



## SCIENCE & TECHNOLOGY

# IBM Says New Quantum Processor Could Make Faster Computers

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The American technology company IBM says that it has designed a new, very powerful quantum computer processor.

The company's leaders made the announcement Monday. They said the processor, or chip, will lead to quantum systems performing better than traditional computer systems at some **tasks** within the next two years.

Quantum computers use quantum physics to perform difficult computing tasks.

IBM said that its Eagle computing chip has 127 qubits. A qubit is a basic measure of quantum information. Traditional computers work using bits of information that represent either 1 or 0. But qubits can be 1 and 0 at the same time.

Qubits could make quantum computers work much faster than normal computers. But they are very difficult to build and require extremely low temperatures to work correctly. IBM said that its new Eagle chip is the first to have more than 100 qubits.

IBM said new **refrigeration** and control system methods that it learned building the Eagle chip will help produce chips with more qubits in the future. The company said it plans an Osprey chip in 2022 with 433 qubits and a Condor chip with 1,121 qubits.

In a few years, the company said it will be close to what is called the "quantum **advantage**." That is when quantum computers are expected to perform better than traditional computers.

Darío Gil is a vice president at IBM and leads its research division. He said that quantum computers will not replace traditional computers all at once. In the future, he thinks some parts of computer programs will work on traditional chips and some parts will work on quantum chips, whichever works best for each task.

"We believe that we will be able to reach a demonstration of quantum advantage — something that can have **practical** value — within the next couple of years. That is our **quest**," Gil said.

I'm Dan Novak.

*Stephen Nellis reported this story for Reuters. Dan Novak adapted it for VOA Learning English. Mario Ritter, Jr. was the editor.*

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## Words in This Story

**task** — *n.* a piece of work that has been given to someone or something; a job that must be done

**refrigeration** — *n.* to put or keep something in a refrigerator, a device that keeps things at a low temperature

**advantage** — *n.* a good or desirable quality; a gain

**practical** — *adj.* relating to what is real rather than to what is possible or imagined

**quest** — *n.* a long and difficult effort to find something