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Altshuler-Aronov-Spivak Oscillation in Graphene Antidot lattice
RYUTA YAGI, RYOJI SAKAKIBARA, JUNPEI ONISHI, ADSM, Hiroshima University, YAGI LAB. TEAM — We have observed the Altshuler-Aronov-Spivac (AAS) oscillation in triangular antidot lattice of single layer graphene. Low temperature magnetoresistance exhibited $h/2e$ periodic oscillations near zero magnetic field, negative magnetoresistance, and h/e periodic (AB-type) oscillations at higher magnetic fields. Phase of the AAS oscillation was the same as those for conventional 2D electrons with negligible spin orbit interaction, showing that inter-valley scattering averaged the Berry phase effect which results in anti-localization. (R. Yagi *et al.* J. Phys. Soc. Jpn. **81**, 064707 (2012).)

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