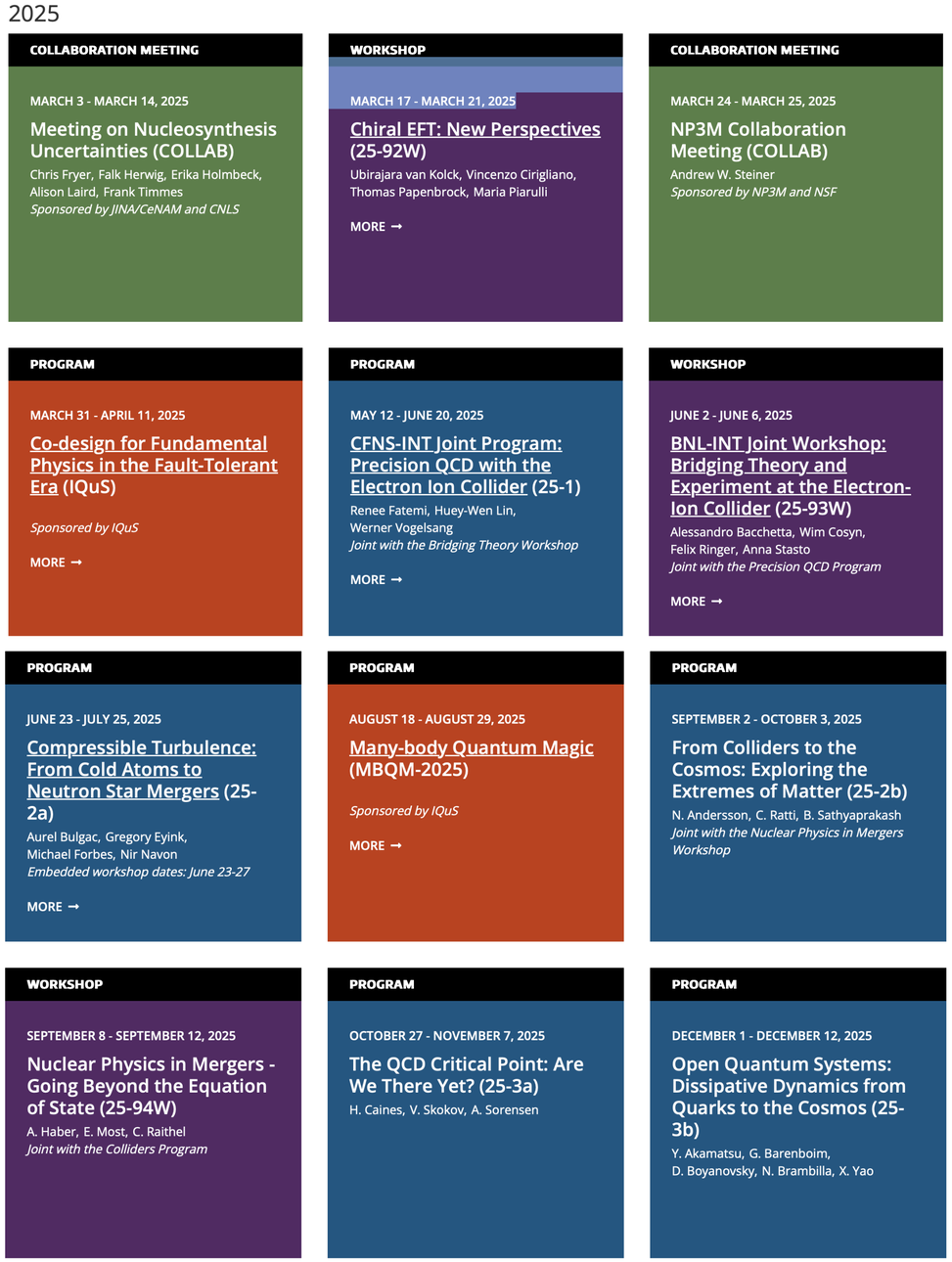
Welcome to the Institute for Nuclear Theory

- The INT is a national resource founded in 1990 and funded by the US Department of Energy and the University of Washington.
- It provides an environment for scientists to advance the frontiers of subatomic physics and make connections to developments in other areas of physics, astrophysics and cosmology.
- Scientific meetings at the INT attracts about 400 visitors annually to enable breakthrough discoveries through collaborations.



Reminders and Announcements

Safety: Please read the welcome material and be aware of building evacuation procedures.

Conduct: Please read and follow the INT code of conduct. If you experience or witness behavior that violates the INT code of conduct, please report it promptly.

Exit Report: Provide us feedback (positive and negative).

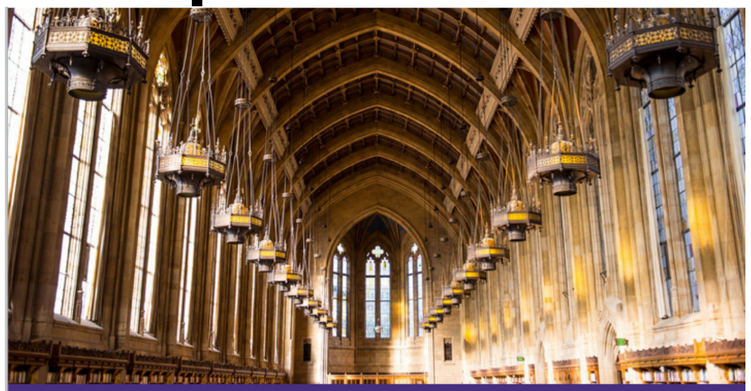
Pre-print #’s: Request an INT preprint number and acknowledge the INT in publications that result from interactions during your visit.

Proposing INT programs: Consider proposing programs and workshops in 2026 and 2027. The deadline is scheduled for July 2026.

Collaboration meetings: We can host collaboration meetings. We provide offices, meeting space, and assistance with arranging lodging, among other services, but we cannot offer financial support.

Friends of the INT: Please consider donating to the 'Friends of the INT' fund. This discretionary fund helps support activities that make the INT a fun place to work and visit.

Take a stroll: The UW Campus is beautiful!



SUZZALLO LIBRARY

DRUMHELLER FOUNTAIN

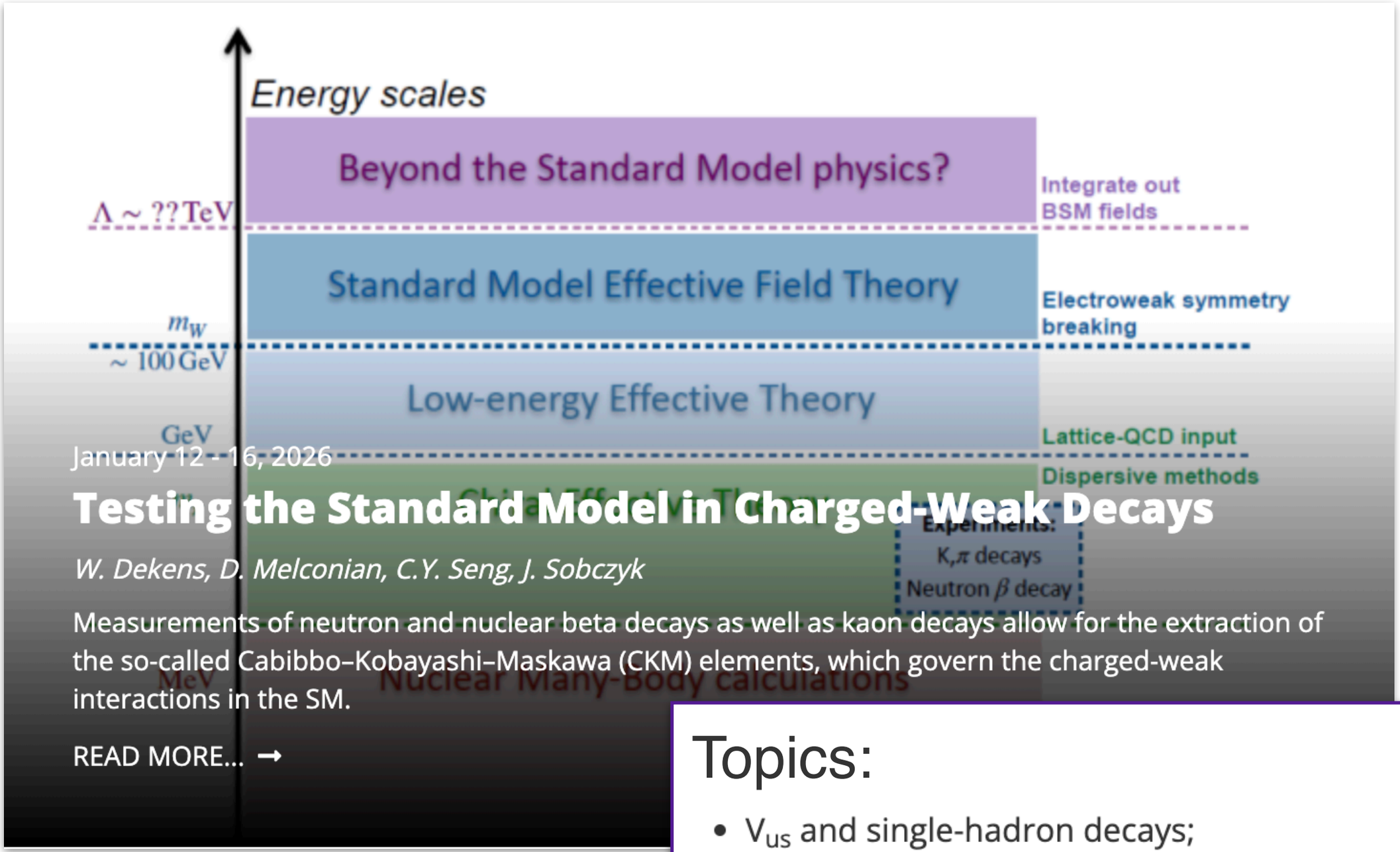
Henry Art Gallery

The Burke Museum

Urban Horticulture Center

Arboretum

Testing the Standard Model in Charged-Weak Decays



January 12 - 16, 2026

Testing the Standard Model in Charged-Weak Decays

W. Dekens, D. Melconian, C.Y. Seng, J. Sobczyk

Measurements of neutron and nuclear beta decays as well as kaon decays allow for the extraction of the so-called Cabibbo–Kobayashi–Maskawa (CKM) elements, which govern the charged-weak interactions in the SM.

READ MORE... →

Topics:

- V_{us} and single-hadron decays;
- V_{us} and nuclear decays; Strangeness-changing processes and V_{us};
- Global analysis, implications for BSM physics;
- Future prospects, writing session

Schedule

Mon: BSM & neutron decay

Monday, January 12, 2026

Start Time	Presentation Title	Presenter
8:00 AM	Check-In	
8:45 AM	Welcome to the INT & Introductions	Wouter Dekens
9:00 AM	Beta decays as a probe of new physics	Vincenzo Cirigliano
9:45 AM	TBA	Maria Dawid
10:30 AM	Coffee Break	
11:00 AM	TBA	Benedetta Belfatto
11:45 AM	Latest constraints on light sterile neutrino from the KATRIN Experiment	Shailaja Mohanty
12:30 PM	Lunch	
2:00 PM	TBA	Chen-Yu Liu
2:45 PM	Neutron beta-decay experiments at Los Alamos	Steven Clayton
3:30 PM	Coffee Break	
4:00 PM	Discussion	

Tue: neutron decay

Tuesday, January 13, 2026

Start Time	Presentation Title	Presenter
9:00 AM	The gamma-W box correction to Vud with dispersion relations: certainties and uncertainties	Misha Gorshteyn
9:45 AM	Overview of Neutron Decay Angular Correlation Measurements (with some comments about beta energy-dependent observables)	Albert Young
10:30 AM	Coffee Break	
11:00 AM	TBA	Zack Hall
11:45 AM	TBA	Dinko Pocanic
12:00 PM	Lunch	
2:00 PM	TBA	Thomas Richardson
2:45 PM	TBA	Wolfgang Schreyer
3:30 PM	Coffee Break	
4:00 PM	Discussion	

Wed: Superallowed

Wednesday, .

Start Time	Presenter
9:00 AM	Emanuele Mereghetti
9:45 AM	Garrett King
10:30 AM	
11:00 AM	Nadezda Smirnova
11:45 AM	Xu Feng
12:30 PM	
2:00 PM	Regan Zite
2:45 PM	
3:30 PM	
4:00 PM	

Thursday, January 15, 2026

Start Time	Presentation Title	Presenter
9:00 AM	TBA	TBA
9:45 AM	Penning trap beta-decay Q value measurements for BSM Physics searches	Matthew Redshaw
10:30 AM	Coffee Break	
11:00 AM	Impact for Rare Kaon decays of Testing the Standard Model in Charged-Weak Decays	Giancarlo D'Ambrosio
11:45 AM	Testing CKM Unitarity with the NA62 Experiment	Victor Shang
12:30 PM	Lunch	
2:00 PM	TBA	Emilie Passemar
2:45 PM	TBA	Xin-Yu Tuo
3:30 PM	Coffee Break	
4:00 PM	Discussion	

Thu: Vus & kaon decays

Friday, January 16, 2026

Start Time	Presentation Title	Presenter
10:00 AM	New Ideas & Short Talks	
11:15 AM	Coffee Break	
11:45 AM	The recent measurement of the neutrino electron correlation coefficient a in free neutron beta decay with the aSPECT spectrometer	Stefan Baessler
12:30 PM	PIONEER: A Next Generation Rare Pion Decay Experiment	Quentin Buat
1:15 PM	Lunch	
2:30 PM	Discussion & white paper writing	

Fri: ongoing/future work & writing session

Some Logistics

Talks:

- All talks/discussions/coffee breaks in, or next to, this room
- Please send your title/slides to Megan (mjb47@uw.edu) well before the start of your session

Lunch/dinner:

- Mostly on your own for lunch/dinner
  - Lots of options around “the ave.”
- Workshop dinner (self-funded) on Wednesday evening (time/location TBA)
  - Please sign up ***before lunch today***

Discussions:

- Will discuss the talks of each day: please add any topics/questions to **this google-doc**
- Two “special” discussion topics:
  - Tuesday: Theory consensus for neutron decay
  - Friday: V_{ud} & V_{us} (VUDU) alliance