

Compactness and properness over the adèles

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¹ IMPA

Let K be global field and $X \rightarrow K$ a geometrically reduced, separable scheme of finite type. For a finite field extension $L|K$ denote by \mathbb{A}_L the adèle ring of L and consider $X(\mathbb{A}_L)$ with the fine topology as in [1]. We prove that $X \rightarrow K$ is proper if and only if $X(\mathbb{A}_L)$ is compact for all finite extensions of K .

References

- [1] O. LORSCHIED, C. SALGADO , *Schemes as functors on topological rings* , J. Number Theory