BBC

CLOSING IN ON A CURE FOR MIGRAINES

Science Focus

The secrets of
YOUR SECOND BRAIN

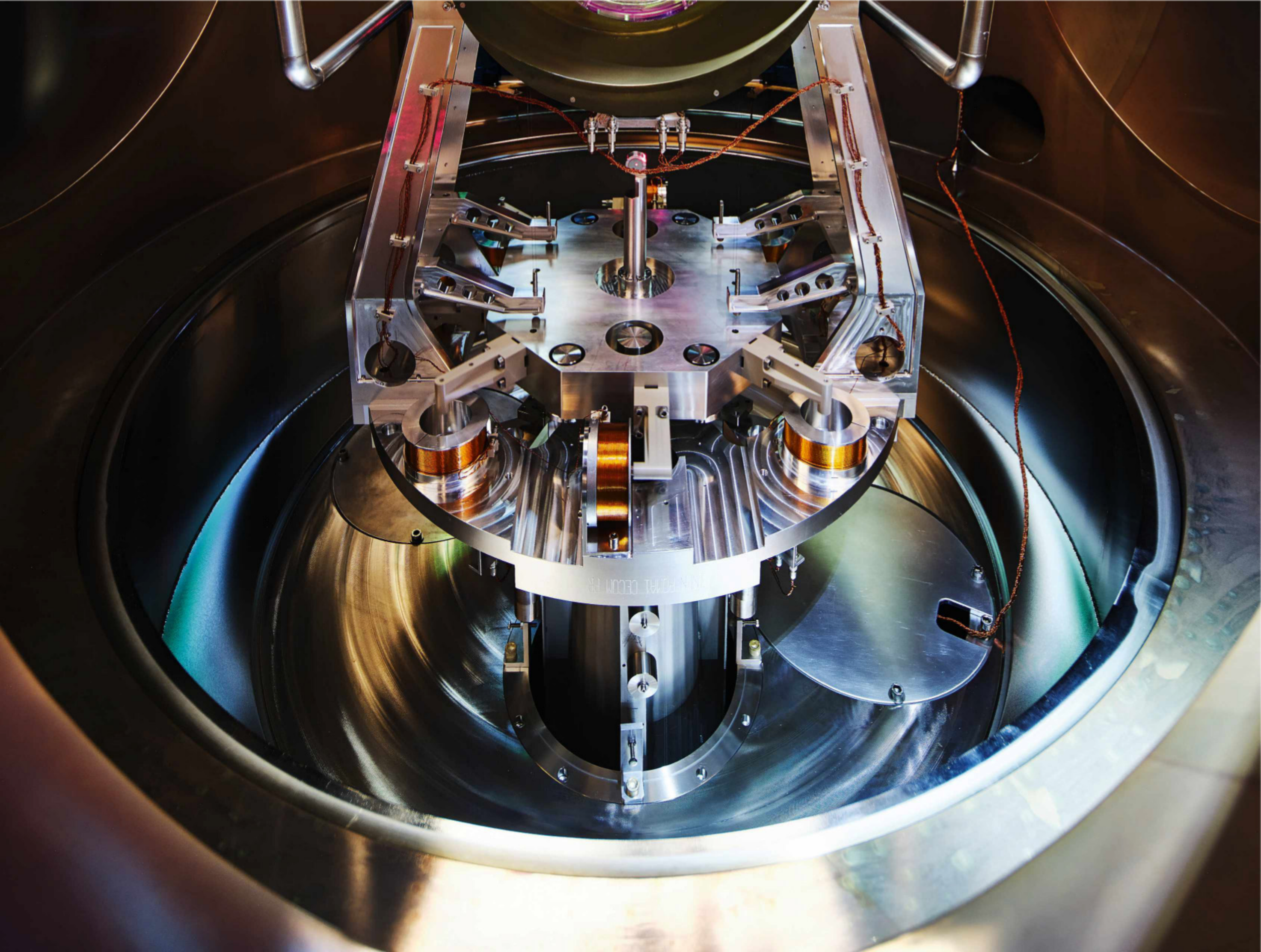
Why we don't need
ROBOTS THAT LOOK LIKE US

THE NEXT GENERATION OF SPACE TECH IS HERE AND IT'S GOING TO TAKE US TO PLACES WE'VE NEVER SEEN BEFORE

INTO THE UNKNOWN

SF
SCIENCEFOCUS.COM
09>
9 772632 284028
#382 SEP 2022
UK £5.50

IN THIS ISSUE



ES-PHOTOGRAPHY

VISIT US FOR MORE AMAZING IMAGES:

SCIENCEFOCUS BBCSCIENCEFOCUS

Catching waves

VIRGO INTERFEROMETER, CASCINA, ITALY

Despite Einstein's prediction of gravitational waves, the first direct observation wasn't until 2015, when two colliding black holes were observed by the LIGO gravitational wave detectors. Since then, experiments like LIGO and Virgo (above) continue to detect these ripples in the fabric of space-time.

This photo reveals the inner workings of Virgo's interferometer, the instrument responsible for taking the measurements that are needed to detect gravitational waves. Virgo has undergone several upgrades, including a more powerful laser source and upgraded optics. "The upgraded setup is being tuned to achieve maximum sensitivity," says Fiodor Sorrentino, Virgo's commissioning coordinator. "We plan to start the next observing cycle in March 2023, together with the LIGO and KAGRA observatories, with a 50 per cent improvement in sensitivity. A three-fold advance in the detection rate will see it go from one gravitational wave per week to one per day!"