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## Nonlinear spinor field in non-diagonal Bianchi type space-time

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Within the scope of non-diagonal Bianchi cosmological models we have studied the role of spinor field in the evolution of the Universe. Unlike in diagonal Bianchi models such as I, III, V, VI0 and VI where spinor field distribution along the main axis is isotropic and becomes zero for linear spinor field, in case (non-diagonal) Bianchi models such as II, VIII and IX, spinor field distribution along the main axis is anisotropic and does not vanish in absence of spinor field nonlinearity. The equation for volume scale  $V$  in case of diagonal Bianchi models can be resolved exactly and the corresponding solution can be presented as quadrature. In case of non-diagonal Bianchi models the corresponding equation contains a term with the first derivative of  $V$  explicitly and does not allow exact solution in quadrature.

In absence of non-diagonal components of energy-momentum tensor non-diagonal Bianchi spacetime becomes locally rotationally symmetric. Inclusion of spinor field does not change the situation as well.

It was found that depending on the sign of coupling constant the model allows either an open Universe that rapidly grows up or a close Universe that ends in Big Crunch singularity.

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