



# Halo Week 2022

Bergen, Norway, July 10 – 15 2022

## Final Circular

### Scope:

After the discovery of Halo nuclei in 1987 and a series of experiments at the first-generation radioactive beam facilities, the field experienced a boost in the time period from 1994 to 2003 when the next-generation experiments provided more precise data accompanied by theory developments. During that time, two dedicated workshop series took place regularly.

The *Halo Weekends* organised in the Nordic countries starting with Copenhagen in 1994 and 1995, followed by Säröhus (1997), Copenhagen (1999), Louvain-la-Neuve (2000), Göteborg (2002), St. Petersburg (2003), and Bergen (2005). In addition, several *workshops in Trento* were devoted to the physics of Halo nuclei, one in 1996 and 2001, and a follow-up workshop in 2006. After the tremendous progress and extension, the field has seen in recent years both in experiment and theory, we feel that it is timely to restart a dedicated workshop series on this subject, which we see as a follow-up in the tradition of the aforementioned workshops, while we interpret “Halo” here as a synonym for drip-line physics in general.

We decided to organise the first “Halo Week” in Bergen to discuss the status of the field and its perspectives. We hope that this starts a new series of workshops organised regularly around the world depending on the progress of the field. Following the tradition of previous workshops, we plan for a size of 40-50 participants to discuss the most recent experimental and theoretical progress and perspectives.

### The topics of the workshop will include:

- Experimental and theoretical progress in the physics of Halo states
- Nuclei at and beyond the drip-lines
- Theoretical description of weakly-bound and continuum states in nuclei, atoms, and molecules
- Pure neutron systems
- Reaction theory
- General aspects and analogies

### Location and Accommodation:

The conference will take place at the [Grand Hotel Terminus](#) in the conference room TERMINUS FORUM with direct access to a large outside area for coffee breaks and discussions. The conference hotel is located centrally in downtown Bergen.

Rooms have been pre-reserved in the adjacent modern hotel [Zander K](#) for a special rate. **Please book the hotel yourself as early as possible using the [link for pre-reserved rooms](#) given on our registration site.**

The transport from the Bergen international airport to the downtown area and hotel takes about 30 minutes with bus.

**Registration and further information on <https://indico.gsi.de/e/halo-2022/>**

There will be a **workshop fee of 350 €** which includes besides the conference facilities and coffee breaks, all lunches and announced social events, which will provide the platform for individual discussions.

**Deadline for registration and payment of workshop fee: April 17 2022**

### Social events:

Reception: Sunday, July 10, 17:00

Excursion: Wednesday, July 13, 09:00 – 15:00

Workshop Dinner: Wednesday, July 13, 19:00

The Workshop will end Friday, July 15 afternoon

### Organizers:

Gaute Hagen (Oak Ridge NL), *Chair and local organizer*

Navin Alahari (GANIL)

Hans Werner Hammer (TU Darmstadt)

Takashi Nakamura (Tokyo Tech)

Jan Vaagen (Bergen)

Thomas Aumann (TU Darmstadt and GSI), *Chair*

Carlos Bertulani (Texas A&M Commerce)

Björn Jonson (Chalmers University)

Isao Tanihata (Osaka University)

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