

20 KT DUSEL LAr Detector, Model B - Preliminary Layout

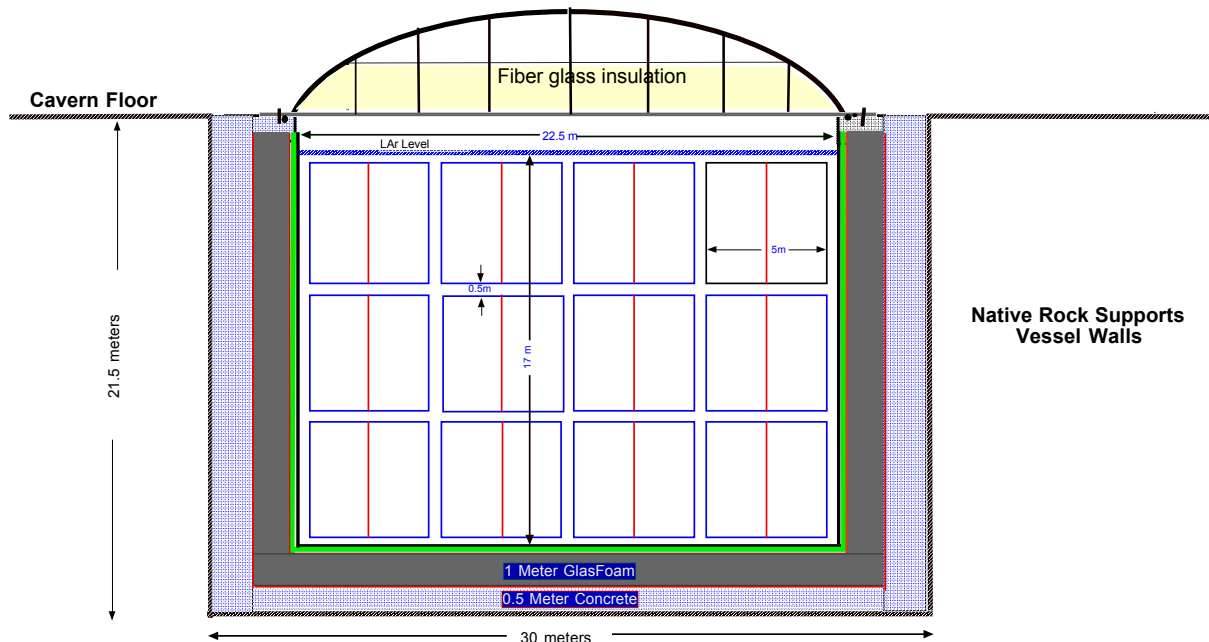
John Sondericker 8/05/09

Shown - 48 dual TPC detector basic units

$5\text{m} \times 5\text{m} \times 40\text{m} = 12,000\text{ m}^3$, 16.8 kt active volume LAr

$22.5\text{m} \times 17\text{m} \times 42.5\text{m} = 16,256\text{m}^3$, 22.76 kt Total LAr volume

Active / Total Volumes = 74%



Inner containment vessel corrugated Stainless Steel or Invar, Inner wall dimensions are fixed. Green is 3/4 inch plywood backing. Red is capping material for foamglas insulation.

Dark gray is 1 meter thickness of foam glass insulation which is also used as secondary containment of LAr.

Outer blue is reinforced concrete, 0.5 meter at base to support hydroststic head and vessel pressure loads...

Vertical concrete fills gaps so that vessel walls are supported by native rock.