

# Preface

It is over a quarter of a century since the discovery of outflows from young stars. The intervening years have led to remarkable advances in our understanding of this phenomenon. Much of the progress can be attributed to advances in facilities and technologies, including not only larger telescopes but also improved instrument and detector performance. In addition protostellar outflows have now been imaged from the ground and space at high spatial resolution, e.g. with HST, and at a wide variety of wavelengths from X-rays to radio waves, revealing more and more about their physics. This veritable revolution in observation has been accompanied by an exponential growth in our ability to numerically simulate the launching and propagation of jets. Codes continue to improve: they now incorporate more physics and are increasingly efficient through, for example, techniques such as adaptive mesh refinement and the use of parallel processing in cluster environments. Simulating the launching and propagation of a jet all the way from the vicinity of the star up to several thousand AU (a size range of  $10^4$ ) is now much closer.

In more recent times, developments in observation, theory and numerical simulation have been joined by laboratory jet experiments reproducing, on centimetre scales, that which is seen in astrophysics to stretch for several parsecs. It is possible to do this in the lab by reproducing fundamental dimensionless variables such as the Mach number and the ratio of the cooling length to the jet span. Such experiments serve not only to simulate protostellar jets but also to rigorously test codes over wide time domains.

The idea of bringing together all these different approaches to the study of protostellar jets led us to form the Jet Simulation, Experiment and Theory (JETSET) network. JETSET is a research–training network, funded by the European Union, involving ten institutions, approximately 100 scientists and 18 directly employed postdoctoral and pre-doctoral researchers. Knowledge was passed on not only through traditional one-to-one supervision and intensive international collaboration but also through a series of dedicated schools open to the wider community. The network was very successful not only in terms of its research output but also in the level of cooperation it engendered. No doubt some of our trainees will be next generation experts in this field.

It was thus a great pleasure for JETSET to organise a conference in the beautiful island of Rhodes, home of the ancient Greek astronomer Hipparchus. This meeting

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