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AN EXPOSITION OF THE STRUCTURE OF SOLVMANIFOLDS. PART II: G-INDUCED FLOWS[1]

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1. **Introduction.** During the academic year 1960–1961 there was a conference held in topological dynamics at Yale University at which the study of G-induced flows on solvmanifolds was initiated and which resulted in the publication of [**1**]. At the conference held on topological dynamics at Yale in June 1972 to honor Professor G. H. Hedlund on his retirement, it was my pleasure to finally announce [**5**] the first theorem giving a necessary and sufficient condition for the ergodicity of a G-induced flow on a compact solvmanifold. Since this result draws on material that are parts of papers written during the intervening twelve years it seems appropriate to take the time and effort to present a fairly systematic and self-contained account of this result. This is particularly true in view of the fact that we are now in possession of an algebraic machine that gives vastly simpler proofs of the required algebraic results. This algebraic material has itself only recently been given a unified exposition in [**4**].

There is always, in writing a paper of this sort, the problem of what to assume and what to present. Here, since we are trying to cover so much material if we tried to be complete we would require a paper of considerable length. However, we also have the perspective of time that tells us that it is the solvable theory that is not understood and that the nilpotent theory is readable even in its original version. Hence we have contented

[1] The material in this article represents an enlargement of part of the material the author presented in his address to the Society at its Annual Meeting in San Francisco in 1968; received by the editor September 27, 1972.

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