The 7th workshop on nuclear mass table with DRHBc theory

July 1-4, 2024 Gangneung (Korea)

First Circular

We are pleased to announce that "The 7th workshop on nuclear mass table with DRHBc theory" will take place at Gangneung Green City Experience Center (Gangneung, Korea) from July 1 to 4, 2024. This workshop is a part of the series that started in 2018.

As is well known, the covariant density functional theories have gained wide attention for describing successfully a variety of nuclear phenomena. As a representative one, the deformed relativistic Hartree-Bogoliubov theory in continuum (DRHBc) has achieved great successes not only in stable nuclei but also in exotic nuclei by self-consistently taking into account the deformation, pairing correlations, and continuum effects. Using the state-of-the-art DRHBc theory with the preeminent density functional PC-PK1, a campaign has been started to construct the first nuclear mass table including continuum and deformation. For this purpose, the DRHBc mass table collaboration was established in Dec. 2018. The ground-state properties of even-even nuclei with $8 \leq Z \leq 120$ from the proton drip line to the neutron drip line have been summarized and published in Atomic Data Nuclear Data Tables last year. The calculations for even-odd nuclei were finished and the second stage of the DRHBc mass table is going to be complete. Now we are moving to the next stage, also the last stage, of the DRHBc mass table: odd-Z nuclei. It is therefore necessary to organize a workshop to discuss the recent progresses on the mass table by the DRHBc theory and to strengthen the active scientific collaboration on broader topics.

The 7th workshop on nuclear mass table with DRHBc theory will be held on July 1 to 4, 2024 in Gangneung, Korea, hosted by Soongsil University (Origin of Matter and Evolution of Galaxies (OMEG)). In this 7th workshop, we would like to focus on the recent progress and achievement of each group for DRHBc calculations with odd-Z nuclei. Next, we will discuss future plans for the DRHBc mass table. We expect that this workshop will fortify the collaboration in this field and produce more scientific outputs.

Scientific Contents

- Overview of the DRHBc calculations for odd-Z nuclei
- DRHBc calculations for odd-Z nuclei
- Progress Reports from PIs for different regions
- Interesting topics of DRHBc mass table
- Future working plan toward a complete DRHBc mass table
- …

Schedule Overview

- July 1, 2024 (Monday)
  - Arrival & Registration / Domestic meeting
- July 2, 2024 (Tuesday)
  - Morning Session / Afternoon Session / Banquet
- July 3, 2024 (Wednesday)
  - Morning Session / Excursion
- July 4, 2024 (Thursday)
  - Morning Session / Discussions

Program

The scientific sessions will take place in Gangneung Green City Experience Center, 1F, Meeting Room1 and 3, starting from July 1 to 4, 2024.

More details will be announced soon.

Accommodation

The accommodation of the participants is supposed to be paid for themselves. Detailed accommodation information can be found on the website of the workshop.

Registration

Participation is based on invitation. In order to better organize the future calculations for odd-odd nuclei, the chief person of each cooperation group needs to ensure that they can participate in the workshop. All the collaboration members are welcome to join the workshop. Please register at your earliest convenient time on the website: https://indico.omeg.soongsil.ac.kr/event/46/registrations/28/.

Fees

There is no registration fee for the workshop.

Chairperson: Myung-Ki Cheoun (SSU)

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