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Mott criticality in electric transport of triangular lattice Hubbard model TOSHIHIRO SATO, KAZUMASA HATTORI, HIROKAZU TSUNETSUGU, Institute for Solid State Physics, University of Tokyo — We numerically study electric transport near the Mott metal-insulator transition for the half-filled Hubbard model on a triangular lattice. Our approach is a cellular dynamical mean field theory (CDMFT) with a continuous-time QMC solver and we calculate optical conductivity including vertex corrections. The main issue is the variation of optical conductivity upon controlling Coulomb repulsion U for various temperatures. Near the Mott critical end point, a Drude peak on the metallic side smoothly continues to an "ingap" peak emerging within the Hubbard gap on the insulating side. We find a critical power-law behavior in their U-dependence near the critical point. The obtained critical exponent $1/\delta = 0.15$ of the optical weight differs from the exponent $1/\delta = 1/3$ of the order parameter (double occupancy) in the CDMFT calculations. This discrepancy suggests that conductivity does not have the same scaling behavior as that for the order parameter[1]. [1]T. Sato, K. Hattori, and H. Tsunetsugu, J. Phys. Soc. Jpn. **81**, 083703 (2012).

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