Dulac's theorem

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Let $\dot{x} = f(x)$ be an analytic planar system, then in any bounded region of the plane there is at most a finite number of limit cycles. Also any polynomial planar system has at most a finite number of limit cycles.[?]

note about the proof: The proof was given by Dulac in 1923, but an error was found in the proof. In 1988 Jean Ecalle, Jacques Martinet, Robert Moussu, Jean Pierre Ramis and independently Yulij Ilyashenko corrected the error in the proof.[?]

References

[PL] Perko, Lawrence: Differential Equations and Dynamical Systems. Springer-Verlag, New York, 1991.