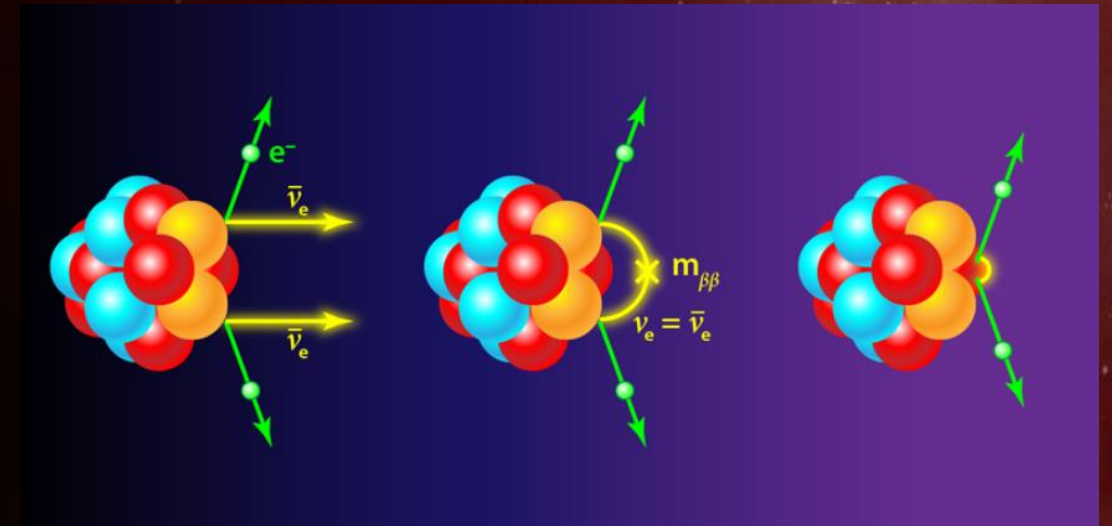
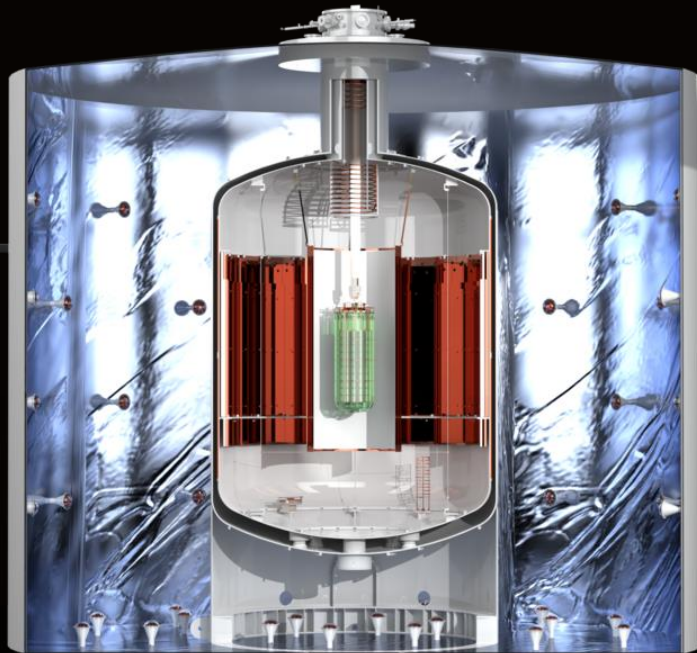
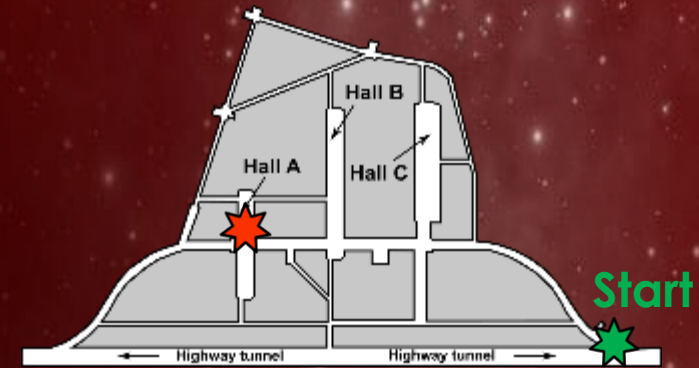
# CRESST

- **Thema:** “Dark matter”-Experiment
- **Detektor:**  $\text{CaWO}_4$ -Kristalle (Kryogenes Kalorimeter)
- **Signal:** Phononen & Szintillationslicht



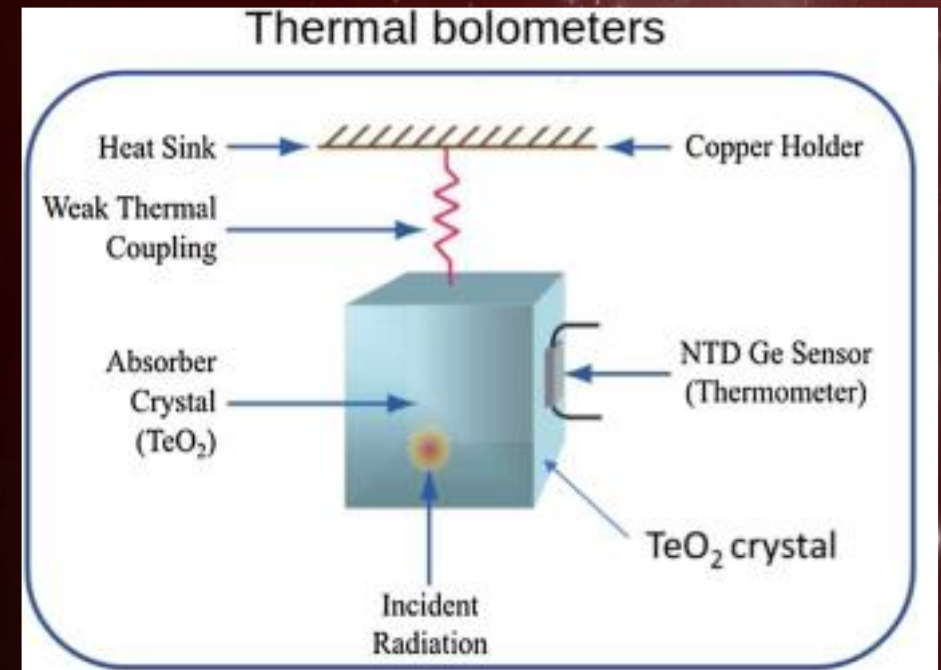
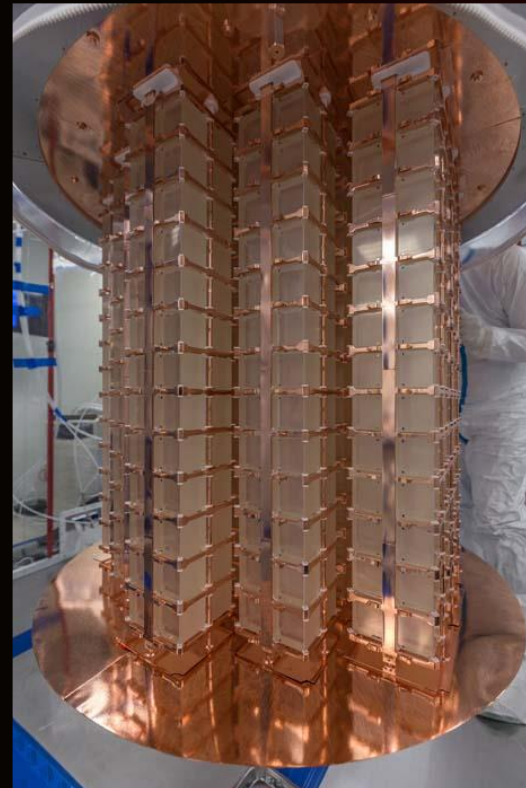
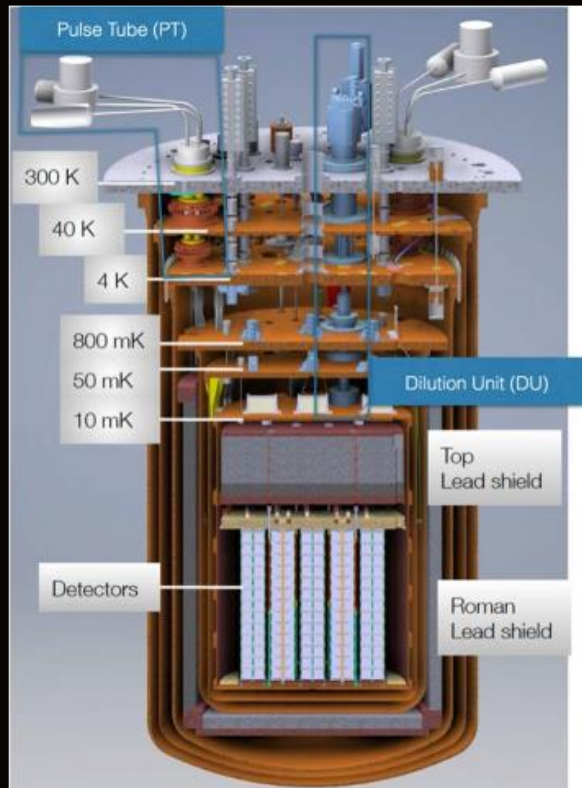
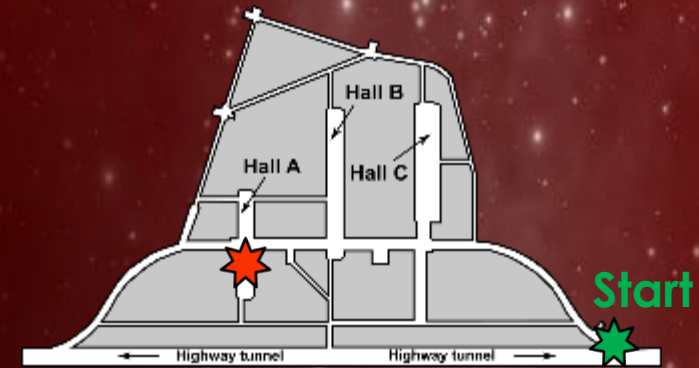
# LEGEND

- **Thema:** Neutrino-Experiment
- **Detektor:** HPGe-Kristalle in flüssigem Argon
- **Ziel:** Neutrinoloser Doppel-Betazerfall in  $^{76}\text{Ge}$



# CUORE

- **Thema:** Neutrino-Experiment
- **Detektor:** TeO<sub>2</sub>-Kristalle in flüssigem Helium
- **Ziel:** Neutrinoloser Doppel-Betazerfall in <sup>130</sup>Te





# CUPID

- **Thema:** Neutrino-Experiment
- **Detektor:**  $\text{Li}_2\text{MoO}_4$ -Kristalle in flüssigem Helium
- **Ziel:** Neutrinoloser Doppel-Betazerfall in  $^{100}\text{Mo}$

