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**Quantum phase transition of the Hubbard model on a honeycomb lattice**[1] ARA GO, Seoul National University, KWON PARK, Korea Institute for Advanced Study, GUN SANG JEON, Seoul National University — We consider the Hubbard model on a honeycomb lattice at zero temperature. Within the cellular dynamical mean-field theory we study the quantum phase transition in the system. The antiferromagnetic transition, which is driven by the increase of the local interaction, is demonstrated by the staggered magnetization. We also examine the spectral properties of the system. The results are discussed in comparison with earlier works.

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