

PREFACE

When leaving the Victoria airport the day before our Colloquium, I saw a van of the Dunsmuir Lodge marked with big letters which I read as "*Alcohol Colloquium*". I do often make such blunders because of the global, casual, and careless way in which I read various ads, and checked myself quickly to read it correctly as "*Algol Colloquium*". Millions of fellow citizens could easily make the same mistake, and no apology could be expected. Even I read and hear the word *alcohol* more frequently than *Algol*, although I must say that Algols have given me more pleasure and fewer headaches over the years; in that, however, I may be a singularity, and possibly a pitiful one at that.

Being appointed Chairman of the Scientific Organizing Committee, I may be deemed to be a purer "*Algolist*" than other investigators, although my range of active interests is much broader; and the same is true about all the 28 invited speakers and all the other participants of the Colloquium. Our interest are strongly diversified, but there are several good reasons that brought us together at this Colloquium.

Algols, or more accurately *semidetached binary systems with non-degenerate components, similar to Algol (= β Persei)*, are just one of several kinds of close binary systems. Their specific characteristic is that they convert detached pairs of stars into semidetached pairs and eventually something else. The important point is that they transform two stars that up to that phase evolved rather independently of each other, into binary systems in which the structure of both components has been strongly affected and altered by *interaction*, that is by *mass transfer between the components* and *mass loss from the system*.

What makes Algols most important is, in my opinion, that *something else*: the subsequent stages of evolution of the binary systems. Active X-ray binaries, cataclysmic variables, and other very exciting objects may lie there. In order to fully understand those objects, the evolutionary path leading to them must be known: this explains the persistent interest in modeling Algols, and in confronting the models with real stars.

Again, the models tell us that mass loss from the interacting semidetached systems must occur, but we have very little idea when, how, and why. One way of attacking this problem is a deeper theoretical investigation of the processes we conveniently call *interaction*. Another way is observing. There exist systems in which we suspect that the mass transfer is proceeding at a high rate; I called some of them the *W Serpentis stars*. We see, in fact, too much activity in them; so much circumstellar material surrounds them that the actual actors, the component stars, are well-nigh invisible. Fortunately, the same processes seem to be occurring in the simple Algols, only on a gentler scale: here is another reason why we observe them.

No group of stars can be studied in splendid isolation; and as astrophysics grows, the web of interconnections becomes more complex. *Stellar wind*, a hot topic in

luminous stars, hot and cold, seems to be induced and enhanced in Algols; magnetic fields reach from the RS CVn stars to Algols; accretion disks are an important problem for Algols, not only for cataclysmic variables; circumstellar envelopes rather mysteriously connect Algols with Be stars.

Thus the title of the book, *Algols*, is somewhat deceptive: We have been discussing broader evolutionary aspects of binary star evolution, talked about stars whose identification with Algols is at least dubious, and heard speakers whose primary interest lies far away. No title can embrace all these aspects; and I assume responsibility for the deceptive short title, hoping that all those who will cite the book in the references at the end of all possible articles, will think kindly of me.

I, in turn, am thinking kindly of the members of the Scientific Organizing Committee who helped to prepare the scientific program. By far the greatest burden, however, lay on the shoulders of Colin Scarfe and his Local Organizing Committee, and at this moment still lies on the shoulders of Alan Batten, who is editing the Proceedings. Colin Scarfe should be also thanked by all those who received financial support enabling them to participate in the meeting. And in a broader sense, our thanks should ultimately go to the Canadian taxpayers, since most of the funds have come from Canadian institutions. A complete list of donors has been prepared by Colin Scarfe.

Finally, I wish to express our gratitude to those unsung heroes of modern civilization who gave us the *e-mail*. Without fast daily contacts between Los Angeles and Victoria, the preparation of the meeting would have been a much harder task. Thus, while so many of our fellow citizens celebrate and admire those who entertain them (often in poor taste and no better morals), let us celebrate here the hundreds of anonymous engineers and technicians who make our lives better and easier.

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