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0521828236 - Handbook of Pulsar Astronomy
D. R. Lorimer and M. Kramer
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Handbook of Pulsar Astronomy

Radio pulsars are rapidly rotating highly magnetised neutron stars. Studies of these fascinating objects have provided applications in solid-state physics, general relativity, galactic astronomy, astrometry, planetary physics and even cosmology. Most of these applications and much of what we know about neutron stars are derived from single-dish radio observations using state-of-the-art receivers and data acquisition systems. This comprehensive book is a unique resource that brings together the key observational techniques, background information and a review of the latest results, including the recent discovery of a double pulsar system. Useful software tools are provided which can be used to analyse example data, made available on a related website. This volume will be of great value not only to graduate students but also to researchers wishing to carry out and interpret a wide variety of radio pulsar observations.

DUNCAN LORIMER received his Ph.D. in 1994 from the University of Manchester for his work on the Galactic population of millisecond and normal pulsars. Since then he has been involved in numerous surveys for radio pulsars. From 1995 to 1998 he was a post-doctoral fellow at the Max-Planck-Institute for Radioastronomy (MPIfR) where, working with Michael Kramer, he discovered the first pulsars with the Effelsberg telescope. From 1998 to 2001 he was a staff scientist at the 305 m Arecibo telescope in Puerto Rico, USA. Since September 2001, he has held a Royal Society University Research Fellowship at Jodrell Bank Observatory. His main research interests are the origin and evolution of pulsars.

MICHAEL KRAMER received his Ph.D. from the University of Bonn, Germany, in 1995 for his work on pulsar observations with the 100 m Effelsberg radio telescope operated by MPIfR. In 1997, he received the Otto Hahn medal from the Max Planck Society, followed by a year as a visiting scholar at the University of California at Berkeley, USA. In September 1999 he took up a lectureship position at the University of Manchester where he is now Reader in Physics and Astronomy. He was the main editor of *Pulsar Astronomy: 2000 and Beyond* published by PASP. His main research interests cover pulsar timing, gravitational physics and the observations of pulsars at the highest radio frequencies ever used.

Both authors have extensive experience in using the largest radio telescopes for pulsar observations, including the telescopes at Jodrell Bank, Arecibo, Effelsberg, Green Bank, Parkes, GMRT and Westerbork. As a recent highlight they have both been involved in the discovery of the first double pulsar system.

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D. R. LORIMER
JODRELL BANK OBSERVATORY

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