

A single-cavern solution for the ET-LF test-masses

The test-masses for ET-LF present one of the most complex hardware design challenges in the whole project. We propose a conceptual design for the towers that is capable in principle of addressing several concerns: rigid mounting of the suspension system; interfaces with the cryogenic and cryogenic vacuum systems; and clean installation and access. The design simplifies the civil-infrastructure interface, operating in a single cavern without underfloor excavation. There are many complex design issues still to address, but there do not appear to be any technological show-stoppers.

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