

Cooled sapphire mirrors in KAGRA

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KAGRA is one of 2nd generation gravitational wave detector which is at Kamioka (1 hour drive from Toyama). This detector has unique key features which other 2nd generation detectors do not have; underground site with small seismic vibration and cooled sapphire mirror to reduce thermal noise. I will explain why KAGRA adopts sapphire as mirror substrate and how we developed sapphire mirrors and its suspension. I also introduce activity for sapphire mirror at Toyama before installation at KAGRA site.

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