

# The cosmologically relevant ${}^7\text{Be}(n,\alpha){}^4\text{He}$ reaction in view of the recent THM investigations

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The role of the unstable  ${}^7\text{Be}$  during the early epoch of the Big Bang Nucleosynthesis is currently matter of study in view of the long-standing  ${}^7\text{Li}$  cosmological problem [1]. Recently, the Trojan Horse Method (THM) [2] have been applied for measuring the cross section of the  $(n,\alpha)$  reaction channel on  ${}^7\text{Be}$  by means of charge-symmetry hypothesis applied to the previous  ${}^7\text{Li}(p,\alpha){}^4\text{He}$  THM data corrected for Coulomb effects. The deduced  ${}^7\text{Be}(n,\alpha){}^4\text{He}$  data overlap with the Big Bang nucleosynthesis energies and the deduced reaction rate allows us to evaluate the corresponding cosmological implications [3].

## References

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- [2] R.E. Tribble *et al.*, *Report on Progress Physics* **77**, 106901 (2014)
- [3] L. Lamia *et al.*, *The Astrophysical Journal* **850**, 175 (2017)