Magnetization patterns and wavefunctions in finite spin chains
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of British Columbia, Canada, FABRIZIO ANFUSO, Chalmers Univ. Of Technology, Sweden — The magnetization pattern along finite spin-1/2 chains is studied in
great detail. For individual excited states we can identify the corresponding spinon
wavefunctions, which characterize the strongly correlated state. For a finite applied
staggered field we can calculate the detailed magnetization from the soliton wavefunction in the gapped phase. This in turn determines the distribution of magnetic
moments in the ordered phase of spin chain compounds, which has recently been
studied by muSR experiments.

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