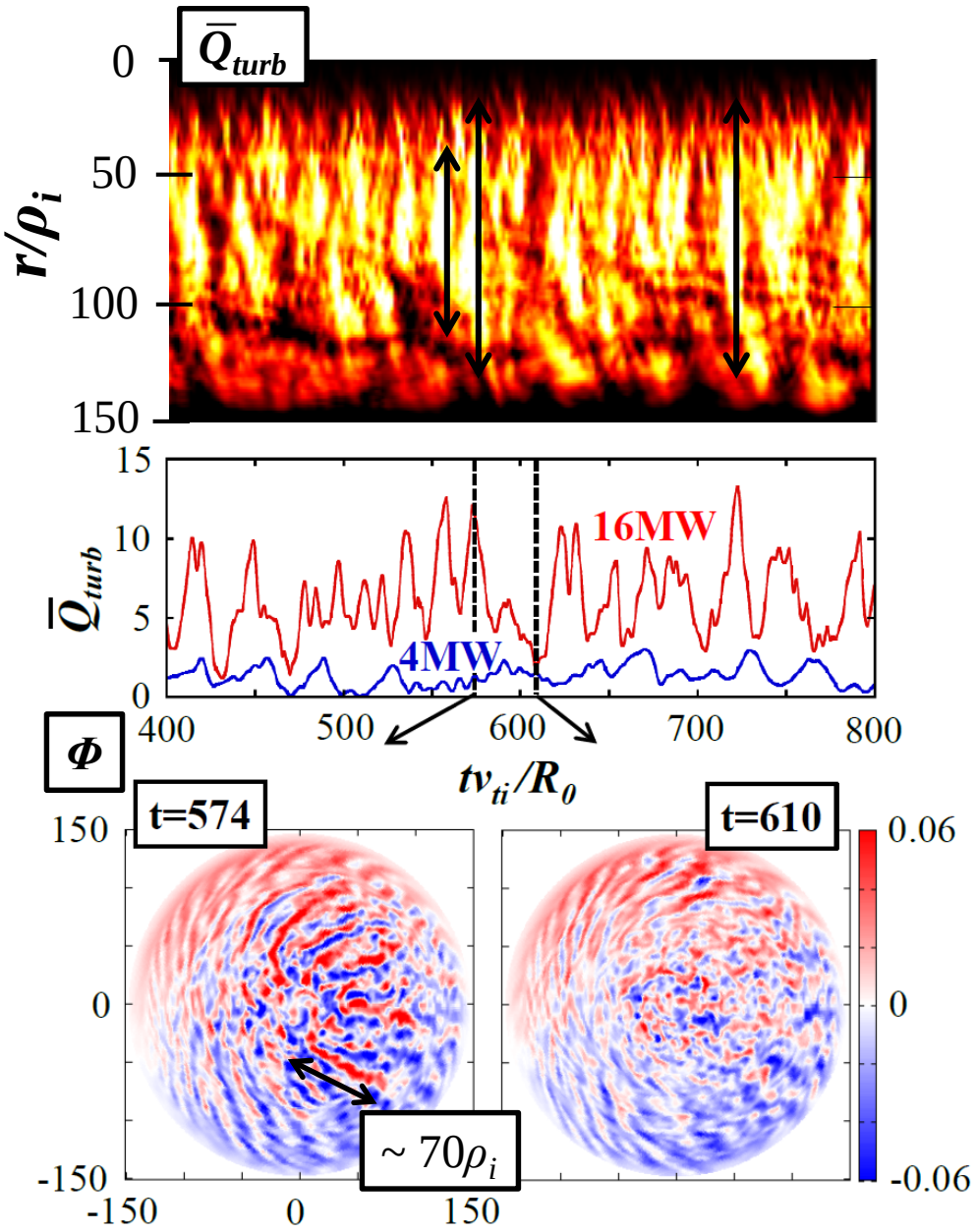
Global profile relaxation coupled with $E \times B$ staircase in toroidal flux-driven ITG turbulence", K. Imadera, *et al*



By means of a newly developed 5D toroidal global gyrokinetic code with heat source/sink and collision, we made the following new findings;

1. Flux-driven turbulent transport is dominated by intermittent bursts resulting from instantaneous formation of radially extended potential structure, whose size ranges from meso($\sim\sqrt{\rho_i L_T}$) to even macro ($\sim L_T$) scale.

2. Ascribed to these events with long correlation lengths, a self-organized resilient profile keeping the exponential function form is established even in the presence of zonal flow.

3. Neoclassical mean flow recovers the symmetry of ballooning structure by cancelling the diamagnetic drift, leading to the enhancement of radially extended structure.