



# **EMU CMS Meeting**

## **Proposal**

### **Ageing Test at CERN**

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# Ageing Test at GIF (CERN)

## Ageing Test:

- Chamber
- Close loop circulation gas system
- Measurements
- Schedule
- Manpower support

# Ageing Chamber

## Ageing Chamber $\longrightarrow$ ME1/2 prototype

### Why:

- 2 chamber ME1/2 available (no conflict with integration)
- LUMA wire (previous ageing chamber was with SYLVANIA)

### Rework

- Chamber disassembly
- Change HV resistors:
  - 1.0 Mohm  $\rightarrow$  10 kOhm
  - 4.7 Mohm  $\rightarrow$  0.5 Mohm
- Remove 1.0 Mohm resistor from cathode connectors
- Install 18 SHV connectors on the frame
- Assembly, RTV sealing, test, training

# Gas system

**Ageing test with close loop gas circulation system is a crucial task:**

- 1. Gas system components should be as close as possible to what we choose for the final system**
- 2. Gas exhaust analysis is very important - we need to know what we trend to accumulate in the chamber**

**We need to define:**

- A final components of the gas system - 2 weeks**
- Impurities analysis scheme (Gas chromatograph, RGA?) -1 week**

**CERN Gas Group promised to complete gas system in two months**



# Gas system

## Measurements:

- **Dark current from strip**
- **Single rate from anode wire group**
- **Anode wire efficiency**
- **Resistance between strips**
- **Manpower support**
- **Chamber current from HV power supply**

# Schedule

## 1. Ageing chamber:

- complete at FNAL - Jan. 15, 2001
- ship to UFL - Jan. 30, 2001
- ship to CERN - March 1, 2001

## 2. Circulation gas system:

- complete at CERN - March 1, 2001  
(CERN manpower)

## 3. Measurement setup:

- complete at UFL - Jan. 30, 2001
- chamber test at UFL - Feb.1 - Feb.28, 2001
- ship to CERN - March 1, 2001

# Manpower / Responsibilities

**O.Prokofiev** - chamber, gas system specs, gas component scheme

**S.Dolinsky** - measurement setup, chamber test at UFL

**S.Dolinsky/O.Prokofiev** - measurement starting at CERN

**PNPI** - measurements support at CERN (4 man/months)