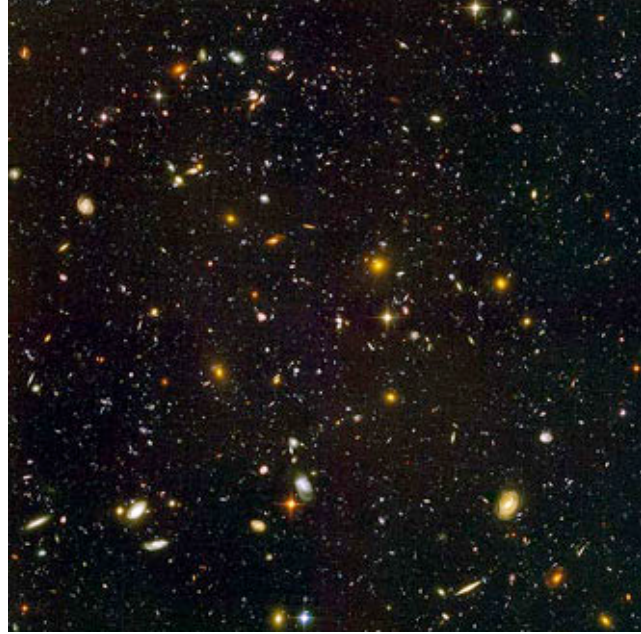


No single image in the history of astronomy has inspired more science than the Hubble Deep Field image. This remarkable image was first seen at the January 1996 meeting of the American Astronomical Society. We may never have gotten this image at all if it hadn't been for a man named Dr. Robert E. Williams.

At the time the image was taken, Dr. Williams was director of the Space Telescope Science Institute, and he decided to do something that had never been done before- point the Hubble Telescope for ten days straight at an apparently "boring" patch of sky north of the Big Dipper.



This patch of sky lies in a region of the sky far away from the plane of our Galaxy, where virtually no stars or dusty clouds within our Galaxy obscure what lies beyond. And what does lie beyond? Billions of other galaxies – some so far away from us that we see them as they were when the Universe was about a quarter of its present age. In one year, light travels about 6 trillion miles. We call this distance a “light year”. Some galaxies in the Hubble Deep Field image are at a distance of about 10 billion light years, which means we see them as they looked 10 billion years ago. Because these galaxies are so far away, they are very faint – much too faint to be observed without a powerful telescope! This is why Hubble had to spend 10 days “staring” at this patch of sky to collect this very faint light.

The light from distant objects gives us a “fossil record” of the Universe. Since the original Hubble Deep Field image, a number of even “deeper fields” have been observed and have helped astronomers construct a detailed history of the Universe. It all started with the decision to spend a week and a half on staring at a new part of the sky, where no one knew exactly what we’d see. Dr. Williams received the Beatrice M. Tinsley Prize from the American Astronomical Society in 1998 for the observations that resulted in the Hubble Deep Field image. This prize recognizes “an outstanding research contribution to astronomy or astrophysics, of an exceptionally creative or innovative character.” Not all outstanding science begins with brilliant hypotheses – some priceless discoveries are made by taking the time to “stop and stare”.

(Photo credit: NASA/ESA/S. Beckwith(STScI) and The HUDF Team.)