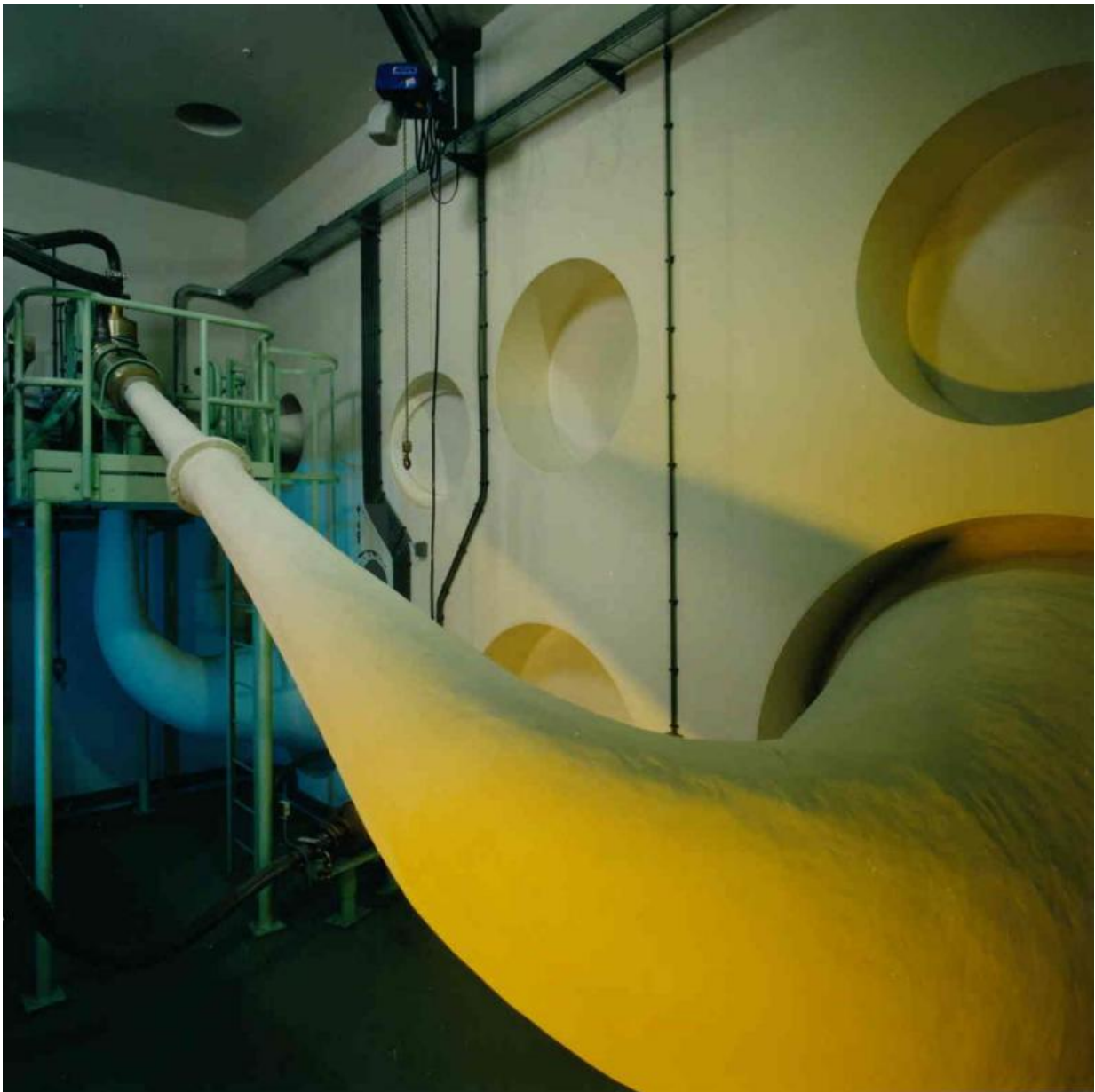


Image: LEAF sound horn at ESA's Large European Acoustic Facility

March 3 2016



Credit: ESA – A. Le Floch

The largest sound horn feeding into ESA's Large European Acoustic Facility – seen here during its installation in 1990 – which is used to subject satellites to a noise level equivalent to a rocket launch.

LEAF is an integral part of ESA's ESTEC test centre in Noordwijk, the Netherlands, a collection of spaceflight simulation facilities under a single roof. One wall of the chamber – which stands 11 m wide, 9 m deep and 16.4 m high – is embedded with a [set of enormous sound horns](#). Nitrogen shot through the horns can produce a range of noise up to more than 154 decibels, like standing close to multiple jets taking off.

As a safety feature, LEAF can operate only once all the doors are closed. Steel-reinforced concrete walls safely contain its noise, coated with epoxy resin to reflect [noise](#) to produce a [uniform sound field within the chamber](#). The chamber itself is supported on rubber bearing pads to isolate it from its surroundings.

Provided by European Space Agency

Citation: Image: LEAF sound horn at ESA's Large European Acoustic Facility (2016, March 3) retrieved 10 April 2024 from <https://phys.org/news/2016-03-image-leaf-horn-esa-large.html>

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