



UPPSALA
UNIVERSITET



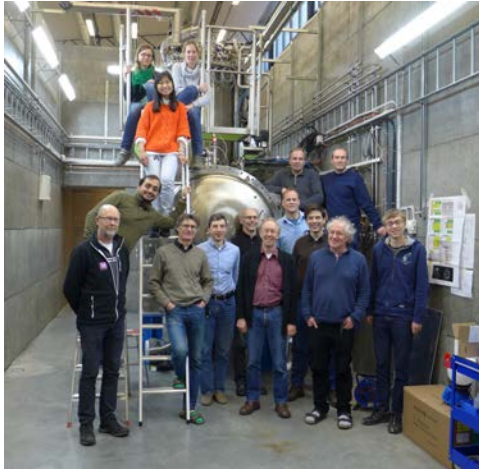
FREIA Laboratory

Facility for Research Instrumentation
and Accelerator Development

Introduction



Facility for Research Instrumentation and Accelerator Development



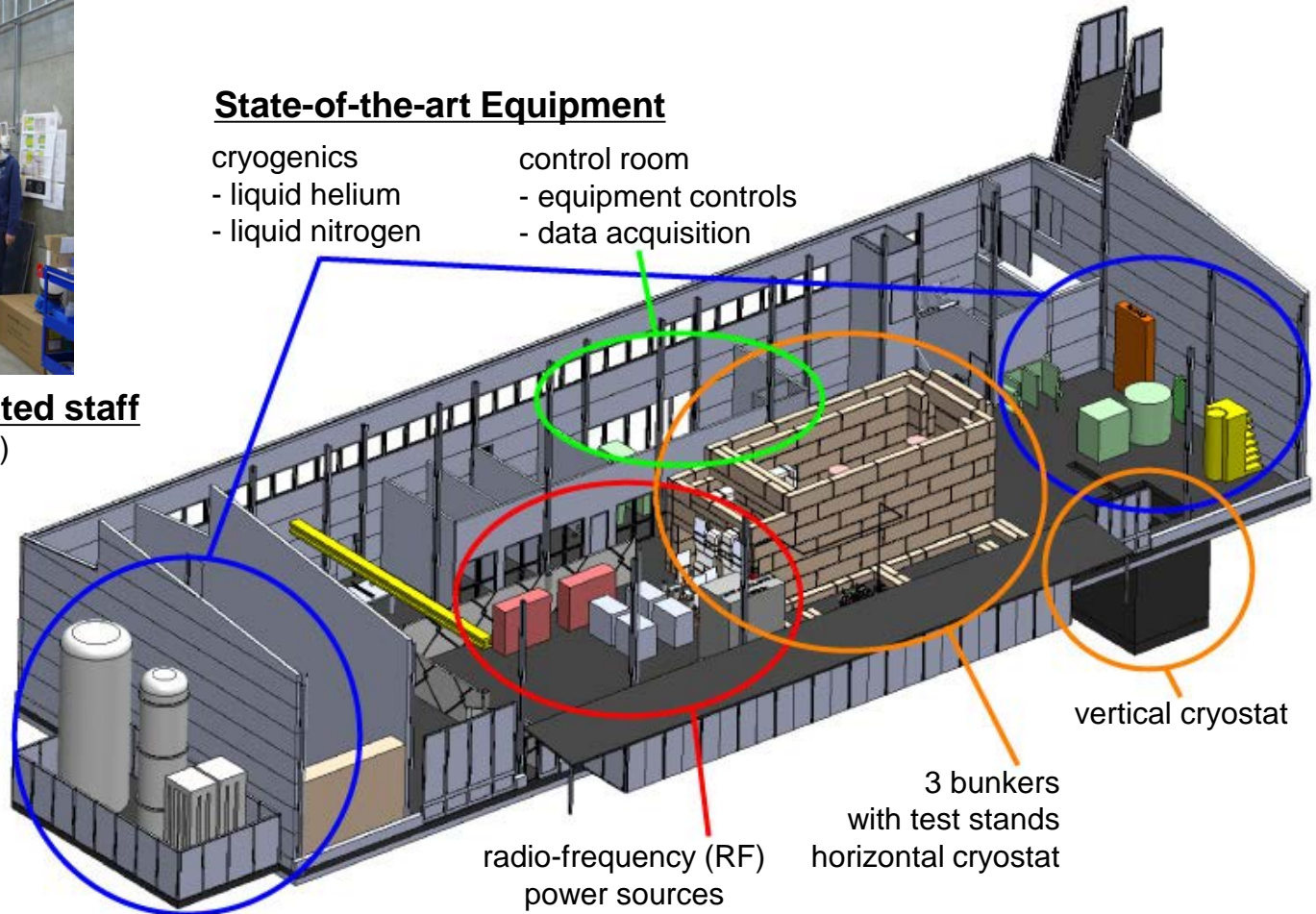
State-of-the-art Equipment

- cryogenics
 - liquid helium
 - liquid nitrogen
- control room
 - equipment controls
 - data acquisition

Competent and motivated staff

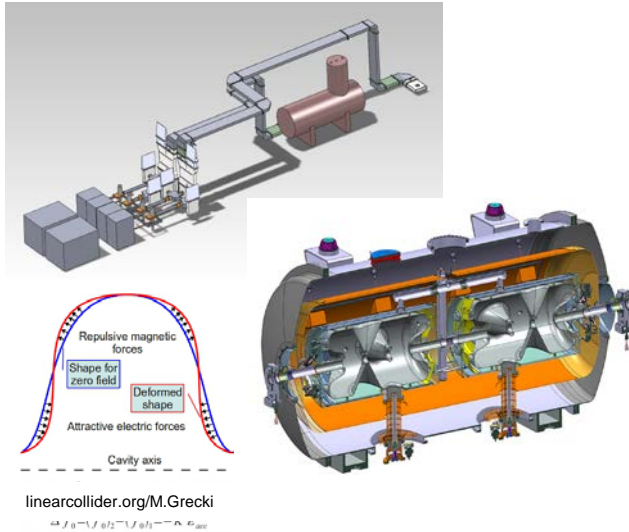
collaboration of physics (IFA) and engineering (Teknikum).

Funded by
KAWS,
Government,
Uppsala Univ.



Cryogenics

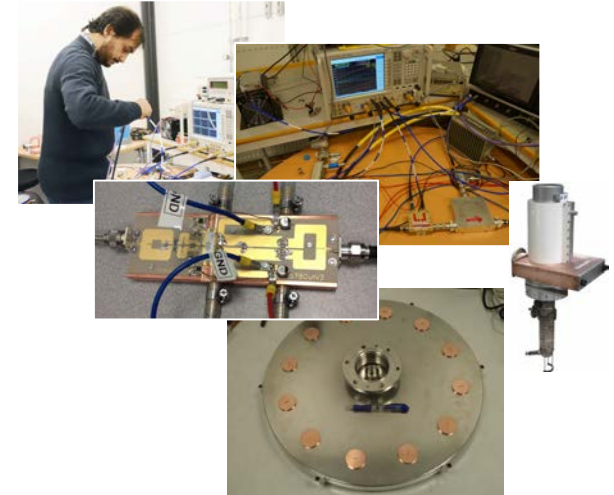
ESS Spoke Linac



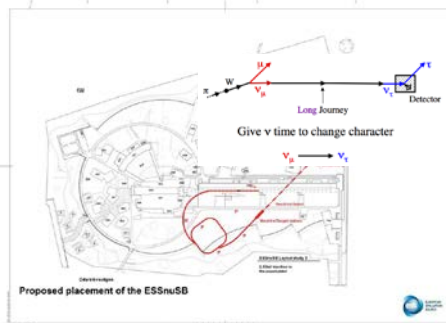
SRF Test Stand



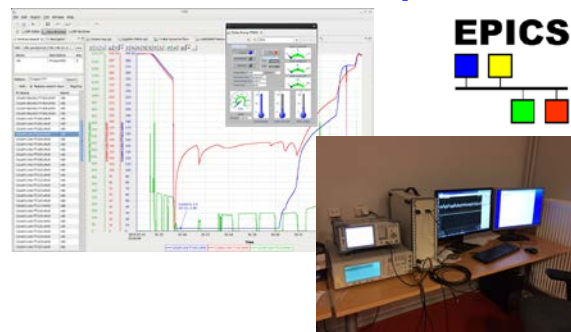
High Power RF Amplifiers Solid-state & Vacuum Tube



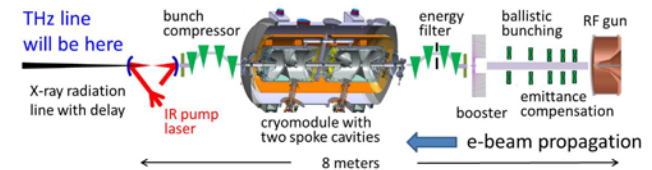
ESS neutrino Super-beam



Controls & Data Acquisition



THz-FEL

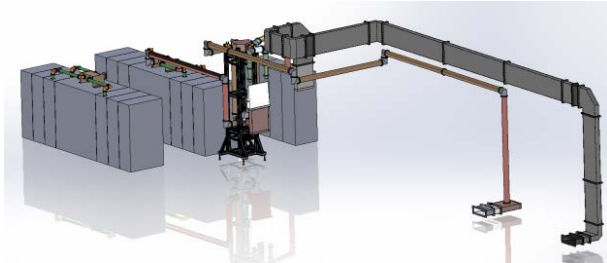


RF = Radio Frequency
SRF = Superconducting RF
FEL = Free Electron Laser

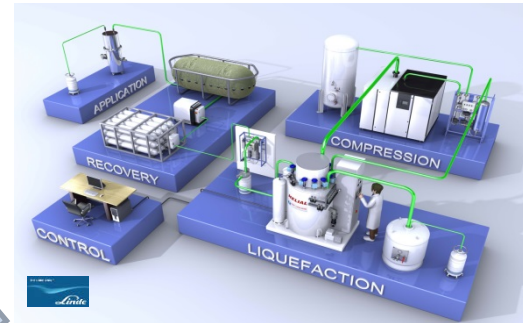
Horizontal SRF Test Stand



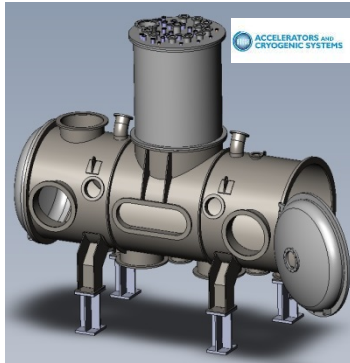
Three main subsystems:



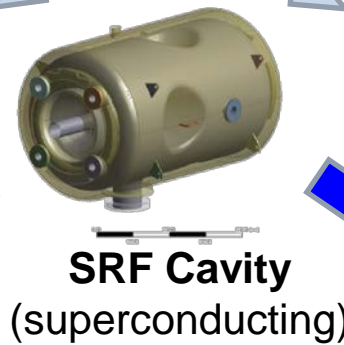
RF Power Source



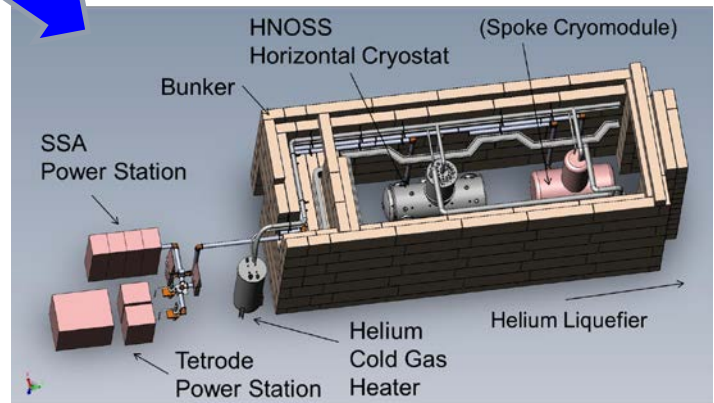
Cryogenics



Horizontal Cryostat



**SRF Cavity
(superconducting)**



Implementation

The FREIA Laboratory



18 June 2013
Inauguration
18 June 2013



Germaine

1 June 2015



25 February 2015



17 February 2015

Hélène



15 October 2013



High Power RF Amplifiers
Feb & Sept 2015



5 February 2015



17 October 2013



9 December 2014



25 Oct. 2013



19 February 2014

First Liquid Helium
14 March 2014



8 August 2014

Reached 2K



30 January 2014

HNOSS