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Zhen Huan* (huan2@illinois.edu). *Quasi-elliptic cohomology*.

Quasi-elliptic cohomology is closely related to Tate K-theory. It can be interpreted by orbifold loop spaces and expressed in terms of equivariant K-theories. We formulate the complete power operation of this theory. Applying that we proved the finite subgroups of Tate curve can be classified by the Tate K-theory of symmetric groups modulo a certain transfer ideal. Moreover, we construct a G-orthogonal spectra weakly representing quasi-elliptic cohomology. Unfortunately, our construction does not arise from a global spectra; thus, we consider a new formulation of global stable homotopy theory that contains quasi-elliptic cohomology. (Received August 30, 2016)