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Channeling of protons in radially compressed chiral carbon nanotubes

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Channeling of 10 MeV protons in radially compressed chiral carbon nanotubes is considered. Monte Carlo simulation program is used for the calculation of the trajectories, energy losses and angular distributions of protons in nanotubes of various lengths and compression, where the potential in Doyle-Turner approximation is used to describe the interaction between a proton and a nanotube. Carbon nanotubes, which are considered, are radially compressed at different points with variable compression. The role of compression in different types of carbon nanotubes is investigated and the results show how it affects angular and energy distribution.

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