

UNIVERSITY OF ARIZONA
Department of Physics, PO Box 210081
Tucson, Arizona, 85721-0081

RE: Exit Report: FUSTIPEN visit to GANIL by Dr. Bruce R. Barrett, March 15-23, 2014

Dr. Robert Janssens
Co-Director: FUSTIPEN
Argonne National Laboratory

Dear Robert,

This is my exit report on my FUSTIPEN visit to GANIL from March 15-23, 2014. I departed Tucson, AZ, on Saturday, March 15 and arrived in Paris on Sunday, March 16. I took an afternoon train to Caen and was met at the Caen train station by Marek Ploszajczak, who took me to my hotel, the Appart City Caen. On Monday, March 17, the FUSTIPEN Topical Meeting on *Understanding Nuclear Structure and Reactions Microscopically, including the Continuum* started at 9:00 a.m. This five-day meeting had 36 participants, half from France and five from the USA plus smaller numbers from several other countries. There were 24 invited presentations, each of 30 minutes in length plus an additional 15 minutes for discussion. Besides the discussions following each talk, there was also a formal Discussion Session at the end of each day. These Discussion Sessions were led by two conveners, who posed questions and raised topics, related to the talks given that day. I led the Discussion Session for the final day of the meeting on Friday, which also included a summary and overview of the Topical Meeting. Consequently, there was much excellent discussion at this FUSTIPEN Topical Meeting. The program for this Topical Meeting is available on the FUSTIPEN website at <http://fustipen.ganil.fr> along with copies of all the presentations and a list of the participants. Marek and I both strongly feel that our FUSTIPEN Topical Meeting on *Understanding Nuclear Structure and Reactions Microscopically, including the Continuum* was very successful and have already discussed the possibility of holding a similar Topical Meeting in 2015.

In addition to the FUSTIPEN Topical Meeting, I also had discussions with my collaborators, Marek Ploszajczak (GANIL), Nicolas Michel (GANIL), Jimmy Rotureau (Chalmers U. Technology, Sweden), and George Papadimitriou (Iowa State U.), on the status of our research project on the No Core Gamow Shell Model (NCGSM). We already have one publication on this project, *i.e.*, Phys. Rev. C **88**, 044318 (2013), in which the formalism for the NCGSM is presented and applied to ^5He . We are now working on applying the NCGSM formalism to the excited states of ^4He . In addition, we had a lengthy discussion regarding the challenges of applying the NCGSM to the hydrogen isotopes, especially ^7H .

My FUSTIPEN visit to GANIL March 15-23, 2014, was highly successful. It met our research goals of 1.) bringing together all of the NCGSM collaborators to discuss the status of the NCGSM and its future applications and 2.) producing a scientifically stimulating and informative Topical Meeting on the present status of microscopic calculations for nuclear structure and reactions. I returned to Tucson on Sunday, March 23, 2014.

With best regards,

Bruce

Bruce R. Barrett