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Quasi-Prüfer extensions. Preliminary report.

We introduce quasi-Prüfer extensions of commutative rings, in order to relativize the notion of quasi-Prüfer domains. These extensions allow us to take into account contexts, recently considered by some authors, like FCP extensions followed by a normal pair. The class of quasi-Prüfer extensions is stable under composition and has a very good behavior with respect to classical algebra operations. Quasi-Prüfer extensions coincide with INC-pairs. Prüfer extensions of Knebusch and Zhang are well known to coincide with normal pairs. As Knebusch and Zhang did, we use flat epimorphisms instead of integrally closed extensions, providing quick proofs. We define the quasi-Prüfer hull of any ring extension. We also introduce almost-Prüfer extensions. They are quasi-Prüfer and their Prüfer hulls commute with the formation of localizations. As an application, we study extensions whose subextensions have finite fibers, a work initiated by Dobbs and Ayache. (Received September 10, 2016)