CONCORDANCE CLASSES OF REGULAR $O(n)$-ACTIONS ON HOMOTOPY SPHERES

BY

M. DAVIS[1], W. C. HSIANG[2] and J. W. MORGAN[3]

Institute for Advanced Study
Princeton, N.J., U.S.A.

Table of contents

0. Introduction

A basic approach in the study of transformation groups is to compare smooth actions of compact Lie groups on homotopy spheres with linear actions on standard spheres. This paper examines actions of the orthogonal group, $O(n)$, on homotopy spheres. We consider only those actions which resemble certain fixed linear actions insofar as their isotropy groups and normal representations are concerned. We are then able to classify such actions, up to concordance, by comparing them directly, via an equivariant map, with their linear

---