

Status on $^{12}\text{C} + ^{12}\text{C}$ fusion at deep subbarrier energies: impact of resonances on astrophysical S^* factors

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Since the discovery of molecular resonances in $^{12}\text{C}+^{12}\text{C}$ in the early sixties a great deal of research work has been undertaken to study α -clustering and resonant effects of the fusion process at sub-Coulomb barrier energies. The modified astrophysical S^* factors of $^{12}\text{C} + ^{12}\text{C}$ fusion have been extracted from direct fusion measurements at deep subbarrier energies near the Gamow window. They were also obtained by the indirect Trojan horse method (THM). A comparison of direct measurements and the THM, which elucidates problems in the analysis of the THM, is discussed in this Letter to the Editor [1].

[1] C. Beck, A.M. Mukhamedzhanov, and X. Tang, *Eur. Phys. J. A* **56**, 87 (2020).