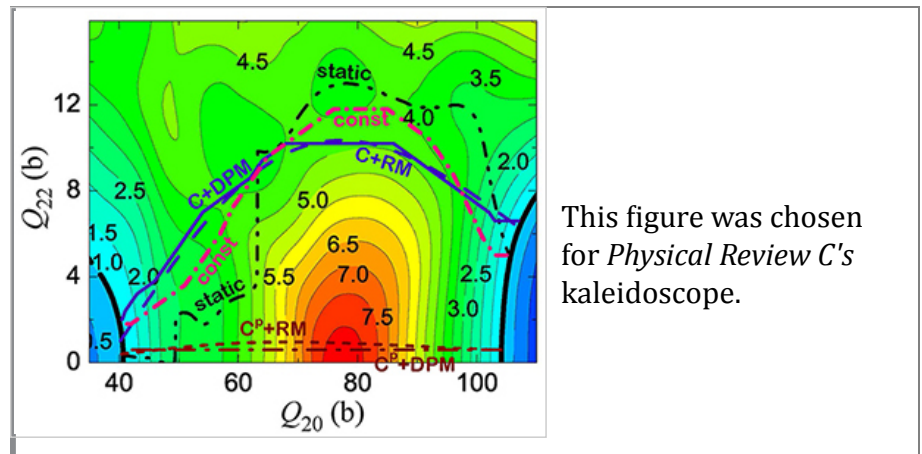


The Beauty of Nuclear Physics

March 28, 2014

Professor Witek Nazarewicz and his colleagues have often been recognized for the scientific merit of their work, and now they're getting a nod for the more aesthetic aspects of their research. The editors of *Physical Review C* have selected a figure from their recent paper "Spontaneous fission lifetimes from the minimization of self-consistent collective action" for the journal's online kaleidoscope: a rotation of images from recent publications.



The paper focuses on the spontaneous fission lifetime of Fermium-264, a member of the actinide series. By using nuclear density functional theory and other sophisticated techniques, researchers discovered that the choice of the collective inertia plays a crucial role in determining the dynamics of spontaneous fission.

The authors include Nazarewicz, the physics department's James McConnell Distinguished Professor, as well as postdoc (and lead author) Jhiliam Sadhukhan of UT and colleagues Katarzyna Mazurek, Andrzej Baran, Jacek Dobaczewski, and Javid Sheikh, who hold affiliations with UT as well Oak Ridge National Laboratory, the Niewodniczanski Institute of Nuclear Physics (Poland), Maria Curie-Skłodowska University (Poland), the University of Warsaw Poland, and the University of Jyväskylä (Finland).

As of last fall, Nazarewicz is also a guest professor of Peking University, an honor he will hold until October 2015. He is part of a century-old tradition at PU to invite experts from other countries to teach, lecture, and contribute to research.



Dr. Nazarewicz (seventh from right) is pictured with representatives from PKU and other nuclear physics laboratories in China.

More information

- ***Physical Review C Kaleidoscope*** (<http://journals.aps.org/prc/kaleidoscope/prc/88/6/064314>)
- **Professor Witek Nazarewicz** (<http://www.phys.utk.edu/faculty/faculty-nazarewicz.html>)