

Image: Hubble peers at the heart of NGC 5793

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Maser emission is caused by particles that absorb energy from their surroundings and then re-emit this in the microwave part of the spectrum.

Naturally occurring masers, like those observed in NGC 5793, can tell us a lot about their environment; we see these kinds of masers in areas where stars are forming. In NGC 5793 there are also intense mega-masers, which are thousands of times more luminous than the sun.

Provided by NASA

Credit: NASA, ESA, and E. Perlman (Florida Institute of Technology)

(Phys.org) —This new Hubble image is centered on NGC 5793, a spiral galaxy over 150 million light-years away in the constellation of Libra. This galaxy has two particularly striking features: a beautiful dust lane and an intensely bright center—much brighter than that of our own galaxy, or indeed those of most spiral galaxies we observe.

NGC 5793 is a Seyfert galaxy. These [galaxies](#) have incredibly luminous centers that are thought to be caused by hungry supermassive black holes—black holes that can be billions of times the size of the sun—that pull in and devour gas and dust from their surroundings.

This galaxy is of great interest to astronomers for many reasons. For one, it appears to house objects known as masers. Whereas lasers emit visible light, masers emit [microwave radiation](#). The term "masers" comes from the acronym Microwave Amplification by Stimulated Emission of Radiation.

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