

<p>Heic0618 Video News Release, v.9 New Hubble Servicing Mission to upgrade instruments</p> <p>EMBARGOED UNTIL: 15:30 (CET)/9:30 AM EST 31 October 2006</p>		
<p>00:02 After more than a decade of fascinating discoveries, the NASA/ESA Hubble Space Telescope will soon be given the new beginning that it deserves. Today, NASA has decided to launch a Space Shuttle mission in 2008 to repair and even upgrade the observatory, despite new Shuttle safety rules formulated after the Columbia disaster that would normally rule out such a rescue mission.</p>	20"	
<p>00:24 Since Columbia, the Shuttle has been launched on three missions, confirming that the numerous improvements since the disaster have established a high level of safety for the vehicle and its crew. After weighing the pros and cons, and bearing in mind that Hubble's orbit does not allow the Shuttle crew to take refuge aboard the International Space Station and wait for rescue if the Space Shuttle is damaged at launch, NASA Administrator Mike Griffin has now given the green light for a fifth Hubble Servicing Mission.</p> <p>[ST ESA Director of Science, David Southwood]</p>	26"	<p><i>Hubble in outer space, Previous launch, Astronauts repairing</i></p> <p><i>Shuttle, Crew, Other missions</i></p>
<p>00:52 "The Hubble Space Telescope is a great workhorse of space astronomy. It's been a great cooperation between us Europeans and the United States. We have had some very anxious times over the last few years and I hope this marks a real renewal of life and - I hope - for as long as we can make it".</p>	20"	<p><i>Hubble in outer space, Crew, Shuttle</i></p>
<p>01:12 The Servicing Mission will not only ensure that Hubble can function for perhaps as many as another ten years, it will also increase its scientific capabilities significantly in some key areas. This highly visible mission is expected to take place in 2008 and will feature several space walks.</p>	20"	
<p>01:34</p>		

<p>As part of the upgrade, two new scientific instruments will be installed: the Cosmic Origins Spectrograph and the Wide Field Camera 3. Each has advanced technology sensors, which will improve Hubble's potential for discovery.</p>	13"	<i>Hubble in orbit, Space walks</i>
<p>[ST Bob Fosbury, European Space Agency]</p>		
<p>01:48 <i>"Today Hubble is producing more science than ever before in its history. Astronomers are regularly asking for five times more observing time than that available to them. The new instruments will open up new windows on the Universe. Extraordinary observations are planned in the coming years including some of the most fascinating physical phenomena ever seen: Investigations of planets around nearby stars, digging deeper into the origins of the Milky Way and perhaps most importantly, getting new insights into the evolution of the Universe."</i></p>	30"	<i>Images of COS & WFC)</i>
<p>[Narrator]</p>		
<p>02:19 Around the same time that the Shuttle lifts off for the Servicing Mission, ESA will launch Herschel, the orbiting telescope with the largest mirror ever deployed in space. Herschel will complement Hubble in the infrared part of the spectrum and is an ESA mission with NASA participation. In a separate project, Hubble's direct successor, the James Webb Space Telescope is being built in a collaboration between NASA, ESA and the Canadian Space Agency, but will need at least seven more years to launch.</p>	30"	<i>After second sentence, insert Footage of the universe</i>
<p>[Narrator]</p>		
<p>02:50 After more than a decade of spectacular observations, Hubble will not be left at the mercy of its aging instruments. Instead, it will now be given the new life that it deserves by providing it with extra power to discover the long-sought key to unfolding the mysteries of the universe.</p>	15"	<i>Shuttle lifting off, Pictures of Herschel, Pictures of astronauts from all agencies collaborating in space, JWST</i>
<p>[ST David Southwood, European Space Agency]</p>		
<p>03:05 <i>"There is never going to be an end to the science that we can do with a machine like Hubble".</i></p>	7"	<i>Footage of Universe</i>
<p>03:20 END</p>		

Shotlist

TIMECODE	DESCRIPTION
	A-ROLL
00:00:00	Hubble in outer space, previous launches, astronauts repairing Hubble
00:00:24	Shuttle, crew, other Servicing Missions Hubble in outer space, crew, Shuttle
00:00:52	Interview with David Shouthwood, European Space Agency's Director of Science
00:01:12	Hubble in orbit, Space walks
00:01:34	Pictures of COS & WFC
00:01:48	Interview with Bob Fosbury, European Space Agency. (After second sentence, insert footage of the Universe)
00:02:50	Footage of Universe
00:03:05	Interview with David Southwood, European Space Agency's Director of Science
00:03:13	
00:03:20	END A-ROLL
	B-ROLL
00:03:45	A-roll animations and footage unedited
00:12:50	Hubble Space Telescope stock animations
00:16:50	END B-ROLL