

INT-26-2b: Quantum Physics of Stars

Welcome!

August 17 to 21, 2026

INSTITUTE for NUCLEAR THEORY

Institute of Nuclear Theory (INT), University of Washington, Physics-Astronomy Building, Box 351550, Seattle, WA 98195-1550, Phone: 206-685-3360



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Some logistics

- General schedule
 - 9 AM start each day with a brief introduction
 - Talk
 - Coffee break at 10 AM (30 minutes)
 - Talk, Talk
 - Lunch from noon to 2 pm (2 hours)
 - Talk
 - Afternoon Discussion Session
- **Talk lengths (30+10+5 minutes)**
- Where is the coffee?!
 - Starbucks of course
- Where can I get lunch?
 - Lots of places nearby, 2 hour lunch break.
- INT code of conduct on the top of the event schedule

Organizers:

Michael Wiescher (James deBoer), Marek
Ploszajczak, Sofia Quaglioni

Local (Real) Organizer:

Megan Roach

Visitor Packet
Travel and Dining

Quantum physics of stars

M. Wiescher^{*} 

*Department of Physics and Astronomy and the Joint Institute for Nuclear Astrophysics,
University of Notre Dame, Notre Dame, Indiana 46556, USA*

Challenge what is
“known”!



Low energy resonances are abundant

- Low-Energy Reaction Models
- R-matrix Applications
- Astrophysical and Anthropogenic Plasma Environments
- Electron Screening

~~Experimental~~ low-energy nuclear reaction studies

- Clustering dynamics in real and imaginary times
 - Aldo Bonasera
- Neutron capture cross sections
 - Brian Appelbe
- Direct measurements of C burning in Massive Stars
 - Sandrine Coutin
- $^{12}\text{C}+^{12}\text{C}$ fusion reactions at stellar energies
 - Xiaodong Tang