

The world's first wooden satellite

A Finnish company is set to launch the world's first wooden satellite, largely constructed from birch plywood, into space in November

WISA Woodsat: Based on **CubeSat** design primarily used by hobbyists and students

Nov 2021: First mission will test durability of **Space Plywood** panels in extreme hot and cold conditions of space

50km
30 miles

500km
300 miles

Mahia Peninsula

Wellington

NEW ZEALAND

Pacific Ocean

Nine solar panels

Launch site: Rocket Lab Launch Complex 1

One side will be coated in normal wood varnish to see how it reacts to space environment

10cm

Radio antennae

Relay video and photos back to Earth

ESA Quartz Crystal Microbalance sensor measures any gas venting from wood

Selfie stick: Records changes in appearance

HOW SPACE PLYWOOD IS MADE – UPM Savonlinna Mill, Finland

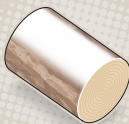
1. Birch

logs soak in water for 24 hours



2. Bark removed

and log cut into lengths



3. Logs peeled

and sheets dried



4. Veneers

glued together (alternate layers rotated 90°)



5. Hot press

squeezes layers together for several minutes, curing glue to maximum strength



6. Wood

dried in **thermal vacuum**, then coated in **aluminium oxide**

