

Update Mar 3, 2022

1. If the cavities perform as expected after this install during this SAD then then the Hall C 5 pass energy is 10.544 ($E_{\text{linac}} = 1.047$) . But there will not be much head room. They will be doing RF recoveries to keep the gradient up. But it is possible over the long period that won't be enough and need to reduce the linac energy to 1.026 . Also since Hall A is off until Sept 1 , the accelerator could run at the highest possible energy and when Hall A
 1. Pion form factor most effected, so moving forward to start would make sense.
2. The 48Ca target needs to be fabricated. Dave Meekins is still in the planning stage.
 1. It would be good to give time so that it can be successful with a reasonable timeline.
 2. Running the 48Ca later in the run period would make sense.
3. The present beam dump limit is 0.9MW. There is also total current limit for the cavities.
 1. When Hall A runs starting in Sept that limits Hall C to 60uA.
 2. In principle at beginning in June, since Hall A is not running, Hall C could take 80uA.
 3. So best to have experiments (or parts of experiments) that need larger beam current early to be most efficient.
4. Dave Meekins has a new target ladder design to maximum number of targets on ladder. It would allow ladder to have 12 targets + hole target.

	PAC days	days		
Pion LT	29	58	6/9/2022	8/6/2022
Target/beam pipe		7	8/7/2022	8/14/2022
CAFE	4	8	8/15/2022	8/23/2022
x>1/EMC (Lh2)	26	61	8/24/2022	10/24/2022
switch		2	10/25/2022	10/27/2022
x>1/EMC (He)	22.5	53	10/28/2022	12/20/2022
x>1/EMC (He)	6.5	18	1/16/2023	2/3/2023
switch		2	2/4/2023	2/6/2023
Deuteron	18	36	2/7/2023	3/15/2023

- Very rough schedule. Just to give idea about how it would fit together.
- Moved pion LT will use the current target config and small angle beam pipe.
- After pionLT,
 - changeover to new target config (cells good for He as well as H) with new design target ladder
 - Change to new beam pipe with min angle for SHMS=7.5 and HMS 13.5
 - Will need to do some small angle Lh2 elastic for CAFÉ during pionLT
- The date of the switch between LH2+ladder1 to 3He+ladder2 is up to experiment
- Scaled x>1/EMC time by 7/6. Deuteron time is not scaled, because hoping that it will be more efficient since less kinematic changes.