CANDLE: INVESTMENT IN THE FUTURE

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On 3-5 December 2018, a meeting was held at CANDLE Synchrotron Research Institute on the organization of a joint German-Armenian practical course for students on modern accelerator physics.

THE NEW PROJECT OF HAMBURG UNIVERSITY AND CANDLE INSTITUTE was supported by the German Federal Ministry of Foreign Affairs in the framework of the program "Expanding Cooperation with Civil Societies in the Eastern Partnership Countries and Russia". This experimental program, designed for the students of Hamburg University and universities of Armenia, will be launched in 2019 and will be conducted on the laser driven AREAL electron accelerator and in the research laboratories of CANDLE Institute. During the meeting, the experimental programs in various fields of modern accelerator physics were presented, including the physics of laser driven sources of relativistic electrons, physics and diagnostics of electron beams, the dynamics of ultrashort lasers, radio frequency technologies, vacuum and magnetic measurements.

"This is a completely new kind of cooperation, which involves strengthening and developing educational and research capabilities of Hamburg University and universities of Armenia in the field of modern accelerator physics, due to the fact that the world-class scientific infrastructure established at CANDLE Institute will be available for students and

they will be able to conduct modern experimental research" says Jörg ROSSBACH, a professor at the University of Hamburg. "We have been cooperating with CANDLE Institute in Armenia for a long time. But if until now the cooperation was connected with research, today our task is to prepare students studying general physics, particle physics and accelerator physics, to work on modern scientific equipment. To this end, we have developed a special training program, which will be a part of an academic training. The necessary basis for conducting these courses is available; the creation of AREAL facility with the appropriate infrastructure has been completed. We do not have the equipment that is available at CANDLE, therefore, the planned program gives us confidence that due to the new course, our students will be able to receive training that will meet the requirements of physical institutions all over the world. And what is even more important, the implementation of the planned program goes beyond the framework of scientific and educational cooperation; this is another step towards expanding and strengthening cultural ties between Germany and Armenia. It is very important that we are supported by the Ministry of Foreign Affairs of Germany, and we hope that this financial support will continue both next in subsequent years well. vear and as

"FOR THE FIRST TIME THE STUDENTS OF HAMBURG UNIVERSITY WILL EXECUTE experimental work and get credits for joint practical courses at CANDLE Institute" says Wolfgang HILLERT, a professor at the University of Hamburg. "We got acquainted with the level of research at CANDLE Institute, the experimental possibilities available here and are confident that the training course we have developed will meet the highest requirements of the Institute of Experimental Physics of the University of Hamburg. We note with deep satisfaction the high level of cooperation between German and Armenian scientists, and this new initiative opens up great prospects for preparing a new generation of scientists in an international team and improving educational programs in Armenia. Thus, we were able to use the facility, which usually represents an essential part of a high-level university structure. The very important resource for us is the expertise of the scientific staff operating AREAL facility, these are specialists with exclusive training and experience necessary to implement our program. We have to work together to coordinate the experience and knowledge of all interested parties involved in the creation and successful implementation of this training course. Now we have some discussions on the equipment for the implementation of the first stage of work, then practical exercises will begin.

A representative of the famous German company Rohde & Schwartz, with which CANDLE Institute signed a memorandum of cooperation, was also present at the meeting. The company, founded by engineers Rohde and Schwartz, has been developing,

manufacturing and selling test equipment for 85 years. The factories of the company are located in Germany, which fully guarantees the German quality of products.

"OUR COMPANY MAKES MONITORING AND MEASURING EQUIPMENT, which is used by research centers, radio frequency centers, mobile operators to assess the quality of services provided, data transmission, etc." says the "Rohde & Schwartz" company's sales manager of measurement equipment Alexander BERESNEV. "The company's participation in the initiative of CANDLE Institute and the University of Hamburg is stimulated by the fact that we will provide advanced test equipment that will be used in the implementation of the curriculum developed. On the basis of CANDLE Institute it is planned to create a new training center equipped with the Rohde & Schwartz equipment. For this center a special room will be allocated here. It is assumed that in the process of learning, students will acquire the most advanced knowledge necessary for working with scientific equipment, which they will later need in the process of practical and research work."

As part of an agreement with Rohde & Schwartz, at the last meeting, the main approaches to the new joint training center at CANDLE Institute for telecommunication, control, radio frequency and microwave devices in accelerators were presented. The opening of the new training center is planned during the international conference "Ultrafast Beams and Application", which will be held in July 2019 at CANDLE Institute.

"THE PREPARATION OF HIGH-LEVEL SPECIALISTS IN THE WIDE SPECTRUM of accelerator physics and the application of this knowledge and skills are extremely important tasks for many leading scientific centers of the world. We are opening a new page in our activities on the international level, and I am sure that the results will be visible very soon. A new student training program conducted at CANDLE, together with the University of Hamburg will undoubtedly contribute to the long-term development of the institute and to the strengthening of its links with other universities. This is a real investment in the future" said Professor Vasili TSAKANOV, director of CANDLE Institute.