New Horizons for High Redshifts

A statement regarding the future of the James Webb Space Telescope
from the ~140 Delegates of the "New Horizons for High Redshifts" meeting,
held at the Institute of Astronomy, University of Cambridge
July 25-29, 2011

The study of the early universe is one of the most exciting and fastest growing areas of modern astronomy. Observations from telescopes on the ground and in space, including the Hubble Space Telescope and Spitzer Space Telescope, have given us the first glimpses of galaxies that lived within one billion years of the Big Bang, when the universe was less than ten percent of its current age. These sources are among the first objects formed in the universe, and represent some of the earliest ancestors of the galaxies we see in the universe today.

Exploring the early universe presents a unique challenge for astronomical observations. The starlight from the first galaxies arrives at earth as infrared radiation, while the extreme distances involved render ordinary galaxies nearly invisible to either Hubble or large telescopes on the ground. The next steps along the path of discovery must therefore be taken with an infrared, space-based telescope with unprecedented sensitivity. The James Webb Space Telescope will have this unique capability, providing an essential tool for exploring the assembly of galaxies in the early universe. JWST will allow us to probe the epoch when the structures of the modern universe first emerged. The success of JWST is therefore vital to revealing the primitive origins of galaxies such as the Milky Way, and to understanding our own cosmic history.

The delegates of this meeting strongly and enthusiastically support the mission of JWST. We are greatly disappointed by the current effort to cancel JWST, and hope that this effort will not come to fruition. We look forward to a new era of exploring the cosmic dawn, and to the new age of astronomical discovery that JWST will enable.

Approved unanimously, July 28, 2011