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Physicists Design New Telescope to See the Beginnings of Time

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Physicists at the University of Birmingham have received a grant of £150,000 to design a new telescope that will aid them in their quest to discover more about the dark side of the universe.

The team are part of a worldwide collaboration that is looking for gravitational waves - tiny distortions of space-time that were predicted by Albert Einstein in the early 20th Century, but have never been directly detected. This is one of the most fundamental research areas in modern science as the direct observation of these waves will allow totally new insights into physics of black holes and may provide a direct view at what happened just after the Big Bang.

Two first generation interferometric detectors, GEO 600 and Virgo, are active already in Europe - in collaboration with the three LIGO detectors in America. The University of Birmingham is already making strong contributions to the instrument development and science exploitation of these five instruments.

The new Einstein Telescope will be designed by physicists over the next three years, and will be an important step towards the third generation of gravitational wave observatories. They will be a hundred times more powerful than the current detectors, increasing the volume of the universe that can be observed by a factor of a million.

Dr Andreas Freise, lead investigator from the University of Birmingham's School of Physics and Astronomy, says, 'We are delighted to have received the grant to design the new telescope along with our colleagues in the UK and Europe. Gravity has been the first known fundamental force - but is still the least understood. This project is a crucial step towards a better understanding of gravity and its role in shaping our universe.'

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Notes to Editors

1. The European Commission has awarded £3 million to the Einstein Telescope project.

2. The Einstein Telescope Project is a collaboration between eight European research institutes: EGO, an Italian French Consortium in Pisa; Instituto Nazionale di Fisica Nucleare (INFN) Italy; the French Centre National de Recherche Scientifique (CNRS); the German Albert Einstein Institute (AEI) Hannover, University of Cardiff, University of Glasgow, and the Dutch Vrije Universiteit Amsterdam.

For further information

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