

The $\mu\mu$ tron physics program

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The construction of the low-energy e^+e^- collider ($\mu\mu$ tron) operating near the muon-pair production threshold begins in 2018 at BINP (Novosibirsk). The collider parameters and configuration (a luminosity of $8 \times 10^{31} \text{ cm}^{-2}\text{c}^{-1}$, an center-of-mass energy spread of 400 keV, and beams collision with a large crossing angle) allow to perform experiments on study of dimuonium properties. The dimuonium is the $\mu^+\mu^-$ bound state that has not yet been observed. At $\mu\mu$ tron it will be possible to detect about 40 thousand dimuonium atoms per year (10^7 s). In this report we describe the physics program of $\mu\mu$ tron.

[1] A. Bogomyagkov *et al.*, arXiv:1708.05819 [physics.acc-ph].