

Measure data problems, lower order terms and interpolation effects

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We deal with the solutions to nonlinear elliptic equations of the form

$$-\operatorname{div} a(x, Du) + g(x, u) = f,$$

with f being just a summable function, under standard growth conditions on g and a . We prove general local decay estimates for level sets of the gradient of solutions in turn implying very general estimates in rearrangement and non-rearrangement function spaces, up to Lorentz-Morrey spaces. The results obtained are in clear accordance with the classical Gagliardo-Nirenberg interpolation theory.