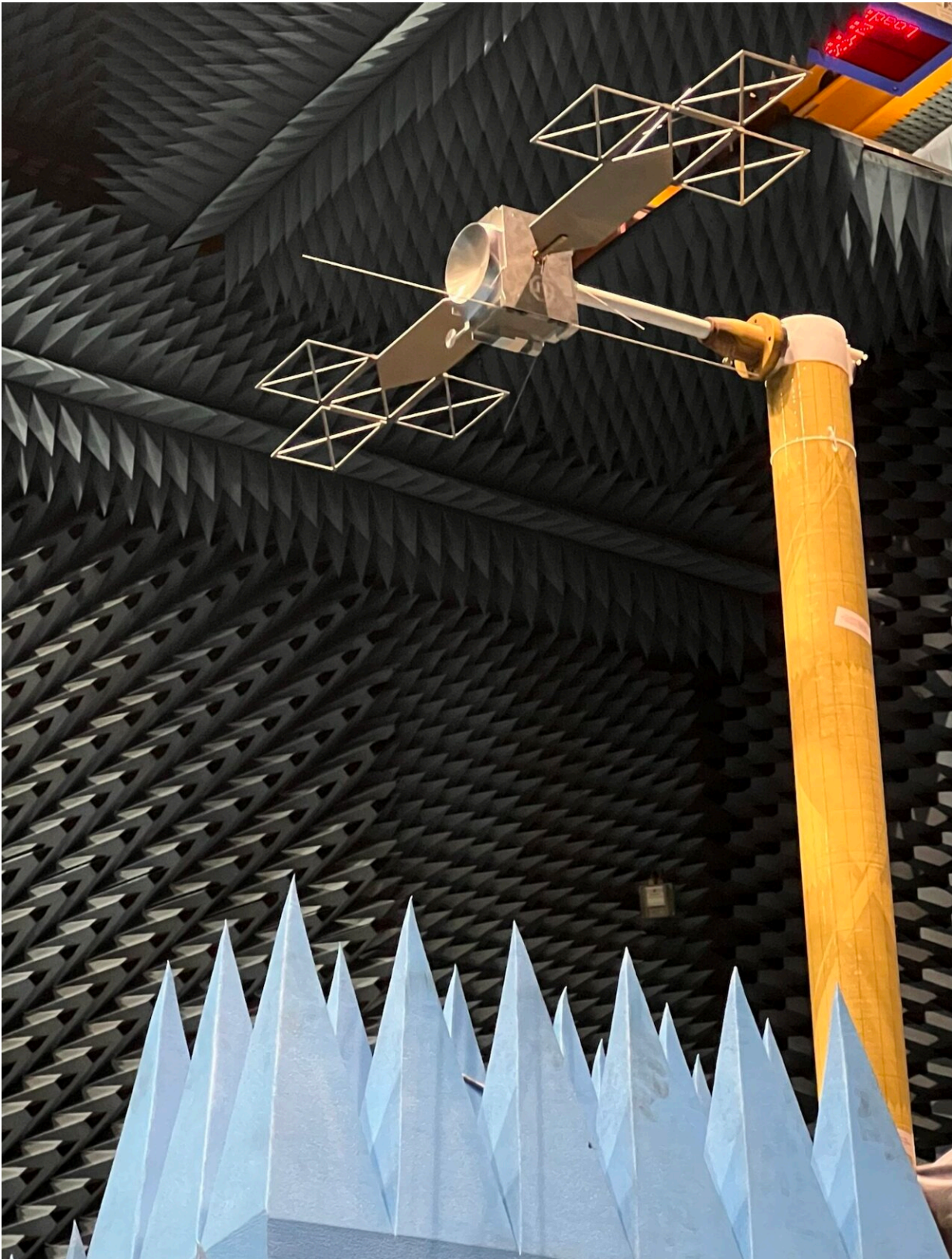


Testing radar to peer into Jupiter's moons

December 23 2021



Credit: ESA-P. de Maagt

A 1:18 scale model of Juice, ESA's spacecraft to explore the Jupiter system, is being employed to test its radar antenna.

The working version of the RIME instrument (Radar for Icy Moons Exploration), incorporating a 16-m long version of the straight 'dipole' boom seen here under the model spacecraft, will probe up to 9 km deep under the surfaces of the gas giant's main "Galilean" moons.

The testing took place in ESA's Hertz (Hybrid European RF and Antenna Test Zone) chamber based at ESA's ESTEC technical heart in the Netherlands.

Metal walls screen outside radio signals, while spiky foam interior cladding absorbs radio signals internally to create conditions simulating the infinite void of space.

This chamber's hybrid nature makes it unique: Hertz can assess [radio signals](#) from antennas either on a local 'near-field' basis or as if the signal has crossed thousands of kilometers of space, allowing it to serve all kinds of satellites and [antenna](#) systems.

A scaled model of the [#JUICE](#) Radar antenna is under characterization test [@TestCentre](#).

The RIME instrument, with its 16 m boom, will sound the depth of the Galilean moons down to about 9 km. [@ASI_spazio](#)
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pic.twitter.com/qINWqpkqEs

— ESA's JUICE mission (@ESA_JUICE) [December 21, 2021](#)

Provided by European Space Agency

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