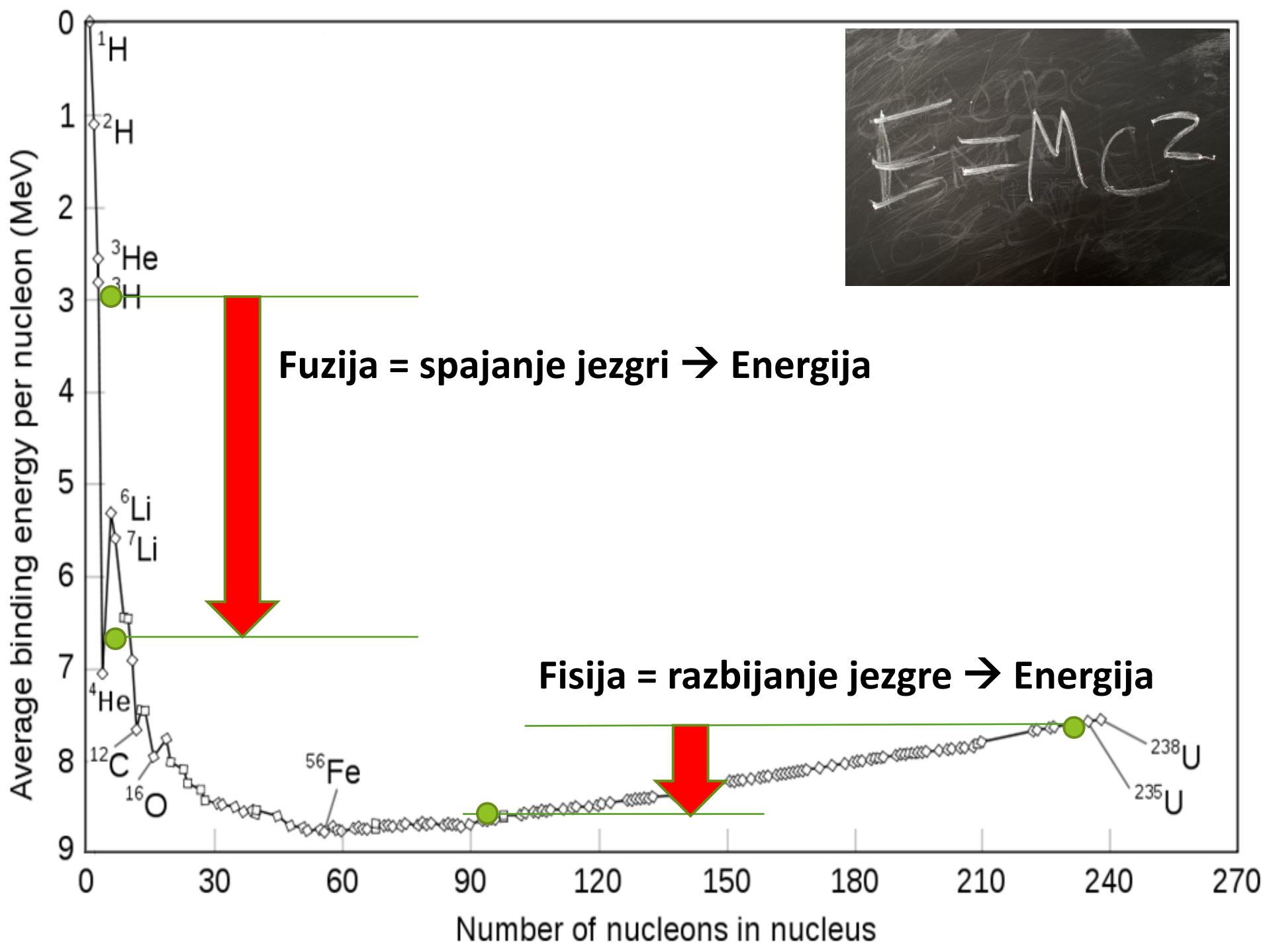


Magnetske boce i nuklearna fuzija

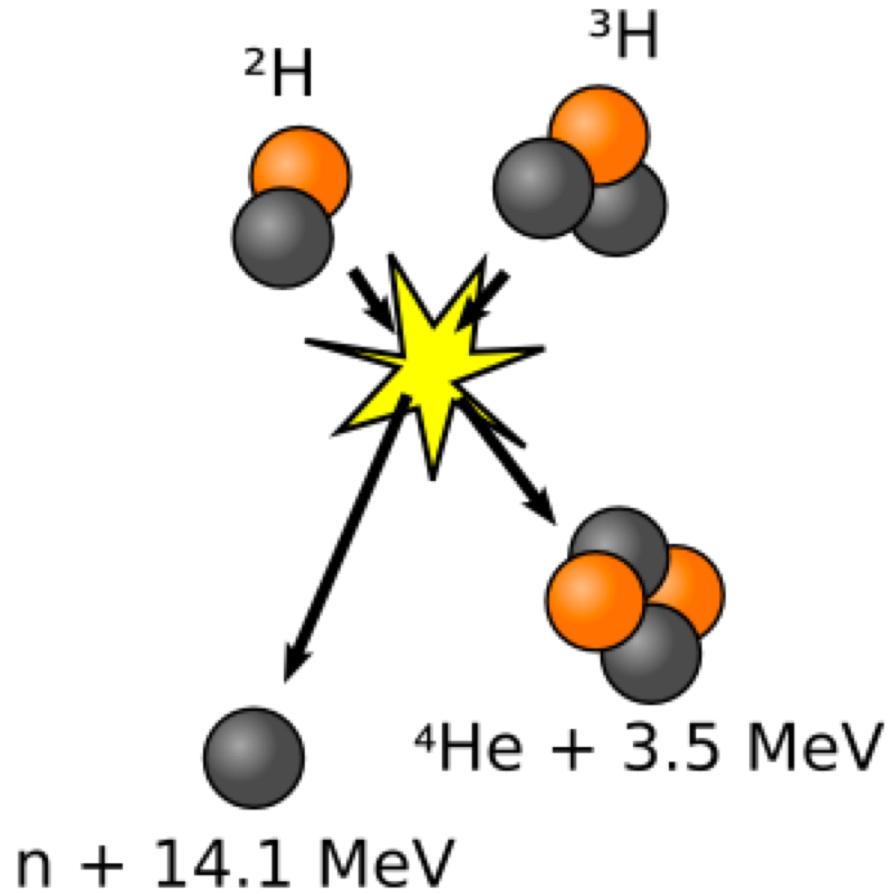
Samuel Bosch

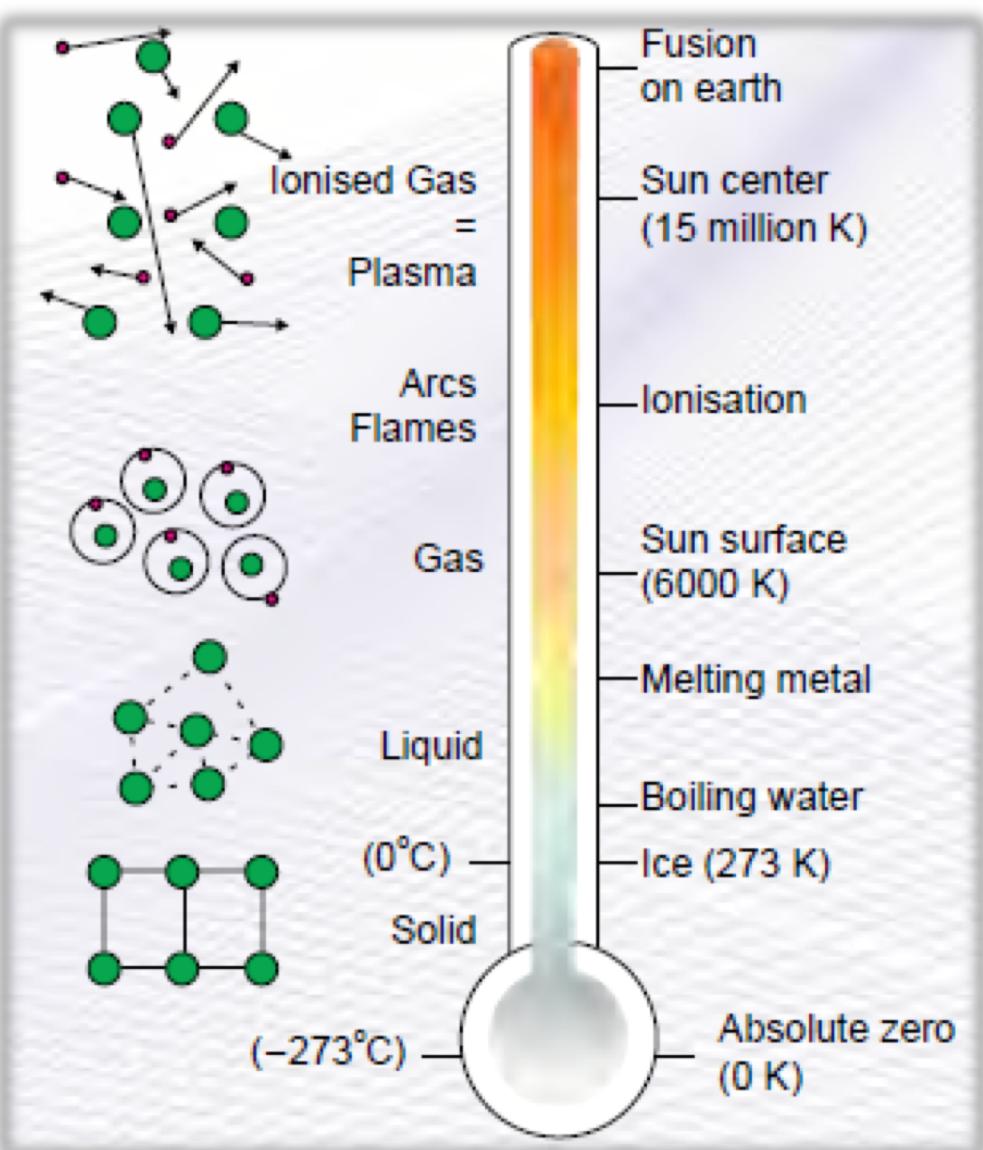


Deuterij-Tricij fuzijska reakcija



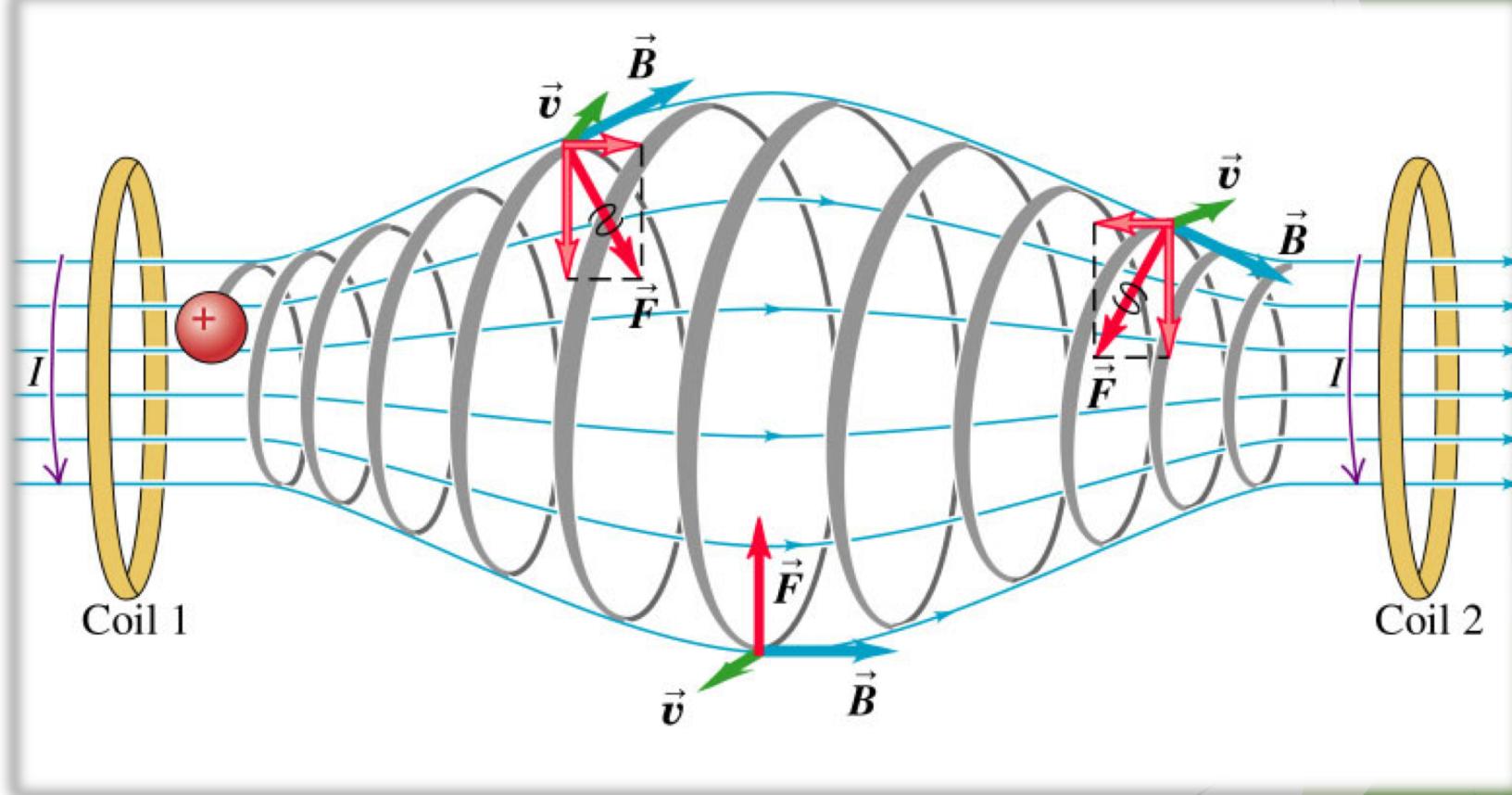
D-T fuzijska reakcija

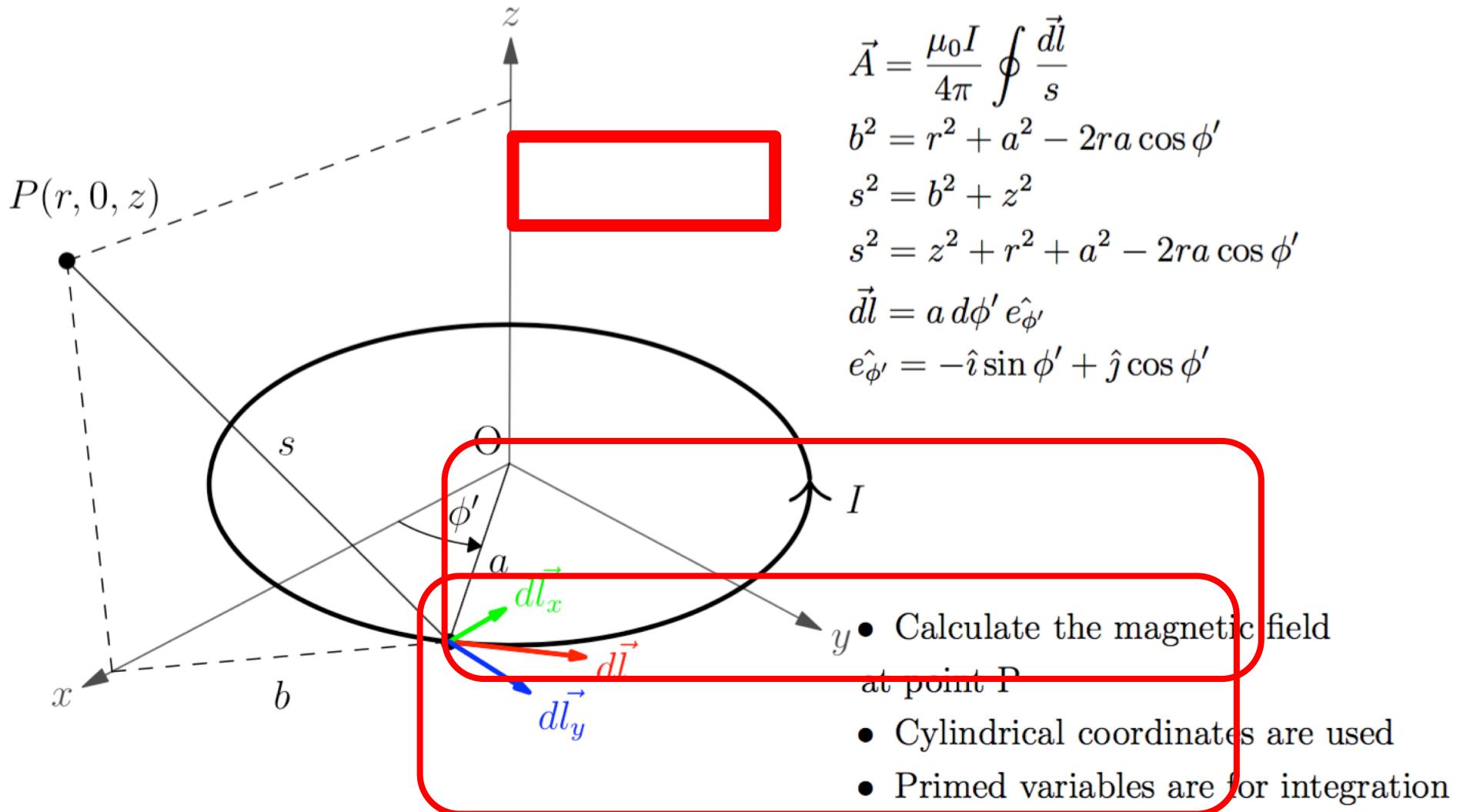




- ▶ Kako na siguran način zagrijati plazmu do 150 000 000 K?

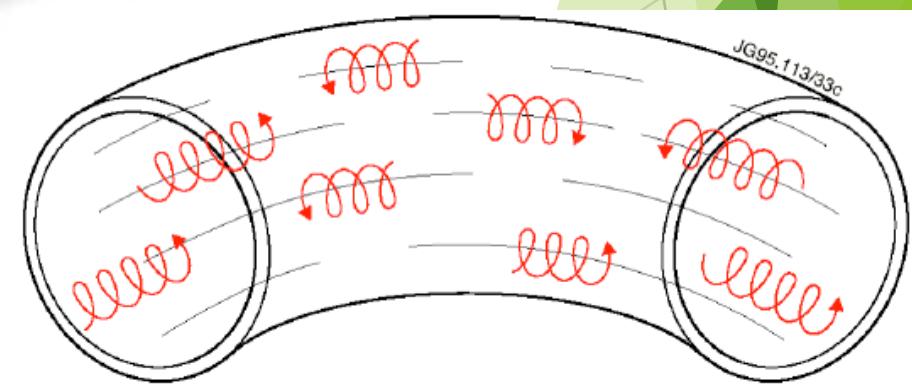
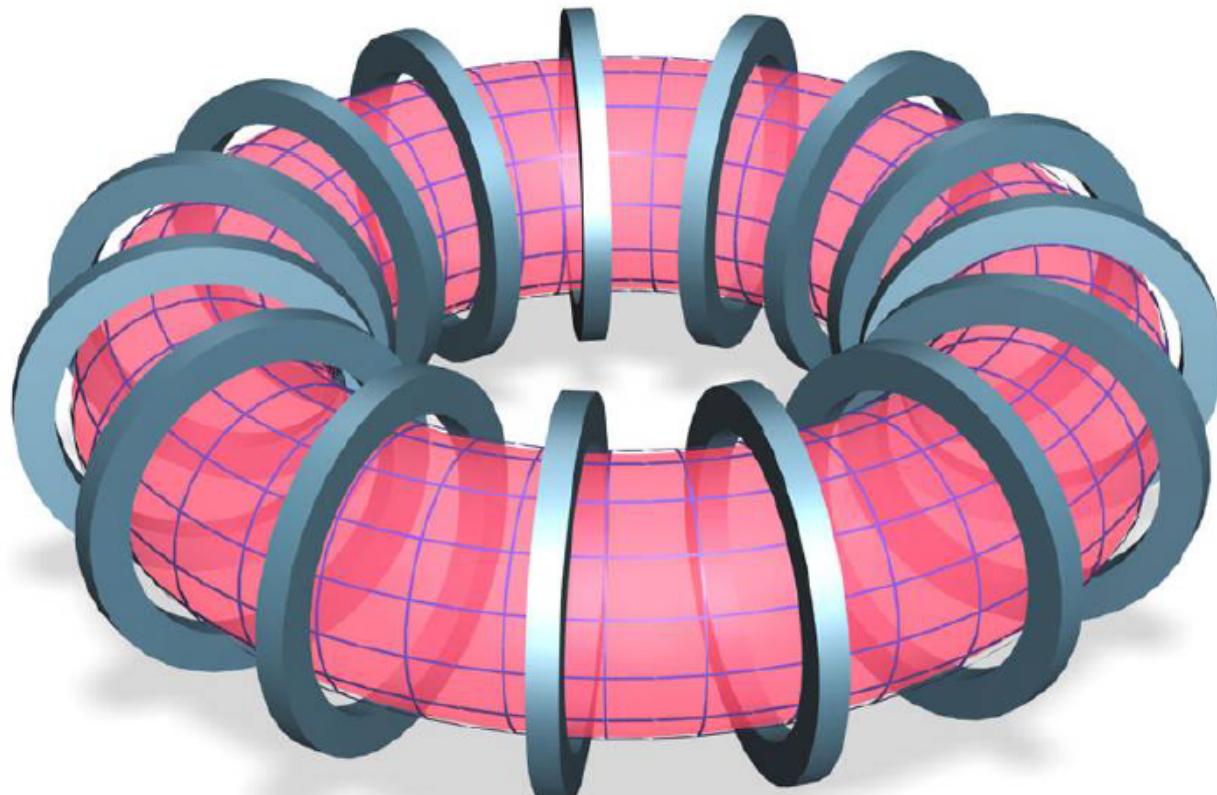
Magnetska boca



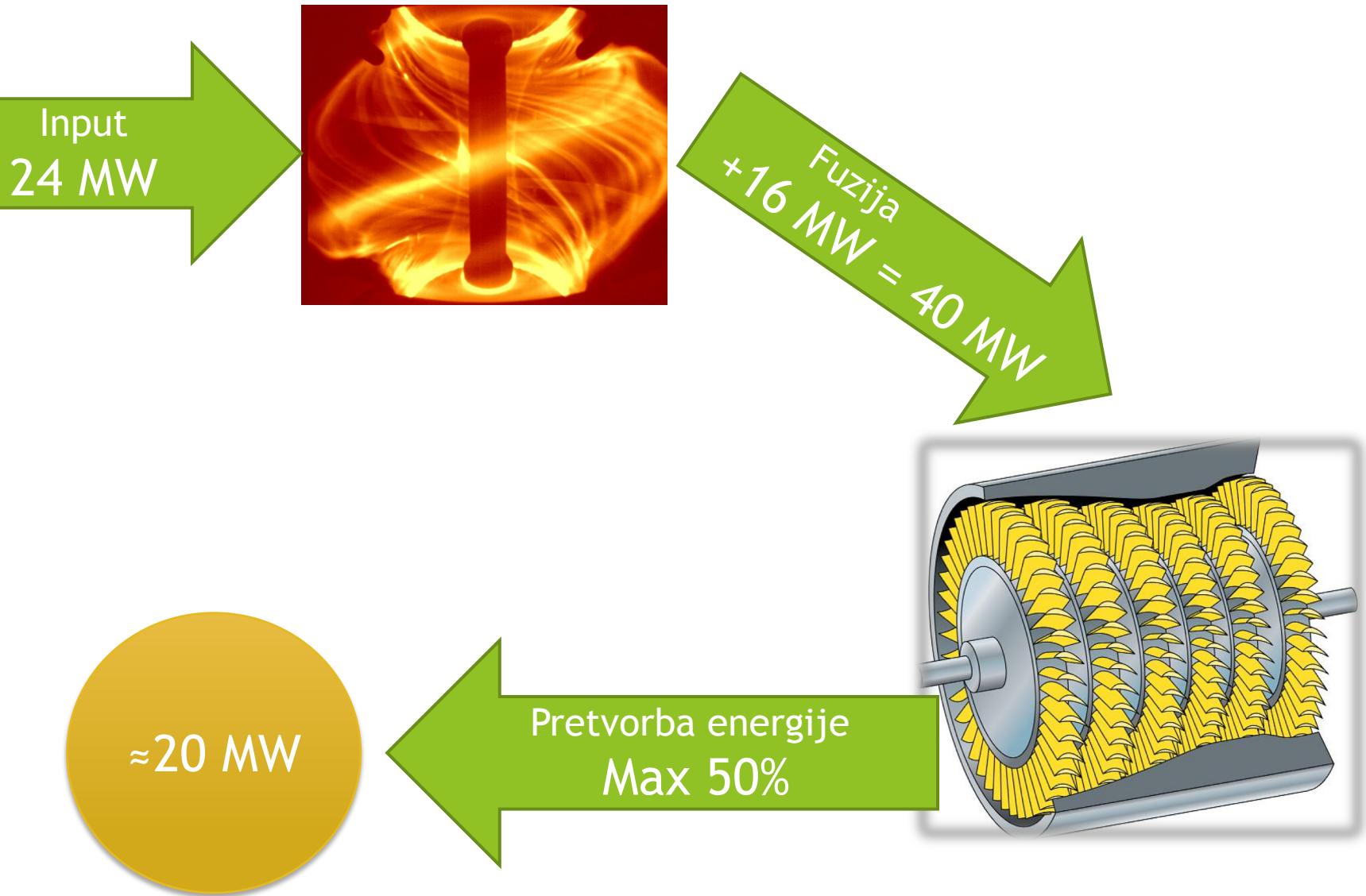


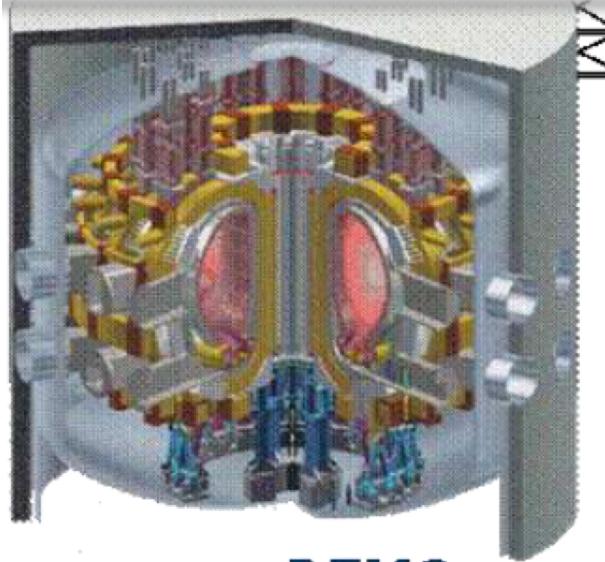
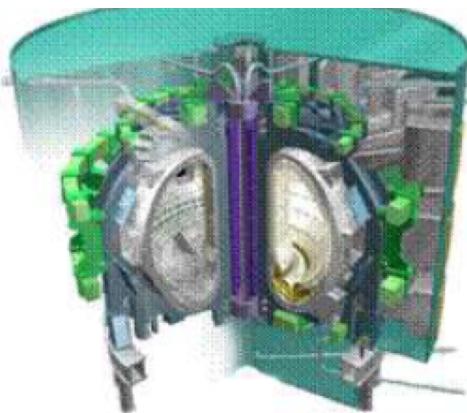
TOKAMAK

TOroidalnaja KAmera s MAgnitnimi Katuškami



Fuzija danas





Tore Supra

25 m^3

$\sim 0 \text{ MW}_{\text{th}}$

JET

80 m^3

$\sim 16 \text{ MW}_{\text{th}}$

ITER

800 m^3

$\sim 500 \text{ MW}_{\text{th}}$

DEMO

$\sim 1000 - 3500 \text{ m}^3$

$\sim 2000 - 4000 \text{ MW}_{\text{th}}$



Od 1988.
6 min



Od 1984.
 $< 1 \text{ min}$

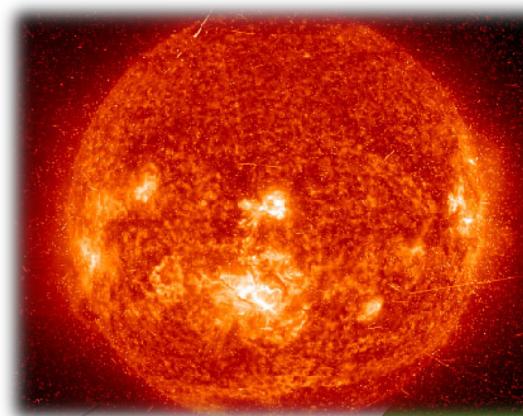


Gradnja od 2013.
Početak 2019.?
Do 15 min?

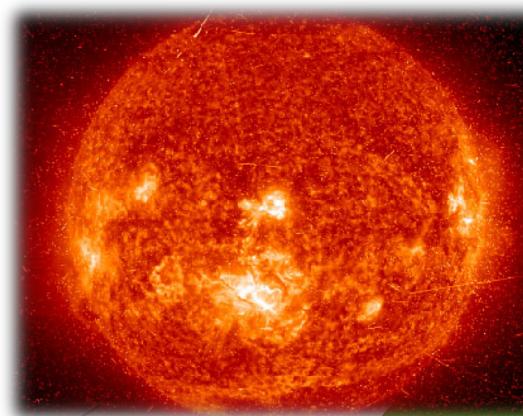
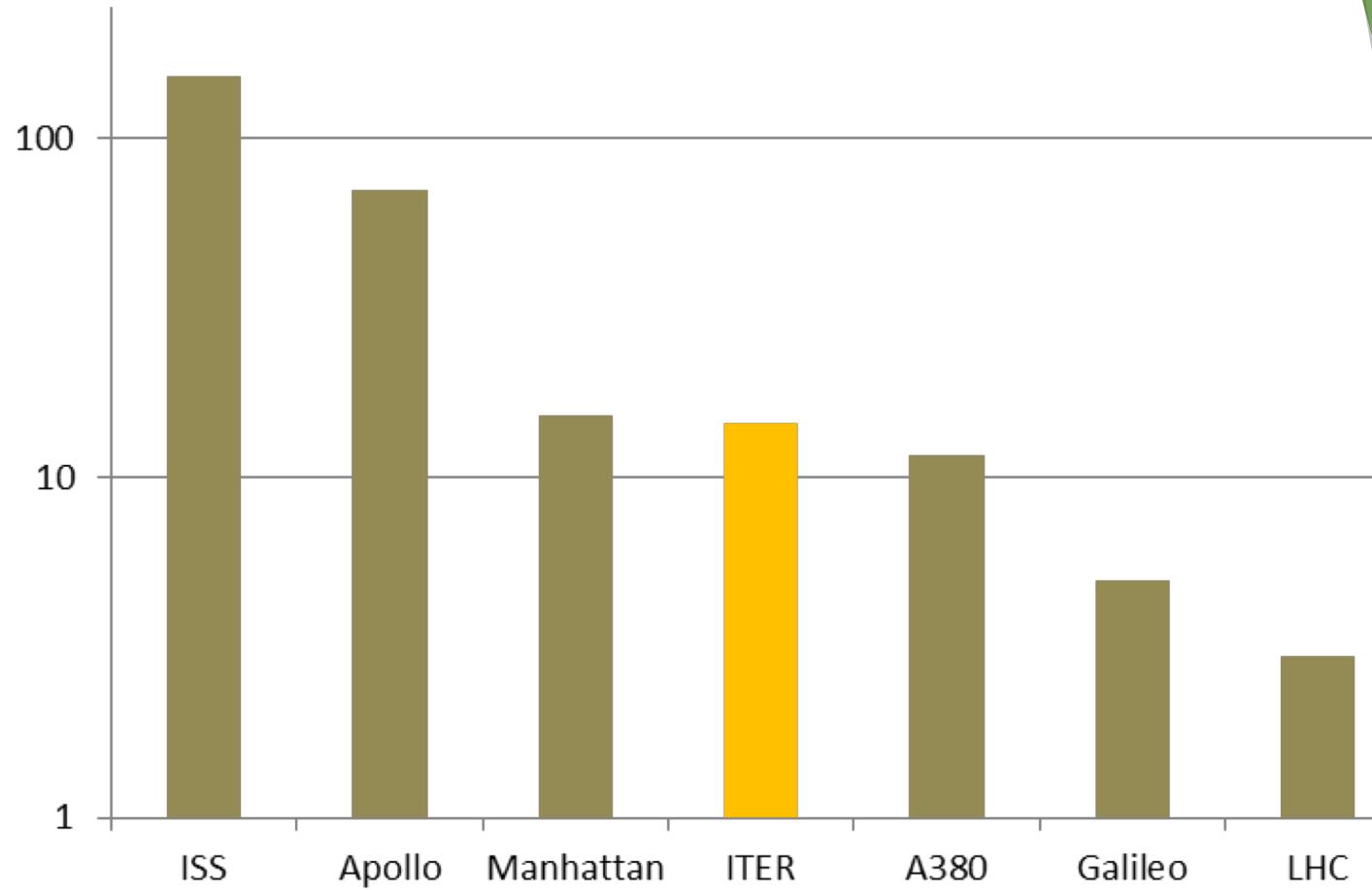
Budućnost fuzije - ITER

- ▶ Ciljevi:
 - ▶ Iz 50 MW proizvesti 500 MW
 - ▶ Razvoj tehnologije za izgradnju pravog reaktora
 - ▶ Raditi oko 20 godina
- ▶ Cijena $\approx 13\text{e}9$ EUR

Total/estimated cost (B Eur 2008)



Total/estimated cost (B Eur 2008)



Izvori

- ▶ Osobna komunikacija: Tonči Tadić
- ▶ <http://www.integrityresearchinstitute.org/FutureEnergy/FocusFusion-Ver6.htm>
- ▶ Pearson Education, Inc. publishing as Addison Wesley
- ▶ <http://www.grant-trebbin.com/2012/04/off-axis-magnetic-field-of-circular.html>
- ▶ <https://www.iter.org/>
- ▶ http://www.bundesregierung.de/Webs/Breg/DE/Theme/n/Energiewende/_node.html