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## Outline of cryogenic payload compliance with Einstein Telescope LF

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The scientific target of cooling-down test mass payloads of ET without affecting the capability of reaching very high sensitivity in the low frequency range is often assessed as achievable. Indeed, relevant developments have still to be pursued with the perspective of a reasonable technical design. Moreover, the overall design of cryostats and its technical facets are interlaced with several constraints determined by the payload design. The system must be compliant with very low seismic background and seismic attenuation performance. At the same time, low thermal noise performance achievable at low temperature should not be spoiled by mechanical dissipations embedded in the payload as a part of the cooling system.

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