

Abstract Submitted
for the DFD14 Meeting of
The American Physical Society

Wall boundary condition for LES using particle method AKIHIKO
NAKAYAMA, Kobe University, NOBUYUKI HISASUE, Kansai Electric Power
Company — In large eddy simulation that does not resolve the near-wall viscous
sub-layer, the no-slip boundary condition cannot be applied and a wall model is
needed. A method is proposed in which a special wall model is applied to the mo-
tion of particles that lie within a thin layer next to solid wall to accomplish the wall
modeling in a SPH formulation. It is verified in fully developed open channel flows
and is applied to dam break flow with reasonable results.

Akihiko Nakayama
Kobe university

Date submitted: 31 Jul 2014

Electronic form version 1.4