

Testing of small scale MWPC prototypes

Prototype I, assembled and operating:

- Test trans-impedance amplifier (TIA) circuits,
 1. TI OPA 657 op-amp + differential output amplifier
 2. TI OPA 857 TIA on a chip
- Test grounding schemes
- Establish gas gain using Fe-55 source (6 keV)
- Measure drift times using cosmic rays
- Test gas mixtures, Ar+CO₂+CF₄
- Optimize gas and HV for fast drift velocity and 10⁵ gain

Prototype II

- Move HV components internal to the MWPC, HV blocking capacitors + load resistors
- TIA mounted on the wire plane
- Test cross talk

Prototype III

- Readout through multi-pin connector
- Pulser circuit
- Tests using FADC125 for readout