(a) Am^{238}, for the 50-hour isotope and (b) Am^{239}, for the 12-hour isotope.

Another fact emerging from the data of Table 2 is that the compound nucleus in the helium ion bombardment of Np^{237} is different in some respect from that formed in the deuteron bombardment of Pu^{239}. If the expected excitation energy is corrected for the difference in binding energies per particle in the helium nucleus and the deuteron, the compound nucleus formed in the 32 Mev helium ion bombardment should correspond rather closely to that in the 19 Mev deuteron bombardment. The relative yields in the two cases are more different than any of those observed with a wide variation in kinetic energy of either particle. This may be due in part to large differences in binding energy of the nucleons or differences in angular momentum of Np^{237}, relative to Pu^{239}, and/or the failure of the compound nuclei to achieve uniform distribution of the excitation energy.

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