

British scientists zero in on the birth of the universe

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British scientists from the University of Cambridge and the University of Exeter discovered that the evolution of the Universe was much slower than previously thought. Dr. Andrew Bunker, who studied images taken by the Hubble Space Telescope, will present the results at a NASA workshop today at the Space Telescope Science Institute in Baltimore, Md.

The British team was the first to analyse Hubble's Ultra Deep Field (HUDF) images, which provide mankind's deepest optical view of the Universe. The team viewed the number of star-forming galaxies and found that there were far less than expected. The rate at which new stars were born was a lot slower than formerly thought.

Scientists believe that the energy released when stars were born provided enough radiation to lift a curtain of cold, primordial hydrogen that formed after the Big Bang, now scientists are having to re-think that theory.

"We can measure how fast stars are being born in the early universe," said Dr. Andrew Bunker. "But our results reveal a puzzle; the birth rate seems low compared with more recent pasts. This is not what theorists had expected: at early times, the Universe seems to undergo a rapid heating. The main candidate for what caused this is ultraviolet radiation, which can be generated as stars are born. Our results suggest this was not the case, the small number of star forming galaxies found in the Ultra Deep Field may not be sufficient to do this. Perhaps this heating happened further back in time, closer to the Big Bang."

By analysing pictures taken by the Hubble telescope Bunker's team could see almost to the beginning of time. They were able to identify 50 objects likely to be galaxies so far away that light from them has taken 13 billion years to reach the earth. The galaxies uncovered by the team existed 95 percent of the way back to the beginning of time. This is the closest man has ever come to the Big Bang, when the Universe was less than a billion years old.

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