

Abstract Submitted
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Soviet Hadron Collider DMITRI KOTCHETKOV, University of Hawaii at Manoa — Rapid growth of the high energy physics program in the USSR during 1960s-1970s culminated with a decision to build the Accelerating and Storage Complex (UNK) to carry out fixed target and colliding beam experiments. The UNK was to have three rings. One ring was to be built with conventional magnets to accelerate protons up to the energy of 600 GeV. The other two rings were to be made from superconducting magnets, each ring was supposed to accelerate protons up to the energy of 3 TeV. The accelerating rings were to be placed in an underground tunnel with a circumference of 21 km. As a 3 x 3 TeV collider, the UNK would make proton-proton collisions with a luminosity of $4 \times 10^{34} \text{ cm}^{-2}\text{s}^{-1}$. Institute for High Energy Physics in Protvino was a project leading institution and a site of the UNK. Accelerator and detector research and development studies were commenced in the second half of 1970s. State Committee for Utilization of Atomic Energy of the USSR approved the project in 1980, and the construction of the UNK started in 1983. Political turmoil in the Soviet Union during late 1980s and early 1990s resulted in disintegration of the USSR and subsequent collapse of the Russian economy. As a result of drastic reduction of funding for the UNK, in 1993 the project was restructured to be a 600 GeV fixed target accelerator only. While the ring tunnel and proton injection line were completed by 1995, and 70% of all magnets and associated accelerator equipment were fabricated, lack of Russian federal funding for high energy physics halted the project at the end of 1990s.

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