

RaDIATE BNL BLIP Irradiation Run Planning VC Meeting 13

05.24.17

Present

CERN: Elvis Fornasiere

KEK: Shunsuke Makimura, Taku Ishida

FNAL: Patrick Hurh, Sujit Bidhar, Kavin Ammigan

PNNL: Andrew Casella, David Senior

FRIB: Frederique Pellemoine

ESS: Yongjoong Lee

Notes

- RaDIATE irradiation was interrupted after 3.9 days of irradiation due to Linac tank failure. Tank will be repaired after RHIC completes their experiments on May 30th.
- Last schedule from BNL shows RaDIATE target box will be inserted back into beam on June 5th at the earliest.
 - Potential Thorium run 06/08 to 06/12 when RaDIATE target box will be removed temporarily
 - Some dedicated runs planned during the last week of June (preliminary)
 - Need to check if dose rate from target box (with high-Z capsule) is low enough when brought up to hot cell.
- Plan to continue irradiation of target box when BLIP starts up again in 2018. Will need to schedule as early as possible in order to make HiRadMat specimens available for test at CERN late 2018.
 - Be and C (FNAL)
 - Will stay in target box to obtain full 8 weeks of irradiation
 - Al (ESS)
 - Leaning towards keeping capsule in target box for further irradiation in 2018, but will confirm soon
 - Si (CERN, KEK)
 - Need to confirm if enough DPA can be obtained during 2017 before deciding whether to remove capsule for PIE
 - US Ti (FRIB, KEK)
 - Will keep in target box for further irradiation in 2018
 - High-Z (CERN)
 - Plan is to insert capsule for the last 14 days of the 2017 run, and expect to complete irradiation this year.
 - Possibly ok if irradiation is 1-2 days short of 14 days in case there is any beam downtime during the last two weeks of BLIP operation
 - One option is to insert high-Z capsule when we start up again.

- However, this will likely increase the cool-down time necessary before shipment and PIE, which is not desirable by CERN.
 - DS Ti capsule (KEK)
 - Would like to obtain at least 4-5 more days of irradiation in order to achieve reasonable amount of DPA before proceeding with PIE. This is dependent on how the BLIP schedule plays out and flexibility of BLIP to remove/insert capsule at any time. Will need to check with BNL.
 - Capsule will stay in target box for further irradiation in 2018 if minimum DPA requirement is not met.
- Shipping and handling arrangements between institutions need to be initiated. Different mechanisms to set up 'work for others' and contracts need to be identified.