



Flash! The hunt for the biggest explosions in the universe

by Govert Schilling

Cambridge University Press, 2002.
ISBN 0-521-80053-6. Pp xi + 291,
£18.95 (hbk).

The 1990s saw great progress in many branches of astrophysics, but none advanced more spectacularly than the field of gamma-ray bursts (GRBs). At the beginning of the decade the majority opinion was that these enigmatic flashes of high-energy radiation must originate in violent outbursts of neutron stars, comparatively nearby within the Milky Way. By its end, it was clear that GRBs are in fact vastly more powerful explosions taking place in galaxies far across the universe.

Flash! tells the fascinating history of GRB research from the first discovery in the late 1960s (by US military satellites intended to monitor compliance with the nuclear test ban treaty), more or less up to the present day. Simply as a study in the scientific method, this is an interesting story: for long periods observational progress was very slow, leaving theorists to speculate which, if any, of the many plausible models best explained the GRB phe-

nomenon. These barren stretches, however, were punctuated by a few decisive observational breakthroughs, the most dramatic of which occurred in early 1997 when the fading afterglows of GRBs were located in X-rays, optical light and radio for the first time. This discovery finally brought the full range of modern techniques to bear, quickly providing redshift measurements for several GRBs, and proving that they are of cosmological rather than galactic origin.

Schilling obviously talked to many of the major players in the GRB game when researching the book, and enlivens the text with a number of colourful biographical notes. In particular, the book itself is dedicated to the memory of Jan van Paradijs, the Dutch astronomer who led the team making the crucial 1997 advance, but who died of cancer in 1999.

The book is written (and translated from Dutch) in lucid prose (only occasionally becoming overly flowery); it is generally very accurate and the explanations are clear and revealing. Perhaps because it is such a rapidly moving field, there are few popular



books devoted to GRB science, but I will be surprised if a better one appears for a while.

Nial Tanvir

Dr Nial Tanvir is a lecturer in astrophysics at the University of Hertfordshire. His research interests include gamma-ray bursts and other aspects of cosmology.

This review is copyright © the *Journal* of the British Astronomical Association, www.britastro.org/journal. If you wish to reproduce it, or place it on your own Web page, please contact the Editor: Mrs Hazel McGee, hazelmcgee@compuserve.com