

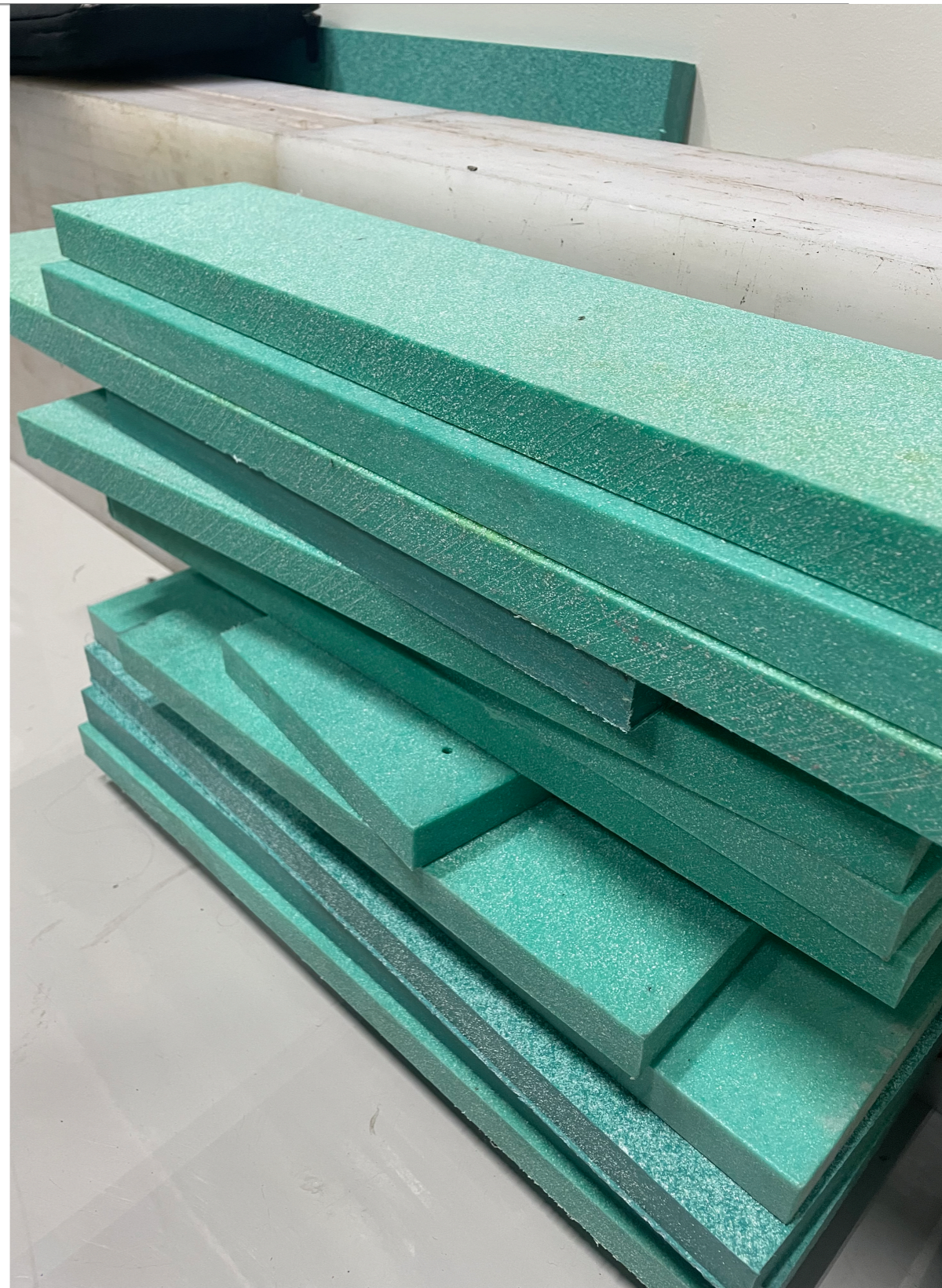
Shielding @ TRIUMF

Kate Pachal

- This is going to be very short
- Basically using this talk as an opportunity to take an inventory of what materials we have on hand so we can see if it's enough to build what Ethan showed, and how much work it will be to shape it
- Essential items are lead, borated poly, & concrete
- Also comment on status of electronics shielding hut - here there are more open points, unfortunately

Available borated polyethylene

- What we have right now: mostly small-ish pieces.
- ~ 18 pieces, 1 inch thick, around 4 to 6" wide by 20" long
- Total surface area: ~ 12 square feet
 - Wolfram Alpha informs me this is 16 Domino's pizzas
- No larger pieces right now



Available un-borated polyethylene

- I don't *think* we want this, but just in case, there's lots.
- Stash #1: 6 blocks of 3" thick and around 15 x 20 inches surface area.
- Stash #2: lives inside the large shielding block that we will be removing from the e-linac section where DarkLight will go. Roughly 95 square feet of 1" thick pieces.



Available lead

- Probably the most important one, since it'll be the most annoying to alter the shape of
- Stash #1: 6 one-inch-thick sheets, 2 feet x 2 feet. Useful for shielding around chamber?
- Stash #2: ~ 95 square feet of quarter-inch sheets from the large shielding block downstairs. For detector shielding?
- Current model has 1 cm lead around the GEMs (I think). How precisely tuned is the weight? Is half an inch OK instead?



Available concrete blocks

- Concrete shielding needed for the electronics hut in the e-hall
 - Need: 11 standard 6-foot blocks and 8 “suitcase” blocks (1' x 2' x 3')
 - Doug Preddy has set these aside for us. I wasn't able to find them to take a picture but they should continue to be available as long as ARIEL hasn't stolen them while our backs were turned
- Ideally no more concrete needed, as it's a highly coveted commodity around here

So can we build the electronics hut?

- Sadly no, at the moment.
- What we are missing: electrical work. Specifically, need to get electrical outlets added to the design, and we are having a hard time getting that done.
 - Can't construct it until building drawings include electrical
 - Can't currently get it added
 - Have requested six 15-V sockets (probably a standard group of 4 and a group of 2)
- Mechanical design is complete and all the rest of equipment is available, so once we can un-stick bottleneck with electrical we could install it

~~Discussion~~
Lunch