

Abstract Submitted
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Angle-dependent Magnetoresistance Oscillations in KFe_2As_2 MO-TOI KIMATA, TAICHI TERASHIMA, NOBUYUKI KURITA, HIDETAKA SAT-SUKAWA, ATSUSHI HARADA, KOUTA KODAMA, AKIRA SATO, MOTO-HARU IMAI, SHINYA UJI, National Institute for Materials Science, Tsukuba, Japan, KUNIHIRO KIHOU, CHUL-HO LEE, HIJIRI KITO, HIROSHI EISAKI, AKIRA IYO, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, HIDEO FUKAZAWA, YOH KOHORI, Department of Physics, Chiba University, Chiba, Japan, HISATOMO HARIMA, Department of Physics, Graduate School of Science, Kobe University, Kobe, Japan — We report the results of angular-dependent magnetoresistance oscillations (AMRO) in the Fe-Pnictide superconductor KFe_2As_2 . The two series of AMRO structures are observed, suggesting the existence of two quasi-two-dimensional Fermi surfaces (Q2D-FSs). The obtained FS cross sectional areas correspond to 11 and 15% of the first Brillouin zone, and our results indicate that the cross sections of the Q2D-FSs are rounded square. The diagonal axes of the rounded squares are parallel to the a-axis in both FSs. These results are essentially consistent with the recent quantum oscillations and photoemission spectroscopy measurements.

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