BESSY Status Report

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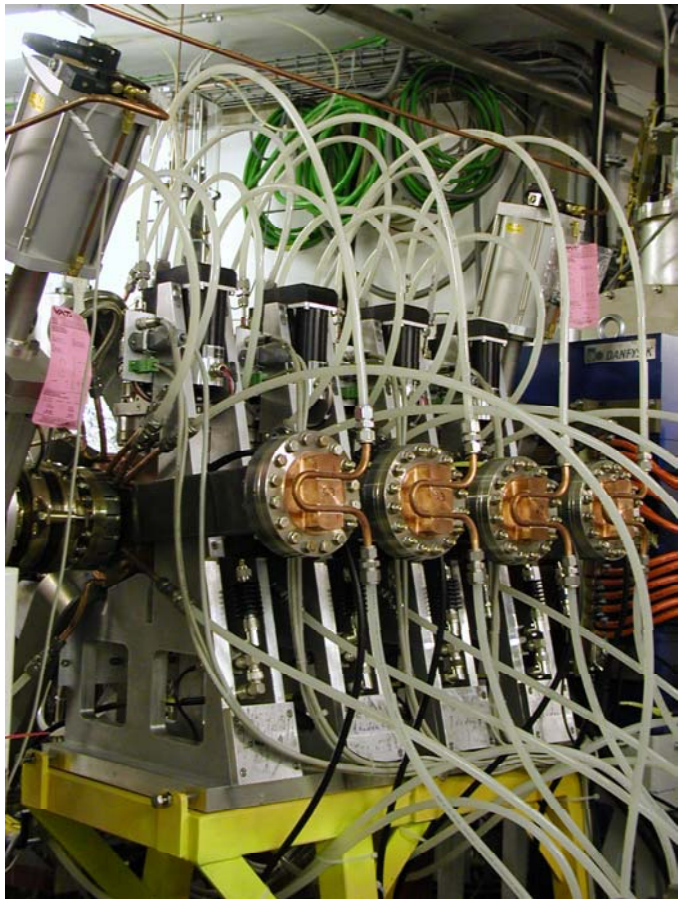
BESSY II

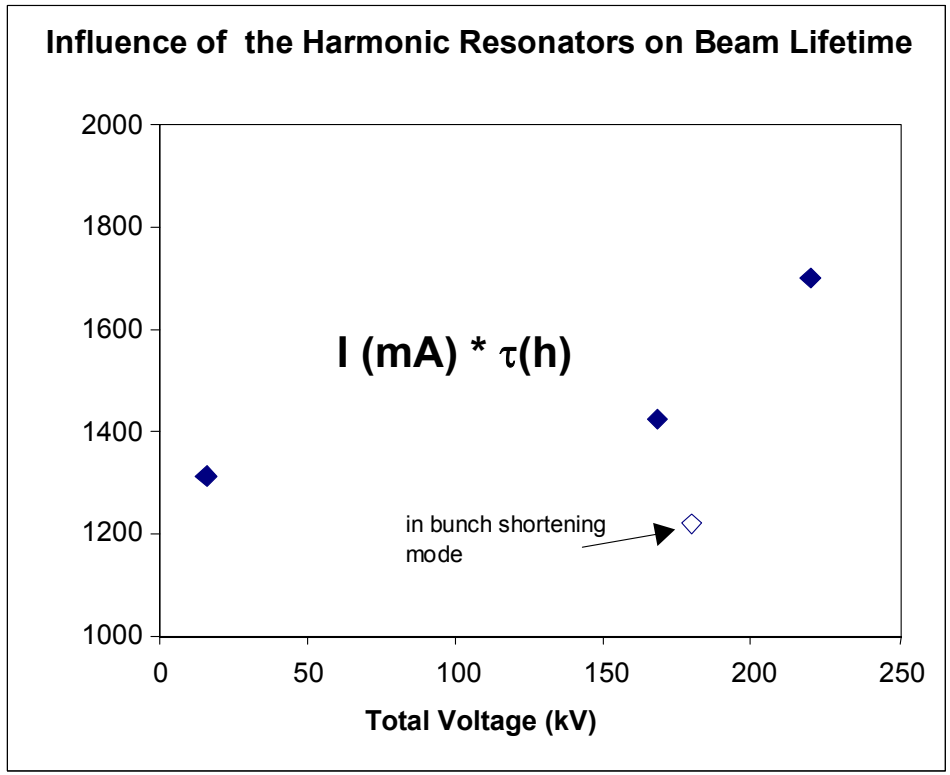
3rd Generation Light Source BESSY II

Energy	1.7 GeV (0.85 - 1.9)
Circumference	240 m
Emittance	6 nm rad
Straight Sections	14 (16fold symmetry)
RF Frequency	500 MHz
Filling	120 out of 400 buckets
Magnets	32 B, 136 Q, 112 S

Activity: Landau Cavities

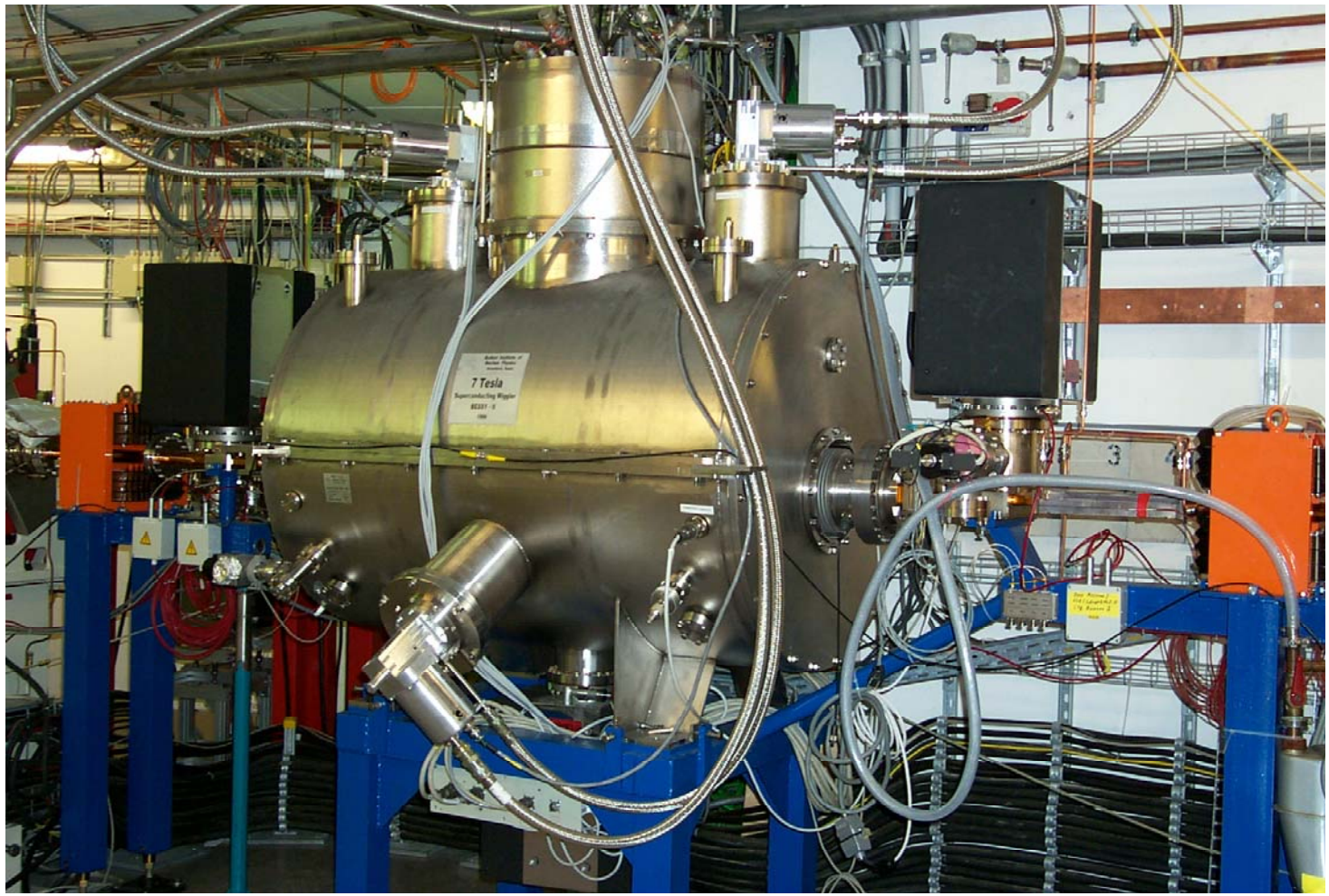


Four New Harmonic Resonators Increase Bunch Length and Lifetime



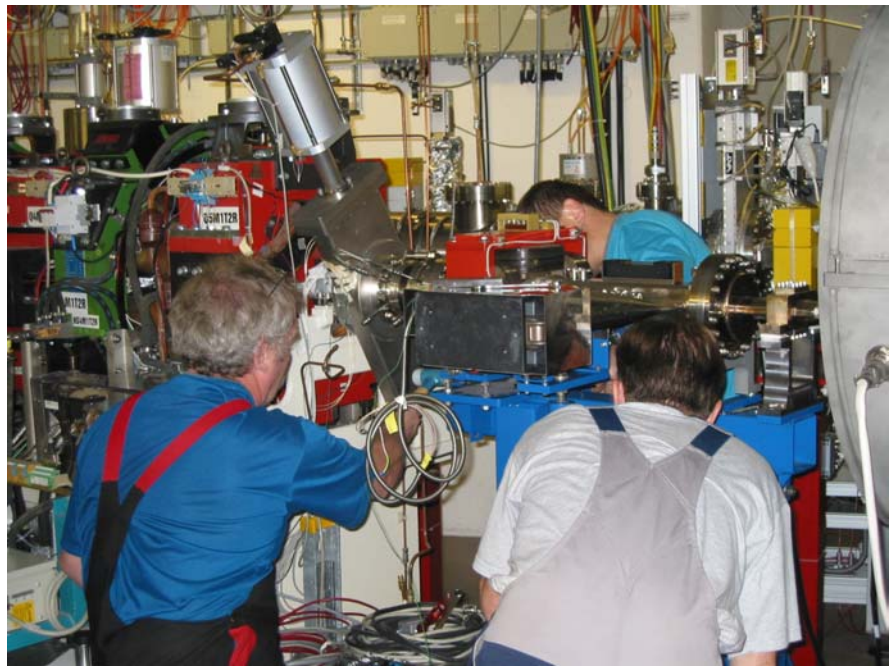
Activity: 7T WLS

7 Tesla Wave Length Shifter for the Protein Structure Factory

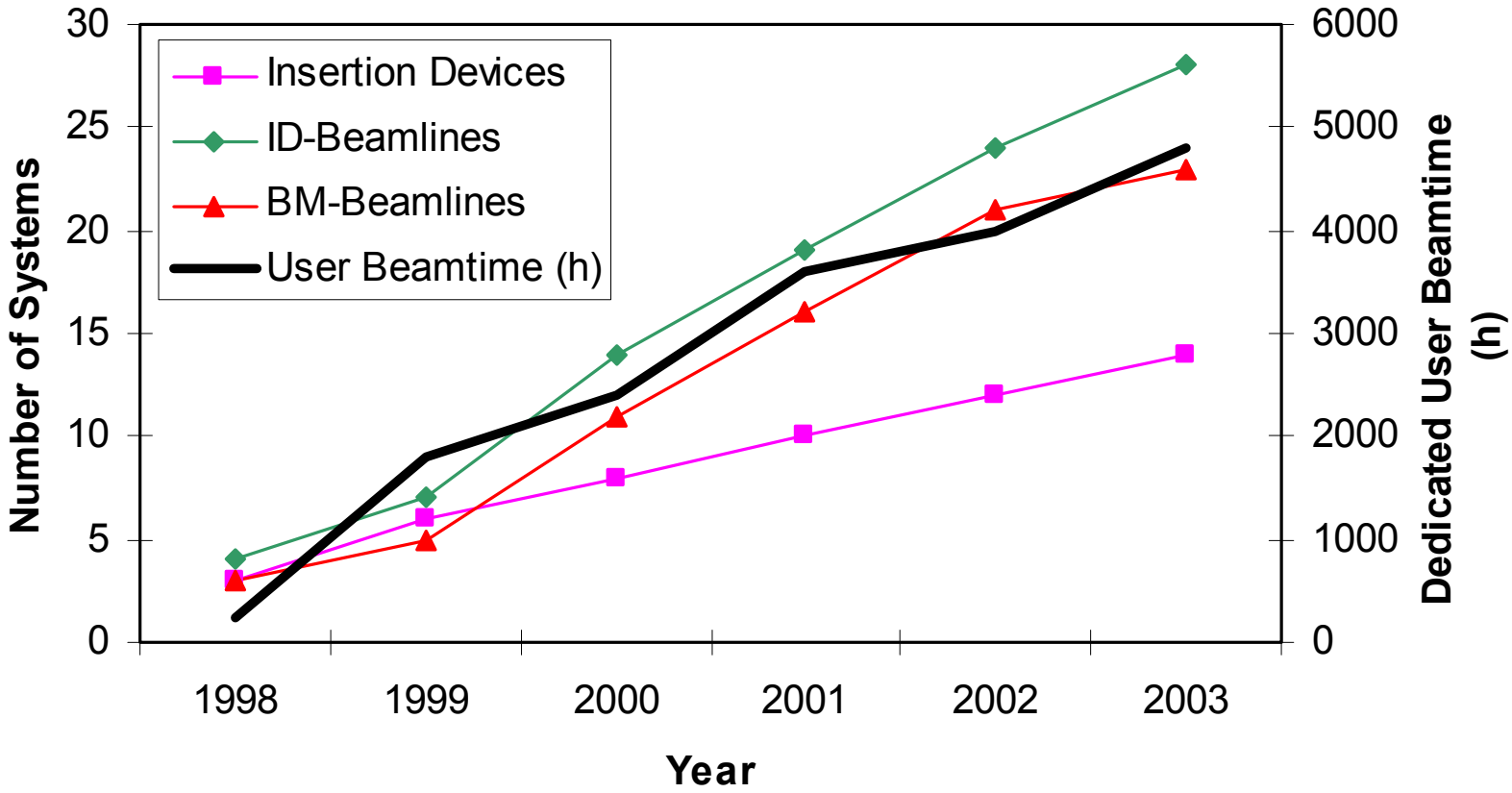


Activity: 7T Wiggler

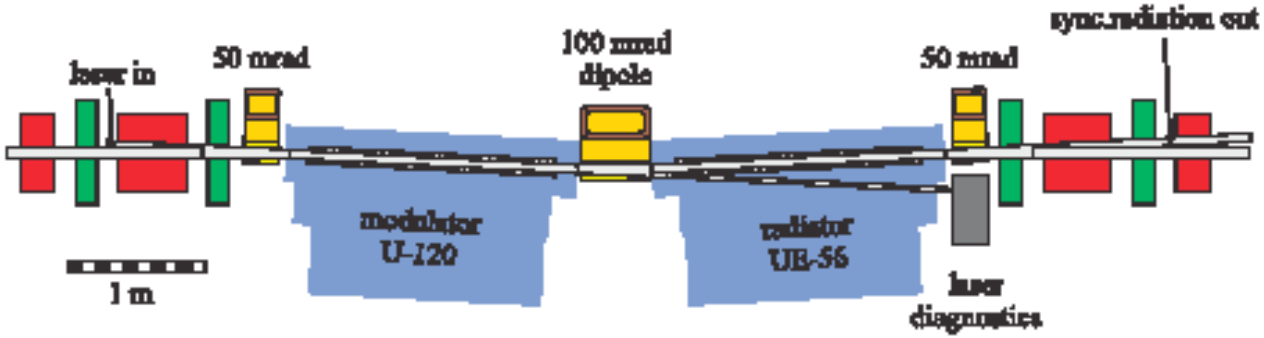
7 Tesla Wiggler for the Hahn-Meitner Institute



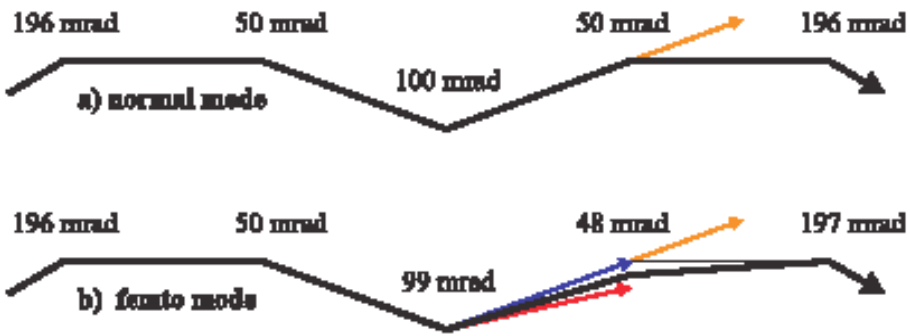
Beamline Numbers

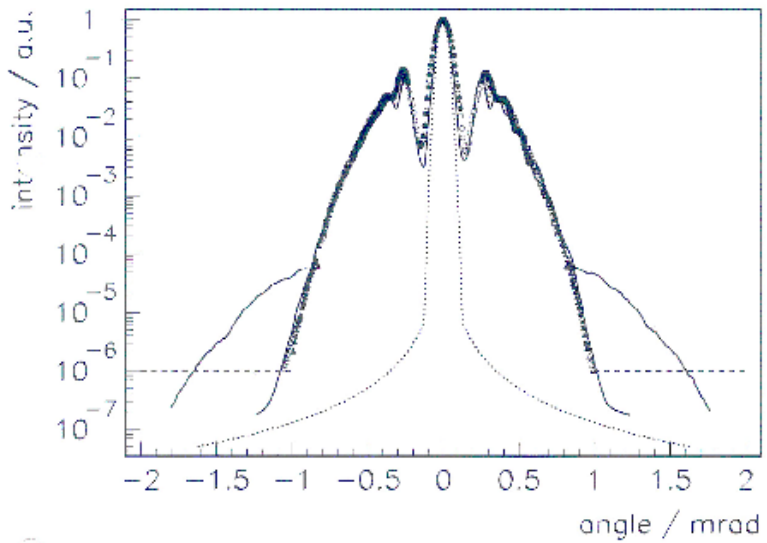


Project: Fs Slicing



Angular Dispersion Mode



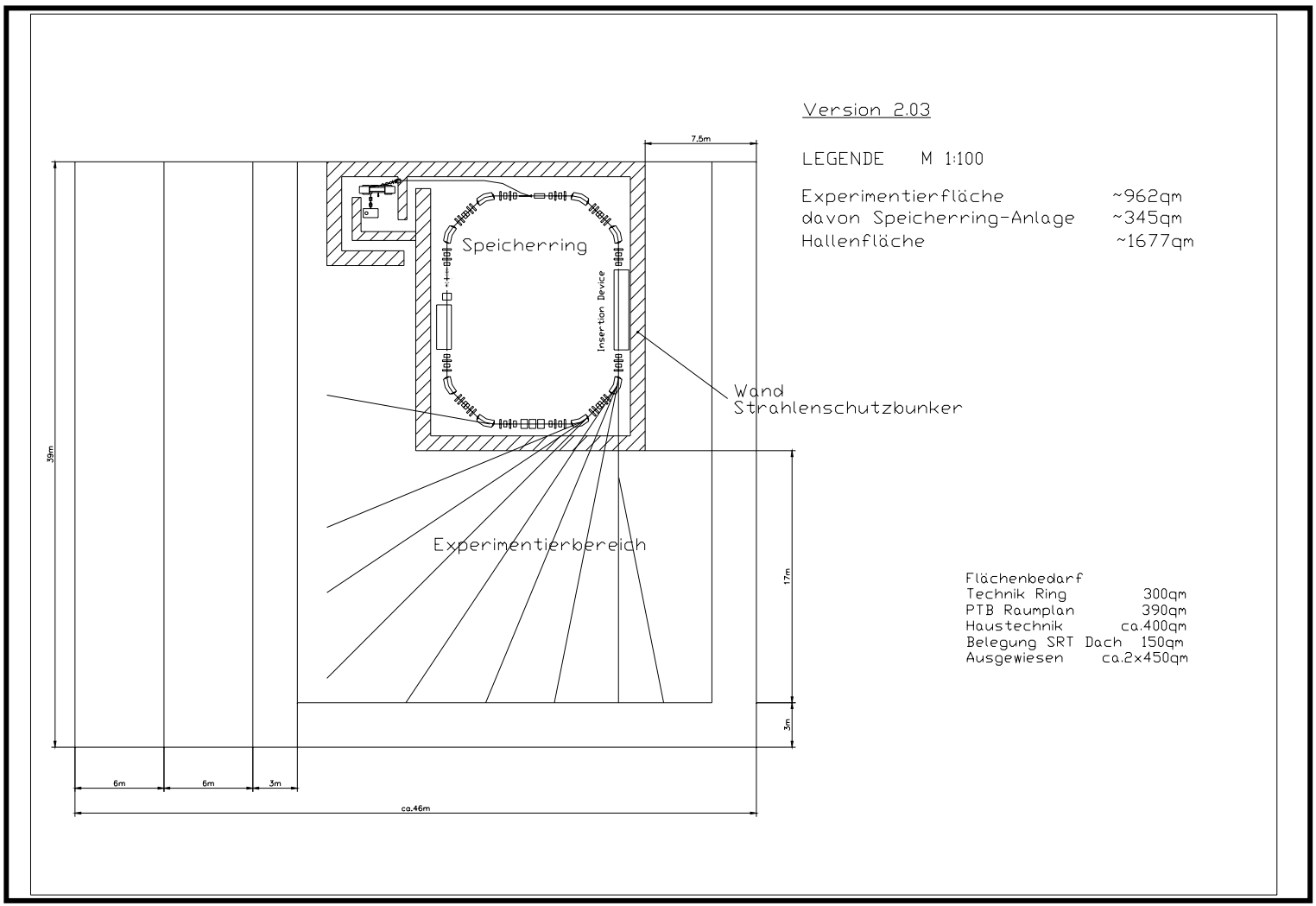


Project: SESAME

June 6th: MS “Conti Harmoni” with 13 BESSY Containers on its Way to Jordan

Project: Compact Synchrotron

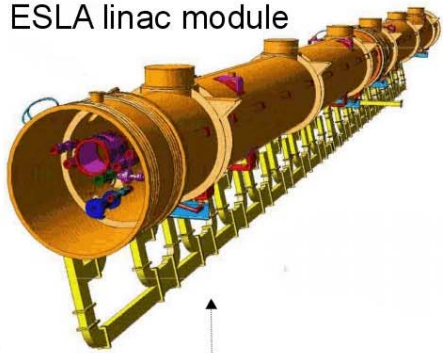
Compact Low Energy Ring for the PTB (German Bureau of Standards)

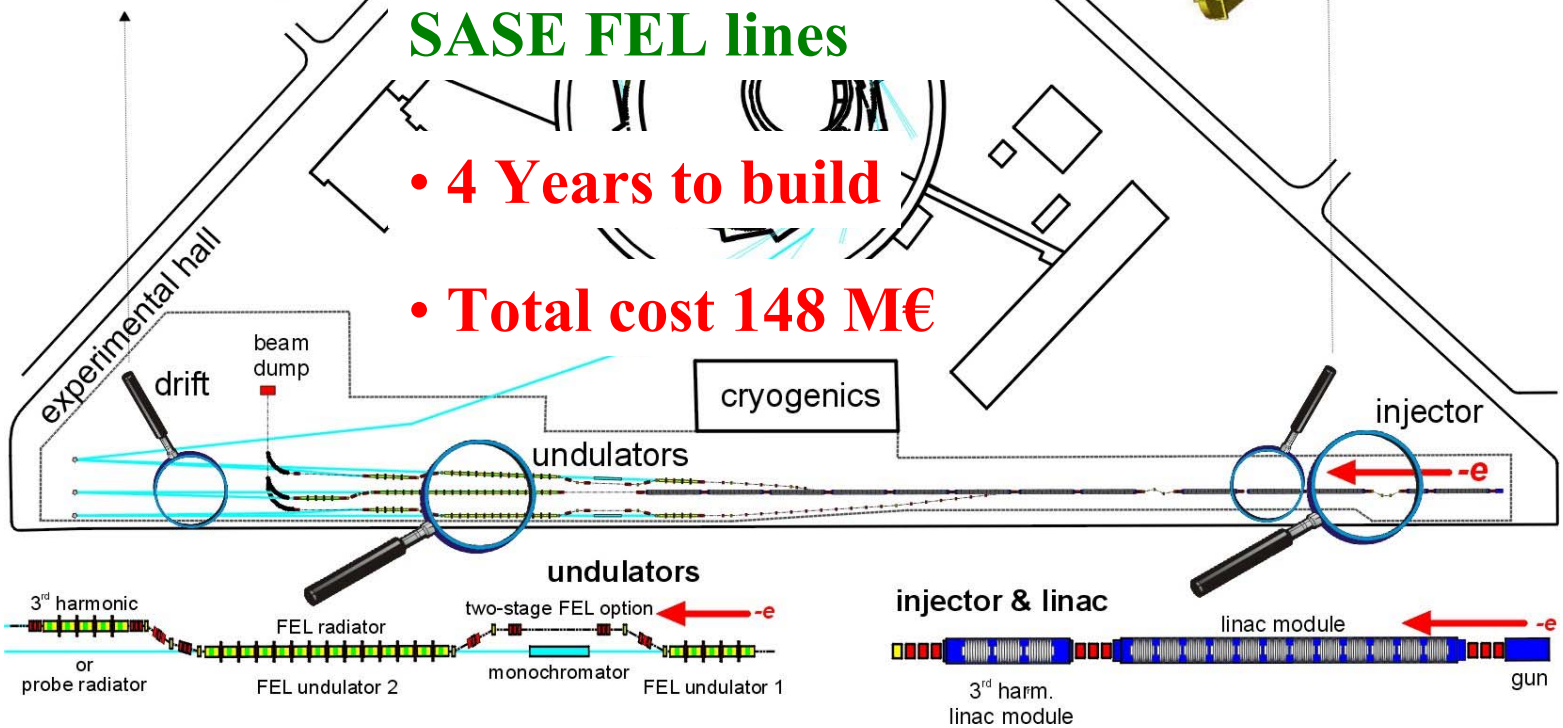


Project: FEL

- 3 SASE FEL lines with 6 experimental stations
- 2 Additional undulators
- Option for 2 more SASE FEL lines
- 4 Years to build
- Total cost 148 M€

ESLA linac module





Controls Numbers

- **~33K EPICS DB records**
  - 8,000 connected to CAN bus (~550 embedded i386-controllers)
  - 400 connected to other hardware
- **~60 IOCs**
  - Mostly mv162 (68k) running VxWorks 5.2
  - Will migrate to mv2432 (PPC) running Tornado 2.0.2
- **HPUX 11** development and OPI hosts
  - Will migrate to Linux with Sun/Solaris as VxWorks reference and tool platform