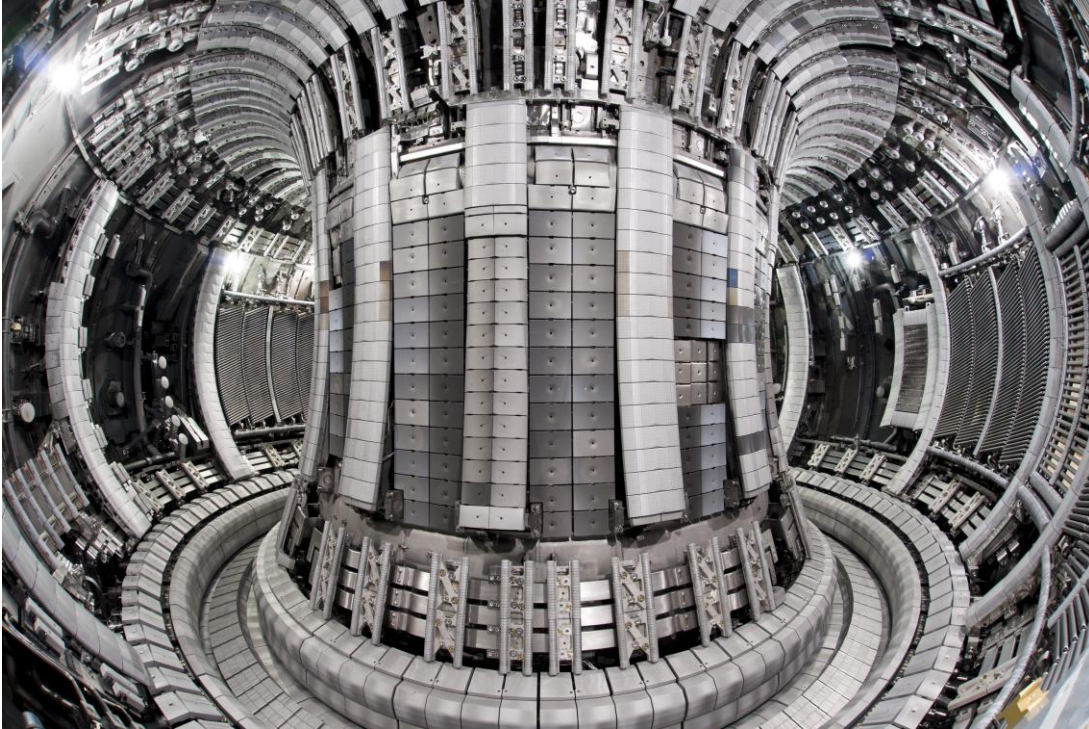


Fusor

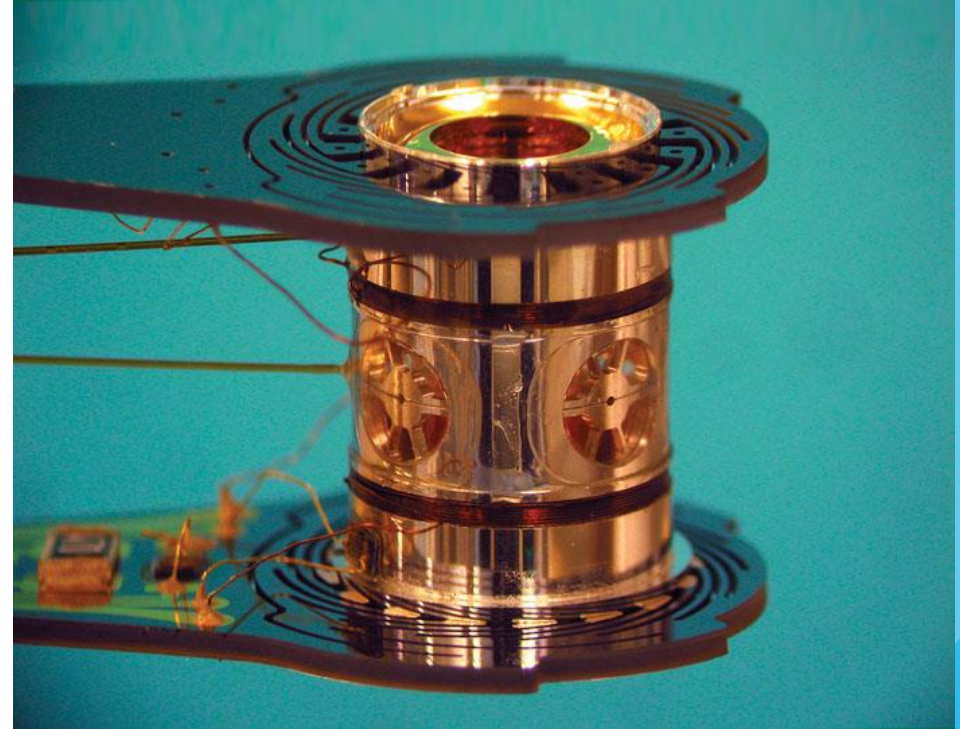
Osnova

- ▶ Úvod
- ▶ Vlastní projekt
 - Plán
 - Provedení
 - Shrnutí
- ▶ Závěr
- ▶ Reference

Jak dosáhnout fúze?



Tokamak JET (euro-fusion.org)



Experiment v laboratoři NIF (Lawrence Livermore National Laboratory)

Fusor

- ▶ Electric discharge device for producing interactions between nuclei



P. Farnsworth (Library of Congress)



R. Hirsch (Peak Oil)

Energie částic

- ▶ $\frac{1}{k_B} = \frac{1.602176 \times 10^{-19} \text{ J/eV}}{1.380650 \times 10^{-23} \text{ J/K}} = 11\,604.5 \text{ K/eV}$
- ▶ $10 \text{ kV} \rightarrow 116045000 \text{ K}$

Tlak

- ▶ Ideální stav ≈ 30 mPa
- ▶ Nízkorychlostní srážky
- ▶ Výboje

Shrnutí

- ▶ Využití fusoru - zdroj neutronového záření, demonstrace
- ▶ Současný výzkum - Univerzity, Školní projekty

Vlastní Projekt

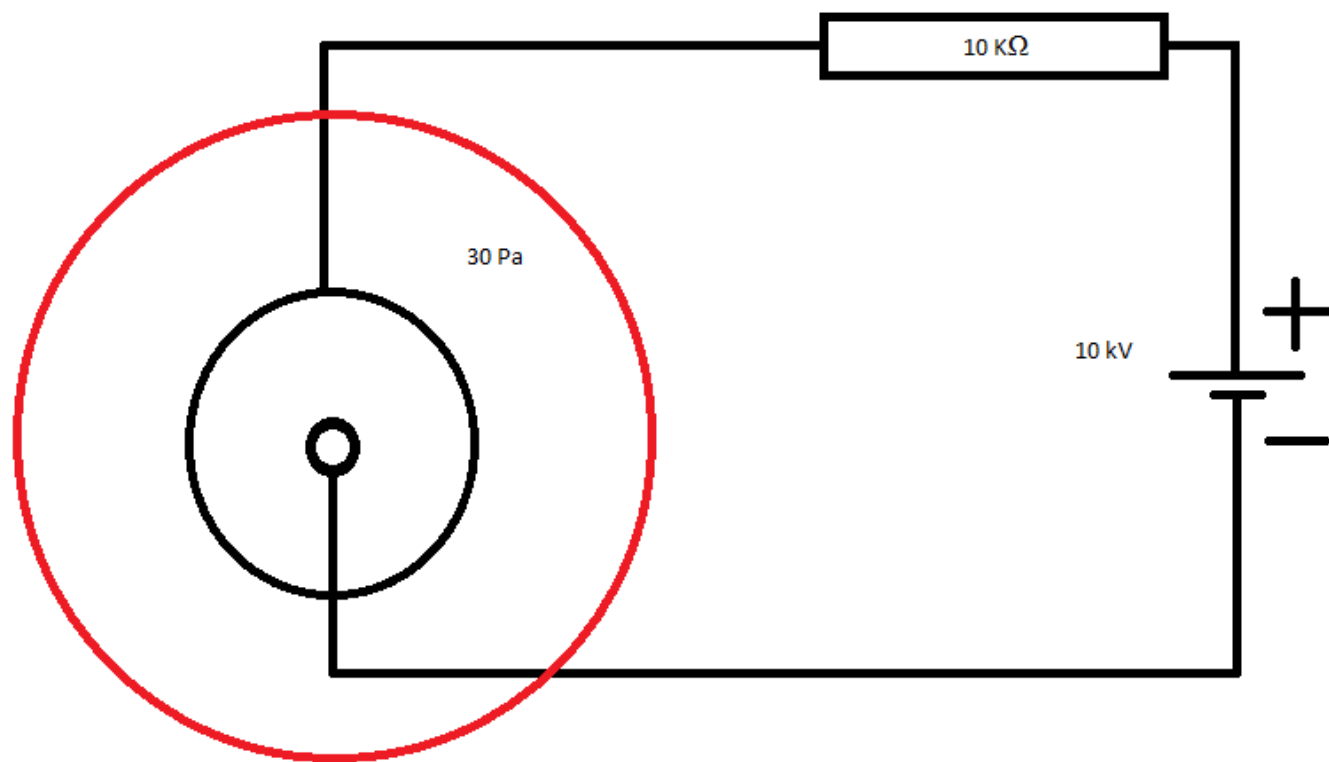
- ▶ Stavba modelu Fusoru

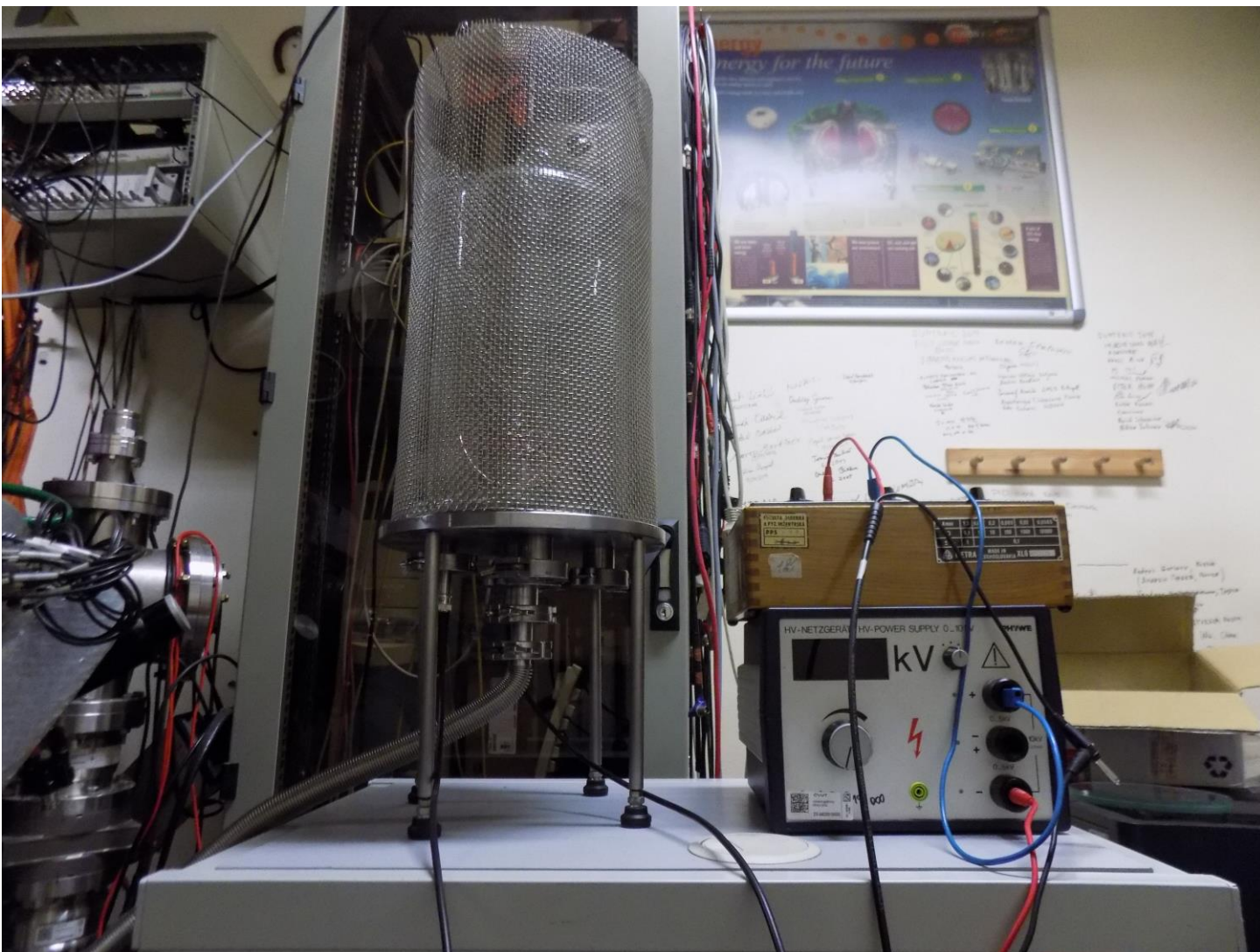
- ▶ Komponenty:

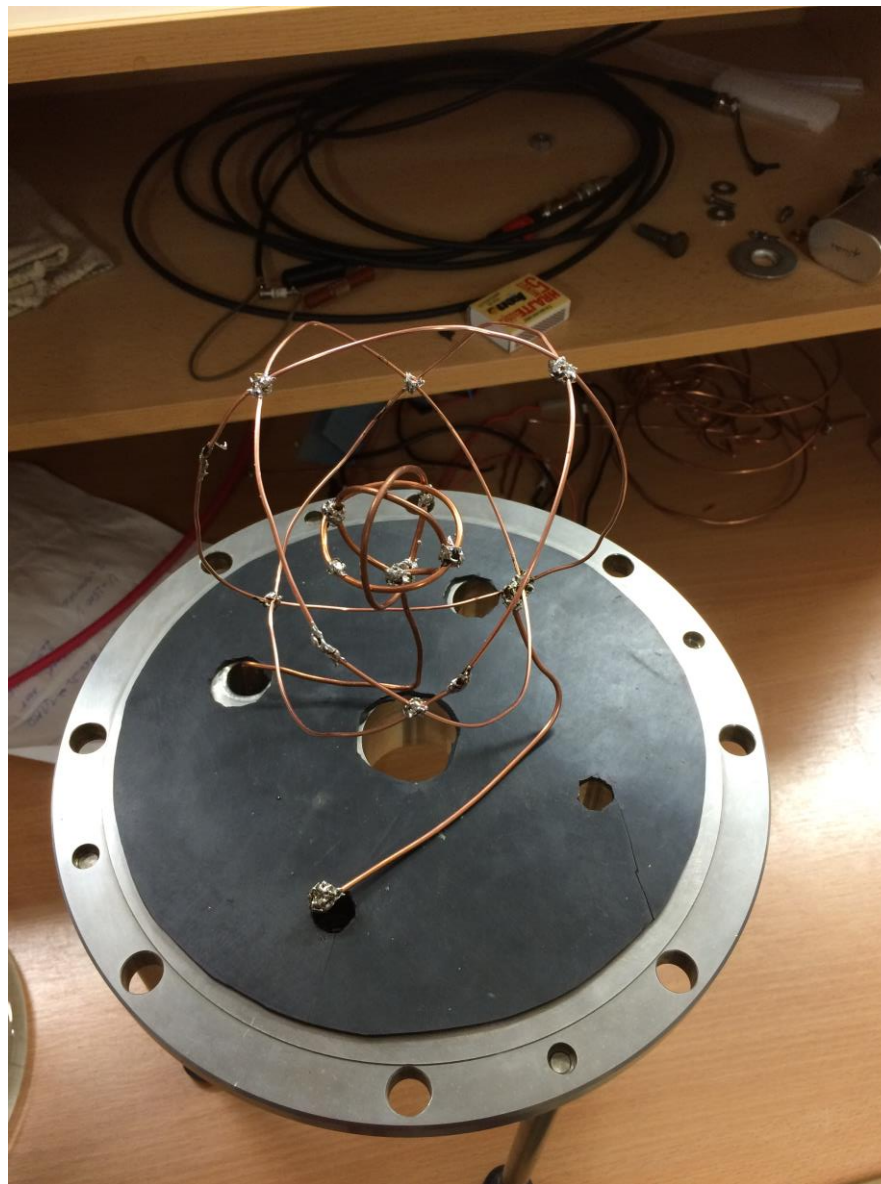
 - Vakuová technika

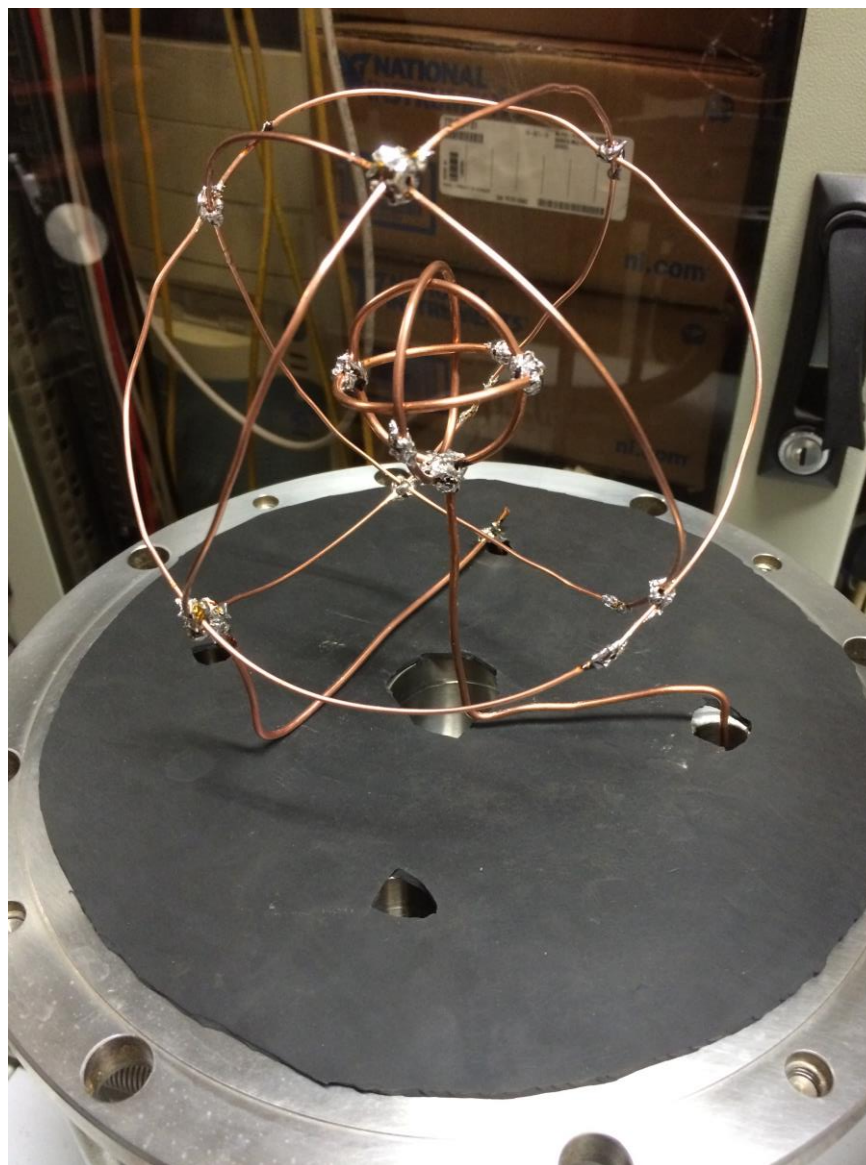
 - Zdroj vysokého napětí

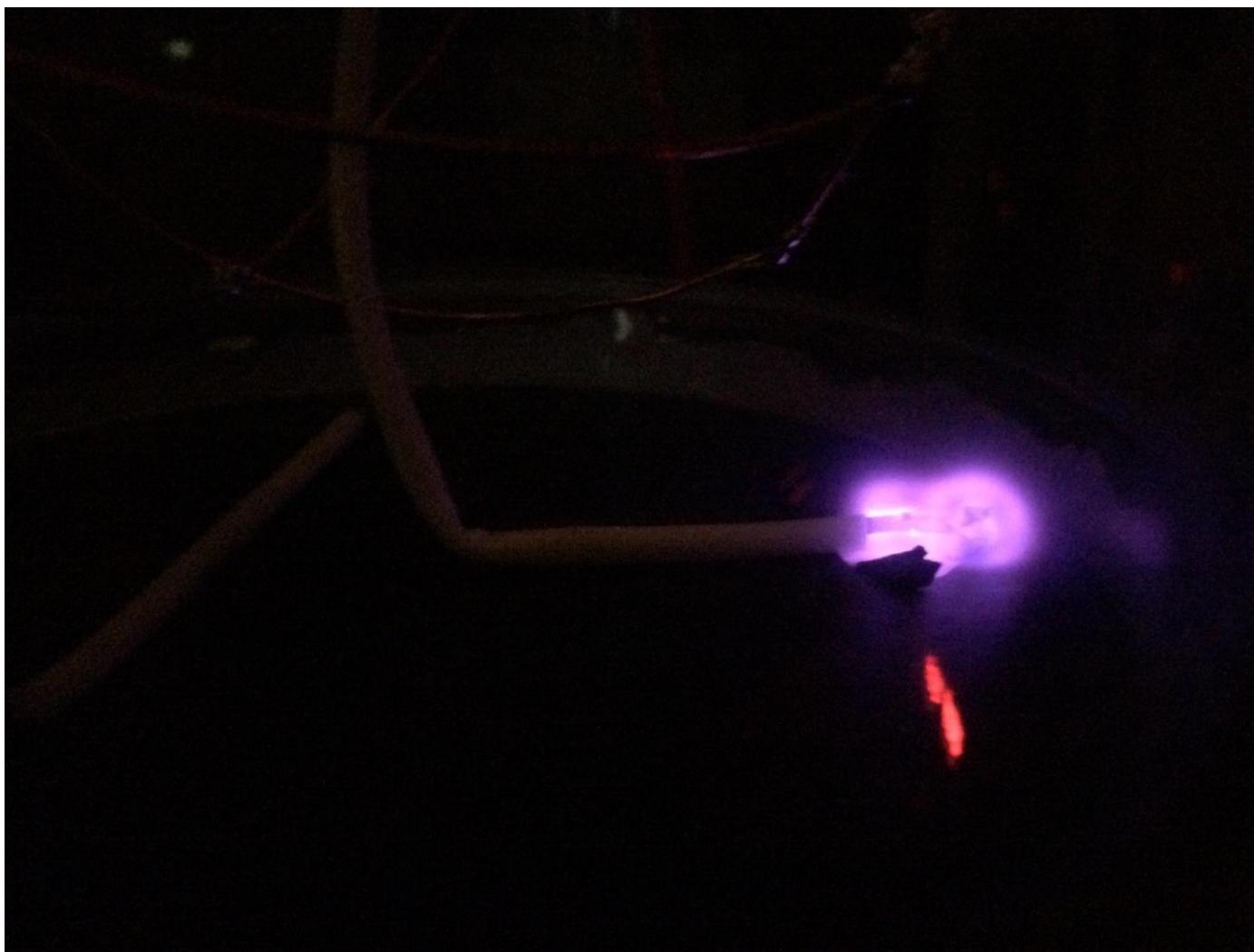
 - Vnitřní a vnější mřížka

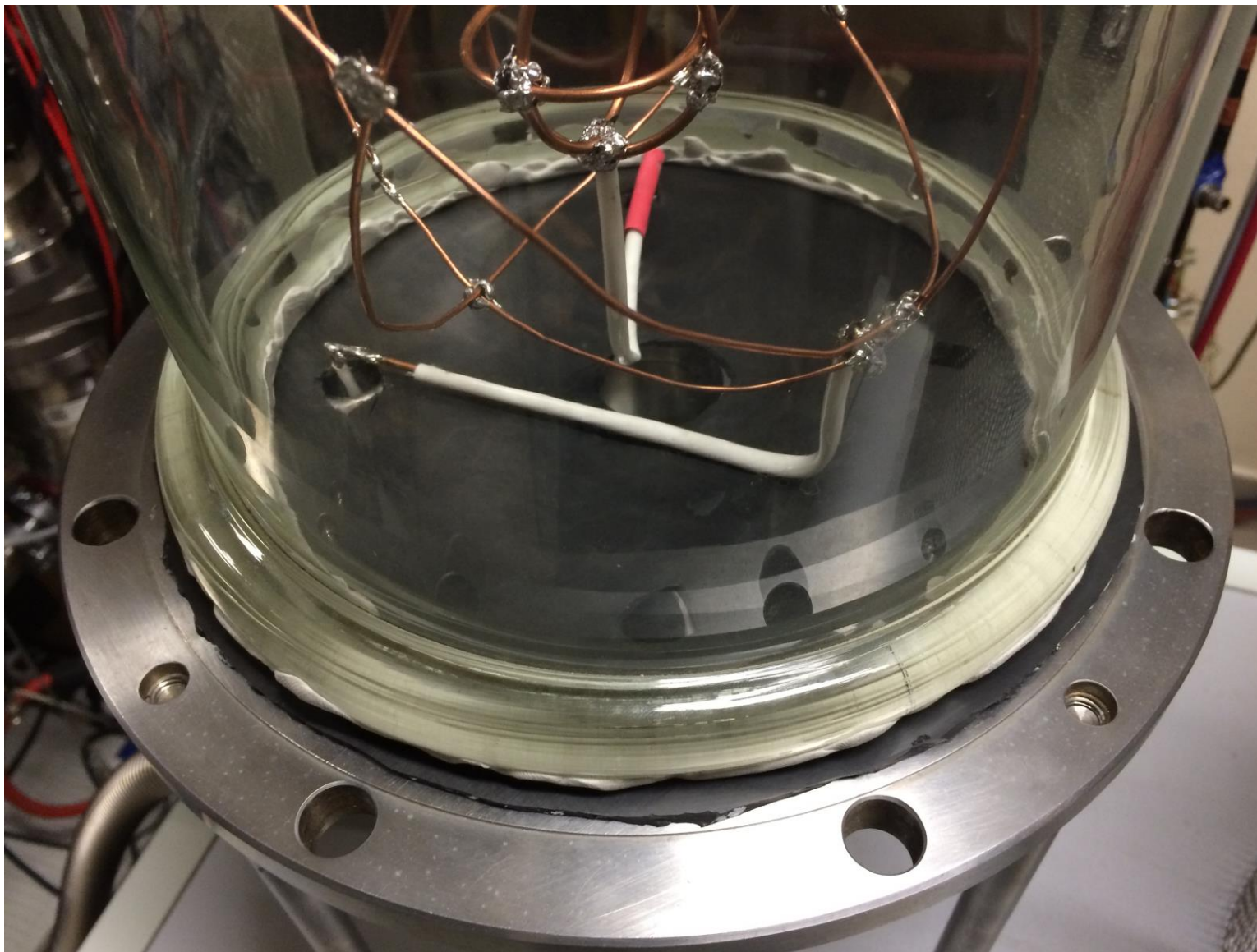


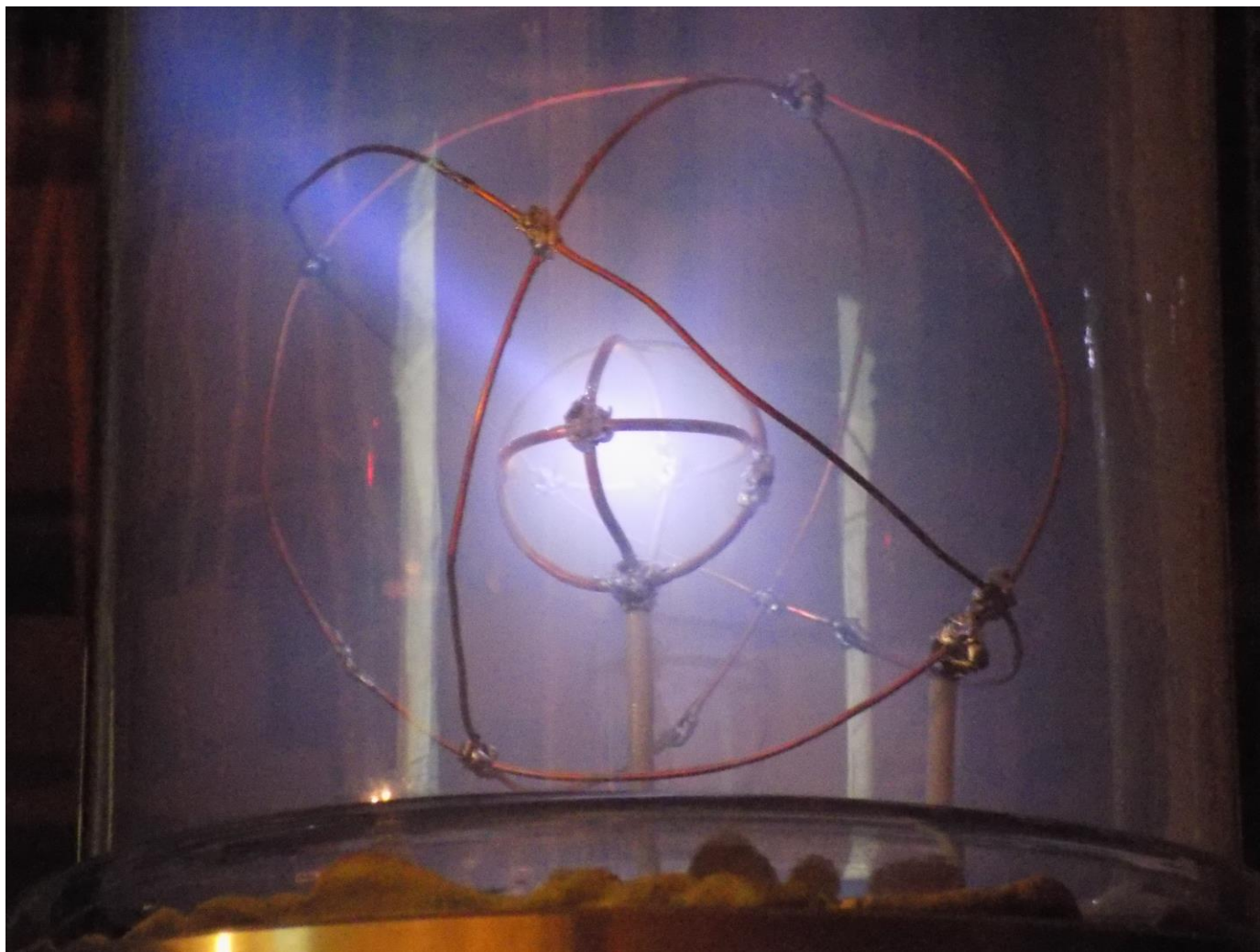










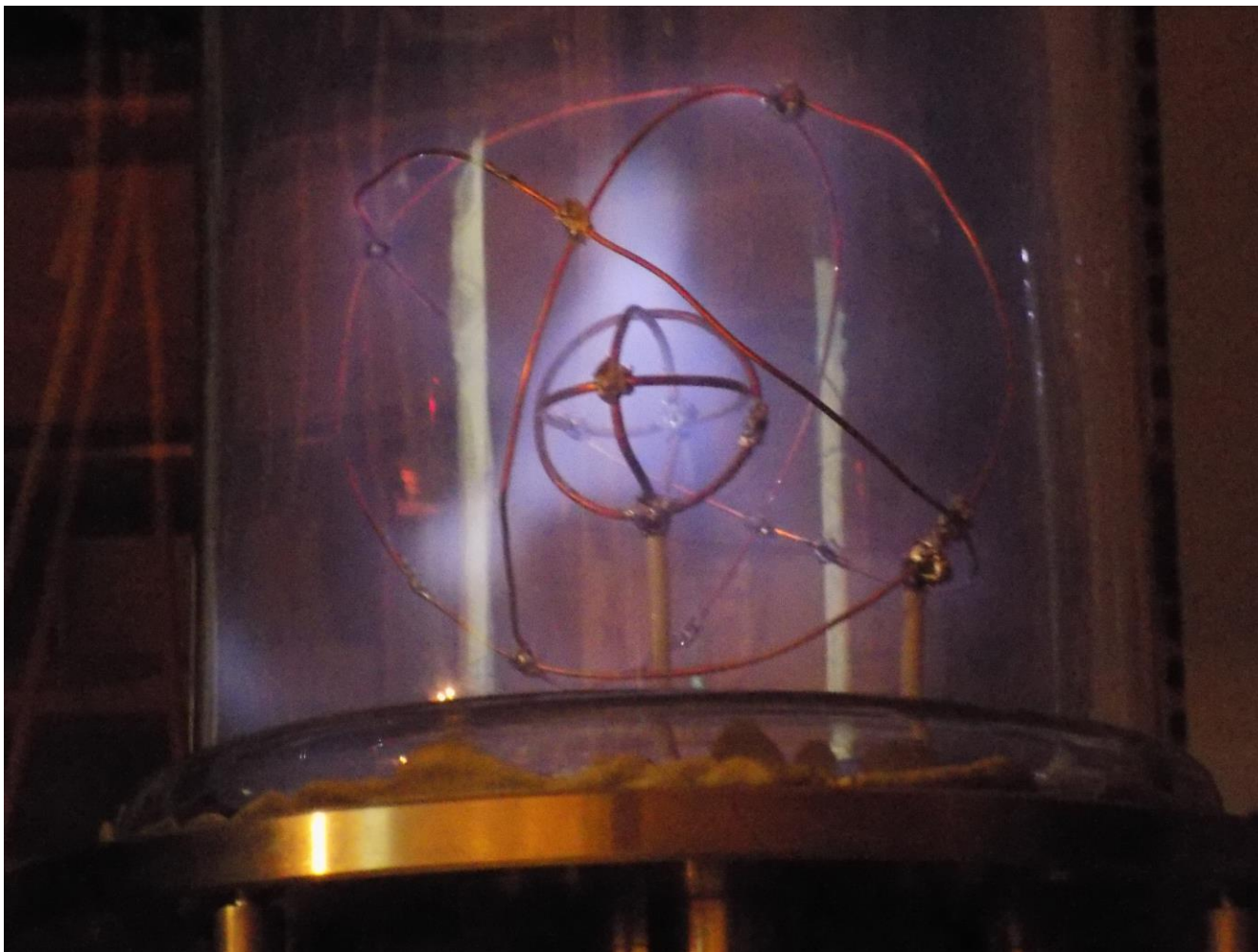


Závěr

- ▶ Tlak 4 Pa
- ▶ Dosažení předpokládaného výsledku
- ▶ Možné zlepšení
 - Lepší mřížky
 - Nižší tlak
 - Vyšší napětí
- ▶ Poděkování Vojtěchu Svobodovi

Reference

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- ▶ [5] FARNSWORTH Philo, patent US 3258402 A. 6/28/1966
- ▶ [5] LIBRARY OF CONGRESS, Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA, <http://www.loc.gov/pictures/resource/hec.25858/>
- ▶ [6] PEAK OIL, Robert Hirsch, Peak Oil as seen through the eyes of Arab oil producers, 4/11/2013, <http://peakoil.com/generalideas/robert-hirsch-peak-oil-as-seen-through-the-eyes-of-arab-oil-producers>
- ▶ [7] THE POLYWELL NUCLEAR FUSION, The Polywell Nuclear Reactor, http://www.polywellnuclearfusion.com/PolywellReactor/PolywelPics/IEC_Polywell.jpg



Polywell

