

## QCD phase structure in Polyakov linear-sigma model with non-zero isospin density

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In mean-field approximation, the Polyakov linear-sigma model (PLSM) with u-, d-, and s-quark flavors is utilized in analyzing the chiral condensates and the deconfinement order parameters, at non-zero isospin density. The results obtained on the bulk thermodynamics including pressure density, interaction measure, susceptibility and second-order correlations with baryon, strange and electric charge quantum numbers shall be confronted to the available lattice quantum chromodynamics (QCD) calculations. The excellent agreement encourage the study of QCD phase structure. We find that the pseudocritical temperatures  $T_\chi$  decrease with the increase in isospin chemical potential and conclude that the QCD phase structure in  $(T_\chi-\mu I)$  plane seems to extend the one in  $(T_\chi-\mu B)$  plane, where  $\mu B$  is the baryon chemical potential.

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