The Neutron Scattering Society of America

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February 6, 2013

Request to Resume Operation of the JRR-3 Research Reactor at Tokai

Dr. Atsuyuki Suzuki
President of the Japan Atomic Energy Agency

Dear Dr. Suzuki,

I am writing to you on behalf of the Neutron Scattering Society of America (NSSA) to strongly support the resumption in research operations at the JRR-3 research reactor in Tokai, Japan.

As you know, the JRR-3 nuclear reactor has been run by the JAERI and JAEA since 1990 as a successor of the previous research reactor that had run safely since 1962 at the same site. The JRR-3 reactor has served as a crucial source of slow neutrons and has supported a wide-ranging program in the science and engineering of materials for more than 20 years. Sources of neutrons optimized for neutron scattering experiments on materials are a scarce commodity worldwide. As a result these facilities are in very high demand worldwide.

The neutron scattering materials science program at JRR-3 has been both prolific and of high impact over this time period. Definitive experimental studies on materials ranging from new superconductors to new plastics and biomaterials to engineering components have been successfully carried out at the JRR-3 research reactor since 1990, and these important studies have greatly furthered our understanding of a large range of technologically important materials. Furthermore, the JRR-3 research reactor has also served as an excellent vehicle for the training of a large number of Japanese and international scientists in the application of neutron scattering to the most topical problems in materials science and engineering and has been essential for the training of the scientific staff that are now working at J-PARC as instrument scientists.

The shutdown of the JRR-3 reactor since the Great Earthquake on March 11, 2011, has affected a large scientific community not only in Japan but also worldwide. In response to the shutdown, many experiments to be performed at JRR-3 were given time at other international facilities. For example, in fiscal year 2011 at least 85 experiments had been transferred to international facilities, 17 of these to the HFIR research reactor in the United States. This however comes at very much increased expenses and leads to a very unusual, unbalanced international exchange, which is not sustainable. A long-term shutdown of JRR-3 will therefore cause a serious deterioration of highly important research activities in Japan.

Since the safety and integrity of the JRR-3 facility in accordance with new regulatory codes and standards has recently been ensured, following detailed inspections, repairs, and a report to the Nuclear Regulation Authority, we hope that this important research facility can be re-started in the immediate future, such that it can safely resume operations and return to full scientific productivity.

Sincerely yours;

Stephan Rosenkranz

President, Neutron Scattering Society of America