

Questions: Nuclear Lunch from 4 February 2015

11 February 2015

1. How are the two fusion methods (i.e., magnetic and inertial confinement) different? Which one is closer to ignition ? (Sushil)
2. What is the Lawson criterion? How can a sustained fusion reaction be achieved? What are the time scales of such reactions? (Brian)
3. What is the significance of the angles shown in the laser mixing chamber? (Shamim)
4. What is the point of using the gold holraum? Why is the holraum filled with helium gas? (Rekam)
5. Why is the fusion material kept inside the CH ablator? What does graded 2% Si doped mean? (Figure 1 in the paper). (Nick)
6. If ignition were to occur, how would the self-sustaining fusion reaction be contained? (Taya)
7. What is the difference between compression yield and self-heating yield? Why is the self-heating yield higher in this experiment compared to previous ones? (Yuanzhi)
8. Why is the D-T mixture cryogenically frozen? (Nadyah)
9. What has 'inertial' to do with inertial confinement fusion?
10. What is an X-ray burn width? (Arbin)
11. Have any of the magnetic confinement fusion facilities achieved a fusion gain greater than unity? (Md. Abdullah Al Mamun)
12. Discuss the history of ITER. (Sudhanva)