



XFEL reference cavities

XFEL reference cavities are arriving at DESY

4 Zanon cavities:

- **Mechanical and optical entrance control ongoing**

4 RI cavities:

- **1st cavity to be tested next week after EP-preparation at DESY**

I r f u

cea
saclay

Vertical Electro-Polishing activities at CEA Saclay: update




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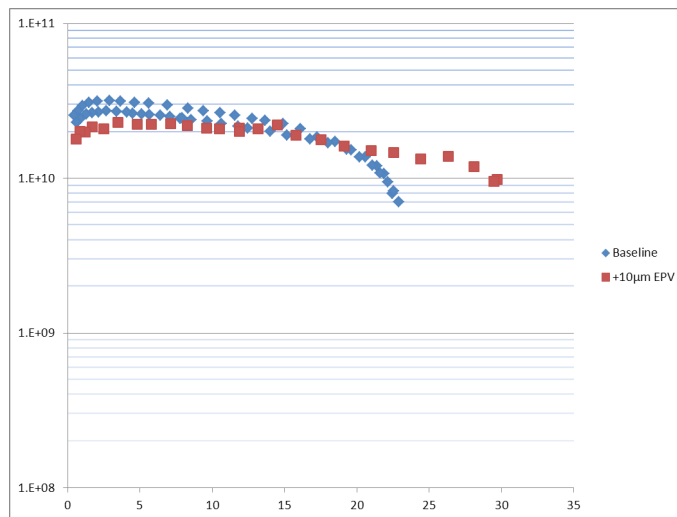
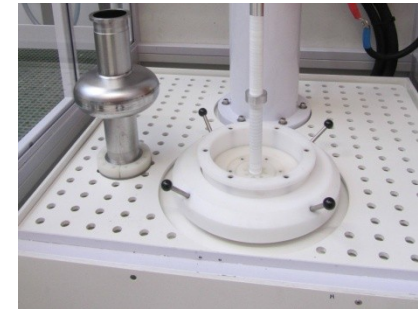
SET-UP COMPLETED



- Chemical area has been closed
- Set-up in its final configuration
- Experiments on single-cells have started

RESULTS (1Cell) AFTER 1st TREATMENT

- Parameters
 - ❖ 8,5L/min acid
 - ❖ 20V, Insulated cathode
 - ❖ $T < 25^{\circ}\text{C}$
- 10 μm removal
- HPR and cavity assembly 
- Cavity under baking at Saclay (Ar 3h-145°C)



- ❖ Surface Brightening but bubble traces (upper cell) because of O_2 at high Voltage
- ❖ Cavity improved after low removal:
- ❖ 30MV/m quench limited, no FE
- ❖ Additional sequences planned to reach again maximum gradient of the cavity (40 MV/m)

DIFFERENT PARAMETERS TESTED

- 2nd experiment
 - ❖ 8,5L/min acid
 - ❖ 20V, Insulated cathode
 - ❖ T up to 35°C→ Pits observed in the upper cell with higher local removal

3rd experiment

- ❖ 8,5L/min acid
 - ❖ 12 V, Insulated cathode
 - ❖ T < 25°C
- Fast brightening of the surface
 - Less bubbles traces
 - Cavity to be tested

Desirable parameters: Low Voltage, Low acid temperature