1
00:00:33,510 --> 00:00:28,020
this is a report on the United States

2
00:00:36,000 --> 00:00:33,520
space exploration of 1958 1958 has seen

3
00:00:39,690 --> 00:00:36,010
notable progress in the space effort of

4
00:00:42,900 --> 00:00:39,700
the United States why us satellites have

5
00:00:45,990 --> 00:00:42,910
gone into warming to space probes were

6
00:00:50,490 --> 00:00:46,000
launched burst in October travelled

7
00:00:53,280 --> 00:00:50,500
about 70 1300 miles and the second in

8
00:00:55,080 --> 00:00:53,290
December ascended sixty three thousand

9
00:00:57,930 --> 00:00:55,090
five hundred eighty miles above the

10
00:01:04,540 --> 00:00:57,940
earth here is the story of these

11
00:01:10,810 --> 00:01:08,110
on January 31st the United States Army

12
00:01:15,700 --> 00:01:10,820
was ready to launch a jupiter-c missile

13
00:01:18,310 --> 00:01:15,710

with a satellite payload 80 days before

14
00:01:22,060 --> 00:01:18,320
Clarence had been given to proceed with

15
00:01:26,280 --> 00:01:22,070
the launch the army selected the Jupiter

16
00:01:29,530 --> 00:01:26,290
see because of its proven reliability

17
00:01:32,320 --> 00:01:29,540
the California Institute of Technology's

18
00:01:35,350 --> 00:01:32,330
Jet Propulsion Laboratory now under

19
00:01:38,260 --> 00:01:35,360
contract to na sa designed and

20
00:01:42,340 --> 00:01:38,270
manufactured the advanced stages and the

21
00:01:45,310 --> 00:01:42,350
payload the payload transmitters would

22
00:01:47,950 --> 00:01:45,320
have an expected broadcast life of two

23
00:01:50,680 --> 00:01:47,960
weeks for the 60 milliwatt transmitter

24
00:01:54,610 --> 00:01:50,690
and two months for the one putting out

25
00:01:58,090 --> 00:01:54,620
ten milliwatts the payload measured 80

26
00:02:03,040 --> 00:01:58,100
inches by 6 inches and weighed 30 and

27
00:02:11,850 --> 00:02:03,050
eight tenths pounds each component in

28
00:02:17,649 --> 00:02:15,100
it was thought that centrifugal force

29
00:02:20,289 --> 00:02:17,659
might distort the structure of the solid

30
00:02:23,800 --> 00:02:20,299
propellant within the high-speed rocket

31
00:02:42,250 --> 00:02:23,810
motor it too was subjected to spin

32
00:02:47,089 --> 00:02:45,290
attention all personnel please clear the

33
00:02:49,790 --> 00:02:47,099
launching area for radio frequency

34
00:02:57,080 --> 00:02:49,800
interference status please clear the

35
00:03:01,130 --> 00:02:57,090
launching area this is rayne command

36
00:03:07,570 --> 00:03:01,140
transmitter on hello neuron frequency

37
00:03:13,670 --> 00:03:07,580
measures 2.5 low-calorie i drove a pond

38
00:03:16,790 --> 00:03:13,680

here all this projects demand the time

39
00:03:19,729 --> 00:03:16,800
is now ex-wife 33 minutes authorized

40
00:03:40,840 --> 00:03:19,739
personnel may resume work on that resume

41
00:03:47,740 --> 00:03:40,850
working all clear the water carries all

42
00:03:50,990 --> 00:03:47,750
clear the area the signal is 2.5 de lo

43
00:03:55,280 --> 00:03:51,000
channel one is now reset channel two is

44
00:03:59,000 --> 00:03:55,290
reset channel 3 is reset to figure 4

45
00:04:02,690 --> 00:03:59,010
channel 1 is 4 30 channel 4 reset

46
00:04:04,630 --> 00:04:02,700
channel 5 this is project to land the

47
00:04:07,880 --> 00:04:04,640
time is nigh

48
00:04:13,630 --> 00:04:07,890
start vibration wrecker begins cluster

49
00:04:15,950 --> 00:04:13,640
run McCluster is starting its spin

50
00:04:38,890 --> 00:04:15,960
transmission of all payload electronics

51
00:04:43,850 --> 00:04:41,960
after the firing signal is given it will

52
00:04:46,490 --> 00:04:43,860
take almost 16 seconds for the vehicle

53
00:04:49,940 --> 00:04:46,500
to take off pressurization will be

54
00:04:52,280 --> 00:04:49,950
started at X plus 3 seconds at X plus 14

55
00:04:54,350 --> 00:04:52,290
seconds ignition will begin trust

56
00:05:10,700 --> 00:04:54,360
build-up will continue until liftoff at

57
00:05:14,840 --> 00:05:10,710
about X plus 16 seconds firing a needle

58
00:05:19,700 --> 00:05:14,850
one piercing provider egg minus 30

59
00:05:27,140 --> 00:05:19,710
seconds close baby circulated recordings

60
00:05:35,620 --> 00:05:27,150
on silent excellent ten nine eight seven

61
00:05:58,960 --> 00:05:35,630
six five four three two one zero

62
00:06:04,790 --> 00:06:02,390
the launching was a success and the

63
00:06:08,330 --> 00:06:04,800

first United States satellite was named

64
00:06:10,670 --> 00:06:08,340
explorer 1 explorer 1 made the most

65
00:06:13,940 --> 00:06:10,680
important discovery of the International

66
00:06:17,030 --> 00:06:13,950
Geophysical Year the existence of a

67
00:06:19,940 --> 00:06:17,040
great belt of radiation identified by

68
00:06:25,580 --> 00:06:19,950
dr. James a van allen head of the State

69
00:06:29,000 --> 00:06:25,590
University of Iowa physics department on

70
00:06:31,040 --> 00:06:29,010
March seventeenth st. Patrick's Day dr.

71
00:06:34,159 --> 00:06:31,050
john p hagen of the Naval Research

72
00:06:36,140 --> 00:06:34,169
Laboratory announced that Vanguard was

73
00:06:40,000 --> 00:06:36,150
poised and ready to launch from the

74
00:06:43,190 --> 00:06:40,010
Atlantic Missile Range Cape Canaveral

75
00:06:46,310 --> 00:06:43,200
vanguard 1 and earth satellite was

76
00:06:48,560 --> 00:06:46,320
placed into orbit with a perigee of 409

77
00:06:53,300 --> 00:06:48,570
miles as its closest approach to the

78
00:06:56,480 --> 00:06:53,310
earth and an apogee of 2453 miles from

79
00:06:59,300 --> 00:06:56,490
the earth it is expected to stay in

80
00:07:02,000 --> 00:06:59,310
orbit for hundreds of years it's solar

81
00:07:04,460 --> 00:07:02,010
batteries will power transmitters which

82
00:07:07,270 --> 00:07:04,470
will give information to generations of

83
00:07:10,430 --> 00:07:07,280
scientists of the world community

84
00:07:13,159 --> 00:07:10,440
information gained from Vanguard one has

85
00:07:19,800 --> 00:07:13,169
enabled us to determine the true shape

86
00:07:27,340 --> 00:07:23,260
Explorer 3 launched nine days after

87
00:07:29,680 --> 00:07:27,350
vanguard one achieved orbit and yielded

88
00:07:33,130 --> 00:07:29,690

valuable data on the radiation belt

89
00:07:36,040 --> 00:07:33,140
discovered by Explorer 1 it recorded

90
00:07:38,500 --> 00:07:36,050
micro meteor impact which gave

91
00:07:41,800 --> 00:07:38,510
information about the density of cosmic

92
00:07:45,810 --> 00:07:41,810
dust and it recorded internal and

93
00:07:49,120 --> 00:07:45,820
external temperatures of the satellite

94
00:07:51,730 --> 00:07:49,130
the next United States success in space

95
00:07:58,030 --> 00:07:51,740
came with the launching into orbit of

96
00:08:00,940 --> 00:07:58,040
explorer for on July 26 1958 as a

97
00:08:03,310 --> 00:08:00,950
scientific experiment it confirmed and

98
00:08:06,030 --> 00:08:03,320
expanded the data on radiation and

99
00:08:12,460 --> 00:08:06,040
temperatures discovered by satellite

100
00:08:14,910 --> 00:08:12,470
explorer 1 and 3 on March 27 the

101
00:08:17,200 --> 00:08:14,920
Advanced Research Project agency

102
00:08:19,750 --> 00:08:17,210
directed the space technology

103
00:08:24,430 --> 00:08:19,760
laboratories to proceed with a series of

104
00:08:26,530 --> 00:08:24,440
lunar probes the payload was designed so

105
00:08:32,830 --> 00:08:26,540
that its electrical system would have

106
00:08:35,440 --> 00:08:32,840
maximum possible life the experiments

107
00:08:38,320 --> 00:08:35,450
aside from an electric scanner would

108
00:08:41,740 --> 00:08:38,330
measure radiation magnetic fields of

109
00:08:47,200 --> 00:08:41,750
Earth and Moon density of micro meteoric

110
00:08:49,750 --> 00:08:47,210
matter and internal temperatures these

111
00:08:51,880 --> 00:08:49,760
probes would use hardware developed for

112
00:08:56,950 --> 00:08:51,890
the Air Force ballistic missile division

113
00:09:00,720 --> 00:08:56,960

as advanced re-entry vehicles the first

114
00:09:03,019 --> 00:09:00,730
stage for develops a sea-level thrust of

115
00:09:07,500 --> 00:09:03,029
150,000 pounds

116
00:09:11,340 --> 00:09:07,510
to vernier engines rated at 1,000 pounds

117
00:09:16,079 --> 00:09:11,350
of thrust provide roll control and final

118
00:09:18,570 --> 00:09:16,089
adjustment of burnout velocity the

119
00:09:20,880 --> 00:09:18,580
second stage was a modified Vanguard

120
00:09:24,740 --> 00:09:20,890
second stage with a gimballed

121
00:09:28,019 --> 00:09:24,750
regenerative lee cooled thrust chamber

122
00:09:30,569 --> 00:09:28,029
it had roll control and a separation