

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Fluctuation of magnetoresistance at the minimum conductivity point of monolayer graphene due to potential fluctuation RYUTA YAGI, SEIYA FUKADA, YUMI SHINTANI, AdSM, Hiroshima University — We have studied magnetoresistance fluctuation which appeared at minimum conductivity point of monolayer graphene devices at low temperatures. The fluctuation was sample-dependent and was reproducible from sweep to sweep. It was not random but was found to be superposition of some series of Shubnikov-de Haas (S- dH) oscillations though peaks are highly deformed. Peaks of the fluctuation could be assigned to some series of oscillations periodic in $1/B$. Cyclotron masses for major peaks of the fluctuation were estimated from the temperature dependence of the amplitude. The cyclotron masses for each series of the oscillation and carrier density calculated from the periodicity assuming the oscillations to be S-dH effect, agreed with the characteristic relation between carrier density and cyclotron mass in monolayer graphene. The major oscillations were due to a few of the largest puddles of electron and/or hole rather than the universal conductance fluctuation.

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Date submitted: 17 Nov 2009

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