Elastic wave velocities and Poisson’s ratio of Tanzawa amphibolite and greenschist up to 800 degree C at 1 GPa

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We measured ultrasonic compressional (Vp) and shear (Vs) wave velocities of Tanzawa amphibolite and greenschist up to 800 degree C at 1 GPa. In the amphibolite experiments, we observed a sudden decrease in Vp, Vs, and an increase in Poisson’s ratio at about 500 degree C. Similarly the greenschist exhibits a sharp change in Vp, Vs, and Poisson’s ratio at 60 degre C. The relatively lower Vp and Vs, and higher Poisson’s ratio of these rocks at higher temperatures are attributed to dehydration melting of amphibole and chlorite.