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Journal of Convex Analysis 20 (2013) 723–752

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**Oscillations and Concentrations in Sequences of Gradients up to the Boundary**

Oscillations and concentrations in sequences of gradients  $\{\nabla u_k\}$ , bounded in  $L^p(\Omega; \mathbb{R}^{M \times N})$  if  $p > 1$  and  $\Omega \subset \mathbb{R}^n$  is a bounded domain with the extension property in  $W^{1,p}$ , and their interaction with local integral functionals can be described by a generalization of Young measures due to DiPerna and Majda. We characterize such DiPerna-Majda measures, thereby extending a result by A. Kalamajska and M. Kružík [“Oscillations and concentrations in sequences of gradients”, ESAIM, Control Optim. Calc. Var. 14(1) (2008) 71–104], where the full characterization was possible only for sequences subject to a fixed Dirichlet boundary condition. As an application we state a relaxation result for noncoercive multiple-integral functionals.

**Keywords:** Sequences of gradients, concentrations, oscillations, quasiconvexity.

**MSC:** 49J45, 35B05