1035-51-71 **Hung Lu*** (`luhungtim@yahoo.com`), Department of Mathematics, 1164 Bishop Street, MP 260, Honolulu, CA 96813, and **Michel L. Lapidus** (`sykomath@yahoo.com`), LA PALMA, CA 90623. *Nonarchimedean Cantor Set and String.*

We construct a nonarchimedean (or *p-adic*) analogue of the classical ternary Cantor set $\mathcal{C}$. In particular, we show that this nonarchimedean Cantor set $\mathcal{C}_3$ is self-similar. Furthermore, we characterize $\mathcal{C}_3$ as the subset of 3-adic integers whose elements contain only $0's$ and $2's$ in their 3-adic expansions and prove that $\mathcal{C}_3$ is naturally homeomorphic to $\mathcal{C}$. Finally, from the point of view of the theory of fractal strings and their complex fractal dimensions [7, 8], the corresponding nonarchimedean Cantor string resembles the standard real (or *archimedean*) Cantor string perfectly.

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