

*Preface*

In July 1998, nearly a hundred astronomers gathered in Wales to consider the Low Surface Brightness (LSB) Universe. IAU Colloquium 171 took place at the University of Cardiff and it marked the 60th birthday of Mike Disney, the Cardiff astronomer who, following those other well known dissidents Fritz Zwicky and Halton Arp, was a pioneer in recognizing that the observed population of galaxies is highly influenced by surface brightness selection. It is now clear that many galaxies are much more diffuse or unevolved than the Milky Way. There are interesting consequences to the truism that our galaxy catalogs only contain galaxies that we can detect.

The study of the LSB universe is an ongoing battle between technology and available photons - after all, Messier's objects were LSB by the standards of the 18th century. Over the past ten years or so, the locus of the debate has shifted from the existence of LSB galaxies to their cosmological significance. Most of the contributions at the Colloquium reflected the traditional optical study of galaxies. However, much evidence was also presented on the gas content of galaxies using the 21cm line of neutral hydrogen. Participants also heard about attempts to learn about the LSB Universe using quasar absorption lines, which are sensitive to extremely small amounts of neutral gas.

IAU Colloquium 171 was a bracing mix of new data and challenging ideas. The combination of optical and radio astronomers, looking at high and low redshift targets, proved to be a success and spurred many discussions outside the formal sessions. Indeed, from humble beginnings, the current breadth and depth of the subject was emphasised by the existence of a whole community dedicated to its study.

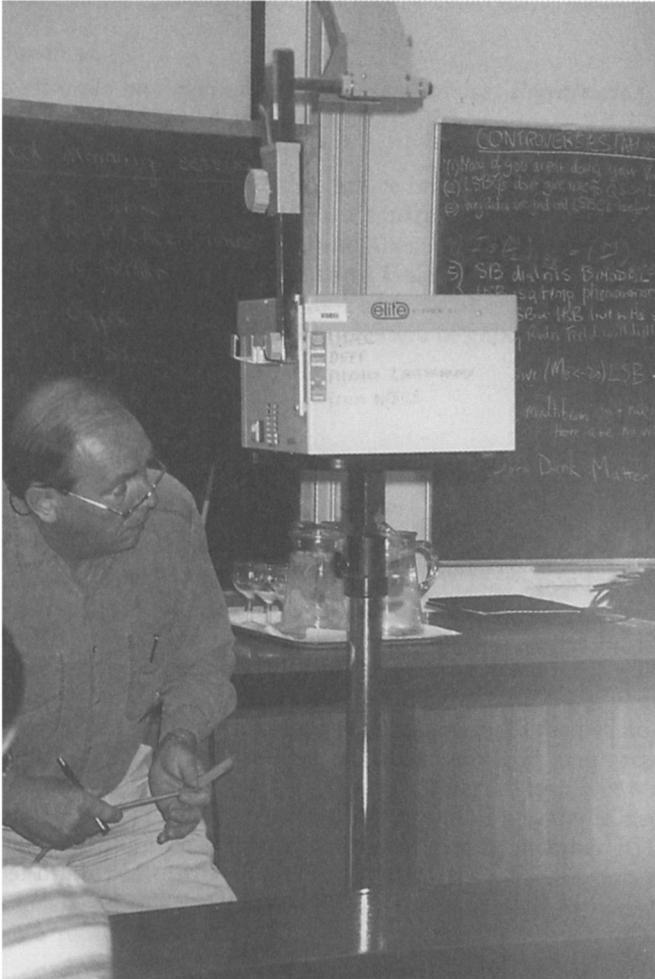
As the meeting progressed, controversial statements and unanswered questions were written on a blackboard at the front of the lecture theater. By the end of the week, nearly 50 had been listed. Even so, there was little real controversy at the meeting itself - who is there to argue with at a meeting of the already converted!

Participants from hot summer climates were also grateful for the blustery Welsh weather, which was best experienced during a clifftop walk on the third afternoon. Another conference highlight was the dinner in the great hall of Caerphilly Castle, built in the 13th century and one of the major fortresses of Europe. As Mike Disney reminded us after the dinner, astronomers are indeed lucky to be paid to travel the world and ponder the exotica of the Universe. The meeting also coincided with the final stages of the soccer World Cup, providing - especially for our French and Dutch colleagues - an excuse to visit the local hosteleries to watch the matches on television and celebrate or drown sorrows!

We thank the Department of Physics at the University of Cardiff for hosting the colloquium and for financial support. Thanks are also due to Rodney Smith for his hard work chairing the Local Organising Committee, to our other session organisers and chairmen Greg Bothun, Elias Brinks, Mike Disney, Ken Freeman, Thijs van der Hulst and Yuri Izotov and to the Cardiff Conference Office, especially Su Hayward-Lewis, our conference co-ordinator.

*Jon Davies, Chris Impey, Steve Phillipps*

## Searching for LSB - I



It's not under here !