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Density Matrix Renormalization Group study of magnon bound states of Heisenberg S=1 Y-junctions HAIHUI GUO, STEVEN WHITE, University of California, Irvine — Systems of Y-junctions are interesting both from a fundamental viewpoint and because of their potential use in nanoscale devices. Here we present a numerical study of S=1 Heisenberg model Y-junctions using a recently developed Y-junction DMRG algorithm[1]. We will focus on the question of the existence of magnon bound states at the junction, as a function of junction geometry and interaction parameters.

[1] Haihui Guo and Steven R. White, Phys. Rev. B 74, 060401 (2006)

Haihui Guo
University of California, Irvine

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