

PREFACE

Investigation of stellar magnetism and chemically peculiar stars has traditionally been one of the important directions in astrophysics in Russia and in the countries of the Former Union. The main teams concerned with this research work at the Astronomical Institute (Moscow), Pulkovo Observatory (St. Petersburg), Crimean Observatory (Nauchny, the Crimea) and Special Astrophysical Observatory (North Caucasus).

The 6 m telescope, put into operation in 1977, came to be extensively used for studies of stellar magnetic fields by the astronomers of our country and of all the world.

The Special Astrophysical Observatory played host to meetings of investigators to discuss observational programmes, methods of reduction and interpretation of data and other problems.

The conferences of stellar magnetism researchers have regularly been held at SAO since 1980. The output of the first meeting (1980) was a collection of the theses of the reports presented. Later we published full proceedings of the meetings held in 1987, 1991, 1996 in the following books:

"Magnetic Stars", 1988, eds.: Yu.V. Glagolevskij and I.M. Kopylov,

"Stellar Magnetism", 1992, eds.: Yu.V. Glagolevskij and I.I. Romanyuk,

"Stellar Magnetic Fields", 1997, eds.: Yu.V. Glagolevskij and I.I. Romanyuk.

The conference which is represented in this book was held in the Special Astrophysical Observatory, Nizhnij Arkhyz from September 24 to 27, 1999. The participants had an opportunity to visit the telescopes of SAO and get acquainted with new devices for magnetic studies and make a tour of our picturesque places.

The present book comprise more than 50 reports and posters embracing a wide range of questions associated with the investigation of magnetic fields of a variety of objects: chemically peculiar Ap and Bp stars of the upper main sequence, solar-type stars and red dwarfs, degenerate magnetic white dwarfs and unique Am Her-type objects. Much attention is paid to the development and manufacturing of novel instruments for magnetic field measurements.

We thank our friends who ventured to come to the North Caucasus for the creation of an informal friendly atmosphere that favoured successful work of our meeting. We believe that this book will demonstrate the high professional level of the problems discussed and will attract interest of readers.

We hope the tradition of holding conferences of magnetic field researchers will be pursued in the 21st century as it used to be in the 20th.

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