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Elastic form factors of light alpha-cluster nuclei

Thursday, 26 September 2024 14:50 (20 minutes)

Within the α-particle model, the structure of ^{12}C, ^{16}O, and ^{20}Ne nuclei is studied. With the use of the variational method with Gaussian basis, the wave functions are found for three-, four-, and five-particle systems consisting from α-particles. The charge density distributions and elastic form factors of ^{12}C, ^{16}O, and ^{20}Ne nuclei are calculated within the Helm approximation.

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