

ARD-ST1 Mini-Workshop: Emitting Materials - Photocathodes for Photoinjectors

December 4./2015, HZDR

AM Session 10:00 - 12:30

10:00 Welcome

10:15 On the way to operate CsK₂Sb photocathodes in Gun1 (J. Kühn, HZB)

10:45 Photocathode transport system for PCHB collaboration & photocathode activities at HZDR
(R. Xiang, HZDR)

11:15 Mainz Lab Report (K. Aulenbacher, JGU Mainz)

11:45 Predicting quantum efficiency to aid photocathode design (B. Camino, Imperial College)

12:30-13:30 Lunch break

[\(visit of new PCHB cathode transfer system\)](#)

13:30-14:30 Gallery poster session

PM Session 14:30-16:00

14:30 Field emission (Günter Müller, Uni Wuppertal)

15:00 Bonn Polarized GaAs-Photoinjector (Wolfgang Hillert, Uni. Bonn)

15:30 Status of preparation at NCBJ Swierk of thin-layer lead photocathodes for SRF injectors
(J. Lorkiewicz, NCBJ Swierk)

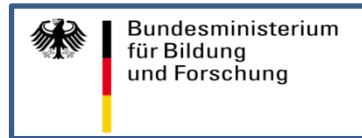
16:00-16:15 Closing remarks

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PCHB – Photocathodes for high brightness,
high average currents electron beams



WP12 RF / Photocathodes

HOPE & HOPE2

Hochbrillante photoinduzierte Hochfrequenz-Elektronenquellen

On the way to an European Photocathode Network
bringing together

Accelerator Centers
Experience & Application

Universities
Basic Knowledge & Innovation

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Participants

Uni Mainz

HZB

Imperial College London

Uni Bonn

DESY

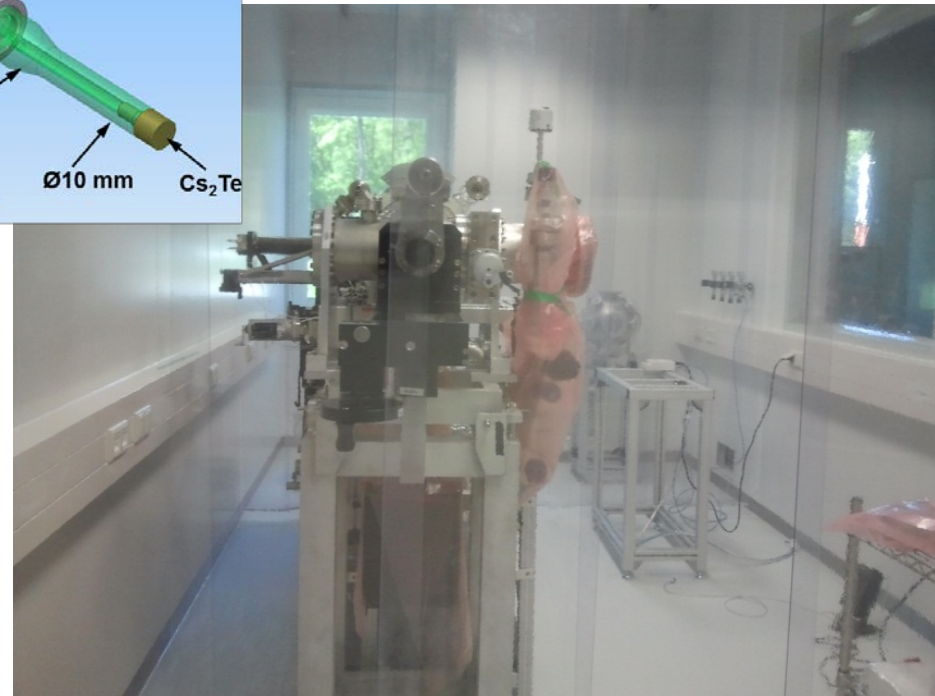
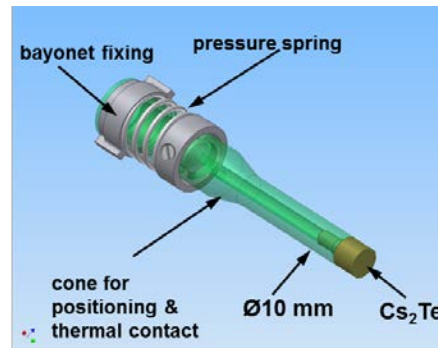
STFC Warrington

NCBJ Swierk

Uni Wuppertal

Uni Siegen

HZDR



ELBE operation and accelerator R&D activities

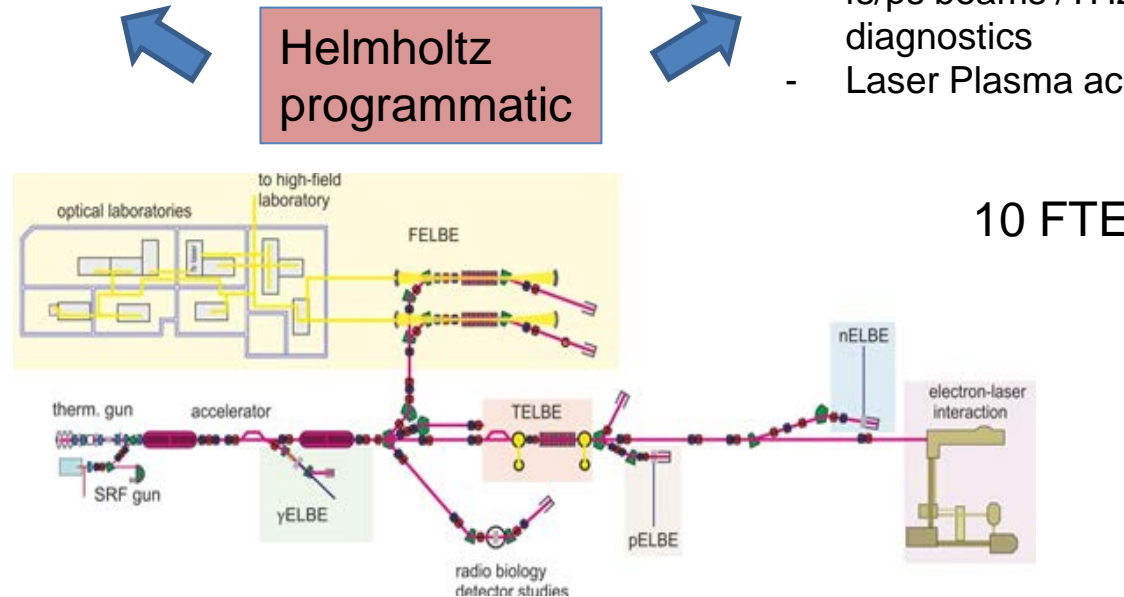
From Matter to Materials and Life

- LKII
- multiple beams $\gamma, \text{IR/THz}, e, e^+, n$
- 24/7 user facility
- ~6000 h/year

23 FTE

Matter and Technology

- sc RF photo injectors
- fs/ps beams /THz based beam diagnostics
- Laser Plasma acceleration



Verbundforschung

(German Universities)
 Photoinjectors
 THz detectors
 e-beam manipulation

Collaborations

DESY, HZB, KIT
 Jlab
 SLAC
 Uni Ankara
 IUAC New Dehli
 ..

EU Projects

EuCardII
 LA3Net

Industry

ASML
 (RI, Bruker)