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Dripline dalam model modified relativistic mean field (MRMF) = Dripline in modi / Jenny Primanita Diningrum

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Abstrak

[ABSTRAK
Prediksi dari posisi proton dan neutron dripline dipelajari dalam model Modi ed Relativistic Mean Field (MRMF) menggunakan tujuh buah variasi parameter set. Posisi proton dan neutron dripline diprediksi dengan menggunakan energi separasi dan energi partikel tunggal. Dalam model MRMF ini, dapat dilihat pengaruh kopling isovektor-isoskalar, tensor dan electromagnetic exchange terhadap prediksi proton dan neutron dripline. Hasil perhitungan menunjukkan bahwa prediksi proton dripline pada isoton N = 28 tidak dipengaruhi oleh ketiga faktor tersebut. Selain itu, proton dripline pada isoton N = 28 tidak memiliki korelasi yang kuat terhadap sifat bulk inti. Prediksi neutron dripline pada isotop Ca dan isotop Pb dipengaruhi oleh ketiga faktor tersebut yang ditandai dengan berbedanya prediksi pada setiap variasi parameter set. Neutron dripline pada isotop Ca memiliki korelasi yang kuat terhadap skin. Namun, pada isotop Pb tidak terlihat korelasi yang kuat terhadap skin. Pada daerah superheavy, isoton N = 258 memiliki hasil prediksi proton dripline yang dipengaruhi oleh ketiga faktor, terutama tensor dan electromagnetic exchange, serta memiliki korelasi yang kuat terhadap skin, jari-jari muatan, dan ketebalan permukaan.
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ABSTRACT
Study of prediction of proton and neutron dripline in Modi ed Relativistic Mean Field (MRMF) model using seven variations of parameter set. The position of proton and neutron dripline predicted use energy separation and energy single particle method. In this MRMF model, can be seen the e ects of coupling isovector-isoscalar, tensors, and electromagnetic exchange on prediction of proton and neutron dripline. The result of these calculation show that prediction of proton dripline in isotone N = 28 not in
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