



南昌大学百年校庆系列 学术报告(在线)

Testing Gravitational Theories by Gravitational Wave Astronomy

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个人简介:

美国贝勒大学终身教授，美国贝勒大学引力、宇宙学和天体粒子物理研究中心主任，浙江工业大学理论物理及宇宙学研究所所长，浙江工业大学、扬州大学、湖南师范大学和上海交通大学引力波物理联合中心主任，金砖五国引力、宇宙学和天体物理学学会创始人兼总秘书长，等职位。王安忠教授一直在黑洞、引力塌缩、引力辐射、暗物质、暗能量、经典及量子引力理论等领域开展研究工作，特别是在Horava-Lifshitz量子引力领域及量子引力在早期宇宙效应的高精度解析计算做出了重要贡献。在国际学术杂志上发表250余篇学术论文，被他人引用七千余次。长期致力于研究生的培养工作，已指导30余名博士后、博士及硕士生出站、毕业。现为五个国际学术刊物编委、以及二十几个国际学术刊物、基金会的项目评审专家。



报告摘要:

About 100 years after Einstein's prediction, gravitational waves were finally detected by two detectors of the Laser Interferometer Gravitational-wave Observatory (LIGO), one is located in Livingston, Louisiana, and the other in Hanford, Washington, USA. The event was recorded on September 14, 2015 at 5:51 a.m. Eastern Daylight Time (09:51 UTC). After careful analysis, the scientists made their discovery public on February 11, 2016, 10:30 AM US EST. This confirms a major prediction of the general theory of relativity proposed by Albert Einstein in 1915, and opens an unprecedented new window onto the cosmos. In this talk, I shall give a basic review on gravitational waves in Einstein's theory, explain the challenges one has to face for their detections, and introduce the most like sources to produce strong enough signals for us to observe on Earth. The discovery on September 14, 2015 is really the culmination of decades of instrument research and development, through a world-wide effort of thousands of researchers and organizations. More excitingly, it marks the beginning of a new era of gravitational wave astronomy the possibilities for discovery are as rich and boundless as they have been with light-based astronomy.

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欢迎大家参加!

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