



# North American Storage Rings and Neutron Captures Workshop

28-30 June, 2021

Virtual Meeting hosted through Zoom and Gather.Town

Rare-isotope storage rings offer unique capabilities to study nuclear properties through their relatively long storage times, as has been demonstrated by the work that has been performed over the last several decades at ring facilities around the world. Despite these opportunities, to date little investment has been made in North America in rare-isotope storage ring capabilities.

Neutron-induced reactions play a key role in understanding such diverse scientific fields as nuclear astrophysics, stockpile stewardship, reactor performance, and nuclear forensics. For many of these endeavors, reactions on short-lived nuclei offer key insights into the physical environment. Neutron reactions on short-lived nuclei have presented particular challenges, however, as both beam and target are unstable.

Bringing storage rings to bear on the challenges of neutron-induced reactions offers the opportunity to directly measure neutron-induced cross sections. In order to develop the technical capabilities to make this opportunity a reality, we invite you to participate in a virtual workshop focused on the scientific opportunities as well as the enabling technologies for such a new research avenue.

Embracing the virtual nature of the workshop, the meeting will be broken into three half-day sessions. No parallel sessions are planned. Zoom will be used for the primary presentation of technical content, while substantial breaks are planned where critical informal discussion can take place in Gather.Town. Gather.Town allows us to invite you for a virtual coffee and exciting discussions.

Planned topics of discussion include:

- Opportunities in Nuclear Astrophysics and Nuclear Reactions Measurements
- Application Needs for Nuclear Data
- Thermal Neutron Target Design
- Interplay of Ion Storage Ring Acceptance and Cooling, with Reaction Product Detection

- RIB Post-Acceleration and Ring Injection
- Beam Diagnostics and Neutron Target Monitoring
- Development of Ring Reaction Measurement Standards
- Future Opportunities with Ring Reaction Measurements

## Meeting Information

**Dates:** 28-30 June 2021

**Location:** Virtual Meeting

**Venue:** Zoom, Gather.Town (*Please register to receive connection details*)

**Registration fee:** None.

**Registration Deadline:** 21 June 2021

**Contributed Talk Deadline:** 28 May 2021

**Conference Website:** <https://indico.triumf.ca/conferenceDisplay.py?confId=2452>

**Organizing Committee:** Iris Dillmann (TRIUMF/UVic), Annika Lennarz (TRIUMF/ McMaster), Chris Ruiz (TRIUMF/UVic), Artemis Spyrou (NSCL/FRIB/MSU), Sean Liddick (NSCL/FRIB/MSU), Aaron Couture (LANL), Shea Mosby (LANL), René Reifarth (Goethe Universität Frankfurt)

**Sponsored by:** [IReNA \(International Research Network for Nuclear Astrophysics\)](#)