From: Nikolaos Simos <simos@bnl.gov>
Subject: **RE: Next Collimation Upgrade Specification Meeting (ColUSM)**
Date: 27 September, 2013 2:34:30 PM GMT+02:00
To: Stefano Redaelli <Stefano.Redaelli@cern.ch>
Cc: Alessandro Bertarelli <Alessandro.Bertarelli@cern.ch>, Nicola Mariani (Nicola.Mariani@cern.ch) <Nicola.Mariani@cern.ch>

Hi Stefano and all
I will make every effort to make it and chat for 10 minutes. Just in case there is technical problems, here is the preliminary plan:

Since we have been granted an additional window for 200 MeV irradiation in January for 3 weeks we will proceed as follows:

We should continue irradiation on the SAME target array that is in there now (the array is at the target position, just elevated within the shaft for cooling down since it is too hot to be brought up into the hot cell at the top). That is the most sensible option. I should note that because RHIC is not going to run polarized protons next run, and we will not be sharing the cost, the 3 weeks will be kind of expensive, but be it.

Following the completion of the 3 additional weeks of 200 MeV irradiation, the array will need to cool down before it gets transferred, opened and the test specimens studied.

While the cooling takes place, I propose that a different array (which will possibly include the one target removed from the original array (Cu_CD)) to be formed to be exposed to the neutron-dominated mixed spectrum utilizing the downstream position in the target space. The make of this could be the same materials or materials of concern that get showered because of collimator-beam interaction.

Regardless of the neutron (or mixed spectrum irradiation) we will need specimens of materials that are being irradiated with the 200 MeV protons to conduct the baselining studies (so by comparison, to assess the effects of irradiation/high temperature on Mo, Glidcop, Cu_CD, Mo_Gr). Maybe Nicola has such specimens available already from the original batch. If that is the case, then it is a simpler path and I will focus on establishing the Post-irradiation experimental plan (including instrumentation, with which I have been having some trouble

lately, such as the special furnace/dilatometer that is crucial to our studies).

Cheers and we will talk later

Nick