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Magnetic Observables for Small Antiferromagnetic S = 1 and $S = \frac{3}{2}$ Spin Clusters J.T. HARALDSEN, University of Tennessee, T. BARNES, University of Tennessee and Oak Ridge National Laboratory, J.L. MUSFELDT, University of Tennessee — Assuming near-neighbor Heisenberg interactions for S=1 and S=3/2 antiferromagnetic spin clusters, we predict the inelastic neutron scattering structure factors for several geometries. Several unusual symmetry-breaking effects are anticipated. Our results are applied to real materials.

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