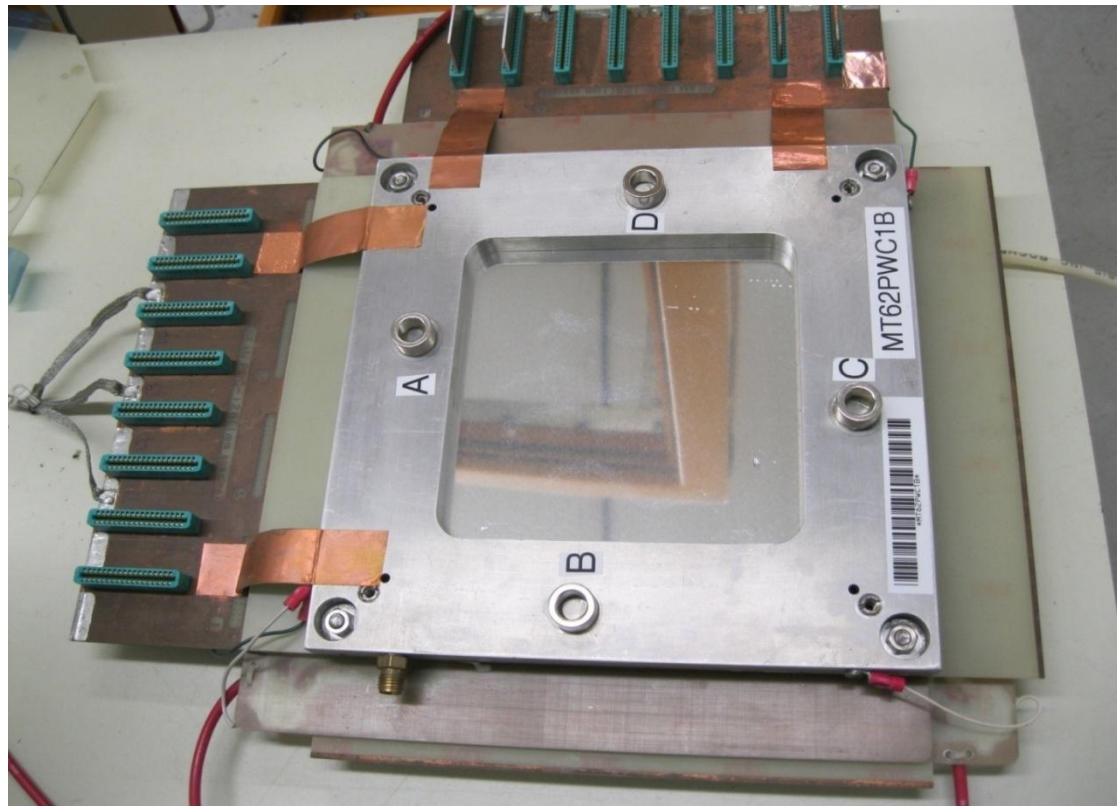
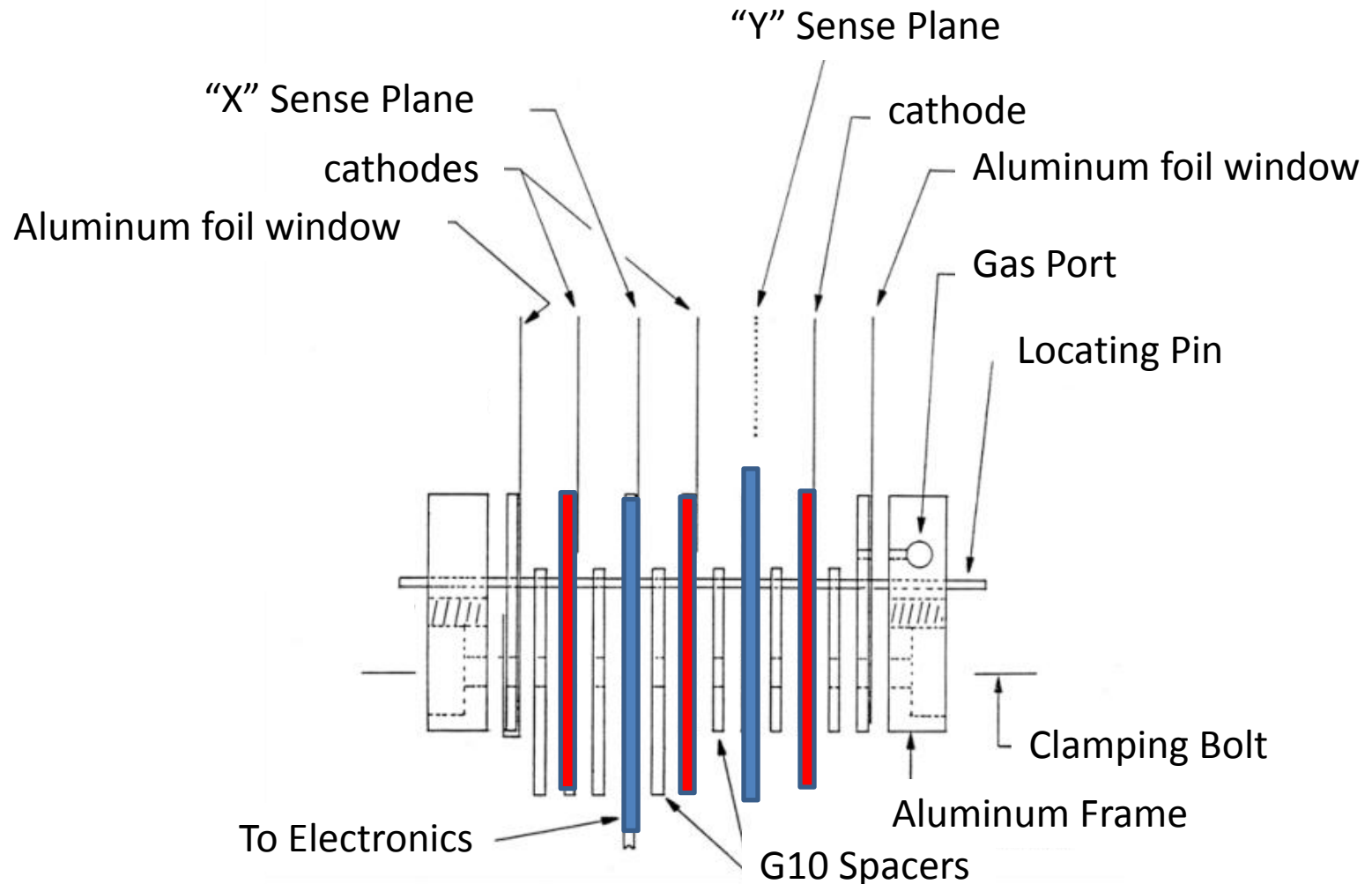


Fenker Chambers at FTBF

We are using multiwire proportional chambers designed by Howard Fenker in 1983



MPWC layout details

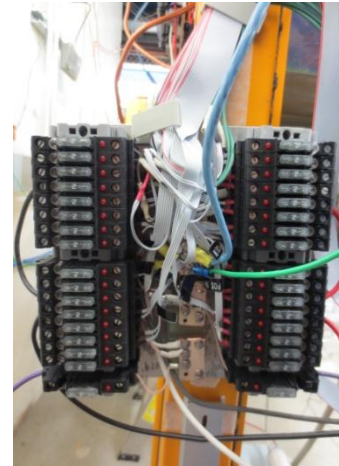


X and Y sense planes, made using 10 microns diameter AuW wire are installed between three high voltage cathodes made with 12.5 microns Al foils. A set of 12 microns Al foils complete the assembly.

Chamber readout and power (to be replaced by new system)



N-277 cards connected to wire plane

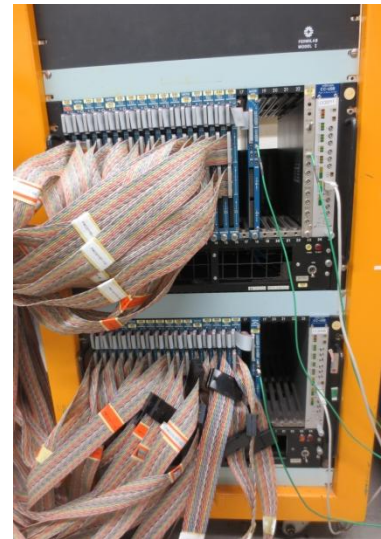


Power and thresholds delivered to cards from power suppliers through fuses boxes and gray cables



+5V and -5V power supply for N-277 cards

NIM High voltage power supplies (orange) for chambers

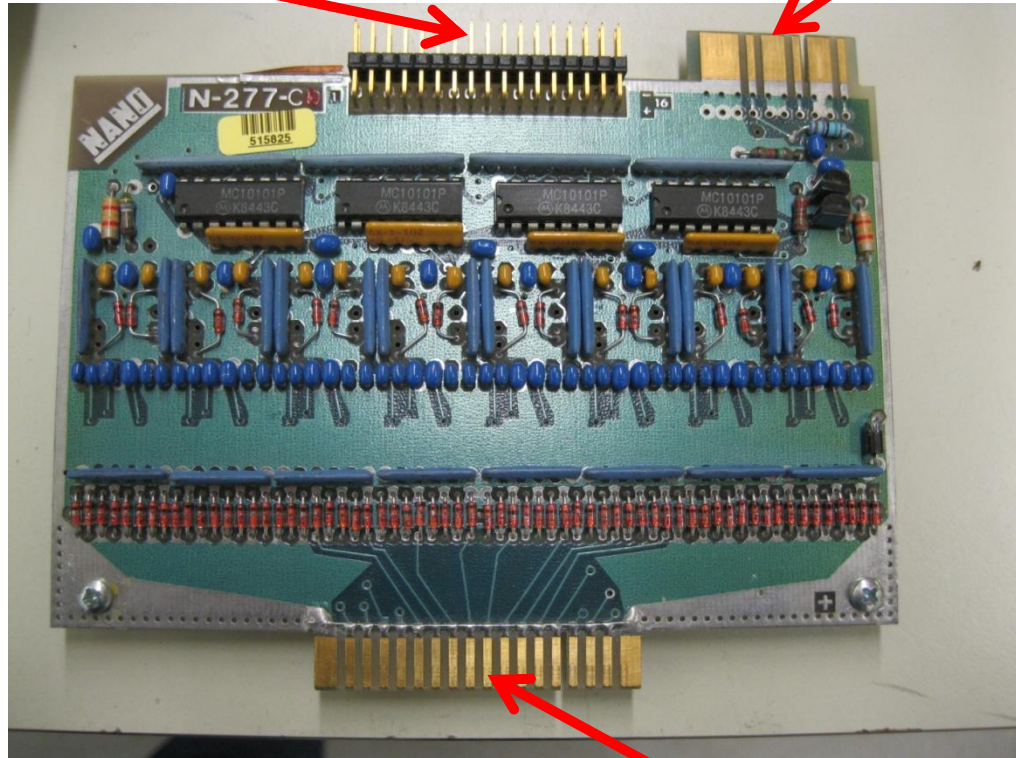


Camac crates with TDCs and ribbon cables coming from N-277

Amplifier Card NANO N-277

Ribbon cable connection

Power and threshold cable connection

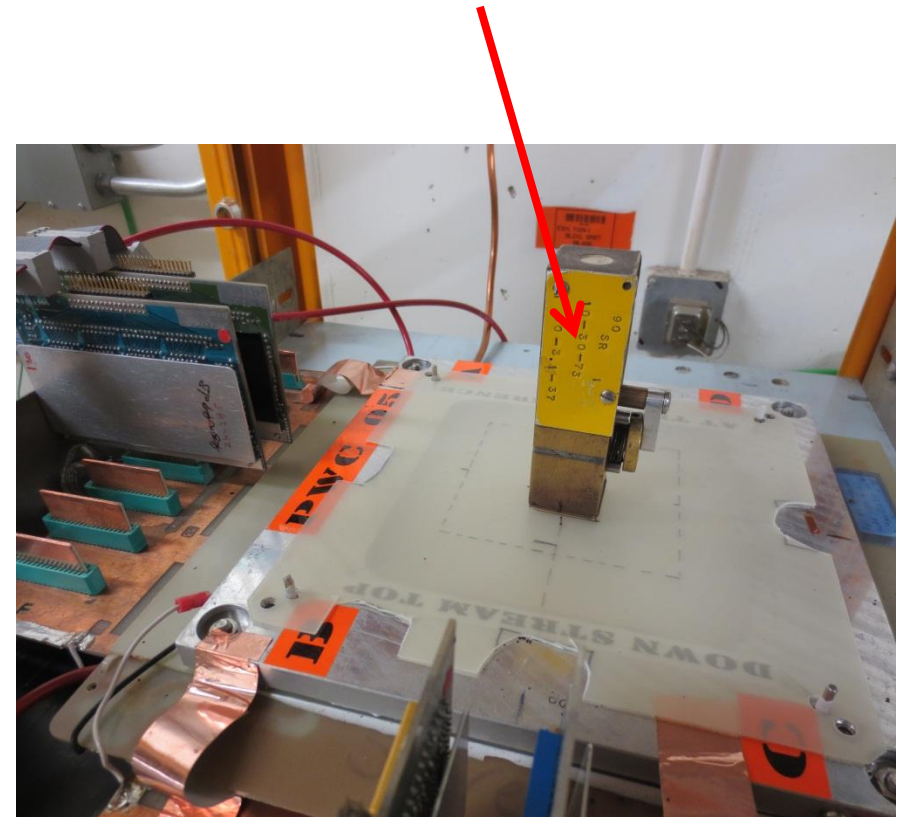
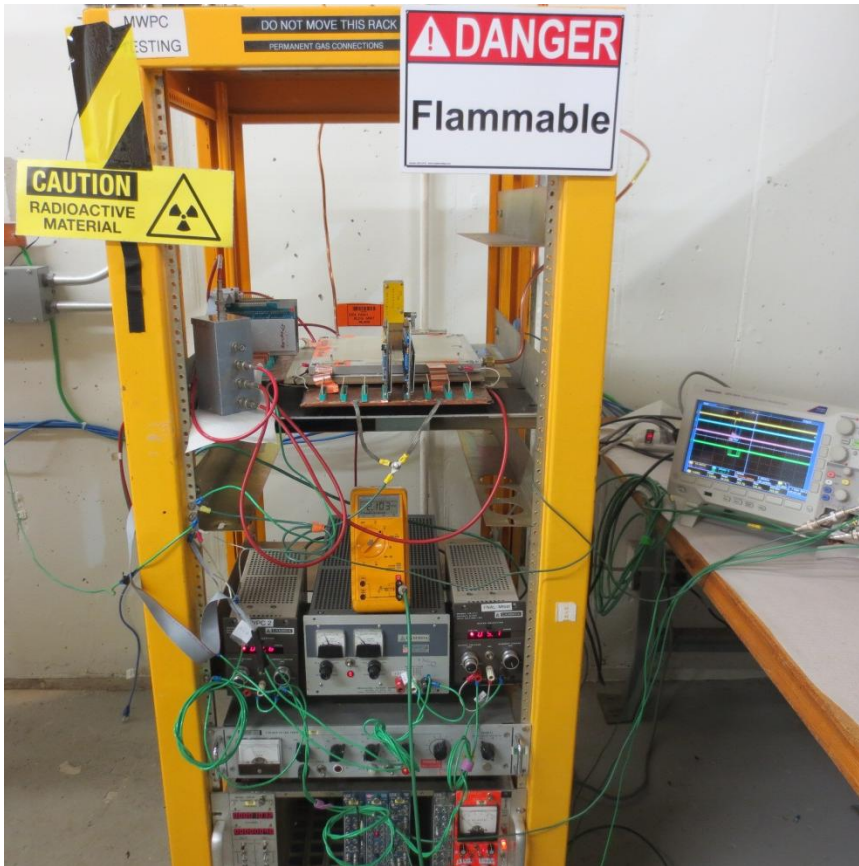


N-277-C3 Negative inputs $R_{in} = 330$ ohms,
positive inputs grounded.

Connects to wire plane

The Setup for MWPC Efficiency Measurement

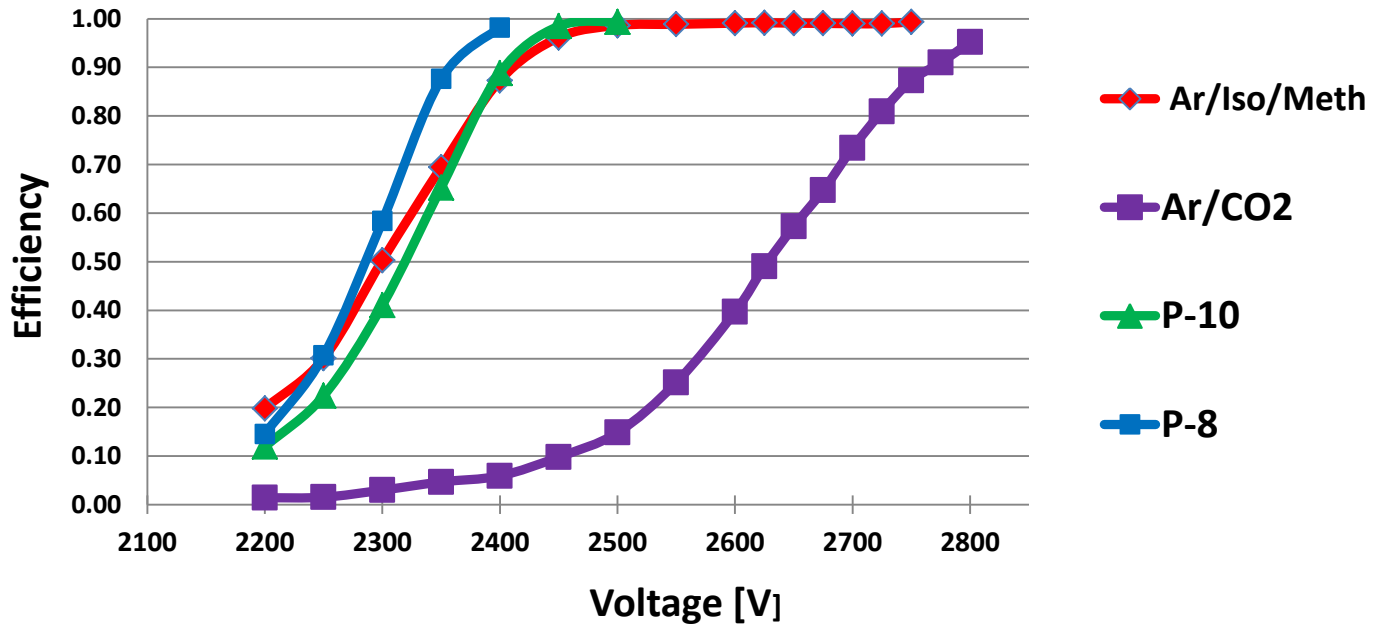
Source Sr-90



MWPC Efficiency with Different Gases

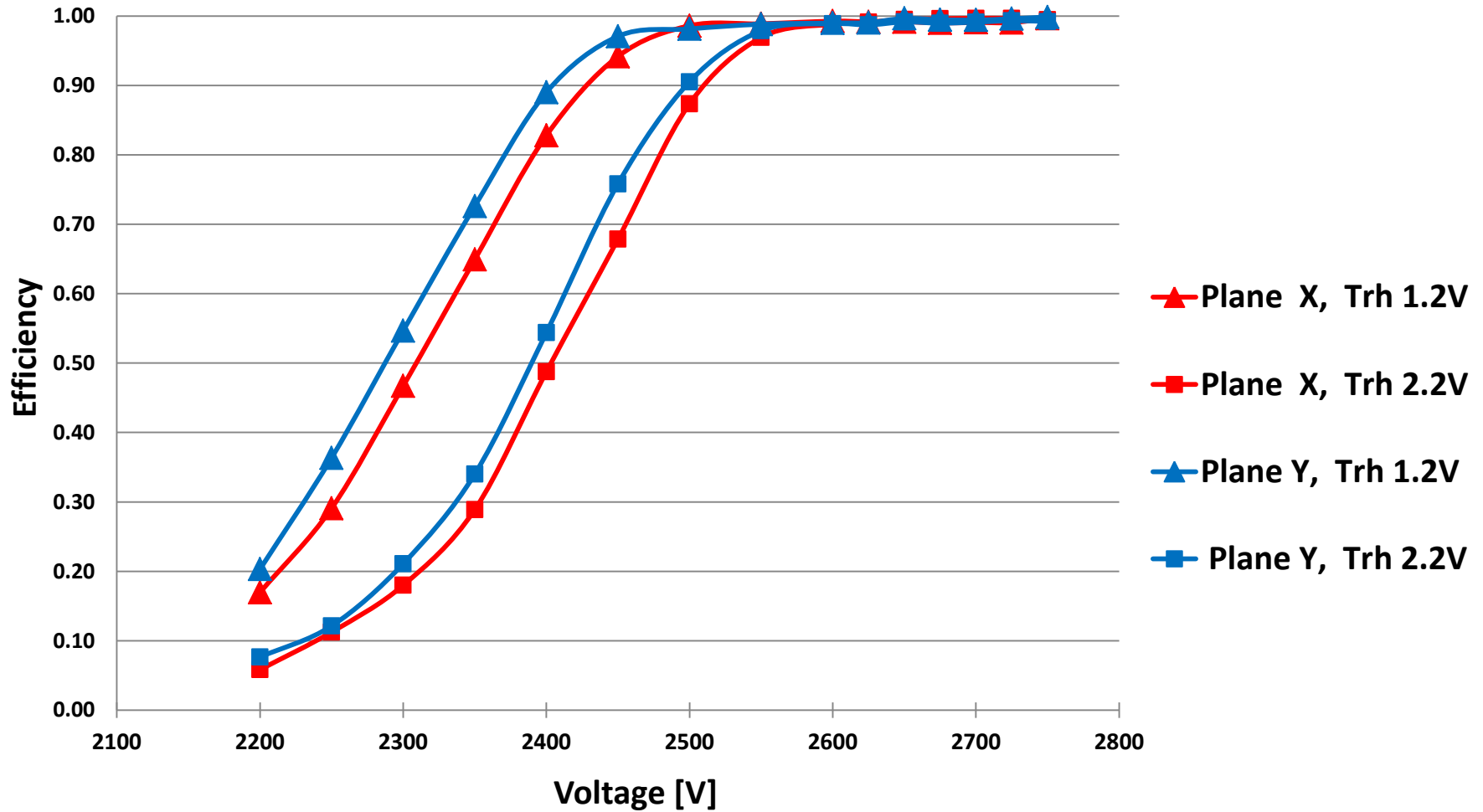
Gases Tested:

- Argon/CO2 80 % / 20 %
- P10 Argon 90 % / Methane 10 %
- P8 Argon 90 % / Methane 8 %
- Argon/Isobutane/Methylal 82% / 15% / 3%

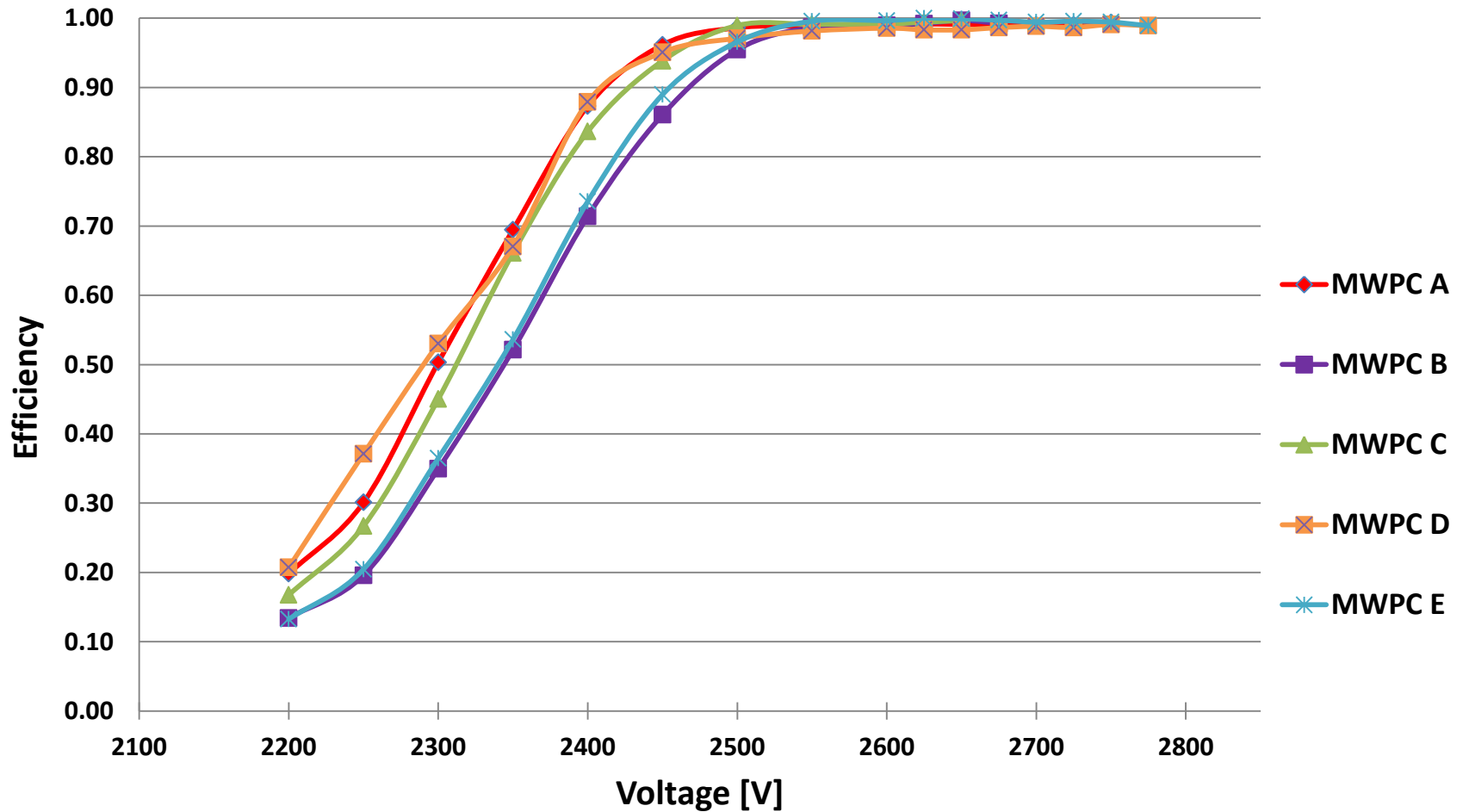


Gas for MWPC was chosen - Argon/Isobutane/Methylal

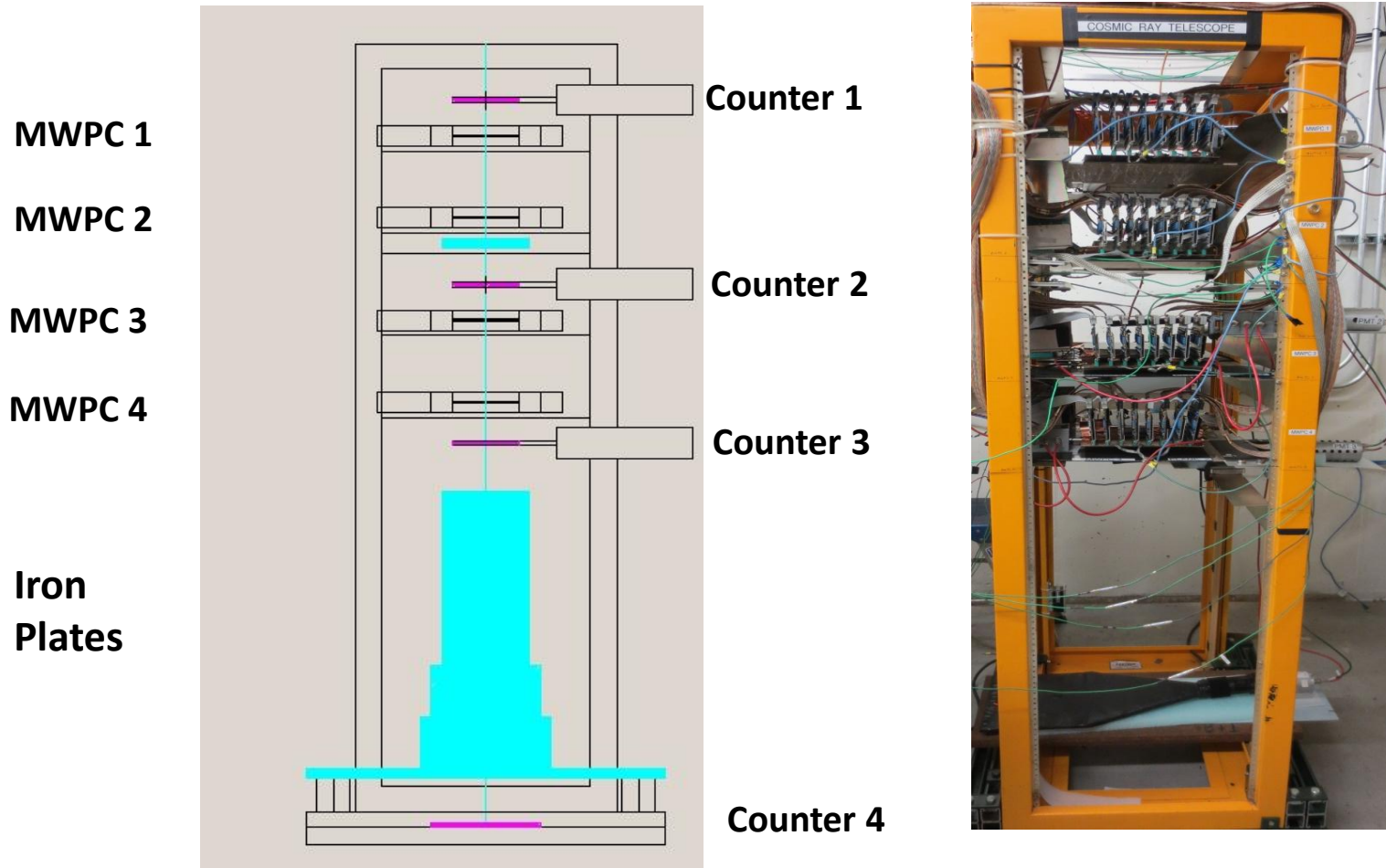
MWPC Efficiency with Different Thresholds with Argon/Isobutane/Methylal



Efficiency for different MWPCs with Argon/Isobutane/Methylal



4 Fenker Chambers in Cosmic Ray Telescope



We have a working test setup, hardware (4 chamber system) and software (currently CAMAC readout)

Signals from 4 MWPCs

