GEOL 135 Radioisotope Next-day assignment due 12-07-2009

Using the 14C decay equation of

Time(years)=19,035\*log(14Ceq / 14Cmeasured)

Determine the age of a piece of charcoal from an archeological site that contained 60% of the 14C a modern tree growing nearby has.

Digging a little deeper imagine you find a piece of wooly mammoth bone, extracting the C from it the 14C measured on a mass spectrometer is 4.3 disintigrations per minute per g C compared to 15.3 disintigrations per minute per g C for a modern elephant bone. How old is the wooly mammoth bone?

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