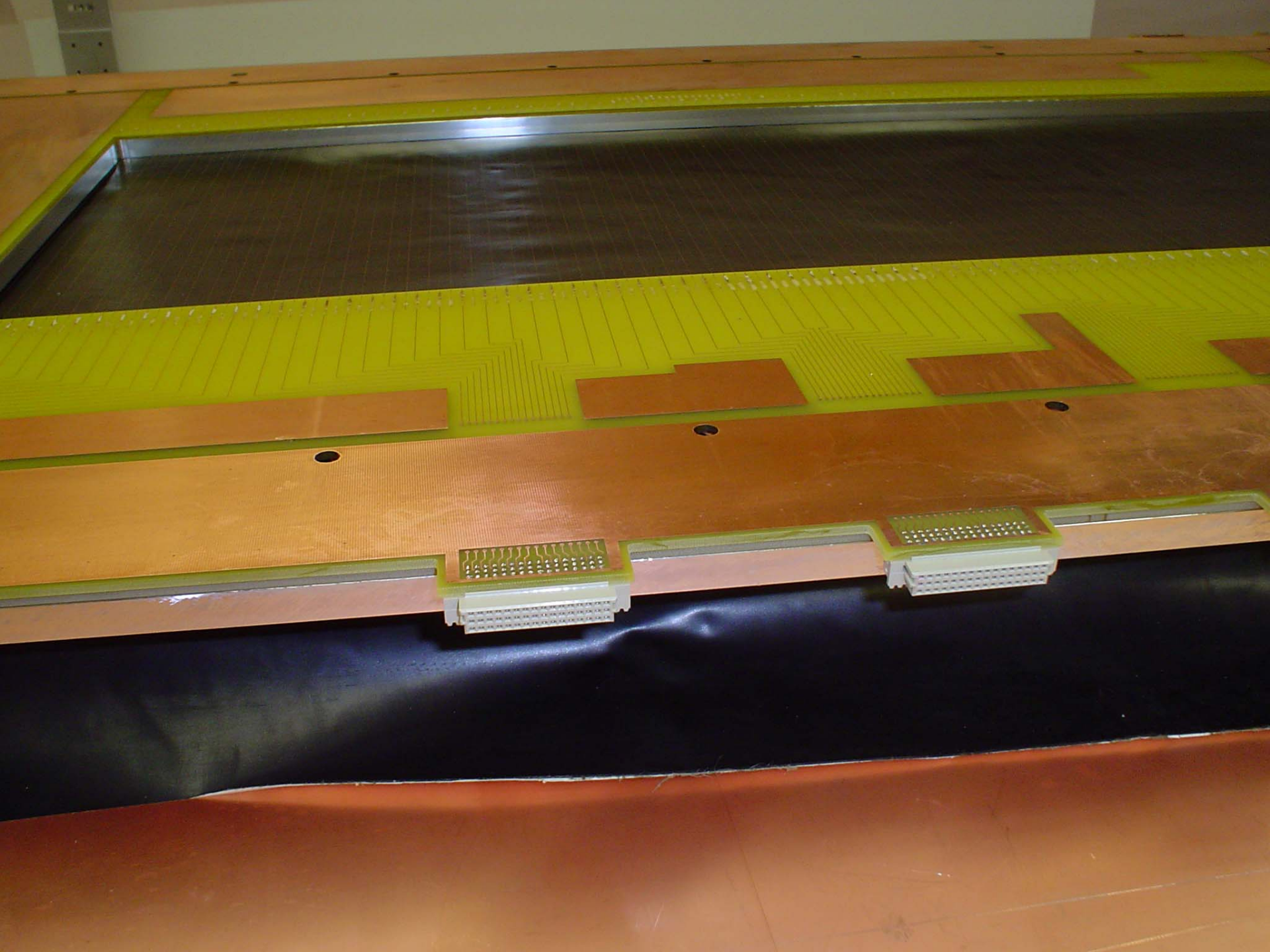


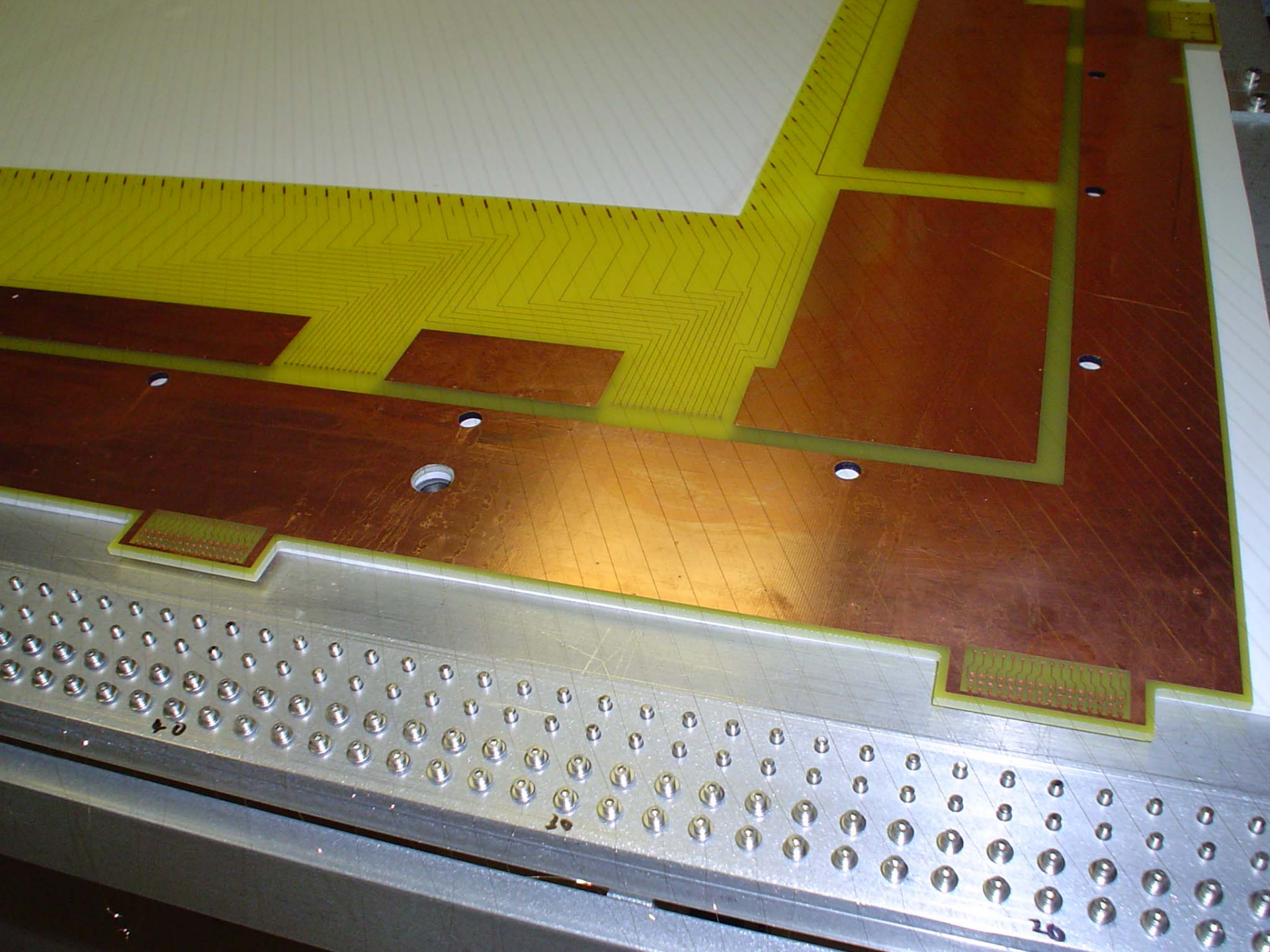
Bigbite Wire-Chamber Project

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UVa

What do we build?

- **Three drift chambers:**
 - **1st and 3rd chambers**
 - 2u,2v,2x planes
 - Resolution ~ 200 μm
 - **Middle chamber**
 - u and v planes
 - Resolution ~1cm: to increase high rate and multi-track capabilities
- **Active area:**
 - **1st 140 cm x 35 cm**
 - **2nd and 3rd 200 x 50 cm (?)**
- **Sensitive wire spacing: 1 cm**
- **Anode to Cathode spacing: 3 mm**
- **Cathode foil: 12 μm Cu-plated mylar**
- **Plans to operate the chamber with Argon bases or He based gas mixtures**





Status of the Project

- **1st chamber is complete: operational works well**
- **Works very well;**
 - Holds HV well, very stable
 - Dark current levels are very low
 - Healthy signals around 1.6 kV.
 - There were few noisy wires, recently fixed.
- **A full chamber test setup at UVa**
- **Bodo setup the DAQ system at UVa**
- **The chamber connected to the DAQ; routine data taking now for testing.**
- **Readout and tracking software under development**
- **Plan to move the Chamber to Jlab in December or January**
- **Plan to test in beam during SRC.**

Status of the Project

- All frames for the 2nd chambers are complete: waiting for assembly soon.
- Stringing and stretching of 3rd chamber frames going on now. Expected to be completed by the new year.
- expecting a visitor from Armenia.
- Planning to assemble both 2nd and 3rd chambers by the end of January
- Test these two chambers at UVa in the Spring and bring them to Jlab in the Summer 05.

**Measurement accuracy of about
25 microns**

**For wire spacing measurements a
random uncertainty of about 50
microns (on difference)**

Motor resolution 0.5 microns

