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The Einstein Telescope –the next-generation gravitational wave observatory

Based on the success of the current generation of gravitational wave detectors, we are planning the construction of a new observatory with 10-fold sensitivity and an extended frequency range. It is called the Einstein Telescope. It is a new research infrastructure designed to observe the entire Universe using gravitational waves. ET will be a multi-interferometer observatory covering the whole gravitational wave spectrum observable from Earth. It will achieve a greatly improved sensitivity by increasing the size of the interferometer from the 3km arm length of the Virgo detector to 10km and by implementing a series of new technologies. These include a cryogenic system to cool some of the main optics to 10 –20K, new quantum technologies to reduce the fluctuations of the light, and a set of infrastructural and active noise-mitigation measures to reduce environmental perturbations.
Please visit us, to discuss about the science and technologies of the project.

Keywords

Collaboration

other Collaboration

Einstein Telescope

Subcategory

Science Fair

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