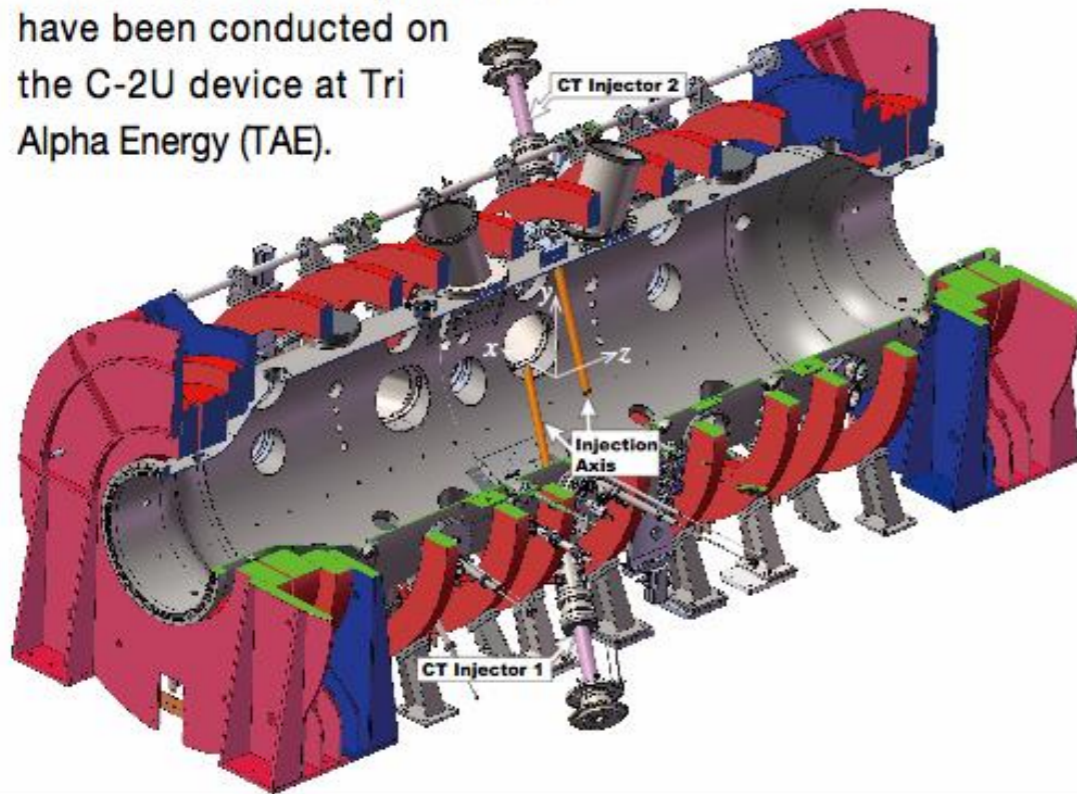


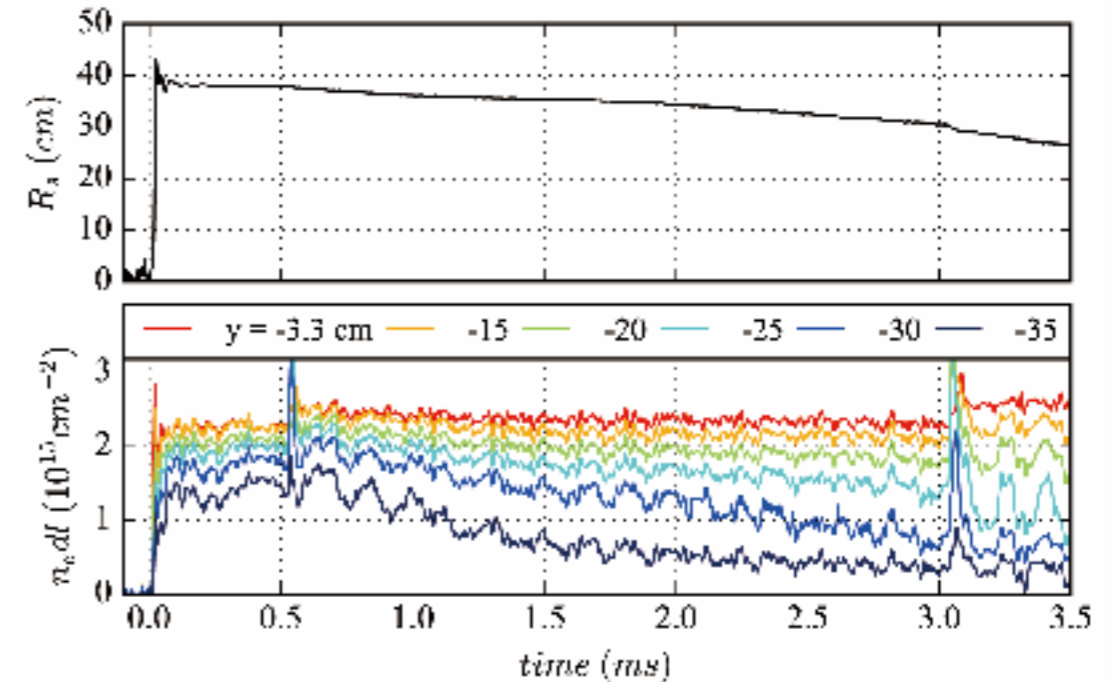
# Compact Toroid Injection Fueling on a Large-sized Field-Reversed Configuration

T. Asai (Nihon University) et al.,

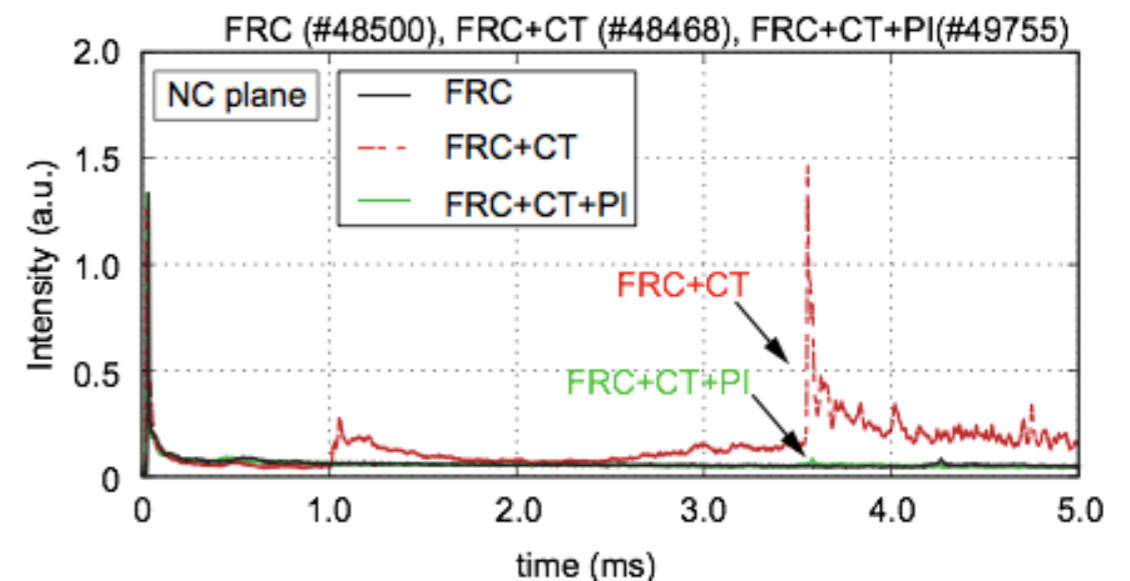
- ▶ The CT injection experiments have been conducted on the C-2U device at Tri Alpha Energy (TAE).



- CT injectors fueling  $0.5 - 1.0 \times 10^{19}$  of particles with 1kHz of repetition frequency has been developed.
- CTs injected perpendicularly to the geometrical axis demonstrated successful fueling with significant density build-up of 20 - 30% of total particle inventory per single CT injection without any serious deleterious effects on the C-2/C-2U FRC.
- $D\alpha$  emission indicates possible pollution by trailing gas. However, it can be reduced drastically by PI technique on the MCPG.



- ▶ Multi-pulsed injection with frequency of 0.5kHz has been performed.
- ▶ Particle inventory is increased by about 15 - 20% via injection of 2 CTs (at 1 ms).



- ▶ The trailing neutral gas is successfully reduced by the PI on the MCPG.