



The edge of infinity – supermassive black holes in the Universe

by Fulvio Melia

Cambridge University Press, 2003.
ISBN 0-521-81405-7, pp. ix + 148.
£18.95 (hbk).

As with so many astronomical books, the eye-catching main title has a fairly distant relationship to the subject. Melia is at some pains to deal with the scale of the Universe from the 3 kilometre radius of a one solar mass black hole to the over 13 billion light years of the visible Universe. My first impression was that the book is much more about the Universe than black holes. However, a quick review of the titles of sections and subsections shows he stuck to his last.

He looks at black holes, where they lurk in the centres of galaxies. He explains how they dominate their surroundings and how infalling gas becomes so heated that it shines brightly and produces quasars and other active galactic nuclei. There is a good deal about the cosmic microwave background radiation and the various types of galaxy, even about starburst galaxies which contain more than one black hole of merely high not super-mass.

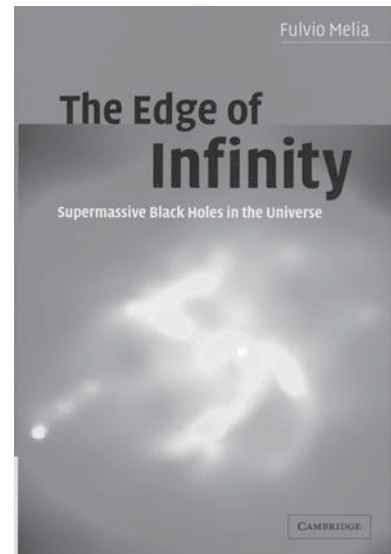
There is a most interesting section discussing the idea that the Universe itself might be in a black hole (read it for yourself – I'm not going to tell you).

The publishers say that this is an 'elegant non-technical account'. It is non-mathematical and there are lots of references to enable the interested reader to get to the original or seminal papers, but I did not find it non-technical in any other way. There is an intriguing explanation beginning on page 46 of rotation and why two full turns are needed. I cannot yet state that I understand it. I even tried the Philippine Wine dance, but couldn't do that either, even though I used an empty plastic cup, not a full wine glass.

There is some odd English amongst the striking ideas.

Plenty of attractive illustrations are included, but the numbering is odd and makes no distinction between pictures in the text and those in the two special sections. I was pleased to see images from the VLT, VLA and Chandra as well as artists' impressions and computer simulations.

Melia is Professor of Astronomy at the



University of Arizona and there is no doubt that he knows what he is talking about.

Roger O'Brien

Roger teaches astronomy and cosmology for the Open University and the Workers' Educational Association. He has just revived his interest in science fiction.