

FOREWORD

Professor Zdeněk Kopal is sixty-seven this year even though his scientific activity, enthusiasm and springy step hardly betray the advancement in years. He came to Manchester as Professor of Astronomy thirty years ago after a very fruitful association of fourteen years with the Harvard Observatory. Much impressed with the young man, Harlow Shapley, who with characteristic insight had recognised in Kopal the qualities that have since made him an outstanding leader in eclipsing binary research, had invited him over as a Research Associate. In the subsequent decade Kopal set about the task of introducing analytical rigour in the solution of orbital elements that hitherto had depended exclusively on the semigraphical procedures introduced by Russell and exploited fully by Shapley. These first efforts stimulated publication of the first of his many books on eclipsing variables; the *Introduction to the Study of Eclipsing Variables* summarized these iterative methods and remains a classic in this field. Soon after the appearance of this volume in print, Kopal gave a course on this subject for the graduate students at Harvard. I was one of those who had the opportunity to attend it and learn much on the need of care and precision in the practice of photoelectric photometry and the importance of exploiting such data to the fullest extent with methods of increasing resolving power. The RCA 1P21 photomultiplier tube had just begun to revolutionize photoelectric photometry and make it accessible to the several small instruments scattered all over the world. It was a tide in astronomical practice that could be fully swung over to maximize the availability of the basic astrophysical parameters, and much of the happy position we are in today in this regard stems from the lively role Kopal has played as a member and subsequently as President of IAU Commission 42.

Since then at Manchester, Kopal has had a very flourishing school whose contributions have continuously taken advantage of the increasing new facilities for quick and elaborate computation. The transition from the time to the frequency domain was timely from the standpoint of available means of automatic computation. The large machines can solve for the elements of a system in a fantastically short interval. Kopal's recent efforts have been to achieve similar goals with simpler computation facilities.

Many years ago, that pioneer of eclipsing binary analysis, Henry Norris Russell, delighted in having his undergraduate class solve the elements of a system with the aid of a slide rule. We have come a full circle today from this simple graphical procedure to something that can be done in the same time with great elegance and analytical rigour. This

transformation is undoubtedly the result of the Kopal era in the study of eclipsing binaries.

This Festschrift Volume is an expression of admiration, appreciation and gratitude from the many who have been Professor Kopal's students and collaborators. May the years ahead hold for him much happiness and continued creative scientific activity.

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