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Aspects of the structure of heavy carbon isotopes

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Abstract content
   (Max 300 words)

A multi-channel algebraic scattering (MCAS) method has been used to obtain spectra of a number of light-mass nuclei, which are treated as a two-cluster system, in these cases a nucleon plus nucleus. The MCAS method gives both sub-threshold and resonance states of the nuclei in question. To date, collective models have been used to specify the interactions between the nucleon and low-lying states of the nucleus that form the compound. For the case of the carbon isotopes, these studies have been complemented by sufficiently complex and complete shell-model calculations. Comparisons with the shell model results provide new insights into the validity of those from MCAS.

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