(14.8) What is the minimum photon energy required for the reaction $^{11}B(\gamma,n)^{10}B$?

Constants, known values, and units:

$MeV := 1.60217733 \cdot 10^{-13} \cdot joule$ $amu := 1.6605402 \cdot 10^{-27} \cdot kg$ $M_n := 1.008665 \cdot amu$

$M_{11B} := 11.009305 \cdot amu$ $M_{10B} := 10.012937 \cdot amu$

Calculations:

$Q := -931.5 \cdot \frac{MeV}{amu} \cdot \left(M_n + M_{10B} - M_{11B}\right)$ eqn. (4.12) $Q = -11.45 \cdot MeV$

neglect the recoil effect.

$E\gamma_{min}$= 11.45 MeV