

TA1 - SD was created in 2001

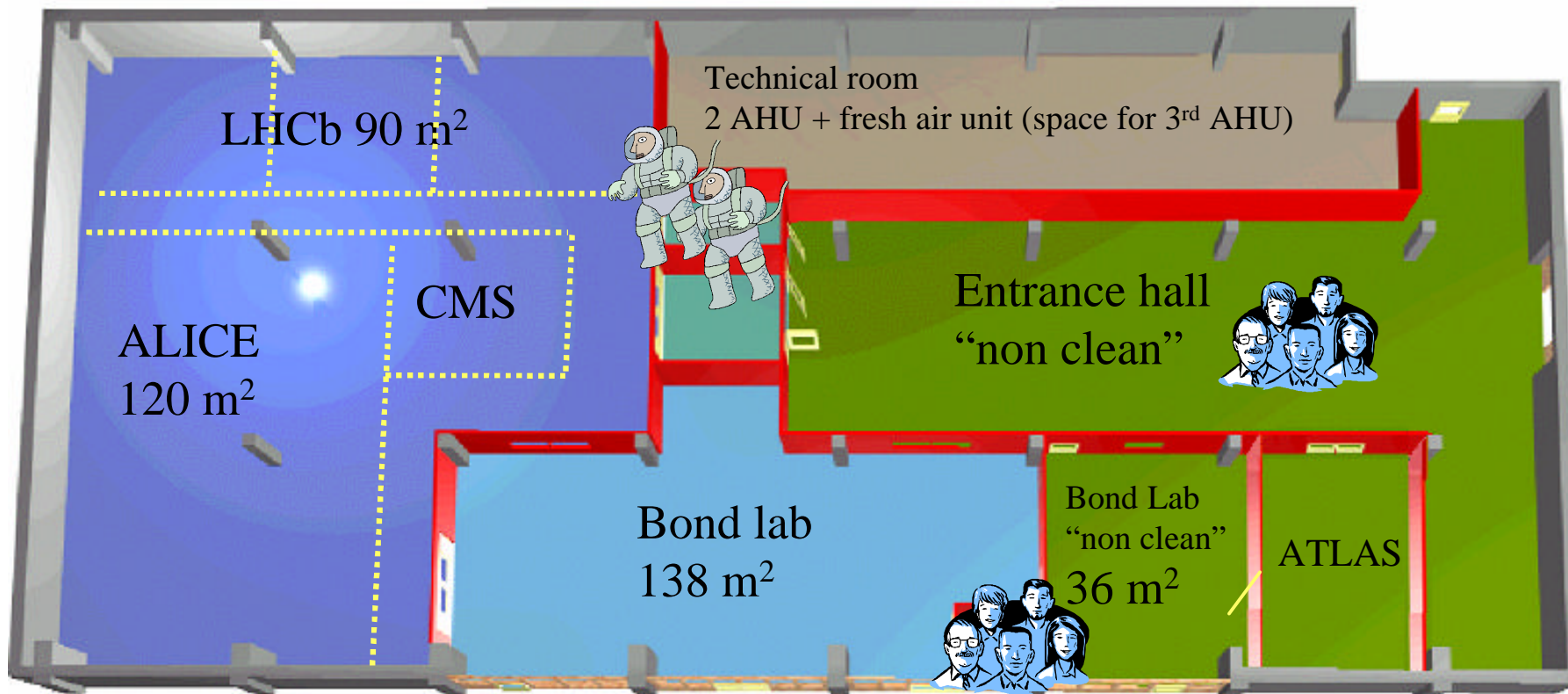
We have as mandate to provide support and perform developments in the field of Solid state Detectors

TA1 - SD = {

- 2 physicists
- 2 engineers
- 5 technicians
- 2 PhD students (shared with LHC experiments)
- 3 very active retired friends (physicists)
- 4 summer students

Our facilities

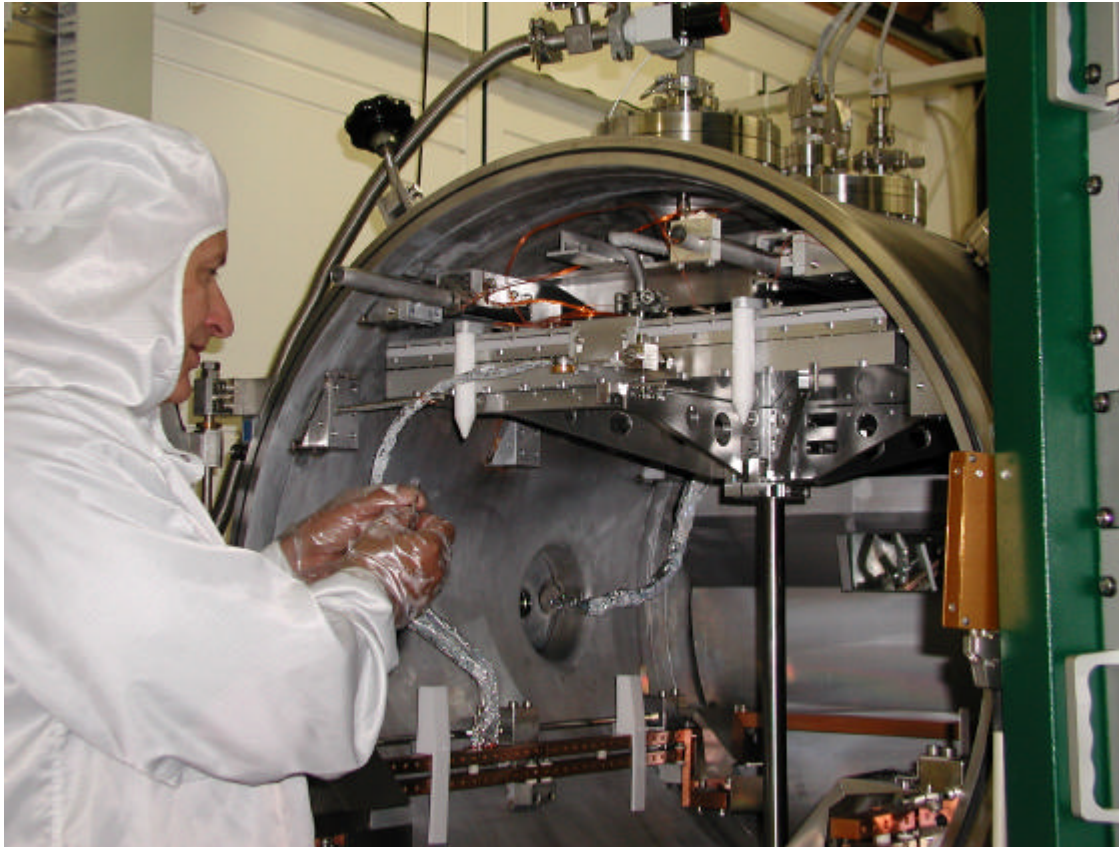
Silicon Facility and Bonding lab (since summer 2002)



~450 m² clean room (50.000)

Thin Film lab

~150 m² clean room (10.000), (Build. 3)



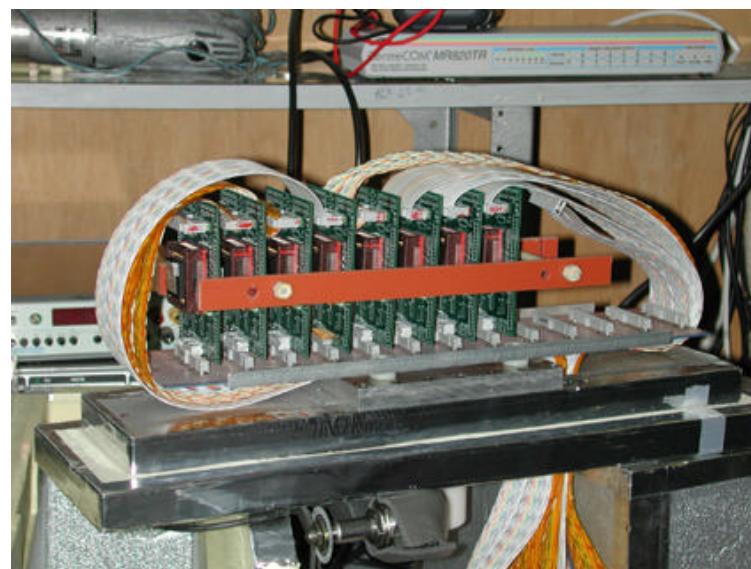
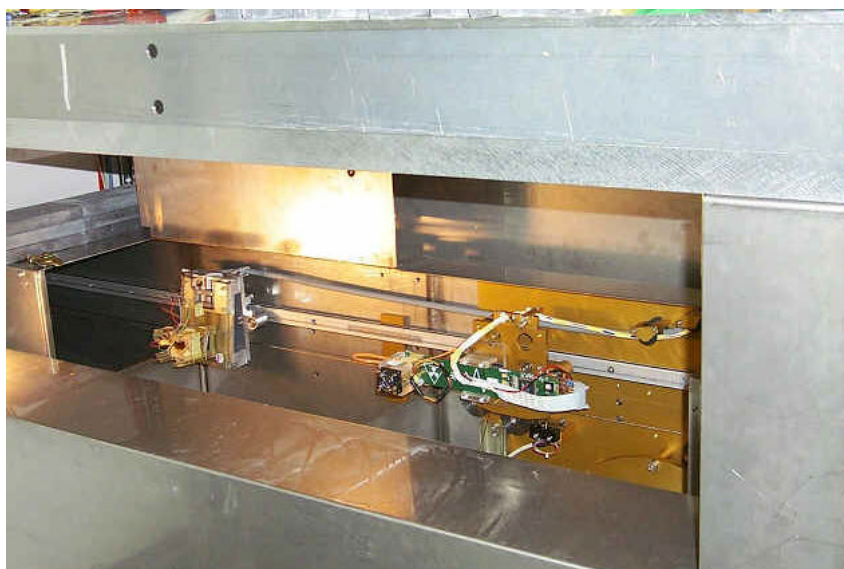
- Several general purpose and custom designed evaporation plants
- Mechanical (glass ceramics) workshop

More details by André Braem

Our facilities

Irradiation facility (PS-T7 area)

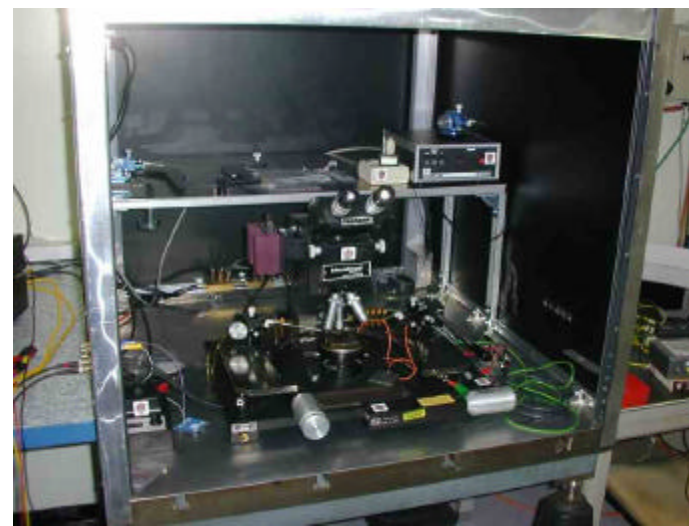
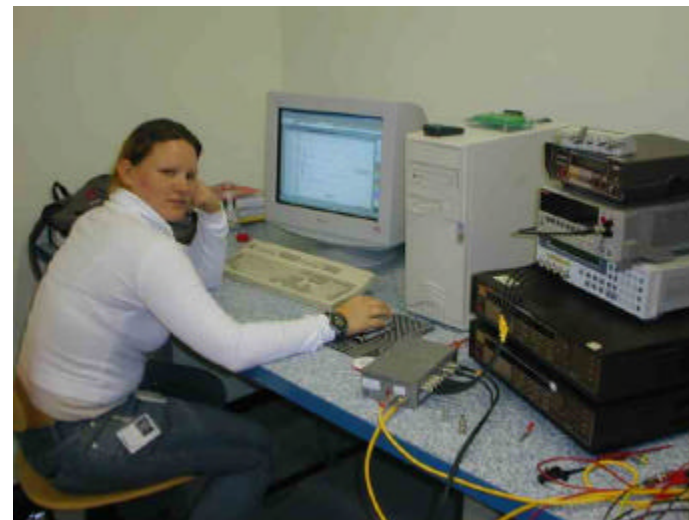
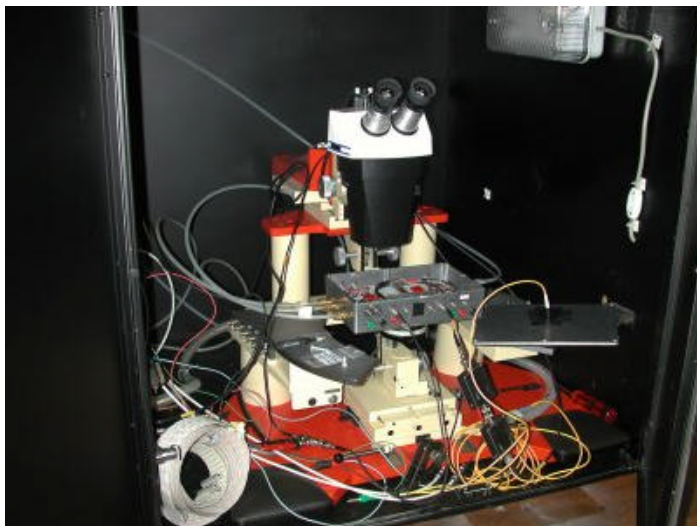
- 2 fix and 2 mobile irradiation set-ups
- 24 GeV protons or LHC like neutron field
- Flux $\sim 10^{13}$ per hour on a $2 \times 2 \text{ cm}^2$ area



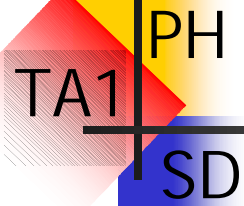
More details by Maurice Glaser

Our facilities

Various small labs,
mainly for detector and electronics testing & characterization



Our activities



TA1/SD works currently for

- all 5 LHC (incl. TOTEM)
- several non-LHC experiments (NA60, COMPASS)
- Microelectronics + Detector developments

Support activities

- ⊕ Thin film technology mirrors, photocathodes
- ⊕ Operation of the PS T7 Irradiation facility (p,n)
- ⊕ Operation of Silicon Facility incl. bondlab

Developments for LHC and beyond

- ⊕ Radiation monitoring devices (common project of LHC experiments)
- ⊕ Fiber tracker for ATLAS luminosity measurement
- ⊕ Ultra radiation hard tracking detectors (RD50)
- ⊕ Diamond as a tracking detector (RD42)

Technology transfer from HEP to other fields

- ⊕ Hybrid Photon Detectors, prototypes for astrophysics and medical imaging (PET)
- ⊕ Silicon detectors for medical imaging (Compton camera)