

Полученные результаты, созданный задел и имеющийся потенциал позволяют физикам ТПУ претендовать на достойное место в табели о рангах международного физического свойства.

Возможность представления полученных результатов на физических форумах Японии (которые проводятся с завидной частотой) способствует дальнейшему расширению научных контактов между физиками ТПУ и японскими коллегами.

Так, например, в 1977 году была завершена модернизация ускорителя-накопителя на энергию 1200 МэВ в Университете Тохоку, г. Сендай, Япония. Ученые Института научных измерений этого университета планируют проводить исследования по тематике, близкой к ведущейся на нашем синхротроне. Возможно, поэтому ими был проявлен интерес к развитию связей с НИИ ЯФ, который был реализован в подписании договора о сотрудничестве между НИИ ЯФ и ИНИ в декабре 1997 года.

По этому договору планируется совместный эксперимент в ИНИ в 1998-99 гг., а также длительная командировка сотрудника НИИ ЯФ при ТПУ в Сендай.

Представляется, что полученные результаты, созданный задел и имеющийся потенциал позволяют физикам ТПУ претендовать на достойное место в табели о рангах международного физического свойства.

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In 1970-80 physicians of Tomsk polytechnical university in the experiments on synchrotron "SIRIUS" have received a number of priority results, which had an appreciable international resonance (detection and research of such effects, as channeling emission, parametric X-ray, B-type coherent emission). To the middle of the 80-s the number of the references of the

foreign authors on Tomsk works has exceeded 100. However, for the known reasons, the normal scientific contacts to the foreign colleagues could not develop till 1991. It is possible to remember that in 1983 some Japanese scientist participating in a Russian-Japanese symposium in Novosibirsk, hinted on desirability of scientific excursion in our institute. As a reply on it the Tomsk participants of a symposium hasty transferred the conversation to the less secret themes.

The first visit of the foreign physicians in TPU was held in the summer of 1991. Then the professor I.Endn (Hiroshima University) and professor K. Ioshida (Institute of nuclear researches at Tokyo University) have visited the research institute of nuclear physics. During that visit therewas achieved an agreement on realization of joint researches both on synchrotron "SIRIUS" and on synchrotron of INR (Tokyo), about which K.Ioshida has told, that these two machines in age and parameters are similar, as "the full sisters".

In 1992 the first joint experiment on our synchrotron was held, which results were published in a prestigious magazine (Phys. Rev. E, v.47, № 3, p.2207, 1993). In 1993 in an experimental session on synchrotron of INR there participated V.N.Zabaev and A.P.Potylitsin. Since that time the realization of joint experiments has become a tradition, and the scientific mutual understanding was transferred into wider interaction: in March, 1997 the Agreement on cooperation between TPU and Hiroshima University was signed. Within the framework of the Agreement senior investigator of research institute of nuclear physics M.Y.Andreyashkin was invited for

a work in Hiroshima University for a long term. Nowadays there is achieved an understanding on 2-nd grants by the Hiroshima University for the students-physiotechnicians. In the nearest years the expansion of exchanges of the students and post-graduate students is expected within the framework of the agreement in force. The joint researches were supported by the grants of Russian Federation Ministry of Education and fund JSPS (Japan), and also by the grants of Institute of nuclear researches (Tokyo University) and National laboratory of high-energy physics (Japan). Unfortunately, the major part of this money, on conditions of the grants, remained in Japan. So, for example, in 1996, there was won a grant for preparation and realization of experiment ES-164 on the synchrotron of INR (Tokyo), chiefs A.P.Potylitsin and K.Ioshida. From a total sum of \$20,000 only about \$4,000 were spent for the payment of travel of the Tomsk participants, whereas other money was spent in Japan for purchasing and manufacturing of the equipment. During the last time candidates of sciences Y.L.Pivovarov, V.V.Kaplin and I.E.Vnukov successfully participated in the joint experiments on Japan accelerators. The received results were reported at many international conferences, including in Tomsk at the international symposiums "Emission of relativistic electrons in periodic structures". The Japanese colleagues came to Tomsk not only to make their reports, but also to participate in the experiments on synchrotron "SIRIUS". In turn Tomsk scientists regularly spoke at various scientific conferences in Japan. Opportunity of representation of the received results on physical forums of Japan (which are

carried out with enviable frequency) promotes the further expansion of scientific contacts between the physicians of TPU and Japanese colleagues. So, for example, in 1977 the modernization of the storage accelerator of 1200 MeV at the University Toхоку, Сендай, Japan was completed. The scientists of the Institute of research measurements of this university plan to conduct researches on the subjects, close to the one conducted on our synchrotron. Perhaps, that is why they displayed an interest to the development of connections with the Research Institute of Nuclear Physics, which was realized in making in December, 1997 the contract about cooperation between RINP and INR. Under this contract there is planned the joint experiment in INR in 1998-99 rr, and also long business trip of the investigator of RINP at TPU in Сендай. I believe, that the received results, created start and available potential, allow to the physicians of TPU to put in for a worthy place in the ratings of applied physics.

Professor A.P. Potylitsin,
Chief of subfaculty of applied physics.

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Opening of Tomsk
«Sirius»
by Japanese
physicians