Preface

In the fall semester of 1981/82 Professor
A. Bialynicki-Birula from the University of Warsaw was
guest professor at the mathematics department at the
University of Notre Dame. He gave a course entitled
"Algebraic group actions on varieties". In conjunction
with his visit, Professors J. B. Carrell, C. W. Curtis,
J. E. Humphreys, B. Parshall and B. Weisfeiler came for
a week each and presented survey lectures on topics in
the theory of algebraic groups. In view of the superb
quality of both the course and the surveys, it was decided
to make them available to a wider mathematical audience.
This is the raison d'être of this book. Due to political
upheavals in Poland at the time, it was impossible for
Professor Bialynicki-Birula to include a survey on the
material of his lectures. This is most unfortunate, of
course, and rather ironic for it was Professor
Bialynicki-Birula's course which served as catalyst for
this volume.

On behalf of our colleagues of the Mathematics
Department of the University of Notre Dame, we wish to
thank both the National Science Foundation and Professor
O. T. O'Meara, Provost of the university, for their

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Alex Hahn
Warren Wong

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