

Global R-matrix analysis of the $^{19}\text{F}(\alpha,n)$ reaction

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In this work we report on the progress in the R-matrix analysis of the $^{19}\text{F}(\alpha,n)^{22}\text{Na}$ reaction at energies above the neutron threshold in the resolved resonance region, using the R-matrix code AZURE2. This reaction has been chosen for re-evaluation because of its importance in applications such as nonproliferation, nuclear astrophysics and low-background experiments. We present the progress of the multichannel multilevel R-matrix analysis of the ^{23}Na system and address the difficulties that arise mainly due to lack of level information in the energy of interest.

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