"Quantum Supremacy" – China's New Supercomputer "10 Billion Times Faster" Than Google's

Description

America is locked in a quantum computer race with China. The latest developments from Chinese scientists show a "significant computing breakthrough, achieving quantum computational advantage," according to state media Xinhua News Agency.

Thursday, China's top quantum research group published a new research paper in the journal Science, titled "Quantum computational advantage using photons," outlines how a quantum computer prototype detected up to 76 photons through Gaussian boson sampling (GBS), a standard simulation algorithm, Xinhua said, adding that its ability to process complex problems is exponentially faster than most supercomputers.

Called "Jiuzhang," the supercomputer prototype can conduct large-scale GBS 100 trillion times faster than the world's fastest supercomputer. Researchers said their prototype processes **10 billion times faster than the 53-qubit quantum computer developed by Googl**e.

This achievement suggests **China is on the pathway for full-scale quantum computing** – a

quantum leap in computational advantage, otherwise known as "**quantum supremacy,**" that could one day put the US at a disadvantage on the modern battlefield.

"Quantum computational advantage is like a threshold," said Lu Chaoyang, professor of the University of Science and Technology of China.

Chaoyang said, "it means that, when a new quantum computer prototype's capacity surpasses that of the strongest traditional computer in handling a particular task, it proves that it will possibly make breakthroughs in multiple other areas."

Readers should forget the trade war between the US and China and accept that two global supply chains are being constructed – the bigger development here is who will win the quantum computing war as the Cold War 2.0 continues.

So it makes sense why the Trump administration plowed a billion dollars into quantum computing last year. There's also been talk within the Pentagon to secure these fast computers for preparation in space-based war.