

LSC NEWSLETTER

FOURTH TRIMESTER | ISSUE 4 DECEMBER 2021



Copper

High purity copper is among the most important materials due to its low level of radioactivity. We have purchased welded, forged and mechanised big pieces of copper to inner shield the NEXT-100 vacuum vessel experiment.



Opening the cryostat of the CROSS experiment

Members of the CROSS experiment's collaboration carried out works aimed at measuring the vibration of the cryostat's holding structure and of the cryostat itself to define a vibration function.



INTERNATIONAL COSMIC DAY 10 YEARS
November 10 | 2021

Cosmic particles, these unnoticed particles that surround us all the time, are the focus of this day. Students, teachers and scientists get together to talk and learn about Cosmic Rays and answer questions like:

What are cosmic particles?
Where do they come from?
How can they be measured?
And what can we learn from them?

Become a Scientist for a Day
Discover the world of cosmic rays like an astroparticle physicist.

Organizer:
Laboratorio Subterráneo de Canfranc
I.E.S. Domingo Miral and I.E.S. Pirineos from Jaca

More information and Registration:
<https://icd.desy.de>
<https://lsc-canfranc.es>

Image Credit: DESY, Science Communication Lab

LSC
Laboratorio Subterráneo de Canfranc

IAGLR, TEILCHENWELT, Fermilab, OsirisNet

The LSC participated one more year in the celebration of the ICD with several activities for students in its premises.



NEXT CASTLE: A new look

NEXT's lead castle was dismantled and the steel structure modified to remove the paint covering. The contribution of the castle to the radioactivity background in NEXT-100 experiment will be reduced by a factor of 2.

LSC Publications:

Machine-learning techniques applied to three-year exposure of ANAIS-112

Contribution to: TAUP2021 • e-Print: 2110.10649 [astro-ph.IM]

First results from the HENSA/ANAIS collaboration at the Canfranc Underground Laboratory

e-Print: 2111.12616 [nucl-ex]

Measurement of the ^{136}Xe two-neutrino double beta decay half-life via direct background subtraction in NEXT

NEXT Collaboration • P. Novella et al. (Nov 22, 2021) e-Print: 2111.11091 [nucl-ex]