Novel Electronic Properties of the Hubbard Model on a Frustrated Triangular Lattice[1] BUMSOO KYUNG, University of Sherbrooke — We study novel electronic properties of the Hubbard model on a triangular lattice using the cellular dynamical mean-field theory. The interplay of strong geometric frustration and electron correlations causes a Mott transition at the Hubbard interaction $U/t = 10.5$ and an unusual suppression of low energy spin excitations. Doping of a triangular Mott insulator leads to a quasiparticle peak (no pseudogap) at the Fermi surface and to an unexpected increase of low energy spin excitations, in stark contrast to the unfrustrated square lattice case. The present results give much insight into strongly frustrated electronic systems. A few predictions are made. cond-mat/0608202

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