

Erratum to: "Hessian equations on compact non-negatively curved Riemannian manifolds" [*Calc. Var.*, 16, 165–176 (2003)]

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Abstract The local test function B used in the paper under correction differs from the one \tilde{B} which should have been considered. But the function B has the same second order jet as \tilde{B} at the maximum point P_0 of $\Lambda(v) - Cv$. Therefore the C^2 estimate carried out at P_0 with B remains valid.

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On p.173 of [1], at the beginning of the C^2 estimate, the sentence preceding (8) must be shrunk to: "it must satisfy" (dropping "assume a local maximum at P_0 as well, hence"). Let us explain why. In the special chart x chosen at the point P_0 where the function $\Lambda(v) - Cv$ assumes its maximum, the local function really meant for our purpose is not B but $\tilde{B} = 1 + \frac{\nabla_{11}v}{g_{11}} - Cv$, that is, the expression:

$$\frac{(g + \nabla dv)(X, X)}{|X|_g^2} - Cv$$

read at the local vector field $X = \frac{\partial}{\partial x^1}$. However, one can readily check that the difference $\tilde{B} - B$ is $O(|x|^3)$. Therefore (8) is correct, hence so is our C^2 estimate.

References

1. Ph. Delanoë, "Hessian equations on compact non-negatively curved Riemannian manifolds", *Calc. Var.*, **16**, 165–176 (2003)