

June 30, 2004

Expression of Interest in Hosting 2007 International Nuclear Physics Conference in Japan

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The Japanese nuclear physics community would like to propose to host INPC2007 in Japan. This proposal is supported by the Japanese Experimental Nuclear Physics Committee (Chair: H. Sakai from April, 2004 and K. Imai until March, 2004), Japanese Theoretical Nuclear Physics Committee (Chair: T. Hatsuda) and by the Yukawa Memorial Foundation (President: H. Sato). Described below are justifications and preliminary ideas of practical matters.

Expected Nuclear Physics Activities in Japan in 2007

- 1) RIKEN RI Beam Facility: The Phase I construction will be completed in 2006, with an anticipated start of new experiments in 2007. These facilities together with the present RIKEN cyclotron facilities will produce interesting results in nuclear physics in particular on nuclei far from the stability line.
- 2) J-PARC Facility: Construction of the J-PARC facility with high power 50 GeV synchrotron is presently under construction in Japan. This facility will be completed in 2007. Although construction of this new accelerator complex will not be completed fully in 2007, an extremely lively atmosphere in nuclear physics around this new facility will be generated in 2007.
- 3) RCNP at Osaka University: RCNP has two major activities, one at the 400 MeV cyclotron that is located in the University campus and the other at an electron-laser scattering facility at SPring-8. The cyclotron at the University campus will be upgraded soon and will produce new results by 2007. Also, after the discovery of penta quarks at Spring-8 by the RCNP group, new results will be expected from this facility as well.
- 4) KEK 12 GeV PS: In addition to the above new initiatives and facilities, results from the KEK 12-GeV proton synchrotron, such as hypernuclear spectroscopy, lepton-pair measurements from vector mesons, deeply bound

kaon system, new multi-quark states, etc. will be studied and the results will be expected in 2007.

- 5) Neutrino Experiments: In Japan, strong groups exist in neutrino experiments. The final data from K2K (KEK to SuperKamiokande) will be available in 2007 before the team moves to J-PARC. Kamland experiment to measure neutrinos from reactors will also be available. Work on neutrino-nucleus interactions is also in progress.
- 6) RHIC at BNL: Furthermore, new exciting results from RHIC (heavy-ion and RHIC spin) in which Japanese groups have been contributing significantly through the US-Japan Collaboration and also through RIKEN-BNL Center will be produced in 2007.
- 7) Other Activities outside Japan: At HERA a Japanese team is conducting an experiment in deep inelastic scatterings to study low-x physics, color-glass condensates, gluon distribution, etc. Also, at GSI a Japanese team is studying the meson property in nuclear matter together with multi-quark states. These results will be also available in 2007.
- 8) Theory: In addition, strong nuclear theory groups exist in Japan by producing exciting results covering from nuclear spectroscopy to hadron physics.
- 9) Young Physicists in Nuclear Physics: Bright and young researchers as well as new graduate students are gathering in nuclear physics in Japan. Inviting INPC2007 will certainly give a strong stimulation to these young physicists in nuclear physics in Japan.

100th Anniversary of Dr. Hideki Yukawa

The year of 2007 is the 100th Anniversary of Hideki Yukawa's birth. The Yukawa Memorial Foundation (President: Professor Humitaka Sato) expressed its interest in sponsoring INPC2007 to celebrate this unique occasion. In the scientific program in IPNC2007, thus, a session will be reserved for presentations of several talks by eminent scientists who have connections with Hideki Yukawa.

Sponsors of the Conference

Presently, the major sponsors of INPC2007 will be:

- 1) IUPAP
- 2) Major Japanese Institutions: KEK, RIKEN and RCNP at Osaka University, and Yukawa Institute for Theoretical Physics, Kyoto University.
- 3) Yukawa Memorial Foundation
- 4) Physical Society of Japan (not yet interacted).

Site and Host Institutions

Site: Not yet decided. Will be decided shortly.

Host Institutions: KEK and RIKEN

Organizing Committee (tentative)

H. En'yo (RIKEN), O. Hashimoto (Tohoku Univ.), T. Hatsuda (Tokyo Univ.), H. Horiuchi (Kyoto Univ.), K. Imai (Kyoto Univ.), T. Kishimoto (Osaka Univ.), T. Kunihiro (Yukawa Institute, Kyoto Univ.), Y. Miake (Tsukuba Univ.), T. Motobayashi (RIKEN), T. Nagae (KEK), S. Nagamiya (KEK, chair), T. Nakano (RCNP, Osaka Univ.), T. Noro (Kyushu Univ.), M. Oka (Tokyo Inst. Tech.), K. Otsuka (Tokyo Univ.), H. Sakai (Tokyo Univ.), H. Sato (Yukawa Foundation), A. Suzuki (Tohoku U.), Y. Suzuki (Cosmic Ray Institute, Tokyo Univ.), H. Toki (RCNP, Osaka Univ).