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Angle dependence of Shubnikov-de Haas effect of $CeOs_4Sb_{12}$ and $NdOs_4Sb_{12}$[1] P.-C. HO, Physics/CSU-Fresno, J. SINGLETON, F.F. BALAKIREV, NHMFL/LANL, New Mexico, M.B. MAPLE, Physics/UC San Diego, T. YANAGISAWA, Physics/Hokkaido U, Japan — The filled skutterudite compounds $CeOs_4Sb_{12}$, $PrOs_4Sb_{12}$, and $NdOs_4Sb_{12}$ are respectively a 1 K antiferromagnetic (AFM) Kondo insulator, a 1.85 K unconventional superconductor, and a 1 K mean-field type ferromagnet (FM), suggesting that superconductivity in $PrOs_4Sb_{12}$ may result from proximity to AFM and FM quantum-critical points. Fermi-surface measurements of $NdOs_4Sb_{12}$ and $CeOs_4Sb_{12}$ could therefore give insights into the pairing mechanism. A rotational skin-depth measurement probe developed at pulse field facilty of NHMFL is used to detect the angle depence of the Shubnikov-de Haas oscillations in single crystals of $CeOs_4Sb_{12}$ and $NdOs_4Sb_{12}$ at fields up to 60 T. The results indicate that $NdOs_4Sb_{12}$ has similar Fermi surfaces as those of $PrOs_4Sb_{12}$ and $LaOs_4Sb_{12}$ but the Fermi surface of $CeOs_4Sb_{12}$ is much different than those three compounds'. $CeOs_4Sb_{12}$ has similar Fermi surfaces as those of $CeRu_4Sb_{12}$.

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