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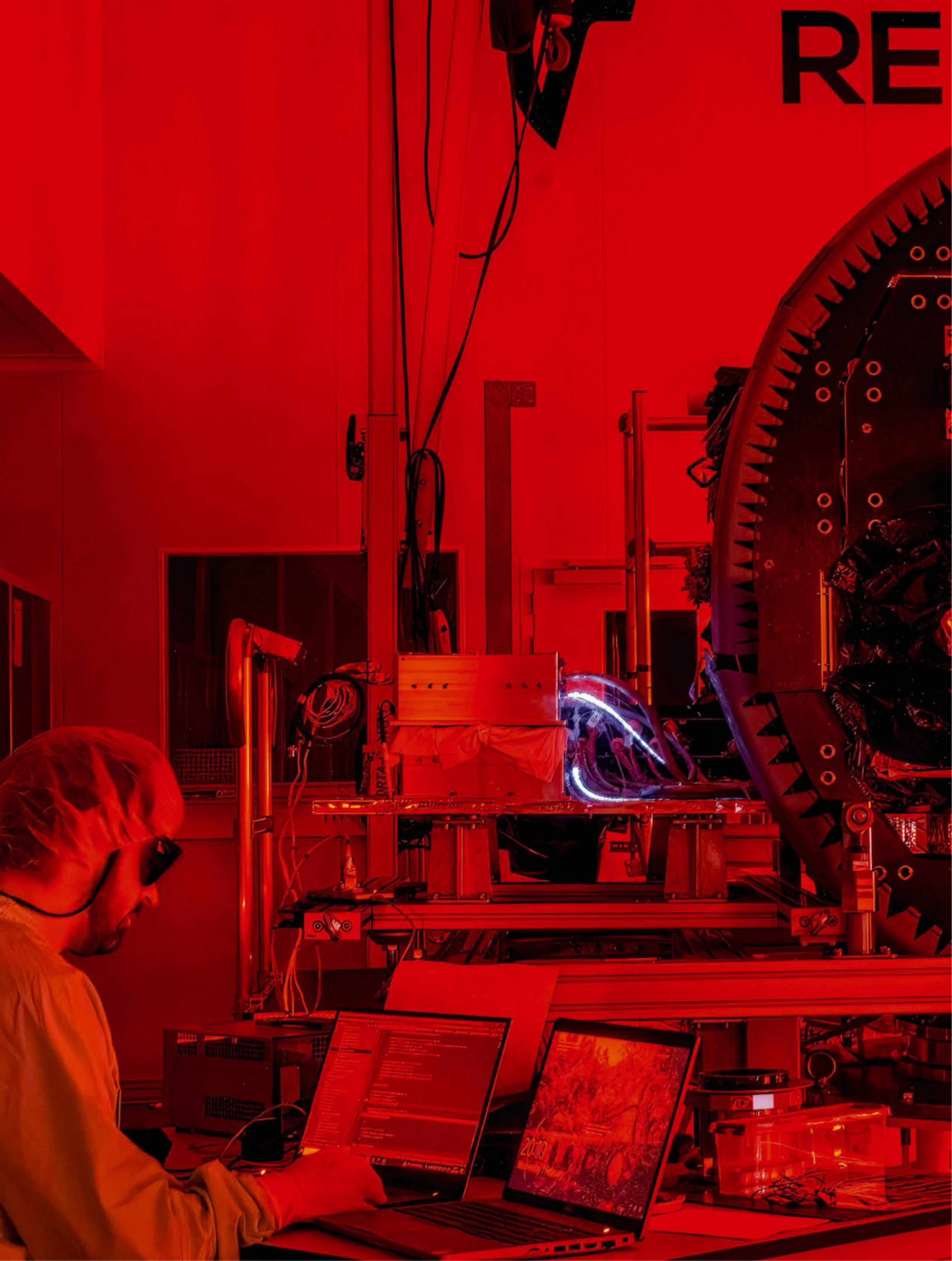
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EYE OPENER

Laser guidance

KRUIBEKE, BELGIUM

Don't believe what you see. This room isn't bathed in red light; it's actually pitch black, save for the laser shooting off to the right. An infrared camera allows you to see what's happening here, which is a test of the laser-guided positioning system for the European Space Agency's Proba-3 mission.

Due to launch from India in September, Proba-3 involves two satellites flying in precise formation to produce an artificial eclipse. One of the two (known as the 'Occulter') will be tasked with blocking the Sun's light from the other (the 'Coronagraph'). The artificial eclipse produced by the Occulter will enable the Coronagraph to gather data on the corona around our host star, which is otherwise invisible due to the Sun's glare.

The shadow cast by the Occulter will be just a few centimetres wide, hence the need for a high-precision positioning system to keep the spacecraft aligned. With the help of laser guidance and other sensors, they will fly approximately 150m (492 ft) apart while maintaining a formation to within a few millimetres (less than 1/8 inch).

ESA/M PEDOUSSAUT/J VERSLUYS

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