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Project 2200

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INTRODUCTION

Work on this project has continued along the lines indicated in Quarterly Report No. 1. As indicated below, the dissertations of Jans and Walter have been essentially completed and are being submitted as technical reports. They will continue with their respective programs of research. In addition, other workers will be added to the project's staff during the summer and the research activities will be considerably expanded during this period.

PROGRESS REPORT OF JAMES P. JANS

The summary of the past three months' activities is as follows. The research for the dissertation previously mentioned has been completed. Three new conditions on the structure of an algebra have been discovered which determine that it has an infinite number of inequivalent, indecomposable representations of a certain degree for each of an infinite number of degrees. The work on the final draft is now in progress and should be completed within a month.

PROGRESS REPORT OF JOHN WALTER

During the last three months the following activities have been pursued. First, the dissertation on the automorphism of the projective unitary groups has been completed and has been submitted as a technical report, "Automorphisms of the Projective Unitary Groups", Engineering Research Institute, Report Number 2200-2-T, University of Michigan, Ann Arbor. Second, progress has been made in the study of nonsemisimple commutative algebras. The

work of Taketa, which was mentioned in the last report, has been investigated further. It appears that Taketa's analysis is incomplete. Instead of continuing with Taketa's approach, greater emphasis is being placed on finding relations between the intrinsic structure of the algebras and their representations. In particular, closer attention is being paid to ideal theory. The remaining time spent on the project will be devoted to the study of these algebras.

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