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Adriana Salerno, Department of Mathematics, Bates College, Lewiston, ME 04240, and **Joseph H Silverman***, Department of Mathematics, Box 1917, Brown University, Providence, RI 02912.
p-adic Properties of Böttcher Coordinates. Preliminary report.

Let $\varphi(x) \in x^m + x^{m+1}\mathbb{Z}_p[[x]]$ be a power series. Then there is a unique power series $f_\varphi(x) \in x + x^2\mathbb{Q}_p[[x]]$, called the Böttcher coordinate of φ , satisfying the functional equation $\varphi \circ f_\varphi(x) = f_\varphi(x^m)$. We investigate how p -divisibility of the coefficients of φ influences p -adic integrality properties of the coefficients of f_φ (Received August 10, 2019)