The counterbeam fast-heating can effectively heat the core due to the Weibel instability between the counter hot electron currents. It is demonstrated by the CD double foil target (PRL 2012), followed by the shell target (Y. Mori et al., PRL 2016).

By using LFEX at Osaka, ion heating of the core is demonstrated as a competing scheme of the fast ignition (Y. Kitagawa et al, PRL 2015).

The counter beam heating results lead us to the preparation for the Mini reactor CANDY using high-rep. 4 kJ lasers. This will start in 5 to 10 years.