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## News Summaries

### Nations breach methodology of science tests

[Friday May 15] International league tables that rank nations according to how their school pupils perform in science and mathematics are flawed according to an academic from the US. Iris C Rotberg of George Washington University in Washington, DC, argues that test scores from the Third International Mathematics and Science Study (TIMSS) are misleading (*Science* 280 1030). Rotberg claims that the methodology used in the international tests do not allow for factors such as the different curriculum emphases in each country or the proportion of students from low-income families in the test samples. The inclusion of these factors, and other indicators of education quality, could change the league tables significantly.

### Quantum computers shape up

[Friday May 15] The dream of quantum computers has moved a small step closer with the first successful demonstration of a quantum algorithm in an experiment and a novel proposal to build a quantum computer based on the silicon technology used in existing computers. Quantum computers exploit the ability of quantum particles to be in a superposition of two states at the same time and have the potential to outperform classical computers by many orders of magnitudes in certain tasks. For example, whereas searching the entire web (which contains 8 trillion bytes of data) for a keyword would take a month using a classical computer, such a search might take less than half an hour on a quantum computer.

### Birth of a black hole

[Friday May 15] Australian astronomers believe they are seeing the creation of a black hole at the centre of a star. This is the first time that such an event has been observed. Last month the BeppoSAX satellite spotted a burst of gamma rays from a suspected supernova explosion in the galaxy ESO 184-82. Ground-based observations by telescopes in Australia indicate that the object is becoming brighter at gamma, visible and radio wavelengths, unlike all other gamma-ray bursts. The astronomers believe that the burst came from the sudden collapse of matter into a black hole.

### India tests nuclear bombs

[Wednesday May 14] The Indian Government surprised the world this week with a series of five nuclear tests, the country's first since a 'peaceful' explosion in 1974. On Monday, the country detonated

a hydrogen bomb, a low yield atomic device, and a tactical nuclear weapon 100 metres below ground. Today, two sub kiloton explosions were carried out at the Pokhran test site in Rajasthan. These last two tests were not picked up by seismic stations set up for monitoring the comprehensive test ban treaty (CTBT). According to experts, no monitoring network could have picked up these last two explosions.