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ЛАБОРАТОРИЯ ТЕОРЕТИЧЕСКОЙ ФИЗИКИ
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Семинар
"ТЕОРИЯ АДРОННОГО ВЕЩЕСТВА ПРИ ЭКСТРЕМАЛЬНЫХ УСЛОВИЯХ"

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**The ρ and A mesons in a strong abelian magnetic field
in $SU(2)$ lattice gauge theory**

The correlators of vector, axial and pseudoscalar currents have been calculated in the background of a strong abelian magnetic field in $SU(2)$ gluodynamics simulated with an improved gauge action. The neutral ρ and A meson masses with different spin projections to the axis parallel to the external magnetic field \vec{B} have been calculated. The masses of the neutral mesons with zero spin $S = 0$ decrease with increasing strength of the magnetic field. The masses of the ρ and A mesons with spin $S = \pm 1$ increase with the value of $|\vec{B}|$. The mass extrapolation and renormalization also were performed on the lattice.