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Character sheaves of $GL_n(k[t]/(t^2))$. Preliminary report.

In 2003, Lusztig constructed generalized character sheaves of $GL_n(k[t]/(t^m))$. He showed that these sheaves behave like character sheaves and conjectured that these are intersection cohomology. In this talk, I will construct a family of perverse sheaves on $GL_n(k[t]/(t^2))$ which are expected to be character sheaves of $GL_n(k[t]/(t^2))$. And I will define induction and restriction functors for them. (Received February 10, 2012)