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G. Alan Cannon, C. J. Maxson and Kent M. Neuerburg*, Southeastern Louisiana University, Department of Mathematics, SLU Box 10687, Hammond, LA 70402. *Rings and Covered Groups*. Preliminary report.

Let $\langle G, + \rangle$ be a group written additively, but not necessarily abelian, with identity element 0, and let $\mathcal{C} := \{A_1, A_2, \dots, A_n\}$ be a cover of G by abelian subgroups, i.e., each A_i is an abelian subgroup of G and $\cup_{i=1}^n A_i = G$. Let $\mathcal{R}(\mathcal{C}) := \{f : G \rightarrow G \mid f|_{A_i} \in \text{End}(A_i) \text{ for all } i = 1, 2, \dots, n\}$. We call $\mathcal{R}(\mathcal{C})$ the *ring determined by the cover \mathcal{C}* , where the operations are pointwise addition and function composition. We will discuss characterizations of $\mathcal{R}(\mathcal{C})$ given specific classes of covers \mathcal{C} . (Received September 04, 2009)