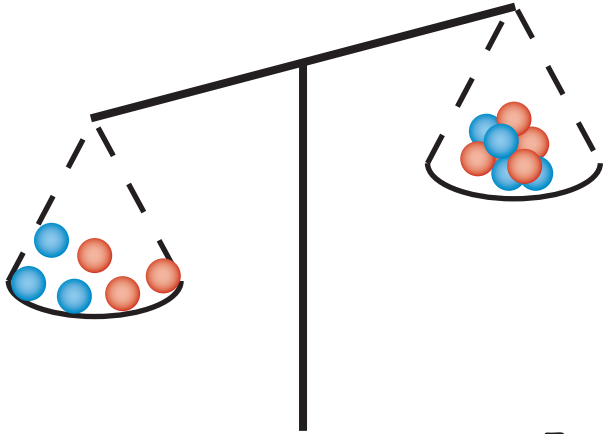


Bindningsenergi



Varför väger kärnan mindre än de ingående nukleonerna ?

- Bindningsenergi !

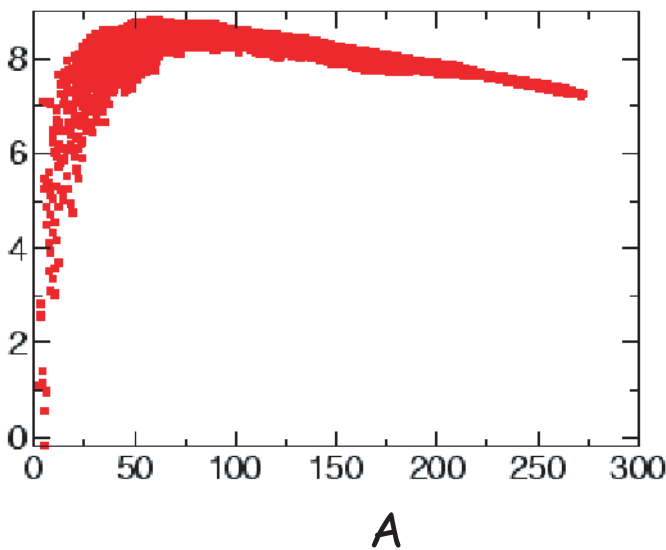
Jämför: Atom: $\frac{B}{\text{atommassa}} \sim 10^{-8}$
 Kärna: $\frac{B}{\text{kärnmassa}} \sim 10^{-2}$

$$B = (Z m(^1\text{H}) + N m_n - m(^A\text{X})) c^2$$

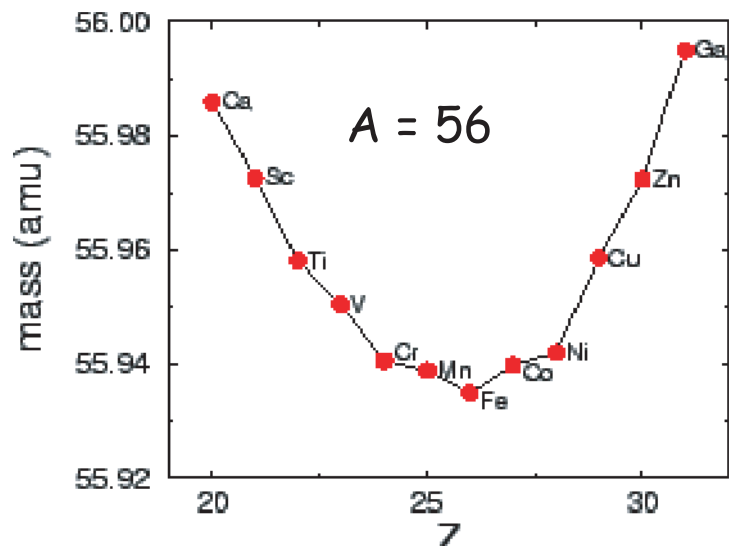
← atommassor

B/A
(MeV/c²)

Bindningsenergi per nukleon

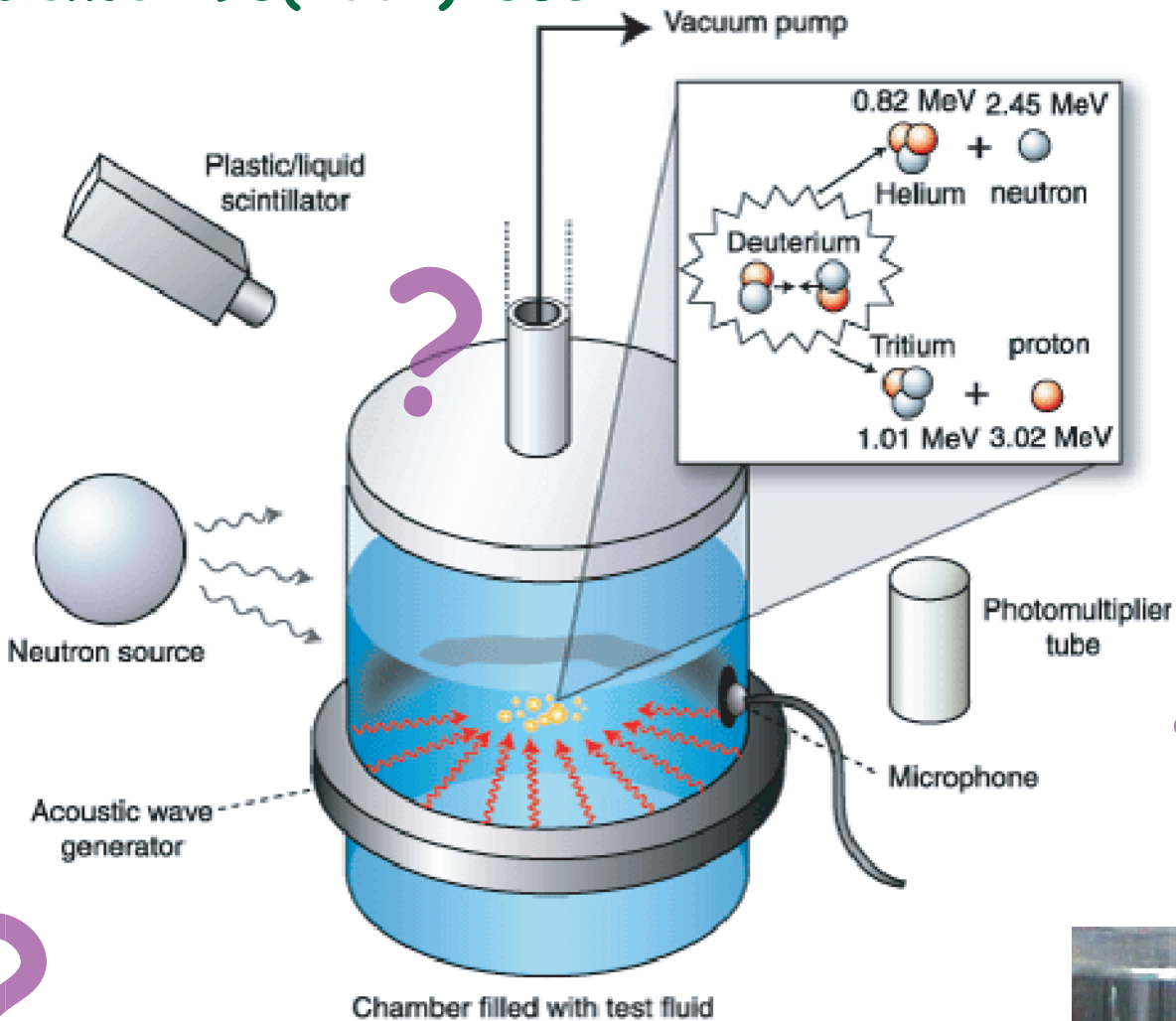


"Valley of stability"



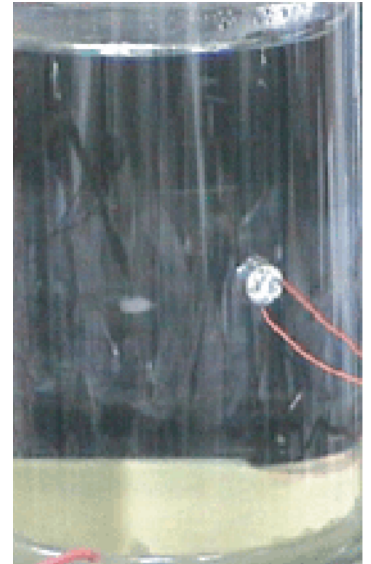
???Bubbelfusion???

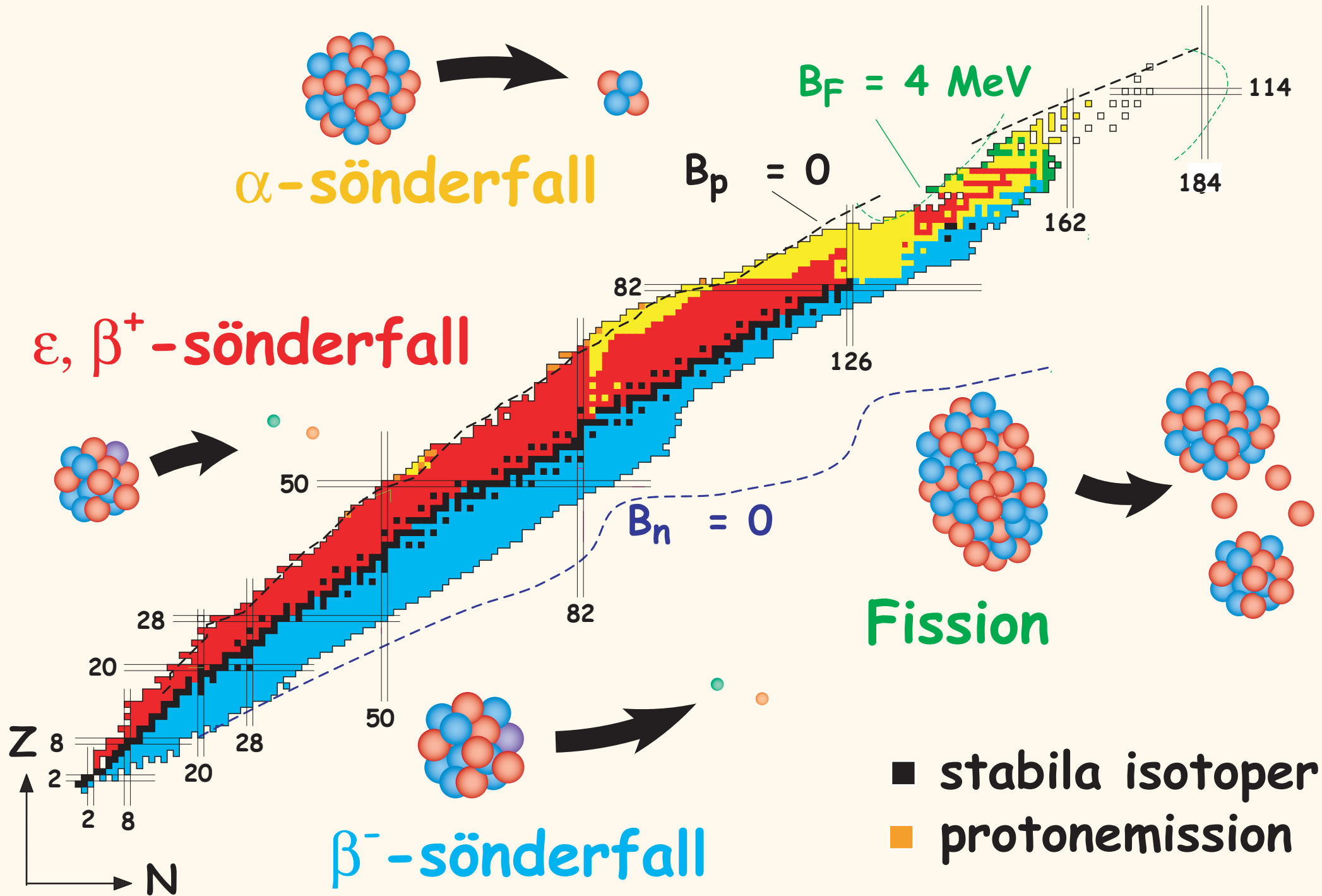
Science 295(2002)1868



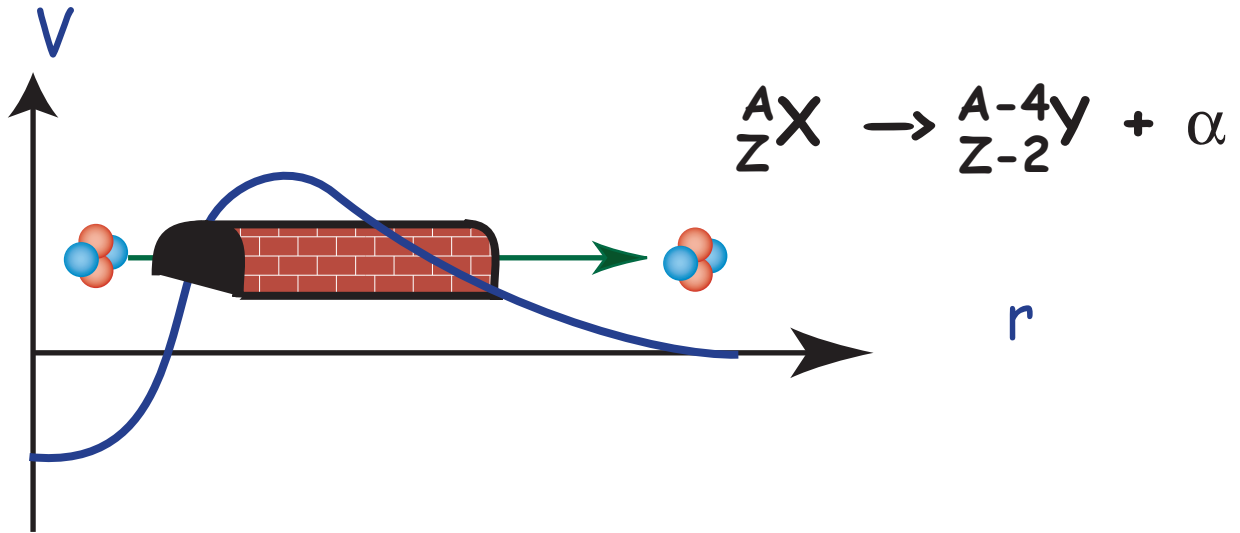
Idé:

- C_3D_6O i vätskefas
- Förångning med snabba neutroner
- Akustisk kavitation
- Bubblan kollapsar => Konc. av energi
- d+d fusion
(2.45 MeV)
- Observation av neutroner och tritium





Alfasönderfall



Detektion av supertunga element

Rev.Mod.Phys 72(2000)733

