Reaction rates for the ${}^{17}O(p,\alpha){}^{14}N$ reaction at astrophysical temperature via the Trojan Horse method

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The ¹⁷O(p, α)¹⁴N reaction is of fundamental relevance in several astrophysical scenarios, such as novae and AGB nucleosynthesis and gamma-ray astronomy. We report on the indirect measurement of the low-energy region of the ¹⁷O(p, α)¹⁴N reaction bare nucleus cross section. In particular the two resonances at $E_R = 65$ keV and $E_R = 183$ keV, which dominate the reaction rate inside the Gamow window, have been observed and the strength of the 65 keV resonance has been deduced to evaluate the reaction rate. The estimate of the screening potential *U* was obtained and it was compared with the upper limit given by theoretical adiabatic approximation.