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Angular-momentum content of momentum profile in a neutron knockout from ^{14}Be .

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A novel method for interpretation of experimental data based on a study of the root-mean-square (r.m.s) of momentum distribution of a $(A-2)+n$ system after one-neutron knockout from a Borromean nucleus of mass A as a function of $(A-2)-n$ relative energy is introduced. This is the first time the momentum profile is used for analyzing experimental data. The method is applied to the analysis of experimental data obtained by ALADIN-LAND collaboration at GSI. Beams of ^8He , ^{11}Li and ^{14}Be impinging on a liquid hydrogen target at relativistic energies have been used. The analysis starts with an investigation of applicability of the method by testing it on two well-known unbound nuclei, ^7He and ^{10}Li . Finally it is applied to the unbound ^{13}Be using the estimated momentum r.m.s. for a neutron knockout from s- and p-shells in the test nuclei. Contradictive interpretations of different experimental data on ^{13}Be will be discussed.

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