
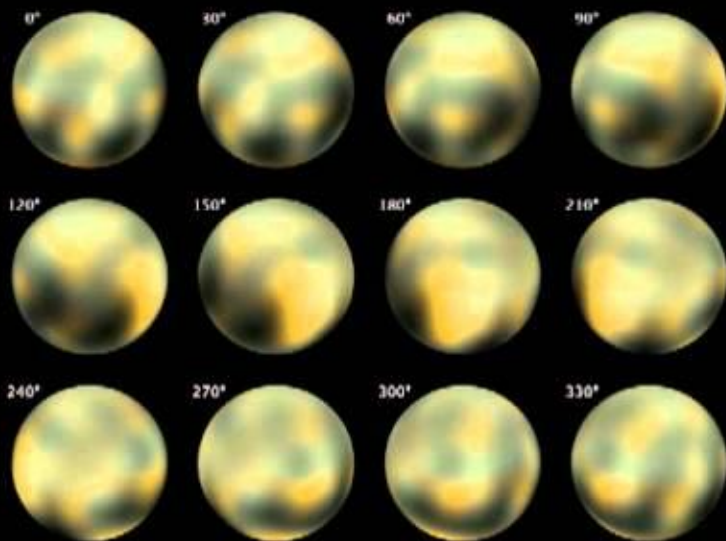


Pluto • Hubble Space Telescope ACS/HRC

science @ 



1
00:00:09,509 --> 00:00:07,510
paying a visit to pluto presented by

2
00:00:11,749 --> 00:00:09,519
science at nasa

3
00:00:13,910 --> 00:00:11,759
at this very moment one of the fastest

4
00:00:16,150 --> 00:00:13,920
spacecraft ever launched nasa's new

5
00:00:18,790 --> 00:00:16,160
horizons is hurtling through the void at

6
00:00:21,429 --> 00:00:18,800
nearly 1 million miles per day

7
00:00:23,750 --> 00:00:21,439
launched in 2006 it has been in flight

8
00:00:26,790 --> 00:00:23,760
longer than some missions last and still

9
00:00:28,550 --> 00:00:26,800
has four more years of travel to go

10
00:00:30,390 --> 00:00:28,560
new horizons is headed for the lonely

11
00:00:32,790 --> 00:00:30,400
world of pluto on the outer edge of the

12
00:00:35,350 --> 00:00:32,800
solar system although astronomers now

13
00:00:38,229 --> 00:00:35,360

call pluto a dwarf planet it's actually

14

00:00:40,950 --> 00:00:38,239

a large place about 5 000 miles around

15

00:00:42,790 --> 00:00:40,960

at the equator says alan stern principal

16

00:00:45,110 --> 00:00:42,800

investigator for the mission

17

00:00:47,350 --> 00:00:45,120

and it's never been explored

18

00:00:49,430 --> 00:00:47,360

indeed no spacecraft has ever visited

19

00:00:50,950 --> 00:00:49,440

pluto or any dwarf planet in the outer

20

00:00:52,950 --> 00:00:50,960

solar system

21

00:00:53,910 --> 00:00:52,960

this is a whole new class of worlds says

22

00:00:55,990 --> 00:00:53,920

stern

23

00:00:58,630 --> 00:00:56,000

to understand the solar system we need

24

00:01:01,029 --> 00:00:58,640

to understand worlds like pluto

25

00:01:03,990 --> 00:01:01,039

pluto is a resident of the kuiper belt a

26
00:01:05,990 --> 00:01:04,000
vast region beyond the orbit of neptune

27
00:01:08,310 --> 00:01:06,000
stern believes the kuiper belt contains

28
00:01:09,590 --> 00:01:08,320
a thousand dwarf planets or more a whole

29
00:01:11,590 --> 00:01:09,600
zoo of them

30
00:01:13,350 --> 00:01:11,600
dwarf planets are in fact the most

31
00:01:15,030 --> 00:01:13,360
numerous class of planets in the solar

32
00:01:16,550 --> 00:01:15,040
system and probably in the whole

33
00:01:18,789 --> 00:01:16,560
universe

34
00:01:20,550 --> 00:01:18,799
pluto is a world of mysteries for one

35
00:01:22,469 --> 00:01:20,560
thing stern wonders what are the

36
00:01:24,149 --> 00:01:22,479
molasses colored patches on pluto's

37
00:01:25,429 --> 00:01:24,159
surface seen by the hubble space

38
00:01:27,190 --> 00:01:25,439

telescope

39

00:01:29,990 --> 00:01:27,200

some scientists think that they could be

40

00:01:31,990 --> 00:01:30,000

deposits of primordial organic matter

41

00:01:34,230 --> 00:01:32,000

new horizon spectrometers will help us

42

00:01:35,429 --> 00:01:34,240

identify the kinds of organic molecules

43

00:01:37,030 --> 00:01:35,439

on pluto

44

00:01:38,469 --> 00:01:37,040

we expect to find something pretty

45

00:01:40,069 --> 00:01:38,479

interesting

46

00:01:42,149 --> 00:01:40,079

hubble recently contributed more

47

00:01:44,950 --> 00:01:42,159

intrigue by spotting a new moon circling

48

00:01:46,950 --> 00:01:44,960

pluto bringing the total to four

49

00:01:49,830 --> 00:01:46,960

composite hubble images of pluto now

50

00:01:51,670 --> 00:01:49,840

resemble a miniature planetary system

51
00:01:54,469 --> 00:01:51,680
new horizons will hunt for even more

52
00:01:56,469 --> 00:01:54,479
moons as it approaches the dwarf planet

53
00:01:58,550 --> 00:01:56,479
to aid in the investigations new

54
00:02:00,550 --> 00:01:58,560
horizons is carrying one of the largest

55
00:02:03,670 --> 00:02:00,560
and highest resolution interplanetary

56
00:02:05,429 --> 00:02:03,680
telescopes ever flown it's called lori

57
00:02:06,389 --> 00:02:05,439
short for long-range reconnaissance

58
00:02:08,790 --> 00:02:06,399
imager

59
00:02:10,630 --> 00:02:08,800
at closest approach to pluto lori can

60
00:02:11,990 --> 00:02:10,640
resolve details almost as well as the

61
00:02:14,390 --> 00:02:12,000
spy camera

62
00:02:16,229 --> 00:02:14,400
the view will be incredible if we flew

63
00:02:18,630 --> 00:02:16,239

this instrument over earth at the same

64

00:02:20,390 --> 00:02:18,640

altitude as we planned to fly over pluto

65

00:02:21,670 --> 00:02:20,400

we would see individual buildings and

66

00:02:23,510 --> 00:02:21,680

their shapes

67

00:02:25,589 --> 00:02:23,520

what will we see on pluto

68

00:02:28,309 --> 00:02:25,599

some researchers predict icy geysers

69

00:02:29,830 --> 00:02:28,319

like the ones on neptune's moon triton

70

00:02:32,229 --> 00:02:29,840

some say we could see those surface

71

00:02:34,229 --> 00:02:32,239

deposits of organic material

72

00:02:36,229 --> 00:02:34,239

stern says simply there could be all

73

00:02:38,949 --> 00:02:36,239

kinds of surprises it's a first

74

00:02:40,949 --> 00:02:38,959

exploration of a new kind of planet

75

00:02:43,830 --> 00:02:40,959

new horizons is scheduled to reach pluto

