

Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

Prospects of realistic Quark-model baryon-baryon interactions¹

CHOKI NAKAMOTO, Suzuka National College of Technology, YOSHIKAZU FUJIWARA, Department of Physics, Kyoto University, YASUYUKI SUZUKI, Department of Physics, and Graduate School of Science and Technology, Niigata University — The QCD-inspired spin-flavor SU_6 quark model for the baryon-baryon interaction, proposed by the Kyoto-Niigata group, is a unified model for the full octet-baryons ($B_8 = N, \Lambda, \Sigma$ and Ξ), which has achieved very accurate descriptions of the nucleon-nucleon (NN) and hyperon-nucleon (YN) interactions. The present model, fss2, is not only more sophisticated than the previous model, FSS, for the description of the realistic NN and YN interaction, but also valid for reproducing of the existing experimental data in the strangeness $S = -2$ sector. We attempt to construct the more realistic quark-model baryon-baryon interactions possessing both the desirable feature of the quark model and the accuracy equivalent with fss2 for the experimental data.

¹This work was supported by Grants-in-Aids for Scientific Research on Priority Areas (Grant No. 20028003).

Choki Nakamoto
Suzuka National College of Technology

Date submitted: 29 Jun 2009

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