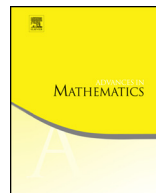




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Centers of quasi-homogeneous polynomial differential equations of degree three

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ABSTRACT

We characterize the centers of the quasi-homogeneous planar polynomial differential systems of degree three. Such systems do not admit isochronous centers. At most one limit cycle can bifurcate from the periodic orbits of a center of a cubic homogeneous polynomial system using the averaging theory of first order.

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