

Hubble finds 'dust clouds' in Milky Way

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NASA says its Hubble Space Telescope has photographed opaque, dark knots of dust and gas called "Bok globules" in our Milky Way Galaxy.

But astronomers say the cosmic dust is not a nuisance -- merely a concentration of elements that are responsible for the formation of stars throughout the universe.

The opaque, dark knots of gas and dust -- absorbing light in the center of the nearby emission nebula and star-forming region, NGC 281 -- are named after astronomer Bart Bok, who proposed their existence in the 1940's.

Bok hypothesized giant molecular clouds, on the order of hundreds of light-years in size, can become perturbed and form small pockets where the dust and gas are highly concentrated. The small pockets become gravitationally bound and accumulate dust and gas from the surrounding area.

If the pockets can capture enough mass, they have the potential of creating stars in their cores; however, scientists note not all Bok globules will form stars. Some will dissipate before they can collapse to form stars.

NGC 281 is located nearly 9,500 light-years from Earth, in the direction of the constellation Cassiopeia.

Hubble is operated jointly by NASA and the European Space Agency.

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