SPACE awareness

SPACE SCOOP

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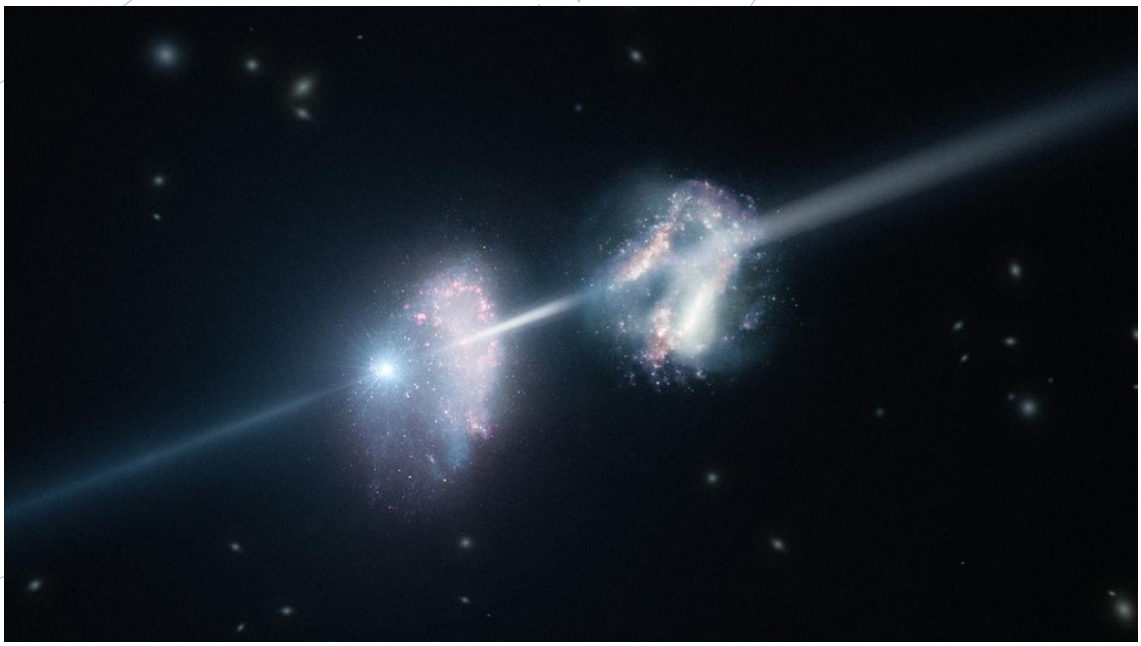

Galactic Duo Enjoy their Moment in the Spotlight

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A pair of galaxies has grabbed the attention of astronomers when they were literally thrown into the spotlight. The galaxies were lit up by one of the brightest explosions in the Universe: a 'Gamma-Ray Burst'.

Astronomers think that the explosions of massive young stars power these bursts of light. This particular Gamma-Ray Burst is special, as it was produced in one of the two galaxies and shone through the other one as well! Because astronomers cannot take a photo of such a burst, an artist has created this wonderful picture instead.

These galaxies are so far away that it has taken this light about 12 billion years to reach us. This means that we are seeing these galaxies as they were 12 billion years ago, when the Universe was still young. (The Universe is 13.7 billion years old.)

Despite being so far away, astronomers can find out a lot of information about these galaxies. By studying the light after it has passed through the galaxies, for example, astronomers can work out what types of atoms they contain, such as oxygen and copper. This is because each type of atom leaves a specific 'fingerprint' encoded in the light.

Astronomers were surprised to find so many different types of atoms inside this pair of galaxies, from a time when the Universe was still young. This is because some atoms take a long time to form, over the lifetimes of many stars. (To learn more about how atoms are created in the Universe, click here.) These galaxies must have been forming new stars incredibly quickly in order to produce all of these different types of atoms in such a short amount of time!

COOL FACT!

A Gamma-Ray Burst can release more energy in 10 seconds than the Sun will in its entire 10-billion-year lifetime!