

Pengaruh kopling tensor, isovektor-isoskalar dan pertukaran elektromagnetik terhadap prediksi inti super berat = Effect of the tensor, isovector-isoscalar and electromagnetic exchange couplings on prediction of super heavy nuclei

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Abstrak

ABSTRAK
Pengaruh dari kopling tensor, isovektor-isoskalar dan pertukaran elektromagnetik terhadap inti berat dan prediksi inti super berat dipelajari melalui teori Relativistic Mean Field (RMF). Ditemukan bahwa ketiga kopling tersebut memberikan pengaruh yang signifikan terhadap sifat materi nuklir, energi ikat, spektrum energi partikel tunggal, distribusi kerapatan dan ketebalan kulit inti berat dan prediksi inti super berat. Hasil Penelitian ini menunjukkan bahwa 208Pb dan 292120 adalah double magic nuclei. Hasil ini konsisten dengan data eksperimen dan prediksi model RMF, sedangkan hasil utama penelitian ini menemukan bahwa 276U adalah double magic nuclei.

ABSTRACT
We studied the effect of tensor, isovector-isoscalar and electromagnetic exchange

couplings on heavy and prediction of superheavy nuclei by using RMF model. We have found that those couplings significantly in

fluence the nuclear matter properties,

binding energy, single particle spectra, nucleon densities and neutron skin of heavy and superheavy nuclei. Our result show that 208Pb and 292120 are double magic nuclei. This results are consistent with experimental finding and other RMF model prediction, while our main result is 276U is also double magic nuclei.;

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