

# Questions: Nuclear Lunch for 25 February 2015

## INPP NUCLEAR LUNCH SERIES

February 18, 2015

1. State the differences between Gamow-Teller (GT) and Fermi transitions. What are their selection rules? (Md. Abdullah Al Mamun)
2. Why is that the Gamow Teller transitions dominate in stellar condition? (Sudhanva)
3. How is the relation between the  $(p, n)$  cross-section and Gamow-Teller strength derived? (Linda)
4. How much  $^{56}\text{Ni}$  is there in a stellar core relative to Fe? (Tyler)
5. What is the relevant temperature for electron capture in the cores of massive stars? (Arbin)
6. Discuss the Time-of-Flight (TOF) method to identify particles in the present context. (Nadyah)
7. Why is the graph plotted at a particular value of  $\theta_{c.m.}$  in Fig. 2 of the paper? (Yuanzhi)
8. What is the density of levels for  $^{56}\text{Cu}$  in 3-5 MeV energy range? (Rekham)
9. What is  $\log(ft)$  value? Why are they significant? (Shamim)