

May 11, 2013

## Interim review report prepared for the RIKEN Nishina Center for Accelerator-Based Science

**1) Name of the Laboratory: Theoretical Nuclear Physics Laboratory**

**2) Names of the Reviewers (Report is prepared jointly by all Reviewers):**

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**3) General comments:**

The group of Dr. Nakatsukasa has been doing extremely well with new ideas, methods, and results. This is one of the leading and most important theory groups of nuclear structure worldwide. One of the highlights of the research is the development of the time-dependent density functional theory (TD-DFT), to which Dr. Nakatsukasa has made a very original initiative. Besides this, there have been a wide variety of interesting works by the members of the group, and the productivity has been remarkably high in the global standard.

The organization of the group has been very successful. Dr. Nakatsukasa is good at inspiring young physicists – not only through direct leadership but also by creating open environment, promoting new ideas, and his own successful work.

We became aware once more that RIBF is truly world no. 1 facility in the field of low-energy nuclear physics, and that one can expect much more intriguing experimental data in the next decade. We, however, observe somewhat imbalance between theory and experiment. The present size of the group of nuclear structure theory does not conform to ambitious

experimental programs. We are aware of many administrative difficulties in RIKEN. Nevertheless, we recommend the relevant personnel in RIKEN to come up with strategic plan promoting synergic connections between theory and experiment.