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CORRIGENDUM

A Correction to the Paper "Quadratic Hamiltonian Vector Fields"

In the paper "Quadratic Hamiltonian Vector Fields" [AL], we studied the global phase portraits of *quadratic Hamiltonian vector fields*, that is, the phase portraits of the vector fields $(\partial H/\partial y, -\partial H/\partial x)$ where H is a polynomial of degree 3 in the variables x and y over $\mathbb{R}$.

We proved the next theorem:

THEOREM 1.1. *Let X be a quadratic Hamiltonan vector field. Then the phase portrait of X is topologically equivalent to one of the* 28 *configurations given in Fig.* 1.1 *of* [AL]. *Moreover, each of the configurations of Fig.* 1.1 *is realizable by a quadratic Hamiltonian vector field.*

This result is right, but the bifurcation map for one of the families was not complete. More precisely, the correct Theorem 5.2 of [AL] must say:

THEOREM 5.2 (X_2 with $\alpha^2+\beta^2=0$). *Consider the quadratic Hamiltonian vector field* $X_2=(bx+cy+x^2, -ax-by-2xy)$. *Then the following statements hold.*

(1) *If* $a=b=c=0$, *then* X_2 *has phase portrait* 14.

(2) *If* $b=c=0$ *and* $a\neq 0$, *then* X_2 *has phase portrait* 14.

(3) *If* $b=0$ *and* $c\neq 0$, *then* X_2 *has phase portrait* 19 *if* $a\leqslant 0$, *and Vulpe* 5 *if* $a>0$.

(4) *If* $b\neq 0$, *then* X_2 *has phase portrait*

20 *if* $c=0$ *and* $a\neq 0$;
21 *if* $c=0$ *and* $a=0$;
Vulpe 5 *if* $c\neq 0$ *and* $a=0$;
Vulpe 6 *if* $ac>1$, *or* $c\neq 0$, $a\neq 0$, $ac<1$ *and* $1+8ac>0$;
22 *if* $ac=1$, *or* $1+8ac=0$; *and*
19 *if* $1+8ac<0$.

The unique mistake was that we forgot in statement (4) the case Vulpe 5, which was considered as Vulpe 6.

We thank N. I. Vulpe [V], who pointed out the error to us.

REFERENCES

[AL] J. C. Artés and J. Llibre, Quadratic Hamiltonian vector fields, *J. Differential Equations* **107** (1994), 80–95.

[V] N. I. Vulpe, private communication.

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