Acceptance tests for barrel modules

A few milestones:

- First modules are due to arrive in March 03
- Module insertion schedule in spaceframe:
  - First sector (6 modules) in Oct 03 – Last in Oct 04
- It takes about 1 week per module to pass through all acceptance test stations
- One month for HV conditioning per sector
  - We have 16 sectors – do 2 sectors at a time
- We have 96 + 6 modules: 2 years of work for 1 technician – 1 year for 2 full-time technicians

Conclusion: production level must start in July

Module flow in building 154

- **Receive module; enter in database**
- **Check dimensions – rework if necessary**
- **Check wire tension with 16-channel tester**
  - **compare with tension data from assembly site**
  - **mark wires that need replacement**
- **Check HV: continuity, broken wires etc**
  - **mark wires that need replacement**
- **Re-string bad wires if needed – re-seal wires**
- **Check for leaks**
- **Gain mapping**
- **HV conditioning for one month – rework if necessary**
- **Store module in shipping container in building 154**
- **Send to assembly building sector by sector**

Final HV conditioning and checks

- **Will be done at the surface building after all sectors will have been inserted**
- **No rework on individual wires done at this point**
- **There will be no access to services once the detector is lowered into the pit so last checks must be done at the surface**

Human ressources at CERN

- **Technical staff: data taking, repairs, setup**
  - **One highly qualified person in March**
  - **Second to start in September**
  - **Requested 2 CERN Summer students**
- **Physicists: data analysis, coordination**
  - **Myself full-time at CERN**
  - **Fred Kaioumov back at CERN in September**
  - **2 physicists from Hampton and Duke in Fall**
- **Others: consultancy**
  - **Craig Kline: expert with module repairs**
  - **John Callahan: database**
    (here in Sept to work mostly on integration)

General status of the lab

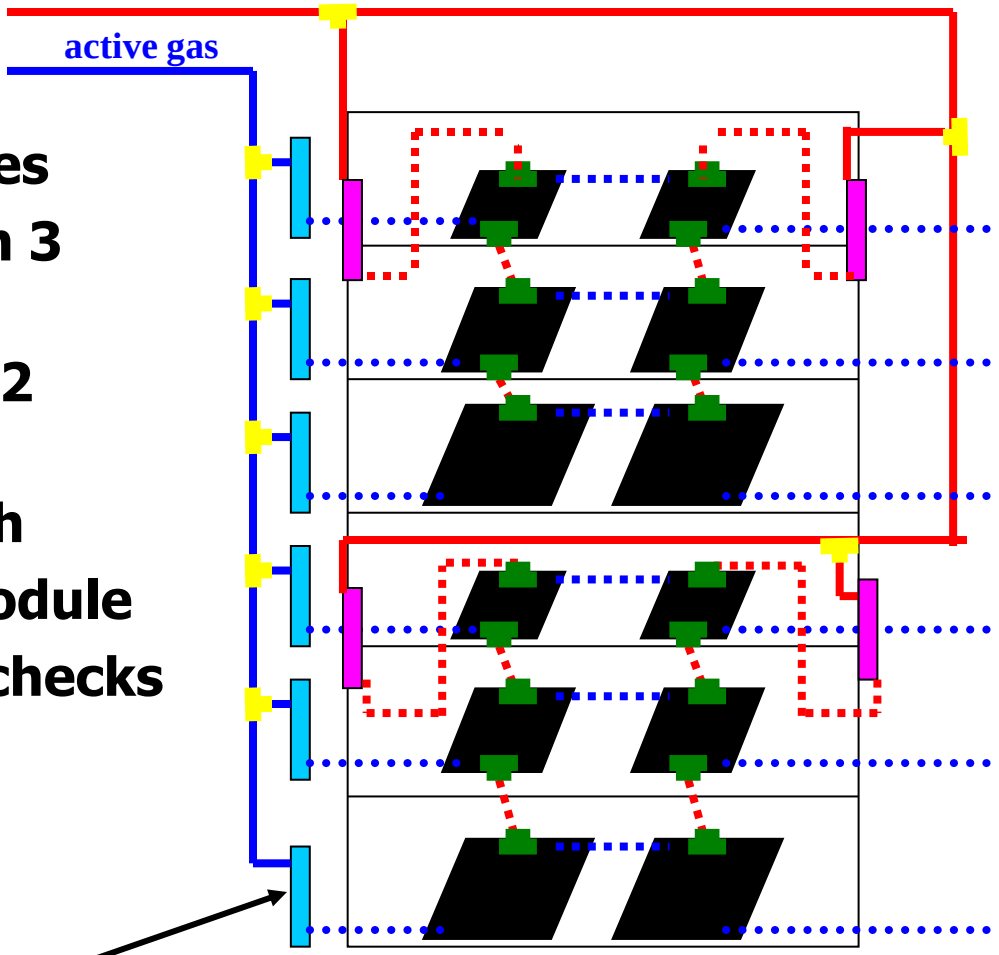
- **All computers/networking installed**
- **General: tools, furniture purchased**
- **All gas lines installed**
- **Most hardware in place and working**
- **Storage rack built**
- **Database in place but needs to be customized**

Overall status of test stations

	hardware	software	database
dimensions	80%	-	0%
leak	100%	50%	50%
16-ch tension	90%	80%	100%
stringing	80%	100%	not tested
HV checks	100%	20%	not done
HV conditioning	in design	20%	not done
gain mapping	designed	100%	not done

Cabinet for HV conditioning

- **Process 2 sectors at a time**
- **2 modules per shelf, 6 shelves**
- **Circulate ventilation through 3 modules: type 1,2 3**
- **Active gas in series through 2 modules of the same type**
- **Condition the HV for a month**
- **Monitor current draw per module**
- **Operate in parallel with HV checks test station**



Gain Mapper Status (Hampton built)

- Design exists: smaller version of Module Test Station
- Software written
- Some parts already purchased
- Construction should start in a few weeks

See Ken's report

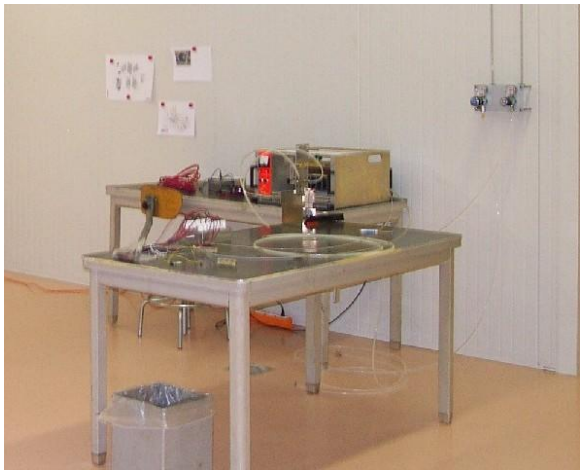
Current look in building 154

16-channel tension tester

Dimension and leak test

stringing station

HV test station



Long-term storage rack

Have rack, need modules