Structurally unstable quadratic vector fields of codimension one

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ABSTRACT. In the work "structurally stable quadratic vector fields, Mem. Amer. Math. Soc. 134 (1998), no. 639", the authors proved that the planar quadratic polynomial differential systems have 44 structurally stable topologically different phase portraits in the Poincaré disc modulo limit cycles.

In the present work we prove that the planar quadratic polynomial differential systems have at most 211 and at least 204 structurally unstable codimension one topologically different phase portraits in the Poincaré disc modulo limit cycles.

ADDENDA: Two later works have proved that instead of at most 211 and at least 204, there are 209 and at least 202 structurally unstable codimension one topologically different phase portraits in the Poincaré disc modulo limit cycles

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