

核与重离子物理

Study of various charged ρ -meson masses in asymmetric nuclear matter

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收稿日期 2008-12-25 修回日期 2009-3-9 网络版发布日期 2009-9-11 接受日期 2009-9-11

摘要

We study the effective masses of ρ -mesons for different charged states in asymmetric nuclear matter (ANM) using the Quantum Hadrodynamics II model. The closed form analytical results are presented for the effective masses of ρ -mesons. We have shown that the different charged ρ -mesons have mass splitting similar to various charged pions. The effect of the Dirac sea is also examined, and it is found that this effect is very important and leads to a reduction of the different charged ρ -meson masses in ANM.

关键词

[asymmetric nuclear matter](#), [\$\rho\$ -meson](#), [effective mass](#), [Dirac sea](#)

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