

FRIB-TA Topical Program

Few-body cluster structures in exotic nuclei and their role in FRIB experiments

Talk/meeting schedule

Week 1

Monday, Aug 15, 2022

Morning session. Chair: Hebborn

- **9:15am - 9:45am** Welcome/opening remarks/self introductions
- **9:45 am - 10:15am** **K. Fosse**: Overview talk
- **10:15am - 10:45am** Coffee break
- **10:45am - 11:15am** **D. Bazin**: Probing clustering in nuclei using active targets
- **11:15am - 11:30am** Discussion
- **11:30am - 11:45pm** **Overview tour**
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- **11:45pm - 1:05pm** Lunch

Afternoon session. Chair: Koenig

- **1:05pm - 2:00pm** Plenary discussion
- **2:00pm - 2:45pm** Coffee break / **Pickup access cards**
- **2:45pm - 3:45pm** Breakout group discussions
- **3:45pm - 4:15pm** Plenary wrap-up

Tuesday, Aug 16, 2022

Morning session. Chair: Kravvaris

- **9:30am - 10:00am** **J. Lubian Rios**: Theoretical model for the calculation of complete and incomplete fusion of weakly bound nuclei
- **10:00am - 10:15am** Discussion
- **10:15am - 10:30am** Coffee break
- **10:30am - 11:00am** **F. Bonaiti**: Ground and dipole-excited states in neutron-rich ^8He
- **11:00am - 11:15am** Discussion
- **11:15am - 11:45am** Breakout group discussions
- **11:45am - 12:00pm** Discussion

- **12:00pm - 12:10pm** Group photo
- **12:10am - 1:30pm** Lunch

Afternoon session. Chair: Macchiavelli

- **1:30pm - 2:30pm** Plenary discussion
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Breakout group discussions
- **3:45pm - 4:15pm** Plenary wrap-up

Wednesday, Aug 17, 2022

Morning session. Chair: Hlophe

- **9:30am - 10:00am** **A. Macchiavelli:** Weak Binding Effects in Nuclear Structure: 40Mg and The Kerman Problem in the Continuum
- **10:00am - 10:15am** Discussion
- **10:15am - 10:30am** Coffee break
- **10:30am - 11:00am** **T. Frederico:** Light two-neutron halo nuclei: a view on their universal structure and reaction properties
- **11:00am - 11:15am** Discussion
- **11:15am - 12:00pm** Breakout group discussions
- **12:00pm - 1:30pm** Lunch

Afternoon session. Chair: Nunes (?)

- **1:30pm - 2:30pm** Plenary discussion
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Breakout group discussions
- **3:45pm - 4:15pm** Plenary wrap-up

Thursday, Aug 18, 2022

Morning session. Chair: Gnech

- **9:30am - 10:00am** **C. Elster:** Extending the leading order Watson optical potential to incorporate a cluster structure
- **10:00am - 10:15am** Discussion
- **10:15am - 10:30am** Coffee break
- **10:30am - 11:00am** **L. Hlophe:** Ab initio description of ternary nuclear reactions
- **11:00am - 11:15am** Discussion
- **11:15am - 12:00pm** Breakout group discussions

- **12:00pm - 1:30pm** Lunch

Afternoon session. Chair: Fosseze

- **1:30pm - 2:30pm** **Tour FRIB**
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Plenary discussion
- **3:45pm - 4:15pm** Plenary wrap-up

Conference dinner 7pm Beggar's banquet

Friday, **Aug 19, 2022**

Morning session. Chair: Bonaiti

- **9:30am - 10:00am** **K. Kravvaris:** Ab initio calculations of nuclear reactions and clustering
- **10:00am - 10:15am** Discussion
- **10:15am - 10:30am** Coffee break
- **10:30am - 11:00am** **K. Becker:** Alpha clustering and alpha-capture reactions from first principles
- **11:00am - 11:15am** Discussion
- **11:15am - 12:00pm** Breakout group discussions

- **12:00pm - 1:30pm** Lunch

Afternoon session. Chair: Fosseze

- **1:30pm - 2:30pm** Plenary discussion
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Breakout group discussions
- **3:45pm - 4:15pm** Plenary wrap-up

Week 2

Monday, **Aug 22, 2022**

Morning session. Chair: TBD

- **9:30am - 10:00am** **B. Kay:** Direct reactions as a probe of weakly bound nuclei and clusters structures
- **10:00am - 10:15am** Discussion

- **10:15am - 10:30am** Coffee break
- **10:30am - 11:00am** **G. Potel:** The nuclear Cooper pair, and how to observe it
- **11:00am - 11:15am** Discussion
- **11:15am - 12:00pm** Breakout group discussions

- **12:00pm - 1:30pm** Lunch

Afternoon session. Chair: Hebborn

- **1:30pm - 2:30pm** Plenary discussion
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Breakout group discussions
- **3:45pm - 4:15pm** Plenary wrap-up

Tuesday, Aug 23, 2022

Morning session. Chair: Higgins

- **9:30am - 10:00am** **A. Spyrou:** beta-decay and neutron capture constraints for the astrophysical r process
- **10:00am - 10:15am** Discussion
- **10:15am - 10:45am** Coffee break
- **10:45am - 11:15am** **F. Nunes:** Uncertainty quantification in breakup reactions or transfer for halos
- **11:15am - 11:30am** Discussion
- **11:30am - 11:40am** Group photo

- **11:40am - 1:30pm** Lunch

Afternoon session. Chair: Koenig

- **1:30pm - 2:30pm** Plenary discussion
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Breakout group discussions
- **3:45pm - 4:15pm** Plenary wrap-up

Wednesday, Aug 24, 2022

Morning session. Chair: Zhang

- **9:30am - 10:00am** **A. Gnech:** Studying clusters with the Hyperspherical Harmonic method: the A=6 case
- **10:00am - 10:15am** Discussion

- **10:15am - 10:30am** Coffee break
- **10:30am - 11:00am** **M. Higgins:** An adiabatic hyperspherical treatment of few-nucleon clusters
- **11:00am - 11:15am** Discussion
- **11:15am - 12:00pm** Breakout group discussions

- **12:00pm - 1:30pm** Lunch

Afternoon session. Chair: Frederico

- **1:30pm - 2:30pm** **Tour FRIB**
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Plenary discussion
- **3:45pm - 4:15pm** Plenary wrap-up

Thursday, **Aug 25, 2022**

Morning session. Chair: Potel

- **9:30am - 10:00am** **X. Zhang:** Recent developments in the emulations of quantum continuum state
- **10:00am - 10:15am** Discussion
- **10:15am - 10:30am** Coffee break
- **10:30am - 11:00am** **T. Whitehead:** TBA
- **11:00am - 11:15am** Discussion
- **11:15am - 12:00pm** Breakout group discussions

- **12:00pm - 1:30pm** Lunch

Afternoon session. Chair: TBD

- **1:30pm - 2:30pm** Plenary discussion
- **2:30pm - 2:45pm** Coffee break
- **2:45pm - 3:45pm** Breakout group discussions
- **3:45pm - 4:15pm** Plenary wrap-up

Friday, **Aug 26, 2022**

Morning session. Chairs: Hebborn/Koenig

- **9:30am - 11:00am** Breakout group discussions (coffee served around 10:30am)
- **11:00am - 12:00pm** Final wrap up
- **12:00pm - 1:30pm** Lunch