

for equipment, thus marking the launch of his research in "Big Science," the legacy of which we see today in projects from FAIR at GSI to the LHC at Cern. Rutherford would, late in life, become a very powerful figure in U.K. politics, but never ceased to devote his efforts to helping secure funding for his researchers and promote science around the world.

Rutherford was a loud, straight-talking giant of a man who did not suffer fools gladly. He would push his colleagues, assistants, and students hard in the lab and would offer encouragement all the time. The English chemist, Henry Tizard, once said of him: "He never considered whether he should be a grave man or a merry man, but just let

inclination for the time take its course." [10, p. 494]

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JIM AL-KHALILI  
*University of Surrey*

## The French–US Theory Institute for Physics with Exotic Nuclei

A new initiative in nuclear theory has been launched: the French-US Theory Institute for Physics with Exotic Nuclei (FUSTIPEN). The Institute is based at GANIL, and is dedicated to promoting collaborative projects between researchers in the United States and in France in the area of physics of or with exotic nuclei, including nuclear structure and reaction theory, nuclear astrophysics, and tests of the standard model rare isotopes.

The Institute was inaugurated with a two-day meeting 18–19 January, attended by about 80 participants (Figure 1). The first day was devoted to the broad picture of the research underway on exotic nuclei. Perspectives on the projects planned and underway were given by representatives of the

major funding agencies, namely T. Hallman of the U.S. Department of Energy, F. Staley of the CEA/DSM, and J. Martino the French CNRS/IN2P3. There were numerous examples showing the importance of international collaboration in the large experimental projects.

The second day was a workshop highlighting theoretical problems that could benefit from collaborative efforts, as well as reporting on ongoing French-U.S. collaborations in the physics of exotic nuclei. High on the list of problems was the need to improve on present implementations of mean-field theory, because of its role as the foundation of nuclear structure theory. In specific regions of the nuclear chart the interacting shell

model is the most powerful spectroscopy tool available for theory. The implementations of this model at the intersection of structure and reaction theory remain one of the major future challenges. There is also a great need for better reaction theory to make quantitative interpretations of experiments. Besides these key areas, there were many topics that were also presented, ranging from shell structure evolution, isospin breaking, astrophysical reaction rates, to giant resonances and fission.

The FUSTIPEN Institute will operate by funding visits of U.S.-based scientists to GANIL to collaborate on a one-to-one basis with French-based scientists. The visits can also include stays at the home institutions of the



**Figure 1.** Inauguration of FUSTIPEN, 18–19 January 2011 in GANIL, Caen, France.

French-based researcher. Funding for FUSTIPEN is provided by the Office of Nuclear Physics of the U.S. Department of Energy while GANIL provides the local support. The French grant supplies funding for French physicists to visit GANIL to collaborate with U.S. visitors. While FUSTIPEN is dedicated to

nuclear theory, collaborations between theorists and experimentalists are essential for understanding and planning of experiments, and such activities are encouraged by the Institute. The present funding of FUSTIPEN permits the support of about 10–15 collaborative visits per year. More details about the Institute

and the application process can be found on its website: [fustipen@ganil.fr](mailto:fustipen@ganil.fr).

Numerous FUSTIPEN activities are already on the books. On 3 February 2011, the topical meeting “Neutron-Proton pair correlations in  $N \sim Z$  nuclei” was devoted to specific correlation effects due to the isoscalar pairing. On 3 March 2011, the topical meeting “Effective field theories for nuclear structure studies” investigated current issues posed by the many-body problem of nuclear structure to effective field theories. Further activities, such as the topical meeting on “Probing two-nucleon correlations in reactions,” and workshops on “Open quantum systems” and “Theory of nuclear fission” are planned later in this year.

G. BERTCH, S. GALES,  
W. NAZAREWICZ, AND  
M. PLOSZAJCZAK  
*FUSTIPEN*