FOREWORD

Recent advances in observational and theoretical efforts in understanding the nature of cataclysmic variables had reached such maturity that there existed a strong, shared feeling among the workers in this field that an international colloquium sponsored by the International Astronomical Union would be timely.

To be more specific, this was due primarily to the accumulation of the new data from satellite observatories, such as the International Ultraviolet Observatory (IUE) and EXOSAT, as well as ground-based optical and radio telescopes, and the advances in modeling the putative accretion disks and the thermo-nuclear run-away phenomena in the vinicity of the white dwarf stars in cataclysmic variables. A series of workshops on this subject held in North America over the past several years and that held in Europe in 1985 had all contributed to the advances in our knowledge that led to IAU Colloguium No. 93, held in Bamberg from the 16th to 19th of June 1986.

In all, 157 astronomers from 27 countries participated in this conference. Judging from the papers presented, both invited and contributed, and from the enthusiasm seen in discussions, the meeting was indeed a success.

Although our understanding of cataclysmic variables have advanced considerably over the past few decades, there still remain a number of unresolved problems, among which are the manner of mass flow from the late type companion to the white dwarf, the detailed properties of the accretion disks, and the effect of the explosions on the late-type companions. For instance, the oft-quoted model for mass flow, in which the gas flows in an orderly manner from the late-type star, through the inner Lagrangian point, to the accretion disk, needs to be carefully re-examined. There is neither compelling theoretical reason nor observational evidence that mass flow would follow such a preordained spiral stream. Instead of misusing the concept of the critical Roche equipotential surface, we need to develop realistic hydrodynamic, preferrably magneto-hydrodynamic, models if we are to comprehend the behavior of the gas flow. It might be that a term like accretion 'doughnut' would more adequately describe the general geometry of the matter surrounding the white dwarf. We hope that future meetings on this subject and interacting binary systems in general will witness progresses on such problems.

We wish to thank the Local Organizing Committe, particularly

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Dr. Horst Drechsel, Professor Tibor Herczeg, and Mr. Rudiger Knigge, for making this meeting such an enjoyable and fruitful experience.

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