1086-14-418 **Pablo Solis*** (pablo@math.berkeley.edu). *A Wonderful Embedding of the Loop Group.*

I describe the wonderful compacti cation of loop groups. These compacti cations are obtained by adding normal-crossing boundary divisors to the group LG of loops in a reductive group G (or more accurately, to the semi-direct product $C^* \times LG$) in a manner equivariant for the left and right $C^* \times LG$-actions. The analogue for a torus group T is the theory of toric varieties; for an adjoint group G, this is the wonderful compactications of De Concini and Procesi. The loop group analogue is suggested by work of Faltings in relation to the compacti cation of moduli of G-bundles over nodal curves. Using the loop analogue one can construct a 'wonderful' completion of the moduli stack of G-bundles over nodal curves. (Received August 30, 2012)