

Symmetric and Asymmetric Nuclear Matter in the Thomas-Fermi Model at Finite Temperatures*

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Z. Naturforsch. **54a**, 83–90 (1999); received July 29, 1998

The properties of warm symmetric and asymmetric nuclear matter are investigated in the frame of the Thomas-Fermi approximation using a recent modern parameterization of the effective nucleon-nucleon interaction of Myers and Świątecki. Special attention is paid to the liquid-gas phase transition, which is of special interest in modern nuclear physics. We have determined the critical temperature, critical density and the so-called flash temperature. Furthermore, the equation of state for cold neutron star matter is calculated.

PACS: Numbers: 21.65.+f, 21.10.Dr, 21.60.-n, 25.75-q.

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