1080-03-173 **Peter Cholak*** (cholak@nd.edu), **Damir Dzhafarov**, **Noah Schweber** and **Richard Shore**.
Computably enumerable partial orders.

We study the degree spectra and reverse-mathematical applications of computably enumerable and co-computably enumerable partial orders. We formulate versions of the chain/antichain principle and ascending/descending sequence principle for such orders, and show that the latter is strictly stronger than the latter. We then show that every $\emptyset'$-computable structure (or even just of c.e. degree) has the same degree spectrum as some computably enumerable (co-c.e.) partial order, and hence that there is a c.e. (co-c.e.) partial order with spectrum equal to the set of nonzero degrees. (Received January 25, 2012)