1040-13-77 **Yuriy A. Drozd*** (`drozd@imath.kiev.ua`), Tereschenkivska str. 3, Kiev. *Representations of linear groups over Euclidean algebras.* Preliminary report.

We consider unitary representations of linear groups over algebras, i.e. groups $GL(P, A) = \mathrm{Aut}_A P$, where A is a finite dimensional $\mathbb{C}$-algebra and P is a finitely generated projective A-module. We call the algebra A Dynkin (Euclidean) if it is derived equivalent to a path algebra of a Dynkin (respectively, Euclidean) quiver. In Dynkin case the author proved that the space $\widehat{G}$ of unitary representations of such a group G contains an open dense subset U isomorphic to $\widehat{GL}(r, \mathbb{C})$ for some r. For Euclidean algebras the following conjecture is plausible.

If G is a linear group over an Euclidean algebra, then $\widehat{G}$ contains an open dense subset U, such that $U \simeq Q_m \times (\mathbb{C}^*)^k \times \widehat{GL}(r, \mathbb{C})$ for some m, k, r Here $Q_m = W_m/\mathbf{S}_m$, where $W_m = \{(\lambda_1, \lambda_2, \dots, \lambda_m) | \lambda_i \in \mathbb{C},\ \lambda_i \neq \lambda_j \text{ for } i \neq j\}$ and $\mathbf{S}_m$ is the symmetric group naturally acting on Q_m.

This cojecture was proved by Timoshin for A of type $\widetilde{A}_1, 2$. We present a proof for A of type $\widetilde{A}_n$. This proof is based on the technique of matrix problems, especially on the algorithm of small reduction. (Received February 01, 2008)