

Primes and irreducibles in truncation integer parts of real closed fields

Salma Kuhlmann

`skuhlman@snoopy.usask.ca`

University of Saskatchewan, Canada

In [B], Berarducci studies primes and irreducibles of truncation closed integer parts of power series fields. In this paper, we study *truncation integer parts* of any non-archimedean real closed field, and generalize results of [B]. Addressing a question in [B; Concluding Remarks], we show that every truncation integer part of a non-archimedean exponential field admits a cofinal set of irreducible elements. Finally, we apply our results to two important classes of exponential fields.

Reference:

[B] Berarducci, A.: Factorization in generalized power series, *Trans. Amer. Math. Soc.* 352 No. 2 (2000), 553–577.