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## THE CENTER PROBLEM FOR A LINEAR CENTER PERTURBED BY HOMOGENEOUS POLYNOMIALS

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摘要

关键词 [Center problem](#) [Nonlinear differential equations](#)

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## THE CENTER PROBLEM FOR A LINEAR CENTER PERTURBED BY HOMOGENEOUS POLYNOMIALS

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**Abstract** The centers of the polynomial differential systems with a linear center perturbed by homogeneous polynomials have been studied for the degrees  $s=2,3,4,5$ . They are completely classified for  $s=2,3$ , and partially classified for  $s=4,5$ . In this paper we recall these results for  $s=2,3,4,5$ , and we give new centers for  $s=6,7$

**Key words** [Center problem](#) [Nonlinear differential equations](#)

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