MTA Cryogenics - status
(07/29/05)

Cryogenic System for MTA Solenoid Magnet

- **Fieldwork**
  - Installation of existing LabG Solenoid Magnet transfer lines
  - Instrumentation installation
  - Piping and relief systems
  - Electrical cabling
  - New PLC for Helium and Nitrogen Dewar changes

- **Safety**
  - Engineering and safety documents
  - Safety walkthrough (Friday July 15th)
    - Complete required modifications
Cryogenic system for MTA Solenoid Magnet

Cryogenic System Process and Instrumentation Diagram
Cryogenic system for MTA Solenoid Magnet

- Helium and Nitrogen transfer lines
- Helium cooldown line
- PL cooling and transfer lines
- PLC
Cryogenic system for MTA Solenoid Magnet

- **Cryogenic Safety Review** - Green light and Recommendations
  - Add relief system to MTA Solenoid Magnet vacuum jacket
    - Use 1 inch parallel plate
    - CVI seal-off
    - and thermocouple
  - Update existing Solenoid Magnet LHe vessel EN for fire condition
    - relief system is not modified
  - Provide operational procedures to safety panel

- **Monitor fan operation to maintain Experimental Hall ODH 0**
  - by using a flow switch installed @ duct ventilation flow
  - Design and control issues (PBar example)
  - FIRUS and Quadlog safety PLC
  - MCR: send the operational procedure in case of FIRUS Alarm
Cryogenic system for MTA Solenoid Magnet

Flow switch with intrinsically safe barrier

Electrical switch + Kapton sail
MTA Cryogenics - status

Compressor and Fridge Buildings Piping contract

- Moved and connected
  - Two (2) SULLAIR compressors + 2 coalescers + 1 aftercooler
  - Two (2) purification skids
  - Nitrogen and Helium storage vessels

- Mechanical INC. makes excellent progress to complete installation by August 18th

- Radiographic test (5% of total weld number) - 12 welds
Compressor & Fridge Buildings Piping Contract

From concept ...

SULLAIR compressor set
To reality

Fridge building ➔ Compressor building

Compressor & Fridge Buildings Piping Contract