

ALPHA INELASTIC SCATTERING AND ALPHA CLUSTER STRUCTURES IN LIGHT STABLE AND UNSTABLE NUCLEI

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Alpha particle clustering is an important concept in nuclear physics. Various experimental and theoretical works were extensively devoted to clarify the alpha cluster structures in light nuclei. Recently, we proposed large isoscalar monopole strengths at relatively low excitation energies are regarded as a signature of spatially well-developed alpha cluster states. This idea was theoretically supported by the Baymann-Bohr theorem. Since the alpha inelastic scattering is widely known as a very useful probe to determine the isoscalar monopole strengths, we measured the ^{11}B , ^{12}C , ^{13}C , $^{24}\text{Mg}(\alpha, \alpha')$ reactions at forward angles including zero degrees to study the cluster structures in those nuclei.

Nuclear
Seminar

All interested
persons are
cordially
invited to
attend.