

**From:** O'Connor, Thomas P. toconnor@anl.gov 

**Subject:** RE: bEMCAL Installation meeting Questions

**Date:** August 21, 2025 at 15:44

**To:** Wimmer, Roland rwimmer@bnl.gov, Joosten, Sylvester Johannes sjoosten@anl.gov, Bailey, Kevin G. kevin\_bailey@anl.gov

**Cc:** zisis.papandreou@uregina.ca, Bazilevsky, Alexander shura@bnl.gov, Sharma, Rahul rsharma@bnl.gov, Cacace, Daniel dcacace@bnl.gov, Aschenauer, Elke elke@bnl.gov

Hi Roland,

Most of those tapped holes on the outer plate are for sector construction and transportation. When building the sector there are long steel bars attached to the outer plate and they support the sector on the press. They are also used for lifting. Take a look at the attached images 5541 and 5543 to see what I mean. These bars come off when it's time to build the barrel. A different subset of these tapped holes are used for manipulating/orienting the sectors and orient in order to build the barrel. For GlueX there were two clamp-like devices that grab the sector and two chain-falls can rotate it about the long axis to orientate it properly for placement in the barrel. This is shown in images 013 and 014. We're committed to using the bars under the top plate but not necessarily so for the clamp/chain-fall approach.

I don't see any problems with adding more holes. We can even re-position some of the existing ones if that helps.

The pockets can be made deeper if necessary. The pocket idea also comes from GlueX. At some point in the past Dan designed a joining plate to connect the sectors that bolted onto the back of our outer plate. That might be a good alternative to consider.

Good catch on the screw length! If we stick with the pockets we can make them longer or perhaps put a threaded insert in the hole on the adjacent sector and eliminate the nut.

Take a look at the pictures and we can discuss this in greater detail tomorrow.

Tom

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**From:** Wimmer, Roland <rwimmer@bnl.gov>

**Sent:** Thursday, August 21, 2025 12:18 PM

**To:** Joosten, Sylvester Johannes <sjoosten@anl.gov>; Bailey, Kevin G. <kevin\_bailey@anl.gov>; O'Connor, Thomas P. <toconnor@anl.gov>

**Cc:** zisis.papandreou@uregina.ca; Bazilevsky, Alexander <shura@bnl.gov>; Sharma, Rahul <rsharma@bnl.gov>; Cacace, Daniel <dcacace@bnl.gov>; Aschenauer, Elke <elke@bnl.gov>

**Subject:** bEMCAL Installation meeting Questions

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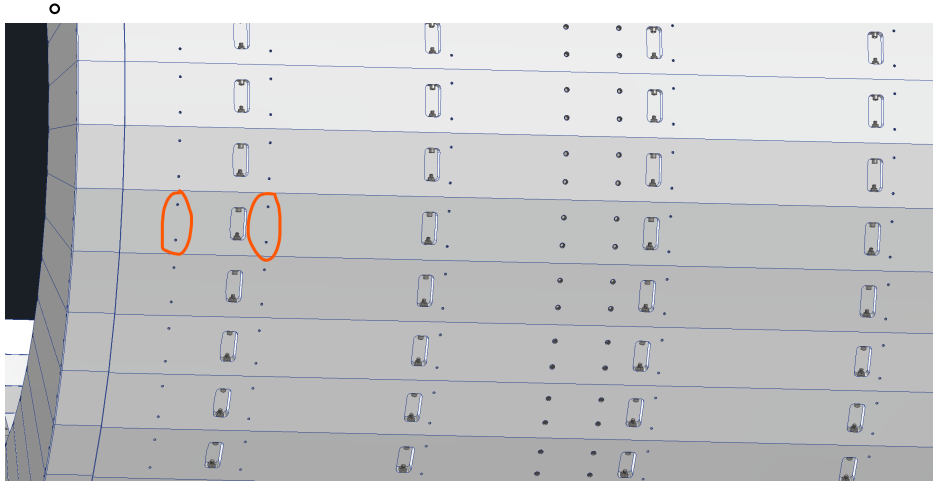
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Hi All,

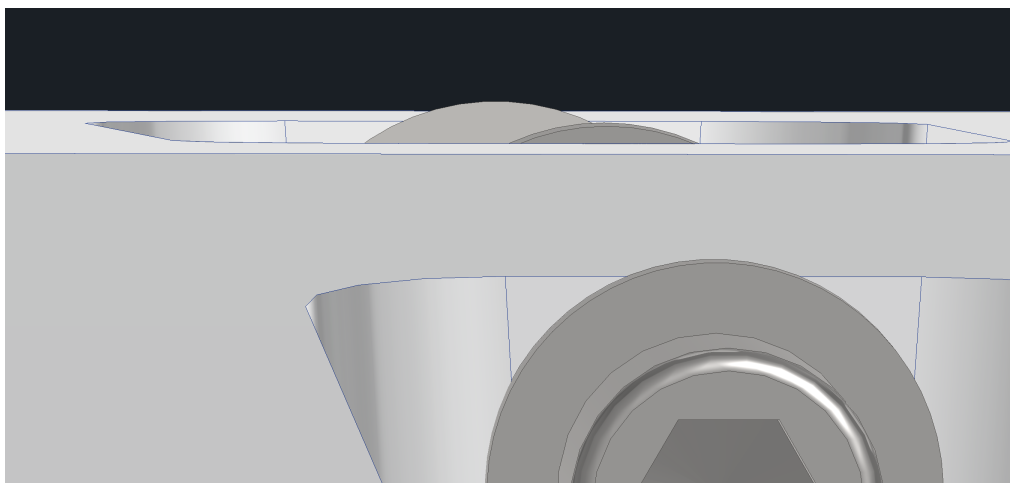
We had a short meeting today amongst ourselves to talk about the BIC support and install. We came up with a list of questions / concerns that we would like to discuss tomorrow and

we wanted to share them ahead of time.

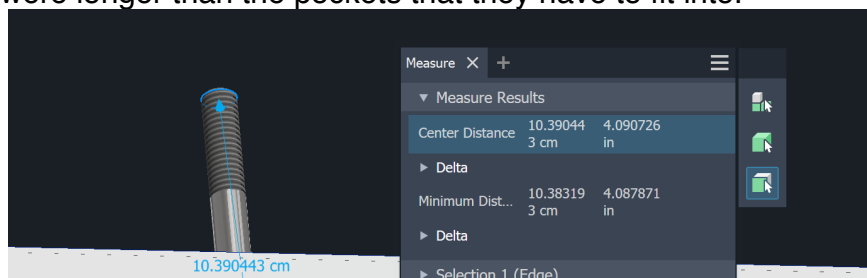
- How do you plan on moving / lifting the sectors? We have assumed that the threaded inserts on the back will be used with some other tooling for lifting, is this correct?
  - Is this lifting method compatible with installing the sectors next to one another?
- Has analysis been done on the barrel EMCAL to confirm that it is entirely self-supporting?
- What are the additional tapped holes for?

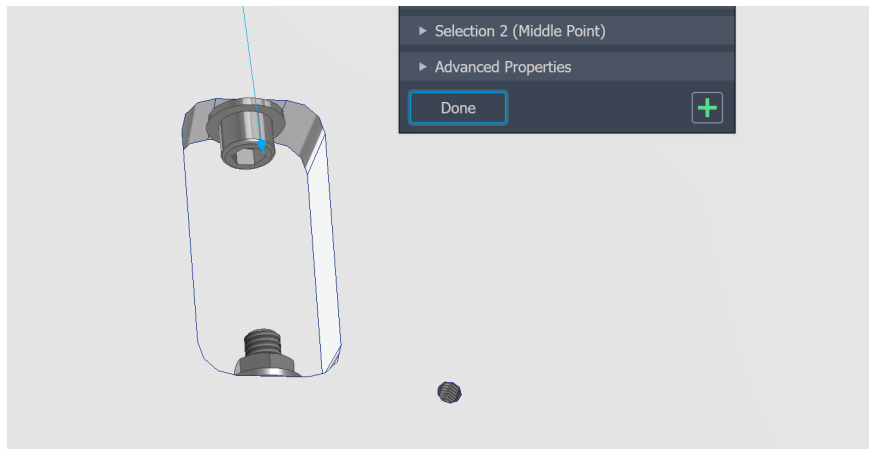


- We would like to add more of the 1/2" tapped holes along the length of the detector in a similar pattern to what already exists. They will be used to attach the support structure to the emcal. IS there any issues or concerns with this? Also can they be made 5/8"?
- Can the pockets be made deeper such that the washers don't stick proud of the face?



- While looking at the model today we noticed that the bolts that connect the sectors were longer than the pockets that they have to fit into.





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Thanks,  
Roland









