Hubble sees a galaxy festooned with stellar nurseries

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Credit: ESA/NASA

(Phys.org) -- The galaxy NGC 4700 bears the signs of the vigorous birth of many new stars in this image captured by the NASA/ESA Hubble Space Telescope.

The many bright, pinkish clouds in NGC 4700 are known as H II regions, where intense ultraviolet light from hot young stars is causing nearby [hydrogen gas](link) to glow. H II regions often come part-and-parcel with the vast molecular clouds that spawn fresh stars, thus giving rise to the locally-ionized gas.

In 1610, French astronomer Nicolas-Claude Fabri de Peiresc peered through a telescope and found what turned out to be the first H II region on record: the [Orion Nebula](link), located relatively close to our Solar System here in the Milky Way. Astronomers study these regions throughout the Milky Way and those easily seen in other galaxies to gauge the [chemical makeup](link) of cosmic environments and their influence on the formation of stars.

NGC 4700 appears to be an edge-on galaxy. It was discovered back in March 1786 by the British astronomer William Herschel who noted it as a "very faint nebula." NGC 4700, along with many other relatively close galaxies, is found in the constellation of Virgo (The Virgin) and is classified as a barred [spiral galaxy](link), similar in structure to the Milky Way. It lies about 50 million light-years from us and is moving away from us at about 1400 km/second due to the expansion of the Universe.

Provided by NASA