Small Pad Resistive Micromegas TB activity in 2018

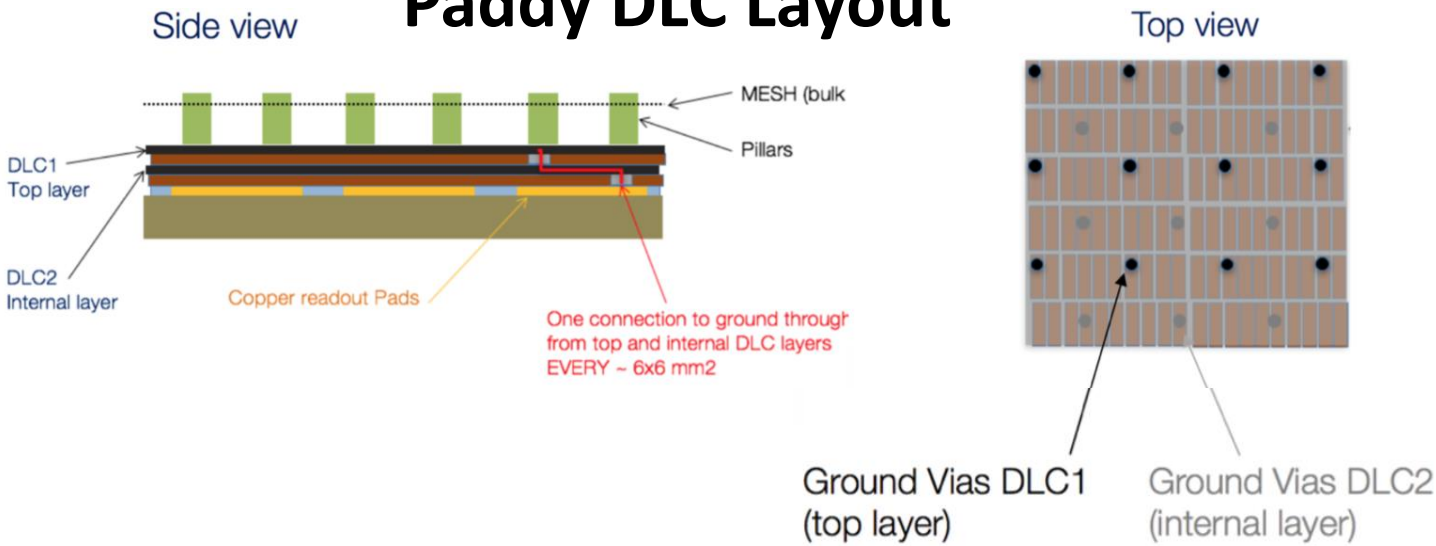
Massimo Della Pietra
University “Federico II” – INFN Naples
on behalf of “Paddy R&D Group”

Small Pad Resistive Micromegas

- Detector tested in 2017
  - Paddy with DLC resistive electrode (very high resistivity ~80MOhm/sq)
- Detectors to be tested in 2018
  - New Paddy with DLC resistive electrode prototype(~20MOhm/sq)
  - New prototype with embedded electronics (new after a layout and connection debug)

Small Pad Resistive Micromegas

Paddy DLC Layout



Paddy Embedded Elx

Beam Periods and needs

- October 24-31 slot is our main priority
  - If new prototypes will be ready earlier and we will have enough time to extensively test at least one of them in July we can consider also 1 more week in August
- We need from RD51:
  - The gas system with a premixed bottle of Ar/CO_2 (93/7)
  - The HV system with both Positive and Negative power supply modules.
  - The trigger system with RD51 hodoscope of 10x10 cm2 scintillators and, optionally, one finger
  - A NIM crate with some standard modules

Beam Periods and needs

- Tracking system:
  - We will use as a tracking system two Tmm chambers (we will procure them)
- DAQ:
  - we will use our SRS+FEC+ADC system with APVs
- Beam:
  - We would like to have both muons and pions beams. High intensity pions will be very important
- Magnet system:
  - We don’t need magnetic field. We would like to have our system upstream with respect to the magnet