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Masaki Kameko* (kameko@tuins.ac.jp), Toyama University of International Studies,
Higashikuromaki 65-1, Toyama, 930-1290, Japan. *Finite Chevalley groups and loop groups.*

Let p, ℓ be distinct prime numbers and let q be a power of p . We denote by \mathbb{F}_q the finite field with q -elements. Let G be a connected compact Lie group and let $G(\mathbb{F}_q)$ be a finite Chevalley group associated with G . We show that there exists an integer b such that the mod ℓ cohomology of the classifying space of the finite Chevalley group $G(\mathbb{F}_q)$ is isomorphic to the ℓ cohomology of the classifying space of the loop group $\mathcal{L}G$ for $q = p^{ab}$, $a \geq 1$. (Received August 15, 2008)