FCAL2 Production Preparations.

At present we are setting up “production line”

Arrange production area from acceptance to assembly:

- raw material acceptance
- deburring
- quality control
- cleaning
- assembly

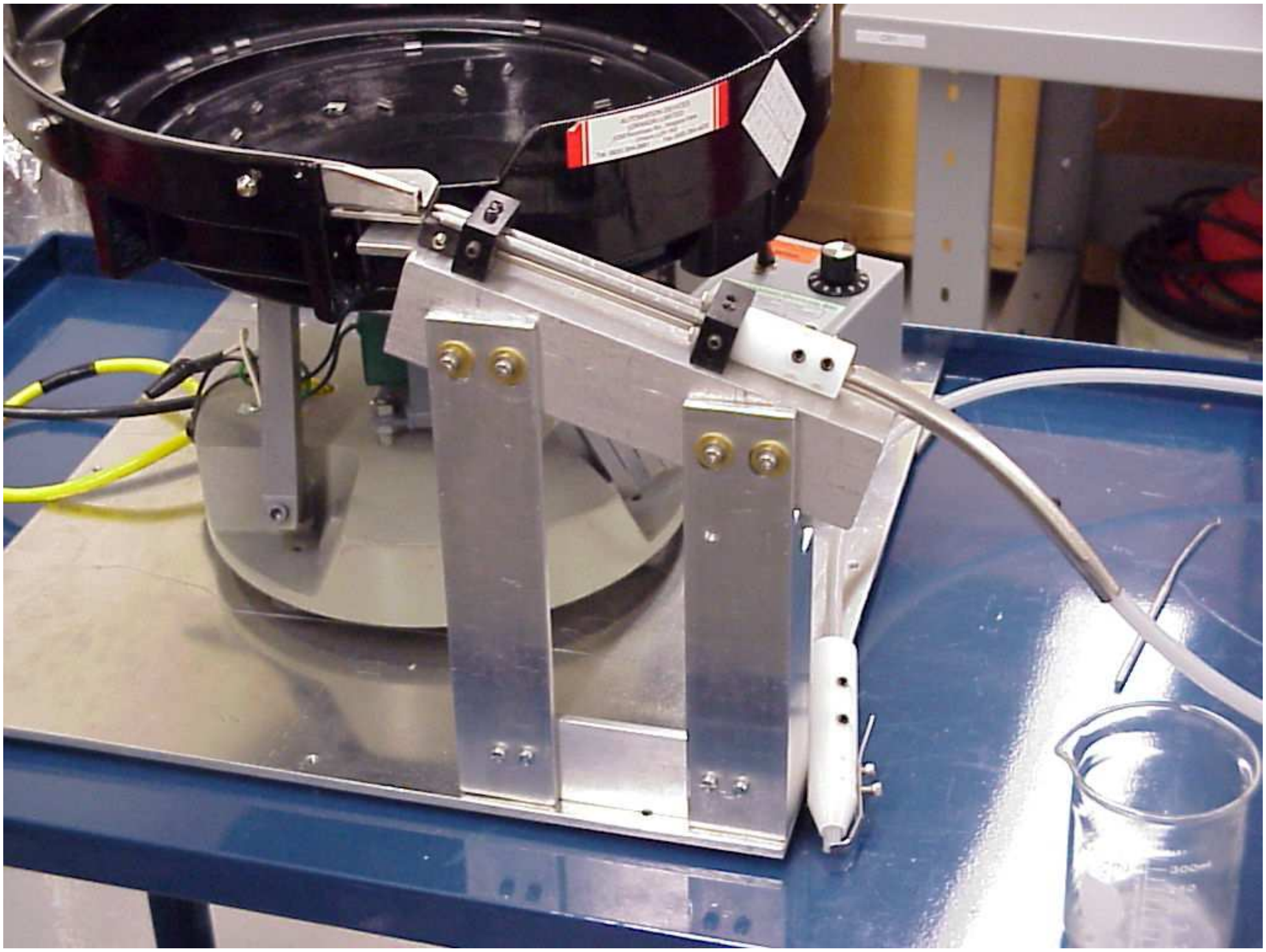
Produce 200 tube/rod assembly

- pass through complete production line
- test for shorts in LN2 (cryostat setup exists)

Re-Assemble maquette

- test slug feeding
- implications for cleanliness

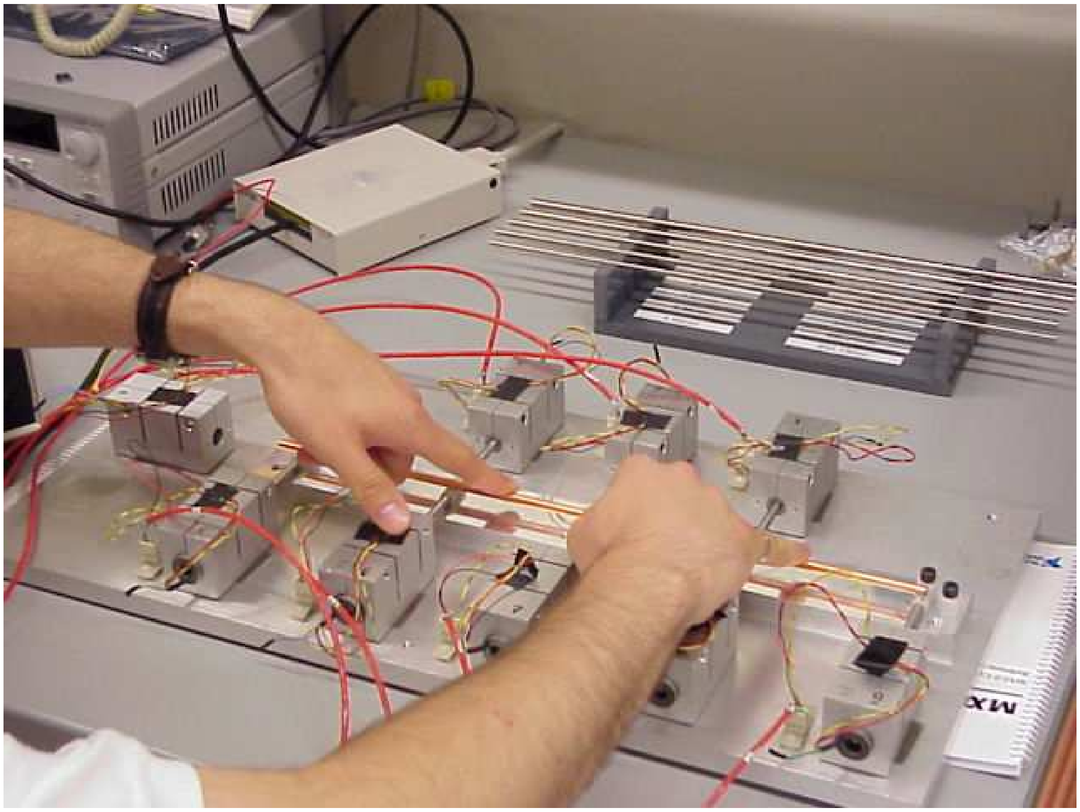
Slug Feeder

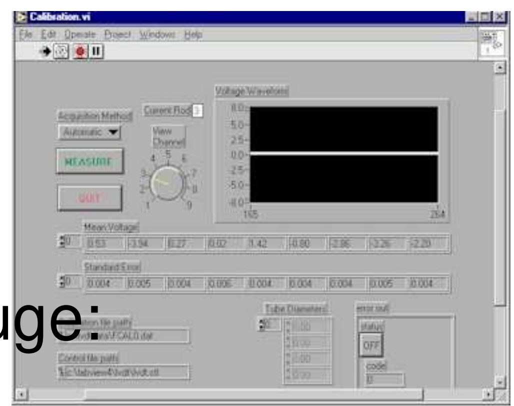


Slug Feeder has been modified:

- Reject slug channel re-shaped
- Final Feed path rebuilt
- Feed path support strengthened

Tube & Rod Gauge

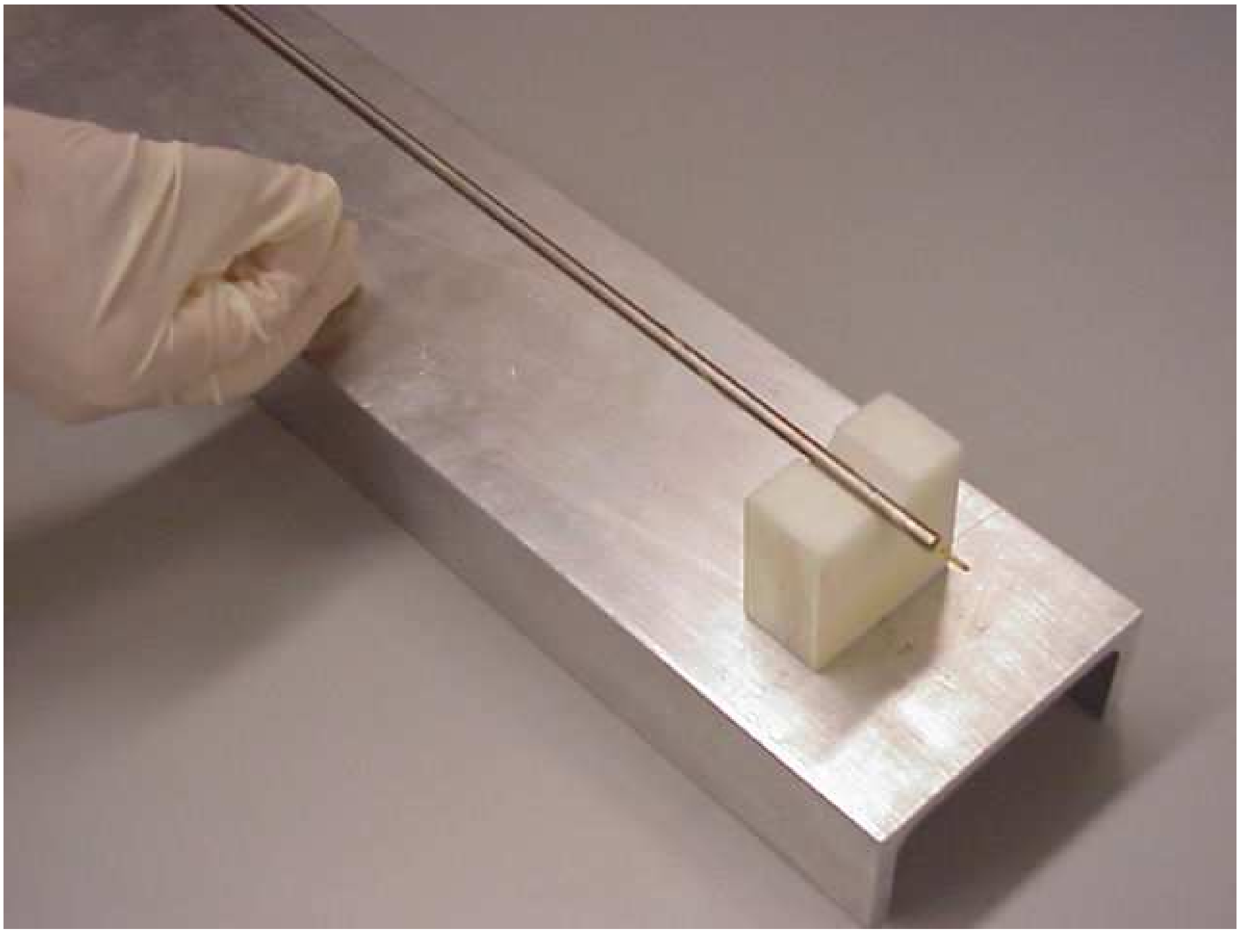




Computer controlled gauge:

- Measure rods & tubes
- Quality Control
- statistics

Fibre Winder



Fibre Winder:

- Powered (motor not shown!)
- will replace Aluminium base with nylon

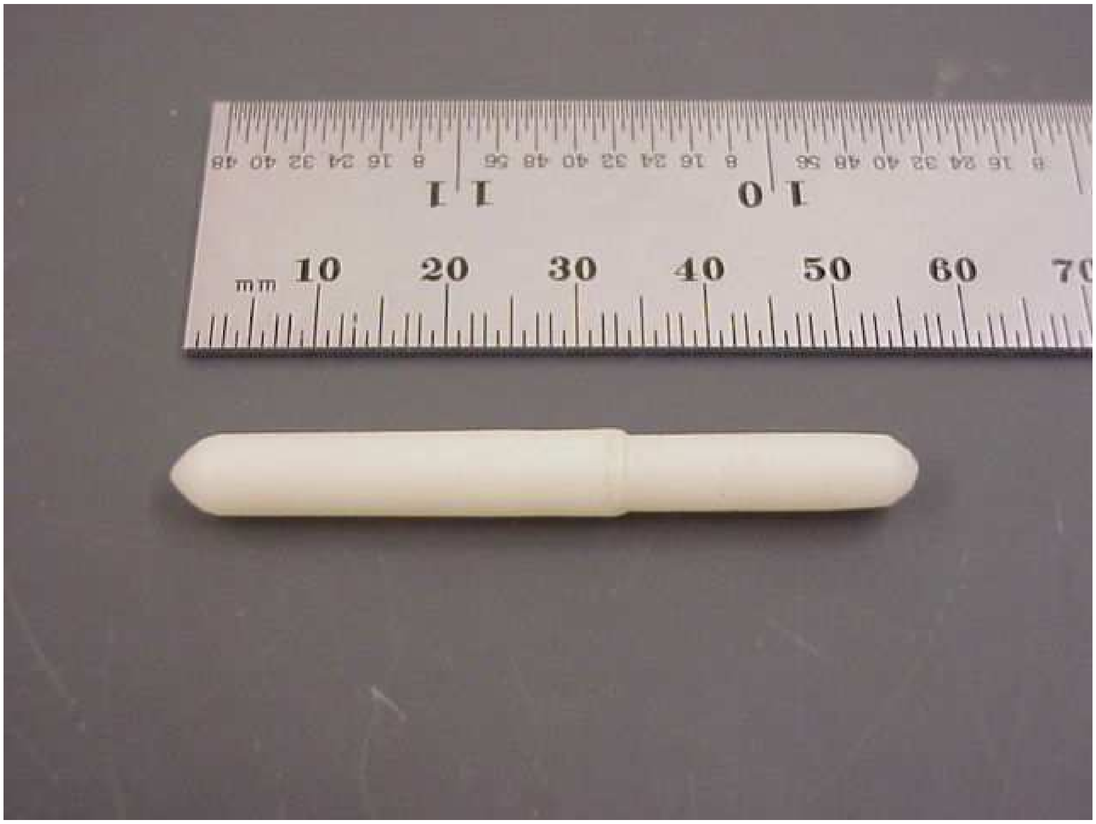
Rod Rack

- Rack for thermoforming fibres
- Rod only in contact with G10
- Will replace alu. from with stainless.

Ultrasonic Cleaning Setup

- Two “solvent baths” sit in main water body
- Metal parts not in cleaning fluid

Tube Bullet



Nylon bullet for guiding tubes through endplates

R.S.Orr - July 1999 LArg Week

Production Site Layout

Work Flow for Copper Tubes

Refer to the drawing of the laboratory layout for locations of operations.

Step	Location	Task	Document
1	Receiving Table	Incoming packages of tubes are received, inspected and openned here.	*Incoming Tube Inspection Process Sheet*
2	Work Bench C	QC check of tubes using Automated Tube and Rod Gauge machine.	*Incoming Tube Inspection Process Sheet*
3	Drill Press	Deburring of tubes.	*Incoming Tube Inspection Process Sheet* *Tube Deburring Process Sheet*
4	Table	Tubes are batched, bagged and labeled.	*Incoming Tube Inspection Process Sheet* *Incoming Tube Inspection Report*
5	Storage Shelf	Tubes are stored here awaiting cleaning.	*Incoming Tube Inspection Process Sheet*
6	Work Bench D	Each batch of tubes are loaded into tube carrying racks.	*Tube Cleaning Process Sheet*
7	Ultrasonic Tank	Ultrasonic cleaning of tubes.	*Tube Cleaning Process Sheet*
8	Work Bench E	Tubes are dryed in convection oven.	*Tube Cleaning Process Sheet*
9	Work Bench E	QC swabs taken. Tubes are transferred from carrying racks to clean bags.	*Tube Cleaning Process Sheet* *Tube Processing Report*
10	Cleanroom	Tubes, in bags are transferred to cleanroom for storage.	*Tube Cleaning Process Sheet*

"Software" Activities @ Toronto

Test Beam :

Start from scratch on FCAL1/2 electrons
Understand other analyses

- analysis program running on UofT SGI
- studied pedestal, noise, bad channels
- studied all cuts
- linearity/resolution

Try to get Peter Loch MC working at TO

"Physics" (ATLFAST)

- got ATLFAST going
- study of SM H -> tau tau (Rainwater)