Discussion cavity theory

- Discuss why total stopping power for electrons does not provide accurate estimates of energy deposition
- For heavy ions and thick targets, why can't we use the stopping power directly to calculate the dose?
- Why do we need Bragg-Gray theory? Are there circumstances were the theory is not applicable?
- Water is irradiated with 200 MeV protons and 800 MeV α's. The number of particles and their range is the same in both cases.
  1) Using stopping power/range theory, explain why the range is the same
  2) Sketch the energy depositions with depth
  3) What is the difference in total energy deposited?
  4) What is the difference in mean dose to irradiated area?