

${}^7\text{Be}(n, p){}^7\text{Li}$ Reaction and the Cosmological Lithium Problem: Measurement of the Cross Section in a Wide Energy Range at n_TOF at CERN

L. Damone *et. al.*, Phys. Rev. Lett. **121**, 042701 (2018)

Discussion

1. What is the Baryon density? What is its significance? (**Irin**)
2. What is the neutron source for this experiment? How is the neutron flux measured? (**Bishnu**)
3. How do we measure the ${}^7\text{Li}$ present after the Big bang? (**Abinash**)
4. How can you do Particle Identification (PID) by ΔE -E method? Why is the dense part in PID plot to be regarded as protons? (**Utsav**)
5. What is detailed balance? How is Eq. (2) derived in the paper? (**Mahesh**)
6. Although the ${}^7\text{Be}(n, p){}^7\text{Li}$ reaction discussed in the paper is producing ${}^7\text{Li}$, how is this reaction helpful in an attempt to solve the cosmological Lithium problem? (**Joe**)
7. In Fig. 2 of the paper, why is the reduced cross section for 1^- and 2^- states large compared to other states? Why do these states not show the resonance similar to the 3^+ state? (**Ibrahim**)
8. What is the new ${}^7\text{Li}(p, n){}^7\text{Be}$ experiment that was just published (Phys. Rev. C. **99**, 034616 (2019))? (**Cole**)