

# CONFLUX - The Reactor Antineutrino Flux Prediction Software

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The predicted reactor antineutrino flux is an important ingredient for particle physics measurements and neutrino-based safeguards applications, ranging from neutrino oscillation measurements to monitoring reactor fuel and operations. Over the past decade, comparisons between predictions and reactor neutrino experiments have revealed significant discrepancies which have motivated new neutrino and nuclear data measurements. CONFLUX, the Calculation Of Neutrino FLUX, is a software framework that aims to provide a flexible and modular tool for multiple communities. This new framework is being developed to standardize the input and output of the neutrino flux calculation, increase the accessibility of neutrino, nuclear data to the community, and package benchmark reactor and nuclear data. The software integrates three different prediction modes: summation, beta-spectra conversion, and direct neutrino measurements. The comprehensive and flexible inclusion of nuclear data allow users to perform sensitivity studies, evaluate impact of new data, monitoring studies, assess novel reactor types, etc. In this presentation, we describe the status of the framework development, the calculation capability, and the potential applications.

## **Abstract title**

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