

Practice Course in Plasma



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Thursday 9:10-12:00

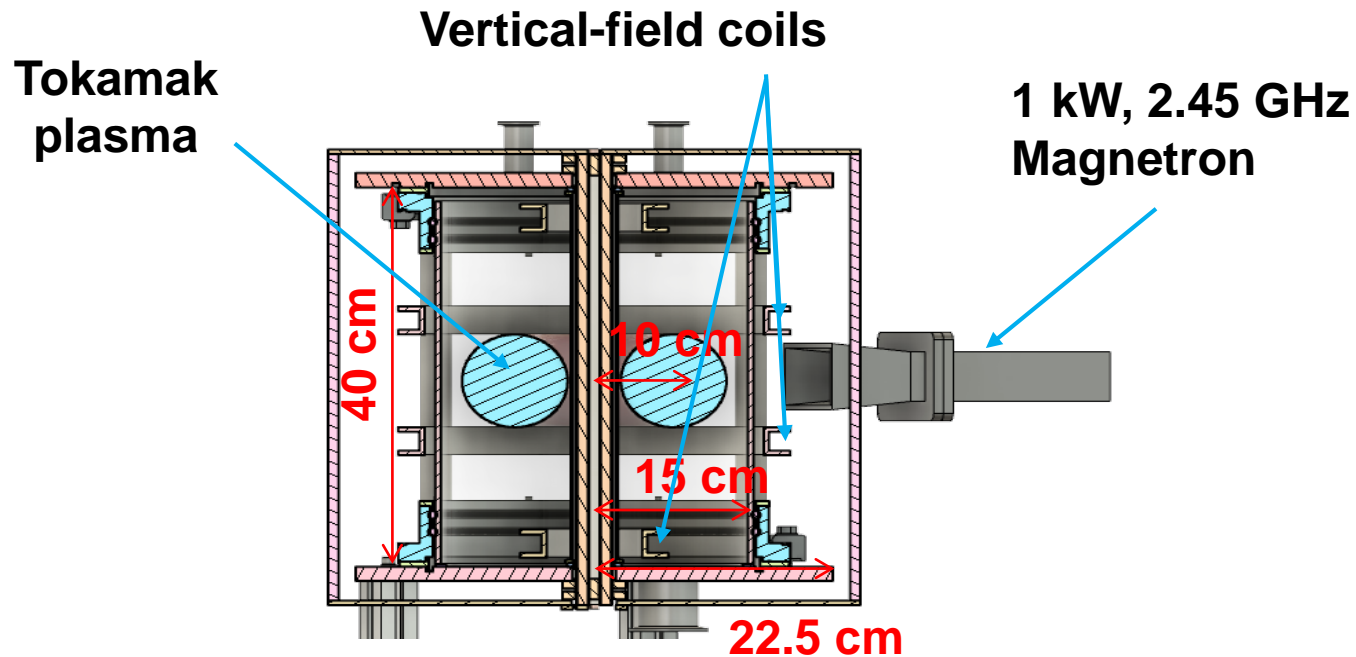
Material: <http://capst.ncku.edu.tw/PGS/index.php/teaching/>

Lecture 9

The prospective system design



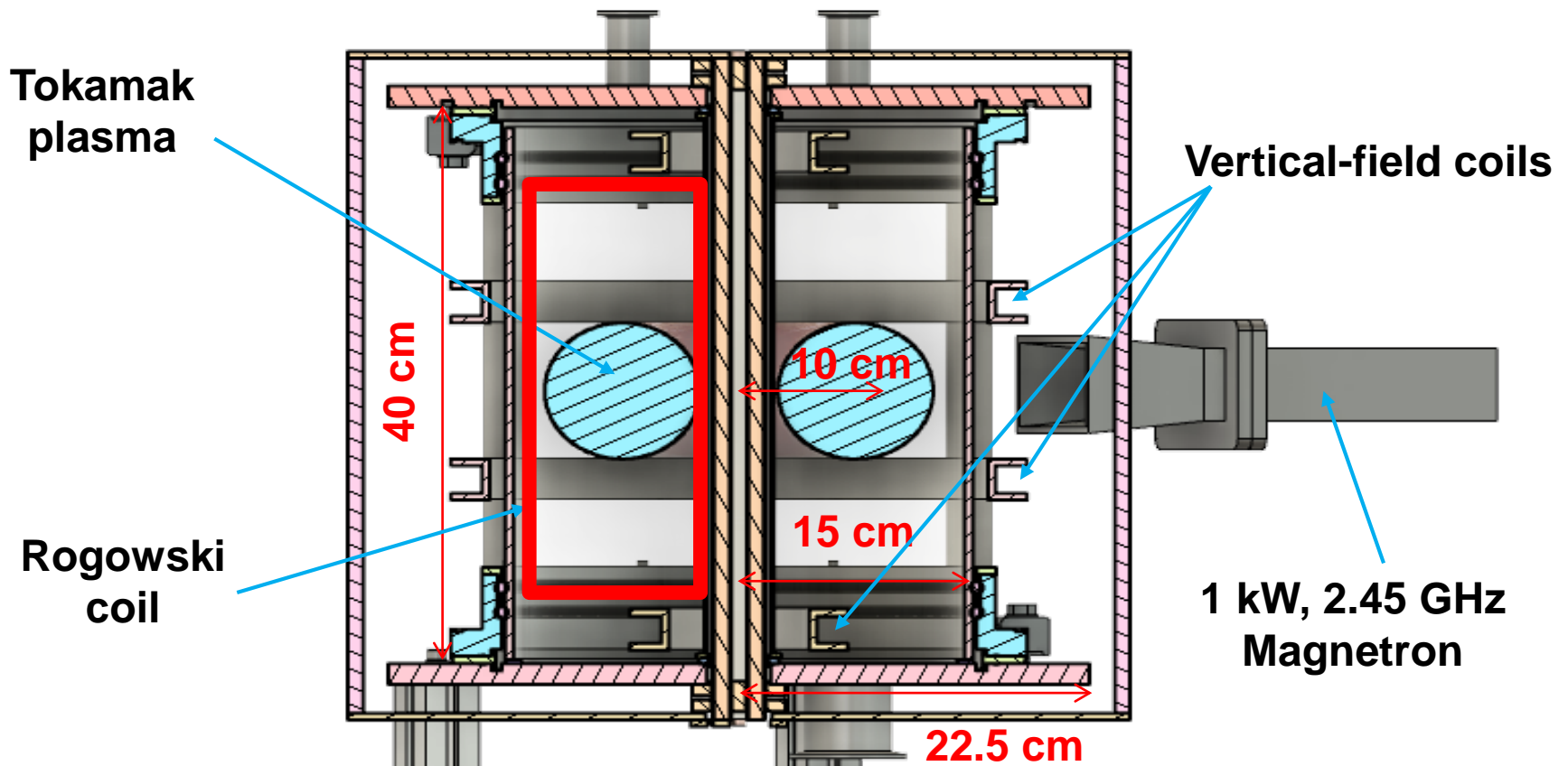
- (1) Vertical field coil (VF coil): $B_v=12$ G w/ curvature of 5 cm.
- (2) Pulse forming network for driving VF coil: ? kA.
- (3) Rogowski coil for measuring plasma current: $I_p = 2$ kA.
- (4) Triple probe for measuring Plasma characteristics: $T_e \sim 1$ eV, $n_e \sim 10^{19} \text{ m}^{-3}$.



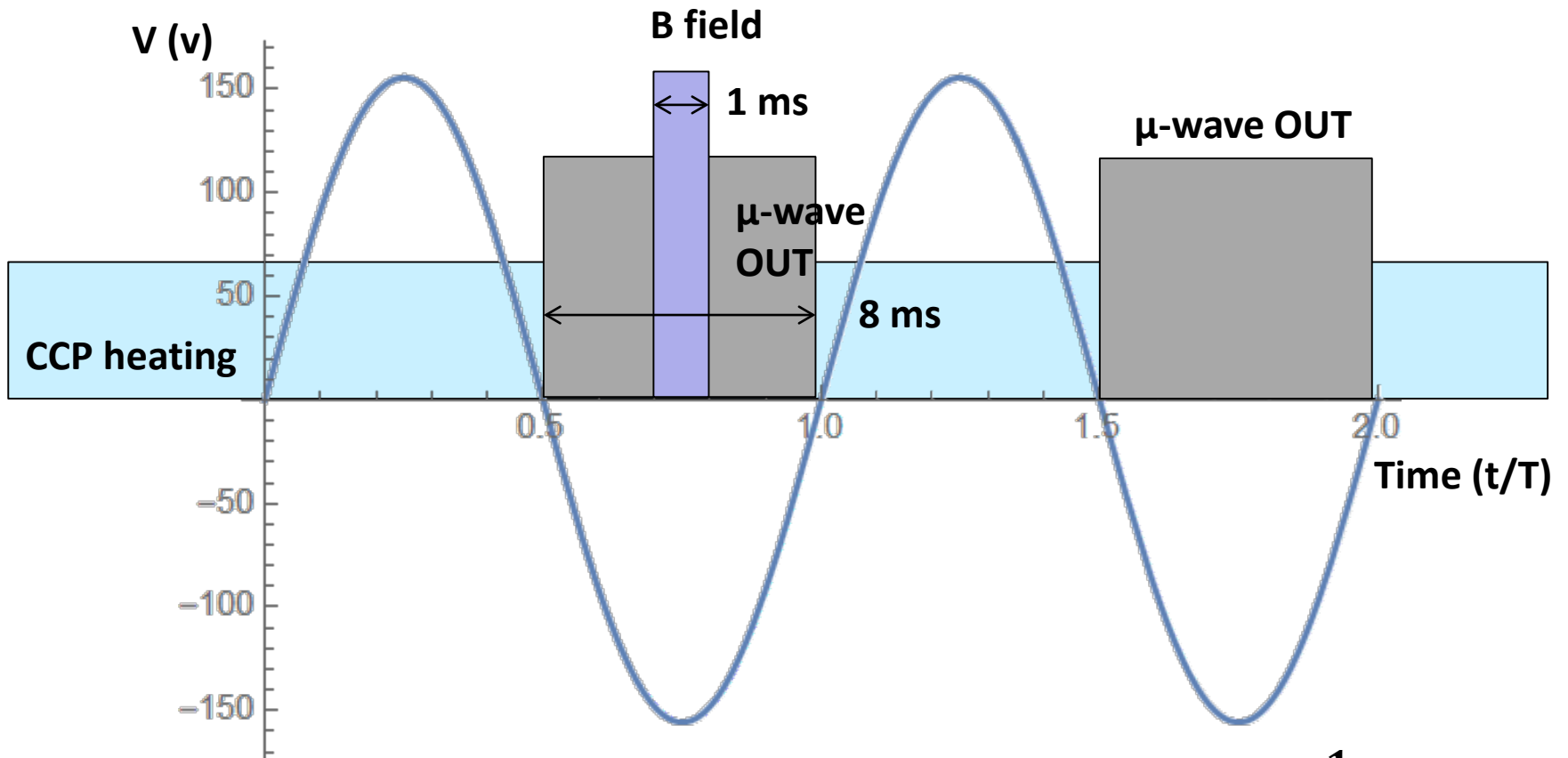
The Rogowski coil needs to wrap around the plasma



(1) Rogowski coil for measuring plasma current: $I_p = 2$ kA.



Time sequence



$$T = \frac{1}{60} = 16.7 \text{ ms}$$

Class schedule



Week	Progress Description
1	2/25 簡介、分組、課程執行介紹
2	3/4 慣性控制核融合
3	3/11 磁場控制核融合
4	3/18 真空系統
5	3/25 電漿源
6	4/ 1 校慶(放假)
7	4/ 8 電漿加熱技術
8	4/ 15 脈衝功率系統
9	4/ 22 電漿量測

Week	Progress Description
10	4/ 29 小組討論
11	5/ 6 各組口頭報告設計
12	5/ 13 托克馬克各次系統實作
13	5/ 20 托克馬克各次系統實作
14	5/ 27 各組口頭報告進度
15	6/ 3 托克馬克各次系統實作
16	6/10 托克馬克各次系統實作
17	6/17 托克馬克實作
18	6/24 各組口頭報告實驗成果