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ON THE CONVERGENCE OF SOLUTIONS OF VARIATIONAL PROBLEMS WITH BILATERAL OBSTACLES IN VARIABLE DOMAINS

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We establish sufficient conditions for the convergence of minimizers and minimum values of integral and more general functionals on sets of functions defined by bilateral obstacles in variable domains. The given obstacles are elements of the corresponding Sobolev space, and the degeneration on a set of measure zero is admitted for the difference of the upper and lower obstacles. We show that a weakening of the condition of positivity of this difference on a set of full measure may lead to a certain violation of the established convergence result.

Keywords: integral functional, minimizer, minimum value, bilateral obstacles, Γ-convergence, strong connected-ness.

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