

To the JUSTIPEN Organizers/Coordinators:

Greetings! I am writing to report on my stay in Japan from March 23 to April 21, 2007, under the JUSTIPEN program. I divided my time between RIKEN and the University of Tokyo, where I worked on research projects and had numerous physics discussions, regarding current research activities at RIKEN and the University of Tokyo, with senior physicists, post-doctoral research associates and graduate students. I also taught a short course at RIKEN (i.e., three one-hour lectures) on Effective Interaction and Shell Model Theory (both the standard Shell Model and the No-Core Shell Model), presented a nuclear-theory seminar at the University of Tokyo and gave the plenary talk at a one-day workshop at RIKEN regarding Many-Body Forces and Many-Body Nuclear Theory.

I found my stay to be very productive and worthwhile, having learned many new things concerning current research in Japan regarding nuclear-structure theory, particularly for rare isotope physics and exotic nuclei, as well as providing information about my research through discussions, seminars and lectures. I see the possibility for two future research collaborations, one concerning new techniques for including more multinucleon correlations in small model spaces by performing two successive unitary transformations and the other regarding the inclusion of clustering effects into shell model calculations.

In my opinion, the JUSTIPEN program is doing exactly what it was created to do, i.e., to bring US nuclear-structure theorists into contact with Japanese nuclear physicists, especially at RIKEN, so as to stimulate mutual research exchanges and collaborations. I would be very happy to return to Japan in the future under the JUSTIPEN program.

Finally, I wish to thank Dr. N. Itagaki, the JUSTIPEN coordinator and liaison person at RIKEN, for all that he did to organize my stay in Japan and to make it productive, and Professor Taka Otsuka for his kind hospitality during my time at the University of Tokyo.

With my very best wishes to everyone,

Bruce Barrett
Professor of Physics