Additional information

International Astronomical Union Symposium "New Frontiers in Black Hole Astrophysics"
12-16 September 2016, Cankarjev dom, Ljubljana, Slovenia
blackholes2016.si

The existence of black holes was originally postulated by the german physicists Karl Schwarzschild, as a solution to Einstein's famous equations of general relativity. At first, they were considered to be purely a mathematical curiosity. Now, 100 years later, thanks to an impressive development in observational astronomy, it is well established that these objects are ubiquitously present in the Universe. We now know that stellar black holes are formed by the collapse of stars and that supermassive black holes (weighting millions of times more than our own Sun) reside in centres of most galaxies in the Universe.

The last major discovery in this fascinating field happened just one year ago, with the first signal of gravitational waves detected by the LIGO observatory in the USA. It has revealed a new class of black hole systems: two large black holes spiraling together to the final merger, billions of light years away.

At the 100th anniversary of the theoretical prediction of these fascinating objects, Slovenia, and in particular the University of Nova Gorica, have the honour of organizing the 324th Symposium of International Astronomical Union (IAU) titled: “New Frontiers in Black Hole Astrophysics” (www.blackholes2016.si). IAU Symposia are the major meetings of the Astronomical community and astrophysicists at the University of Nova Gorica won the privilege to host the first IAU Symposium in Slovenia thanks to the active role they play on the world's stage. The attendees will be welcomed to the Symposium with a short speech given by the Minister of Education, Science and Sport, Dr. Maja Makovec Brenčič.

In the period from September 12th to 16th, Cankarjev Dom in Ljubljana will host more than a hundred of world-renown experts who will discuss state-of-the-art theoretical modeling of black hole systems and the implications on our understanding of astrophysics and cosmology. In preparation for new, major international facilities such as the Cherenkov Telescope Array, the Large Synoptic Survey Telescope and the Square Kilometre Array coming on-line from 2018 onwards, part of the meeting will be dedicated to discussions on how these new instruments could be used in the most productive ways to reveal the remaining mysteries surrounding these objects.

During the meeting, a public talk with the title “Gravitational waves: A new astronomy” will be given on September 14th, exactly one year after the first direct detection of gravitational waves. The speaker, Professor Sheila Rowan, will tell a captivating story about the theoretical prediction of gravitational waves 100 years ago and the amazing technological developments which made their

discovery possible. Professor Rowan is the Director of the Institute for Gravitational Research at the University of Glasgow and has been recently appointed Chief Scientific Adviser for Scotland. A wide audience, including high school students is warmly welcome to attend. It is necessary to reserve free-of-charge tickets on blackholes2016@ung.si. In addition, teachers' workshop and sky observations will be organized, as well as an exhibition on black holes in parallel at the National Assembly and Cankarjev dom, including guided tours.

During the meeting, the organizers will make every effort to introduce Slovenian culture and heritage to the visitors. This will include a walking tour of Ljubljana, a visit to the Postojna Cave and to the newly renovated Lanthieri mansion in Vipava valley, which now hosts the University of Nova Gorica.

The event is organized by the University of Nova Gorica and we kindly acknowledge the sponsorship by IPZ d.o.o. and Aresis d.o.o.

The Symposium webpage: blackholes2016.si