

# WAVE-PARTICLE INTERACTIONS, PLASMA HEATING AND PARTICLE ACCELERATION

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There are substantial observational evidence and theoretical arguments supporting the view that during solar flares particles are acceleration stochastically via their interactions with plasma waves or turbulence. Turbulence is expected to be generated in flares during the reconnection process because of the prevailing high ordinary and magnetic Reynolds numbers. Nonlinear processes, such as three wave interactions, cause a cascade of the turbulence to smaller scales till wave-particle interactions become important. The latter interactions damp the turbulence, and heat the plasma or accelerate particles. In recent years there has been a substantial progress in understanding these processes. The observational evidence and theoretical developments will be reviewed and results from comparisons of model predictions with observations will be presented.