ФИЗИКА ЭЛЕМЕНТАРНЫХ ЧАСТИЦ И АТОМНОГО ЯДРА
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Preface

The Joint Institute for Nuclear Research (JINR, Dubna) was organizing the IV International Pontecorvo Neutrino Physics School on September 26 – October 6, 2010 at the resort house «Dubna» in the town Alushta, Crimea, Ukraine.

The school continues the tradition of Pontecorvo schools previously held at Dubna in 1998 and at Alushta in 2003 and 2007.

The school is named after the famous scientist Bruno Pontecorvo who was working at JINR since 1950 and is well known for his contribution to the world science. In 1957 Bruno Pontecorvo for the first time suggested the idea of neutrino oscillations — phenomenon which was experimentally discovered about 40 years later and which remains now one of the most intriguing subjects of the modern particle physics.

Nowadays scientists are more and more convinced that the understanding of tiny neutrino masses will bring us to the physics beyond the Standard Model and play key role in future development of the theory. Experiments all over the world are aiming to study the neutrino features using various neutrino sources and detector techniques. New ideas are coming along both in theory and in experiment and the interest to the neutrino physics is growing bringing to the field young people.

The purpose of the school was to review the present experimental and theoretical situation in neutrino physics. The lecture courses at the school were given by the experts in the field and included phenomenology and theory reviews, discussion of experimental results and future programmes, as well as cosmology, dark matter and astrophysics subjects. In total the school accepted about 50 participants from different Institutes and countries worldwide.