1046-13-862 **Peter Vamos** (P.Vamos@exeter.ac.uk), School of Mathematical Sciences, University of Exeter, Exeter, EX4 4QE, England, and **Sylvia Wiegand*** (swiegand1@math.unl.edu), Department of Mathematics, University of Nebraska, Lincoln, NE 68588-0130. *Block diagonalization and 2-unit sums of matrices over Prufer domains.* Preliminary report.

We show that matrices over a large class of integral domains are equivalent to almost diagonal matrices. Here, an "almost diagonal" matrix has all its nonzero entries within blocks along the diagonal; the sizes of the diagonal blocks are determined by the size of the class group of the integral domain. This result is a generalization of a 1972 result of L. S. Levy for Dedekind domains. For integral domains in the class we study, we obtain also a partial answer to the question: For which n is every $n \times n$ square matrix a sum of two invertible matrices? (Received September 12, 2008)