

Space telescope's first pictures unexpectedly clear

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The clearest pictures of stars ever provided by a space telescope have been received on Earth.

Images taken by the Hubble Space Telescope yesterday clearly show a star cluster - several bright stars as well as a binary or double star.

Broadcast from the Goddard Space Flight Centre in Maryland, the pictures are similar to photos taken by ground-based telescopes. However, the images, called the "First Light" pictures, are twice as clear as even the Hubble team had expected them to be.

For example, two stars that appear almost as one when viewed from Earth clearly showed their double configuration in the Hubble pictures. The open-star cluster in the constellation Carina is visible to the naked eye in the Southern Hemisphere.

Pictures provided by the Hubble will eventually be almost 10 times as clear as ground-based photographs, as the team learns to sharpen the focus.

"It was clearly better than we all expected and I'm surprised that it turned out to be as good as it did today," said John Caldwell, director of the Institute for Space and Terrestrial Science in Toronto and one of only two Canadians on the 100-member Hubble team. Mr. Caldwell watched the NASA broadcast at York University.

Space telescopes are clearer because there is no interference from the Earth's atmosphere, which distorts and even hides distant images.

Now that the telescope has been launched, NASA will use it to view objects never seen before and to get clearer images of what they already know is out there.

Pictures with high resolution have important implications for astronomy, said Nancy Evans, an associate scientist in the department of space astrophysics at York University.

"The better you can see into some of the systems, the better you can determine how much mass they have," she said. Once mass is established, details of their history emerge.

The cluster photographed yesterday, in the constellation Carina, is approximately 1,300 light years away from Earth. A light year is the distance light travels in a year.

NASA broadcast the pictures as they were being processed from the data collected from the telescope's wide field planetary camera.

The telescope satellite, which cost \$1.5-billion, was launched April 25 from the space shuttle Discovery. It was originally to have been launched seven years ago, but was delayed several times because of mathematical and communications problems and the explosion in 1986 of a previous shuttle, the Challenger.