GM 7 Quantum Oscillations in the Metallic Compounds Nb_3Sb and EuB_6.* D. LIEBOWITZ and D. J. SELLMYER, Behlen Laboratory of Physics, U. of Nebraska, A. J. ARKO, Argonne National Laboratory, and Z. FISK, U. of California, LaJolla--Transverse magnetoresistance and Shubnikov-de Haas (SdH) measurements were made on high-purity Nb_3Sb and EuB_6 single crystals at 4.2 K and in fields up to 210 kG. Five different SdH frequencies were observed in Nb_3Sb; most of these agreed well with previous dHvA measurements. A particularly large-amplitude set of SdH oscillations with frequency about 2.8 MG was observed for B near <001>. These oscillations appear to be due to magnetic breakdown. The results will be compared with recent calculations of Mueller et al. and Klein et al. We report also the first observations of quantum oscillations in a rare-earth ferromagnetic compound: EuB_6, T_C=13.7 K.[1] Several SdH frequencies have been observed and studied as a function of orientation.

*Research supported by NSF Grants DMR-7916187, DMR-7708469, and the DOE.

[1]Z. Fisk et al., J. Appl. Phys. 50, 1911 (1979).