

Abstract Submitted  
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**Configuration space Faddeev formalism:  $\Lambda + n + n$  bound state search**<sup>1</sup> VLADIMIR SUSLOV, IGOR FILIKHIN, BRANISLAV VLAHOVIC, North Carolina Central University — The HypHI Collaboration has recently reported the evidence for bound state of  $\Lambda + n + n$  system (Phys. Rev. C88, 041001(R) (2013)). However, the theoretical analysis did not find  ${}^3_{\Lambda}n$  bound state (see, for instance, Phys. Lett. B 736, 93 (2014)). In the present work we will describe our attempt to construct a phenomenological three-body  $\Lambda NN$  force with the spin-isospin dependence that is attractive in the channel  $T=1, S=1/2$ . This dependence was tested to reproduce the value of ground state energy for  ${}^3_{\Lambda}H$  hypernuclei. The formalism of the configuration-space Faddeev equations is applied for  $\Lambda + n + n$  and  $\Lambda + n + p$  systems. As  $\Lambda + n$  interaction the s-wave potential simulating model NSC97f is used. This potential reproduces well the hyperon binding energy for  ${}^3_{\Lambda}H$  nuclei (J. Phys. G: 31, 389 (2005)). The details of the model and obtained results will be presented.

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