

The status of KAGRA underground cryogenic gravitational wave telescope

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KAGRA is a 3-km interferometric gravitational wave telescope, which is being built at the underground site of Kamioka mine in Gifu prefecture, Japan. It is the first km-scale interferometer constructed at a quiet and stable underground site to reduce seismic and Newtonian noise. Also, it will be the first km-scale interferometer to utilize cryogenic mirrors to reduce thermal noise.

The project started in 2010, and the construction of the basic infrastructure including the tunnel and the vacuum system was completed in 2015. In March and April 2016, we performed the first test run with a simplified configuration, i.e., 3-km Michelson interferometer at room temperature. Here we present some of our recent results of the test run, and show the development status for the full configuration of KAGRA.

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