Tsunamis in galaxy clusters: heating of cool cores by acoustic waves

Y. Fujita, T. K. Suzuki, & K. Wada (2004, ApJ, 600, 650)

Motivation

Solve the cooling flow problem

Mechanism

Cluster merger, galaxy motion

- \rightarrow Turbulence \rightarrow Acoustic waves
- \rightarrow (Non-linear effect) \rightarrow Weak shocks
- \rightarrow Heat the cluster core

Analytical Analysis, Numerical Simulations
The mechanism may actually be working in clusters

