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Leonid Makar-Limanov, Umut Turusbekova and Ualbai Umirbaev*
(umirbaev@yahoo.com). *Automorphisms of elliptic Poisson algebras.*

It is well known that the automorphisms of polynomial algebras and free associative algebras in two variables are tame. It is also known that polynomial algebras and free associative algebras in three variables in the case of characteristic zero have wild automorphisms. It was recently proved that the automorphisms of free Poisson algebras in two variables over a field of characteristic zero are tame. Note that the Nagata automorphism gives an example of a wild automorphism of a free Poisson algebra in three variables. A complete description of quadratic Poisson brackets on the polynomial algebra $K[x, y, z]$ over a field K of characteristic zero is given by Donin and Makar-Limanov (1998), Dufour and Haraki (1991), and Liu and Xu (1992). Among corresponding Poisson algebras the most interesting are the elliptic Poisson algebras E_α . By definition, an elliptic Poisson algebra E_α is the polynomial algebra $K[x, y, z]$ endowed with the Poisson bracket given by $\{x, y\} = -\alpha xy + z^2$, $\{y, z\} = -\alpha yz + x^2$, $\{z, x\} = -\alpha zx + y^2$, where $\alpha \in K$. In this paper we describe the automorphism groups of the elliptic Poisson algebras E_α over a field K of characteristic zero. (Received August 22, 2008)