Preface

Stellar turbulence is a fascinating and fundamentally important aspect of stellar atmospheres. I.A.U. Colloquium 51 was organized to bring together both stellar and solar astronomers, to have them share views about the generation, nature, and implications of stellar turbulence.

The program was arranged into several conceptual pieces: the generation of motions by convection, rotation, oscillations, the measurement and observed characteristics of turbulence, modeling and theoretical interpretation of turbulence, and the relation of chromospheres, coronae, and mass loss to the turbulence. This same order of material has been preserved in these proceedings. We chose not to record the questions and dialogue which transpired. This choice was made in part because of the publisher's preference and in part because it leads to greater freedom and intensity of discussion among the participants. Two types of material are found in these proceedings. First, there are the invited papers which are presented in full. Second, there are the contributed papers which are presented in abstract form.

The 73 registered participants came from 19 countries.

The cross-exchange between the stellar and solar domains was very useful. The type of physical goings-on seen on the sun is very informative when trying to puzzle out turbulence in other stars. At the same time, stars give us the conditions where the phenomena comprising turbulence are likely to occur in combinations and strengths quite different from the solar example. Stars also allow us to explore the dependence of turbulence on temperature, pressure, rotation, and similar physical variables - levers not available for the sun alone. Experience has shown that stellar turbulence is not an easy subject to deal with. We need every advantage we can bring to the problem, if progress is to be made. The unification of stellar and solar information, people, and thinking is a very basic step in this direction.

For me personally, I.A.U. Colloquium 51 was a mind expanding and pleasureable experience. I am grateful to those working with me on the organizing committee: J. Beckers, E. Gurtovenko, K. Kodaira, H. Lamers, J. Linsky, L. Lucy, E. Müller, J.-P. Zahn, for their h elp with organizing and running the meeting. I would like to thank the Union and the National Science and Engineering Council of Canada for contributing toward the travel and running expenses of I.A.U. Colloquium 51. I also wish to express my warm thanks to the participants themselves for their constructive and hard working attitudes and for their kindness to me during the meeting.

David Gray
Chairman of the Scientific
Organizing Committee