

## **CDC Wire Stringing Procedure:**

Preliminary procedure based on prototype construction.

**Handling:** *Wire needs to be handled with care so as not to bend or kink. Wire should only be handled wearing black latex gloves. Extreme Care should be taken to avoid touching the surface of the wire with bare fingers. The wire spool will be located above the chamber. The chamber will also be assumed to be in the correct orientation. This can be checked by shining a laser pointer through the straw. Standard clean-room procedures are to be followed during the entire procedure.*

- Wire is unspooled from the upper spool and threaded through a crimp pin and a plastic pin holder.
- A small weighted chain is attached to the end of the wire and the assembly is lowered through the straw taking care not to tangle or kink the wire.
- The pin holder is set into the upper feedthru.
- The crimp pin is set into the upper pin holder.
- At the bottom of the chamber, the wire is detached from the chain and threaded through a plastic pin holder.
- The wire is threaded through the crimp pin.
- The pin holder is inserted into the lower feedthru and held with a dot of glue.
- The crimp pin is inserted into the lower pin holder.
- The upper wire is clamped to prevent further sliding.
- The 30 g weight is attached to the lower wire.
- The wire is now allowed to relax for about 30 seconds.
- The upper crimp pin is crimped.
- The lower crimp pin is crimped.
- The crimp resistance between the upper and lower crimp pin is measured to insure connection. This should be no more than x-Ohms.
- The resistance from the lower crimp pin and the endplate is checked, **VALUE TBA.**
- A dot of glue is used to connect the crimp pin to the pin holder.
- A dot of glue is used to connect the pin holder to the feed thru.

## **CDC Wire Tension Checks:**

**Handling:** *Be extremely careful when making electrical connections to the crimp pins.*

- These tests are described in a second document. All results are to be recorded in a (excel) database.

## **Training Procedure for Stringing**

CMU has old wire that can be used for training purposes. We note that during the initial phase of any new procedure, all work will be carried out in a fully supervised environment.

- Practice threading wires through the crimp pins while wearing gloves will start well before the actual stringing. It will initially be 15 minutes per day, twice per day. The length will then shift to 30 minutes per day, once per day.
- Practice attaching chains and weights to the wire will be carried out at a test station outside the clean area.

- Crimping will need to be practiced on pins outside the clean area. Having this done uniformly and consistent with the procedures worked out in Hall B for these pins is very important.