





“Starburst Galaxy NGC 1313”

The starburst galaxy NGC 1313 is a stellar incubator delivering stars on a scale rarely seen in a single galaxy of its size. This Gemini Observatory image reveals the multitudes of colorful glowing gas clouds in this galaxy’s arms which are the tell-tale sign of star-formation in this prolific star factory.

Located some 15 million light-years away, NGC 1313 is a late-type barred spiral galaxy. It’s a relatively close galactic neighbor to the Milky Way and has a mysterious past. Generally, starburst galaxies show some signs of interaction with another galaxy and a close galactic encounter is usually responsible for sparking increased levels of star-birth activity. However, NGC 1313 is a neighborless “drifter,” far away from any other packs of galaxies. The cause of its deformed shape and high rate of star formation is not obvious.

In radio studies of the underlying gas distribution aimed at solving the mystery of this galaxy’s active star formation rate it appears that the edge of an expanding “superbubble” is causing gas to pile up and spur the formation of stars. Dr. Stuart Ryder, Australian Gemini Scientist at the Anglo-Australian Observatory who has studied this galaxy extensively explains, “What triggered the superbubble is still a mystery. It would have required about a thousand supernovae to go off in the space of just a few million years, or else something punched its way through the disk and set it off like ripples in a pond.”

Astronomers also speculate that nearby gas clouds may be falling into (or orbiting) the galaxy and this could be prompting localized starbursts. The bottom-line is that this galaxy still has a lot of questions for astronomers to answer.

Technical Data:

Field of View: 5.5 x 8.2 arcminutes

Instrument: Gemini Multi-Object Spectrograph (GMOS).

Filters and color assignments for composite color image:

H-alpha: Red

O III: Green

He II: Blue

See full press release and image download at: www.gemini.edu/node/11470