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**Modelling Nucleon-Nucleon Scattering Above 1 GeV** RUPRECHT MACHLEIDT, University of Idaho, OLEG EYSER, WOLFGANG SCOBEL, University of Hamburg — Motivated by the recent measurement of proton-proton spin-correlation parameters up to 2.5 GeV laboratory energy, we investigate models for nucleon-nucleon (NN) scattering above 1 GeV. Signatures for a gradual failure of the traditional meson model with increasing energy can be clearly identified. Since spin effects are large up to tens of GeV, perturbative QCD cannot be invoked to fix the problems. We discuss various theoretical scenarios and come to the conclusion that we do not have a clear phenomenological understanding of the spin-dependence of the NN interaction above 1 GeV.

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