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Field dependence study on the ordering temperature of [Cu(pz)₂(NO₃)](PF₆) FAN XIAO, CHRISTOPHER LANDEE, MARK TURNBULL, Clark University — [Cu(pz)₂(NO₃)](PF₆) is a tetragonal 2D quantum Heisenberg antiferromagnet with an exchange strength of 10.9 K and a zero-field ordering temperature of 3.05 K. Its magnetization has been studied along the two principal directions at various fields and temperatures. The ordering temperature increases with field by as much as 19% in 5 Tesla. This behavior can be explained as the effects of both weak 3D interactions ($J'/J \approx 10^{-3}$) and field-induced Heisenberg-XY crossover.

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