Dynamic of Current Sheets and Their Associated Particle Ener-
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LI, U. Alabama and LANL — Large-scale numerical simulations have revealed the 
critical role of current sheets in regulating the energy conversion processes from 
fluid scale to kinetic scale. Recently, we have found that efficient particle accel-
eration can occur in association with these sheets as well. We will present fluid and 
particle-in-cell simulation results that show the dynamics of current sheets and par-
ticle acceleration processes. We discuss the implications of these studies for solar 
plasma heating and AGN jets/lobes.