

Comparison on the Xs of Cu63 and Cu65 between Empire and USD database

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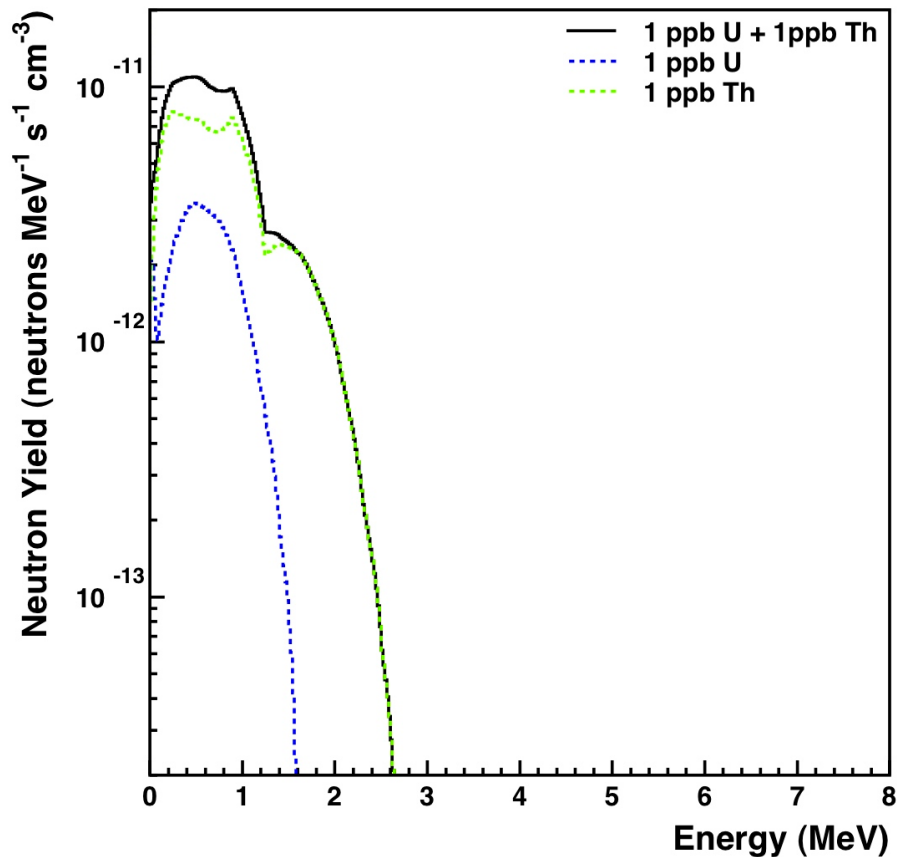
06/27/2013

Outline

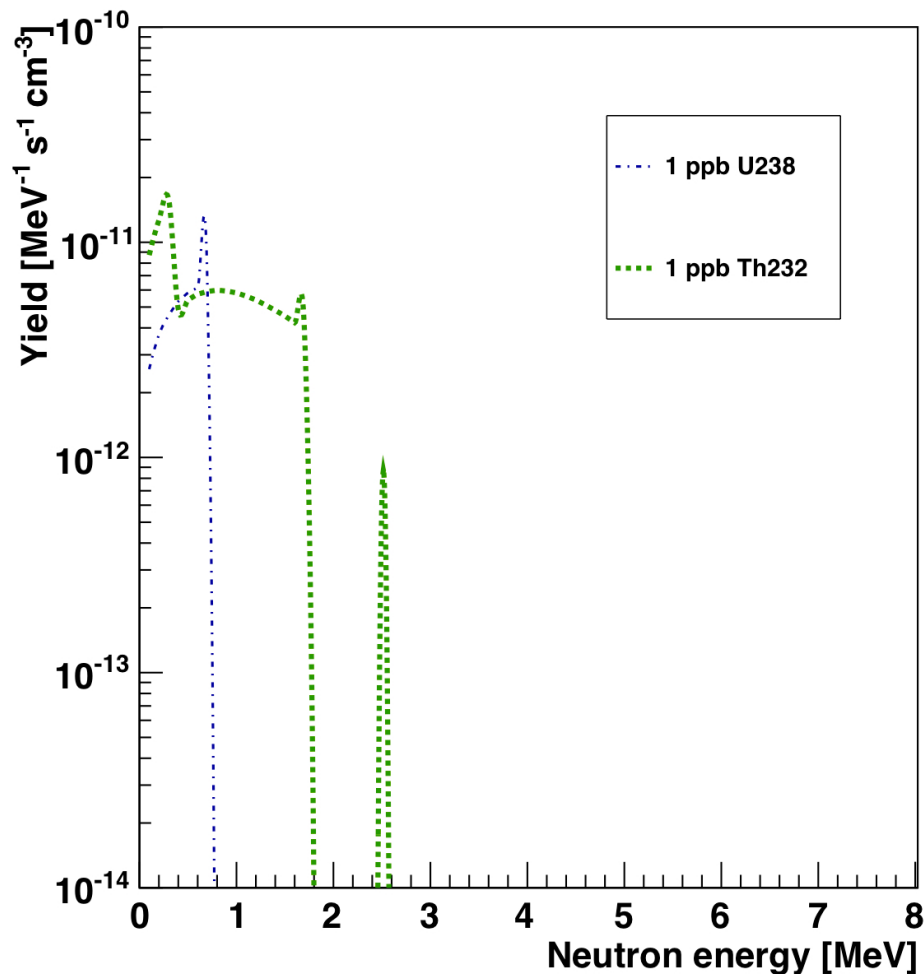
- Chao provides us a link with the Xs info. Of Cu63 and Cu65:
- <https://skydrive.live.com/?cid=97567B2787A2C828&id=97567B2787A2C828%21226>
- We would show Xs-comparison plots for these two isotopes between Empire and USD.
- Files used: *nprod.tot.063*, *nprod.tot.065*.

Difference in the current yield plots

Copper ($\rho=8.94\text{g cm}^3$) (α,n) reaction



USD alpha-n Neutron Yield on Natural Copper

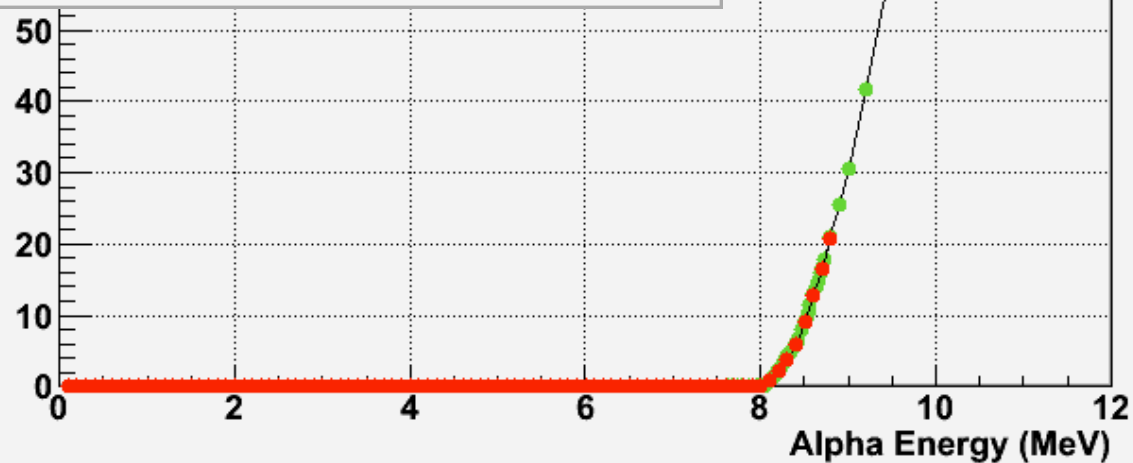
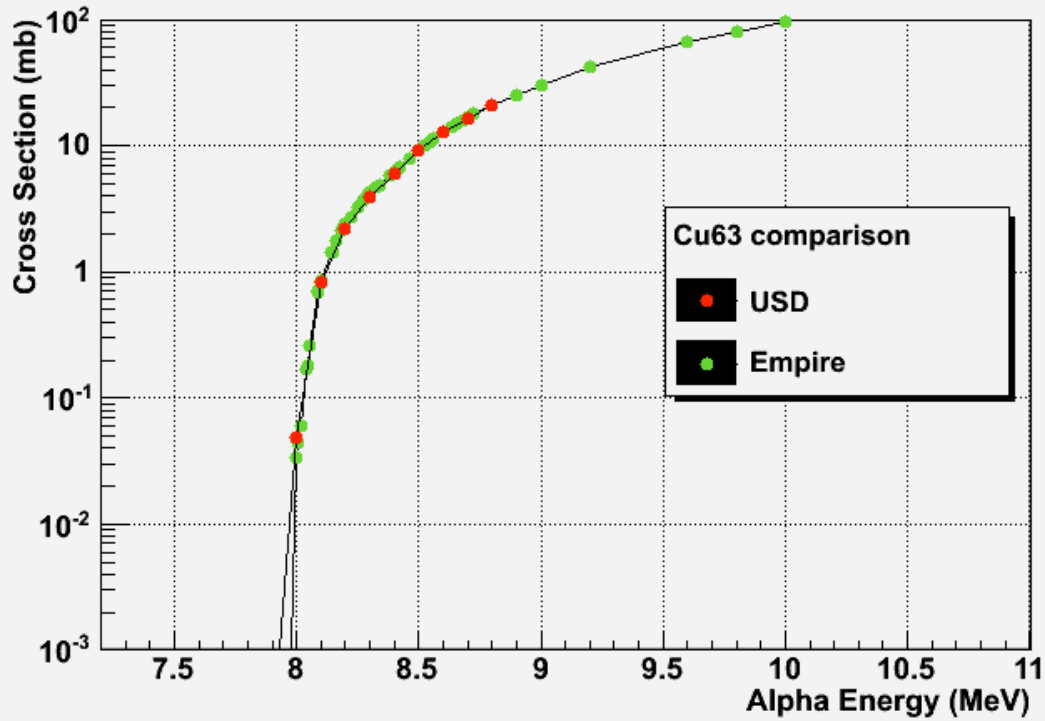


USD shows a “gap”
between 1.8-2.4 MeV.

Cu63

Empire: 7.6-14.0 MeV

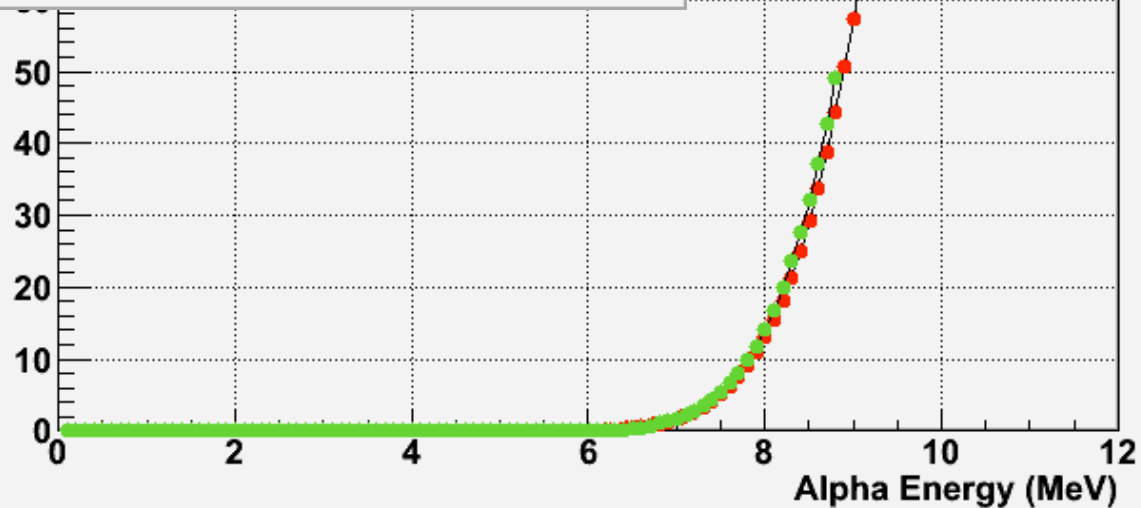
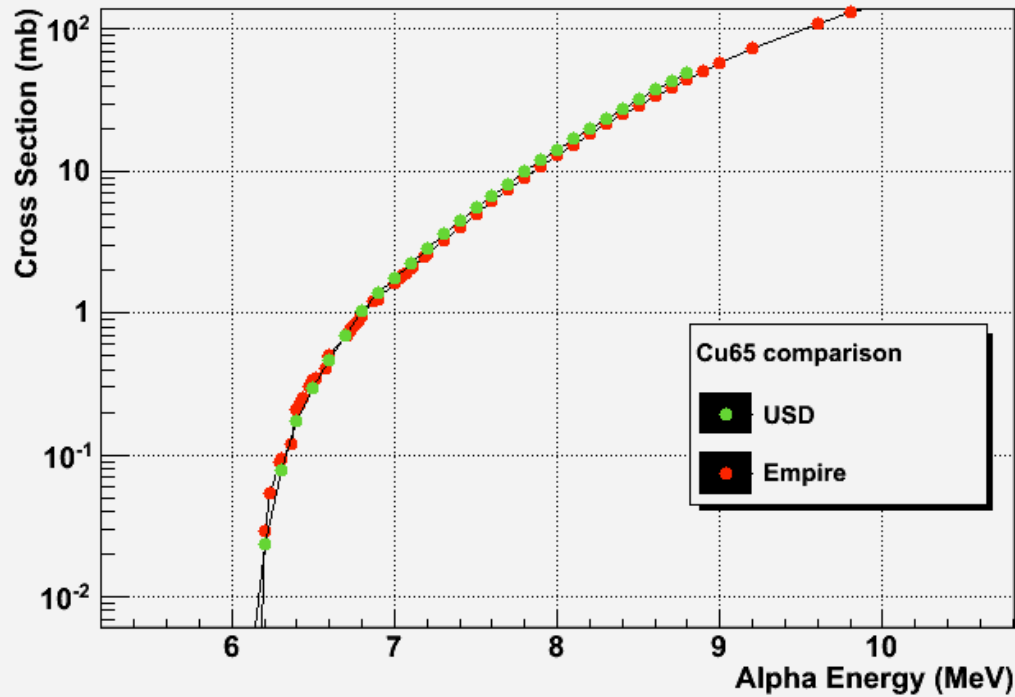
USD: 0.1-8.8 MeV



Cu65

Empire: 5.9-14.0 MeV

USD: 0.1-8.8 MeV



Conclusion

- Cu63 and Cu65 are in good agreement up to 8.8 MeV (upper threshold in USD website inputs).
- Not run SOURCES with Cu63-65 USD cross section inputs yet.
- Need to check the other inputs of SOURCES4 calculations.
- Which inputs?

user-supplied input file

