1046-54-2061 **Mieczyslaw K. Dabkowski*** (mdab@utdallas.edu), University of Texas at Dallas, Department of Mathematical Sciences, Richardson, TX 75080, and **Malgorzata A. Dabkowska**, **Valentina S. Harizanov**, **Jozef H. Przytycki** and **Michael A. Veve**. *Compactness of the space of left orders.*

A left order on a magma (e.g., semigroup) is a total order of its elements that is left invariant under the magma operation. A natural topology can be introduced on the set of all left orders of an arbitrary magma. We prove that this topological space is compact. Interesting examples of nonassociative magmas, whose spaces of right orders we analyze, come from knot theory and are called quandles. Our main result establishes an interesting connection between topological properties of the space of left orders on a group, and the classical algebraic result by Conrad and Los concerning the existence of left orders. (Received September 17, 2008)