Session Program

Jun 8 – 13, 2025

15th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2025) Madison Wisconsin June 9-13

Nuclear Structure for Neutrinos and Astrophysics

Tue, June 10

2:00 PM

Nuclear Structure for Neutrinos and Astrophysics: Parallel 3

Session | **Location:** Old Madison | **Convener:** Ingo Tews

2:00 – 2:20 PM **Exploring new physics and nuclear structure with ytterbium isotope shifts**

Speaker
Matthias Heinz

2:20 – 2:40 PM **How Weak Interactions Suppress g-Modes in Hot Neutron Stars**

Speaker
Tianqi Zhao

2:40 – 3:00 PM **Beta-decay strengths of neutron-rich nuclei relevant for astrophysics**

Speaker
Francesca Bonaiti

3:00 PM

Wed, June 11

4:00 PM

Nuclear Structure for Neutrinos and Astrophysics: Parallel 6

Session | **Location:** Langdon | **Convener:** Anna McCoy

4:00 – 4:30 PM **Ab Initio Calculations on Neutrinoless Double-Beta Decay**

Speaker
Lotta Jokiniemi

4:30 – 4:50 PM

A novel simplification of tensor interactions unlocks new paths in dark matter, flavor violation, neutrino scattering, and β-decays

Speaker
Ayala Glick-Magid

4:50 – 5:10 PM

Determining the leading-order contact term induced by sterile neutrinos in neutrinoless double β decay

Speaker
Sebastián Urrutia Quiroga

5:10 – 5:30 PM **Superallowed beta decays in effective field theory**

Speaker
Wouter Dekens

5:30 PM

Thu, June 12

2:00 PM

Nuclear Structure for Neutrinos and Astrophysics: Parallel 7

Session | **Location:** Capital View | **Convener:** Prof. Christian Drischler

2:00 – 2:30 PM **What is hiding in the core of a neutron star?**

Speaker
Debora Mroczek

2:30 – 2:50 PM **A New Class of Three Nucleon Forces and their Implications**

Speaker
Maria Dawid

2:50 – 3:10 PM **Machine Learning for Uncertainty Quantification in Neutron Matter**

Speaker
Cassandra Armstrong

3:10 – 3:30 PM
Emulation and Uncertainty Quantification of Nuclear Matter Equation of State from In-Medium Similarity Renormalization Group

Speaker
Kang Yu

3:30 PM