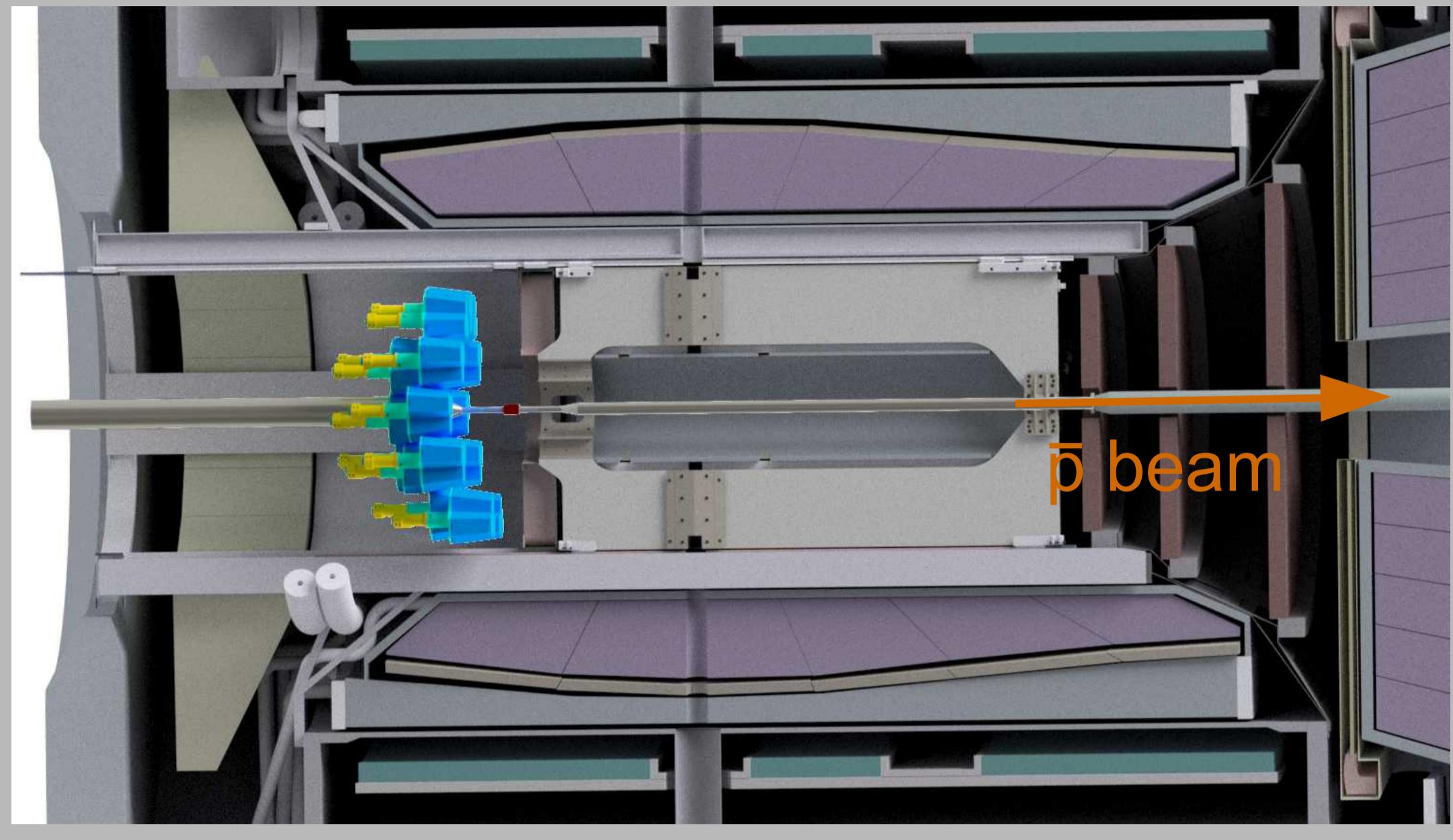


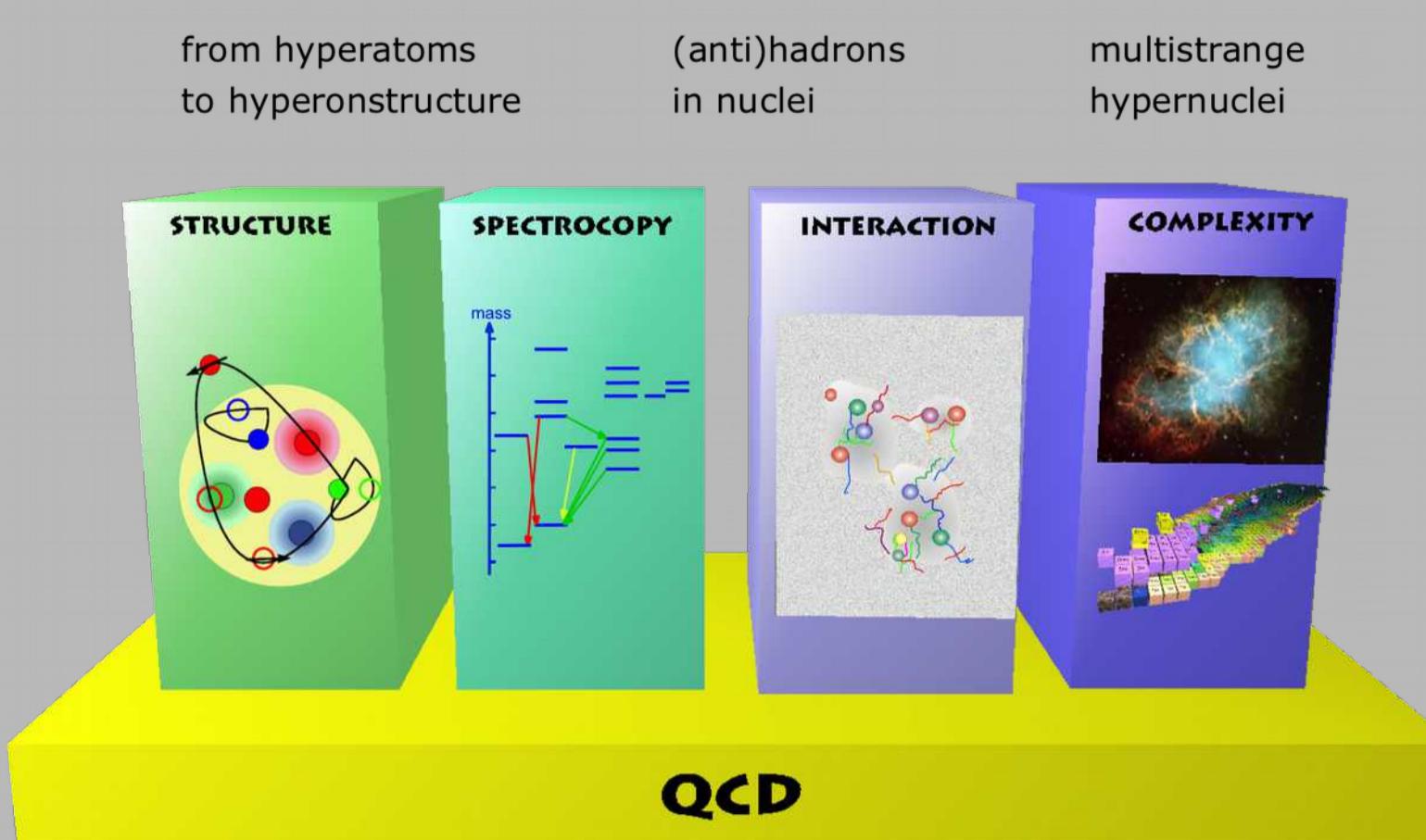
# Strangeness nuclear physics at $\bar{\text{P}}\text{ANDA}$

Helmholtz Institute Mainz

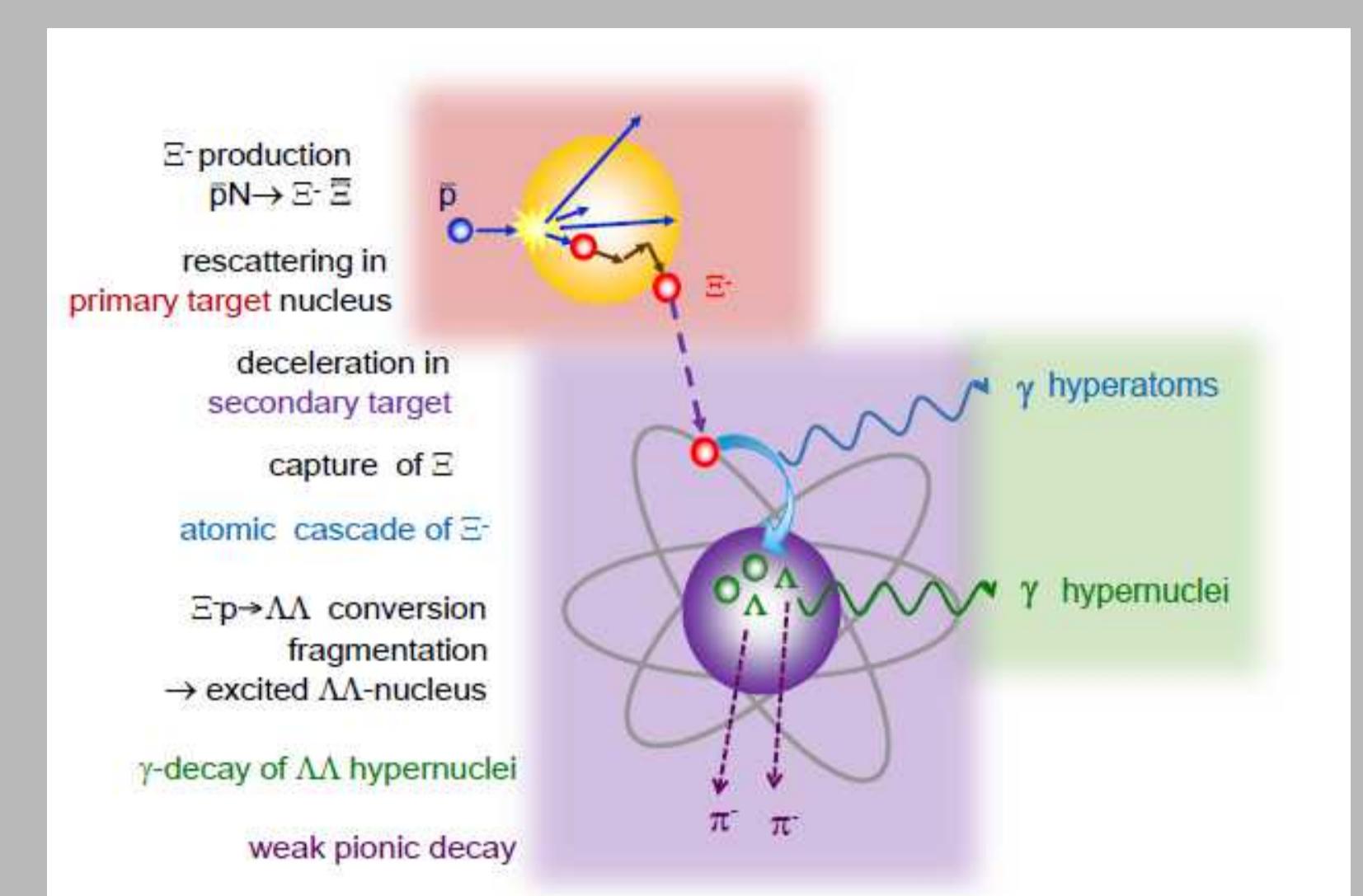
S. Bleser<sup>1</sup>, M. Böltling<sup>1</sup>, J. Gerl<sup>2</sup>, F. Iazzi<sup>3</sup>, I. Kojouharov<sup>2</sup>, J. Kojouharova<sup>2</sup>, J. Pochodzalla <sup>1,4</sup>, A. Sanchez Lorente<sup>1</sup>, F. Schupp<sup>1</sup>, M. Steinen<sup>1</sup>, C. Tiefenthaler<sup>4</sup> - <sup>1</sup>Helmholtz-Institut Mainz; <sup>2</sup>GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt; <sup>3</sup>Politec. di Torino and INFN, Sez. Torino, Italy; <sup>4</sup>Institut für Kernphysik, Mainz



Hypernuclear setup of  $\bar{\text{P}}\text{ANDA}$

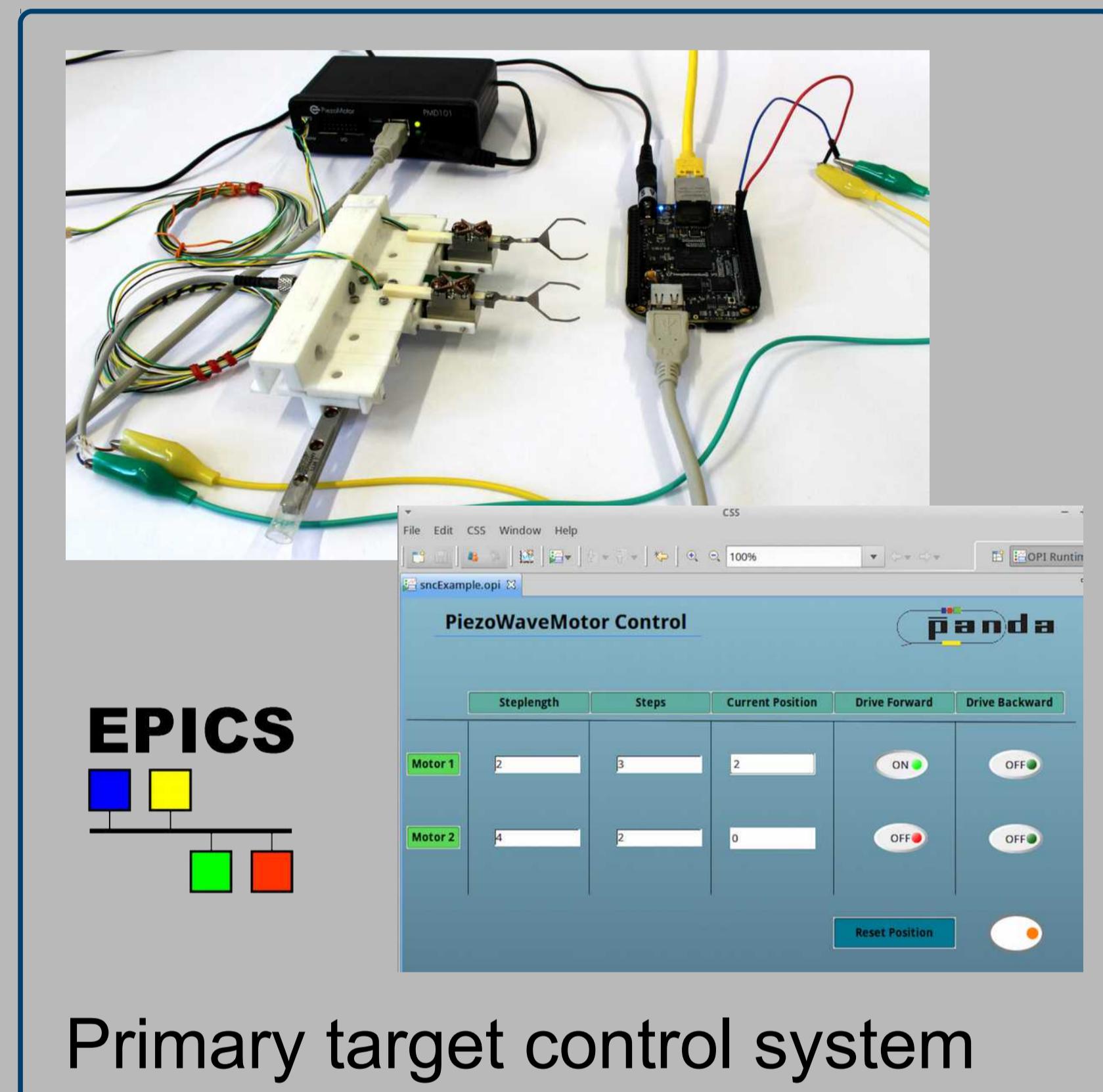


- Antihyperons in nuclear matter<sup>[1]</sup>
- Sampling the nucleon skin<sup>[2]</sup>
- High precision  $\gamma$ -spectroscopy of  $\Lambda\Lambda$ -hypernuclei<sup>[2,3]</sup>
- Hyperatoms as a doorway to  $s = -3$  nuclear physics<sup>[3]</sup>

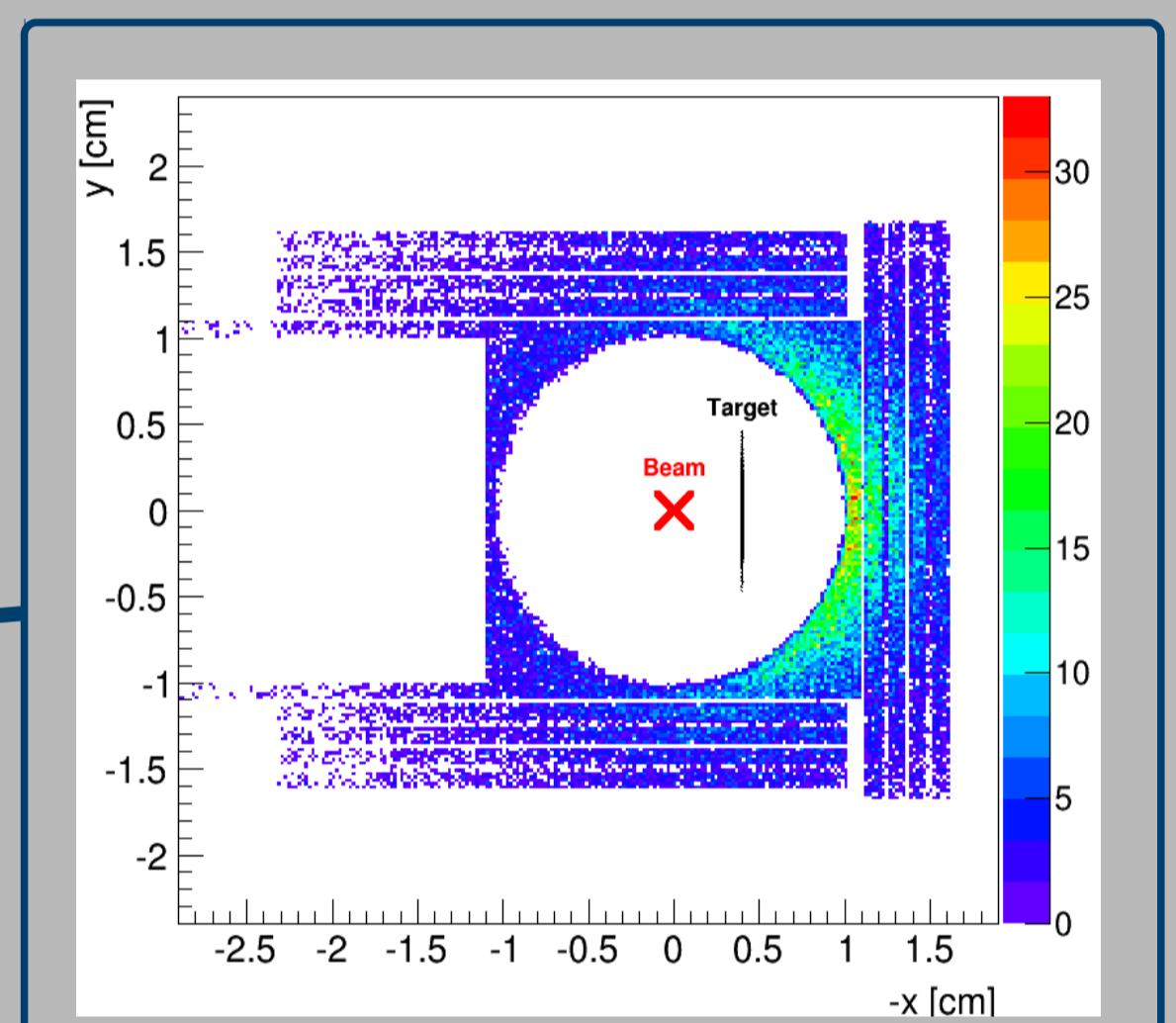
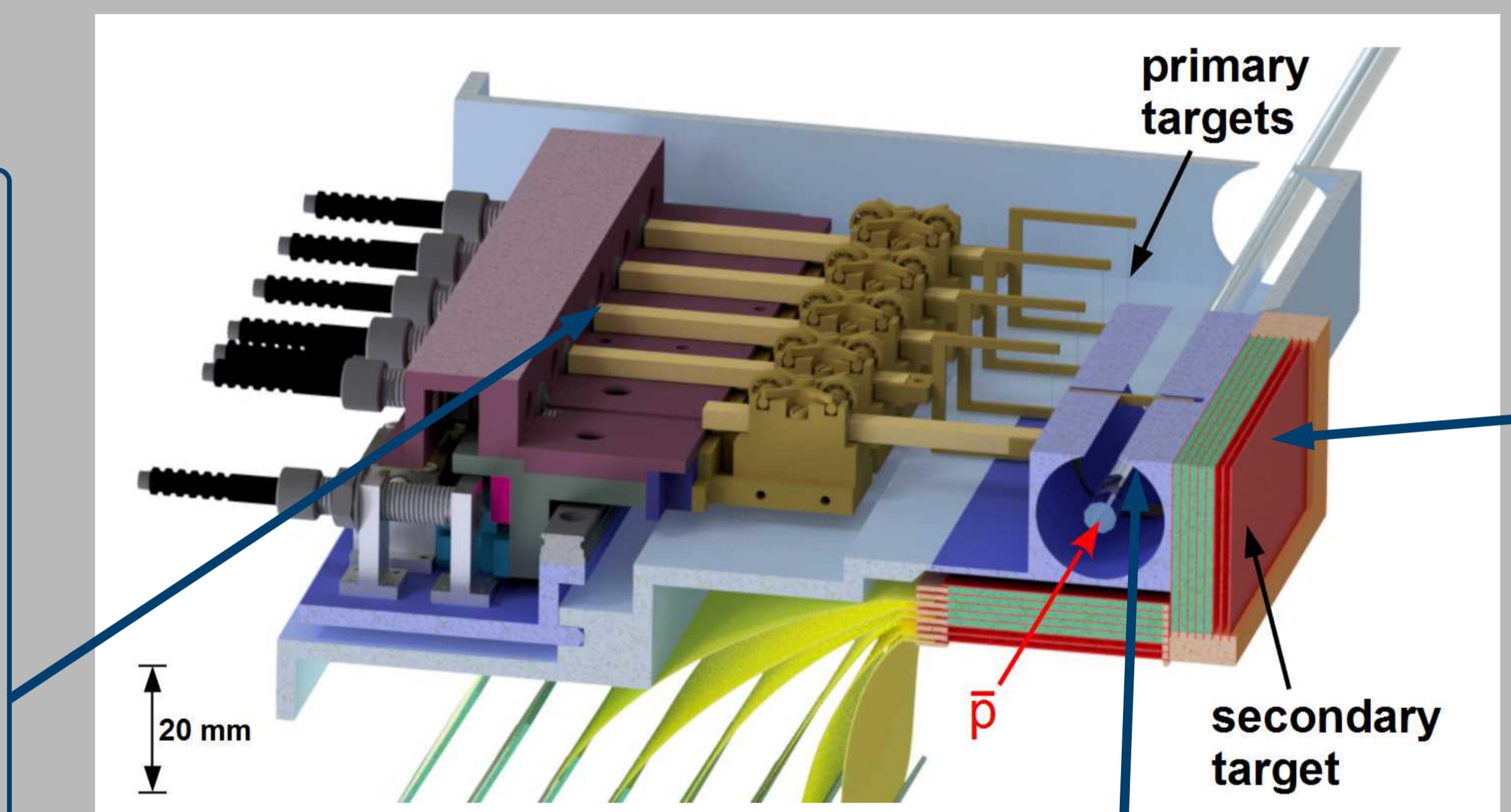


Production process of hypernuclei and atoms

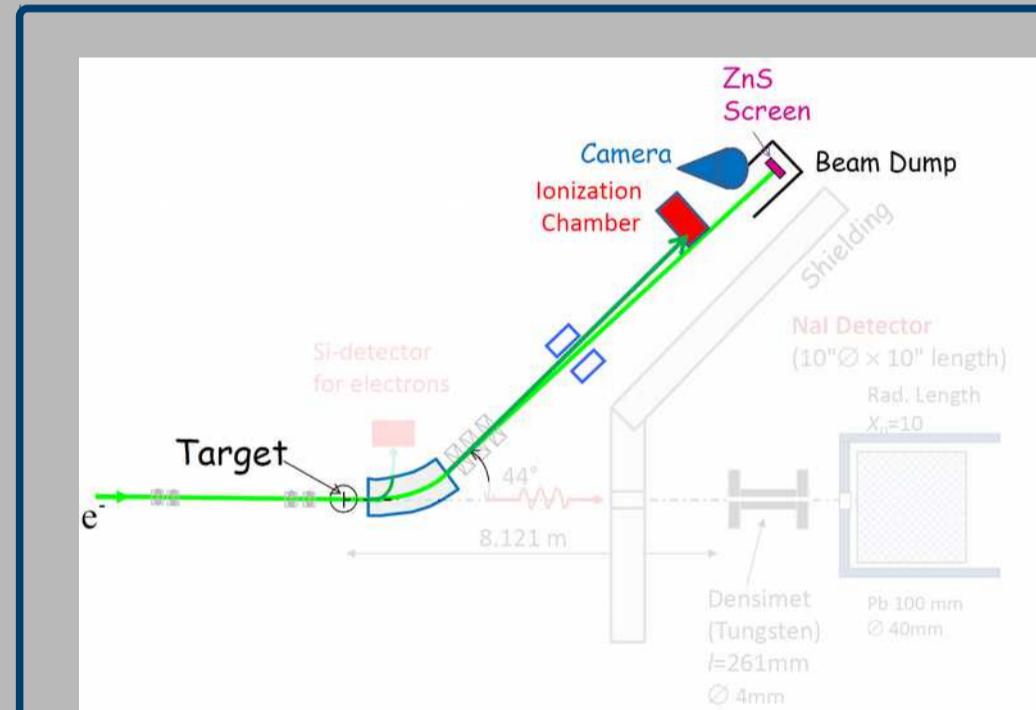
## Target system



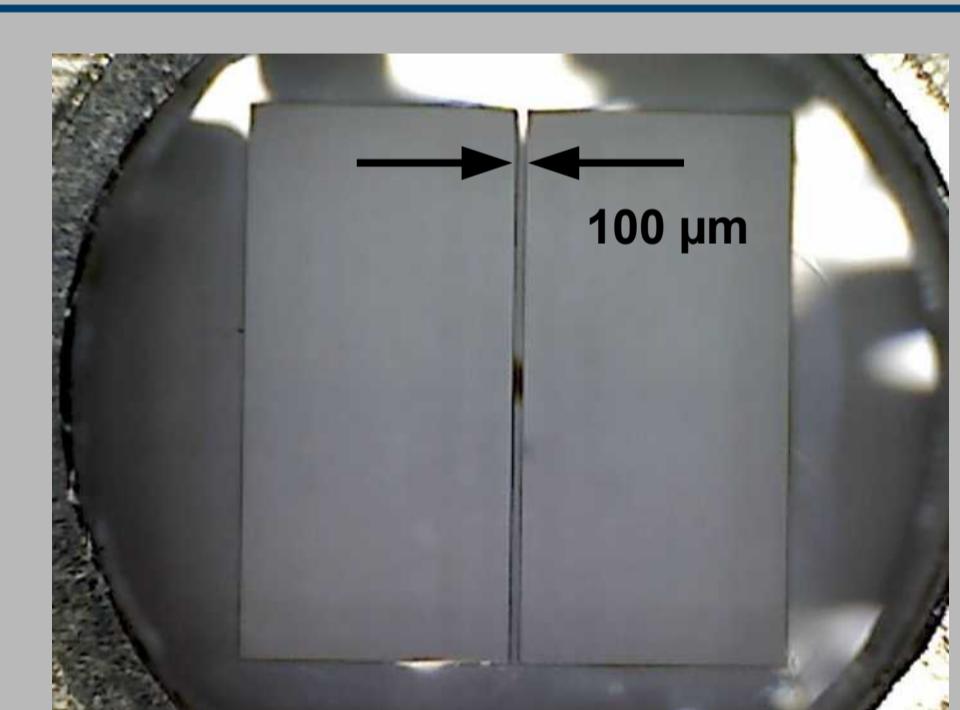
Primary target control system



Stopping probability

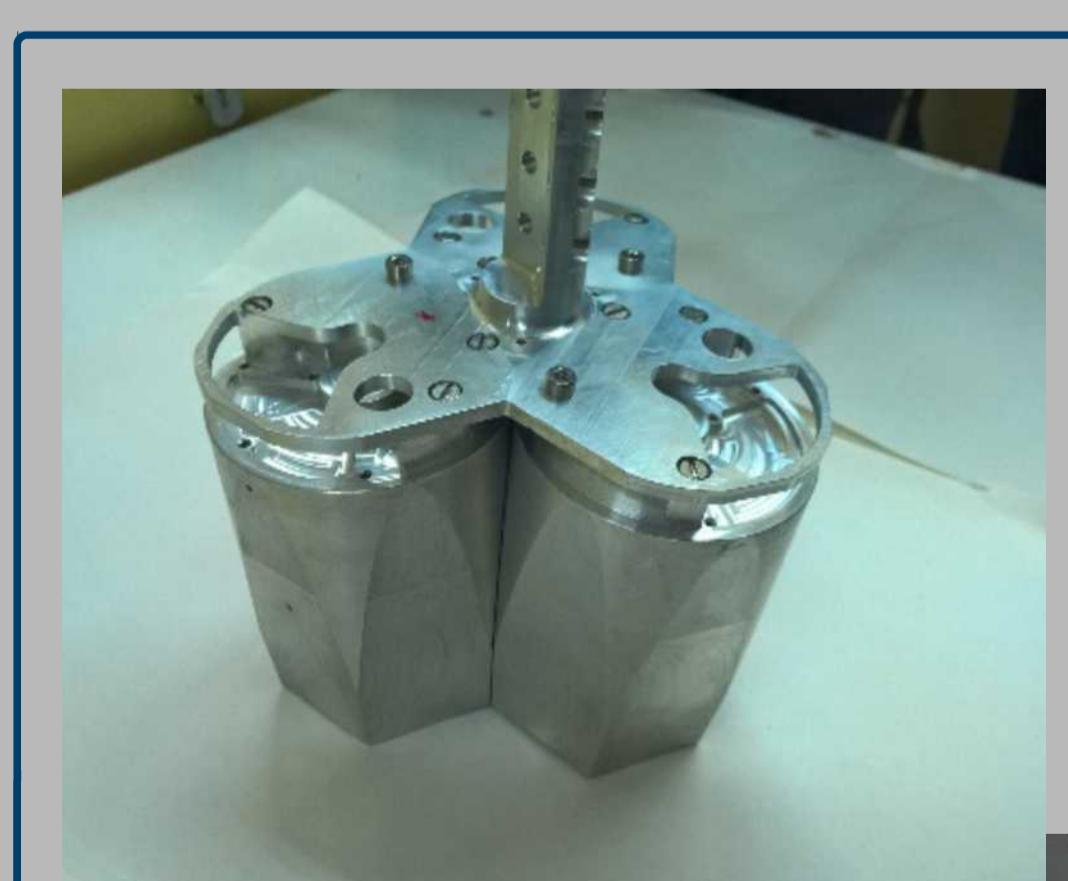


In beam filament irradiation test

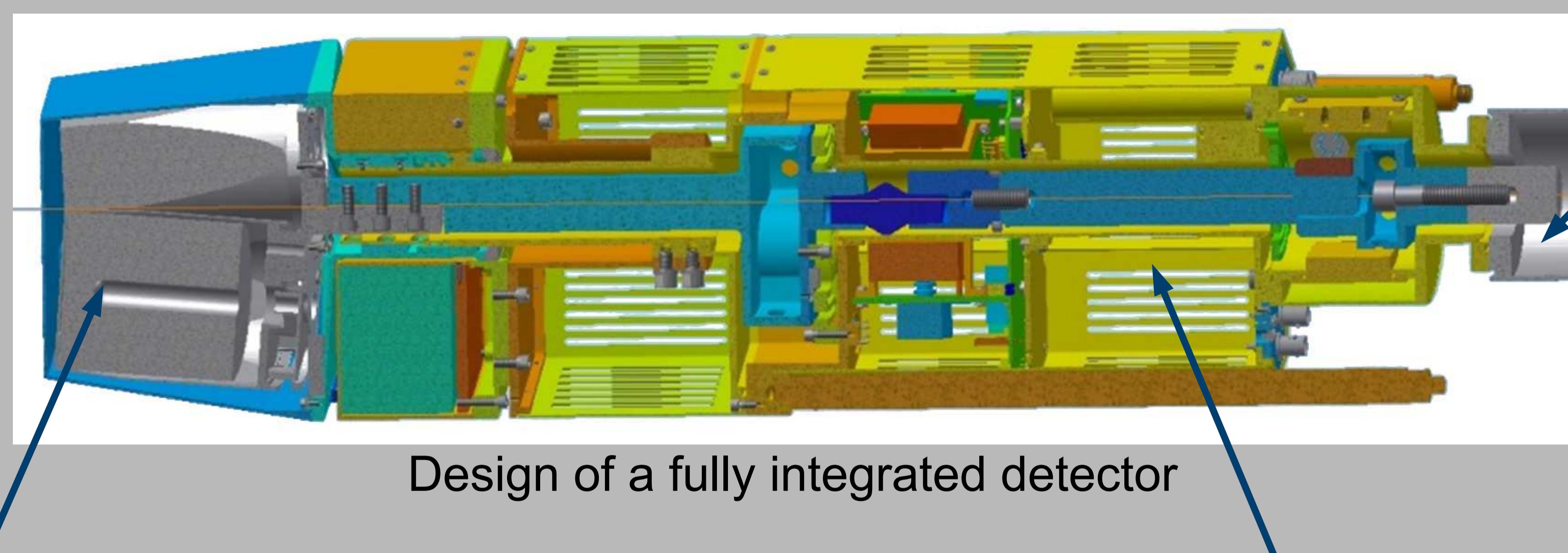


## PANDA GERmanium Array (PANGEA)

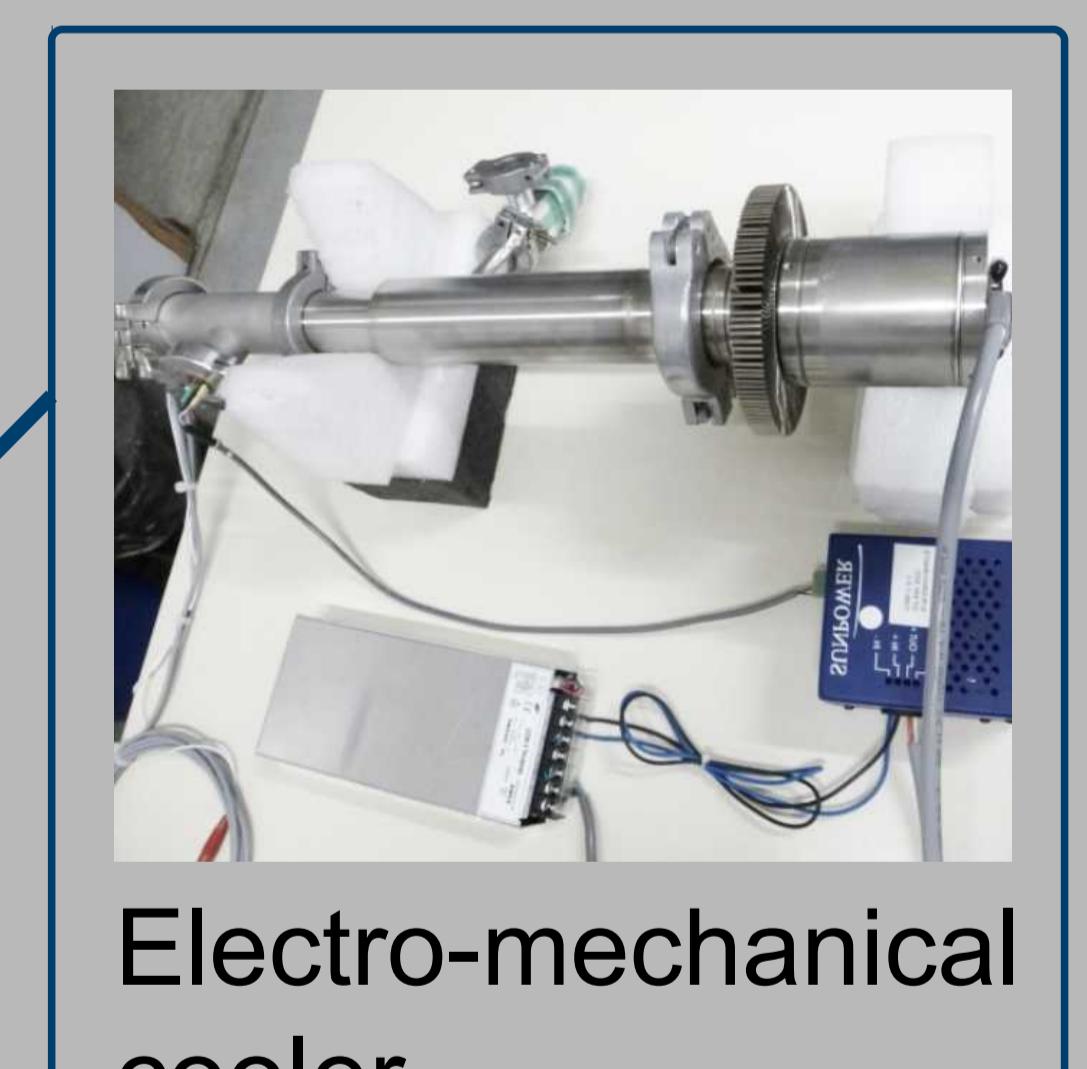
In collab. with



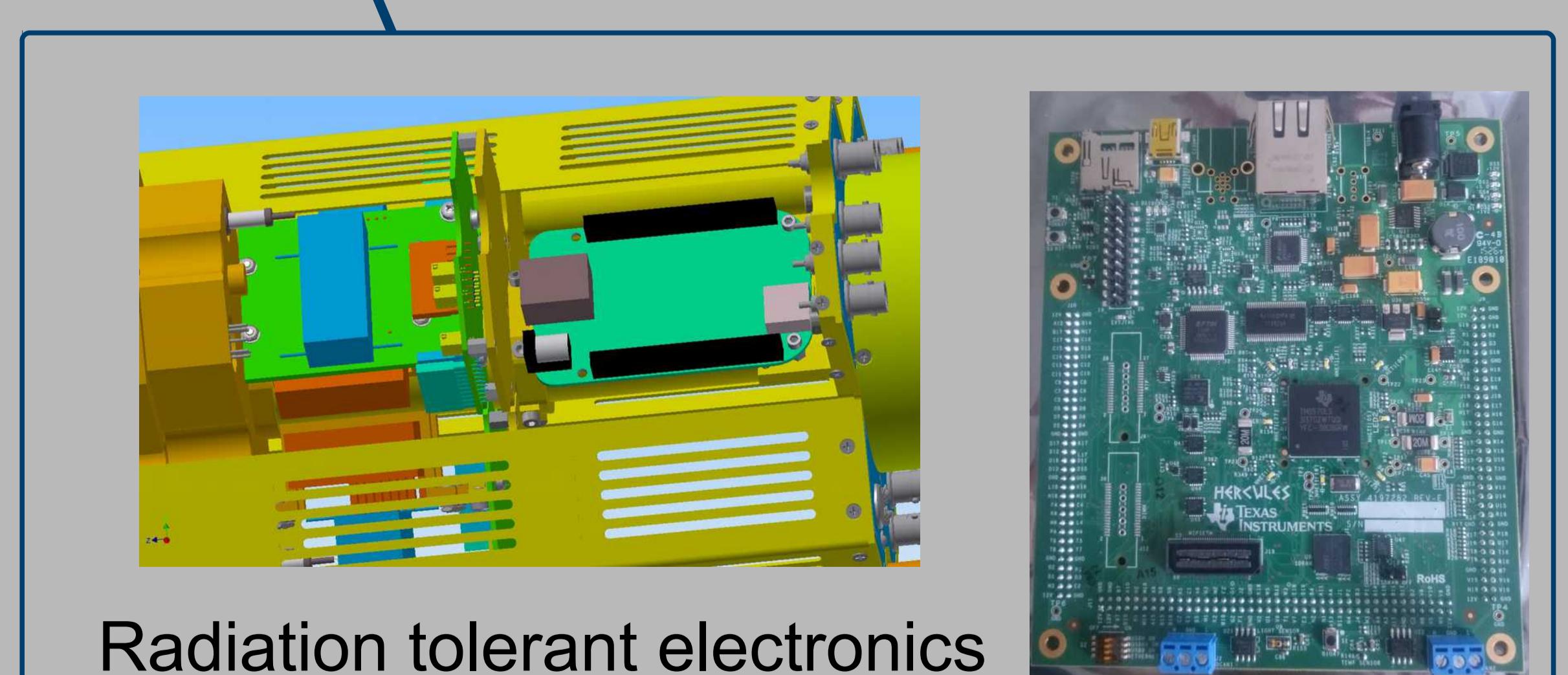
Mechanical and vacuum tests of first components



Design of a fully integrated detector



Electro-mechanical cooler



Radiation tolerant electronics