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**Linquan Ma\*** (lquanma@math.utah.edu) and **Raymond C Heitmann**

(heitmann@math.utexas.edu). *Extended plus closure in complete local rings*. Preliminary report.

The (full) extended plus closure was introduced by R. Heitmann in order to attack the homological conjectures, and it was hoped that it might play the same role in mixed characteristic as tight closure in characteristic  $p$ . Using the recent solution of the direct summand conjecture by Andre, we prove that extended plus closure satisfies the colon-capturing property for complete local domains. As a corollary, we recover Lipman-Sathaye's version of the Briancon-Skoda theorem in the mixed characteristic case. This is a joint work with R. Heitmann. (Received July 12, 2017)