

Year: 2013

Vol.: 83

Fasc.: 4

**Title:** Multidegrees of tame automorphisms with one prime number

**Author(s):** Jiantao Li and Xiankun Du

Let  $3 \leq d_1 \leq d_2 \leq d_3$  be integers. We show the following results: (1) If  $d_2$  is a prime number and  $\frac{d_1}{\gcd(d_1, d_3)} \neq 2$ , then  $(d_1, d_2, d_3)$  is a multidegree of a tame automorphism if and only if  $d_1 = d_2$  or  $d_3 \in d_1\mathbb{N} + d_2\mathbb{N}$ ; (2) If  $d_3$  is a prime number and  $\gcd(d_1, d_2) = 1$ , then  $(d_1, d_2, d_3)$  is a multidegree of a tame automorphism if and only if  $d_3 \in d_1\mathbb{N} + d_2\mathbb{N}$ . We also show that the condition  $\frac{d_1}{\gcd(d_1, d_3)} \neq 2$  in (1) cannot be removed.

**Address:**

Jiantao Li  
School of Mathematics  
Jilin university  
130012 Changchun  
China

**Address:**

Xiankun Du  
School of Mathematics  
Jilin university  
130012 Changchun  
China