

Gauge cosmic chiral strings in general relativity

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Cylindrically symmetric self-gravitating configurations of string (vortex) type are considered within the framework of the chiral $SU(2)$ model with the inclusion of the proper Yang - Mills gauge field. In the approximation of the large topological charge n the solutions to the field equations are found, with the magnetic field of the vortex being longitudinal. The linear energy density of the vortex configuration is estimated.