

SPACE SPECTACULAR

Endeavour to correct Hubble's blurred vision

In the most ambitious shuttle mission to date, four of the six astronauts will work outside the Space Shuttle Endeavour to attempt the complex repairs to the Hubble Space Telescope. The 11-day mission will involve five spacewalks to try to restore Hubble's well-known short-sightedness

Days 1-2

System checks as Space Shuttle nears Hubble in orbit 575km above the earth

Day 3

Robot arm manipulates Hubble into payload bay where it is connected to Shuttle's own electrical supply

Day 4

SPACEWALK 1: Replace three gyroscopes and eight electrical fuses. Prepare to replace solar arrays

Space Shuttle Endeavour

Hubble Space Telescope

Solar arrays suffer 'jitters' caused by temperature changes when passing from sunlight into darkness

Hubble's main mirror unable to focus due to manufacturing defect

Day 5

SPACEWALK 2: Replace solar arrays

Day 6

SPACEWALK 3: Fit new Wide Field Planetary Camera

Day 8

SPACEWALK 5: Replace solar array command electronics

Day 9

Deploy Hubble

Day 10

Contingency work

Day 11

Prepare for re-entry

Day 7

SPACEWALK 4: Install COSTAR. Upgrade on-board computer with extra memory

COSTAR (Corrective Optics Space Telescope Axial Replacement) uses 10 small mirrors to correct Hubble's short-sightedness

New solar arrays weigh 160kg and are 4.5m long when folded