

# PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT



3/17/2011  
Don Lynch



### This Week:

- RHIC Cryo/power supply problems fixed (?)
- Next Access : March 30th ???
- ~~DC wire fixed~~
- Plans for RPC scintillators in N & S tunnels developed
- Prep for FoCal prototype installation
- Continuing mechanical, electrical and gas system support for Run 11
- Plan for shutdown 2011
- Future upgrades support

## Next Week

No scheduled maintenance next week, Next: scheduled maintenance access:

March 30<sup>th</sup> (?)

Continue Prep for FoCal prototype installation (waiting for prototype)

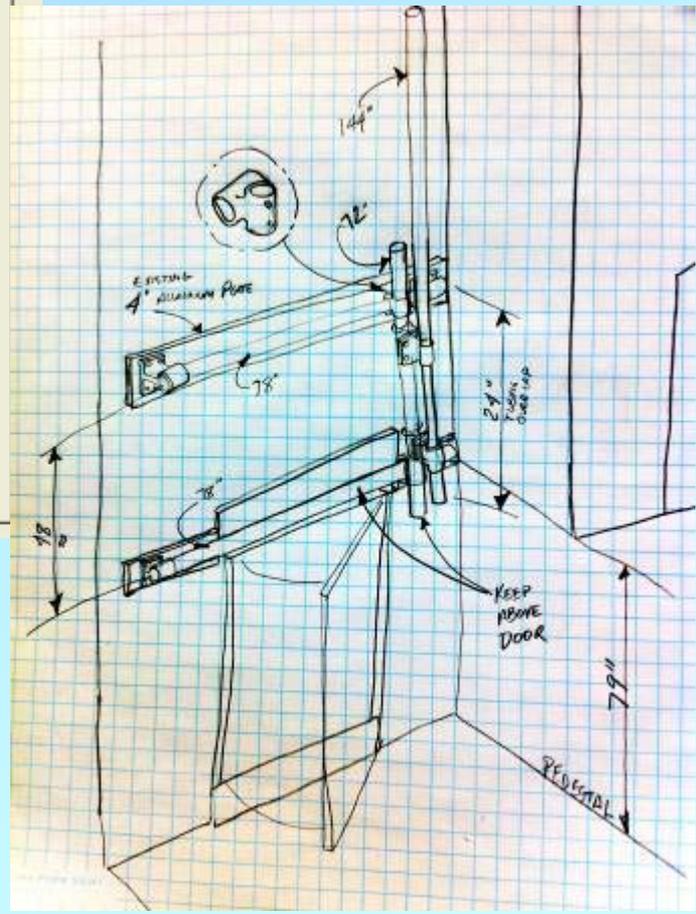
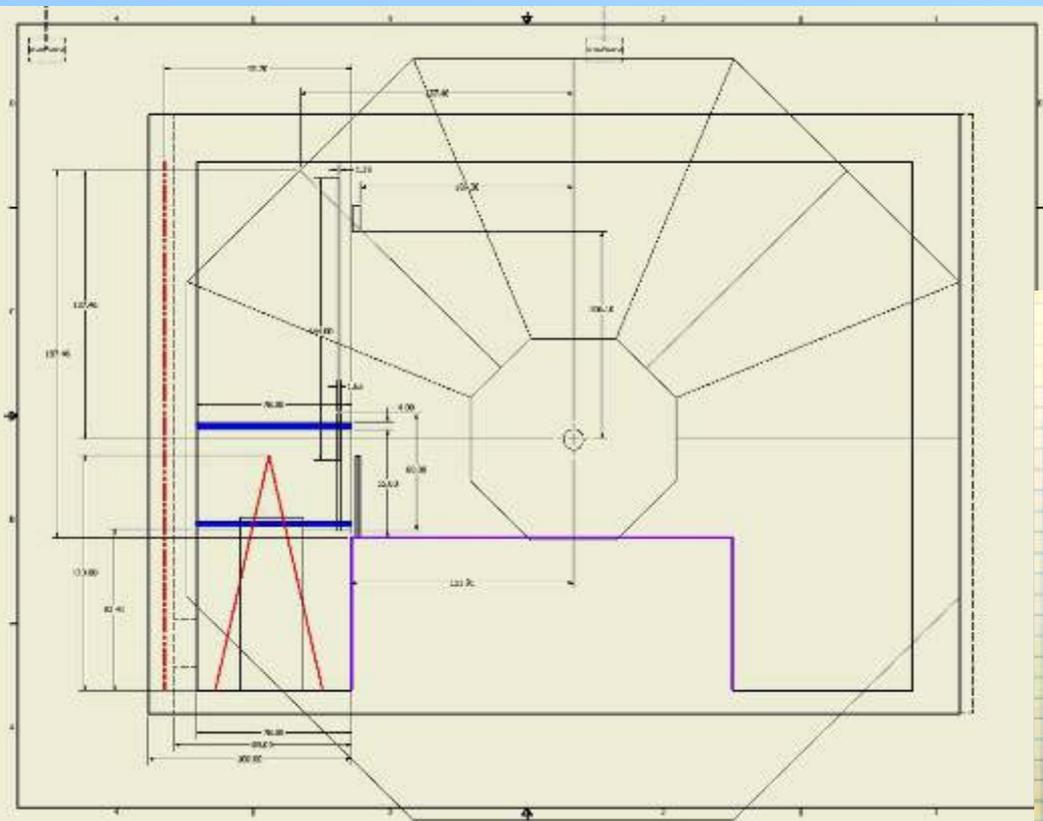
Continuing mechanical, electrical and gas system support for Run 11

Continue planning for shutdown 2011

Future upgrades support

TECHNICAL SUPPORT

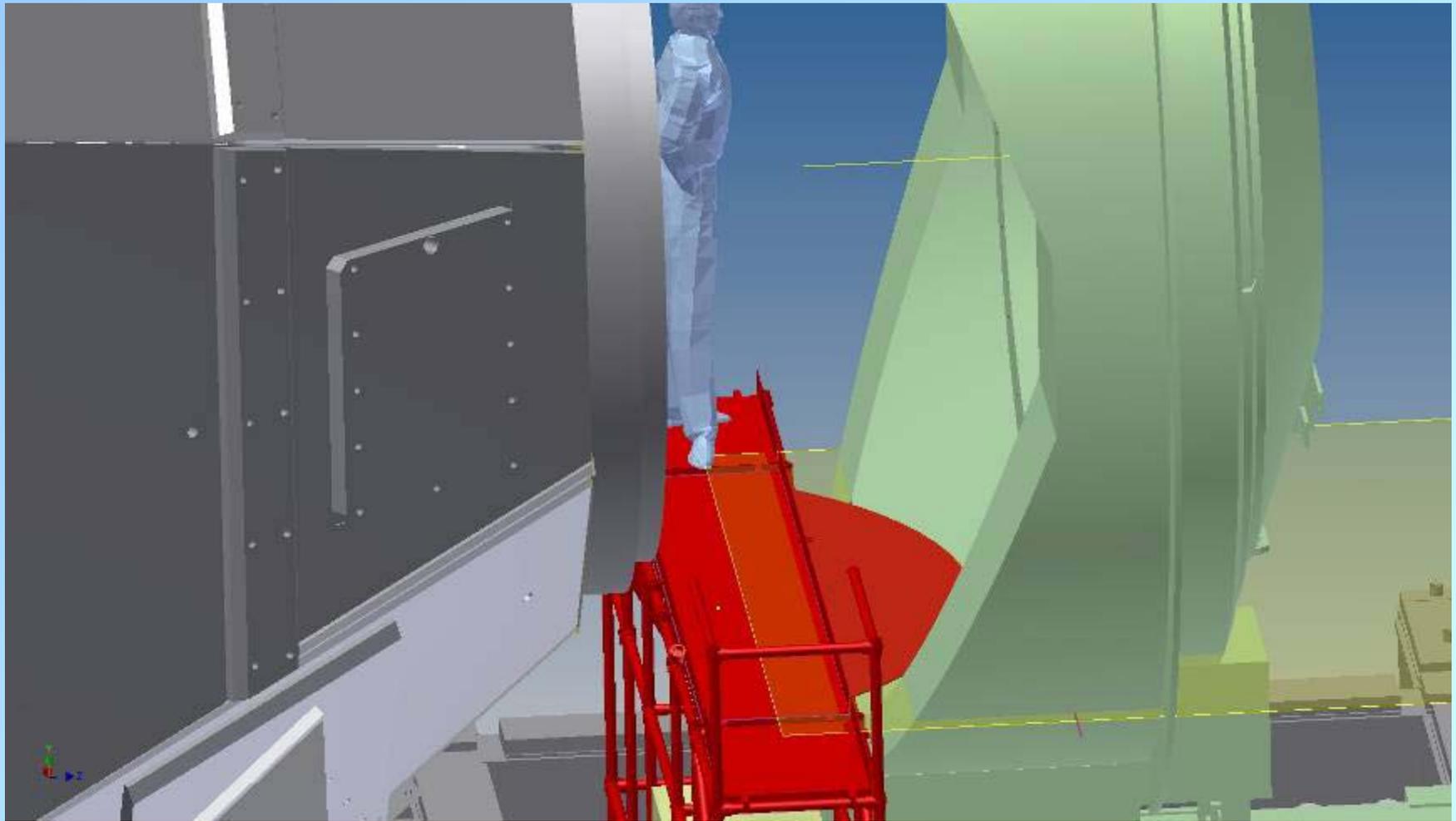
# RPC Scintillator Support



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# MuTr & RPC1 Work platform/scaffold

TECHNICAL SUPPORT NO. 1



TECHNICAL SUPPORT



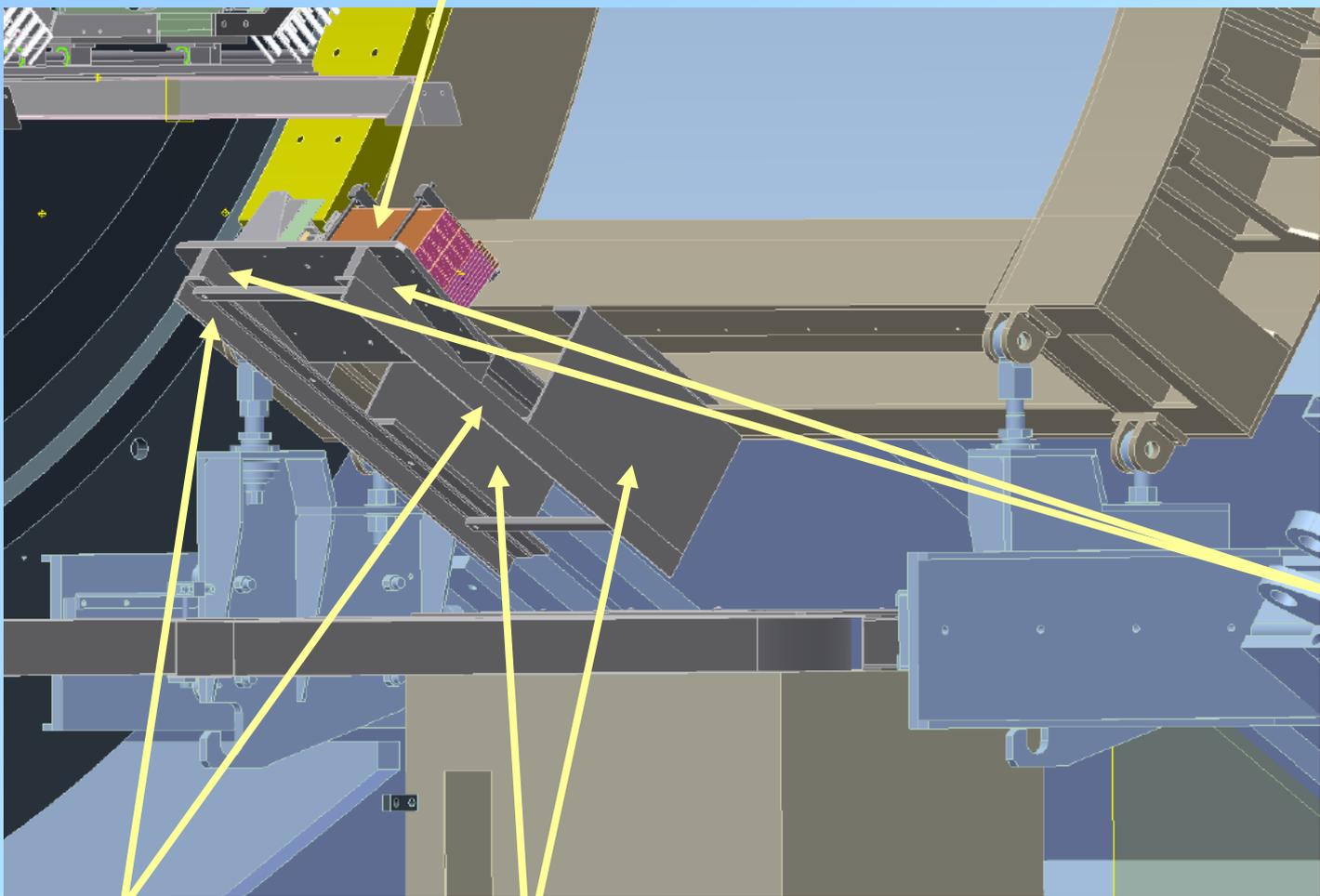
MuTr station 1 lifting fixture



TECHNICAL SUPPORT

FoCal prototype

Focal prototype support



Wedges to aim prototype

Angles to position prototype

10" channels clamped to DC support structure

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TECHNICAL SUPPORT NO. 1



3/17/2011

# Planning For the 2011 Shutdown

- Prep for shutdown 2/1-6/30/2011
  - Define tasks and goals
  - Analysis and design of fixtures, tools and procedures
  - Fabricate/procure tools and fixtures
  - Tests, mockups, prototypes
  - Receive, fabricate, modify, finish installables (bigwheels, tubing, etc.)
  - Review and approval of parts, tools, fixtures and proceures
  - Assembly and QA tests
- Run 11 Ends 6/30/2010
- Shutdown Standard Tasks 7/1-7/21/2010
  - Open wall, disassemble wall, Remove MuID Collars,
  - Move EC to AH, etc.
- Disassemble VTX services 7/11-7/22
- Remove VTX and transport to Chemistry Lab 7/25/2011
- BBC North maintenance 7/22-7/29/2011
- MuTr North Station 1 work 7/25-9/30/2011
  - Install access (scaffold) (1 week)
  - Disconnect Cables, hoses etc (1 week)
  - Remove FEE plates and chambers (1 week)
  - Station 2 Maintenance/upgrade through access opened by station 1 removal (3 weeks concurrent with next task)
  - Clean/install new parts and upgrades (3 weeks, concurrent)
  - Re-install chambers and FEE plates (1 week)
  - Re-cable, re-hose and test (3 weeks)

# Planning For the 2011 Shutdown (cont'd)

TECHNICAL SUPPORT 2011

- VTX maintenance/upgrade and integration of FVTX onto VTX support structure 7/25-9/25/2011
  - Disassemble/repair/upgrade/test/reassemble VTX (3 weeks)
  - Resurvey as necessary (1 week)
  - Install FVTX (3 weeks)
  - VTX/FTX survey and QA tests (2 weeks)
- RPC1 and Absorber upgrades 7/25-10/28/2011
  - Install north absorbers (1 week)
  - Install north RPC1 (3 weeks)
  - Install south absorbers (1 week)
  - Install south RPC1 (3 weeks)
- Install VTX&FVTX (2 weeks) 9/26-10/7/2011
- Undefined detector subsystem maintenance and repairs 7/25-10/7/2011
- Prep for EC roll in 10/3-10/7/2011
- Roll in EC 10/10/2011
- Prep IR for run 10/10-10/17/2010
- VTX, FVTX and RPC1 Services and commissioning 9/16-10/31/2011
- Pink/Blue/White sheets 10/17-10/31/2011
- Run 12 cooldown 11/1/2011

Tools/Fixtures Needed for Shutdown 2011

- FVTX/VTX modified assembly fixture
- FVTX inspection tool(s)
- Modified FVTX/VTX installation/transport fixture(s)
- RPC absorber assembly tool(s)
- RPC absorber installation tool(s)
- Station 1 North scaffolding
- RPC1 assembly fixture(s)
- RPC1 transport/installation fixture(s)
- MuTr vacuum lifter dummy load (for load test)
- MuTr additional lifting fixture(s) (FEM plate)
- Mu Trigger Stations 2/3 North&South access scaffolding
- Mu Trigger Stations 2/3 North&South Assembly/positioning/holding tool(s)

TECHNICAL SUPPORT 2011

- Improved/upgraded VTX part(s)
- VTX assembly(s)
- FVTX support structure
- FVTX big wheels
- FVTX Big wheel mounts
- VTX/FVTX arc cable trays and mounts
- RPC PE&Pb/Li absorber Components (N & S)
- RPC PE&Pb/Li absorber assemblies (N & S)
- RPC PE&Pb/Li absorber mounting structure (N & S)
- RPC1 components (N & S)
- RPC1N assembly(s)
- RPC1N mounting structure
- BBCN wire management modification
- RPC1S assembly(s)
- RPC1S mounting structure
- BBCS wire management modification
- MuTr Repair/Upgrade Parts (including scaffolding)

TECHNICAL SUPPORT NO--

- MuTr Repair/Upgrade Assemblies
- MuTrigger Repair/Upgrade Parts (including scaffolding)
- Parts for Other Shutdown Work
  - Misc. Subsystem Part(s)
  - Gas Mixing House Maintenance and upgrade parts
  - PHENIX Infrastructure Maintenance and improvement parts
  - Gas Pad maintenance/repair/upgrade parts
  - PC1/DC repairs and improvements parts
  - IR Bridge electrical service upgrade parts
  - FoCal Support parts
  - RPC Factory Support parts
  - Rack room upgrades parts
  - CM Crane parts
  - CM Alignment Stop parts
  - Gas system maintenance/repair/upgrade parts
  - Future upgrade support parts
  - MuTrigger Repair/Upgrade Assemblies

## Procedures for Shutdown 2011

- Existing PHENIX General Purpose Recurring Task procedures
- VTX Removal
- FVTX/VTX installation
- VTX Survey
- FVTX Survey
- FVTX Cooling System
- RPC borated PE/Pb or Li Absorber
- RPC1 Installation/QA testing/Survey
- MuTr Maintenance & Upgrade
- MuTrigger Maintenance and Upgrade

### Work Permits for Shutdown 2011

- Start of Shutdown
- VTX Removal
- FVTX/VTX Installation
- MuTr Maintenance and Upgrade
- RPC Absorber Upgrade
- RPC1 Installation
- MuTrigger Maintenance and Upgrade
- End of Shutdown

# 2010 Building Maintenance Issues

TECHNICAL SUPPORT

- Roof leaks in utility bathroom at northwest corner behind tech offices, over door between rack room and assembly hall, over door between control room and elect. ass'y room, southeast corner of IR and laser room.
- General maintenance for Trailer Offices (in progress)
  - Repair replace floor tiling as needed
- Flooding in AH/ Driveway
- New [unclear] connection

## Nothing New This Week



PHENIX Procedure Review Current Status:

147 Procedures Identified

87 Made Inactive (not currently in use, will reactivate if and when necessary, available for re- activate if

9 CAD procedure relevant to the and available on the

43 PH a

9 Prop...ures (never previously formalized) (3 are ready for these will be addressed during next few months.

Nothing New This Week

Web retrieval of latest procedures now available from PHENIX Internal:

[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_procedures.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_procedures.htm)

TECHNICAL SUPPORT ZONE

- 1. RPC Factory annual safety review
  - a) All procedures reviewed and found to be up to date requiring no revisions
  - b) Annual RPC Factory safety system blue sheet testing complete (?)  
(Waiting for IFM to do fire alarm tests)
    - a) Safety walkthru needed, schedule TBD, after blue sheets
  
- 2. FoCal Prototype safety review
  - a) Documents prepared and submitted for review - Done
  - b) Installation procedure and work permit in progress - Waiting for prototype
  - c) Assembly of prototype and design of installation/support structure in progress - wire bonding in progress?
  - d) Expect to install during a maintenance access period sometime in April

BNL Injury Report:

A Contractor lacerated fingers requiring stitches (first aid)

A visitor lacerated fingers on a damaged plastic door handle requiring stitches (Recordable)

An employee injured his arm while cutting a tree in a manlift with a chain saw. The tree struck his arm and he ended up in the hospital for more than 5 days (DART)

BNL management is alarmed at the spike in injuries and suggests the following:

- Inspect your area for objects and surfaces that can cause cuts and lacerations, such as sharp edges & sharply pointed objects. Place guards on pointed objects and foam or vinyl tape on sharp edges when practical.
- When working with pointed tools, equipment or materials with sharp edges, select the right personal protective equipment (PPE) for the tasks. This typically means leather or cut-resistant gloves.
- Choose the right tool for tasks that require cutting or scraping. Many new tools have been designed to limit the risk of cuts from sharp blades. Contact your supervisor to obtain and use these safer tools whenever possible.

## Hand Injuries

Hand injuries are one of the most common injuries at home and at work. Our hands are vulnerable to cuts, bruises, burns, chemical exposure, and even amputation. Before you pick up a tool or turn on a saw, think of all the hazards that can happen and make sure you are prepared.

### What should I do?

Be aware of the hazards associated with materials such as:

- Chemicals (i.e., corrosives and sensitizers)
- Moving machine parts
- Pinch points
- Sharp edges
- Hot surfaces or objects
- Electrical Shock

### Make a work plan

- List all hazards and controls
- Inform and train all people of the hazard



Check for Safeguards/Machine guards

- Ensure all the guards are in place before use of any machinery
- Never remove guards or bypass the machine guards

Wear the right Personal Protective Equipment (PPE), such as gloves, and ask the following questions:

- Does the PPE fit properly?
- Is it appropriate for the hazard involved?
- Will the chemical degrade the glove?
- Will it protect me from extreme heat?

If you incur a hand injury, no matter how minor it may seem, immediately report to the Occupational Medical Clinic (OMC).



# Where To Find PHENIX Engineering Info

## Happy St. Patrick's Day !!



Some fun facts:

Celebrated worldwide: Parades in all 50 US States, the Virgin Islands, and American Samoa, Parades/celebrations in many countries including: US (largest in NY) , Canada (longest continuous in Montreal), Great Britain, Australia, Russia (Moscow parade cancelled this year, but celebrations continue), Ghana (newest parade in Accra), New Zealand, Ireland, Scotland, Wales, Austria, Canary Islands, Croatia, Cyprus, Denmark, Germany, Greece, Hungary, Norway, Italy, Netherlands, Spain, Turkey, China, Japan, Singapore, Korea, Taiwan, Montserrat, Dubai, Argentina, Brazil, Uruguay, France, Monaco, Sweden, Bulgaria, Iraq,

Shortest Parade: Bridge Street in Hot Springs Arkansas (98 feet)

Longest Celebration: St. Patrick's week in Montserrat. (St. Patrick's Day is a national holiday).

Smallest Parade: Enterprise Alabama: 1 person with a pot of gold and an Irish Flag marches past the courthouse and around the Bol Weevil monument. Since 1993.

Coldest Celebration: Bering Sea Ice St. Patrick's Golf Classic, Nome, Alaska 6 hole course.

St. Patrick's Day Parades are banned in Iran.

Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_SSint-page.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm)

