

RaDIATE BNL BLIP Irradiation Run Planning VC Meeting 8

01.12.17

Present

FRIB: Frederique Pellemoine

CERN: Elvis Fornasiere, Claudio Torregrosa

BNL: Leonard Mausner, Nick Simos, Dmitri Medvedev

KEK: Taku Ishida

RAL: Chris Densham, Mike Fitton

FNAL: Patrick Hurh, Sujit Bidhar, Kavin Ammigan

OXFORD: Slava Kuksenko

PNNL: Dave Senior

Notes

- BNL BLIP update
 - Safety committee review is scheduled at the end of this month. All last minute changes to the capsule contents will need to be included in the safety document
 - FLUKA activity results are available and will be shared with group soon
 - Nick has placed order with BNL design room for capsule holders and vacuum degraders
 - BLIP experiment is current scheduled to run the week of Feb. 27th. This will be scheduled right after the Thorium run at 200 MeV.
 - We have some flexibility in delaying the start of the experiment by a couple of weeks if capsules are not ready in time
 - BLIP routinely runs at 117 MeV, and it usually takes several days to warm up RFQs to go up in energy from 117 MeV to 200 MeV. So, it's preferable for BLIP to go down from 200 MeV Thorium run to 181 MeV BLIP run, rather than back to 117 MeV and up again to 181 MeV.
 - FNAL currently planning to visit BNL for capsule assembly/welding during the week of Feb. 6th.
 - Kavin to write up description of work required by EB industries and send to Nick
 - Ti capsule update
 - Meso-scale fatigue specimens
 - Micro-laser machining was successful with trial foil
 - Laser cut width is around 150 um
 - Final dimensions of cantilever finalized
 - Final foils were successfully machined down to 250 um thickness
 - RAL/Oxford will report back on flatness

- Nick/Dmitri will check whether gaps between specimens in foil have significant impact on the energy budget/degradation
 - RAL/Oxford to investigate adding identification marks on foil to help determine foil orientation
 - FRIB specimens
 - 3D printed specimens delayed and now hoping to receive specimens around Jan. 20th.
 - Kavin to send Frederique mailing address so that specimens can be shipped directly to FNAL
 - All Grade 5 and 23 KEK specimens have been received by FNAL
 - Waiting on Grade 9 specimens – possibly end of Jan.
 - Capsule and outer fillers currently being fabricated
- Si/high-Z capsule update
 - CERN capsules successfully welded and leak checked
 - Very minimal distortion observed ~ 100 um
 - Capsule delivery to BNL expected around mid-Feb.
- Al capsule update
 - First capsule shipped to BNL bulged out by about 2.5 mm during transport (twice the design thickness in the center of the capsule)
 - Most likely due to sub-atmospheric pressure during cargo transport
 - ESS currently has a spare capsule with 0.3 mm distortion due to welding. Capsule will be clamped and shipped to BNL.
 - If capsule is received distorted again (with specimens shifted out of place), back up capsule will be fabricated and welded at BNL.
 - Need to evaluate whether to re-include thin luminescent coated specimens in new capsule if these specimens will be challenging to handle during opening and sorting with current BNL remote handling capabilities
- Be/C capsule update
 - All graphite specimens and fillers have been fabricated
 - Dimensions and weights have been measured
 - Capsules are currently being fabricated
 - All Be specimens expected by the end of next week
 - Plan to have all specimens assembled and test fit by the end of January
 - Currently evaluating partial fill with inert gas for Be and Ti capsules
 - Need to check impact on peak temperatures
- Kavin to send out Doodle poll for next meeting (early Feb meeting)