

**LSC Scientific Committee
8th Meeting**

**May 26th and 27th, 2011
Canfranc Estación, Spain**

Summary, Conclusions and Recommendations

DIRECTOR'S REPORT

Director Bettini described the main structures of the LSC, the underground facilities and the surface building. The new laboratory is now called Lab-2400 (the number being the distance in metres from the Spanish entrance of the "train" tunnel), the two small laboratories closer to the entrance are called Lab-780E and Lab-780W, the old laboratory is Lab-2500. Lab-2400 was officially delivered by the Saragossa University to the LSC Consortium on 30 June 2010. The Lab-780s and 2500 are being integrated in the LSC structures on the basis of a MoU with the Saragossa University. Lab-780s have been refurbished and Lab-780W has been prepared to install one of the GEODYN interferometers by drilling the 17m rock between its two parts. Lab-2500 will be refurbished in the coming Autumn.

Lab-2400. The continuous convergence monitor, after a commissioning period, became fully operational in May. Seventeen optical fibre arcs, each 5 m long, monitor the distance between the extremes of each arc with a few micrometres sensitivity. The Rn specific activity, and more generally, the quality of the air are being monitored (around 80 Bq/m³ in Hall C). The gamma ray flux in Hall A has been measured (1.23±0.17 cm⁻²s⁻¹). José Luis Taín (IFIC-Valencia) coordinates the campaign for measurements of neutron background with ³He counters. LSC produced 6 polyethylene matrices of different thickness (for energy spectrum deconvolution). Measurements will start on 13 June.

The clean room (class ISO7 and ISO6) has been completed and the rules for access defined. It has been used by the BiPo experiment. Three HP Ge detectors have been installed in Hall C and are being used for the NEXT and SuperK-Gd experiments. Two more counters will be procured during the year and two more of the Saragossa group, presently being refurbished at the Company, will also be available.

The surface building was finished in January 2011, offices and rooms, including the conference hall, were then furnished; the chemistry laboratory was installed; the machine shop will be equipped during the year. The fibre optic connection between external and internal structures was established. A 64 MB/s radio-link to the RIA (Red de Investigación de Aragón) was installed, a very appreciated contribution of the Aragón Government.

The Director presented the organization chart of LSC showing the positions occupied and two positions to be filled in 2011, one in the Administration office (management of the accesses) and one in applied physics (including electronics).

The law of the Consortium foresees its funding in the period 2006-15 for a total of

19.301.925 €. While, the 2011 budget has been severely reduced, it appears that the total for the funding period will be guaranteed.

The same law foresees that before the end of 2011, the Scientific Committee should prepare a report on the future opportunities, perspectives and capabilities of the LSC, to be submitted to the CR to start the discussions between the Institutions for the period after 2015. (See later for the conclusions on this point).

Professor Bettini presented his philosophy of building a scientific community around the Laboratory, and serving that community, within the boundary conditions of the limited budget and of the decision by the Council not to foresee any scientific staff at LSC. Experiments should attend, in particular, to the open session of the Scientific Committee meetings. The committee agrees with the Director's view.

He then recalled the rules that have been established for the users. The rules for submitting and processing proposals can be found at <http://www.lsc-canfranc.es/pagina-305/>. Safety of personnel, lab users, freeway users and environment are a priority. Users must follow the safety and environmental rules and the Group Leader in Matter of Safety (GLIMOS) should be appointed by the approved experiment. Apparatuses must go through the seismic and general risk analysis before installation.

On the request of the Consejo Rector, LSC Services, such as the Underground Clean Room and the Ge counters facility should be made available also to users different from the experiments. An ad hoc "User Access Committee" has been established to give advice to the Director on these requests.

The Director reviewed the list of 7 approved experiments. The referees for each of them were defined. ANAIS and ROSEBUD will be installed in Hall B, their huts being already built by LSC. The first prototype of BiPo3 is taking data in Hall A. The locations of ArDM and NEXT in hall A have been defined. LSC will build the platforms for both experiments. The 2nd and 3rd batches of ¹³⁶Xe (about 33 kg each) have been delivered, the 4th and last one is due in June.

The Committee is unanimous in its conclusion that Professor Bettini has done an outstanding job in managing the completion of the civil works in both the underground laboratory and external building. The Laboratory Organization execution plan is well thought out and being executed in a timely manner.