Some results on the cohomology of moduli spaces of Higgs bundles

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We want to give a combinatorial description of the irreducible components of the global nilpotent cone in the simplest case of the GL_n Hitchin fibration. The main method to prove this is a simple observation on a variation of stability conditions from the point of view of stacks. As an application this proves the connectedness of moduli spaces of Higgs bundles for various unitary groups. (This is joint work with S. Bradlow, O. Garcia-Prada and P. Gothen)