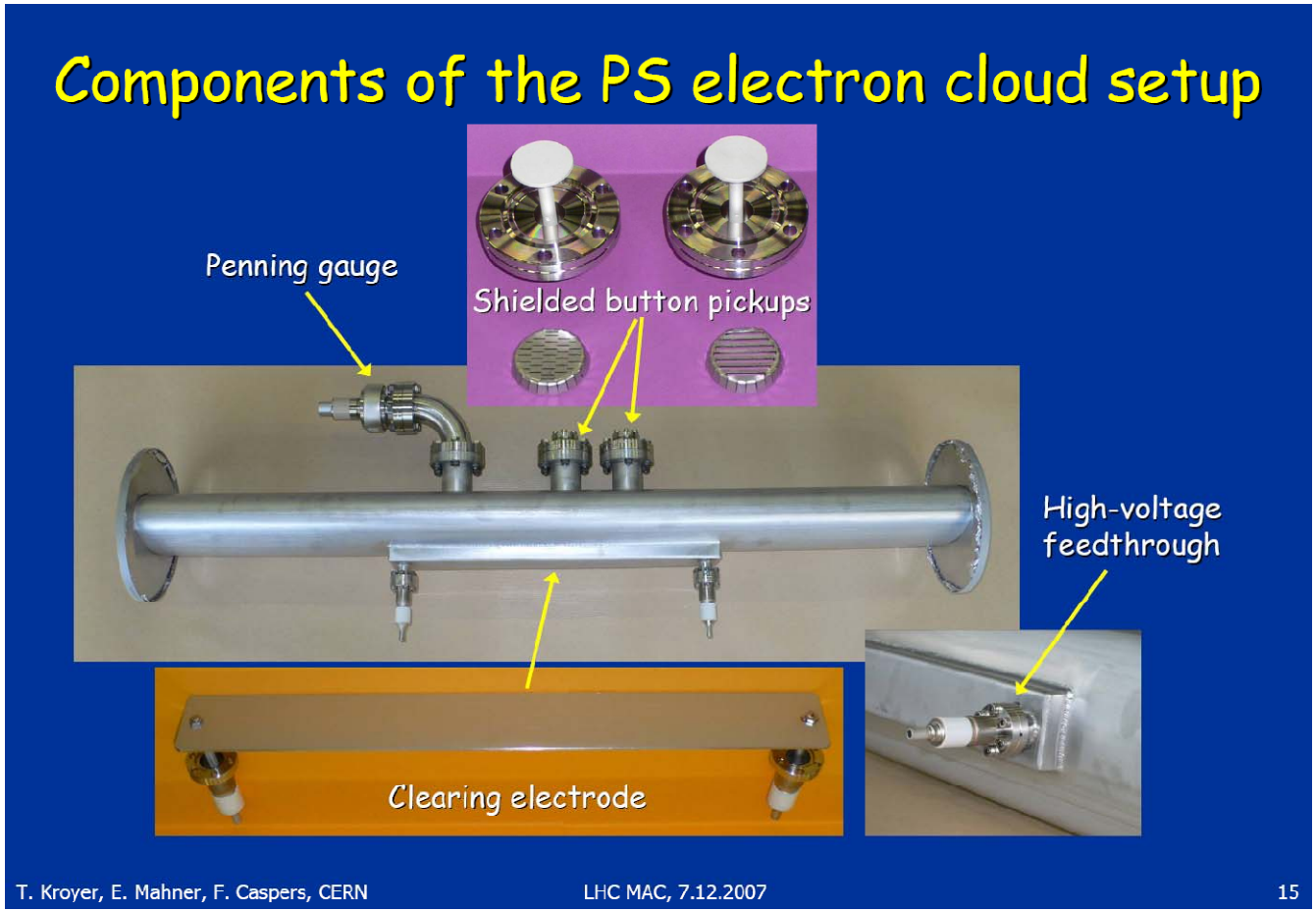
The SPS e-cloud measurements 2008
Status and near future planning

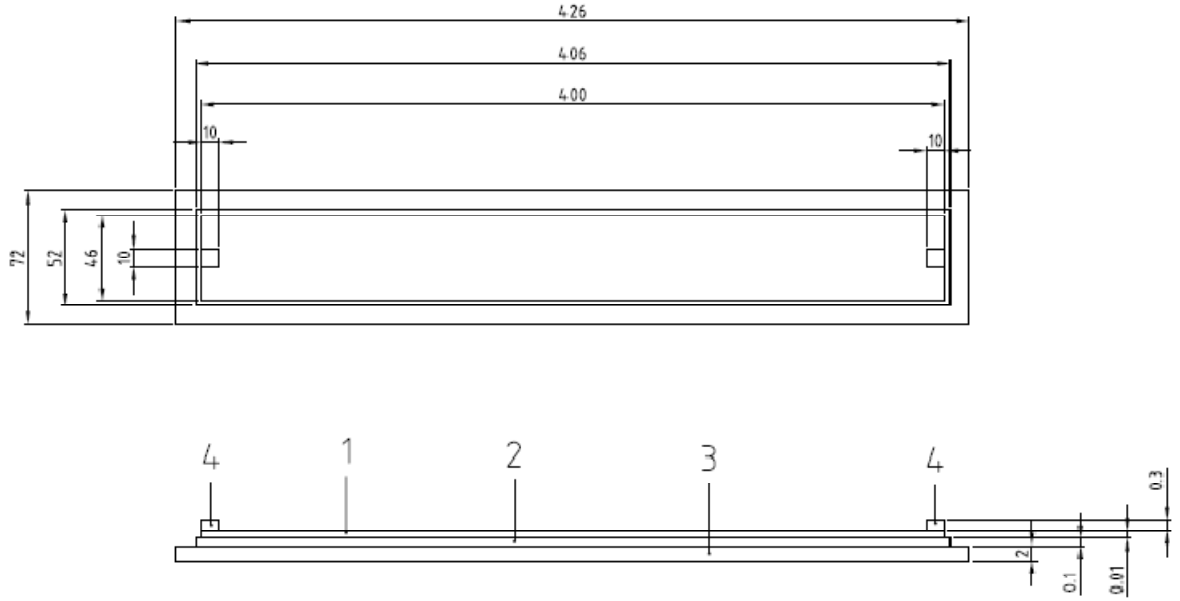
F.Caspers, J.Jimenez, E. Mahner, T. Kroyer

- **The SPS e cloud experiment near point 5 consists essentially of 2 parts**
  - **“conventional” (but improved) electron collectors with stripline electrode on the opposite wall (like used in the SPS in 2007)**
  - **Several microwave transmission setups (like the first experimental version from the SPS in 2003)**
- **The aim is to compare the results of both experiments for cross-calibration and also to check the applicability of enamel technology.**
- **The present status is, that machining of hardware and ordering of electronic components continues.**

The PS e-cloud measurement setup 2007



Enamel electrode for the SPS setup



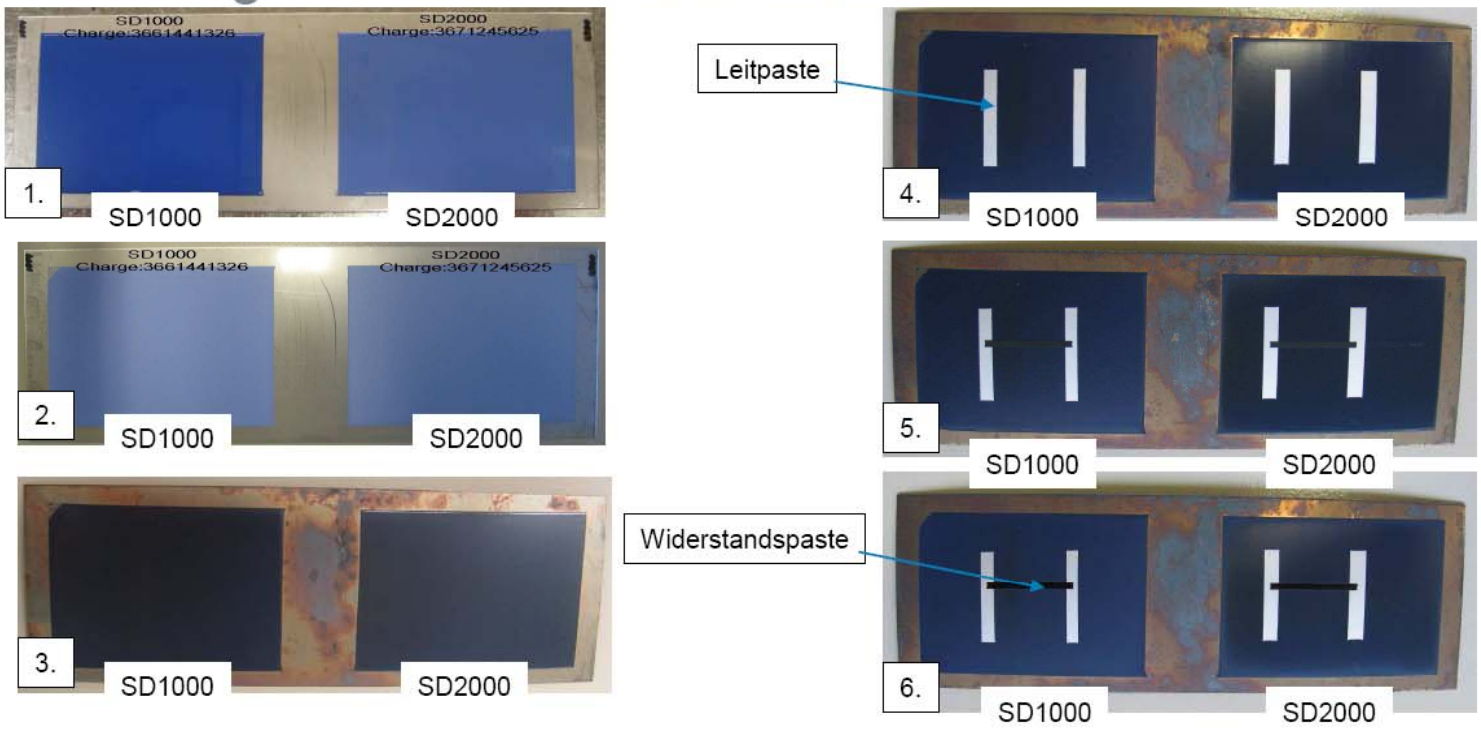
1. HOCHOHMIGE SICHICHT / RESISTIVE LAYER: R_surface = 10 kOhm
2. EMAIL / ENAMEL
3. EDELSTAHL 316 LN / INOX 316LN
4. CONDUCTIVE PAINT

That item should arrive at CERN this week from Düker-works and will be installed immediately

Recent results with ceramic coatings from Heraeus (1)

S. Malkmus Heraeus

Untergrund SD1000 und SD2000



Ergebnis: Optisch in Ordnung

Recent results with ceramic coatings from Heraeus (2)

S. Malkmus Heraeus

Ablauf

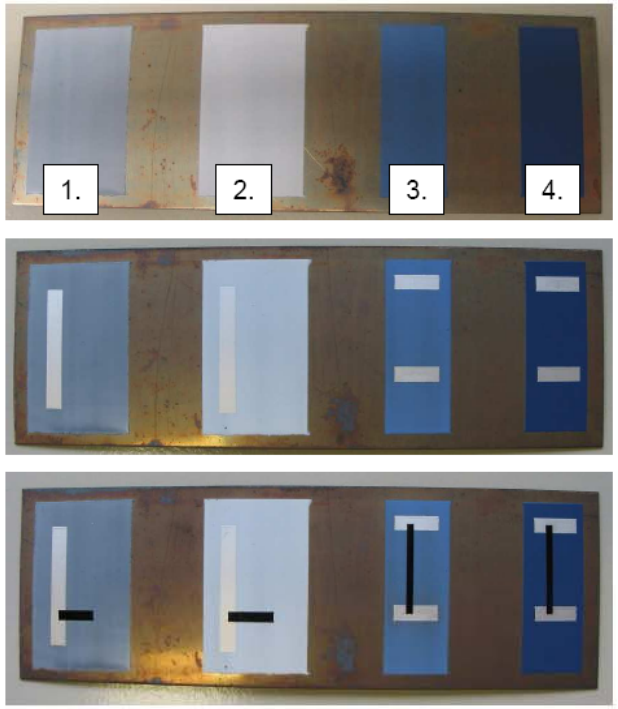
- **1. bis 3. →Dielektrikum drucken, trocknen (150℃), brennen (850℃/10´/60´).**
- **4. → Leitpaste drucken, trocknen (150℃), brennen (850℃/10´/30´).**
- **5. bis 6. → Widerstandspaste drucken, trocknen (150℃), brennen (850℃/10´/60´).**

Dielektrikapasten: Name/Charge
SD1000/3661441326
SD2000/3671245625
Leitpaste: Name/Charge
C1076SD/3644935883
Widerstandspaste: Name/Charge
R8931D/3653038561

Recent results with ceramic coatings from Heraeus (3)

S. Malkmus Heraeus

Untergrund 1. – 4.



Ergebnis: Optisch in Ordnung

Dielektrikapasten: Name/Charge

1. GPA94-085/3662942580
2. GPA99-048/EI1533 (= 4. ohne Co)
3. IP9227/3672847072
4. IP9117E/PI3295

Leitpaste: Name/Charge
C1076SD/3644935883

Widerstandspaste: Name/Charge
R8931D/3653038561

Thickness of these coatings:

About 30 micron for the isolating layer

About 20 micron for the resistive layer

The basic Layout for the microwave transmission setup (SPS 2008) will be similar to