New Folder Name ISOLATION STACK LOCATION

L. Jones
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ISOLATION STACK LOCATION CONSIDERATIONS: TEST MASS CHAMBER, TYPE II AND DIAGONAL CHAMBER

LOW STACK

Isolation Stack Below Beam Line: traditional "optics bench" or table, with components clamped to its top and resting on it.

Pass-Over: when components are being moved about on a densly populated table the "low stack" may have an advantage in allowing virtually unlimited clearance overhead for passing components over those already installed. This assumes use of modular, integrated suspension/OSEM cage design of suspended components. If the suspension and OSEM cage are separated (such as is shown in Fig. VI-B-9, p. 37, "Information for Potential Contractors") both pass-over and pass-under are denied.

Floating personnel: working over the center of a densly populated table requires that workers be "floating" over the components. This could be implemented by a "diving board" type temporary fixture, or an inverted-position sling, for example. A disadvantage of this plan is that items dropped by workers will fall toward the components, causing possible damage or contamination.

HIGH STACK

Isolation Stack Above Beam Line: inverted "optics bench", with components clamped to its bottom and hanging from it.

Pass-Under: the "high stack" allows a certain amount of passing components underneath components already installed, but this clearance is limited (approximately 21") and may not be sufficient for taller components. In that case, the components may have to be passed around, or be removed from the chamber and installed from the other side of the chamber. Within an open 60" center down tube, passing over components is technically possible but may be impractical due to support structure clearances.

Floating components: this plan requires that the components hang under the table; gravity is not sufficient to keep them in place while installing. A positioning jack would serve this purpose. Workers have support from a work platform below, and more comfort and mobility than when "floated." In this plan, falling components/parts are a safety consideration.

Mechanical noise: integrated suspension/OSEM cage design will likely have quieter OSEM heads than suspension mounts, as the OSEM heads are closer to the cage mounting plane. This situation is likely preferred to the high stack situation, as the suspension wires may remove 90% of any motion.	Mechanical noise: integrated suspension/OSEM cage design will likely have quieter suspension mounts than OSEM heads, with the suspension mounts on the same block as the cage mounting plane.
Station floor: trenching required.	Station floor: flush.
Future stack height growth: deeper trench, added chamber spool required.	Future stack height growth: incremental dome spools or higher roof required, added chamber spool required.
Servicing (adjusting OSEM head positions, locking/unlocking earthquake stops, inspecting mirrors, etc.): some of these tasks may be blocked by suspension components. Suspension points are more accessible than those mentioned.	Servicing: the items involved with tasks mentioned at left are typically near the beam line; the high stack design allows closest personnel access to the beam line area. Suspension points are probably the least accessible.
Stack support stability: shortest pedestals, more stable.	Stack support stability: taller pedestals, less stable.
Air shower design: specific protection will be needed for components (see "Floating personnel" above).	Air shower design: air curtains at 60" ports may be sufficient.