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$C^{1,\alpha}$ local regularity for the solutions of the p -Laplacian on the Heisenberg group. The case $1 + \frac{1}{\sqrt{5}} < p \leq 2$

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Abstract: We prove the Hölder continuity of the homogeneous gradient of the weak solutions $u \in W_{loc}^{1,p}$ of the p -Laplacian on the Heisenberg group \mathcal{H}^n , for $1 + \frac{1}{\sqrt{5}} < p \leq 2$.

Keywords: degenerate elliptic equations, weak solutions, regularity, higher differentiability

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