

## **Status of SNS**



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EPICS Fall 02 SNS Status

# **LINAC** and Cryo Building





### Warm Linac Equipment is Being Installed

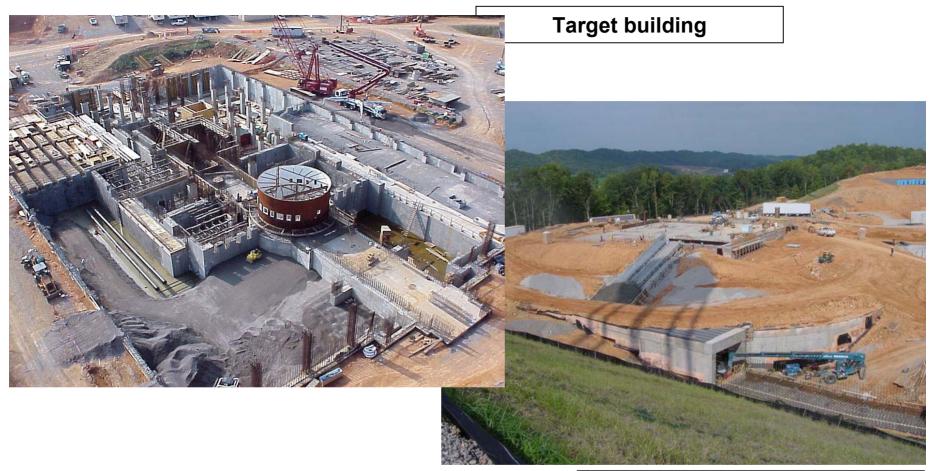
Klystron Gallery with Equipment for the DTL

Linac Tunnel with Waveguide from the DTL and CCL

#### March 13, '02

 First inserts installed before Klystron Building is finished

## **Constuction Is Ongoing**



Ring Tunnel partly under berm

### **Installation Progress**



- Front End is fully operational with the control system and waiting for RF that should be ready this week.
- DTL equipment racks are in place. The control system racks are installed and complete. The instrumentation wiring is not yet underway. The DTL tank is not ready. The LLRF is not ready. IOC racks fabricated and installed.
- CCL control system racks have been delivered. No equipment has been installed into the Klystron building.
- The SCL building is done but the utilities are not yet complete.
- The Ring tunnel is built.
- The Cryo building is complete and ready for equipment.
- The Target building is under construction

### Some Developments Being Supported at SNS



- Extensible Display Manager extensions\*
- Electronic Log\*
- Channel Access Modifications for 3.16\*
- Large Array support
- Multi-priority channel access clients
- Archiver data retrieval and runtime management enhancements\*
- Ethernet interface driver to the Allen-Bradley Control Logix PLC
- Oscilliscope and Waterfall Tools
- eXtensible Accelerator Language with high level physics apps\*

<sup>\*</sup>talks on this topic will be given at this meeting

#### **Some Lessons Learned**



- Naming standards are really hard! Tools are needed to support people
  defining their names. Everyone agrees on hierarchical system,
  subsystem, device, signal. But agreeing on what is a device and should
  there be hierarchical devices. Which perspective is used for naming –
  equipment engineer or physicist? Name aliasing could help handle this
  situation. Epics databases do not carry it, but the gateway, cdev, and
  XAL support this.
- Use of a relational database can be very helpful. Creating the Entity Relationship Diagram is a first small step. Tools need to be available as soon as possible. The warm linac is not using these tools for database configuration. Naming standards can be supported here by helping choose valid name segments – or flag the non-standard ones so that they can be addressed. Perhaps this should be some standard package as it takes a lot of time and thought to create usable tools.

### The SNS Control System is ahead of the game



- We have supported every test stand and vendor site test.
- We are ready for HPRF on the Front End
- The network, personell protection, event link/timing, and machine protection systems are all ready for operation in the front end.
- The diagnostics is operational on the front end and was working to support tests at Lawrence Livermore.