

Experimental Readiness Review Results and the Jefferson Lab Beam Schedule

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Personal note

I know reviews, making special presentations, answering safety questions. etc. is a lot of work, but please always remember that our collective goal, both of the collaboration and the review committees, is to make sure the experiment is successful.

I was an observer of the K-Long Facility phase-I review and I was very impressed with your collaborations preparations and the very professional manner you all treated your review.

Please keep up the good work!

Recommendations from Phase-I ERR Review

1. Complete a bottom-up cost estimate (30% accuracy) and deliver to Physics Division management by the **end of September 2023** – prior to awarding any major procurements.
2. Work with lab management, including RadCon, to document requirements for decommissioning and disposal of the KLF apparatus and incorporate this information to develop designs that are compatible with required timelines for removal and disposal of equipment. Make all efforts to obtain this guidance from lab management by the **end of September 2023**.
- 3. Proceed with detailed engineering work.**
4. A report of relevant beam studies results from the 2024 run period should be delivered to Physics Division management by **June 2024** (compatibility with MOLLER). **(note: Laser work has already started and tests planned.)**

5. Perform time-dependent and thermal cycling (e.g. from beam trips) simulations of targets (copper and beryllium) and blockers (tungsten) that receive high (kW) power deposition to assure that thermal and mechanical performance is adequately understood. Fatigue, cracking, etc. Provide report to Physics Division management by **June 2024**.

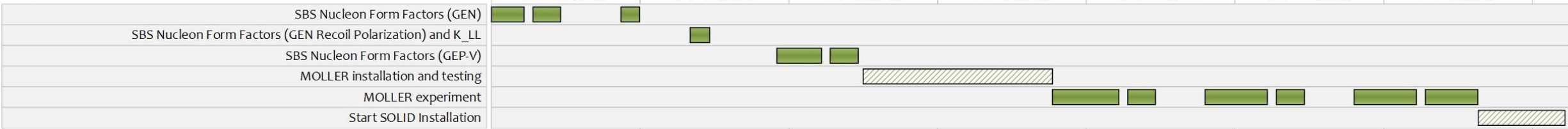
6. Include residual field from dipole in beam optics calculations and determine extent of degaussing that will be required to operate KLF. Provide report to Physics Division management by **March 2024**.

7. Perform an FMEA including safety assessment of off-normal events, e.g, cooling system failures, power supply failures, beam excursions etc. Provide results **at next ERR**. (FMEA = Failure Mode and Effects Analysis)

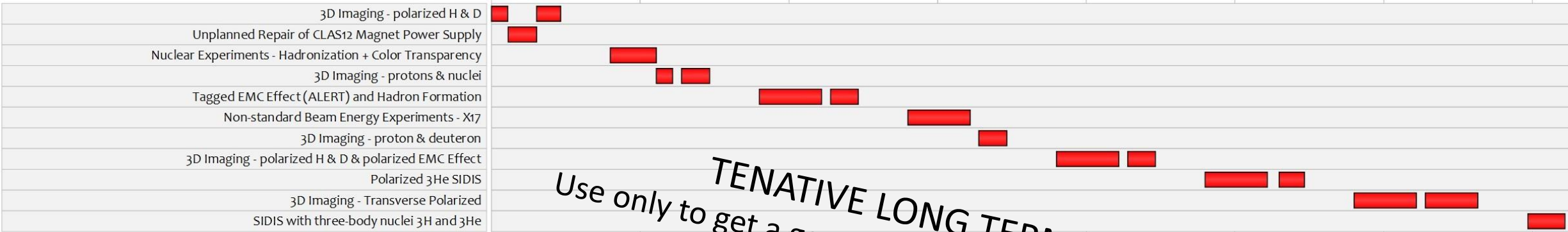
8. **Within 2 months**, assign a dedicated scientist or team to assess radiation tolerance of equipment, in the tagger hall in particular, and assess if any components will need to be shielded or potentially replaced to restore GlueX.

Safety Pauses Shifted Upcoming Schedule Out By Two Months And Is Not Yet Shown On This Figure.

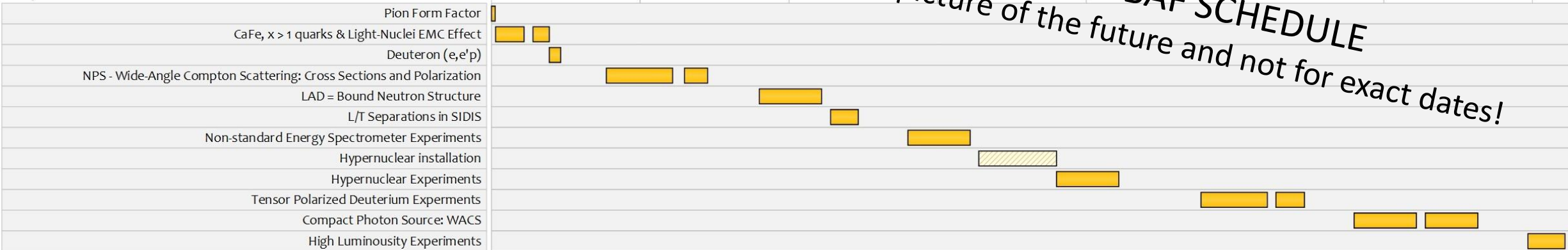
Experimental Hall A



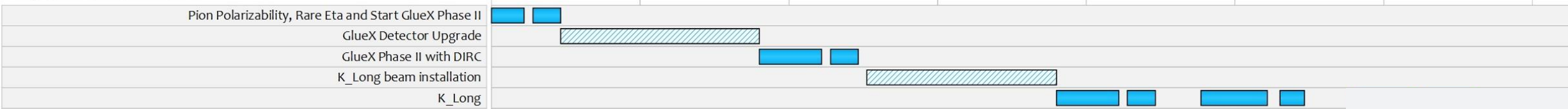
Experimental Hall B



Experimental Hall C



Experimental Hall D



TENATIVE LONG TERM CEBAF SCHEDULE
 Use only to get a general picture of the future and not for exact dates!

Summary and Outlook

- Draft official schedule out to Sept. 2025 is circulating and should be posted very soon. We will also be working to update the long term schedule as the Moller project timeline becomes firmer.
- Currently looking to be able to start the Moller experiment as soon as Sept. 2026, though they have contingency that could push that out.
- Neither I nor accelerator want to start Moller and K-Long at exactly the same time, so I will look to have some kind of stagger. Moller also would like to have a shorter “engineering run”, so I should be able to work this out as time gets closer.
- NOTE: With the same energy as last run period but now with a lot more headroom, CEBAF is running with just a few trips per hour instead of twenty!
- **Please keep up your enthusiasm and continue to get ready!**