

FUSTIPEN collaboration visit report
(C.A. Bertulani – GANIL + Orsay - 06/30/13 to 07/20/13)

GANIL – 06/30/13 – 07/13/13

The purpose of my visit to GANIL was to explore new theoretical research venues for reactions with rare nuclear isotopes. I have presented 4 lectures (1 hour each) at GANIL on “Challenges in Nuclear Astrophysics”, July 4 and July 5. As an experiment, I had planned to present my lectures with an old technique: pen+whiteboard or chalk+blackboard. But my feeling was that this experiment would not work as expected. It seems that we are too much used to the mundane Microsoft Powerpoint presentations, so I did it that way. Solving equations on a piece of paper and making discussions on a black/whiteboard are losing space to doing algebra, calculus, letters, and numeric (at least this is understandable) on the computer.

I am happy with the important physics discussions I had with Marek Ploszajczak, Francois de Oliveira, Denis Lacroix, Piet van Isacker and Gilles de France. I had also fruitful discussions with Alexandre Obertelli and Gregory Potel, both from Saclay.

My trip was organized by Marek Ploszajczak, who took care of my working conditions, lodging, documents and organization of my lectures and contact with French collaborators. Marek is a perfectionist.

GANIL is preparing a world class facility for research with rare nuclear isotopes, which hopefully will survive the economical turmoil, nowadays typical of developed countries. SPIRAL 2 will need much support of theorists. Nuclear physics is a very hard discipline which demotivates young theorists by the realization that many years of work are not enough appreciated, in particular when more senior colleagues distance themselves from experimental data. There is nothing more important for research than experiment. GANIL is doing a great investment to clarify many relevant aspects of nuclear science. It is up to a strong effort between theory and experiment to help this project to succeed. FUSTIPEN has a very important role on it.

ORSAY – 07/13/13 – 07/20/13

During my stay in Orsay I had several research discussions with Bira van Kolck, Nguyen van Giai, Francesco Catara and Denis Lacroix. I have also presented a talk on “Challenges in Nuclear Astrophysics” on July 17.

Summary

My visit to France within the FUSTIPEN was very fruitful and important for my future work in nuclear physics/astrophysics. I am confident that robust research results will emerge from collaborations started during this visit.

I cannot hide my appreciation for FUSTIPEN as an important piece of effort that the US is pursuing with the French nuclear physics community. It is an excellent symbiosis of resources across the Atlantic ocean.