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Hot hadron-quark mixed phase including hyperons NOBU-TOSHI YASUTAKE, National Astronomical Observatory of Japan, TOSHIKI MARUYAMA, Japan Atomic Energy Agency, TOSHITAKA TATSUMI, Kyoto University — We study the hadron-quark phase transition with the finite size effects at finite temperature. For the hadron phase, we adopt the nuclear equation of state in the framework of the Bruekner-Hartree-Fock theory including hyperons. The properties of the mixed phase are clarified by considering the finite size effects under the Gibbs conditions. We find that the equation of state becomes similar that given by the Maxwell construction. Moreover, the number of hyperons is suppressed by the presence of quarks. These are characteristic features of the hadron-quark mixed phase, and should be important for many astrophysical phenomena such as collisions of neutron star-neutron star binaries.

Nobutoshi Yasutake
National Astronomical Observatory of Japan

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