

# **LSC Scientific Committee – 29<sup>th</sup> Meeting**

30 November-1 December 2021

Virtual Meeting Online, with some participants in-person at LSC

## **Summary, Conclusions and Recommendations**

### **Introduction**

The 29<sup>th</sup> meeting of the Canfranc Underground Laboratory (LSC) Scientific Committee was held on 30<sup>th</sup> November and 1<sup>st</sup> December 2021. This was a hybrid meeting with some in-person participants at LSC and others connecting online using Zoom videoconference. The meeting format was effective and there was sufficient time for in-depth discussions of the reports and EOIs from the experiments.

The Scientific Committee welcomed two new members: Victoria Ley (Biologist) and Paul Soler (Particle Physics Experimentalist). With the new underground Biology Lab facilities at LSC, it is very important for LSC to be receiving expert guidance from Dr. Ley.

The Committee heard six presentations in total: from two experiments (BabyIAXO and JASC); from two existing EOIs (DAMIC and ARQ); and from two new EOIs (CADEx and Microbial-mediated low-energy nuclear reactions). An additional six new EOIs were reviewed and considered by the Committee: BUCETA, *C. elegans*-OrV, PRBBI, UPF, MODERN-E and LiquidO; four of these are biology experiments that seek to examine the effects of low radioactivity on various biological processes. The Committee reviewed reports from HENSA, Geodyn and SuperKGd-Isc. There was also a presentation by the Director in which he provided an outlook for the overall scientific program and reported about laboratory personnel, budget, and funding. At the previous SC meeting, the Committee had learned that the 10-yr budget for LSC had been approved, which enables the Director to consolidate long-term plans for the lab. The fact that there were so many new EOIs is a very positive indication of tremendous scientific interest in LSC facilities and capabilities.

There are 5 new EOIs with a common fundamental objective: to determine the role of cosmic radiation in the biology of different organisms. Therefore, the Committee considers that it would be very beneficial to establish strong coordination between these consortia. This coordination would facilitate making the most of the LSC facilities, the radiation shielding and monitoring and other physical conditions. The Committee encourages that LSC staff would collaborate with the applicants to advise them on the necessary conditions so that their experiments can be reproducible and give quantitative results. In addition, the Committee encourages the members of the consortia to exchange opinions and discussions about their rationales and results in face-to-face or virtual meetings, which will enrich the scientific knowledge and complementarity of their projects.