1037-20-106 **Xuhua He*** (hugo@math.sunysb.edu), Department of Mathematics, Stony Brook University, Stony Brook, NY 11794. *Semi-stable locus of a group compactification.*

Let G be a connected, semisimple algebraic group of adjoint type over an algebraically closed field. There is a partition of the wonderful compactification $\bar{G}$ of G into finite many G-stable pieces, which was introduced by Lusztig. In this talk, we will discuss the semi-stable locus of $\bar{G}$. We will show that the semi-stable locus is a disjoint union of some G-stable pieces. Based on this result, we will verify inside the semi-stable locus a Lusztig's conjecture about the generalization of the notion of semisimple elements to $\bar{G}$. (Received January 26, 2008)