

We present an in situ study of the electron acceleration and heating in turbulent reconnection. Using Cluster observations in the turbulent plasma of the Earth's magnetosheath downstream of the quasi-parallel shock, we examine measurements inside the diffusion region of a thin reconnecting current sheet. The observed current sheet has a thickness less than the proton inertial length and shows evidence of ongoing reconnection. Multi spacecraft observations allow us to study electron distributions and wave activity at different distances from the x-line. This enables us to probe the microphysics of reconnection at kinetic scales allowing us to provide observational evidence regarding the mechanisms of particle heating and dissipation in turbulent reconnection.