Nigel Pynn-Coates* (pynncoa2@illinois.edu), Department of Mathematics, University of Illinois at Urbana–Champaign, 1409 W Green St, Urbana, IL 61801. A model complete theory of pre-$H$-fields with small derivation.

Pre-$H$-fields are a kind of ordered valued differential field introduced by Aschenbrenner, van den Dries, and van der Hoeven in their work on the model theory of transseries; all Hardy fields are pre-$H$-fields. We consider a certain theory of pre-$H$-fields with small derivation (including those whose induced derivation on the residue field is nontrivial) and show that it has a model companion. (Received July 11, 2019)