

^8Be NUCLEUS RESONANCES
AT THE EXCITATION ENERGY
 $E_x < 35$ MeV IN THE THREE-PARTICLE
REACTION $^9\text{Be} + ^{13}\text{C} \rightarrow ^{14}\text{C} + \alpha + \alpha$

*V. Ostashko, M. Lattuada¹, O. Goryunov, A. Di Pietro¹,
D. Miljanic², M. Zadro², A. Musumara¹,
M.-G. Pellegriti¹, S. Romano¹, S. Tudisco¹,
A. Tumino¹, P. Figuera¹*

Institute for Nuclear Researches,
Nat. Acad. Sci. of Ukraine
(47, Nauka Ave., Kyiv 03680, Ukraine),

¹Laboratorio Nazionale del Sud,
Istituto Nazionale di Fisica Nucleare
(Catania, Italy),

²Laboratory of Experimental Nuclear Physics,
Ruder Bošković Institute
(Zagreb, Croatia)

S u m m a r y

The energy interval of ^8Be nucleus excitation up to 35 MeV has been studied in a kinematically complete experiment $^9\text{Be}(^{13}\text{C}, ^{14}\text{C}\alpha)^4\text{He}$. The well-known levels of ^8Be with $E_x(^8\text{Be}) = 3.06, 11.35, 16.92,$ and 19.86 MeV were observed as the resonances of $\alpha - \alpha$ interaction. New excitation levels at the energies of about 15.3 and 29 MeV – and, probably, at 23.3 and 26.5 MeV – have been identified as those which correspond to $\alpha - \alpha$ configurations.