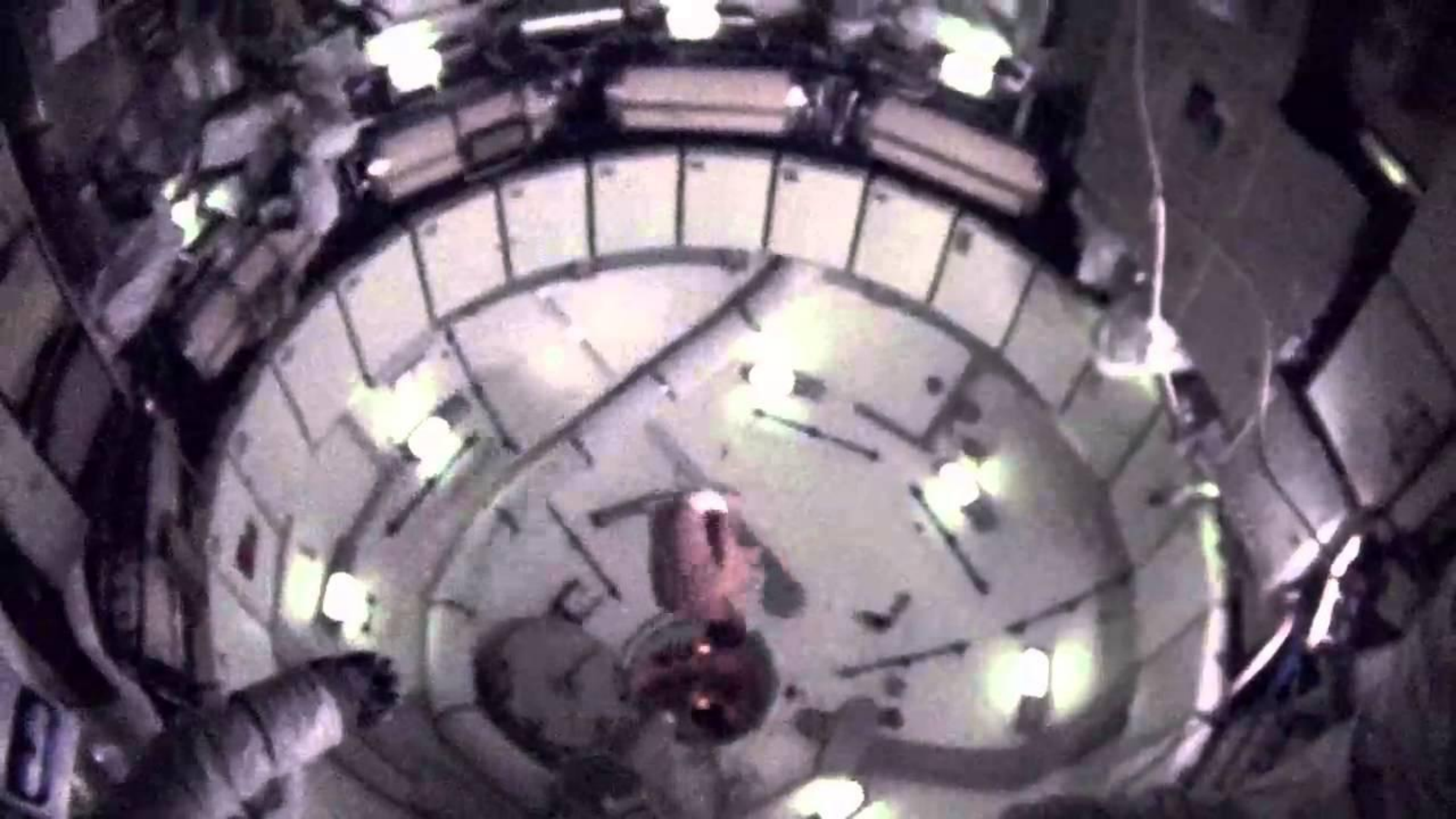

1
00:00:08,310 --> 00:00:06,470
skylab starts

2
00:00:09,990 --> 00:00:08,320
in the dreams of the people who wanted

3
00:00:11,990 --> 00:00:10,000
to go into space for a long time early

4
00:00:13,270 --> 00:00:12,000
in the 20th century we saw people who

5
00:00:15,190 --> 00:00:13,280
were thinking about how do we get

6
00:00:18,550 --> 00:00:15,200
humanity off the planet earth and into

7
00:00:21,510 --> 00:00:18,560
space there was a vision a long-term

8
00:00:24,310 --> 00:00:21,520
vision humans had of exploring and going

9
00:00:25,750 --> 00:00:24,320
beyond higher farther faster there was a

10
00:00:27,830 --> 00:00:25,760
technical challenge there was the

11
00:00:29,429 --> 00:00:27,840
scientific interest there was the

12
00:00:30,630 --> 00:00:29,439
adventure

13
00:00:33,350 --> 00:00:30,640

and there was just simply the

14
00:00:36,310 --> 00:00:33,360
demonstration of managerial and

15
00:00:38,069 --> 00:00:36,320
organizational and industrial

16
00:00:40,310 --> 00:00:38,079
economic competence

17
00:00:42,069 --> 00:00:40,320
in a world that was contested

18
00:00:43,670 --> 00:00:42,079
so that was skyla

19
00:00:45,990 --> 00:00:43,680
throughout the 1960s they looked at a

20
00:00:47,910 --> 00:00:46,000
number of different ways in which you

21
00:00:49,670 --> 00:00:47,920
could take the apollo materials

22
00:00:52,709 --> 00:00:49,680
particularly saturn v and the apollo

23
00:00:54,869 --> 00:00:52,719
spacecraft and do

24
00:00:57,350 --> 00:00:54,879
space station like things with them so

25
00:00:59,189 --> 00:00:57,360
by the end of 1960s 1969 right after the

26
00:01:00,310 --> 00:00:59,199
successes on the landing moon attention

27
00:01:03,189 --> 00:01:00,320
turns to

28
00:01:05,830 --> 00:01:03,199
the space station program and sky lab is

29
00:01:07,590 --> 00:01:05,840
really born there being the program for

30
00:01:09,910 --> 00:01:07,600
human space flight uh during the early

31
00:01:10,950 --> 00:01:09,920
1970s and to build our bases for

32
00:01:12,870 --> 00:01:10,960
experience

33
00:01:15,270 --> 00:01:12,880
and to address those important questions

34
00:01:17,510 --> 00:01:15,280
that we had which were could humans

35
00:01:20,070 --> 00:01:17,520
physiologically adapt to long periods of

36
00:01:22,550 --> 00:01:20,080
space early 1973

37
00:01:24,550 --> 00:01:22,560
we already launched skylab

38
00:01:26,149 --> 00:01:24,560

the skylab saturn 5 is sitting on one

39
00:01:28,149 --> 00:01:26,159
launch pad the two launch pads we had

40
00:01:29,670 --> 00:01:28,159
for the apollo program uh skylab is

41
00:01:31,590 --> 00:01:29,680
sitting on one launch pad just a little

42
00:01:33,590 --> 00:01:31,600
ways away on the other launch pad

43
00:01:34,789 --> 00:01:33,600
is this saturn one vehicle with the

44
00:01:36,950 --> 00:01:34,799
command and service module because

45
00:01:38,789 --> 00:01:36,960
scotland launches one day and the

46
00:01:51,190 --> 00:01:38,799
vehicle with the first crew was supposed

47
00:01:55,590 --> 00:01:52,789
unfortunately

48
00:01:57,350 --> 00:01:55,600
when skyline the laboratory goes up

49
00:01:58,870 --> 00:01:57,360
the micro meteoroid shield that was on

50
00:02:01,510 --> 00:01:58,880
it that also provided heat protection

51
00:02:03,429 --> 00:02:01,520
for the vehicle rolls back jams into the

52
00:02:04,630 --> 00:02:03,439
solar arrays that they're two big five

53
00:02:06,550 --> 00:02:04,640
kilowatt each solar rays that we're

54
00:02:09,350 --> 00:02:06,560
supposed to deploy skylight gets in

55
00:02:11,750 --> 00:02:09,360
orbit it's crippled and and we're in big

56
00:02:13,510 --> 00:02:11,760
trouble because uh scott needs that

57
00:02:14,710 --> 00:02:13,520
energy from those big solar arrays to

58
00:02:15,830 --> 00:02:14,720
operate and for the mission to be

59
00:02:17,670 --> 00:02:15,840
successful

60
00:02:18,710 --> 00:02:17,680
and in 10 days they quickly come up with

61
00:02:20,869 --> 00:02:18,720
a plan

62
00:02:23,270 --> 00:02:20,879
we had people sew together

63
00:02:25,190 --> 00:02:23,280

parasol sunshade that they could

64
00:02:26,790 --> 00:02:25,200
erect outside the station they came up

65
00:02:28,949 --> 00:02:26,800
with some equipment that the crews could

66
00:02:30,710 --> 00:02:28,959
use to try and unstick the giant solar

67
00:02:32,790 --> 00:02:30,720
array that was stuck

68
00:02:35,750 --> 00:02:32,800
and pete conrad and his crew the first

69
00:02:38,070 --> 00:02:35,760
skylab crew launched 10 days later

70
00:02:39,910 --> 00:02:38,080
and save the entire program you know two

71
00:02:42,630 --> 00:02:39,920
and a half billion dollar program

72
00:02:43,990 --> 00:02:42,640
would have gone down the drain if the

73
00:02:45,030 --> 00:02:44,000
crew hadn't gone up there and saved the

74
00:02:47,350 --> 00:02:45,040
mission

75
00:02:49,190 --> 00:02:47,360
okay we're free

76
00:02:53,589 --> 00:02:49,200
we got four tenths of a foot per second

77
00:02:57,030 --> 00:02:55,350
story of the launch of the skylab

78
00:02:59,990 --> 00:02:57,040
orbital workshop is one of those great

79
00:03:02,470 --> 00:03:00,000
triumphs of things going bad

80
00:03:04,229 --> 00:03:02,480
and engineers and humans and astronauts

81
00:03:05,910 --> 00:03:04,239
working together to fix them they have a

82
00:03:07,190 --> 00:03:05,920
very successful almost month-long

83
00:03:08,869 --> 00:03:07,200
mission

84
00:03:11,190 --> 00:03:08,879
and

85
00:03:13,270 --> 00:03:11,200
prove that in fact first the skylab will

86
00:03:14,710 --> 00:03:13,280
work that humans are really important to

87
00:03:16,229 --> 00:03:14,720
those things and they get a lot of good

88
00:03:17,589 --> 00:03:16,239

scientific data

89
00:03:19,350 --> 00:03:17,599
and of course we had two more crews that

90
00:03:20,949 --> 00:03:19,360
launched later in the year

91
00:03:23,430 --> 00:03:20,959
the second skylight crew goes up for a

92
00:03:25,830 --> 00:03:23,440
longer period

93
00:03:28,229 --> 00:03:25,840
and you know does lots of earth science

94
00:03:29,589 --> 00:03:28,239
experiments lots of solar observations

95
00:03:31,990 --> 00:03:29,599
and then the third crew finally launches

96
00:03:33,910 --> 00:03:32,000
at the end of 1973 and early into 74

97
00:03:36,710 --> 00:03:33,920
they're up for almost three months

98
00:03:40,229 --> 00:03:38,710
observe do solar observations do more

99
00:03:41,589 --> 00:03:40,239
earth observations we do experiments

100
00:03:43,430 --> 00:03:41,599
with students

101
00:03:45,509 --> 00:03:43,440
there's the first nasa student

102
00:03:48,070 --> 00:03:45,519
experiments go on during skylab

103
00:03:50,390 --> 00:03:48,080
the last crew leaves skylab in early

104
00:03:51,670 --> 00:03:50,400
1974 so a very successful program

105
00:03:53,429 --> 00:03:51,680
overall

106
00:03:56,470 --> 00:03:53,439
despite the fact that it almost on the

107
00:03:58,470 --> 00:03:56,480
first minute of operations almost went

108
00:04:01,110 --> 00:03:58,480
in the drink one of the real triumphs of

109
00:04:02,710 --> 00:04:01,120
skylab is that it basically took a

110
00:04:04,630 --> 00:04:02,720
situation

111
00:04:07,830 --> 00:04:04,640
gathering both the limits of what was

112
00:04:09,830 --> 00:04:07,840
possible and the possibilities

113
00:04:11,910 --> 00:04:09,840

presented by incredible technological

114
00:04:13,509 --> 00:04:11,920
developments and put them together in a

115
00:04:15,990 --> 00:04:13,519
program that produced

116
00:04:19,110 --> 00:04:16,000
tremendous benefits and science

117
00:04:20,789 --> 00:04:19,120
education what space flight is all about

118
00:04:22,469 --> 00:04:20,799
so it's a stepping stone it was the

119
00:04:24,870 --> 00:04:22,479
stepping stone between

120
00:04:26,550 --> 00:04:24,880
the apollo program and then later

121
00:04:29,430 --> 00:04:26,560
definitions of what space flight would

122
00:04:30,629 --> 00:04:29,440
mean for the united states skylab is the

123
00:04:33,110 --> 00:04:30,639
first step

124
00:04:35,510 --> 00:04:33,120
we learn how to operate in space

125
00:04:37,749 --> 00:04:35,520
we build on that with the iss

126
00:04:39,830 --> 00:04:37,759
we now go on further beyond low earth

127
00:04:40,870 --> 00:04:39,840
orbit to visit an asteroid and then onto

128
00:04:42,710 --> 00:04:40,880
mars