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Astrophysical S(E)-factor of the ^{15}N(p,α)^{12}C reaction at sub-Coulomb energies via the Trojan-horse method[1] DANIEL SCHMIDT, Liberty University, M. LA COGNATA, S. ROMANO, C. SPITALERI, S. CHERUBINI, V. CRUCILLA, L. LAMIA, R. PIZZONE, A. TUMINO, Dipartimento di Metodologie Fisiche e Chimiche per l'Ingegneria-Universita di Catania, Catania Italy & Laboratori Nazionali del Sud-INFN, Catania, R. TRIBBLE, L. TRACHE, CHANGBO FU, V. GOLDBERG, A. MUKHAMEDZHANOV, G. TABACARU, Cyclotron Institute, Texas A&M University, College Station, TX 77843, USA, S. TYPEL, GSI, Darmstadt, Germany, B. IRGAZIEV, 1GIK Institute of Engineering Sciences and Technology, Topi, District Swabi, N.W.F.P., Pakistan, ITALY TEAM, USA TEAM, GERMANY TEAM, PAKISTAN TEAM — The low-energy bare-nucleus cross section for ^{15}N(p,α)^{12}C is extended by means of the Trojan-horse method applied to the ^{2}H(^{15}N,α^{12}C)n reaction at E_{beam}=60 MeV. The astrophysical S-factor is compared to the direct data in the same energy region. A fair agreement is found at low energies between 80 keV and 250 keV, while the low-energy behavior of the S-factor suggests a smaller rate than reported in literature. There is a larger discrepancy between the direct data and Trojan-horse data at high energy. Further study is needed to clarify the source of this error.

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