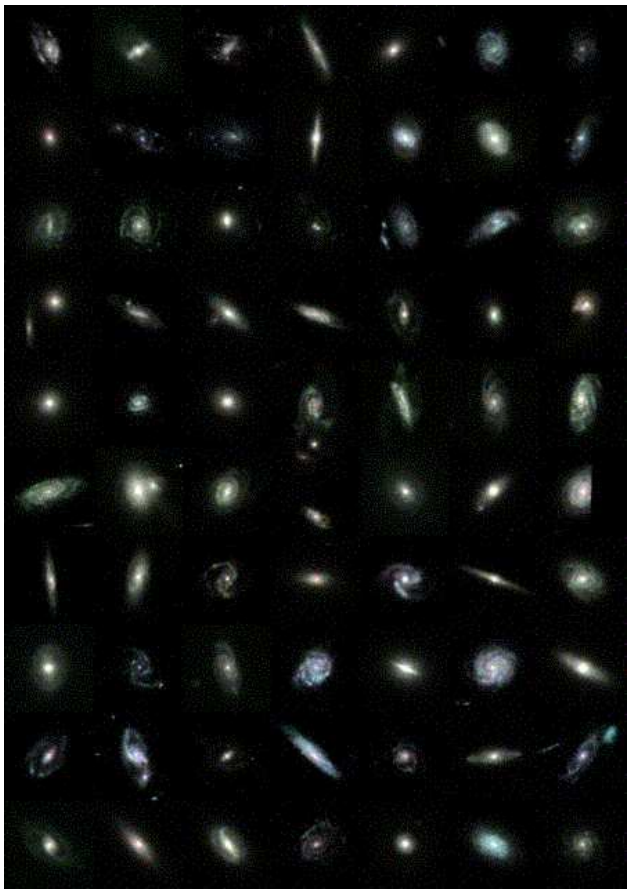
Largest picture of the Hubble

20.01.2004 - The largest farbbild of the space telescope Hubble shows a sky sowcut of the size of the full moon and shows approximately 40,000 galaxies. The picture is information on the development of Milky Way-similar galaxies in the last 9 billion year to give.



Dr. Eric F. Bell of Max-Planck-Institut for astronomy in Heidelberg and Dr. Shardha Jogee of the space Telescope Science of institutes in Baltimore presented the picture, which is a mosaic from 78 pictures, past week on the recent conference of the American Astronomical Society in Atlanta. The two astronomers belong to an international consortium with the name GEMS, "Galaxy evolution from to Morphology and Spectral Energy distribution", that by Professor Hans-Walter Rix, director at Max-Planck-Institut for astronomy, are led.

Since the galaxies are not evenly distributed over the sky, but heaps of galaxy and chains form, could pictures out with a very small sky cutout untypische characteristics point. If one examines however many galaxies, one will understand also the distribution of the galaxies.

The picture shows a sky cutout in the constellation Fornax on the southern hemisphere. Astronomers had selected this range, since by scarcely 10,000 galaxies the distance had been already determined. By the fact that the universe it spreads departs the galaxies faster from us, which are furthest away from us. And because the speed of light is finite, one can with the picture approximately 9 billion years into the past look.

Dr. Christian wolf, University OF Oxford, and Dr. Klaus Meisenheimer, Max-Planck-Institut for astronomy, determined the distance that together with its colleagues approximately 10,000 galaxies in GEMS field. With these data and the Hubble picture one can now the development of the forms and structures of the galaxies in the last 9 billion years investigate. A goal of the GEMS project is it to examine the reciprocal effect of galaxies and the influence of the galaxies caused thereby among themselves. Interacting galaxies can change or merge strongly mutually by the enormous gravitation forces. In this picture are to be recognized some such interacting galaxies.

In addition, the gravitativen reciprocal effects can canalize powerful rivers of interstellar gas into the massive black holes, which lie in the centers of the galaxies, and with it violent activity phases in the galactic core regions to release.

"today most massive galaxies become simply older, them fade slowly, until they disappeared a daily in the darkness," say Hans walter Rix.

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In the picture it is to be also seen that the portion of elliptical galaxies is higher today, as in former times.
Those knows on the fact that a part of the elliptical galaxies from merged spiral galaxies resulted.

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