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**Byung Gyun Kang\*** (bgkang@postech.ac.kr), Dept. of Math., POSTECH, Pohang, 790-784, South Korea, and **Toan**, Dept. of Math., POSTECH, Pohang, South Korea. *Krull dimension of a power series ring over a one-dimensional nondiscrete valuation domain.* Preliminary report.

We solve an open question on the Krull dimension of a power series ring over a one-dimensional nondiscrete valuation domain posed by Eakin and Sathaye. Let  $V$  be a one-dimensional nondiscrete valuation domain and  $V^*=V-0$ . We prove that  $\dim V[[X]] \text{ loc. at } V^*$  is uncountable and that the ring  $V[[X]] \text{ loc. at } V^*$  is not a Prufer ring. (Received September 22, 2009)