

# Publication List

Anil Kumar

Updated on September 4, 2023

## I Papers Published in International Refereed Journals (9)

- 1. Measurement of atmospheric neutrino mixing with improved IceCube Deep-Core calibration and data processing**  
R. Abbasi et al. (IceCube Collaboration)  
[Physical Review D](#), 108 (2023), 012014  
e-Print arXiv: [2304.12236 \[hep-ph\]](#)
- 2. Probing dark matter inside Earth using atmospheric neutrino oscillations at INO-ICAL**  
Anuj Kumar Upadhyay, [Anil Kumar](#), Sanjib Kumar Agarwalla, Amol Dighe  
[Physical Review D](#), 107 (2023) 11, 115030  
e-Print arXiv: [2112.14201 \[hep-ph\]](#)
- 3. Discriminating between Lorentz violation and non-standard interactions using core-passing atmospheric neutrinos at INO-ICAL**  
Sadashiv Sahoo, [Anil Kumar](#), Sanjib Kumar Agarwalla, Amol Dighe  
[Physics Letters B](#), 841 (2023) 137949  
e-Print arXiv: [2205.05134 \[hep-ph\]](#)
- 4. Locating the core-mantle boundary using oscillations of atmospheric neutrinos**  
Anuj Kumar Upadhyay, [Anil Kumar](#), Sanjib Kumar Agarwalla, Amol Dighe  
[Journal of High Energy Physics](#), 04 (2023) 068  
e-Print arXiv: [arXiv:2211.08688 \[hep-ph\]](#)
- 5. Probing Lorentz Invariance Violation with Atmospheric Neutrinos at INO-ICAL**  
Sadashiv Sahoo, [Anil Kumar](#), Sanjib Kumar Agarwalla  
[Journal of High Energy Physics](#), 03 (2022) 050  
e-Print arXiv: [2110.13207 \[hep-ph\]](#)

6. **Validating the Earth's Core using Atmospheric Neutrinos with ICAL at INO**  
Anil Kumar, Sanjib Kumar Agarwalla  
[Journal of High Energy Physics](#), 08 (2021) 139  
e-Print arXiv: [2104.11740 \[hep-ph\]](#)
7. **A New Approach to Probe Non-Standard Interactions in Atmospheric Neutrino Experiments**  
Anil Kumar, Amina Khatun, Sanjib Kumar Agarwalla, Amol Dighe  
[Journal of High Energy Physics](#), 04 (2021) 159  
e-Print arXiv: [2101.02607 \[hep-ph\]](#)
8. **From oscillation dip to oscillation valley in atmospheric neutrino experiments**  
Anil Kumar, Amina Khatun, Sanjib Kumar Agarwalla, Amol Dighe  
[The European Physical Journal C](#), volume 81 (2021) 2, 190  
e-Print arXiv: [2006.14529 \[hep-ph\]](#)
9. **A compact cosmic muon veto detector and possible use with the Iron Calorimeter detector for neutrinos**  
Neha Panchal, S. Mohanraj, A. Kumar, T. Dey, G. Majumder, R. Shinde, P. Verma, B. Satyanarayana, V.M. Datar  
[Journal of Instrumentation](#), 12 (2017) 11, T11002  
e-Print arXiv: [1708.08597 \[physics.ins-det\]](#)

## II Conference Proceedings (7)

1. **Discriminating Between Lorentz Violation and Non-Standard Interactions Using Core-Passing Atmospheric Neutrinos at INO-ICAL**  
Sadashiv Sahoo, Anil Kumar, Sanjib Kumar Agarwalla, Amol Dighe  
Proceedings of The Ninth Meeting on CPT and Lorentz Symmetry, (Online) 17 May - 26 May, 2022, Indiana University, Bloomington  
[CPT and Lorentz Symmetry. May 2023, 226-228](#)
2. **Exploring NSI using oscillation dip and valley in atmospheric neutrino experiments**  
Anil Kumar, Amina Khatun, Sanjib Kumar Agarwalla, Amol Dighe  
Proceedings of The 17th International Conference on Topics in Astroparticle and Underground Physics (TAUP2021), Online Conference, 26 August - 30 September, 2021  
[Journal of Physics: Conference Series 2156 \(2021\) 012119](#)

3. **Exploring the Violation of Lorentz Invariance using Atmospheric Neutrinos at INO-ICAL**  
Sadashiv Sahoo, [Anil Kumar](#), Sanjib Kumar Agarwalla  
Proceedings of The 17th International Conference on Topics in Astroparticle and Under-ground Physics (TAUP2021), Online Conference, 26 August - 30 September, 2021  
[Journal of Physics: Conference Series 2156 \(2021\) 012238](#)
4. **Probing the Earth's Core using Atmospheric Neutrinos at INO**  
[Anil Kumar](#), Sanjib Kumar Agarwalla  
Proceedings of The European Physical Society Conference on High Energy Physics (EPS-HEP2021), Online Conference, 26-30 July, 2021  
[PoS\(EPS-HEP2021\)257](#), e-Print arXiv: [2110.08333 \[hep-ph\]](#)
5. **Probing NSI in Atmospheric Neutrino Experiments using Oscillation Dip and Valley**  
[Anil Kumar](#), Amina Khatun, Sanjib Kumar Agarwalla, Amol Dighe  
Proceedings of the XXIV DAE-BRNS High Energy Physics Symposium 2020, NISER, Bhubaneswar, India, 14-18 December, 2020  
[Springer Proc. Phys. 277 \(2022\) 525-529](#), e-Print arXiv: [2104.06955 \[hep-ph\]](#)
6. **Effect of Variation of Surface Resistivity of Graphite Layer in RPC**  
[Anil Kumar](#), V. Kumar, S. Mukhopadhyay, S. Sarkar, and N. Majumdar  
Proceedings of the XXIII DAE-BRNS High Energy Physics Symposium 2018, IIT, Madras, India, 10-14 December, 2018  
[Springer Proc. Phys. 261 \(2021\) 725-730](#)
7. **A compact cosmic muon veto detector and possible use with the Iron Calorimeter detector for neutrinos**  
Neha, S. Mohanraj, [A. Kumar](#), T. Dey, G. Majumder, R. Shinde, P. Verma, B. Satyanarayana, V.M. Datar  
Proceedings of the 62nd DAE-BRNS Symposium on Nuclear Physics, Patiala, India, 20-24 December, 2017  
[DAE Symp. Nucl. Phys. 62 \(2017\) 1076-1077](#)