New episodes every month!

Episode 29:
First Space Shuttle Flight:
Astronaut Bob Crippen on the legacy of STS-1 & Columbia

April 2021

@NASAKennedy
#NASARocketRanch

1
00:00:08,320 --> 00:00:14,800
The spotlights came on in the predawn hours\h
of April 12th 1981, illuminating a spacecraft\h\h

2
00:00:14,800 --> 00:00:21,200
like no other, the space shuttle. Just before\h
liftoff, Columbia's crew climbed inside for the\h\h

3
00:00:21,200 --> 00:00:27,680
very first test flight into space. Today, we\h
recall the amazing story of that first mission\h\h

4
00:00:27,680 --> 00:00:34,320
and listen to rarely-heard details from Columbia\h
pilot Bob Crippen, next on the Rocket Ranch.\h

5
00:00:34,320 --> 00:00:38,000
EGS Program Chief Engineer,\h
verify no constraints to launch.\h

6
00:00:38,000 --> 00:00:44,080
Three, two, one, and lift off.
Welcome to space.\h

7
00:00:44,080 --> 00:00:50,560
Bob Crippen, was a rookie astronaut in 1978,\h
when NASA assigned him and veteran astronaut\h\h

8
00:00:50,560 --> 00:00:54,080
John Young to train for the\h
very first space shuttle flight.\h

9
00:00:54,080 --> 00:00:58,640
I was ready to turn handsprings at that moment.
The launch was nearly perfect.\h

10
00:00:59,200 --> 00:01:03,360
Not a ride like it anywhere else.
After getting to space,\h\h

11
00:01:03,360 --> 00:01:09,760
Crippen made a disturbing discovery. Some of the\h
protective tiles on the spacecraft were missing.\h

12
00:01:09,760 --> 00:01:14,480
A lot of people on the ground worried that there\h
were some missing there, maybe some were missing\h\h

13
00:01:14,480 --> 00:01:18,880
on the bottom, which would be critical.
The fearless astronaut recounts the best\h\h

14
00:01:18,880 --> 00:01:23,760
stories from the first shuttle flight and shares\h
his thoughts on the space shuttle's legacy.\h

15
00:01:24,320 --> 00:01:29,680
I believe that some of those\h
payloads helped us win the cold war.\h

16
00:01:29,680 --> 00:01:34,960
Here now, four time space shuttle astronaut,\h
Bob Crippin. Welcome to the rocket ranch.\h

17
00:01:35,840 --> 00:01:40,640
Thank you very much, Pleased to be here.
Oh, what was it like to be selected for this\h\h

18
00:01:40,640 --> 00:01:46,880
very first mission of the space shuttle?
It was a very exciting moment for me.\h\h

19
00:01:48,000 --> 00:01:52,240
On the very first flight, John Young, who\h
ended up being the commander was the most\h\h

20
00:01:53,840 --> 00:01:58,560
likely guy in the office to do it. He was our\h
most experienced astronaut, flown four times,\h\h

21
00:01:58,560 --> 00:02:05,520
including Apollo 16 and walked on the moon. I\h
expected him to be the commander of the first\h\h

22
00:02:05,520 --> 00:02:10,800
flight, but I expected the other seat would be\h
occupied by somebody else that had flown before.\h\h

23
00:02:11,920 --> 00:02:18,400
I was very pleasantly surprised when George\h
Abbey, who was our big boss at that time,\h\h

24
00:02:18,400 --> 00:02:24,400
asked me if I'd like to fly the first one. I was\h
really turning handsprings at that moment, but\h\h

25
00:02:25,680 --> 00:02:31,520
I'd been working a long time towards it. I\h
guess the powers that be decided they wanted to\h\h

26
00:02:33,760 --> 00:02:39,920
expand our experience basis as fast\h
as possible. On the initial flights,\h\h

27
00:02:39,920 --> 00:02:44,320
they paired a guy who had flown before\h
with a rookie like myself, and I ended\h\h

28
00:02:44,320 --> 00:02:49,120
up being lucky enough to be on the first one.
Wow, I can imagine that moment when he told you\h\h

29
00:02:49,120 --> 00:02:54,320
that you were the guy, must've been incredible,\h
like you said, you were doing handsprings.\h

30
00:02:57,920 --> 00:03:05,440
I joined the astronaut office in 1969, it\h
had been a while working there towards the\h\h

31
00:03:05,440 --> 00:03:08,800
flight. In fact, Deke Slayton, when he\h
hired us, told us we probably wouldn't\h\h

32
00:03:08,800 --> 00:03:14,240
be able to fly it until around 1980.
You and astronaut John Young, what an\h\h

33
00:03:14,240 --> 00:03:19,760
interesting pair you kind of mentioned it there.\h
He had all this experience, here he was a veteran\h\h

34
00:03:19,760 --> 00:03:27,040
of NASA space flight, Gemini, Apollo, he walked on\h
the moon. This was going to be your first flight,\h\h

35
00:03:27,040 --> 00:03:33,280
so a very unlikely pairing some would\h
say. What was the relationship like?\h

36
00:03:34,160 --> 00:03:39,440
John was my big boss at that time, so I\h
hadn’t really worked that close with him,\h\h

37
00:03:40,880 --> 00:03:46,240
but we developed a very close working relationship\h
and friendship during the time training for the\h\h

38
00:03:46,240 --> 00:03:53,280
flight. We had more time to train them we had\h
initially planned on. John was a great guy.\h\h

39
00:03:54,160 --> 00:03:58,080
When you're a rookie going up for the first\h
time, it's great to go with a guy with that\h\h

40
00:03:58,080 --> 00:04:04,000
kind of experience. I'm just sorry that\h
John can't be with us here to celebrate\h\h

41
00:04:04,000 --> 00:04:08,480
this 40th anniversary with myself.
Certainly understand that John Young\h\h

42
00:04:08,480 --> 00:04:15,920
passed away in 2018 at the age of 87,\h
and he is missed. So the space shuttle,\h\h

43
00:04:15,920 --> 00:04:21,440
10 years in the design process launched like a\h
rocket, went into space for several weeks and\h\h

44
00:04:21,440 --> 00:04:29,200
then came back down like an airplane. This was\h
a highly complex machine. Your job, I believe,\h\h

45
00:04:29,200 --> 00:04:35,200
was working with the computers and the electrical\h
systems. How complex of a machine was this?\h

46
00:04:35,920 --> 00:04:40,400
It was a very complex machine, perhaps\h
the most complex we'd ever built.\h\h

47
00:04:41,840 --> 00:04:48,080
We did have some initial problems technically\h
because of that. It took us a while to get ready\h\h

48
00:04:48,080 --> 00:04:53,920
for that first flight. We had problems with our\h
main engines and also with our thermal protection\h\h

49
00:04:53,920 --> 00:04:58,640
system, the tiles, and we had other problems as\h
well, but those ended up being the big ones that\h\h

50
00:04:59,360 --> 00:05:06,160
caused the delay. It was a complex machine,\h
and it was a fabulous machine in retrospect.\h

51
00:05:06,160 --> 00:05:11,760
What impressed you the most about it as\h
a spacecraft, and then also as a glider?\h

52
00:05:14,720 --> 00:05:20,160
What impressed me most was that we would actually\h
fly back in and land on the runway as opposed to\h\h

53
00:05:20,160 --> 00:05:27,120
parachute in the ocean some place to get\h
picked up. As a pilot, that is a much more\h\h

54
00:05:27,680 --> 00:05:34,240
satisfying way to come back. It was overall the\h
fact that it could carry very large payloads,\h\h

55
00:05:35,440 --> 00:05:39,760
and has allowed us to do some\h
fantastic things with it. It\h\h

56
00:05:39,760 --> 00:05:47,040
was a great machine. I'm really proud of it.
The only way of proving this space shuttle,\h\h

57
00:05:47,040 --> 00:05:56,240
that it would work, was to fly it with crew in it\h
on the very first mission. It's really incredible\h\h

58
00:05:56,240 --> 00:06:03,040
to think about you and John Young, flying the\h
space shuttle, no previous test flight in a\h\h

59
00:06:03,040 --> 00:06:10,000
un-crewed position. Many of your contemporaries\h
have said that this was for that reason that this\h\h

60
00:06:10,000 --> 00:06:15,760
was one of the boldest test flights in history.\h
Did you have a sense of that at that time?\h

61
00:06:17,200 --> 00:06:23,040
Not as much as some people have talked about\h
and some of my aviator friends might argue this,\h\h

62
00:06:23,040 --> 00:06:29,120
some others rivaled it as well, but it was\h
an interesting thing. I don't know that we'll\h\h

63
00:06:29,120 --> 00:06:37,840
ever do that again. The design of the shuttle was\h
such that we had never designed to be able to fly\h\h

64
00:06:38,720 --> 00:06:46,000
without a crew. There was some discussion maybe\h
about a year prior to flight as to whether\h\h

65
00:06:46,000 --> 00:06:54,400
we should do that or not, but it would delay us\h
even more, and been very costly. John and I both\h\h

66
00:06:54,400 --> 00:06:59,280
thought that the best chance of the mission\h
being a success was for us to be onboard.\h\h

67
00:07:00,080 --> 00:07:06,640
Thank goodness they ended up agreeing with us.
Was there any hesitation, any worry or any concern\h\h

68
00:07:07,680 --> 00:07:13,040
in the lead up to launch?
John and I both, we knew the vehicle very well\h\h

69
00:07:13,680 --> 00:07:20,000
and we knew the people that were working on it.\h
We spent a lot of time going out to the various\h\h

70
00:07:20,000 --> 00:07:28,480
companies that were assembling it. We thought that\h
we can handle any problems that were given to us.\h\h

71
00:07:29,680 --> 00:07:36,720
Maybe it’s because we were test pilots, we\h
thought that we could deal with anything.\h

72
00:07:37,680 --> 00:07:45,440
You guys were certainly the right stuff.\h
Let's go back to that day, April 12th, 1981,\h\h

73
00:07:45,440 --> 00:07:52,480
here at the Kennedy space center, you're strapped\h
in the seconds are ticking down to liftoff.\h\h

74
00:07:53,600 --> 00:08:00,080
Kind of explain to me and take me through what\h
you remember what you recall about those moments.\h

75
00:08:02,640 --> 00:08:08,320
I still remember them very well, I think. We\h
actually tried on April the 10th for a launch,\h\h

76
00:08:08,320 --> 00:08:11,840
and we ended up with a computer\h
problem that caused us to scrub.\h\h

77
00:08:13,440 --> 00:08:19,680
The vehicle was, as I said before, very complex.\h
It didn't surprise me that we scrubbed. When\h\h

78
00:08:20,800 --> 00:08:27,520
some people, smart people, solved that computer\h
problem, and we tried again on the 12th two days\h\h

79
00:08:27,520 --> 00:08:33,200
later. I fully expected there was a good\h
chance that we were going to scrub again.\h\h

80
00:08:34,320 --> 00:08:38,880
It was only when the count got inside of about\h
a minute that I turned to John, and I said,\h\h

81
00:08:38,880 --> 00:08:44,640
“I think we might really do it.” I think it was\h
at that point, my heart rate went up to about 130,\h\h

82
00:08:44,640 --> 00:08:55,360
it was probably one of the most exciting moments\h
of my life. The flight certainly lived up to it.\h

83
00:08:57,040 --> 00:09:03,760
That's funny that you mentioned that because I\h
have the Today newspaper from after that flight\h\h

84
00:09:04,720 --> 00:09:11,200
with a headline, Columbia is a gem and there\h
is the launch of the space shuttle in that.\h\h

85
00:09:11,200 --> 00:09:16,160
And it's funny you mentioned your heart rate\h
at 130, and that's exactly what it was reported\h\h

86
00:09:17,120 --> 00:09:25,200
being. I'll just read from this part right here,\h
it said that “a cool collected 50 year old young,\h\h

87
00:09:25,200 --> 00:09:32,000
whose heartbeat was a steady 85 during liftoff\h
commented, I've got a super spaceship under me, as\h\h

88
00:09:32,000 --> 00:09:37,600
he and Crippen whizzed around the Earth. ‘What a\h
feeling! What a view!,’ said 43 year old Crippen,\h\h

89
00:09:37,600 --> 00:09:44,240
whose heartbeat jumped to 130 at liftoff.” So\h
yours was 130 and his was 85. That's a cool cat.\h

90
00:09:44,960 --> 00:09:52,480
He is although it wasn't reported, but John's\h
heart rate on the landing was closer to my 130.\h

91
00:09:57,520 --> 00:10:05,200
Let the record show. Well, I tell you as it lifted\h
off tell me about what kind of ride that was like.\h

92
00:10:07,680 --> 00:10:12,720
It was an exciting ride. Prior to that time,\h
especially with the Saturns, it was very slow\h\h

93
00:10:12,720 --> 00:10:20,880
to lift off. But when the space shuttle was\h
about to, lit the solid rockets, it lifted off\h\h

94
00:10:21,920 --> 00:10:29,360
with a nice fast acceleration. The only thing\h
I've been able to liken it to was a catapult\h\h

95
00:10:29,360 --> 00:10:39,200
shot coming off an aircraft carrier. It got up\h
and moved out I guess because it was winged.\h\h

96
00:10:40,000 --> 00:10:45,680
Most people had never realized that all of\h
the other expendable vehicles tend to rotate\h\h

97
00:10:45,680 --> 00:10:50,400
right after they lift off to get themselves\h
oriented in the direction they want to go.\h\h

98
00:10:50,400 --> 00:10:55,360
When we rotated, I understand it made a lot\h
of the spectators kind of nervous because\h\h

99
00:10:55,360 --> 00:10:59,840
they thought something was wrong, but all\h
it was doing was what it was supposed to do.\h

100
00:11:01,680 --> 00:11:06,000
It was rather noisy, a lot of shaking\h
going on with those solid rockets.\h\h

101
00:11:06,640 --> 00:11:13,120
I've likened it to driving my pickup down an\h
old country washboard road, you just kind of\h\h

102
00:11:13,840 --> 00:11:18,400
shake it along but that lasts about two\h
minutes and it's quite a ride. You get up\h\h

103
00:11:18,400 --> 00:11:21,760
but the acceleration is not that much,\h
you're only three G's, that's the max.\h\h

104
00:11:22,320 --> 00:11:25,680
We throttled the engines actually to\h
maintain that not for the crew, but\h\h

105
00:11:26,480 --> 00:11:33,760
for the payloads that we'd be carrying. After the\h
solid rockets burned out, actually that really\h\h

106
00:11:33,760 --> 00:11:39,920
got my attention, because we went from three G's\h
down to about a half a G and it got very quiet,\h\h

107
00:11:39,920 --> 00:11:44,640
very still, no shaking. I thought for a moment,\h
maybe the main engines had quit too, but\h\h

108
00:11:45,680 --> 00:11:51,680
checking the instruments that said they were still\h
running. And then accelerating on out to three G's\h\h

109
00:11:51,680 --> 00:11:57,680
again and eight and a half minutes ago in 17,500\h
miles an hour, not a ride like it anywhere else.\h

110
00:11:58,960 --> 00:12:05,920
I can only imagine, wow, just listening to\h
your description of it is thrilling in it\h\h

111
00:12:05,920 --> 00:12:13,120
of itself. So you circled the earth 36 times,\h
you were up in space about two and a half days.\h\h

112
00:12:13,920 --> 00:12:17,280
What were the most memorable\h
moments from that flight?\h

113
00:12:18,880 --> 00:12:24,720
I like to use John's phrase for that. The part\h
between takeoff and landing, it was all memorable.\h\h

114
00:12:28,320 --> 00:12:34,000
First the ride up was exciting,\h
and then all of a sudden you're\h\h

115
00:12:34,640 --> 00:12:38,640
floating around and getting weightless\h
experience for the first time.\h\h

116
00:12:39,600 --> 00:12:44,560
And then you look out the window and see this\h
beautiful spaceship earth that we live on,\h\h

117
00:12:45,680 --> 00:12:52,880
all of that was remarkable. Perhaps the thing\h
that got most people's attention though was when\h\h

118
00:12:52,880 --> 00:12:58,240
I opened up the payload bay doors, we discovered\h
that some of our thermal protection system,\h\h

119
00:12:58,240 --> 00:13:02,720
the tiles were missing off the rear end\h
of the vehicle. John and I really weren't\h\h

120
00:13:02,720 --> 00:13:09,200
that concerned about that because those were there\h
for reusability only. But a lot of people on the\h\h

121
00:13:09,200 --> 00:13:14,000
ground worried that there were some missing there,\h
maybe some were missing on the bottom, which would\h\h

122
00:13:14,000 --> 00:13:21,040
be critical, but there wasn't anything that we\h
could see or observe that would allow us to check\h\h

123
00:13:21,040 --> 00:13:24,640
that out, so there wasn't any sense worrying\h
about it as far as John and I were concerned.\h

124
00:13:26,480 --> 00:13:33,840
You didn't worry at all?
No, I was just enjoying the experience.\h

125
00:13:35,840 --> 00:13:43,920
Wow. So the flight is completed.\h
You're getting ready to land,\h\h

126
00:13:44,640 --> 00:13:50,960
and as you're coming down I can imagine the\h
re-entry of this vehicle for the first time.\h\h

127
00:13:51,920 --> 00:13:55,440
How did it perform when it was\h
coming back into Earth's atmosphere?\h

128
00:13:58,320 --> 00:14:09,200
It was fantastic, there were a lot of aerodynamic\h
things that we had to worry about, but the vehicle\h\h

129
00:14:09,200 --> 00:14:15,840
flew beautifully. It did reach\h
some limits that we had to\h\h

130
00:14:16,800 --> 00:14:22,560
be a little bit concerned about with the way\h
our body flat was moving and a few other things.\h\h

131
00:14:24,400 --> 00:14:33,120
In essence, it was a beautiful landing all the way\h
up from when we did the deorbit burn to touchdown.\h\h

132
00:14:36,000 --> 00:14:41,200
John took over a few times during entry during\h
the roll reversals, just to get the feel of\h\h

133
00:14:41,200 --> 00:14:49,680
the vehicle. When we came out of blackout, the\h
ground got excited because they knew we hadn't,\h\h

134
00:14:50,720 --> 00:14:57,360
the tiles must've been okay because we'd\h
survived that. I remarked as we came over…\h

135
00:14:57,360 --> 00:14:58,640
Wow.
…the California coast,\h\h

136
00:14:58,640 --> 00:15:04,720
that that was a great way to come to California.\h
It was a beautiful day in California too,\h\h

137
00:15:05,760 --> 00:15:09,200
we could see Edwards Air\h
Force Base our landing site\h\h

138
00:15:10,000 --> 00:15:14,240
from well over a hundred miles away.
I believe we could have just flown in\h\h

139
00:15:14,240 --> 00:15:20,640
visually, but we had good guidance. John took\h
over, and finally just as we came overhead,\h\h

140
00:15:21,760 --> 00:15:30,400
about 40,000 feet and started a big roll reversal.\h
When he rolled left, I looked out his left window\h\h

141
00:15:31,440 --> 00:15:37,040
and I looked down at the lakebed and there's\h
thousands of people out there. I said to John,\h\h

142
00:15:37,040 --> 00:15:44,240
hope they're not on the runway. They weren't thank\h
goodness. John brought the vehicle around and did\h\h

143
00:15:44,240 --> 00:15:53,840
a marvelous landing like I knew he would. John was\h
about as excited at that point as I've ever seen\h\h

144
00:15:56,560 --> 00:15:59,760
him.
225,000 people\h\h

145
00:15:59,760 --> 00:16:07,840
it was reported Bob, were there on that dry\h
lakebed watching, what was that site like?\h

146
00:16:09,920 --> 00:16:15,600
Well, as I said, it got my attention when I first\h
saw them, but after that we weren't paying any\h\h

147
00:16:15,600 --> 00:16:22,640
attention to it. However, after we got out of\h
the vehicle and the docs had checked us over,\h\h

148
00:16:23,520 --> 00:16:31,200
they had a little ceremony out on the lakebed\h
with the governor of California, and some other\h\h

149
00:16:31,200 --> 00:16:38,160
dignitaries. The crowd was out there as well. I\h
remember very well when I was a kid growing up\h\h

150
00:16:38,720 --> 00:16:44,880
in the Houston area we used to go to the rodeo\h
every year. One year they'd have Gene Autry,\h\h

151
00:16:44,880 --> 00:16:50,640
another year they'd have Roy Rogers. I'd always\h
go down to the edge of the arena and hold out my\h\h

152
00:16:50,640 --> 00:16:55,920
hand, and they'd ride around and shake hands with\h
everybody. As I was sitting there on the podium\h\h

153
00:16:56,640 --> 00:17:01,840
after landing, I looked down at the crowd\h
and there was Roy Rodgers, so I got up\h\h

154
00:17:01,840 --> 00:17:08,400
and walked over and shook hands with him.
What a special moment that must've been.\h

155
00:17:10,480 --> 00:17:13,280
It was.
So you're there on the ground, and\h\h

156
00:17:13,280 --> 00:17:22,400
there were celebrities everywhere. You mentioned\h
Roy Rogers, what was your sense of the moment,\h\h

157
00:17:22,400 --> 00:17:31,840
what you had accomplished after getting out and\h
being welcomed back home to such a grand affair?\h

158
00:17:34,560 --> 00:17:40,960
It's hard to capture emotions like that but\h
both John and I were on a high. We were really\h\h

159
00:17:40,960 --> 00:17:45,840
excited the vehicle performed as well as\h
it did. I was excited I hadn't screwed up.\h\h

160
00:17:47,520 --> 00:17:53,120
But we were just enjoying the moment.
After STS-1, Crippin was selected for\h\h

161
00:17:53,120 --> 00:17:59,200
three more space shuttle missions and the\hprogram was flying high\hthe first five years

162
00:17:59,200 --> 00:18:06,160
until the Challenger accident in 1986, and then the
Columbia accident in 2003.

163
00:18:06,160 --> 00:18:09,360
Together,\h\hthose accidents claimed\h
the lives of 14 astronauts.\h

164
00:18:11,280 --> 00:18:20,720
Bob, you flew four space shuttle missions on two\h
orbiters, Columbia and Challenger, and both were\h\h

165
00:18:20,720 --> 00:18:28,480
destroyed in mission accidents we know in 1986,\h
and in 2003, and of course 14 astronauts lost.\h\h

166
00:18:29,600 --> 00:18:35,360
I know you knew many of them, you were close to\h
many of them. In fact, you flew with Dick Scobee,\h\h

167
00:18:35,360 --> 00:18:43,040
I believe who was lost in Challenger. Would you\h
share what kind of impact those accidents had\h\h

168
00:18:43,680 --> 00:18:48,400
on you personally and professionally\h
being that you flew on both of those?\h

169
00:18:51,520 --> 00:18:57,360
They were terrible tragedies, probably one of\h
the worst experiences I ever had in my life.\h\h

170
00:18:59,040 --> 00:19:03,840
I was actually training for a fifth flight\h
that we were going to do out of California\h\h

171

00:19:03,840 --> 00:19:06,640
to launch out of Vandenberg Air\h
Force Base on the space shuttle.\h\h

172
00:19:08,320 --> 00:19:14,720
I was in Los Alamos, New Mexico, working\h
with the crew training on one of our payloads\h\h

173
00:19:15,840 --> 00:19:25,200
when we watched the launch of the STS-51L,\h
and we were irritated at the TV coverage\h\h

174
00:19:25,200 --> 00:19:29,680
because they showed the liftoff and then\h
they cut to a soap opera or something. And\h\h

175
00:19:32,800 --> 00:19:38,160
we were saying foul words walking out of\h
the room when the picture came back to the\h\h

176
00:19:38,160 --> 00:19:48,320
terrible sight of the solid rockets peeling\h
off of the space shuttle. And, well, I knew\h\h

177
00:19:49,120 --> 00:19:53,680
as soon as I saw the accident that the crew\h
was lost. I had very good friends onboard,\h\h

178
00:19:53,680 --> 00:20:00,160
just as you said I flew with Dick Scobee. He\h
was on my third flight. He was my pilot on that.\h

179
00:20:01,680 --> 00:20:08,800
It was a sad moment, one that I'll\h
never forget. Every anniversary\h\h

180
00:20:10,560 --> 00:20:16,640
it tears me up a little bit. This year was the\h
35th anniversary of that, that terrible tragedy.\h\h

181

00:20:17,600 --> 00:20:24,080
But NASA did what it usually does in that\h
kind of thing, it pulled itself together\h\h

182
00:20:24,080 --> 00:20:30,000
tried to correct the mistakes, and got\h
back flying again. I was part of the\h\h

183
00:20:32,800 --> 00:20:39,040
investigation. I ended up making a recommendation\h
that we ought to put more operational people\h\h

184
00:20:40,400 --> 00:20:45,600
in the management of the shuttle. My boss\h
told me if I believe that I'd come help him\h\h

185
00:20:45,600 --> 00:20:52,240
manage the program. That was when I hung up\h
my flying boots, and tried to get the shuttle\h\h

186
00:20:52,240 --> 00:21:00,880
back flying again, which we did eventually.
I was completely retired when we lost Columbia.\h\h

187
00:21:03,360 --> 00:21:10,080
I have a daughter who works there at the\h
Johnson Space Center, Susie Crippen, and Susie\h\h

188
00:21:11,120 --> 00:21:16,560
called me up on the day the vehicle was\h
re-entering, and said they lost contact with it.\h\h

189
00:21:17,840 --> 00:21:24,480
She and I both knew that meant that they lost\h
the vehicle and the crew as well. I knew some\h\h

190
00:21:24,480 --> 00:21:31,200
of the crew, I didn't know them nearly as well as\h
I did the 51L crew, but it was another sad day.\h

191

00:21:32,160 --> 00:21:41,600
Thank you for sharing that with us. It's\h
interesting to me that you took it as a motivation\h\h

192
00:21:41,600 --> 00:21:48,400
to get into management, to be involved, to have...\h
You were an astronaut, now you put yourself\h\h

193
00:21:48,400 --> 00:21:54,880
in the operations. Did that carry through\h
with you throughout your management career?\h

194
00:21:55,680 --> 00:22:03,920
Well, you know, my initial thought was let's get\h
the vehicle back flying again and do it safely.\h\h

195
00:22:05,600 --> 00:22:10,080
At least, I personally believed that was what\h
the crew that we lost would have wanted us to do.\h\h

196
00:22:12,640 --> 00:22:19,200
I did learn some lessons throughout that, that\h
actually returned it to making that happen,\h\h

197
00:22:20,240 --> 00:22:24,720
which I worked with a lot of people like Tony\h
Aldridge, who was the director of the space\h\h

198
00:22:24,720 --> 00:22:32,160
shuttle program at that point. And Dick Coors, who\h
was looking over the engineering. The three of us\h\h

199
00:22:34,400 --> 00:22:40,640
worked hard for a couple of years to make\h
that happen. We were all very proud of it when\h\h

200
00:22:41,680 --> 00:22:48,800
Rick Hauck, who I had flown with on my\h
second flight successfully lifted off again.\h

201

00:22:50,880 --> 00:22:58,320
Bob, the collective history of the space shuttle\h
program is impressive, right? It was used to\h\h

202
00:22:58,320 --> 00:23:06,240
repair damaged satellites while in orbit, the most\h
striking being the Hubble telescope. It was also,\h\h

203
00:23:06,880 --> 00:23:12,480
it flew 37 shuttle flights, which were necessary\h
to, to build the international space station,\h\h

204
00:23:12,480 --> 00:23:23,840
which 20 years after humans first got aboard is\h
still up there doing great science; 135 missions,\h\h

205
00:23:23,840 --> 00:23:32,640
542 million miles, it was a long program. What do\h
you think the legacy of the space shuttle program\h\h

206
00:23:32,640 --> 00:23:39,280
is that all began with your first flight?
I think it was one of undoubtedly the most\h\h

207
00:23:39,280 --> 00:23:44,640
fantastic flying machines we've ever built. As\h
you said, it allowed us to do some great things.\h\h

208
00:23:45,440 --> 00:23:52,480
One early on, we were flying flights\h
for the department of defense. And\h\h

209
00:23:53,440 --> 00:23:59,840
I believe that some of those payloads helped\h
us win the cold war. And as you said, we\h\h

210
00:24:00,560 --> 00:24:07,840
also were able to do the great observatories,\h
including Hubble, that's enlightened us\h\h

211

00:24:07,840 --> 00:24:15,680
considerably about the nature of our universe and\h
went on to build the International Space Station,\h\h

212
00:24:15,680 --> 00:24:22,640
which is still flying today. We had the two\h
terrible tragedies that shouldn't have happened\h\h

213
00:24:22,640 --> 00:24:28,960
in my opinion, but they did. It was a fantastic\h
flying machine, but it was also a fragile one,\h\h

214
00:24:30,080 --> 00:24:35,760
took lots of TLC, and the people at Kennedy Space\h
Center were very good at that. When Atlantis\h\h

215
00:24:35,760 --> 00:24:42,320
landed after the last flight, that vehicle was as\h
good a condition as it could have possibly been,\h\h

216
00:24:42,320 --> 00:24:47,600
and was certainly capable of flying some\h
more, but the politics, and the accidents\h\h

217
00:24:49,120 --> 00:24:54,800
spelled the end of that. It'll be a long\h
time before we have a vehicle that's nearly\h\h

218
00:24:56,080 --> 00:25:04,000
as magnificent as the space shuttle was.
It was certainly one of a kind and now as we see\h\h

219
00:25:04,000 --> 00:25:09,440
spacecraft manufacturers going back to the capsule\h
design for all the advantages, it just certainly\h\h

220
00:25:09,440 --> 00:25:16,000
cements its place in history. For many reasons\h
as you mentioned if not alone, just how unique\h\h

221

00:25:16,000 --> 00:25:22,160
it was. You had a career at NASA in management,\h
so I would be remiss if I didn't ask you about\h\h

222
00:25:22,160 --> 00:25:27,840
your time working out here at the rocket ranch,\h
the Kennedy Space Center, what was that like?\h

223
00:25:30,800 --> 00:25:37,200
That was fantastic as director of the Kennedy\h
Space Center. That was my dream job. The only\h\h

224
00:25:37,200 --> 00:25:44,800
better one was sitting in the cockpit of the\h
space shuttle. I first visited them the Kennedy\h\h

225
00:25:44,800 --> 00:25:52,880
Space Center in, I believe it was 1967 before I\h
was with NASA. I fell in love with the place. I\h\h

226
00:25:52,880 --> 00:25:57,200
always felt that was where the rubber hits the\h
road as far as the space program is concerned.\h\h

227
00:25:58,000 --> 00:26:05,440
The people that work there from the janitors on\h
up to the center director, love it. Love what\h\h

228
00:26:05,440 --> 00:26:13,040
they're doing and they do a fantastic job of it.
You've now got the new program Artemis, which\h\h

229
00:26:13,680 --> 00:26:20,720
we've got rocket parts inside the VAB right now.\h
And you talked about what it was like to ride\h\h

230
00:26:20,720 --> 00:26:27,200
those solid rocket boosters that's their plans to\h
make that happen again. The SLS of course as you\h\h

231

00:26:27,200 --> 00:26:33,440
know has two solid rocket boosters so that ride's\h
coming back. What are your thoughts about Artemis\h\h

232
00:26:33,440 --> 00:26:40,800
going back to the moon and then establishing a\h
presence there so we can learn how to get to Mars?\h

233
00:26:40,800 --> 00:26:46,080
We do need to get out of Earth orbit. We need to\h
go back to the moon. That's the right thing to do,\h\h

234
00:26:47,040 --> 00:26:50,960
we need to learn to live and work off of this\h
planet. There are still some great things we\h\h

235
00:26:50,960 --> 00:26:57,440
can do on the moon. A lot of people say we've been\h
there, we've done that. But really those were like\h\h

236
00:26:57,440 --> 00:27:01,840
six camping trips. They didn't last very\h
long and we need to go back and learn to,\h\h

237
00:27:01,840 --> 00:27:07,680
to live on the moon, then eventually fly on\h
to Mars. That will happen some day. I don't\h\h

238
00:27:07,680 --> 00:27:11,360
think I'll be around to see it though.
Bob, I'm going to leave you with this. I\h\h

239
00:27:11,920 --> 00:27:16,000
found this picture here. I'm going to put it\h
up to the screen so you can see it. This is,\h\h

240
00:27:16,800 --> 00:27:23,200
this is you and John Young, 40 years ago.\h
Handsome devil there signing autographs.\h

241

00:27:24,240 --> 00:27:26,880
We've done that a few times.
What was that like to be\h\h

242
00:27:27,680 --> 00:27:29,920
an astronaut celebrity?
Well, I guess it\h\h

243
00:27:31,200 --> 00:27:38,160
comes with the job, that wasn't what John\h
and I were fond of. But it was part of what\h\h

244
00:27:38,160 --> 00:27:44,240
we needed to do to make people appreciate what\h
the space shuttle had done and what it could do.\h\h

245
00:27:46,240 --> 00:27:52,320
John and I spent a while after that first flight\h
doing what I call the rubber chicken circuit, and\h\h

246
00:27:53,040 --> 00:27:57,040
signing lots of autographs and talking to\h
people, and telling them about the program.\h

247
00:27:58,480 --> 00:28:05,920
Bob Crippen, pilot for the Space Shuttle Columbia,\h
the very first launch of the space shuttle.\h\h

248
00:28:05,920 --> 00:28:09,040
Thank you so much for being on\h
and stopping by the rocket ranch.\h

249
00:28:10,880 --> 00:28:11,840
Thank you for having me.

250
00:28:13,760 --> 00:28:17,280
And that’s going to do it for\h
this episode of the Rocket Ranch.\h

251
00:28:17,280 --> 00:28:20,480

A special thanks to our\h
guest astronaut Bob Crippen.\h\h

252
00:28:21,040 --> 00:28:25,920
If you liked this podcast, please subscribe!
A special shout-out to our producer,\h\h

253
00:28:25,920 --> 00:28:30,000
John Sackman, and editor Chris\h
Chamberland. I’m your host,\h\h