Stefano Castro Tognini

Oak Ridge National Laboratory
+1 (865) 341 0453
togninis@ornl.gov
stognini

Publications

Research profiles

orcid.org/0000-0001-9741-6608
inspirehep.net/authors/1074966
publons.com/researcher/1798369/stefano-castro-tognini/
scholar.google.com/citations?user=M4To0NcAAAAJ
www.researchgate.net/profile/Stefano-C-Tognini

Journal articles

2021 M. A. Acero, *et al.* (NOνA Collab.) **Seasonal variation of multiple-muon cosmic ray air showers observed in the NOvA detector on the surface**. Phys. Rev. D **104**, 012014.
10.1103/PhysRevD.104.012014

2020 P. Adamson, *et al.* (MINOS+ Collab.) **Precision Constraints for Three-Flavor Neutrino Oscillations from the Full MINOS+ and MINOS Dataset**. Phys. Rev. Lett. **125**, 131802.
10.1103/PhysRevLett.125.131802

P. Adamson, *et al.* (MINOS+ Collab.) **Improved Constraints on Sterile Neutrino Mixing from Disappearance Searches in the MINOS, MINOS+, Daya Bay, and Bugey-3 Experiments**. Phys. Rev. Lett. **125**, 071801.
10.1103/PhysRevLett.125.071801

2019 M. A. Acero, *et al.* (NOνA Collab.) **Observation of seasonal variation of atmospheric multiple-muon events in the NOvA Near Detector**. Phys. Rev. D **99**, 122004.
10.1103/PhysRevD.99.122004

P. Adamson, *et al.* (MINOS+ Collab.) **Search for Sterile Neutrinos in MINOS and MINOS+ Using a Two-Detector Fit**. Phys. Rev. Lett. **122**, 091803.
10.1103/PhysRevLett.122.091803

2018 M. A. Acero, *et al.* (NOνA Collab.) **New constraints on oscillation parameters from ν_e appearance and ν_μ disappearance in the NOvA experiment**. Phys. Rev. D **98**, 032012.
10.1103/PhysRevD.98.032012

2017 P. Adamson, *et al.* (NOνA Collab.) **Search for active-sterile neutrino mixing using neutral-current interactions in NOvA**. Phys. Rev. D **96**, 072006.
10.1103/PhysRevD.96.072006

P. Adamson, *et al.* (MINOS+ Collab.) **Search for flavor-changing nonstandard neutrino interactions using ν_e appearance in MINOS**. Phys. Rev. D **95**, 012005.
10.1103/PhysRevD.95.012005

P. Adamson, *et al.* (NOνA Collab.) **Measurement of the Neutrino Mixing Angle θ_{23} in NOvA**. Phys. Rev. Lett. **118**, 151802.
10.1103/PhysRevLett.118.151802

P. Adamson, *et al.* (NOνA Collab.) **Constraints on Oscillation Parameters from ν_e Appearance and ν_μ Disappearance in NOvA**. Phys. Rev. Lett. **118**, 231801.
10.1103/PhysRevLett.118.231801

2016 P. Adamson, *et al.* (MINOS Collab.) **The NuMI neutrino beam**. Nucl. Instr. Meth. A **806**, 279-306.
10.1016/j.nima.2015.08.063

P. Adamson, *et al.* (NOνA Collab.) **First measurement of muon-neutrino disappearance in NOvA**. Phys. Rev. D **93**, 051104(R).
10.1103/PhysRevD.93.051104

P. Adamson, *et al.* (MINOS Collab.) **Measurement of the multiple-muon charge ratio in the MINOS Far Detector**. Phys. Rev. D **93**, 052017.
10.1103/PhysRevD.93.052017

P. Adamson, *et al.* (NOνA Collab.) **First Measurement of Electron Neutrino Appearance in NOvA**. Phys. Rev. Lett. **116**, 151806.
10.1103/PhysRevLett.116.151806

P. Adamson, *et al.* (Daya Bay Collab., MINOS Collab.) **Limits on Active to Sterile Neutrino Oscillations from Disappearance Searches in the MINOS, Daya Bay, and Bugey-3 Experiments**. Phys. Rev. Lett. **117**, 151801.
10.1103/PhysRevLett.117.151801

P. Adamson, *et al.* (MINOS Collab.) **Search for Sterile Neutrinos Mixing with Muon Neutrinos in MINOS**. Phys. Rev. Lett. **117**, 151803.
10.1103/PhysRevLett.117.151803

P. Adamson, *et al.* (MINOS Collab.) **Measurement of single π^0 production by coherent neutral-current νFe interactions in the MINOS Near Detector**. Phys. Rev. D **94**, 072006.
10.1103/PhysRevD.94.072006

P. Adamson, *et al.* (MINOS Collab.) **Constraints on large extra dimensions from the MINOS experiment**. Phys. Rev. D **94**, 111101(R).
10.1103/PhysRevD.94.111101

2015 P. Adamson, *et al.* (MINOS Collab.) **Observation of seasonal variation of atmospheric multiple-muon events in the MINOS Near and Far Detectors**. Phys. Rev. D **91**, 112006.
10.1103/PhysRevD.91.112006

P. Adamson, *et al.* (MINOS Collab.) **Study of quasielastic scattering using charged-current ν_μ-iron interactions in the MINOS near detector**. Phys. Rev. D **91**, 012005.
10.1103/PhysRevD.91.012005

P. Adamson, *et al.* (MINOS Collab.) **Precision measurement of the speed of propagation of neutrinos using the MINOS detectors**. Phys. Rev. D **92**, 052005.
10.1103/PhysRevD.92.052005

2014 P. Adamson, *et al.* (MINOS Collab.) **Combined Analysis of ν_μ Disappearance and $\nu_\mu \to \nu_e$ Appearance in MINOS Using Accelerator and Atmospheric Neutrinos**. Phys. Rev. Lett. **112**, 191801.
10.1103/PhysRevLett.112.191801

P. Adamson, *et al.* (MINOS Collab.) **Observation of muon intensity variations by season with the MINOS near detector**. Phys. Rev. D **90**, 012010.
10.1103/PhysRevD.90.012010

2013 P. Adamson, *et al.* (MINOS Collab.) **Measurement of Neutrino and Antineutrino Oscillations Using Beam and Atmospheric Data in MINOS**. Phys. Rev. Lett. **110**, 251801.
10.1103/PhysRevLett.110.251801

Proceedings

2022 H. R. Gadey, R. Howard, *et al*. **Using Cosmic Ray Muons to Assess Geological Characteristics in the Subsurface**. International High-Level Radioactive Waste Management (IHLRWM).
[Accepted; Proceedings are in preparation]

S. C. Tognini, P. Canal, *et al*. **Celeritas: GPU-accelerated particle transport for detector simulation in High Energy Physics experiments**. Submitted to the Proceedings of the US Community Study on the Future of Particle Physics (Snowmass 2021).
10.48550/arXiv.2203.09467

2021 S. R. Johnson, S. C. Tognini, *et al*. **Novel features and GPU performance analysis for EM particle transport in the Celeritas code**. 25th International Conference on Computing in High Energy and Nuclear Physics (CHEP 2021). EPJ Web of Conferences **251**, 03030.
10.1051/epjconf/202125103030

2020 T. M. Evans, S. R. Johnson, *et al*. **Celeritas—a nascent GPU detector simulation code**. Letter of Interest for Snowmass 2021.
www.snowmass21.org/docs/files/summaries/CompF/SNOWMASS21-CompF2_CompF1-053.pdf

2017 A. Habig, M. Goodman, P. Schreiner, S. C. Tognini, and R. A. Gomes. (On behalf of the NOνA Collaboration) **Seasonal Variation of Multiple-Muon Events in MINOS and NOνA**. 35th International Cosmic Ray Conference (ICRC), Bexco, Busan, Korea.
10.22323/1.301.0200

2012 S. C. Tognini and R. A. Gomes. **Simulation of atmospheric temperature effects on cosmic ray muon flux**. NuInt12: Eight International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region, Rio de Janeiro (RJ), Brazil. AIP Conf. Proc. **1663**, 120015.
10.1063/1.4919521

Technical reports

2022 S. C. Tognini, H. R. Gadey, *et al*. **URL Muon Detector Project Simulation Status Report**. Sponsor Report ORNL/SPR-2022/2568.

H. R. Gadey, R. Howard, *et al*. **Muon Detector Development Status Report**. Sponsor Report PNNL-32802.

2021 J. Meszaros, S. C. Tognini, *et al*. **Underground Research Laboratory Muon Detector Project Progress Report**. Sponsor Report ORNL/SPR-2021/2077.