

# **Discussion/Suggestions for ArgonCube Module Design**

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Kathrine Cipriano, Mike Zuckerbrot, Frederick Schwartz, Sai Manohari Kancharla

- Bellows on the feedthroughs in the vacuum space? Only on flowing lines that can get cold: [LAr return to the module](#).
- Mirrored surface on vacuum space bottom surface? 20-30 layers of MLI or a mirror finished surface are acceptable.
- How thick should the vacuum space be? Thickness should depend on keeping the outer surface above dew point temperature based on conduction through the side walls. ANSYS Thermal analysis.
- Insulation on non-jacketed surfaces on top plate? A few inches of foam insulation would be a safe bet and would cut down on system heat load (outside or inside cryostat).
- Separation of liquid purification path into two (require more discussion): one for liquid from ArgonCube modules and the other for the cryostat main bath.
- Relief valve vent line: researching code-allowable options (i.e. adding a compressor downstream of the relief valve).