THE EFFECT OF INHOMOGENEITIES ON HIGH-FREQUENCY, LOW-l p-MODES
DIFOS Experiment on CORONAS-I

NAGW-4719

Final Report

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The Effect of Inhomogeneities on High-Frequency, Low-l p-Modes

The investigation of the effects of inhomogeneities of the acoustic modes of the global solar oscillation spectrum has two parts, the first dealing with the prediction of wave fluxes in magnetic flux tubes due to the excitation of longitudinal (i.e. pressure) modes, and the second part, concerning the effects of radiation damping on the p-modes themselves.

Part 1 of this work, in collaboration with S.S. Hasan (Indian Institute of Astrophysics, Bangalore), is complete and has resulted in a publication titled *Excitation of Longitudinal Modes in Solar Magnetic Flux Tubes*, By S.S. Hasan & WK. It is in press in the ASP conference series, containing the proceedings of the Cool Stars conference of 1997, R.A. Donahue and J.A. Bookbinder, editors; publication is expected in 1998. Part 2, in collaboration with Y. Zhugzhda (Izmiran, Moscow) and J. Staude (Sonnenobservatorium Einsteinturm, Potsdam) is in progress and is expected to result in a paper in the forthcoming Boston conference on Helio- and Asteroseismology in June, 1998.

A fuller accounting of the work done under the grant will be given when the work started with funding from the grant is complete.