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**Jacqueline Anderson\*** ([jackie@math.brown.edu](mailto:jackie@math.brown.edu)), Providence, RI 02912. *Bounds on the radius of the  $p$ -adic Mandelbrot set.*

Let  $f(z) = z^d + a_{d-1}z^{d-1} + \cdots + a_1z \in \mathbb{C}_p[z]$  be a degree  $d$  polynomial. We say  $f$  is *post-critically bounded*, or PCB, if all of its critical points have bounded orbit under iteration of  $f$ . It is known that if  $p \geq d$  and  $f$  is PCB, then all critical points of  $f$  have  $p$ -adic absolute value less than or equal to 1. We give a similar result for  $\frac{1}{2}d \leq p < d$ . (Received July 10, 2012)