

## Transport coefficients of superdense matter in nucleon cores of neutron stars in BHF approach. Comparison of different nucleon potentials

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We study transport coefficients of  $npe\mu$  matter in non-superfluid neutron star cores. These coefficients (in particular, thermal conductivity and shear viscosity) are mediated by the nucleon collisions. In [1] the nucleon-nucleon interaction was considered in the framework of Brueckner-Hartree-Fock formalism and the Argonne v18 nuclear potential was used supplied with the Urbana IX effective three-body forces. In the present study we compare different nuclear potentials and different three-body forces. We employ the same models as were used in Ref. [2] where the nucleon effective masses were considered. We find that different three-body forces can lead to the order-of-magnitude different values of nucleon transport coefficients, still they remain smaller than the lepton ones. The work is supported by RFBR grant # 16-32-00507-mol-a.

### References

- [1] P. S. Shternin, M. Baldo, & P. Haensel, *PRC* 88, 065803 (2013)
- [2] M. Baldo, G. F. Burgio, H.-J. Schulze, & G. Taranto, *PRC* 89, 048801 (2014)

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