

LSC Scientific Committee – 30th Meeting

28-29 June 2022

Canfranc Estación, Spain

Summary, Conclusions and Recommendations

Introduction

The 30th meeting of the Canfranc Underground Laboratory (LSC) Scientific Committee was held on the 28th and 29th June 2022. The meeting was held fully in-person, for the first time since the pandemic. The Committee greatly appreciated the opportunity to visit the underground lab and see the experiments and their current status and being able to learn more details by talking directly with the researchers. Coinciding with the SC meeting was the celebration of the 12th anniversary of LSC on 30th June 2022. The SC wishes to express its gratitude for being invited to attend this wonderful event.

The Committee heard presentations from: ANAIS, BabyIAXO, NEXT, DAMIC, CROSS, JASC; plus, two EOIs: IF (microbial life in heavy water) and NaI CGF (facility for growing pure crystals of NaI). The Committee also reviewed written reports by DArT, TREX-DM and an Eoi for YCAM (yeast chronological aging and mutation under low-radiation conditions).

The two biology project EOIs that were reviewed, IF and YCAM, are the first to present themselves as being ready to start activities at LSC in the near term. The Committee discussed the general nature of biology projects and how they differ from longer-duration physics experiments. At LSC, after a physics project's EOI has been approved, the project then proceeds to apply to be an approved Experiment, when it is ready to deploy in the lab. Since the anticipated biology projects tend to be of shorter duration, possibly including an iterative cycle of different tests, and are smaller in physical size, the Committee suggests to the LSC Director that the lab follow a modified approach. For these, upon approval of the EOI, they would immediately become Biology Facility Projects, and deployment would be considered approved. As there may eventually be competition between approved Biology Facility Projects for facility time and space (e.g., in the lead castle shielding), the Committee suggests that an allocation sub-committee could be convened to assign each project's placement and duration, similar to how beam-time is allocated at an accelerator (or similarly, to telescope observation time allocation). The Committee thinks that its intervention is not needed each time for this, as the allocations could be made effectively by the Director and staff at LSC forming this biology facility sub-committee.