

Abstract Submitted  
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**Study of the de Almeida-Thouless line using power-law diluted one-dimensional Heisenberg spin glasses**<sup>1</sup> AUDITYA SHARMA, PETER YOUNG, University of California at Santa Cruz — In a recent study, we showed that in mean-field theory, there is a de Almeida-Thouless (AT) line, that separates the low-temperature, low-field spin-glass phase from a high-temperature, high-field paramagnetic phase, for arbitrary  $m$ -component vector spin glasses, provided one applies a magnetic field that is *random in direction*. Building on this piece of work, here, we investigate whether or not there is an AT line beyond mean-field theory for Heisenberg spin glasses by performing Monte Carlo simulations on a power-law diluted one-dimensional Heisenberg spin glass for very large system sizes.

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