

Rapport d'activité LPNHE 2020–2021

Liste de publications du groupe Neutrino

2 décembre 2021

Articles

- [1] K. Abe et al. « First combined measurement of the muon neutrino and antineutrino charged-current cross section without pions in the final state at T2K ». *Phys. Rev. D* 101.11 (2020), p. 112001. DOI : [10.1103/PhysRevD.101.112001](https://doi.org/10.1103/PhysRevD.101.112001). arXiv : [2002.09323](https://arxiv.org/abs/2002.09323) [hep-ex].
- [2] K. Abe et al. « Simultaneous measurement of the muon neutrino charged-current cross section on oxygen and carbon without pions in the final state at T2K ». *Phys. Rev. D* 101.11 (2020), p. 112004. DOI : [10.1103/PhysRevD.101.112004](https://doi.org/10.1103/PhysRevD.101.112004). arXiv : [2004.05434](https://arxiv.org/abs/2004.05434) [hep-ex].
- [3] K. Abe, P. Adrich, H. Aihara et al. « Supernova Model Discrimination with Hyper-Kamiokande ». *Astrophys.J.* 916.1 (2021), p. 15. DOI : [10.3847/1538-4357/abf7c4](https://doi.org/10.3847/1538-4357/abf7c4). arXiv : [2101.05269](https://arxiv.org/abs/2101.05269) [astro-ph.IM].
- [4] K. Abe, N. Akhlaq, R. Akutsu et al. « First T2K measurement of transverse kinematic imbalance in the muon-neutrino charged-current single- π^+ production channel containing at least one proton ». *Phys.Rev.D* 103.11 (2021). DOI : [10.1103/PhysRevD.103.112009](https://doi.org/10.1103/PhysRevD.103.112009). arXiv : [2102.03346](https://arxiv.org/abs/2102.03346) [hep-ex].
- [5] K. Abe, N. Akhlaq, R. Akutsu et al. « Improved constraints on neutrino mixing from the T2K experiment with 3.13×10^{21} protons on target ». *Phys.Rev.D* 103.11 (2021). DOI : [10.1103/PhysRevD.103.112008](https://doi.org/10.1103/PhysRevD.103.112008). arXiv : [2101.03779](https://arxiv.org/abs/2101.03779) [hep-ex].
- [6] K. Abe, N. Akhlaq, R. Akutsu et al. « Measurement of the charged-current electron (anti-)neutrino inclusive cross-sections at the T2K off-axis near detector ND280 ». *JHEP* 10 (2020), p. 114. DOI : [10.1007/JHEP10\(2020\)114](https://doi.org/10.1007/JHEP10(2020)114). arXiv : [2002.11986](https://arxiv.org/abs/2002.11986) [hep-ex].
- [7] K. Abe, N. Akhlaq, R. Akutsu et al. « Measurements of $\bar{\nu}_\mu$ and $\bar{\nu}_\mu + \nu_\mu$ charged-current cross-sections without detected pions or protons on water and hydrocarbon at a mean anti-neutrino energy of 0.86 GeV ». *PTEP* 2021.4 (2021). DOI : [10.1093/ptep/ptab014](https://doi.org/10.1093/ptep/ptab014). arXiv : [2004.13989](https://arxiv.org/abs/2004.13989) [hep-ex].
- [8] K. Abe, N. Akhlaq, R. Akutsu et al. « T2K measurements of muon neutrino and antineutrino disappearance using 3.13×10^{21} protons on target ». *Phys.Rev.D* 103.1 (2021). DOI : [10.1103/PhysRevD.103.L011101](https://doi.org/10.1103/PhysRevD.103.L011101). arXiv : [2008.07921](https://arxiv.org/abs/2008.07921) [hep-ex].

- [9] K. Abe, R. Akutsu, A. Ali et al. « Constraint on the matter–antimatter symmetry-violating phase in neutrino oscillations ». *Nature* 580.7803 (2020), p. 339. DOI : [10.1038/s41586-020-2177-0](https://doi.org/10.1038/s41586-020-2177-0). arXiv : [1910.03887](https://arxiv.org/abs/1910.03887) [hep-ex].
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- [12] A. Acharya, H. Adhikary, A. Aduszkiewicz et al. « Measurements of π^- production in ${}^7\text{Be}+{}^9\text{Be}$ collisions at beam momenta from 19A to 150A GeV/c in the NA61/SHINE experiment at the CERN SPS ». *Eur.Phys.J.C* 80.10 (2020), p. 961. DOI : [10.1140/epjc/s10052-020-08514-6](https://doi.org/10.1140/epjc/s10052-020-08514-6). arXiv : [2008.06277](https://arxiv.org/abs/2008.06277) [nucl-ex].
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- [17] A. Acharya, H. Adhikary, K.K. Allison et al. « Spectra and mean multiplicities of π^- in central ${}^{40}\text{Ar}+{}^{45}\text{Sc}$ collisions at 13A, 19A, 30A, 40A, 75A and 150A GeV/c beam momenta measured by the NA61/SHINE spectrometer at the CERN SPS ». *Eur.Phys.J.C* 81.5 (2021), p. 397. DOI : [10.1140/epjc/s10052-021-09135-3](https://doi.org/10.1140/epjc/s10052-021-09135-3). arXiv : [2101.08494](https://arxiv.org/abs/2101.08494) [hep-ex].
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- [19] A. Aduszkiewicz, E.V. Andronov, T. Antićić et al. « $K^*(892)^0$ meson production in inelastic $p+p$ interactions at 158 GeV/c beam momentum measured by NA61/SHINE at the CERN SPS ». *Eur.Phys.J.C* 80.5 (2020), p. 460. DOI : [10.1140/epjc/s10052-020-7955-1](https://doi.org/10.1140/epjc/s10052-020-7955-1). arXiv : [2001.05370](https://arxiv.org/abs/2001.05370) [nucl-ex].

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