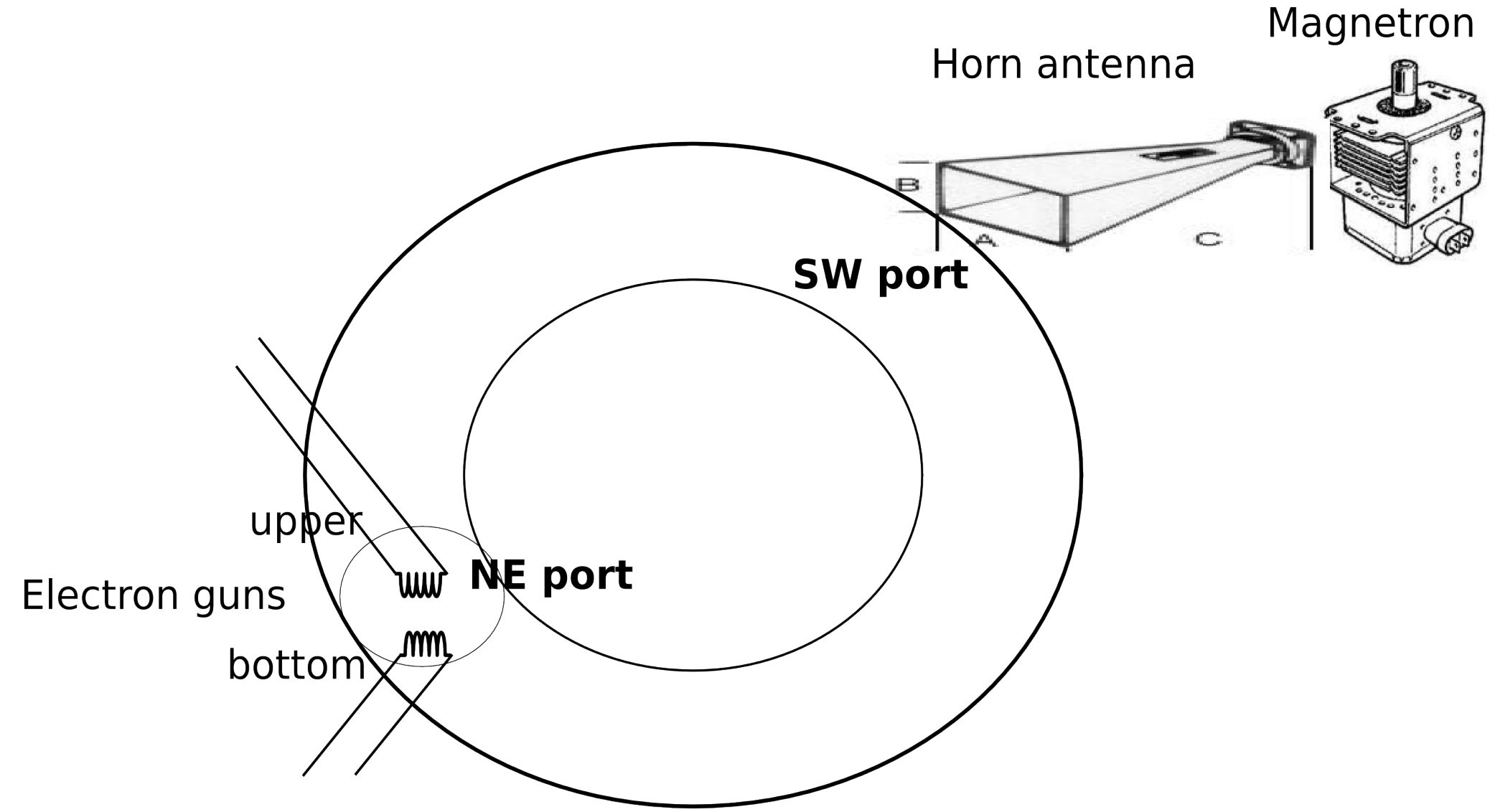
Tokamak GOLEM for IAEA JE

- MW preionization
- RF plasma
- Hall probes feasibility studies in the ICRH presence

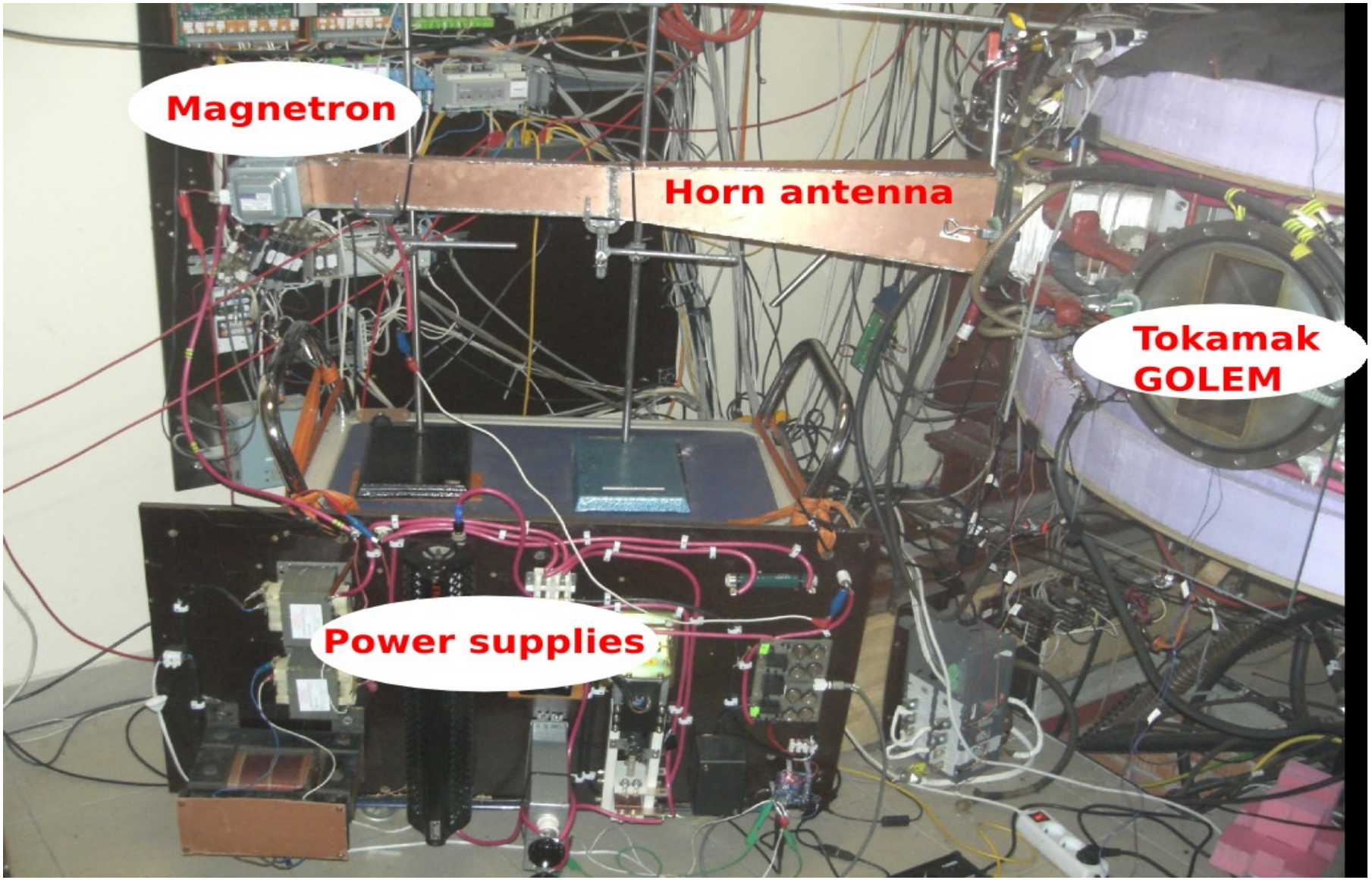
Motivation

- **To <u>continue</u> tests of low-power ECR preionization for plasma formation on GOLEM tokamak.**
- Optimisation of the use of HTS PF coils on GOLEM requires modifications to the discharge scenario.
- To reduce AC losses during current ramp-up in HTS coils, reduction in the current ramp-up speed is needed.

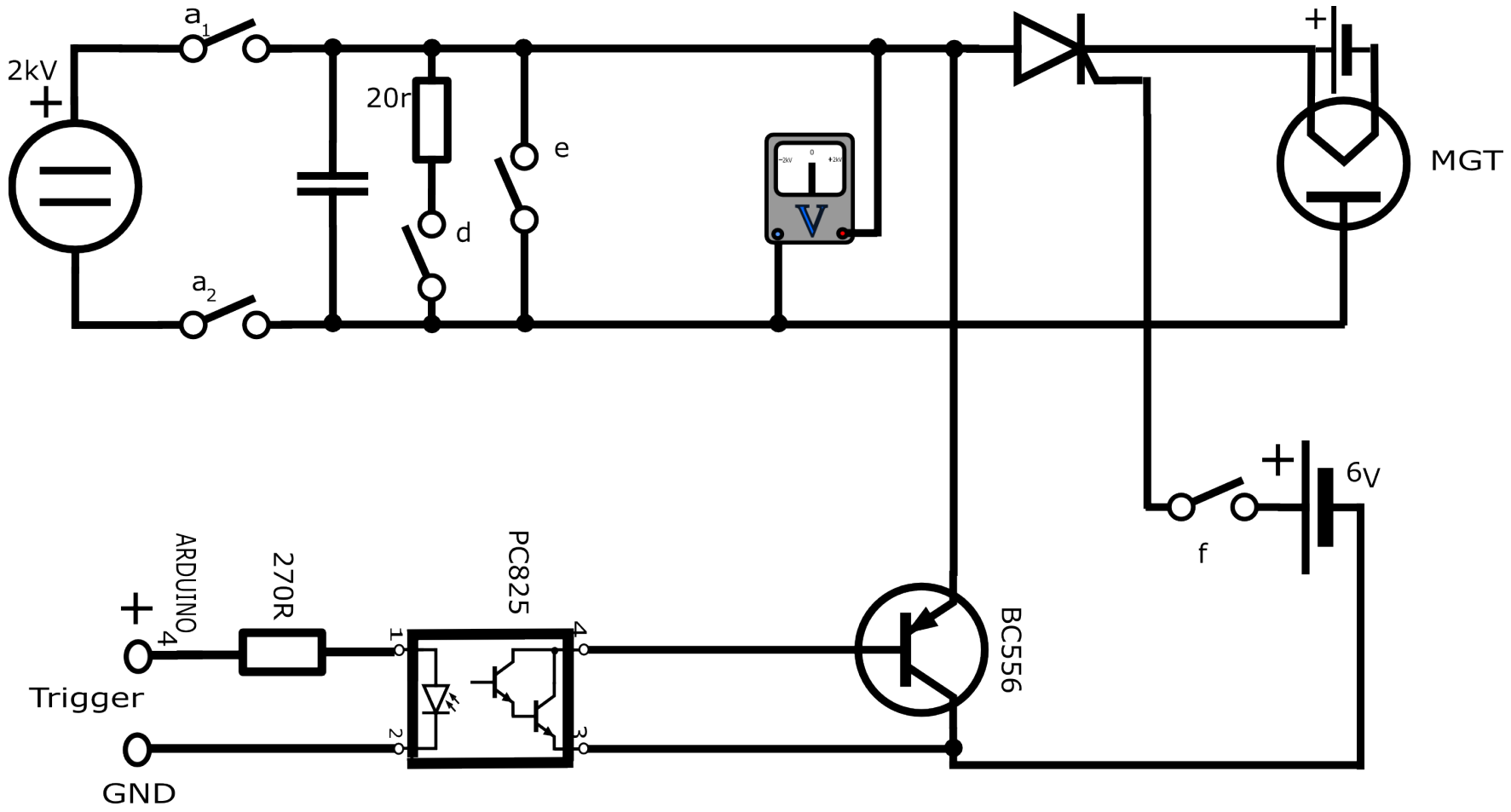
Experimental setup



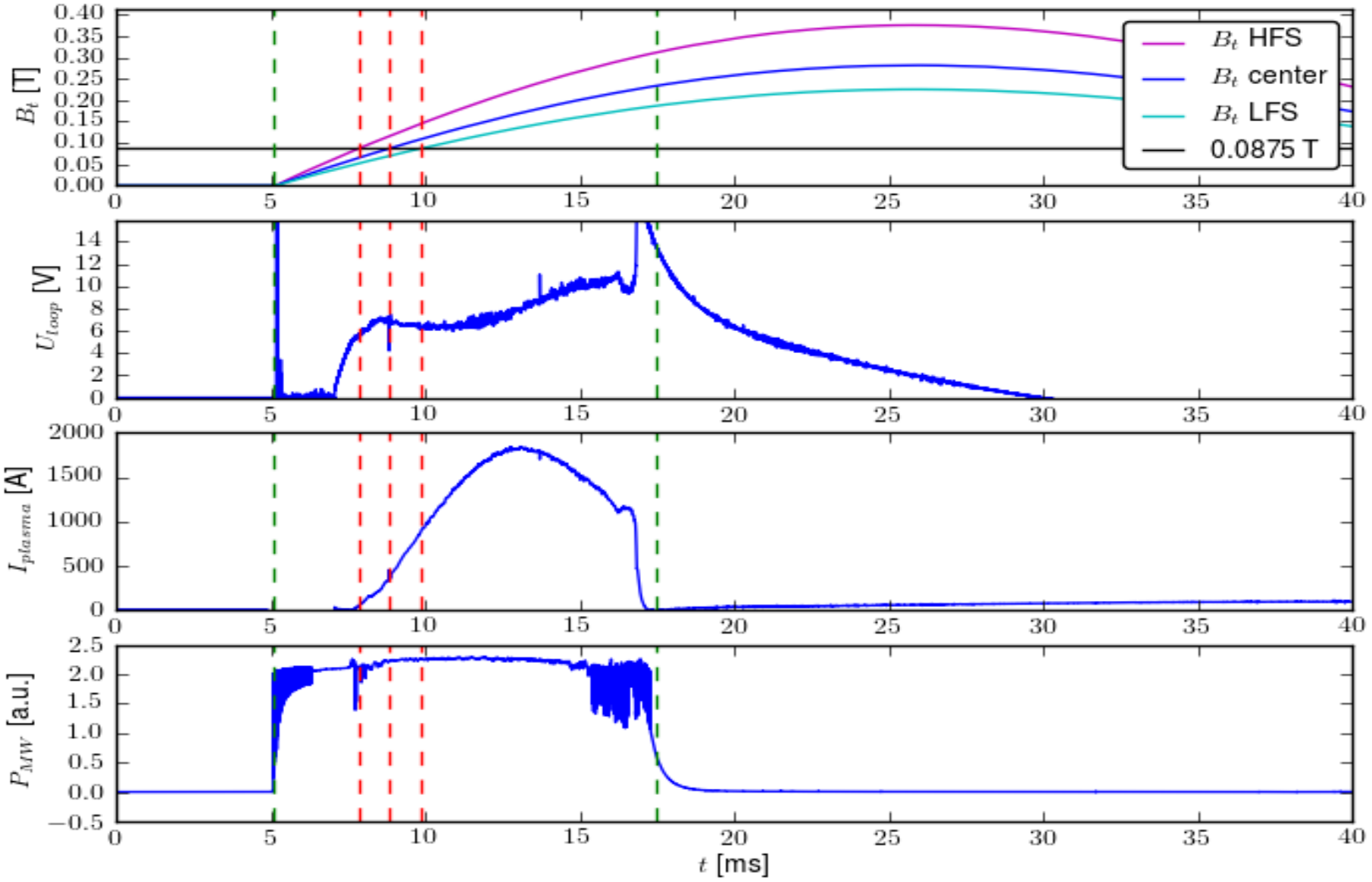
Experimental setup - photo



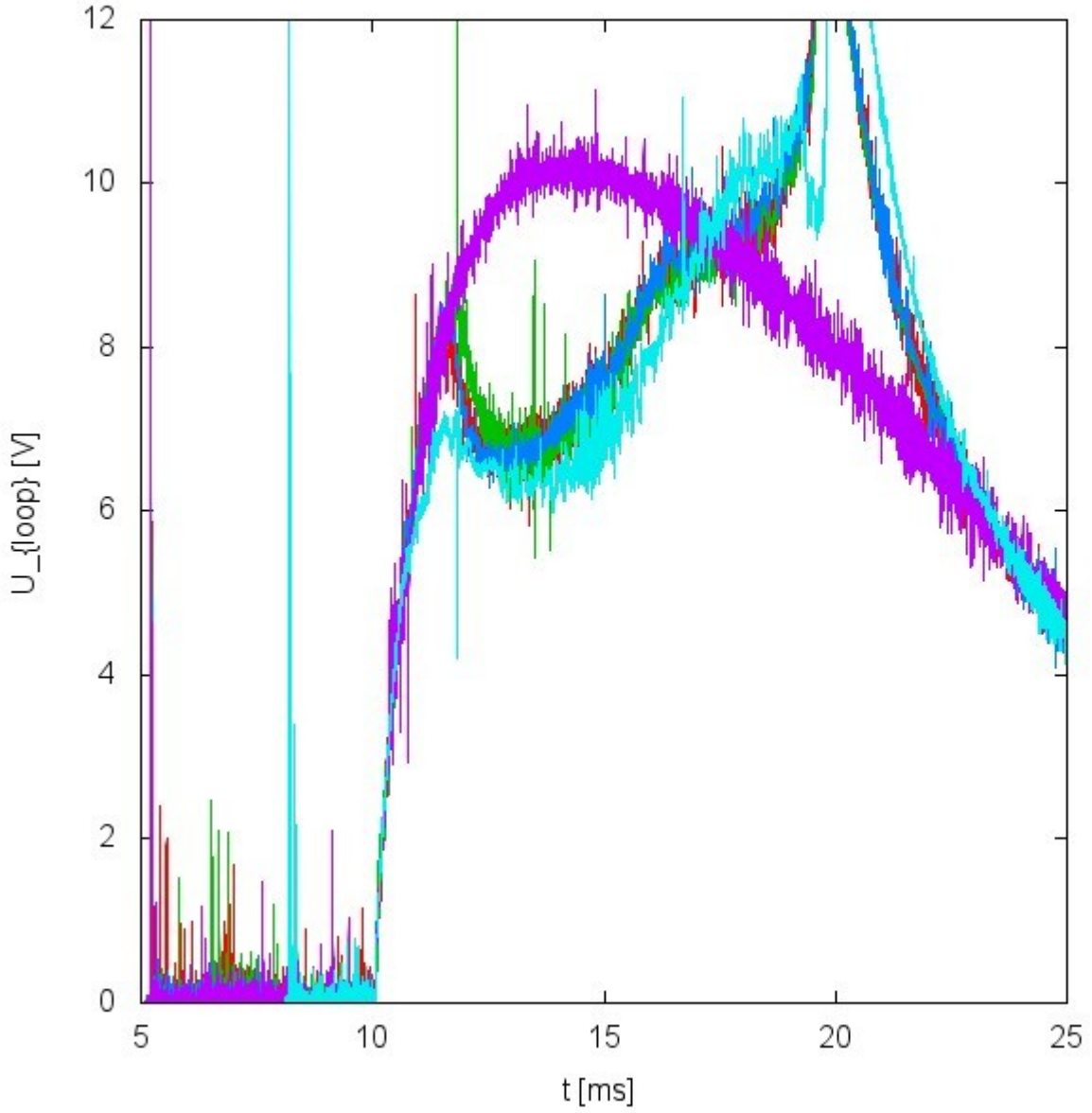
Magnetron operation modification

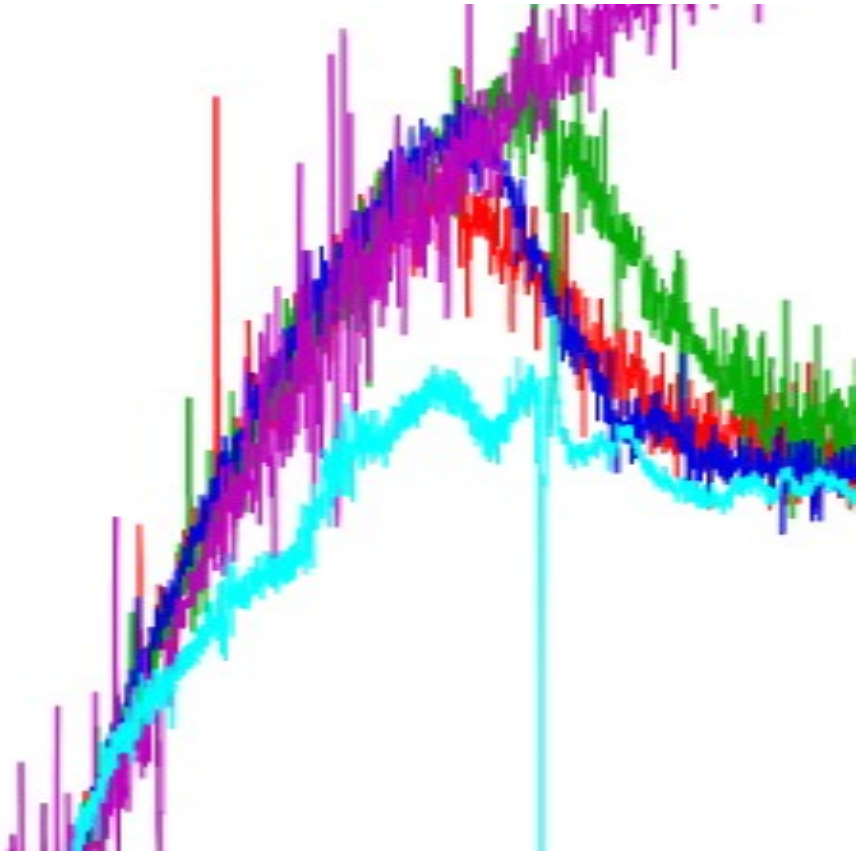


MW preionization

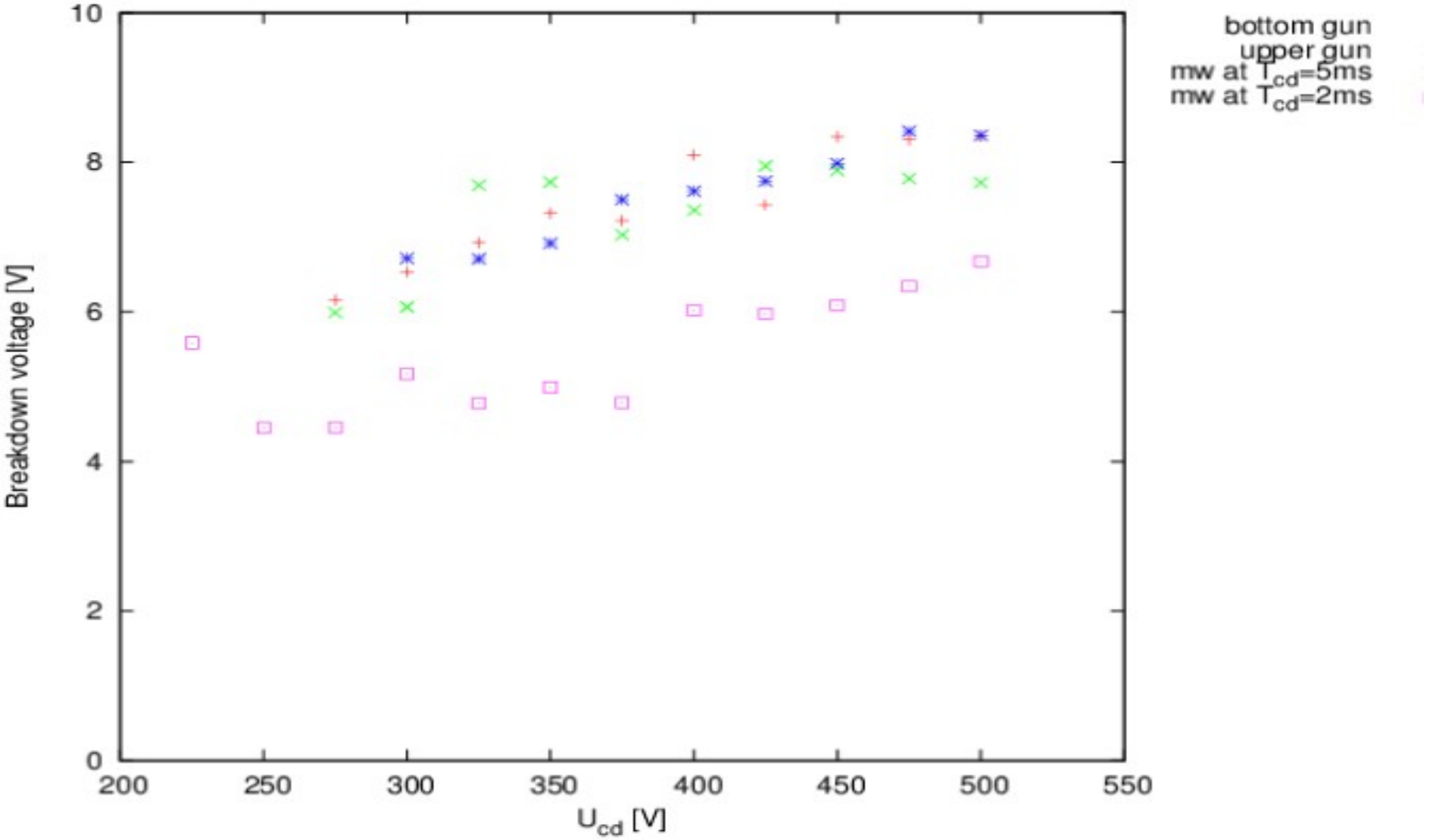


MW preionization II
el. guns upper, bottom vs. mw



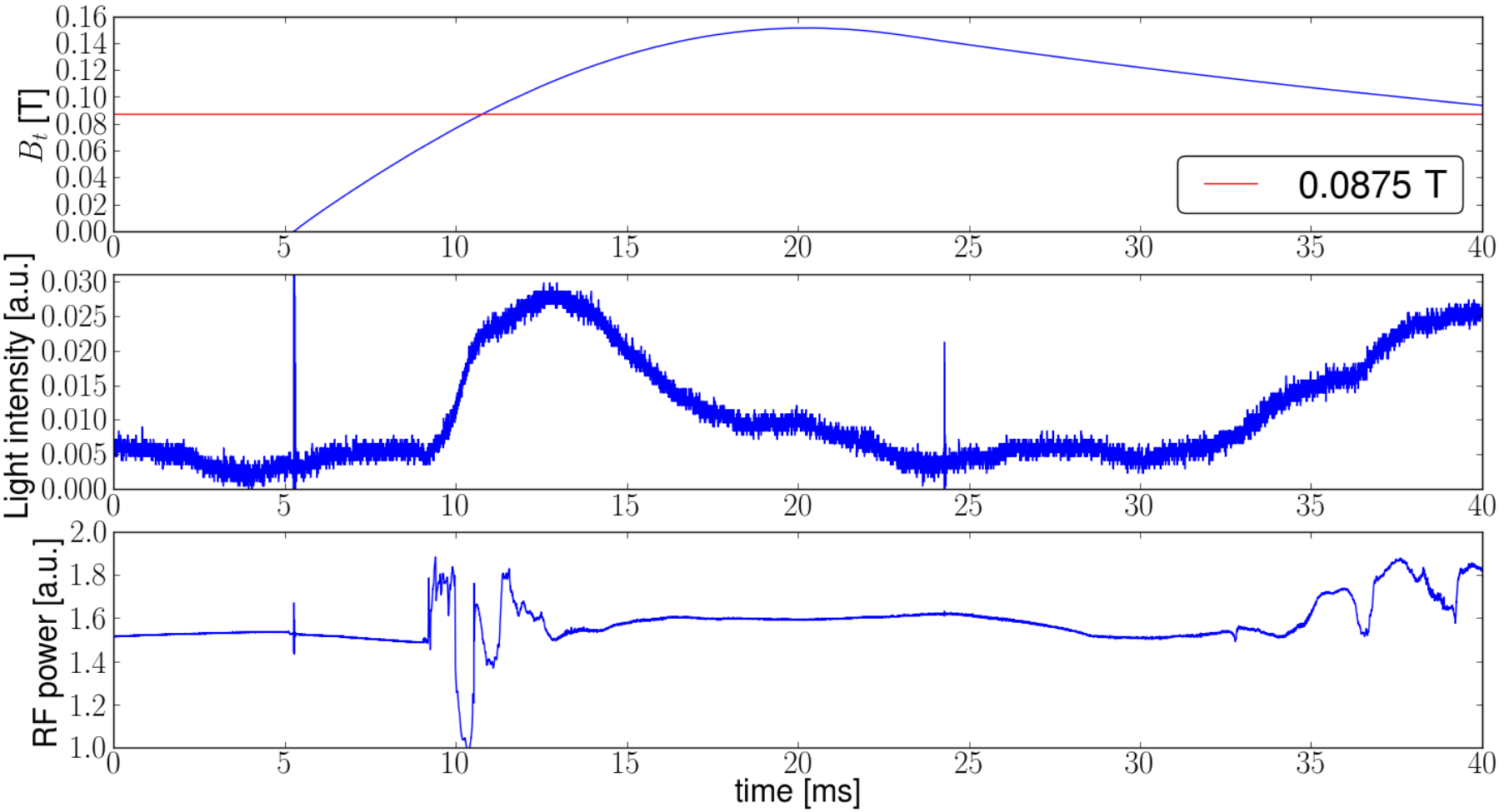


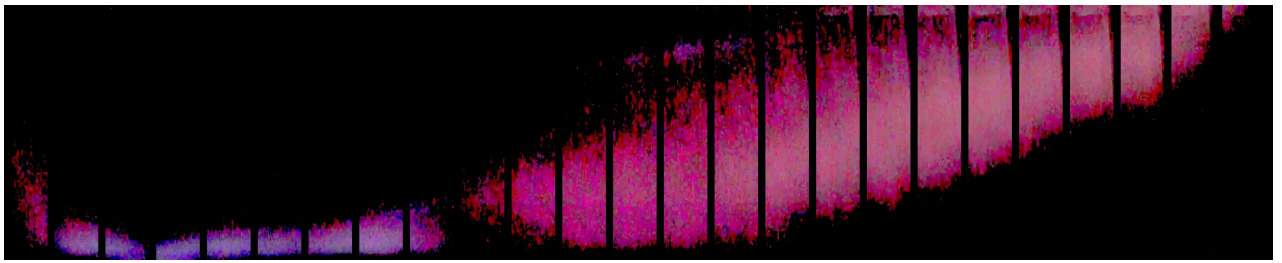
Breakdown studies summary



RF plasma

discharge # 13392





Hall probes in the RF field

- Misha, Tomas & Ivan

Summary

- Reasonable results achieved
- 2V drop in the breakdown with the RF wave.
- ~ 30 ms of RF plasma.
- Hall probes: negative, but clear result.