

Nuclear Lunch Seminar questions for 11/05/14

1. What is deep inelastic scattering (DIS)? What do inclusive, semi-inclusive and exclusive mean? (**Sushil**)
2. What are Feynman x and Bjorken x ? How are they similar/different? (**Shamim**)
3. What are parton distribution functions (PDF)? How are PDFs normalized? (**Mamun**)
4. Is there a minimum number of gluons that have to be present inside a proton? Is there a maximum? How many are there? Does the answer to this question affect whether or how they can be polarized? (**Sudhanva**)
5. What is Polarized DIS and why is it not very sensitive to $\Delta g(x, Q^2)$? Why does one need not integrate Δg over Q^2 to obtain ΔG ? (**Nick**)
6. How do the polarizations (aligned or anti-aligned) of the colliding protons eventually give information on whether the gluons are polarized or not? (**Taya**)
7. What was/is the “Spin Crisis”? What could be the implications based on these measurements for what causes the proton spin? Where does the contribution on $\Delta\Sigma$ from anti-quark come from? (**Bijaya**)
8. Why may jet data give a better indication of non-zero Δg as compared to pion data? (**Tyler**)