1077-20-2938   **Alimjon K Eshmatov*** (`alimjon@math.arizona.edu`), 617 Santa Rita Ave, tucson, AZ 85721.
On subgroups of the Dixmier group and Calogero-Moser spaces. Preliminary report.

We describe the structure of the automorphism groups of algebras Morita equivalent to the first Weyl algebra $A_1(k)$. In particular, we give a geometric presentation for these groups in terms of amalgamated products, using the Bass-Serre theory of groups acting on graphs. A key role in our approach is played by a transitive action of the automorphism group of the free algebra $k < x, y >$ on the Calogero-Moser varieties $\mathcal{C}_n$ defined in which is a variation of Hilbert scheme of point on the plane. In the end, we propose a natural extension of the Dixmier Conjecture for $A_1(k)$ to the class of Morita equivalent algebras. (Received September 23, 2011)