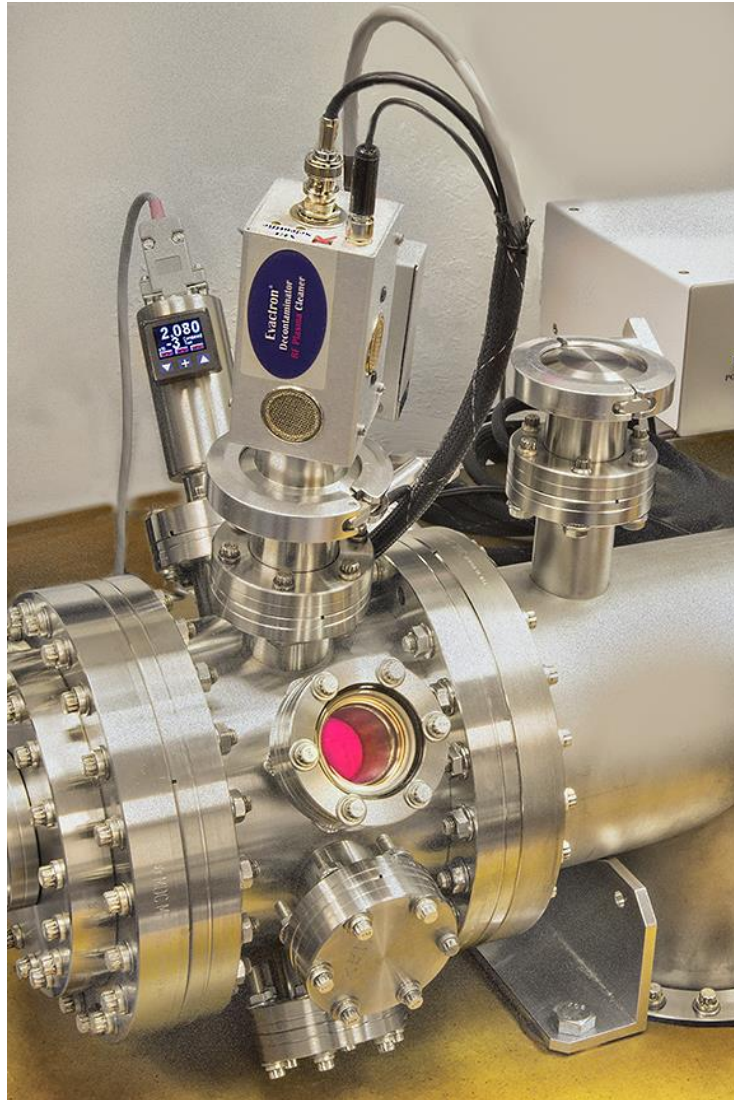


# Analýza zdroje plazmatu

Dušan Nešpor, R&D Physics – S9000 platform leader

**Motivace**

Dekontaminátor



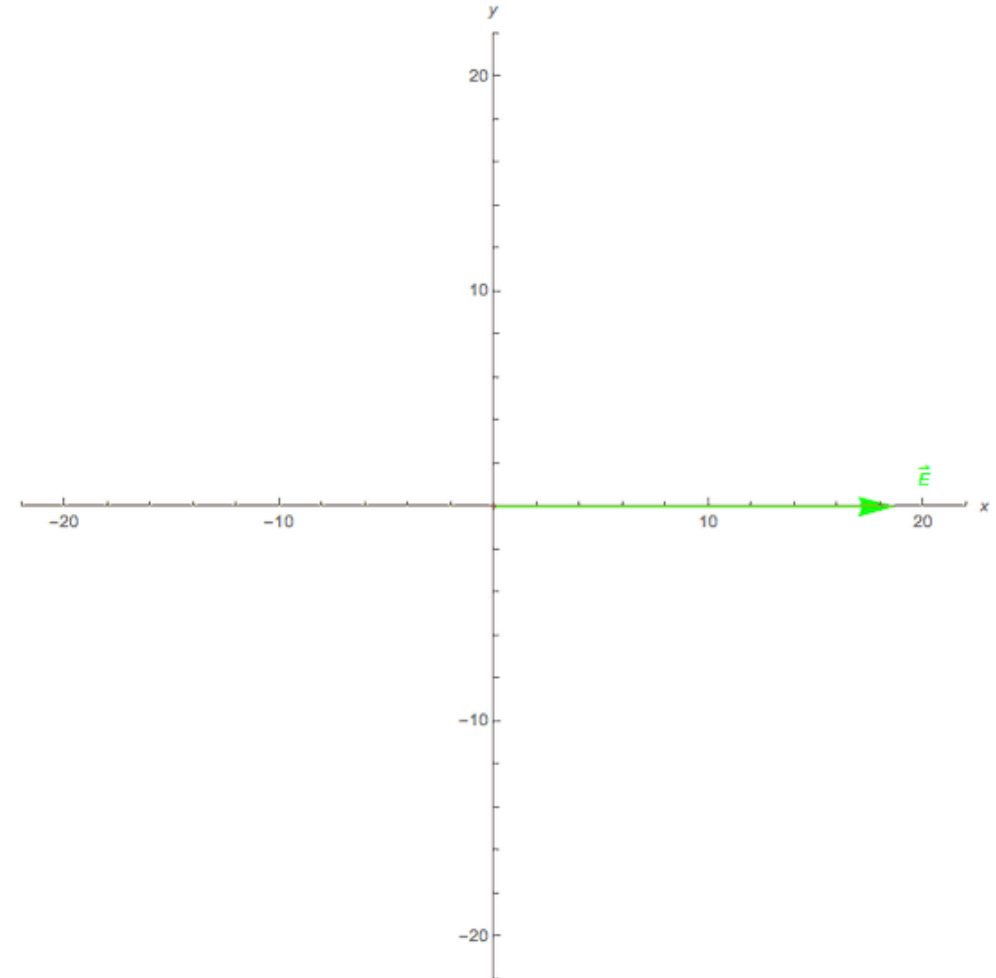
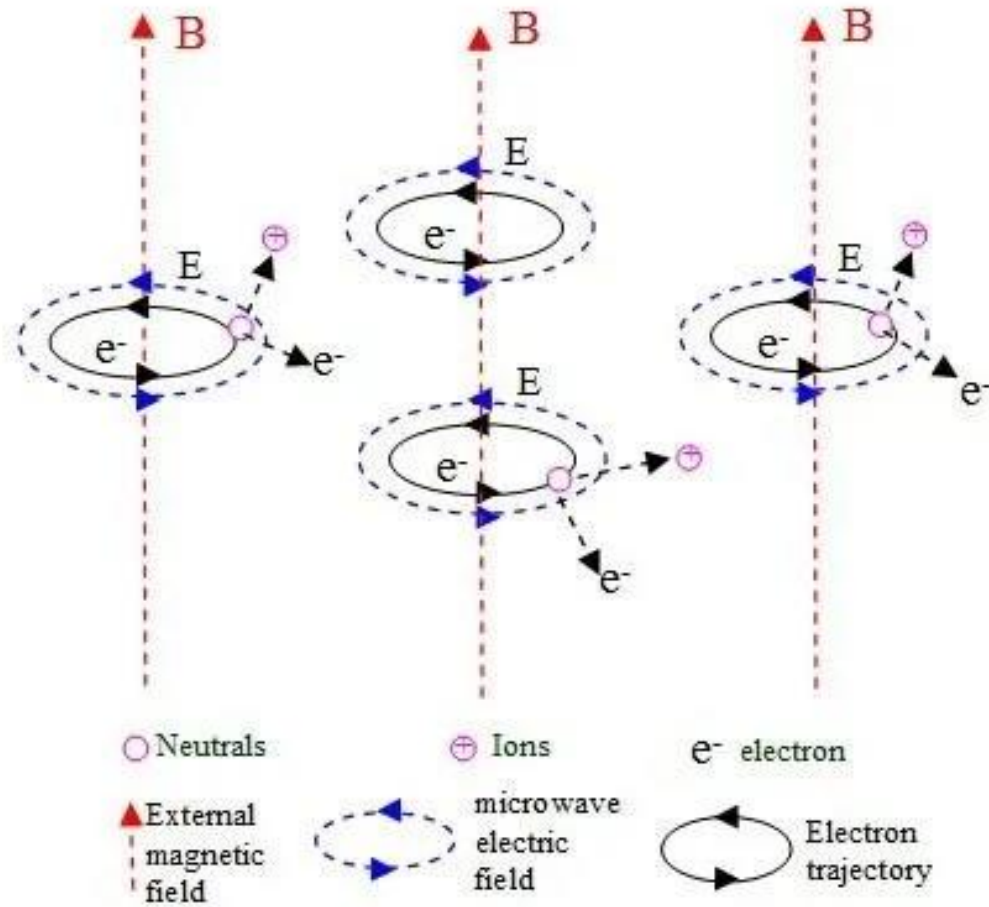
FIB



# Elektronová Cyklotronová Rezonance - ECR

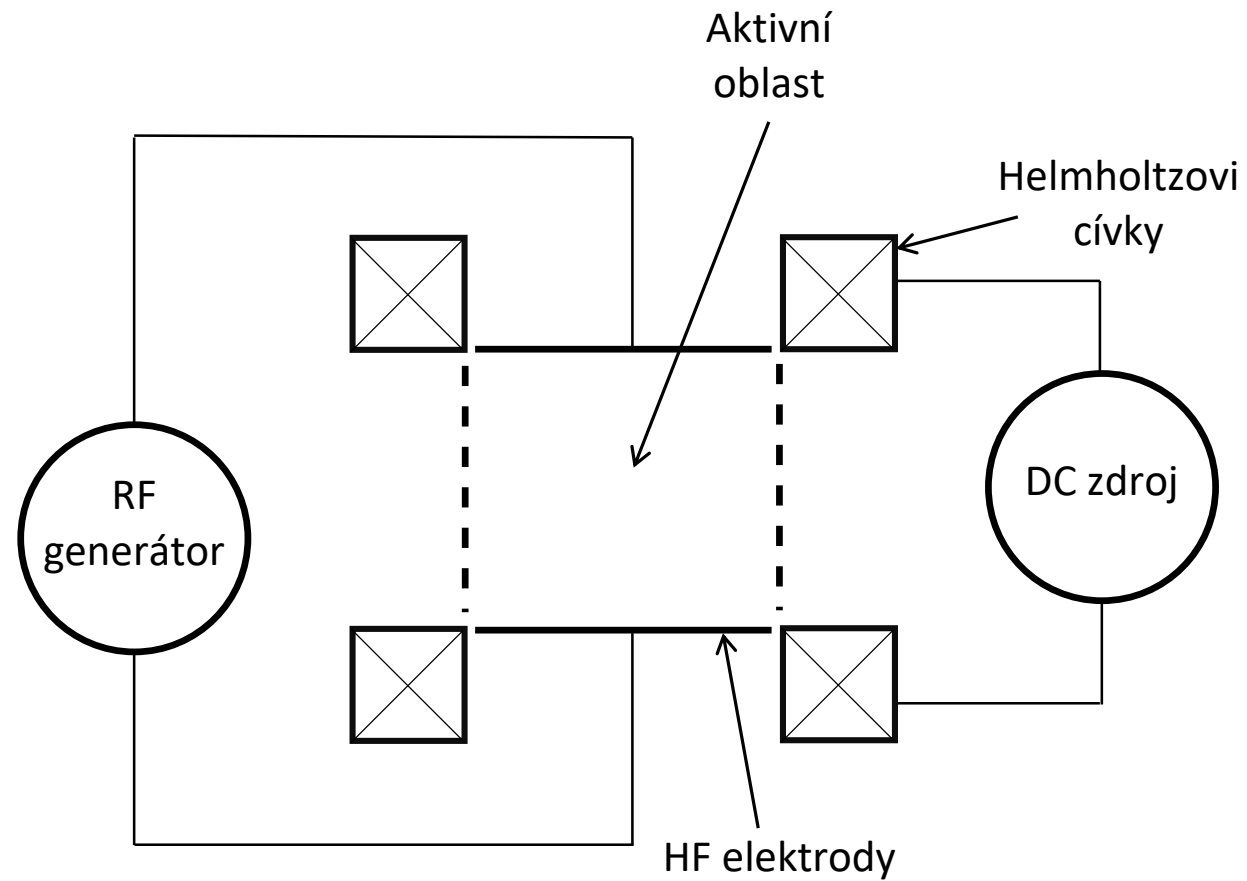
# Princip ECR

$$f = \frac{eB}{2\pi m_e}$$



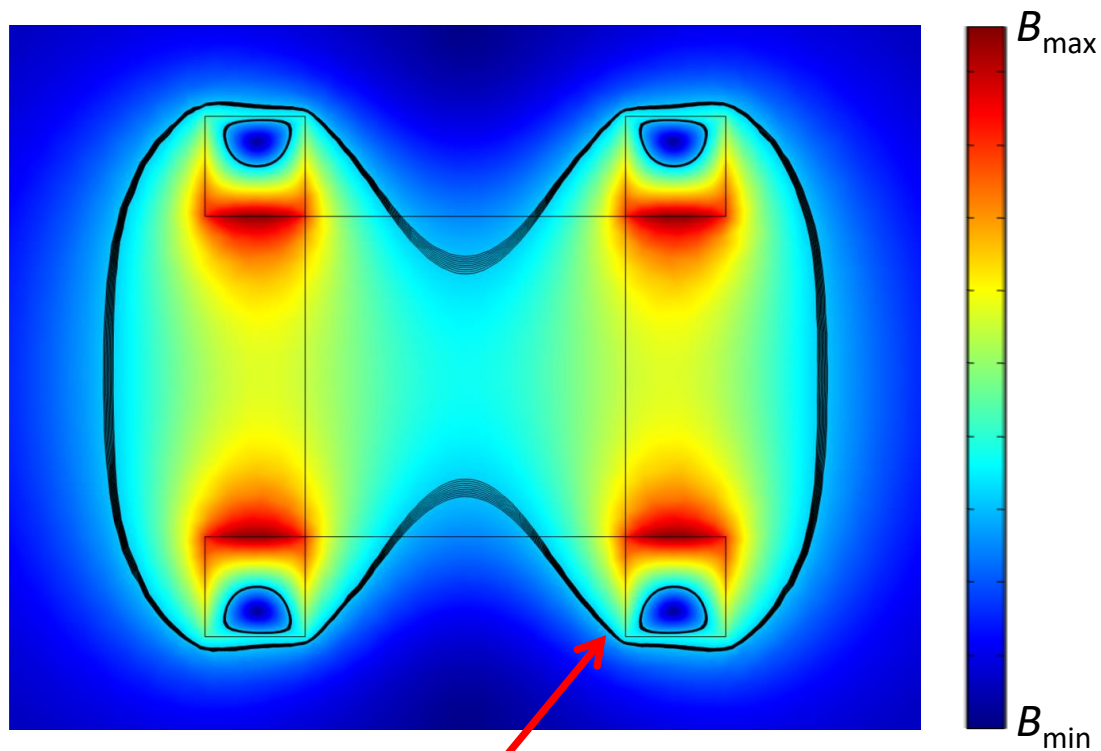
# Sestavení modelu

# Schéma modelu ECR



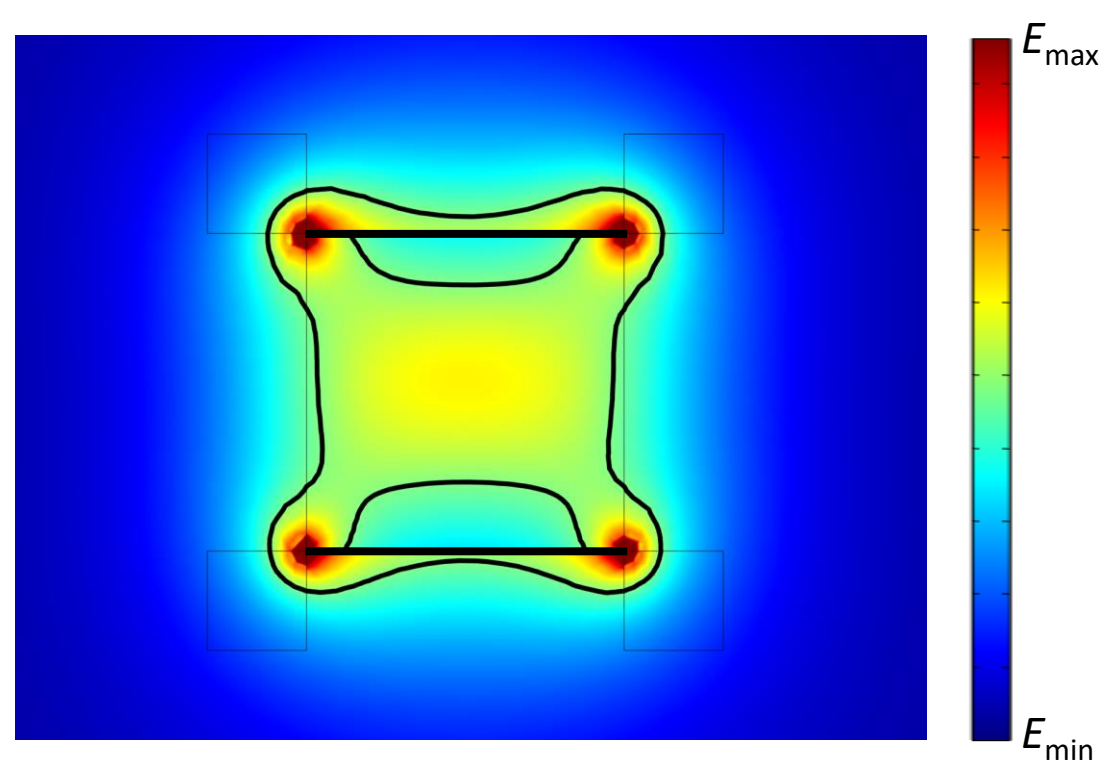
- Statické magnetické pole
- Vysokofrekvenční elektromagnetické pole
- Impedanční přizpůsobení

Rozložení magnetické indukce



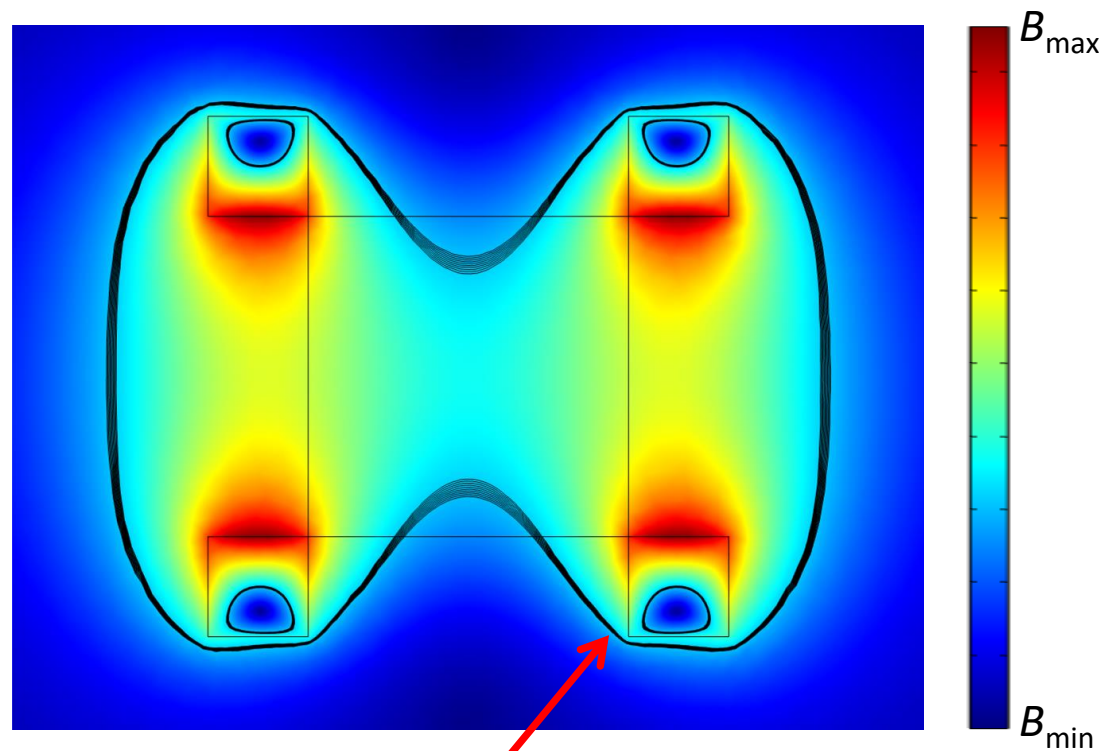
ECR

Rozložení intenzity elektrického pole

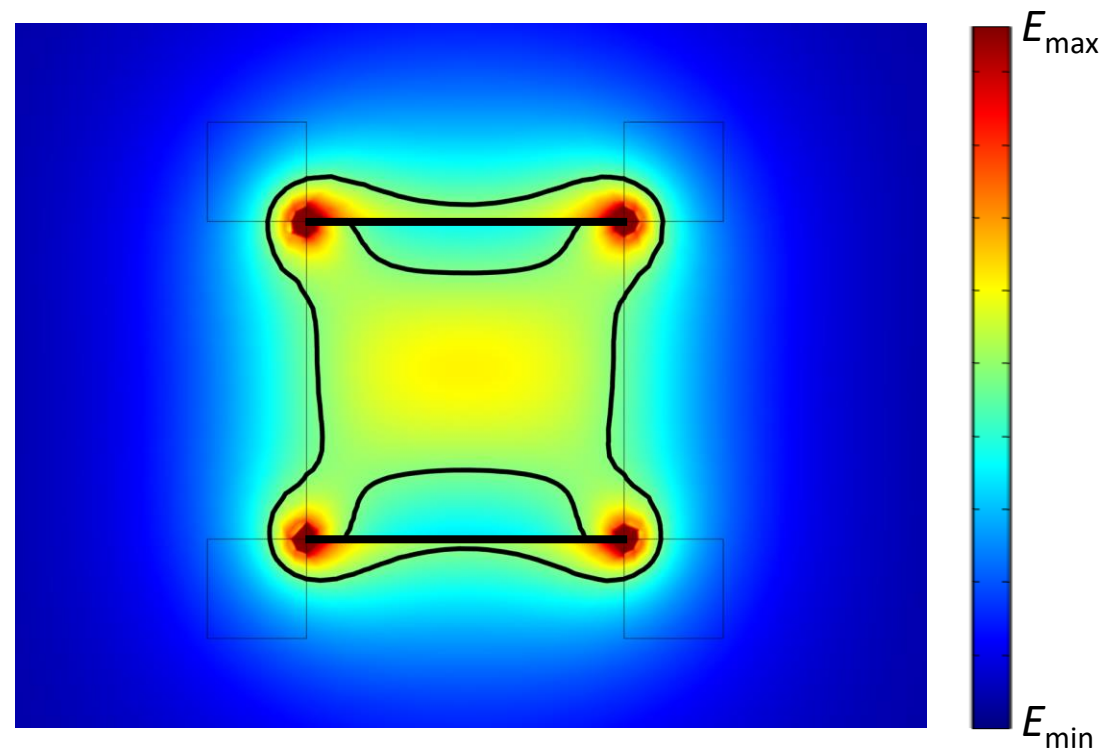




Rozložení magnetické indukce



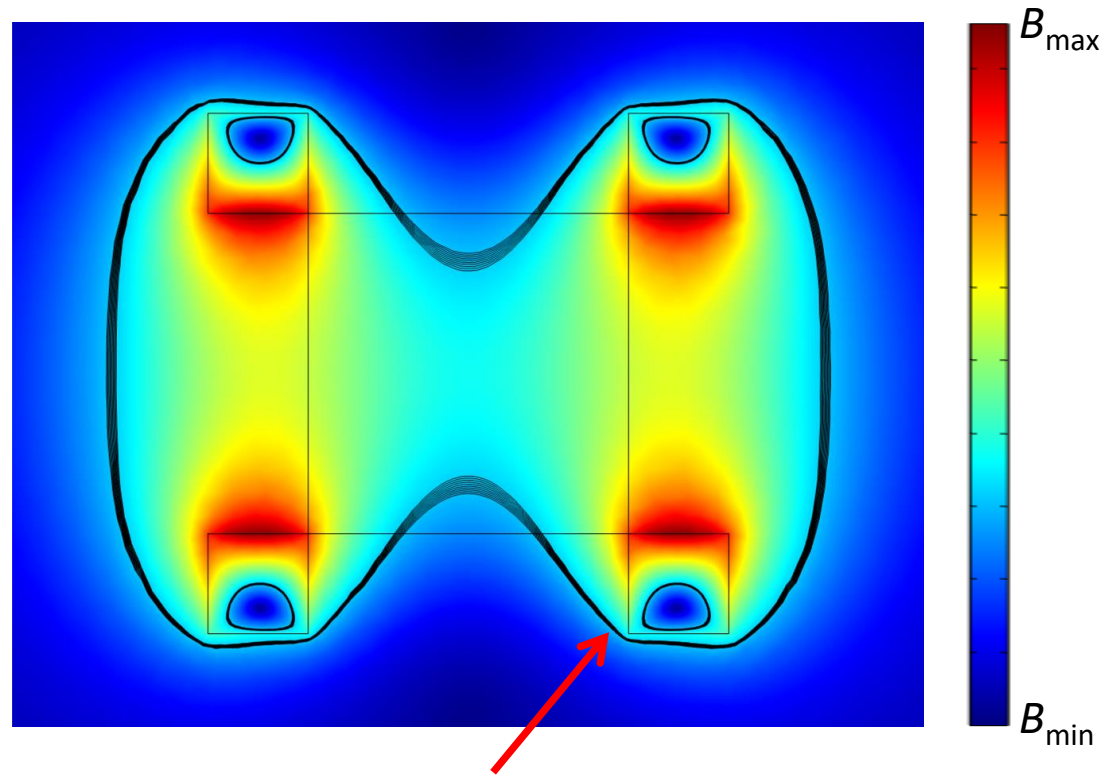
Rozložení intenzity elektrického pole



ECR

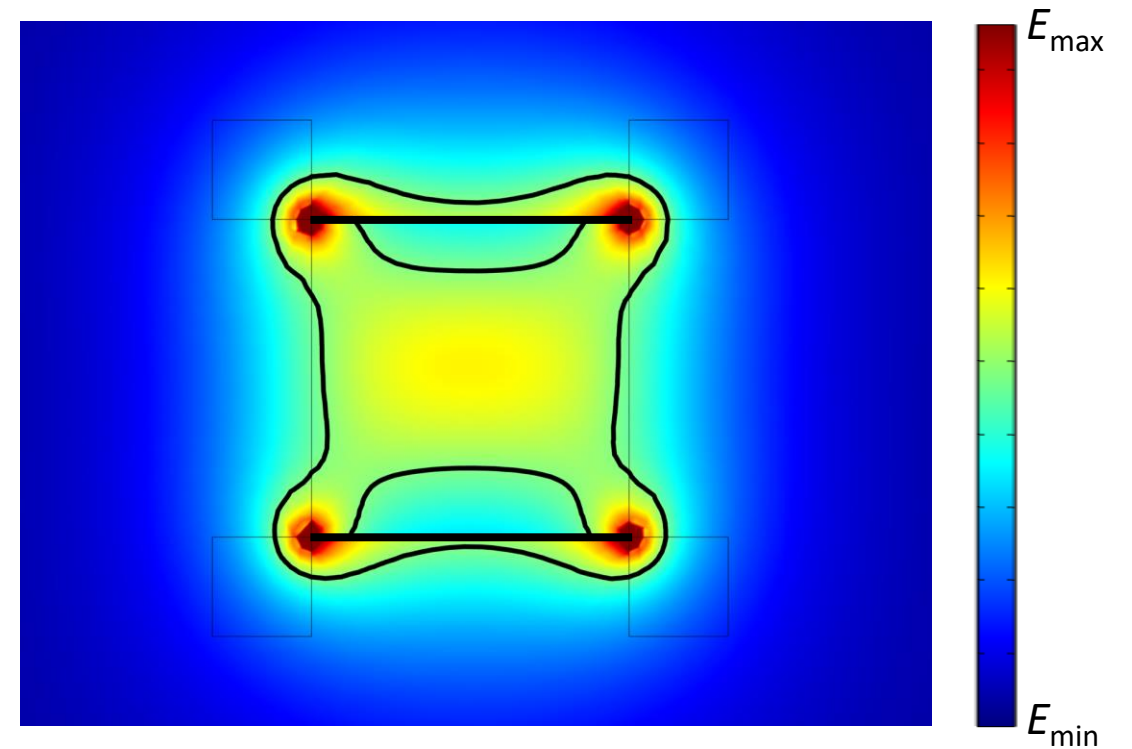
**K ionizaci dochází na ECR ploše**

Rozložení magnetické indukce



ECR

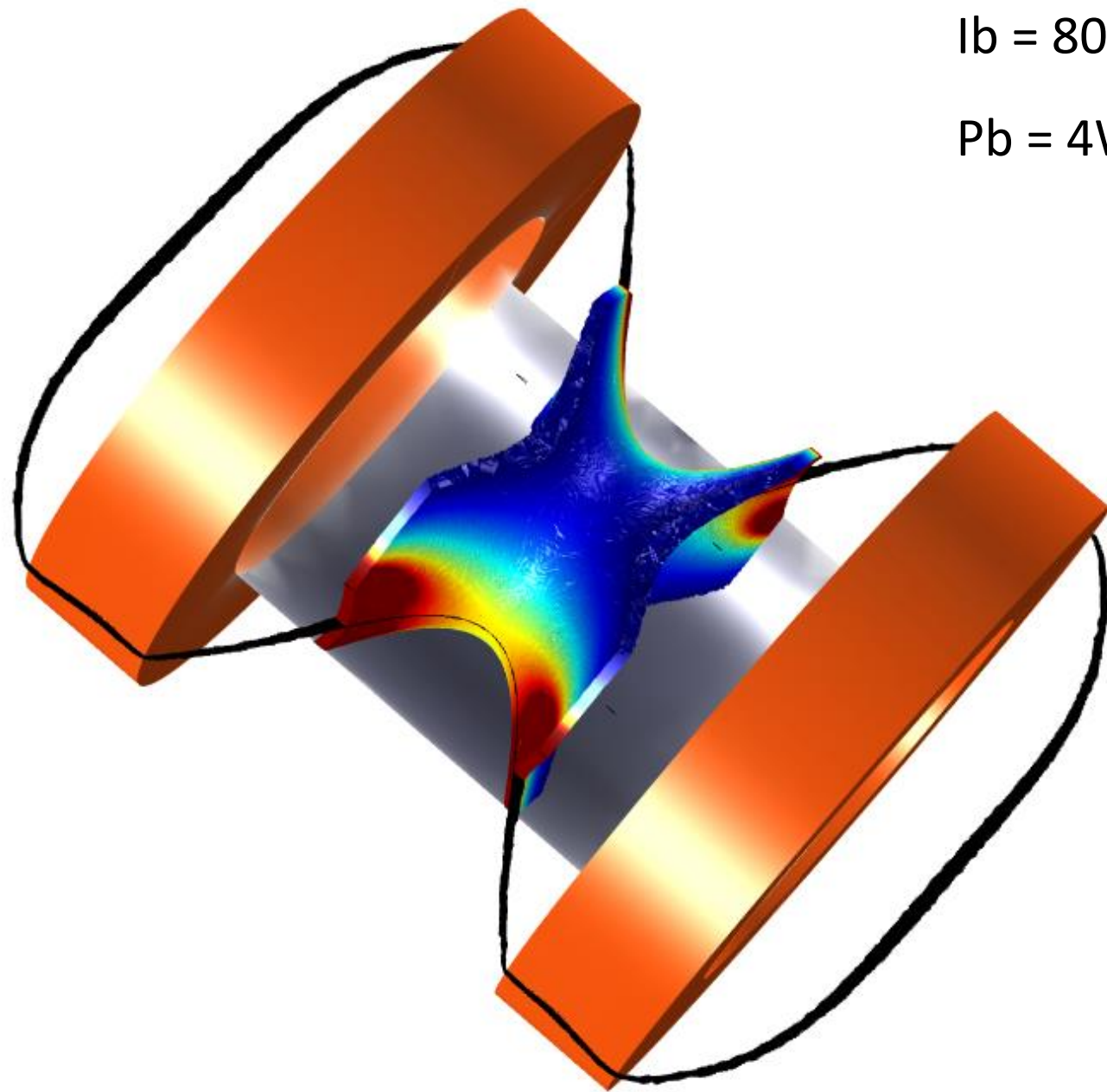
Rozložení intenzity elektrického pole



**K ionizaci dochází na ECR ploše**

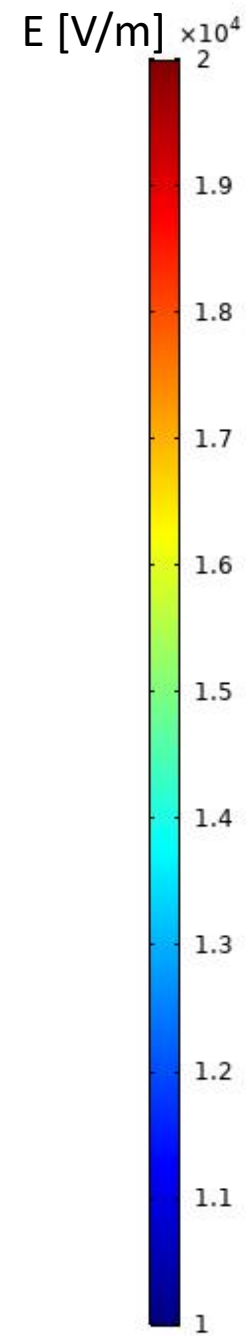
**K ionizaci dochází pokud  $E > 10$  kV/m**

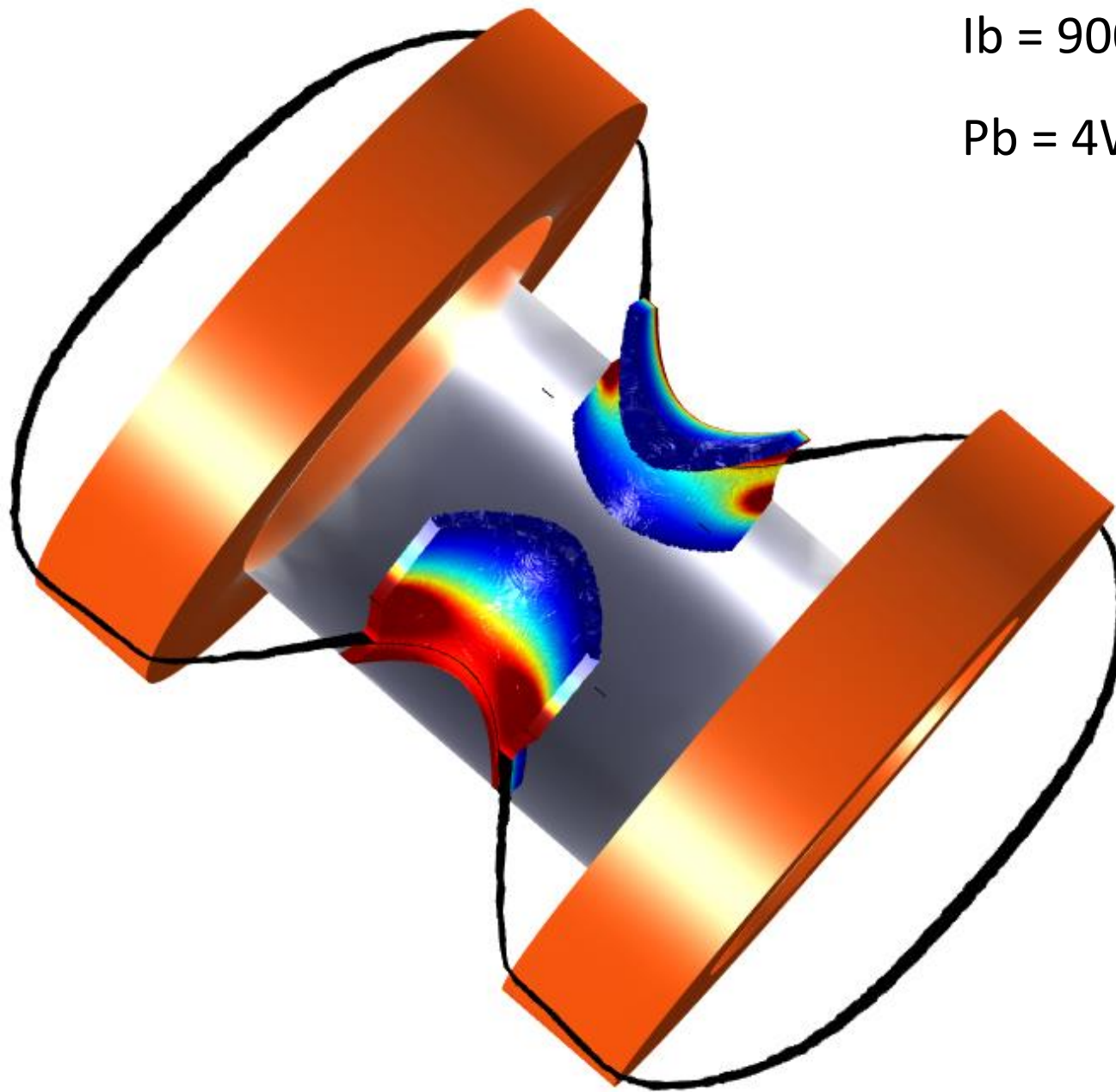
# Výsledky numerické analýzy



$I_b = 800\text{Az}$

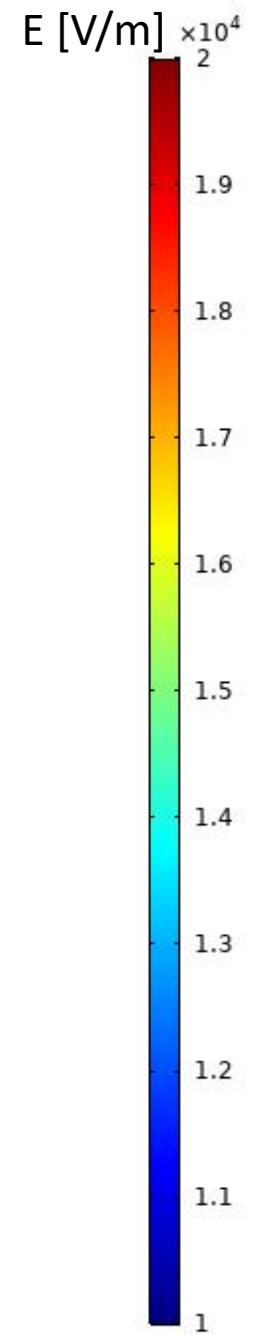
$P_b = 4\text{W}$

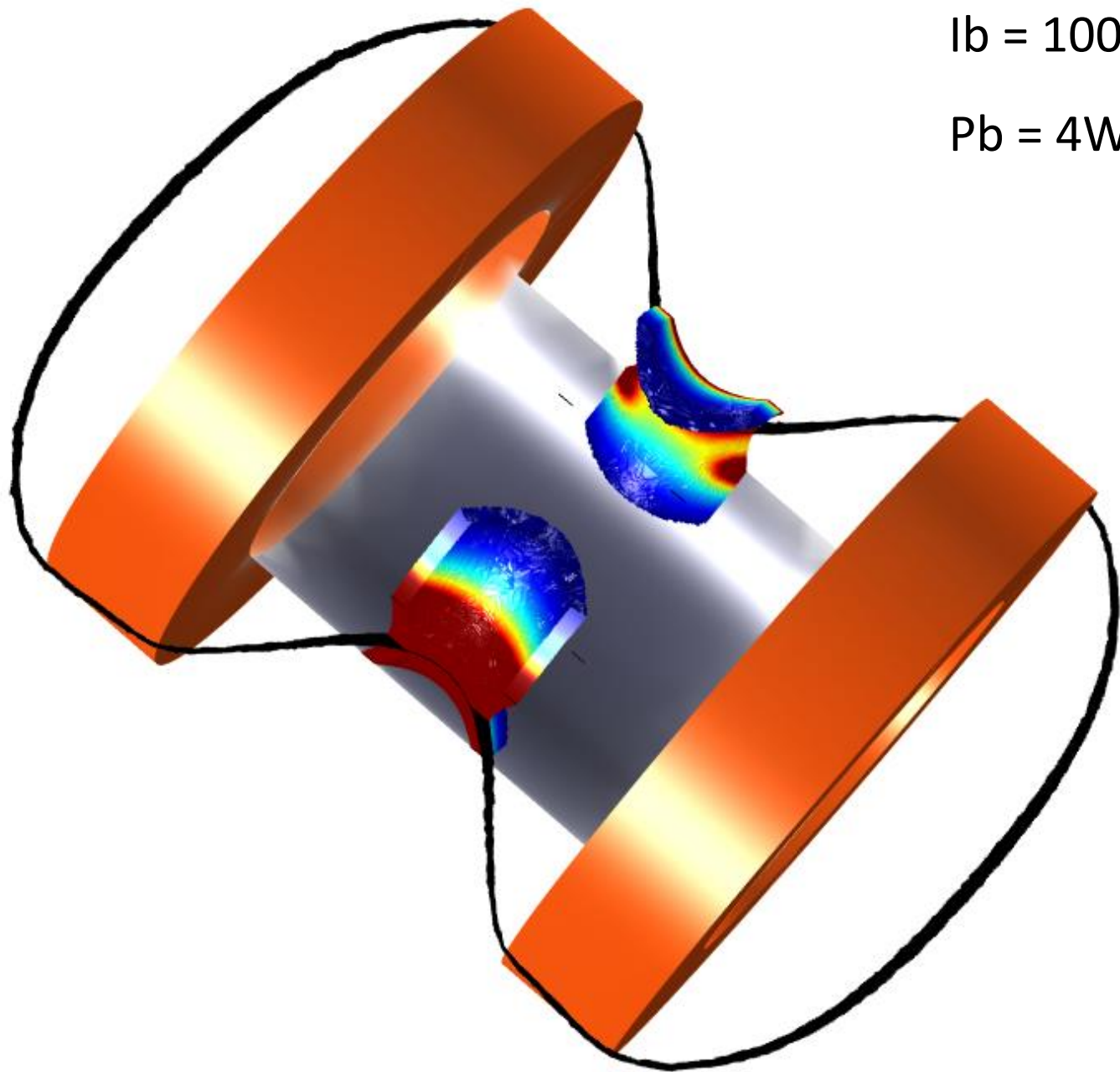




$I_b = 900 \text{Az}$

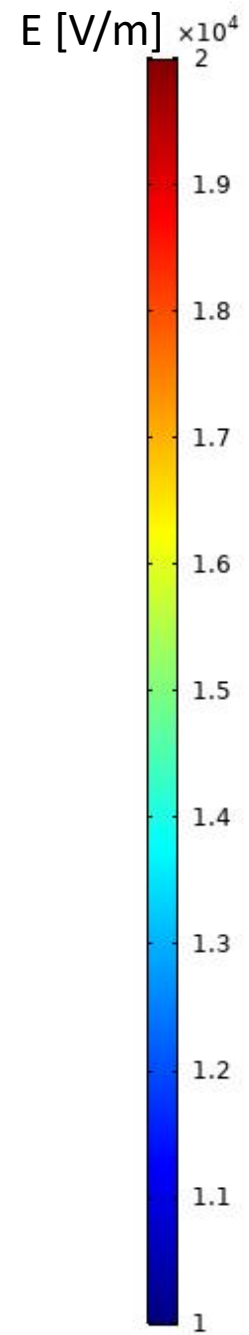
$P_b = 4 \text{W}$

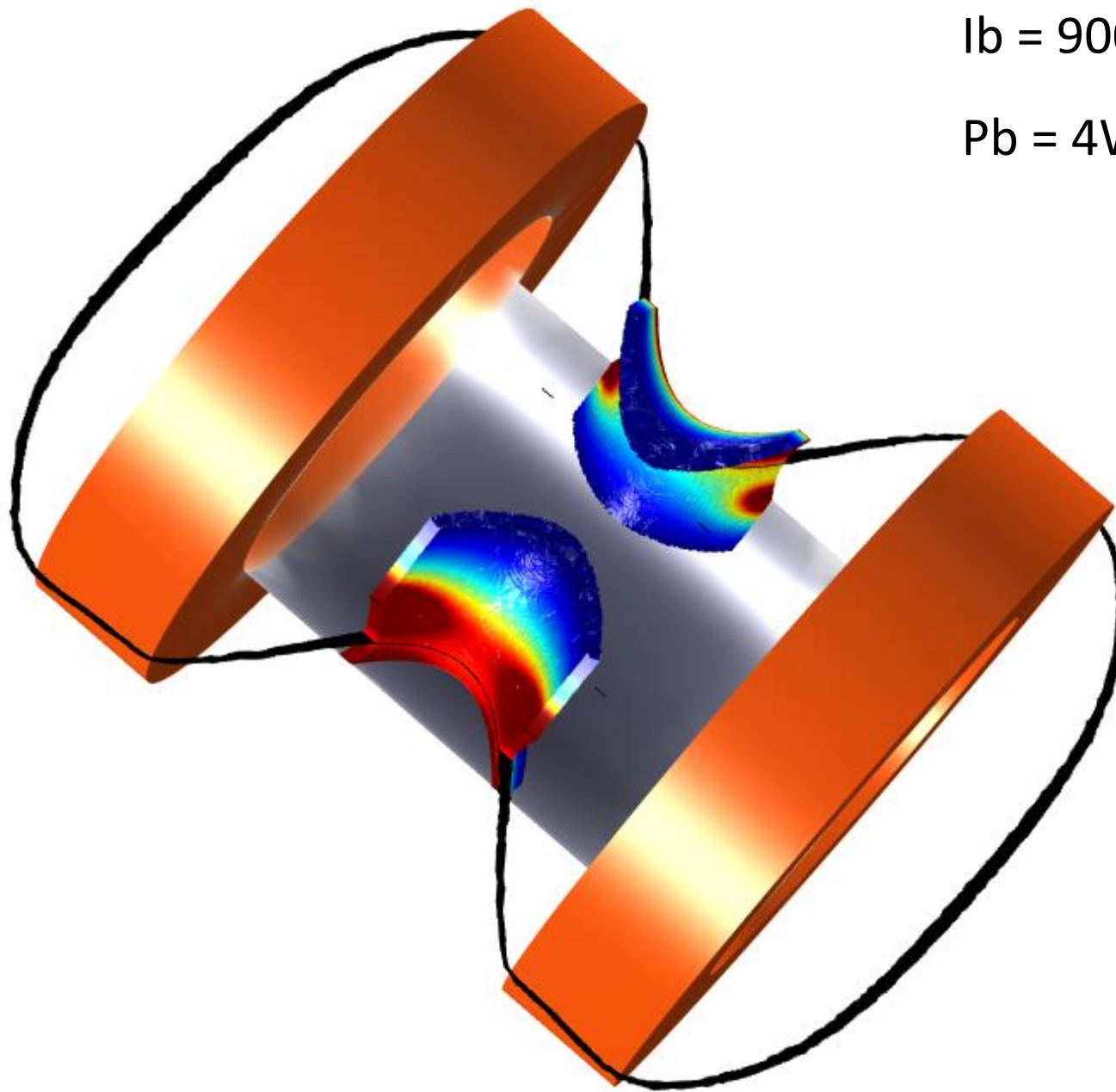




$$I_b = 1000A_z$$

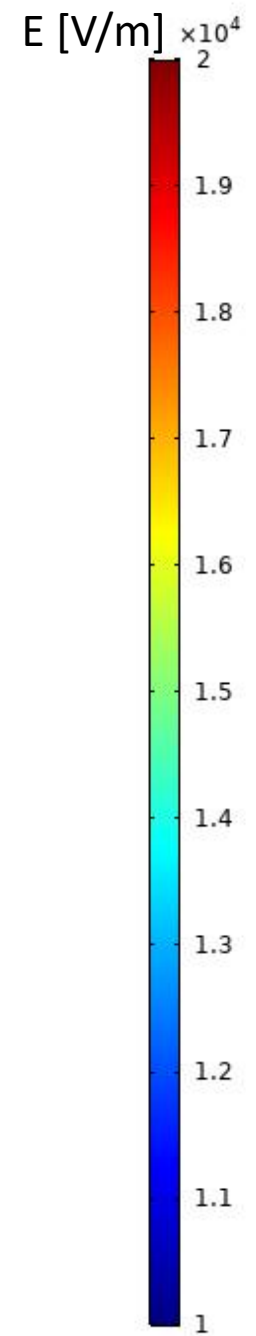
$$P_b = 4W$$

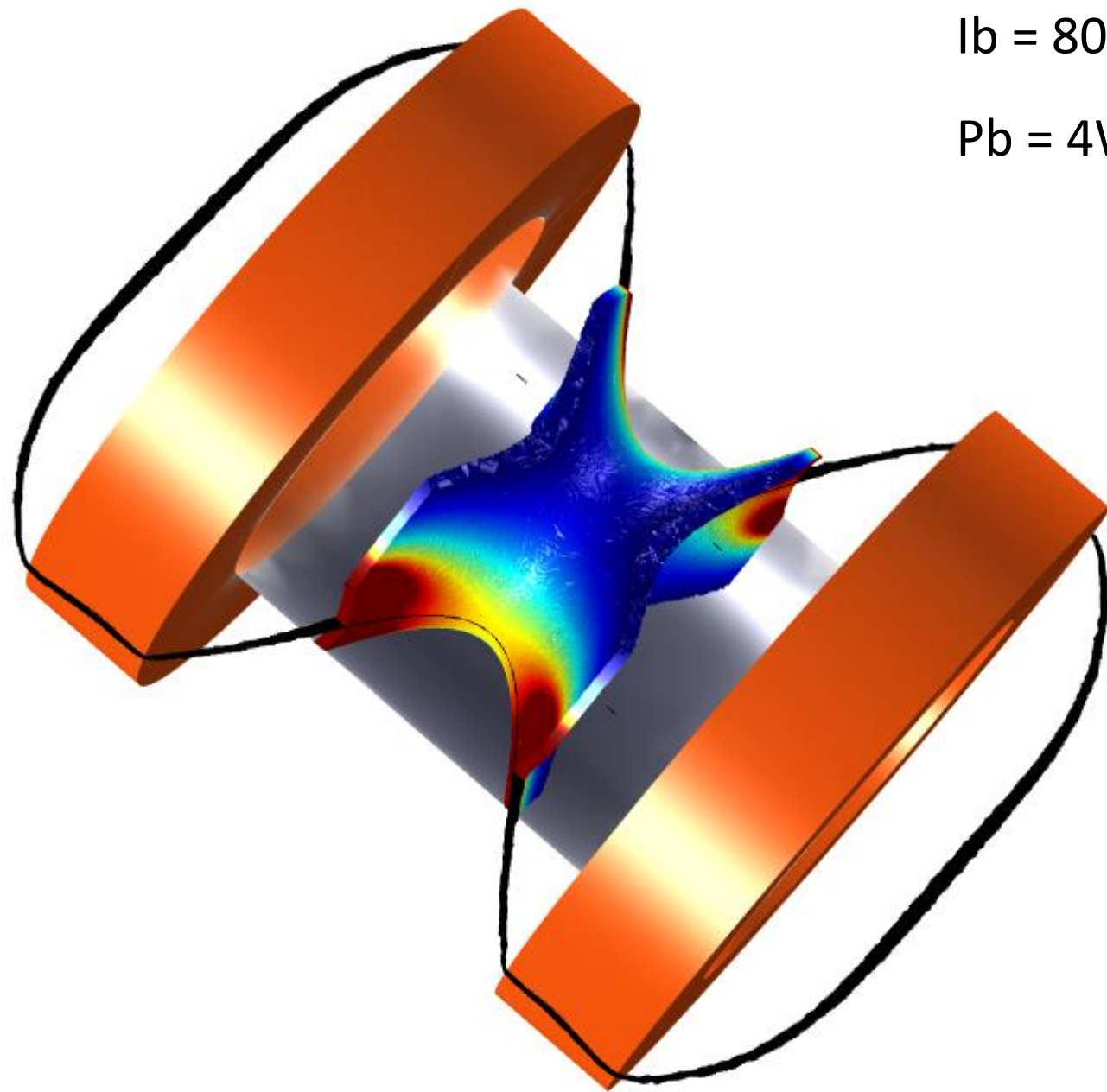




$I_b = 900 \text{Az}$

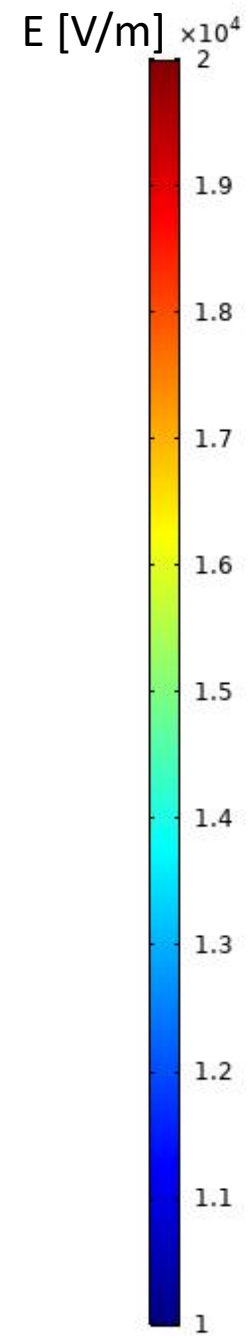
$P_b = 4 \text{W}$



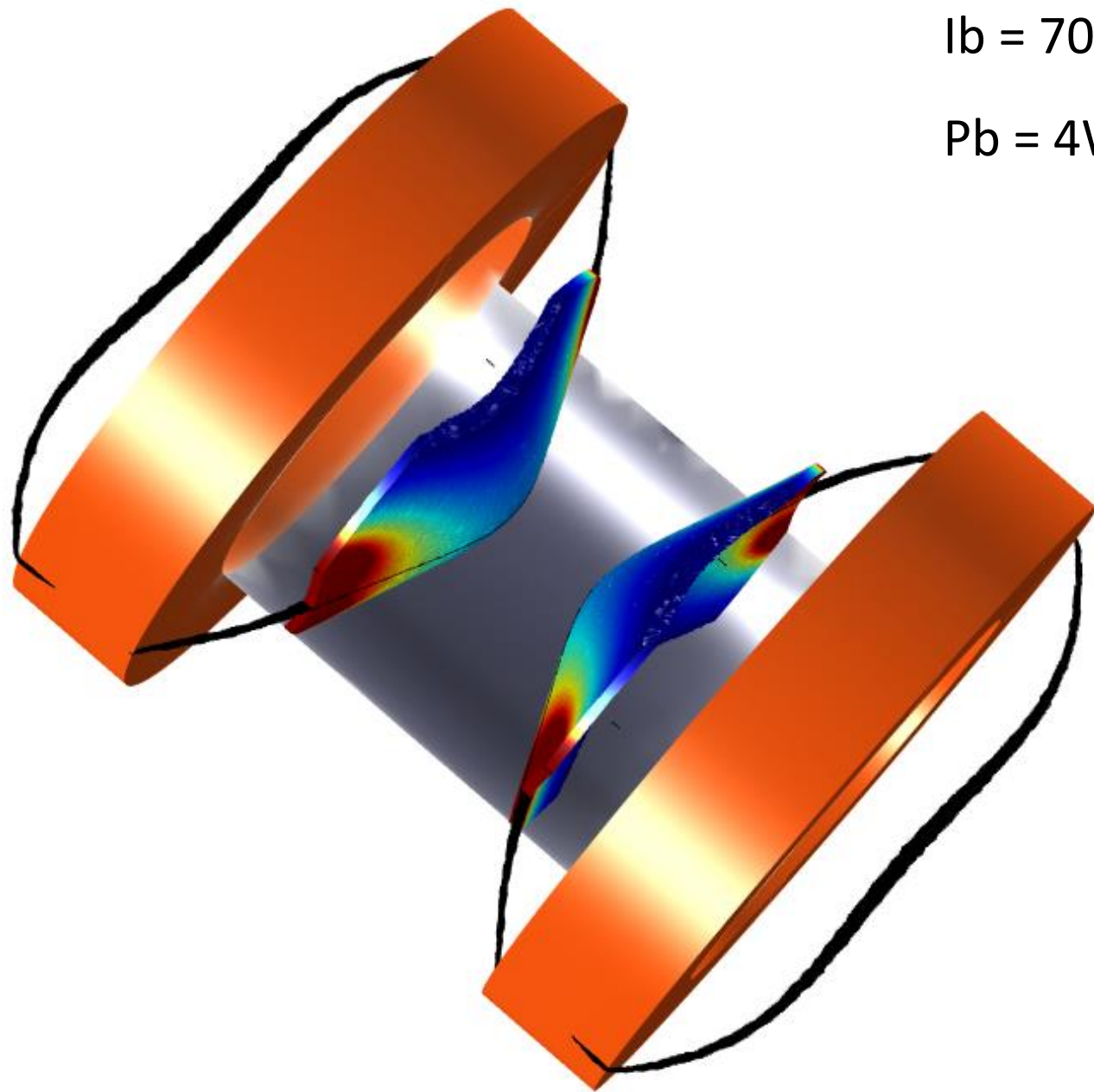


$I_b = 800\text{Az}$

$P_b = 4\text{W}$

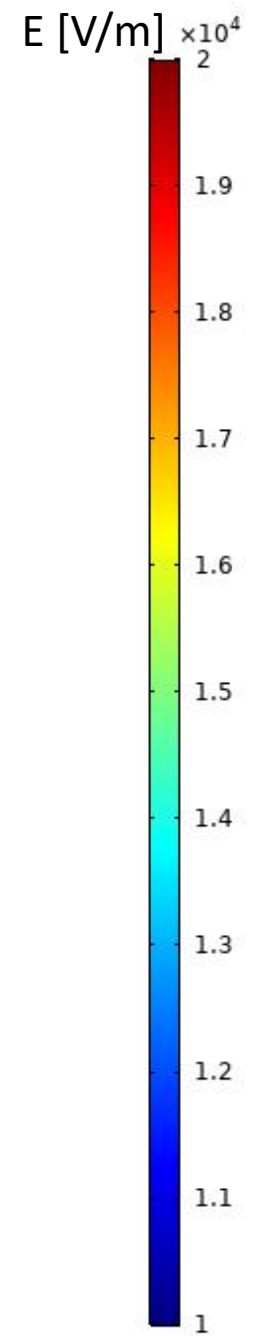


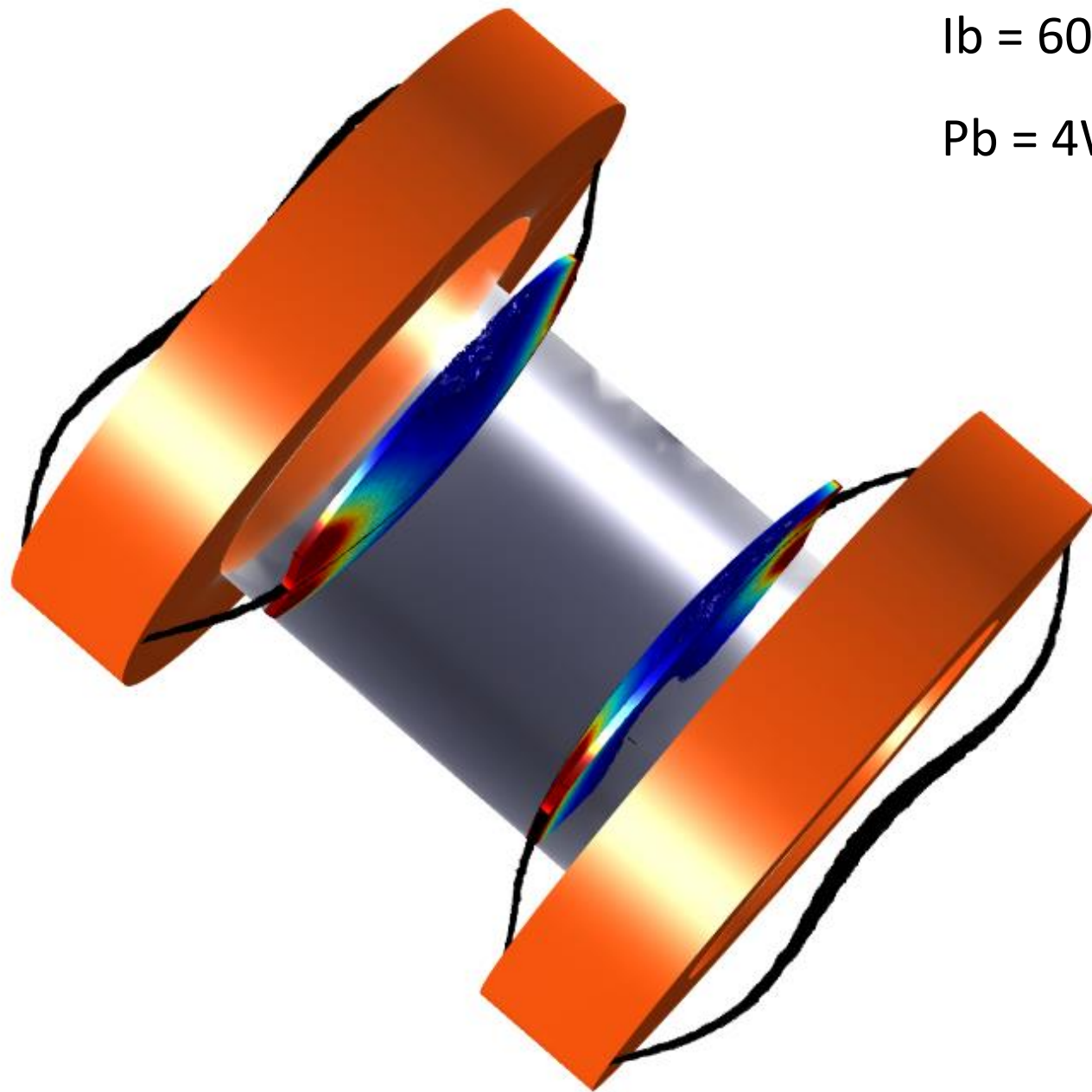




$I_b = 700\text{Az}$

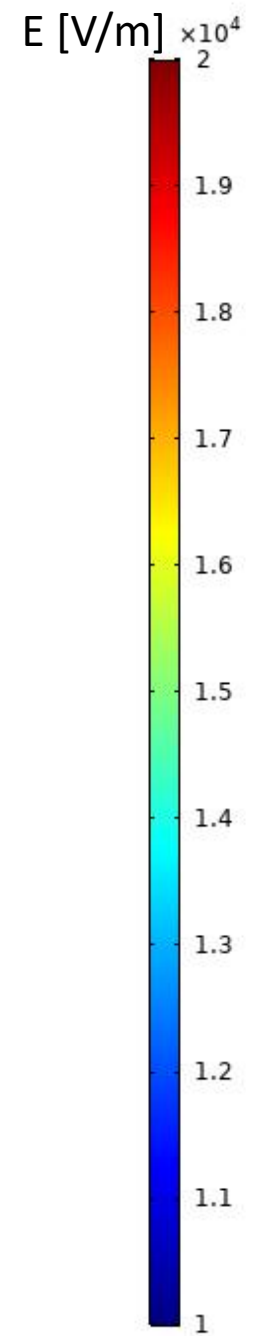
$P_b = 4\text{W}$

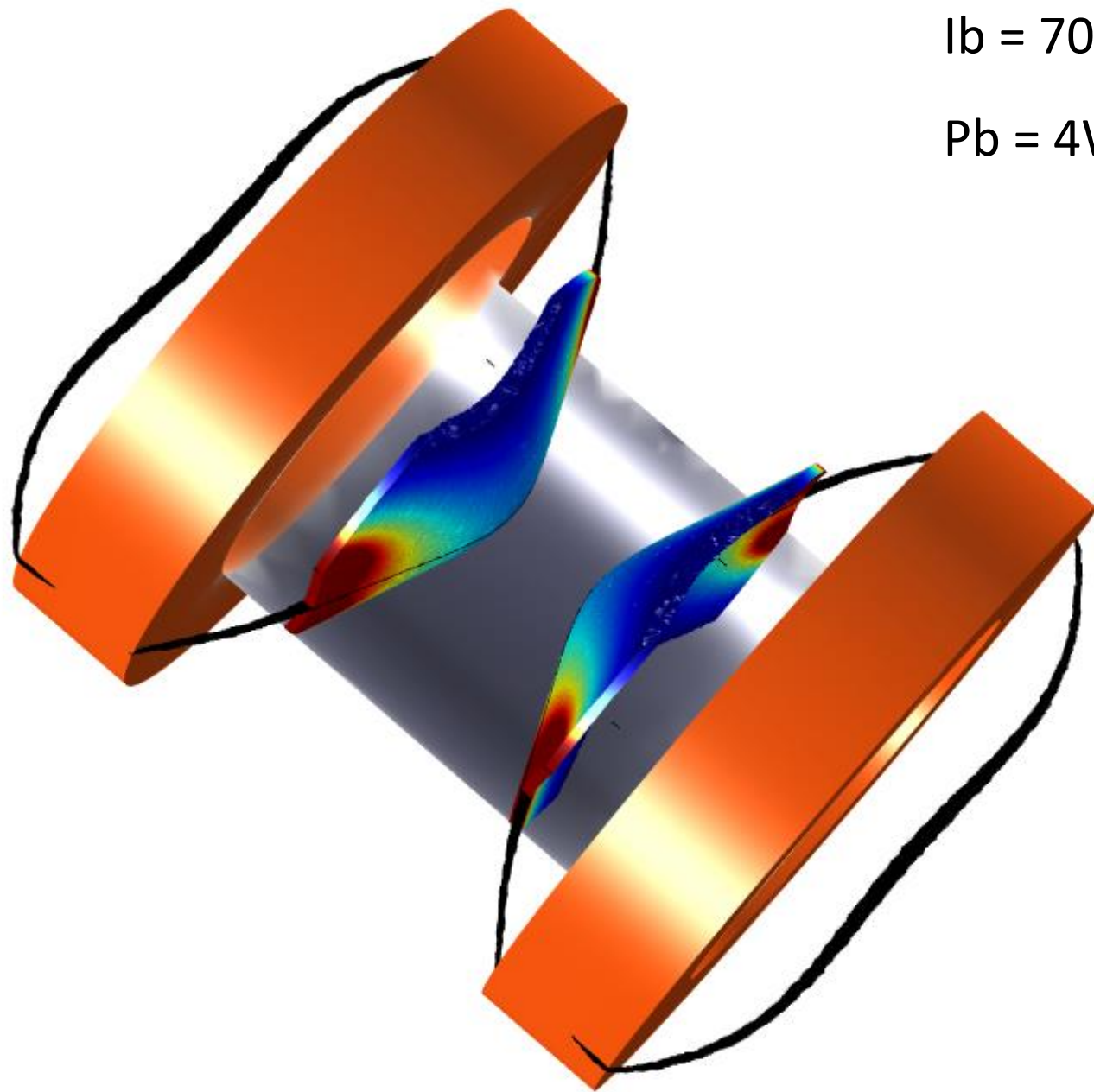




$I_b = 600\text{Az}$

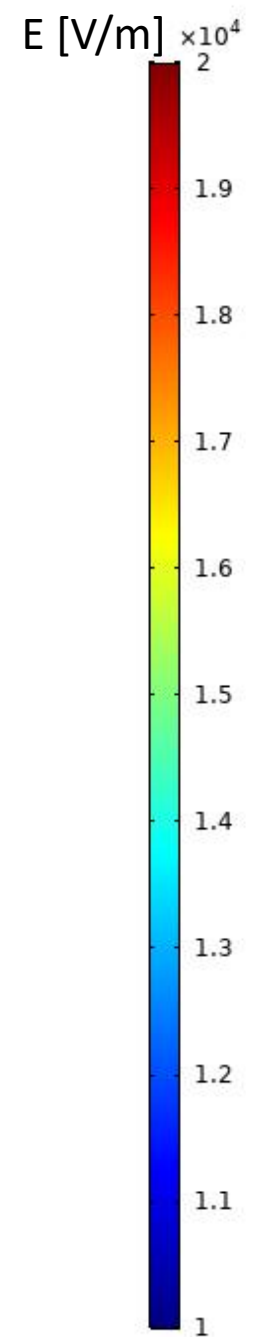
$P_b = 4\text{W}$

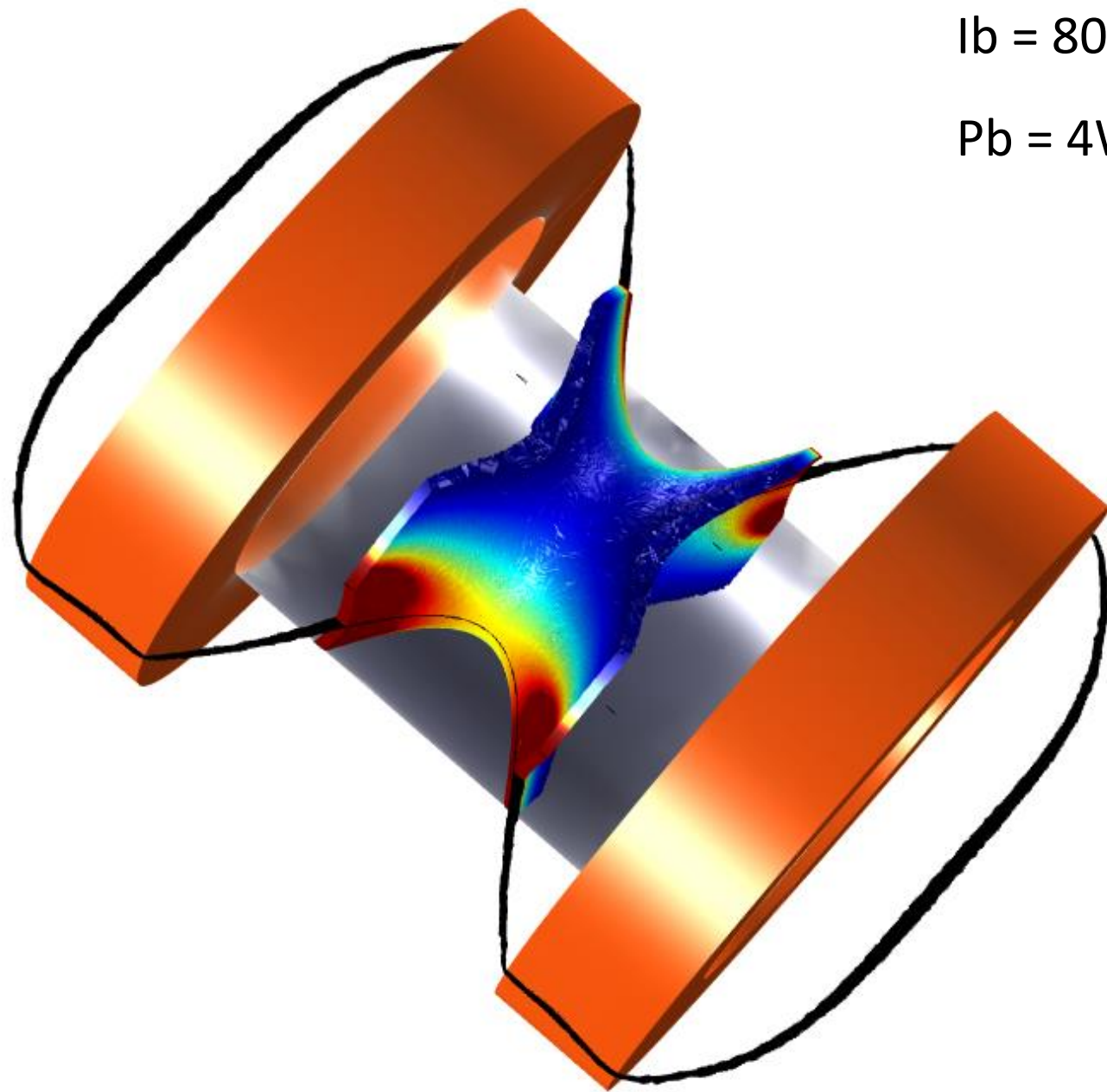




$I_b = 700A_z$

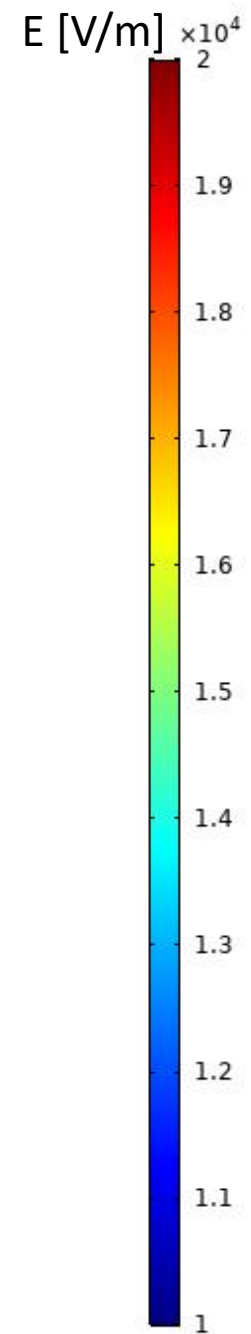
$P_b = 4W$

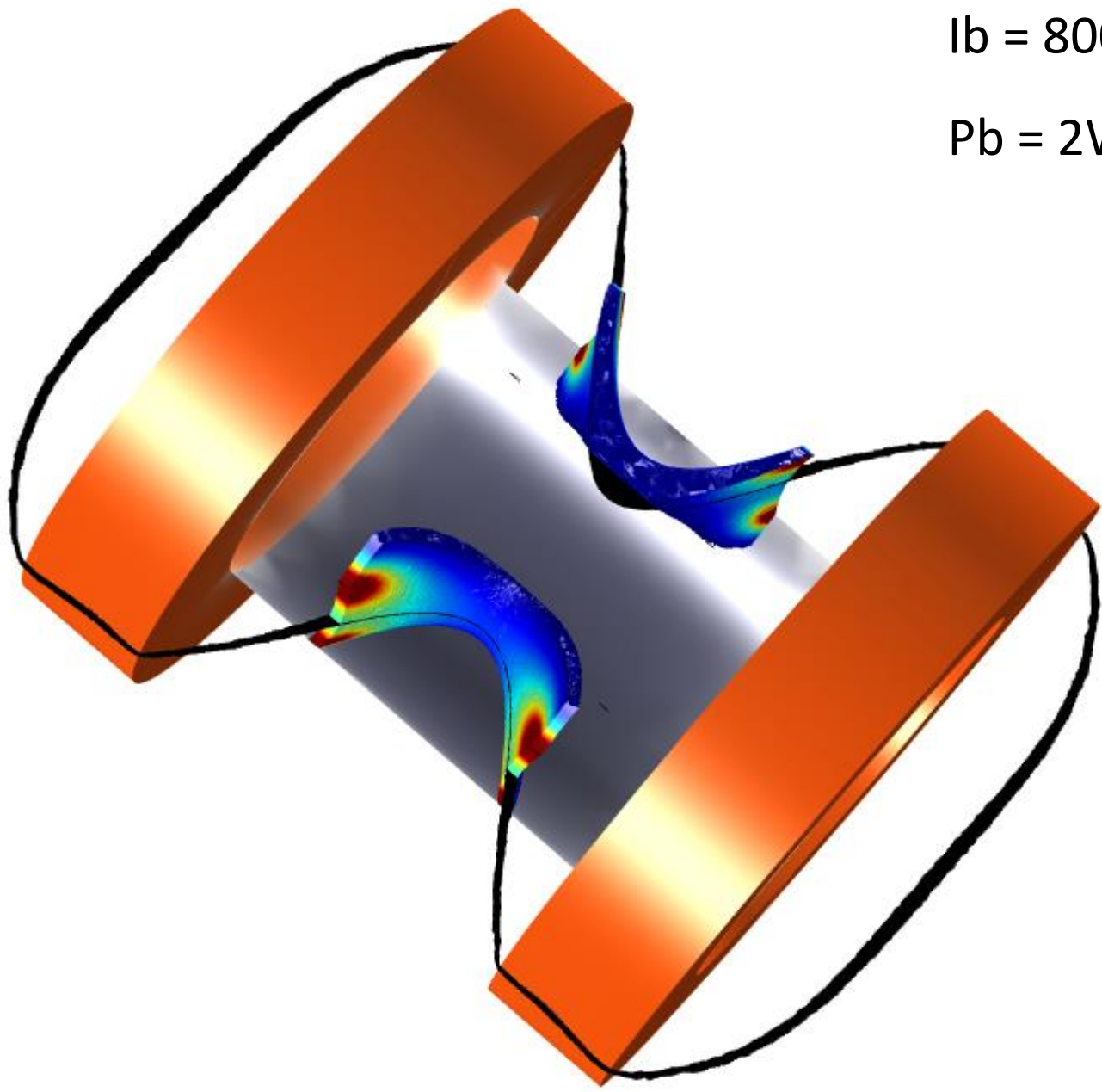




$I_b = 800\text{Az}$

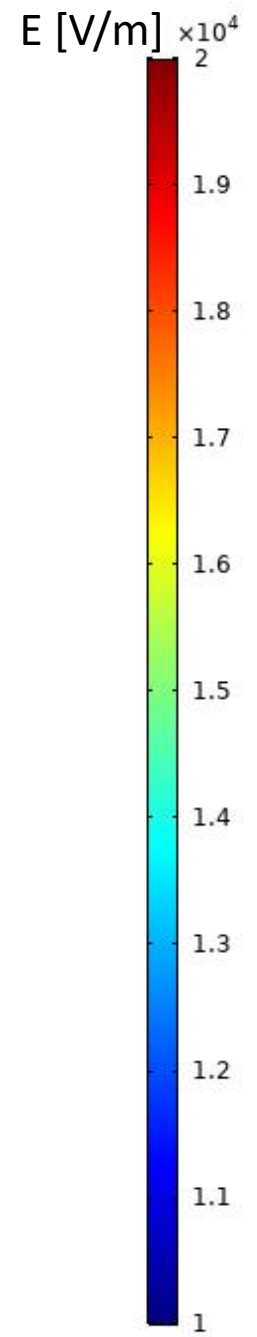
$P_b = 4\text{W}$

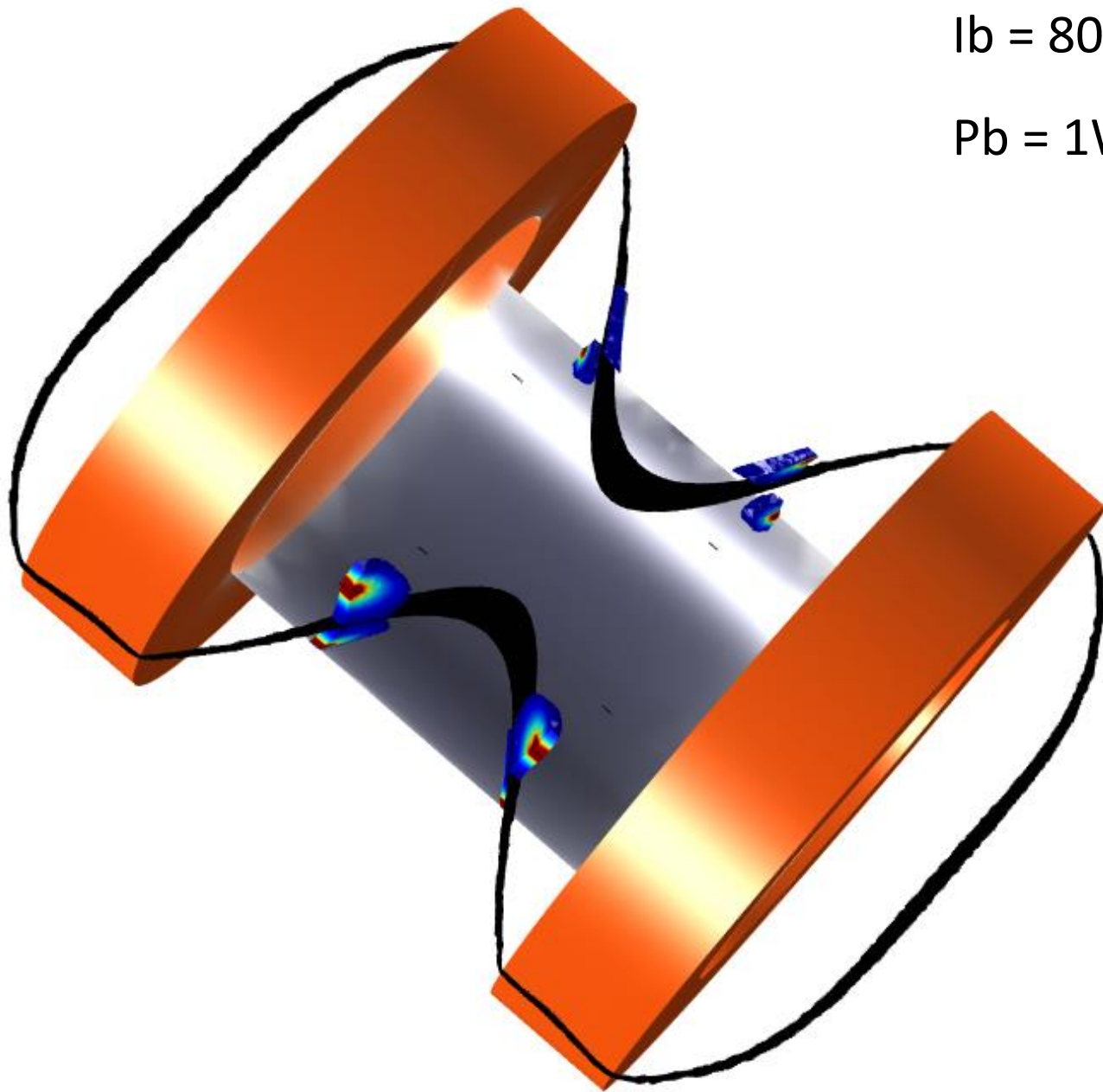




$I_b = 800\text{Az}$

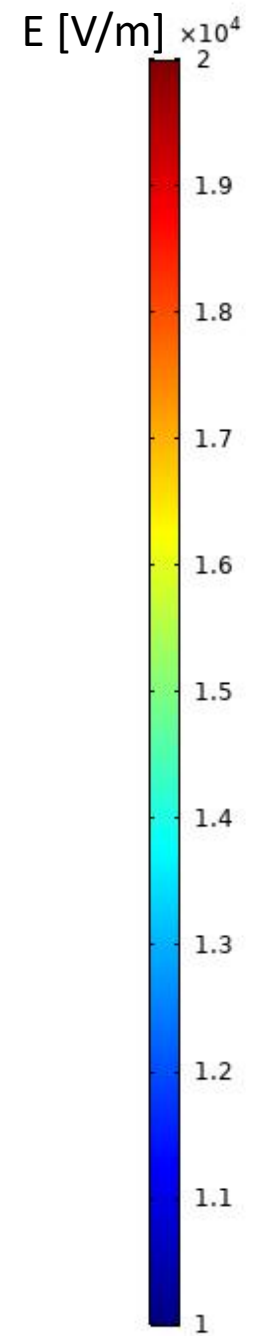
$P_b = 2\text{W}$

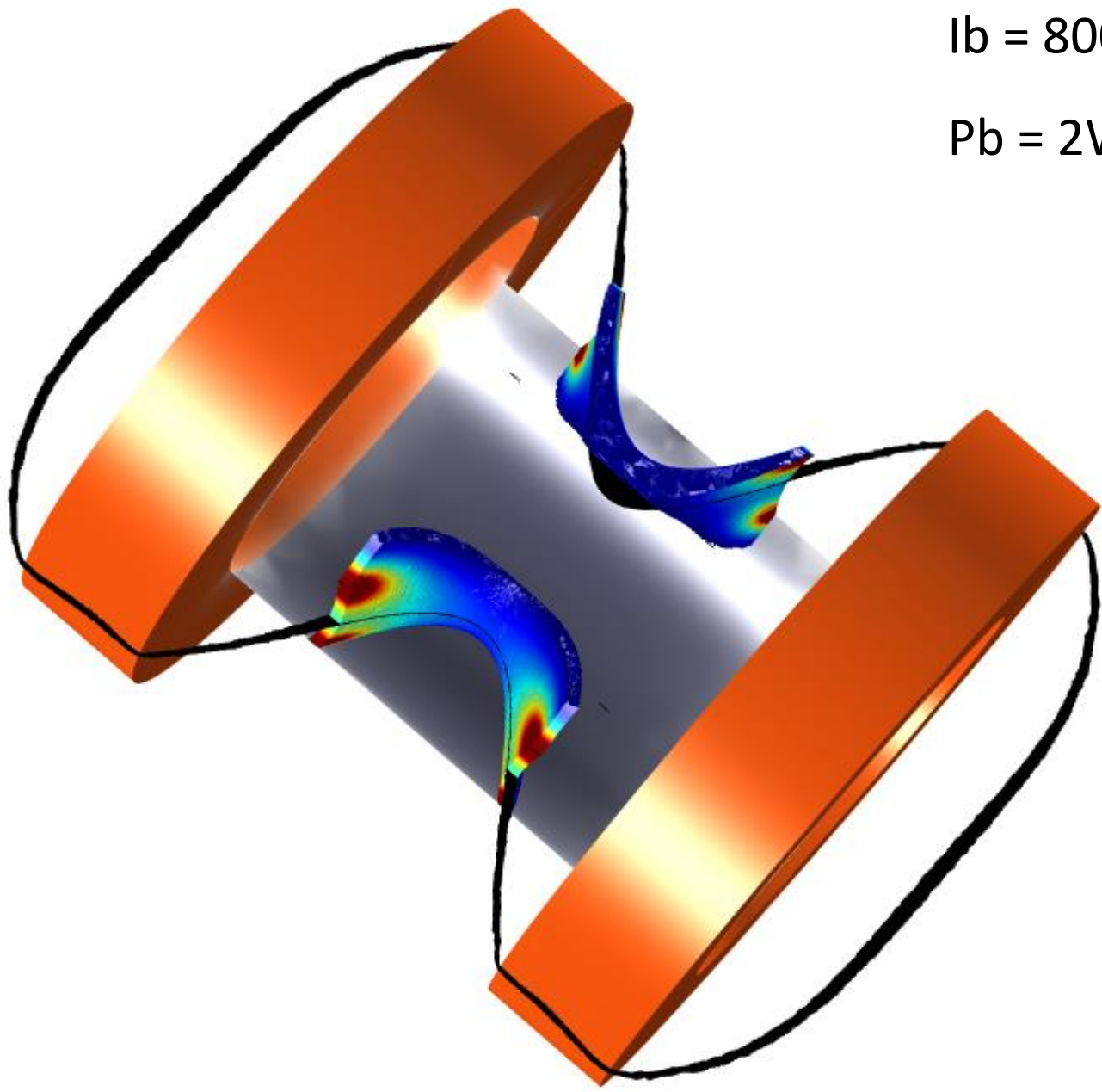




$I_b = 800\text{Az}$

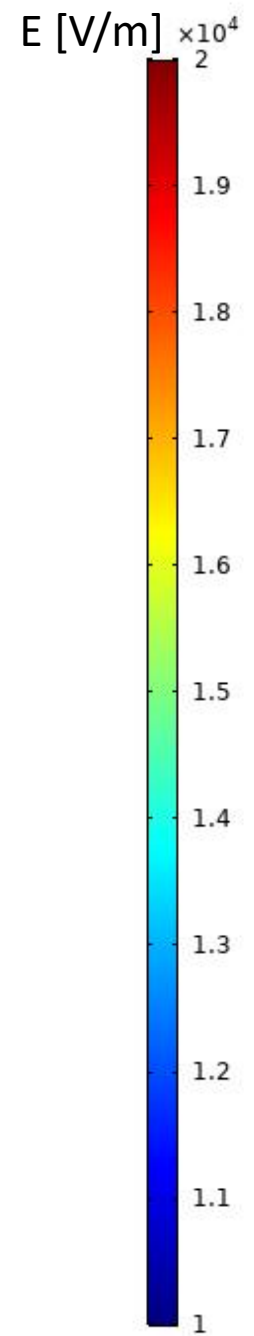
$P_b = 1\text{W}$

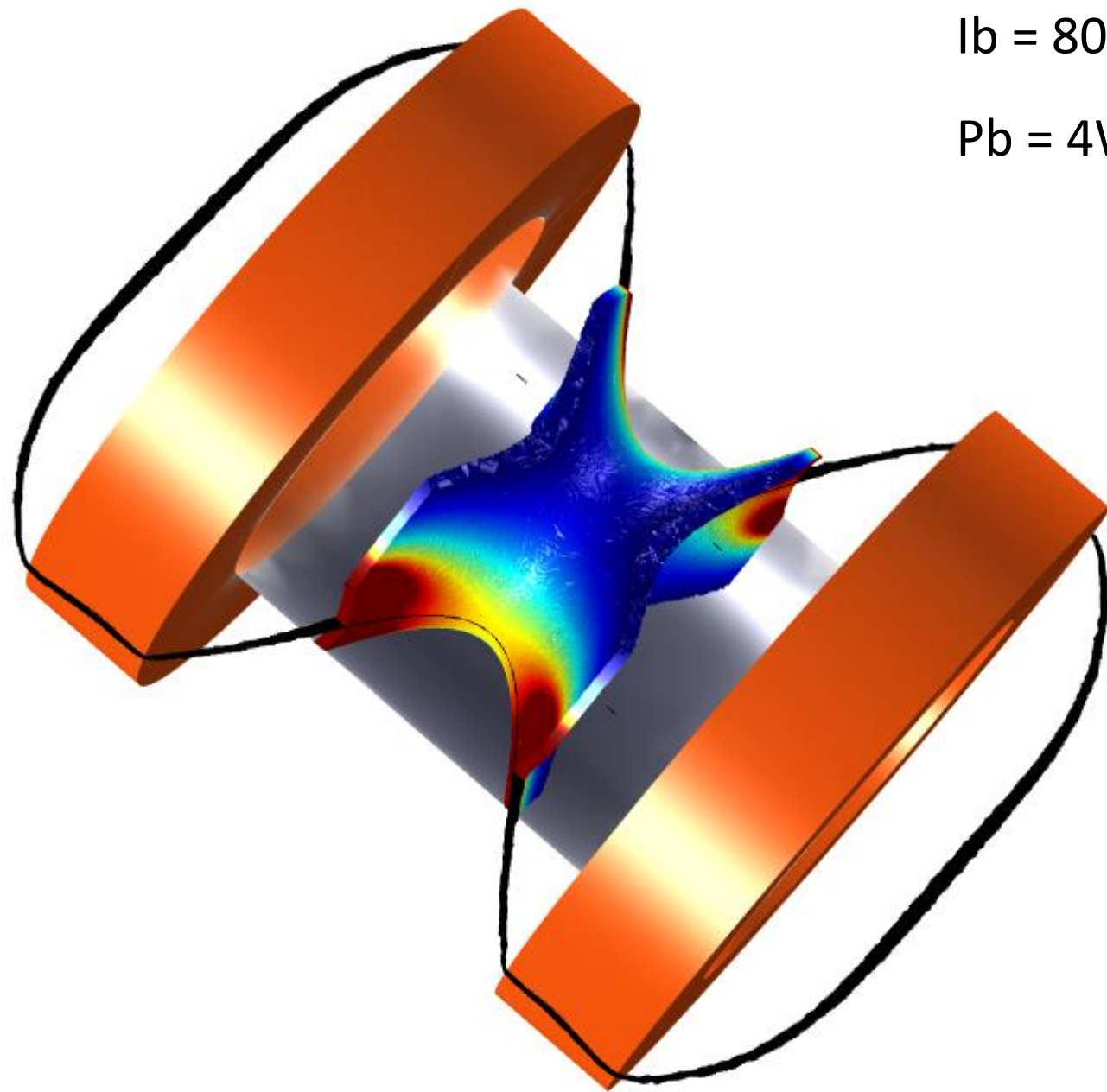




$I_b = 800\text{Az}$

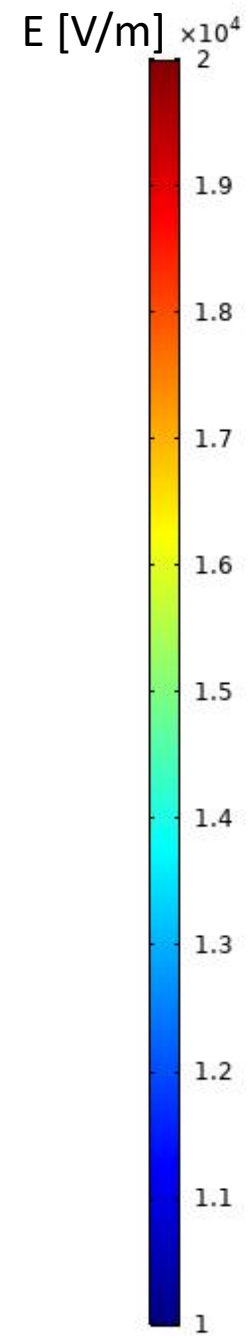
$P_b = 2\text{W}$



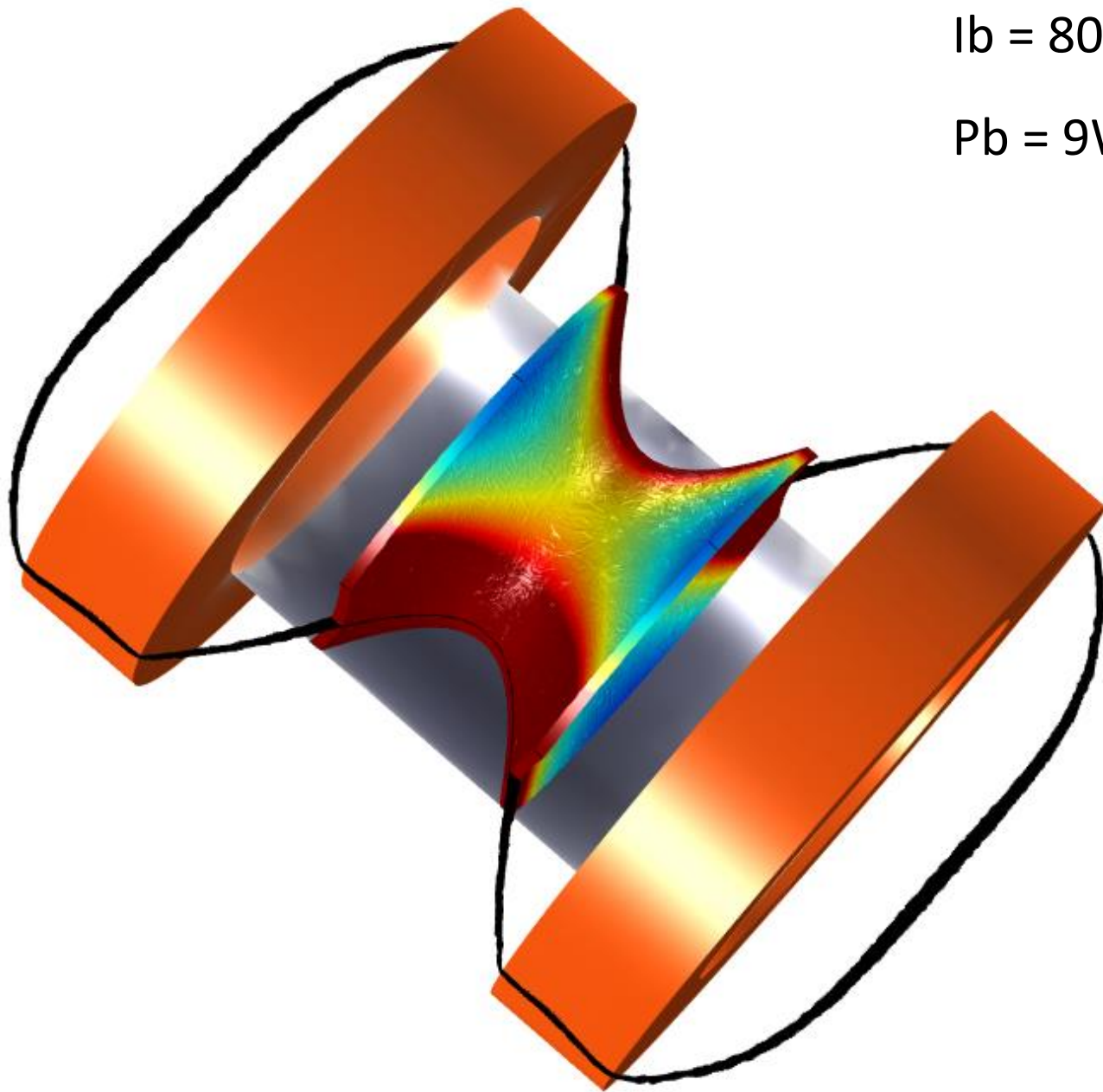


$I_b = 800\text{Az}$

$P_b = 4\text{W}$

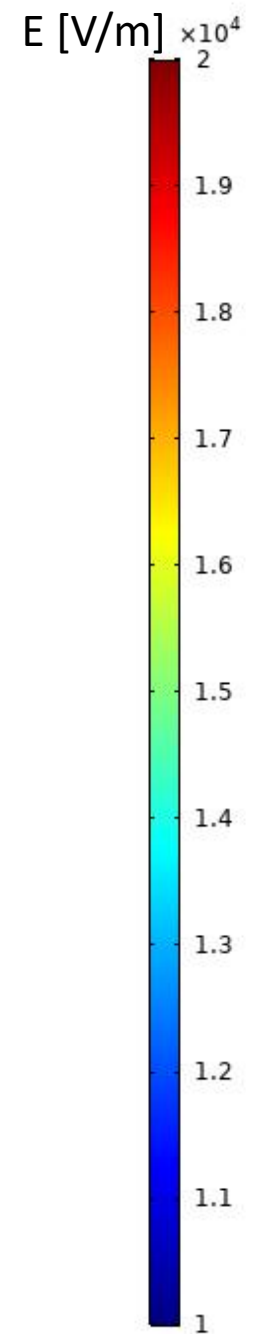




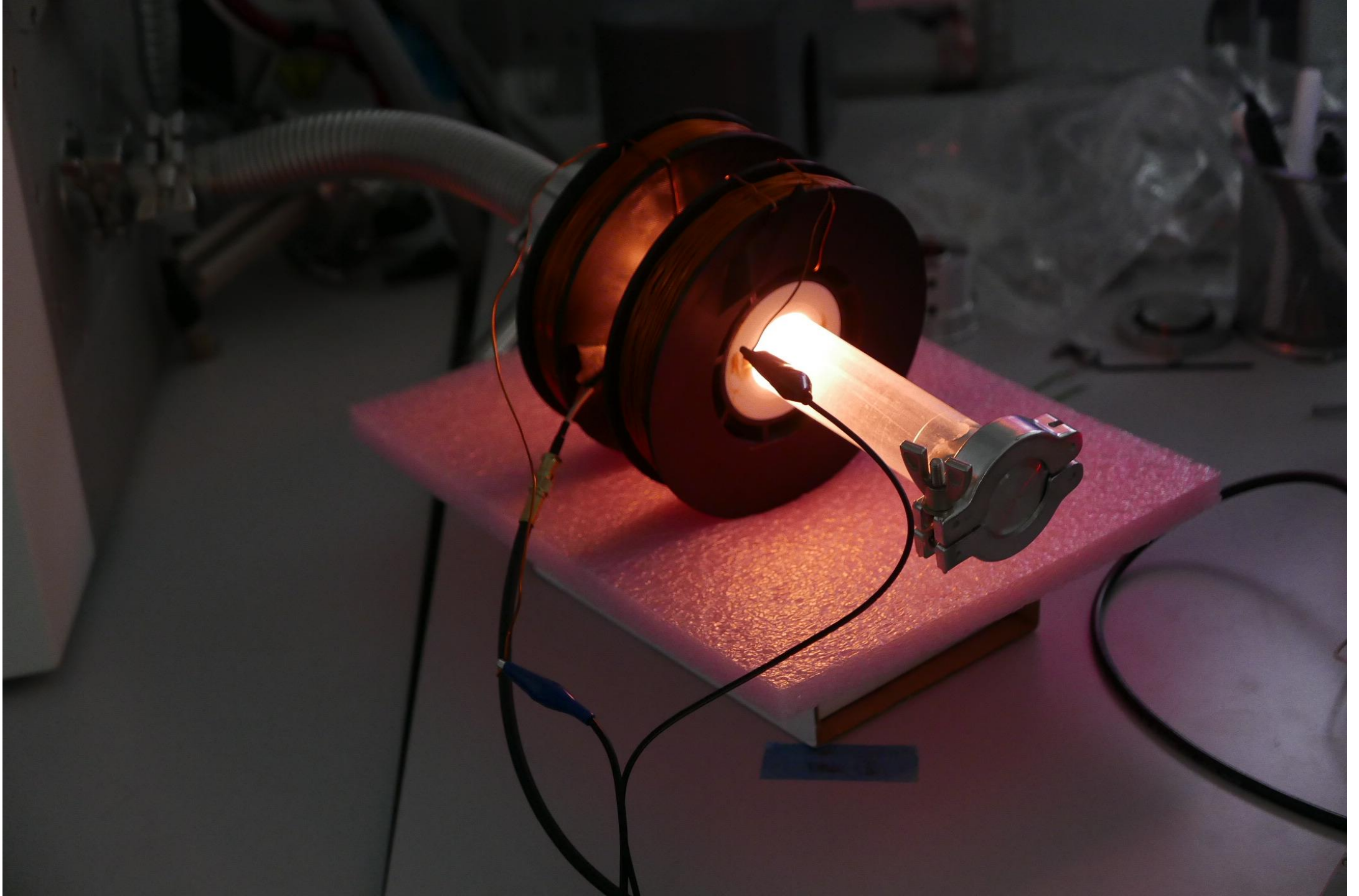


$I_b = 800\text{Az}$

$P_b = 9\text{W}$



# Ukázka experimentu





Děkuji za pozornost