Muon Flux = 0.27/m²/day

2km overburden (6000 mwe)

Surface Facility

Underground Laboratory

MEI & HIME astro/ph 0512125
Laboratory Space

<table>
<thead>
<tr>
<th></th>
<th>Excavation Area</th>
<th>Clean Rm Area</th>
<th>Laboratory Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume</td>
<td>Volume</td>
<td>Volume</td>
</tr>
<tr>
<td>Original</td>
<td>20,049 ft²</td>
<td>582,993 ft³</td>
<td>12,196 ft²</td>
</tr>
<tr>
<td>SNO Areas</td>
<td>1,863 m²</td>
<td>16,511 m³</td>
<td>1,133 m²</td>
</tr>
<tr>
<td>SNO Areas + Phase I</td>
<td>65,340 ft²</td>
<td>1,367,488 ft³</td>
<td>41,955 ft²</td>
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<tr>
<td></td>
<td>6,072 m²</td>
<td>38,728 m³</td>
<td>3,899 m²</td>
</tr>
<tr>
<td>SNO Areas + Phase I &amp; II</td>
<td>77,636 ft²</td>
<td>1,647,134 ft³</td>
<td>53,180 ft²</td>
</tr>
<tr>
<td></td>
<td>7,215 m²</td>
<td>46,648 m³</td>
<td>4,942 m²</td>
</tr>
</tbody>
</table>

- All clean spaces to be operated as Class 2000 clean room.

Fraser Duncan

SNOLAB Workshop 27, 28 Aug 2009
Status

- Since last workshop in October 2008
  - Chiller and sewage treatment plant went operational in Dec 08
  - Commissioned HVAC in all new areas.
  - Rough cleaned and painted Ladder Labs.
  - Relocated personnel area to new refuge station 3 Feb 09.
  - Transitioned to clean room conditions in Ladder Labs 5 Aug 09.
  - Last major Contractor work: Concrete floor in “TAC” drift outside Cryopit; 5 T Monorail beam in Cryopit.
- Continuing operation of the PICASSO and DEAP-1 Dark Matter Search experiments and the PUPS seismology station.
Chiller
Unsealing door to Ladder Labs
Construction Status

• With the “going clean” of the Ladder Labs there is now 40,000 ft² (3,700 m²) of space inside the clean room boundary of the lab. For comparison the surface building is 32,000 ft².

• However the Ladder Labs still require a “fine clean” to bring...
Facility Construction Schedule

- Contractor work almost done (still some “building automation” and fire alarm tasks).
- Remaining work will be done primarily by SNOLAB personnel (with contractors as necessary).
- Next facility construction activities:
  - Fine cleaning of Ladder Labs
  - Installation of services (plumbing, electrical) in Ladder Labs and Cube Hall.
  - Cryopit: prepare and paint.
  - Renovation of old Personnel Area (reclaim for experiments or infrastructure).
Experiment Installation

• Cube Hall
  - Installation of steel work for DEAP-3600 and MiniCLEAN this fall. Contract awarded, construction to begin in September. Will go clean after civil work is complete.

• SNO Cavity
  - Repairs to cavity liner and modification of detector support to hold down the Acrylic Vessel for liquid scintillator.

• SNO Utility Room
  - Excavation of pit for liquid scintillator purification system.

• Other
  - Work as necessary for other experiments such as HALO
Facility Personnel

• Nominal staff of ~40 including scientists, engineers, technicians, cleaners, admin, IT.

• New Hires
  - Project Engineer, Tom O'Malley (started 4 Aug)
    • Will be working on installations for DEAP-3600, MiniCLEAN, SNO+ and others.
  - Process Systems Engineer, Allan Barr (starts 31 Aug).
    • Will be maintaining the SNOLAB Ultra Pure Water Systems as well as participating in the installation and
Summary

- Major laboratory construction complete.
- Most spaces now under clean room conditions.
- Now preparing for the Day 1 experiments
  - Civil work in Cube Hall starts next month.
- Time to do some (more) science.
End