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**Alica Miller\*** ([amiller@math.msu.edu](mailto:amiller@math.msu.edu)), Department of Mathematics, Michigan State University, East Lansing, MI 48824. *A criterion for minimality of restrictions of compact minimal abelian flows.*

For a compact minimal abelian flow  $\mathcal{X} = (T, X)$  we introduce the notion of an  $\mathcal{X}$ -enveloped subgroup of  $T$  and use it to give a criterion for minimality of the restricted flow  $\mathcal{X}_S = (S, X)$ ,  $S$  a syndetic subgroup of  $T$ , in terms of eigenvalues of  $\mathcal{X}$ . We then deduce a criterion for total minimality of  $\mathcal{X}$ . We apply these two criteria in several situations. In case of skew-extensions we get a new proof of a classical theorem of Parry. We also introduce the notion of SK groups and use it, together with the criteria, to generalize some statements about weak mixing and improve some conditions which imply non-total-minimality. (Received September 19, 2000)