



FUSTIPEN Topical Meeting

«Dipole collectivity in nuclei»

October 3-4, 2013, GANIL, Caen, France

Second circular

Collective excitations of quantum many-body systems are characterized by the participation of many particles and often lead to an interpretation in terms of shapes. Besides the ubiquitous quadrupole-deformed states, nuclei may display dipole excitations associated with a linear displacement (or E1) mode, an angular displacement (or M1) mode, or even more complicated collective behaviour such as the shears mode. Many pertinent results, both experimental and theoretical, have been obtained over several decades.

We propose to organize a topical two-day meeting to discuss different types of dipole collectivity, to point out similarities and differences as compared to other quantum many-body systems, to suggest new experiments on nuclei, in particular to explore the dipole degree of freedom in the exotic realm where nuclei display an excess of nucleons of one type.

We invite those participants who believe that they can contribute to the discussion to contact us at fustipen@ganil.fr. In line with previous workshops of this kind, the format of the workshop will be kept informal with ample time for discussion.

The preliminary program of the meeting is as follows:

Thursday 3 October

Lunch

M1 Session

14:00 Welcome
14:00 – 15:00 Kris Heyde (University of Ghent)
TBA
15:00 – 15:45 Kosuke Nomura (GANIL)
TBA

Coffee break

16:15 – 17:00 Thomas Möller (TU Darmstadt)
One-quadrupole phonon mixed-symmetry states of vibrational nuclei
17:00 – 17:45 Jacob Beller (TU Darmstadt)
Systematics and new decay channels of the nuclear 1+ scissors mode
along a shape transition path

Friday 4 October

E1 Session

9:00 – 10:00 Andreas Zilges (University of Cologne)
The electric dipole response of atomic – from giants to pygmies

Coffee break

10:30 – 11:15 Mark Spieker (University of Cologne)
TBA
11:15 – 12:00 Julien Gibelin (LPC Caen)
TBA

Lunch

13:30 – 14:15 Sophie Péru (CEA, DAM, Arpajon)
Dipole description with axially-symmetric-deformed QRPA using the
Gogny force
14:15 – 15:00 Danilo Gambacurta (GANIL)
Low-lying dipole response in $^{40,48}\text{Ca}$ isotopes within second RPA

Coffee break

Shears session

15:30 – 16:15 Augusto Macchiavelli (University of California, Berkeley)
TBA
16:15 – 17:00 Piet Van Isacker (GANIL)
Shell-model description of the shears mechanism
17:00 Close

To register for the meeting, please fill in the [registration form](#). We are asking even those holding a GANIL badge to register so that an accurate count can be obtained for the coffee breaks. There is no registration fee. A French FUSTIPEN grant can provide local support for French-based physicists interested in the topic of the meeting.

The information to reach GANIL can be obtained at the address:

http://fustipen.ganil.fr/practical/Practical_info.pdf

If you have any question concerning your arrival and stay in Caen, or your participation in the meeting, please do not hesitate to contact us at fustipen@ganil.fr.

Augusto Macchiavelli (University of California, Berkeley)

Piet Van Isacker (GANIL)