

XXV International Baldin Seminar on High Energy Physics Problems
"Relativistic Nuclear Physics and Quantum Chromodynamics"



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on High Energy Physics Problems
Relativistic Nuclear Physics & Quantum Chromodynamics
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Novel quantum phase transition in heavy ion collisions

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As a result of the collision of heavy ions, matter with extremely high acceleration is formed. We show that at such high accelerations, a new quantum phase transition occurs in the medium when its temperature drops below the Unruh temperature. The connection with the behavior of wave modes at the Rindler horizon and the phenomenological implications for hadronization and fast thermalization will be discussed.

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