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Electron Cooling Installation  
(MI31 and MI tunnel work update)

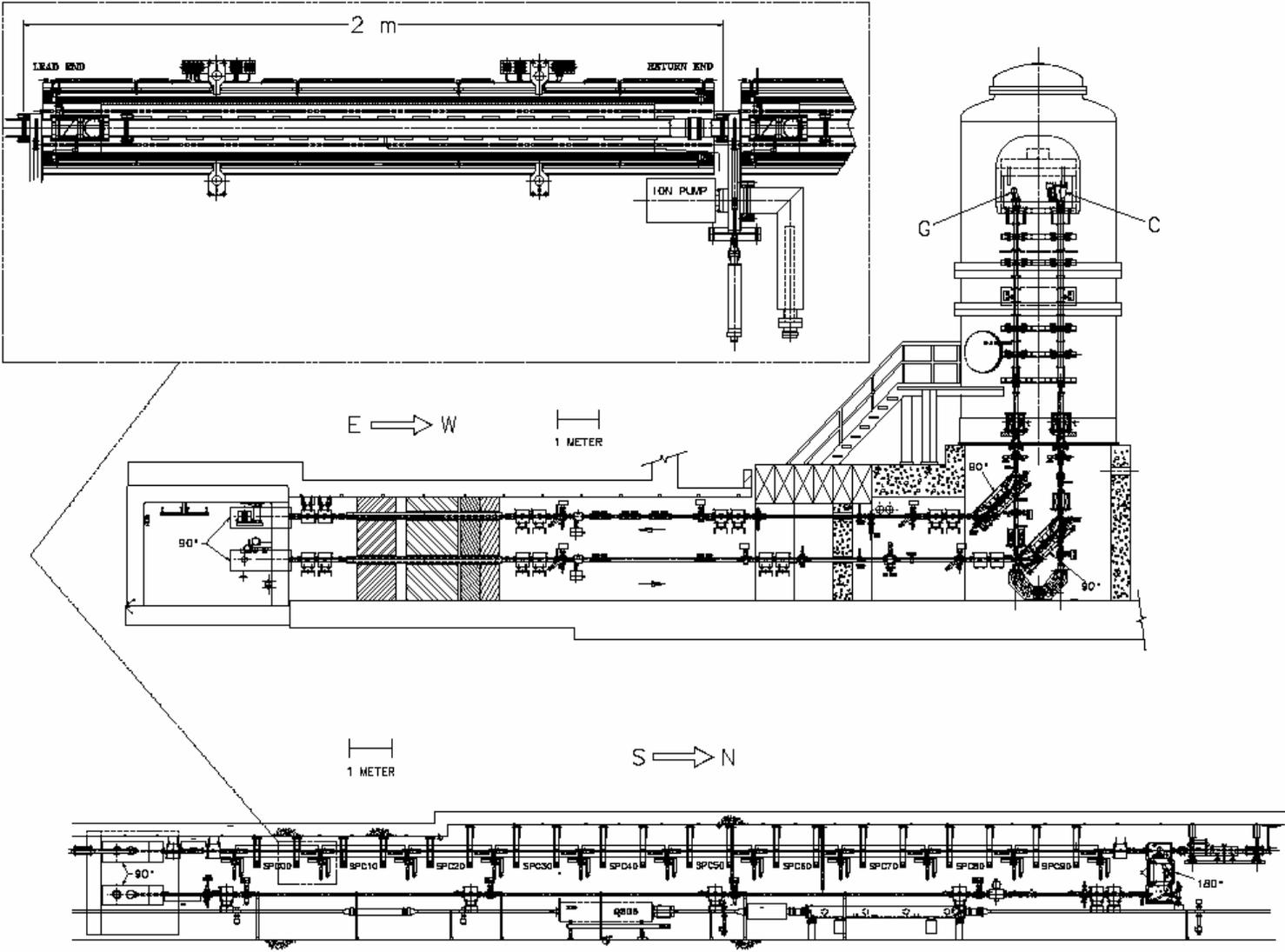
Sergei Nagaitsev

October 11, 2004

Installation AIP is managed  
by J. Sims (FESS) and J. Leibfritz (AD)

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# Electron cooling system setup at MI-30/31



# MI 31 building

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# Pelletron & MI-31 Status

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- Completed Work
  - Pelletron Tank Installed
  - Separator Boxes Installed Up to Mid-section
  - Pressure Test/Certification Completed (moisture)
  - Staircase, Cave, Catwalk, & Ladder Installed
  - SF6 Tank Installed and re-manifolded
  - Counterweight Structure Set in Final Position
  - Electrical Racks, Control Room Nearly Complete

## Pelletron & MI-31 Status - Cont.

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- Not Completed Yet
  - Purify SF6 gas and put in Storage Tank
  - Chiller Operational
  - SF6 Piping/Dryer Installation
  - Connection of Counterweight/Service Platform
  - Cleaning of Inside of Pelletron
  - Remaining Separator Boxes
  - Deck & Terminal Shell
  - Accel./Decel. Tubes
  - Gun & Collector
  - U-Bend Components

# Electron cooling system setup at MI-31



# Electron cooling system setup at MI-31



# Shutdown Status

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- Completed Work
  - MI LCW & BUS Relocated
  - Cables Pulled from MI to MI-31
  - 95% of Magnet/Solenoid Stands Installed
  - Shield Wall/Spool/Mu Shielding/Shielding Rods Between MI & MI-31
  - All Transfer/Supply Line Magnets Installed & Aligned (Most of Return Line Magnets)

# Electron cooling system setup in the MI tunnel

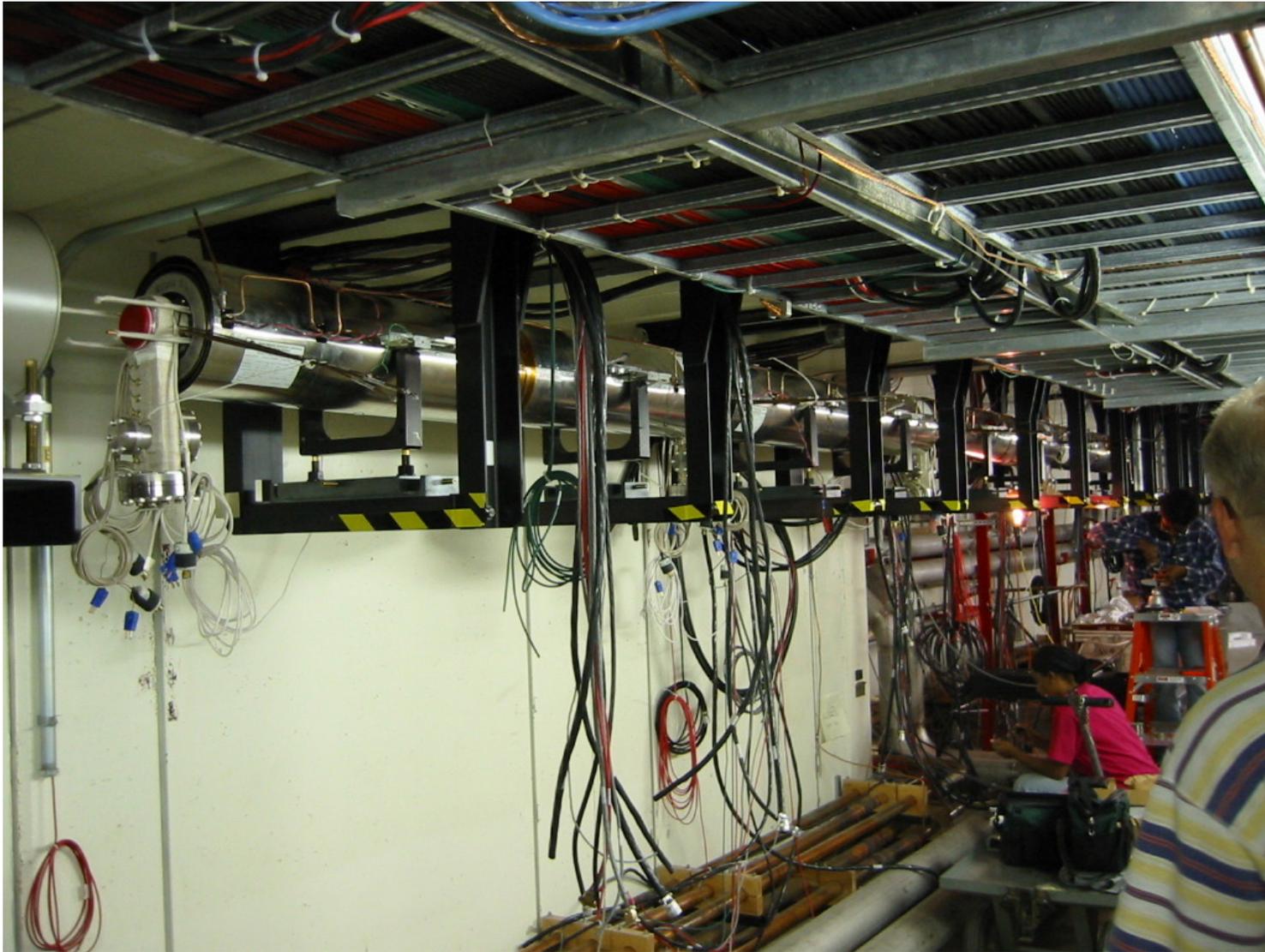


## Shutdown Status - Cont.

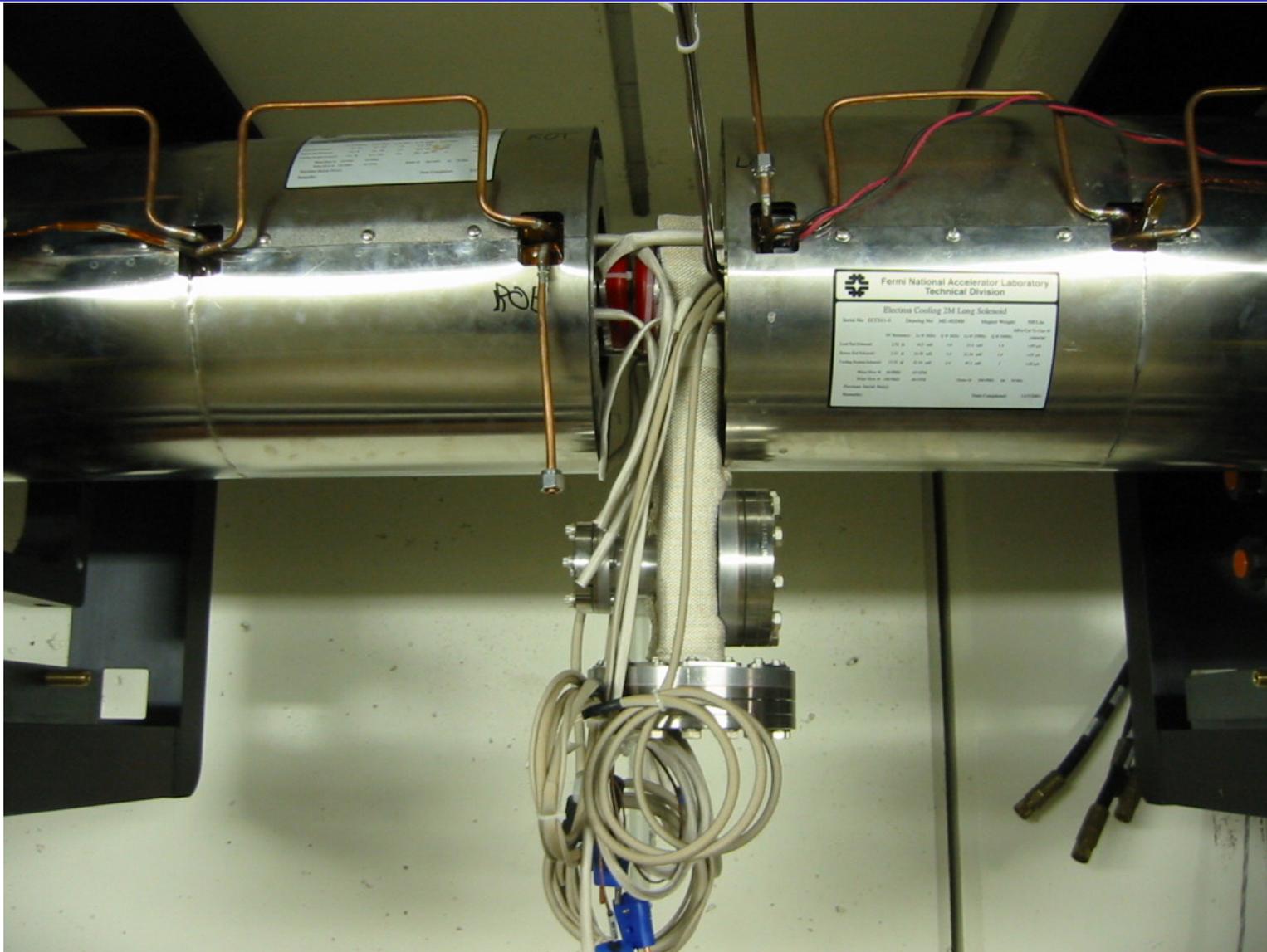
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- Currently in Progress
  - Cable Terminations
  - Chiller Piping
  - Installation/Alignment of Cooling Solenoids
  - Installation of Magnetic Measurement System
  - Transfer/Supply Line Vacuum Installation
  - Safety System Installation

# Electron cooling system setup in the MI tunnel



## Cooling section - solenoid



## Shutdown Status - Cont. (2)

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- Remaining Work (not started yet)
  - Transfer Line Cable Pulls
  - Install Horizontal 90°-Bend Stand & Magnets
  - Magnetic Measurements of Cooling Section
  - Prep. & Install 180°-Bend Magnet
  - Install Return Line Vacuum System
  - Magnetic Shielding Installation
  - Magnetic Shielding of BUS
  - Scraper/OTR/Ion Pump Installation
  - Pump Down/Leak Check/Bake All Vac. Systems

# Schedule

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- MI-31/Pelletron
  - Were 3-4 Weeks Ahead of Schedule
  - Little Effort Lately
  - On Schedule for 2/1/05 Commissioning of the Pelletron
- Shutdown Schedule
  - 7 weeks complete, 6 weeks to go
  - Work is going well
  - Very tight, no contingency for problems
  - Next major milestone -- **Mag. Measurements Begin 10/19/04**