1012-16-173 **Alexei Oblomkov*** (oblomkov@ias.edu), rm 412, Fuld Hall, IAS, Einstein drive, Princeton, NJ 08540. *Double affine Hecke algebra of type $C^\vee C_n$ and multiplicative Deligne-Simpson problem.* Preliminary report.

We show that the spectrum of the spherical subalgebra $eH(t;1)e$ of the double affine Hecke algebra $H(t;1)$ of type $C^\vee C_n$ is isomorphic to the variety of solutions of some multiplicative Deligne-Simpson problem when t is generic. We also show that $H(t;1) = End_{eH(t;1)e}(H(t;1)e)$ where $H(t;1)e$ is a projective $eH(t;1)e$-module. This implies the classification of the finite dimensional representations of $H(t;1)$. (Received September 19, 2005)