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Departamentos de Física Teórica I y II
Universidad Complutense de Madrid

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TITULO: Baryons and their melting temperature in the (P)NJL model

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ABSTRACT:

The Nambu-Jona-Lasinio model is an effective theory of QCD for low-energy quark interactions. I will explain how to use this model (and its extension, the Polyakov-NJL model) in combination with the Bethe-Salpeter equation, to describe mesons and diquarks as bound states of quarks + (anti)quarks. In a similar context, baryons can also be modelized as bound states of diquarks + quarks. I will present our results for the baryon masses as a function of temperature and chemical potential, and show a clear evidence of a flavor dependence of the baryon melting temperature, as suggested by experimental results in heavy-ion collisions, and supported by recent lattice-QCD results.