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Cryogenics research in ETpathfinder

In preparation for Einstein telescope, strategies to cool down the cryogenic payloads and cryotrap without introducing excess technical noise need to be developed and validated. A viable, ultra-low vibrational-noise strategy is to employ sorption coolers for low temperatures and sub-cooled liquid Nitrogen for intermediate temperatures. This technology is chosen in ETpathfinder. We will present aspects of this technology, describe how it is being implemented in ETpathfinder and sketch the roadmap to scale up and reach technical readiness level 9 for Einstein Telescope.

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