1154-51-1090   **Peter Koroteev*** (`pkoroteev@math.berkeley.edu`), University of California, Department of Mathematics, Berkeley, CA 94720. *Branes and DAHA Representations.*

It is was shown by Oblomkov that spherical double affine Hecke algebra (DAHA) arises via geometric quantization of the Calogero-Moser space $\mathcal{M}$. I shall describe representation theory of sl(2) DAHA in terms of geometry of $\mathcal{M}$. We conjecture an equivalence between the representation category of sl(2) DAHA and a certain extension of the Fukaya category of $\mathcal{M}$. In particular, under this relation, finite dimensional representations of DAHA correspond to compact Lagrangian cycles (branes). (Received September 13, 2019)