
HUBBLE SPACE TELESCOPE

1
00:00:00,000 --> 00:00:01,368
[background music]

2
00:00:01,368 --> 00:00:03,737
You are now in the exhibit
hallway outside of the

3
00:00:03,737 --> 00:00:06,707
Operations Support Room, which
displays some of the hardware

4
00:00:06,707 --> 00:00:10,477
that once flew on Hubble. In the
built-in display case you see a

5
00:00:10,477 --> 00:00:15,082
black electronic control box. It
was used to control gyroscopes -

6
00:00:15,082 --> 00:00:17,584
the sensors that can tell how
fast Hubble is turning and in

7
00:00:17,584 --> 00:00:21,688
what direction. During the first
servicing mission in 1993,

8
00:00:21,688 --> 00:00:25,125
astronauts replaced this control
box and learned that it had a

9
00:00:25,125 --> 00:00:29,096
bad capacitor. It was fixed so
that it could potentially be

10
00:00:29,096 --> 00:00:33,934
used on Hubble again, but it was
never needed. Farther over is

11

00:00:33,934 --> 00:00:36,203
one of the original tape
recorders used for storing

12
00:00:36,203 --> 00:00:39,373
science and engineering data.
During the second servicing

13
00:00:39,373 --> 00:00:43,010
mission in 1997, the tape
recorder was replaced with a

14
00:00:43,010 --> 00:00:46,813
solid state recorder, similar to
a USB memory stick, which could

15
00:00:46,813 --> 00:00:50,417
hold 10 times more information.
This was important as Hubble

16
00:00:50,417 --> 00:00:52,986
would later be upgraded with
better cameras that had over six

17
00:00:52,986 --> 00:00:57,925
times the resolution – requiring
more storage space. On the

18
00:00:57,925 --> 00:01:01,561
opposite wall, standalone
display cases contain tools

19
00:01:01,561 --> 00:01:05,165
developed to help astronauts
work on Hubble. The Mini Power

20
00:01:05,165 --> 00:01:08,769
Tool is a power screwdriver with
LED lights and interchangeable

21

00:01:08,769 --> 00:01:12,506
screwdriver bits. It is
connected to a battery pack so

22
00:01:12,506 --> 00:01:16,710
that it is smaller and easier to
handle. The tool was optimized

23
00:01:16,710 --> 00:01:20,180
so that astronauts could remove
over 100 small screws during an

24
00:01:20,180 --> 00:01:24,351
instrument repair. The bits are
color coded so that the

25
00:01:24,351 --> 00:01:28,622
astronauts can find the right
bit faster. Their bit caddy, a

26
00:01:28,622 --> 00:01:31,725
device built to carry the bits
and hold them in place, can hold

27
00:01:31,725 --> 00:01:37,197
7 bits at a time. Moving along,
the standalone display case to

28
00:01:37,197 --> 00:01:41,668
the right discusses technologies
developed for this remarkable

29
00:01:41,668 --> 00:01:43,670
observatory that have made their
way into everyday products here

30
00:01:43,670 --> 00:01:46,340
on earth. These include digital
mammography systems that use a

31

00:01:46,340 --> 00:01:49,509
Hubble camera detector that is
used in the fight against breast

32
00:01:49,509 --> 00:01:52,546
cancer and a sky map computer
program used by amateur

33
00:01:52,546 --> 00:01:56,717
astronomers that is based on
Hubble’s star catalog. On the

34
00:01:56,717 --> 00:01:59,486
walls to the left of the
standalone display cases hang

35
00:01:59,486 --> 00:02:03,090
various awards received by the
operations team as well as a

36
00:02:03,090 --> 00:02:06,293
letter from the President of the
United States congratulating the