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国台学术报告 NAOC COLLOQUIUM

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Time: Tue. 2:30 PM, Nov. 21st Location: Multi-Function Hall

Precision fundamental physics with astronomy

Prof. Michael Kramer

Max Planck Institute for Radio Astronomy



Prof. Michael Kramer received his PhD in Physics from University of Bonn in 1995. After that, he worked as staff astronomer at MPIfR (1996-1998) and worked as Otto-Hahn fellow at the University of California at Berkeley (1998-1999). Then, he became Lecturer (1999-2003), Senior Lecturer (2003-2005) and Reader (2005-2006) at the University of Manchester and Head of the Pulsar Group of the Jodrell Bank Observatory/Jodrell Bank Centre for Astrophysics (2005-2009). In 1999, he joined in the Jodrell Bank Observatory and worked as Associate Director there (2007-2009). He was a professor for Astrophysics at the University of Manchester (since 2006). He is currently Director and Scientific member at the Max-Planck-Institut für Radioastronomie (since 2009).

Abstract

The Universe is vast. And even though we live on a tiny planet among billions of stars in a galaxy that is one of very many, we are curious enough to seek to understand its beginning and the fundamental laws that govern it: Curiosity-driven research in its purest form - and of fundamental importance. Einstein himself said that “he had no special talent” but “that he was only passionately curious”. This “slight” understatement mocks the fact that his theory of general relativity (GR) represents our best understanding of gravity – by far. But whether it is also our last word, at least on macroscopic scales, remains to be seen. Radio astronomy provides a unique tool for making appropriate experiments to test gravity and to explore fundamental physics with high precision. I will present some of these tests related to radio pulsars and compare them with observations using gravitational wave detectors or experiments to image the black hole in the centre of the Milky Way.

All are welcome! Tea, coffee, biscuits will be served at 2:15 PM