

Scientists left puzzled by a vast "monster" galaxy that mysteriously went dark

(1) The web of stars, known as XMM-2599 spewed out a vast number of stars in its short life. And then it suddenly stopped. Astronomers say the vast galaxy does not fit with our existing models of the early universe. "Even before the universe was 2 billion years old, XMM-2599 had already formed a mass of more than 300 billion suns, making it an ultramassive galaxy," said, the **lead** author of the study, (5) Benjamin Forrest. "More remarkably, we show that XMM-2599 formed most of its stars in a huge frenzy when the universe was less than 1 billion years old, and then became **inactive** by the time the universe was only 1.8 billion years old." Scientists are unable to explain how the galaxy came to exist and then very quickly stopped existing, which, they say, could lead to dramatic changes in our understanding of how stars form – and stop forming. "In this epoch, very few galaxies have stopped (10) forming stars, and none are as massive as XMM-2599," said Gillian Wilson, profesor at University of California, where the research was conducted. "The **mere** existence of ultramassive galaxies like XMM-2599 **proves** quite a challenge to numerical models. Even though such massive galaxies are incredibly rare at this epoch, the models do predict them. The predicted galaxies, however, are expected to be actively forming stars. "What makes XMM-2599 so interesting, unusual, and surprising is that it is no (15) longer forming stars, perhaps because it stopped getting fuel or its black hole began to turn on. Our results **call for** changes in how models turn off star formation in early galaxies." At its peak, the galaxy was forming stars equivalent to more than 1,000 of our own suns each year. That is incredibly fast for any galaxy, with our Milky Way forming about one star each year. "We have caught XMM-2599 in its inactive phase," Wilson said. "We do not know what it will turn into by the present day. Now the team (20) behind the discovery hopes to use the high-tech equipment at the Keck Observatory to **delve** more **into** the galaxy, and hopefully answer the questions **thrown up** by the bizarre **clump** of stars.

Adapted from www.theindependent.com

FIND THE WORDS IN THE TEXT

1. any creature ugly enough to frighten people:
2. gushed or poured out, esp. quickly and violently.
3. a body of matter, usually of indefinite shape
4. extraordinarily large in size, weight, quantity, or area; gigantic
5. agitated or uncontrollable activity.
6. something that by its nature is a test or a difficult thing to accomplish
7. declared in advance; foretold
8. corresponding
9. unusual in appearance, style, or character.

C- FIND SYNONYMS FOR THE WORDS IN BOLD

D- SAY IF THE FOLLOWING SENTENCES ARE TRUE OR FALSE AND INDICATE THE LINE (S):

1- XMM-2599 formed an ultramassive galaxy of more than 300 billion suns 2-The XMM created its stars when the universe was 1.8 billion years old 3- Massive galaxies are predicted by numerical models 4- The Milky Way is as fast as XMM in creating stars 5- High tech would help to decipher unknown facts of stars

THE FOLLOWING WORDS REFER TO:

L1 " its"; L4 " it"; L8 "which"; L8 "they"; L13 "them";

