

NuFact 2026 - The 27th International Workshop on Neutrinos from Accelerators



Contribution ID: 102

Type: **Poster contribution**

Revival of the Reactor Antineutrino Anomaly

Monday, August 31, 2026 6:00 PM (2 hours)

The Reactor Antineutrino Anomaly (RAA)—a long-standing discrepancy between the measured and predicted antineutrino flux—has been a cornerstone in the search for light sterile neutrinos. In recent years, the anomaly was partially attributed to uncertainties in reactor flux models, particularly the ^{235}U contribution. However, new experimental results, most notably from the BEST gallium experiment, along with updated flux evaluations, have sparked a “revival” of the RAA.

This poster reviews the latest developments in this field, highlighting how the combined evidence from reactor and gallium experiments challenges a purely model-based explanation. We explore the renewed case for the sterile neutrino hypothesis and discuss the critical role of upcoming high-precision neutrino experiments in resolving this mystery.

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Session Classification: Poster

Track Classification: WG5: Neutrinos Beyond PMNS