

LSC NEWSLETTER

FIRST TRIMESTER | ISSUE 1 APRIL 2021

Laura Cid Barrio
Técnica de análisis y espectrometría de masas



Beatriz Hernandez Molinero
Técnica de criogenia y sistema de gases

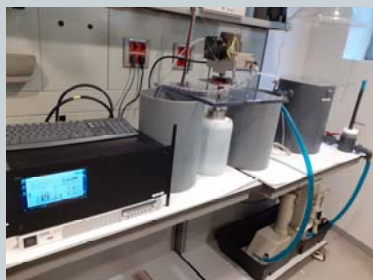
Ana Belén Núñez Chico
Ingeniera DIPC



New additions to the LSC

Laura Cid Barrio joined the LSC staff as an analysis and mass spectrometry technician and Beatriz Hernandez Molinero as a cryogenics and gas system technician.

Likewise, the Donostia International Physics Center (DIPC) has seconded Ana Belén Núñez Chico, who has joined the activities to support the engineering tasks for the scaling up of the experiment from NEXT NEW to NEXT 100.



New Equipment for the Copper Electroforming Service (CES)

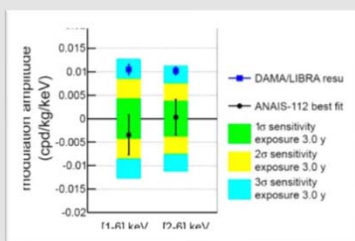
The LSC CES has been recently completed by the installation of two new equipment: a monitoring and control system and a new power supply.

It has been improved by the process control and monitoring, increase in the dimensions of the electroformed copper piece and the plating rate optimization.

New ANAIS-112 results on annual modulation

ANAIS-112 experiment is taking data at the LSC since August 2017 in order to test DAMA/LIBRA signal. Updated results for three years and 112.5 kg, together with complementary analysis and consistency checks have been posted in arXiv:

<https://arxiv.org/abs/2103.01175>



Completed works of the first financial year at Hyper-Kamiokande

Construction of the access roads, geological survey of the Hiper-Kamiokande cavity, and manufacturing of the first 50 cm diameter photomultiplier tubes.



Other relevant LSC Publications:

Boosting background suppression in the NEXT experiment through Richardson-Lucy deconvolution

NEXT Collaboration•A. Simón(Ben Gurion U. of Negev) et al. (Feb 23, 2021), e-Print: 2102.11931 [physics.ins-det]

Phonon-mediated crystal detectors with rejection capability of surface α and β particles assisted by metallic film coating.

I.C. Bandac(LSC, Canfranc), et al. (Mar 12, 2021), e-Print: 2103.07181 [physics.ins-det]

Double gamma decay as a probe of neutrinoless double beta decay nuclear matrix elements

B. Romeo, J. Menéndez and Carlos Peña Garay, e-Print: 2102.11101 [nucl-th]