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SUMMABILITY IN A MONOMIAL FOR SOME CLASSES OF SINGULARLY PERTURBED PARTIAL DIFFERENTIAL EQUATIONS

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Abstract: The aim of this paper is to continue the study of asymptotic expansions and summability in a monomial in any number of variables, as introduced in [**3, 15**]. In particular, we characterize these expansions in terms of bounded derivatives and we develop Tauberian theorems for the summability processes involved. Furthermore, we develop and apply the Borel–Laplace analysis in this framework to prove the monomial summability of solutions of a specific class of singularly perturbed PDEs.

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