Quantum Oscillations in the Metallic Compounds Nb$_3$Sb and EuB$_6$.

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Árkö, Argonne National Laboratory, and Z. Fisk, U. of California, LaJolla—Transverse magnetoresistance and Shubnikov–de Haas (SdH) measurements were made on high-purity Nb$_3$Sb and EuB$_6$ single crystals at 4.2 K and in fields up to 210 kG. Five different SdH frequencies were observed in Nb$_3$Sb; most of these agreed well with previous dHvA measurements. A particularly large-amplitude set of SdH oscillations with frequency about 2.8 MГ was observed for B near [001]. These results appear to be due to magnetic breakdown. The first observations of quantum oscillations in a rare-earth ferromagnetic compound: EuB$_6$, Tc = 13.7 K.I.

Several SdH frequencies have been observed and studied as a function of orientation.