## Gluing Donuts into Straws

General Procedures: Mix the epoxy according to procedures (GlueX-doc 1622). All procedures are carried out in the clean room. Standard clean-room procedures apply. Prior to this step, the straws have been checked (GlueX-doc 1532) and cut to length and cleaned (GlueX-doc 1624). Prior to this step donuts have been checked and cleaned (GlueX-doc-1533). This procedure applies to both the aluminum and the plastic donuts where the appropriate glue is used. Aluminum are glued with the $920-\mathrm{H}$ conducting epoxy and the plastic with the DP-xxx epoxy.

Training Procedures: New personnel will watch a trained person carry out this procedure. They will then repeat the procedure under supervision. Given the small number of people allowed in the clean room, no written records of this training are maintained.

Caution: The conducting epoxy is expensive so make sure that more tubes than can be glued are ready to glue. We estimate about 25 tubes per 10-gram bipack of epoxy.

- Make sure donut fits snugly against the end of the straw tube (no gaps between the tubes edges and the lip on the donut)
- Hold straw tube steady and place one thumb on the end of the donut to keep it in place
- Insert syringe needle just inside a glue port (too far in will not allow complete glue flow)
- Start pneumatic pump to begin flow
- Stop when glue starts coming out of opposite glue port (roughly 30 seconds depending on how long it's been in the syringe)

- Make sure the port where the needle was is filled
- Wipe off excess glue, being careful not to leave any in the donuts' inner ring

