P–ADIC WEAK CENTRAL MORREY
SPACES ON DIFFERENTIAL FORMS

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Abstract. In this article, the theory of differential forms on $\mathbb{R}^n$ was extended to the filed $\mathbb{Q}_p^n$ of p-adic numbers. The imbedding inequalities for differential forms were derived on $\mathbb{Q}_p^n$. Then, we show the definitions of p-aidc weak central Morrey spaces and p-adic λ-central BMO spaces on differential forms. The boundedness of Hardy operator and its adjoint operator were given in the new space. Finally, we give the characterization of the two operators in p-adic λ-central BMO spaces by using imbedding inequalities on differential forms.

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