1010-13-101 Marco Fontana, Rome, Italy, Evan Houston* (eghousto@email.uncc.edu), Dept. of Mathematics, Charlotte, NC 28223, and Thomas Lucas. Factorization of ideals in Prüfer domains II. Preliminary report.

Let R be a Prüfer domain. We say that R has the strong factorization property if each nonzero ideal I of R can be written uniquely as $I = I_v \Pi$, where I_v is the divisorial closure of I and Π is the product of those nondivisorial maximal ideals M of R which contain I and for which IR_M is also nondivisorial. Relaxing this definition a bit, we say that R has the weak factorization property if each nonzero ideal I satisfies $I = I_v \Pi$, where Π is a product of (not necessarily distinct) maximal ideals. We show that h-local Prüfer domains have the strong factorization property and that the converse holds in the finite-dimensional case. On the other hand, we give examples of (non-Dedekind) almost Dedekind domains with the weak factorization property. In the case of strong factorization, we also study how the factorizations of ideals I and J affect those of I + J, IJ, etc. (Received August 22, 2005)