

Science Camp

Tokunaga Laboratory accepted two students for the Kashiwa Science Camp, a practical training course for first- and second-year students at the University of Tokyo. This year's theme was “Ultrasound Study of Quantum Phenomena in Materials at High Magnetic Fields.” After experiencing sound velocity measurement using piezoelectric elements, the students performed ultrasound measurements on a Dirac electron material in pulsed magnetic fields up to 60 T.

The experiment succeeded, clearly capturing acoustic de Haas-van Alphen oscillations as shown in the figure on the right. Analyzing these oscillations reveals characteristics of Dirac electrons. Although the students had not yet studied solid-state physics, they independently investigated this phenomenon and produced an excellent presentation.

