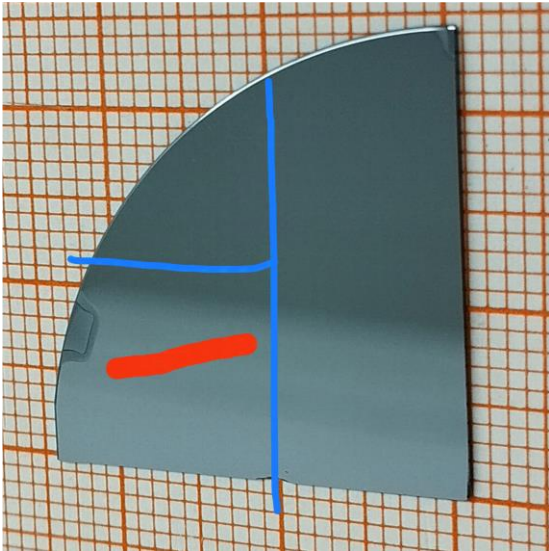
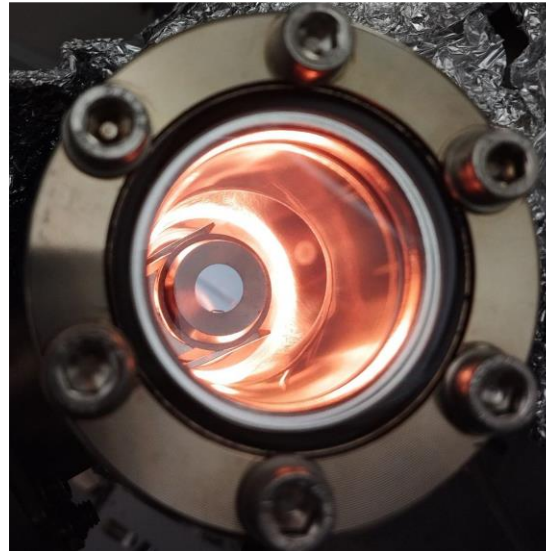


Polarized electron source R&D progress

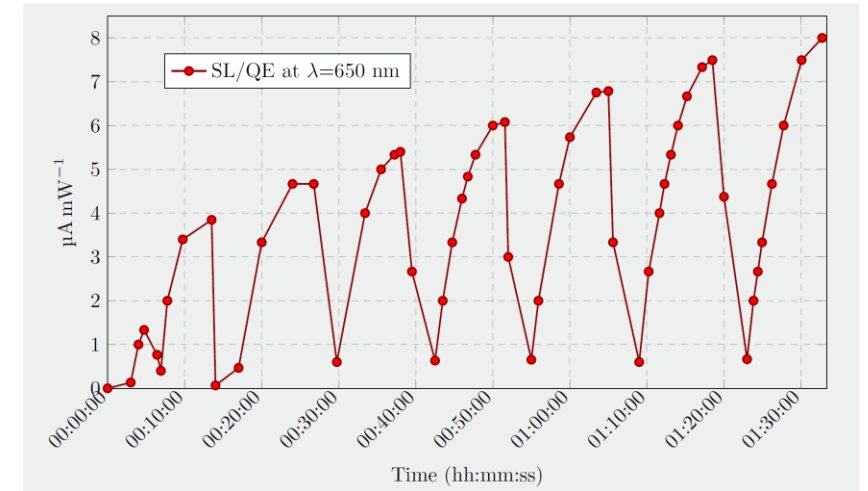
1. A superlattice GaAs wafer has been cut, and a quarter has been delivered to the Inst. of Nuclear Physics, JGU Mainz
2. Activation experiment of the SL GaAs has been carried out (**Valery Tyukin**)



- The SL structure is cut along blue lines
- Piece on the right is for main accelerator
- Piece on the left bottom is tested



- SL in loadlock chamber
- Preheating in loadlock chamber



- Jo-Jo method, Cs + NF₃
- Both Cs and NF₃ doses are much lower than for bulk GaAs
- Maximal QE=1.5% @650nm

Polarized electron source R&D progress

Summary from Valery Tyukin

1. The QE is two to three times lower than that of bulk material structures
2. There is a noticeable difference in the flows of Cs and NF₃ required to achieve high QE
3. The lifetime of the SL GaAs in sample preparation chamber is a few hundred hours, which is a good indicator
4. Polarization measurements will be carried out in the near future (after repair work on the beamline).