

EXPERIMENTO EXP-05- NEXT

For links to the publications go to the experiment's web:

<http://next.ific.uv.es/next/talks.html>

Database of publications LSC

2010-2011

Publications on refereed journals:

The NEXT Collaboration, Design and characterization of the SiPM tracking system of the NEXT-100 demonstrator, submitted to JINST.

J. J. Gómez-Cadenas, F. Guinea, M. M. Fogler, M. I. Katsnelson, J. Martín-Albo, F. Monrabal, J. Muñoz-Vidal, GraXe, graphene and xenon for neutrinoless double beta decay searches, JCAP 02 (2012) 037.

The NEXT Collaboration, SiPMs coated with TPB: coating protocol and characterization for NEXT, JINST 7 P02010 (2012).

J. J. Gómez-Cadenas, J. Martín-Albo, M. Mezzetto, F. Monrabal, M. Sorel, The search for neutrinoless double beta decay, Riv. Nuovo Cim. 35 (2012) 29-98.

J.J. Gómez Cadenas, Jot Down (Contemporary Culture Mag) October 2011.

C.A.B. Oliveira et al., Energy resolution studies for NEXT, JINST 6 P05007 (2011).

J. J. Gómez-Cadenas, J. Martín-Albo, M. Sorel, P. Ferrario, F. Monrabal, J. Muñoz-Vidal, P. Novella, A. Poves, Sense and sensitivity of double beta decay experiments, JCAP 1106 (2011) 007.

S. Cebrián, T. Dafni, E. Ferrer-Ribas, J. Galán, J. A. García, I. Giomataris, H. Gómez, F.J. Iguaz, I.G. Irastorza, G. Luzón, R. de Oliveira, A. Rodríguez, L. Seguí, A. Tomás, J.A. Villar, Radiopurity of micromegas readout plane, Astropart. Phys. 34:354-359, 2011.

L.M.P. Fernandes, E.D.C. Freitas, M. Ball, J.J. Gómez Cadenas, C.M.B. Monteiro, N. Yahlali, D. Nygren, J.M.F. dos Santos, Primary and secondary scintillation measurements in a xenon Gas Proportional Scintillation Counter, JINST 5 P09066 (2010).

E.D.C. Freitas, C.M.B. Monteiro, M. Ball, J.J. Gómez Cadenas, J.A.M. Lopes, T. Lux, F. Sánchez, J.M.F. dos Santos, Secondary scintillation yield in high-pressure xenon gas for neutrinoless double beta decay ($0\nu\beta\beta$) search, Physics Letters B 684 (2010) 205–210.

S. Cebrián, T. Dafni, E. Ferrer-Ribas, J. Galán, I. Giomataris, H. Gómez, D. C. Herrera, F.J. Iguaz, I.G. Irastorza, G. Luzón, A. Rodríguez, L. Seguí, A. Tomás, Micromegas readouts for double beta decay searches, JCAP 10 (2010) 010.

Conference proceedings

P. Ferrario, NEXT-DEMO: a prototype for the NEXT experiment, iWoRID 2012, July 1st to 5th, 2012, Figueira da Foz (Portugal), proceedings to be published in JINST.

D. Lorca, The NEXT experiment - A high pressure xenon TPC for neutrinoless double beta decay searches., 12th Pisa Meeting on Advanced Detectors, La Biodola, Isola d'Elba (Italy), May 20th to 26th, 2012, proceedings to be published in NIM-A.

J.J. Gómez-Cadenas, Status of the NEXT experiment, DBD 2011, Osaka (Japan), November 14th to 17th, 2011.

J. Toledo et al., The Front-End Concentrator card for the RD51 Scalable Readout System, presented at TWEPP 2011, Vienna (Austria), September 26th to 30th 2011 - JINST Vol. 6, Issue 11, November 2011.

A. Gil et al., Front-end electronics for accurate energy measurement of double beta decay, poster presented at NDIP 2011, Lyon (France), to be published in Nuclear Inst. and Methods in Physics Research, A.

V. Herrero et al., Readout electronics for the SiPM tracking plane in the NEXT-1 prototype, poster presented at NDIP 2011, proceedings published in Nuclear Instruments & Methods In Physics Research Section A (2011).

J. Rodríguez, A. Gil, J. Díaz, J.J. Gómez-Cadenas, V. Álvarez, D. Lorca, Programmable power supply system for SiPM bias, poster presented at IEEE Nuclear Science Symposium, Valencia (Spain), October 23rd to 29th, 2011, proceedings.

Nadia Yahlali, Tracking with Silicon Photomultipliers in NEXT, IEEE Nuclear Science Symposium, Valencia (Spain), October 23rd to 29th, 2011, proceedings.

Joshua Renner, High-pressure xenon gas TPC for neutrino-less double-beta decay in ^{136}Xe : Progress toward the goal of 1% FWHM energy resolution, IEEE Nuclear Science Symposium, Valencia (Spain), October 23rd to 29th, 2011 - proceedings.

Francesc Monrabal, Discovering neutrinoless double beta decay with the NEXT-100 detector, 12th International Conference on Topics in Astroparticle and Underground Physics (TAUP 2011), Munich (Germany), September 05th to 09th, 2011 - to be published in Journal of Physics: Conference Series.

T. Dafni et al., Rare event searches based on Micromegas detectors: T-REX, poster presented at the 12th International Conference on Topics in Astroparticle and Underground Physics (TAUP 2011), Munich (Germany), September 05th to 09th, 2011 - to be published in Journal of Physics: Conference Series.

T. Dafni et al., The T-REX project: Micromegas for Rare Event Searches, 2nd International Conference on Particle Physics (in Memoriam Engin Arık and Her Colleagues), Istanbul (Turkey), June 20th to 25th, 2011 - to be published in Journal of Physics, Conference Series.

I. G. Irastorza et al., Status of R&D on Micromegas for Rare Event Searches: The T-REX project, 3rd International conference on Directional Detection of Dark Matter (CYGNUS 2011), Aussois (France) June 8th to 10th, 2011 - to appear in EAS journal.

Igor Liubarsky, NEXT: The Electroluminescence Readout, Fifth Symposium on large TPCs for low energy rare event detection and workshop on neutrinos from Supernovae, Paris (France), December 14th to 17th, 2010 - 2011 J. Phys.: Conf. Ser. 309 012007.

Theopisti Dafni, Micromegas planes for the neutrinoless double beta decay search with NEXT, Fifth Symposium on large TPCs for low energy rare event detection and workshop on neutrinos

from Supernova, Paris (France), December 14th to 17th, 2010 - 2011 J. Phys.: Conf. Ser. 309 012009.

Justo Martín-Albo, The NEXT experiment - Neutrinoless double beta decay searches at the LSC, Pascos 2010 - 16th International Symposium on Particles, Strings and Cosmology, Valencia (Spain), July 19th to 23rd, 2010 - 2010 J. Phys.: Conf. Ser. 259 012040.

Alfredo Tomás Alquézar, The NEXT experiment: a high-pressure xenon gas (HPGXe) TPC for the search of neutrinoless double-beta decay, ICHEP 2010, Paris (France), July 22nd to 28th, 2010 - PoS (ICHEP 2010) 316.

H. Gómez Maluenda, The NEXT experiment in the new Canfranc Underground Laboratory, 8th International Workshop on Identification of Dark Matter, Montpellier (France), July, 2010 - PoS (IDM 2010) 104.

T. Dafni, Poster presented at NEUTRINO 2010, Athens (Greece), June 14th to 19th, 2010, to be published in Nuclear Physics B.

Nadia Yahlali, Igor Irastorza, First NEXT prototypes for double-beta decay search, 12th Vienna Conference on Instrumentation, Vienna (Austria), February 15th to 20th, 2010 - Nucl. Inst. and Meth. in Phys. Res. A 628 (2011) 162–165.

J. J. Gómez-Cadenas, The NEXT Project at LSC, IWDD09, Shanghai (China), June 15th and 16th, 2009.

Nadia Yahlali, NEXT: a Neutrino Experiment with xenon Gas TPC, 11th Pisa Meeting on Advanced Detectors: Frontier Detectors for Frontier Physics, La Biodola, Isola d'Elba (Italy), May 24th to 30th, 2009 - proceedings.

Pau Novella, NEXT: Searching for the neutrinoless double beta decay with a gas-xenon TPC, TAUP 2009, Gran Sasso, Assergi (Italy), July 1st to 5th, 2009 - proceedings.

Federico Sánchez, NEXT 2b0nu experiment, NOW 2008, Conca Specchiulla, Otranto (Italy), September 6th to 13th, 2008 - proceedings.

J. J. Gómez-Cadenas, Justo Martín-Albo, Poster presented at NuFact 2008, Valencia (Spain), June 30th to July 5th, 2008 and Neutrino 2008, Christchurch (New Zealand), May 25th to 31st.

Markus Ball, R&D activities towards a High Pressure Xenon TPC (NEXT), NuFact08, Valencia (Spain), June 30th to July 5th, 2008 - PoS (Nufact08) 119.

Justo Martín-Albo, NEXT: a HPXe TPC for neutrinoless double beta decay searches, NuFact 2008, Valencia (Spain), June 30th to July 5th, 2008 - Pos (Nufact08) 130.

Oral/poster presentations at conferences

N.Yahlali, Imaging with SiPMs in noble-gas detectors, poster presented at iWoRID 2012, Figueira da Foz (Portugal), July 1st to 5th, to be published in JINST.

Justo Martín-Albo, Status of CUP-Proyecto Consolider-INGENIO 2010 "Canfranc Underground Physics", talk given at III Jornadas CPAN, Barcelona, November 2nd to 4th, 2011.

Michel Sorel, Neutrino Experiment with a Xenon TPC, XXXIX International Meeting on Fundamental Physics, Canfranc (Spain), February 7th to 11th, 2011.

Paola Ferrario, Luis Serra, NEXT: a Neutrino Experiment with a high pressure Xenon TPC for neutrinoless double beta decay searches, poster presented at XXXIX International Meeting on Fundamental Physics, Canfranc (Spain), February 7h to 11th, 2011.

Invited talks

Justo Martín-Albo, The NEXT experiment. A xenon gas TPC for double beta decay searches, Harvard University (US), September 7th, 2011.

Theses and Dissertations

Miquel Nebot, Development of wavelength shifter coated reflectors for the NEXT experiment, Master Thesis, December 2011.

Carlos A. B. de Oliveira, Monte Carlo study of electroluminescence in gaseous detectors, PhD Thesis, 2011.

Javier Rodríguez, Diseño y caracterización de la electrónica de acondicionamiento para los fotomultiplicadores de la cámara de proyección temporal NEXT-1 (in Spanish), Final project dissertation, September 2011.

David Lorca, Desarrollo y caracterización de fotomultiplicadores de silicio para NEXT (in Spanish), Master Thesis, September 2010.

Javier Pérez, Caracterización de los fotomultiplicadores R8620-06SEL para NEXT (in Spanish), Master Thesis, July 2010.