
PAO

1
00:00:01,667 --> 00:00:03,903
>> Kyle Herring: Also, we have
an opportunity and a pleasure

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00:00:03,903 --> 00:00:06,072
to welcome Heather
Paul into the room.

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00:00:06,072 --> 00:00:10,209
Heather is a crew and
thermal systems division lead

4
00:00:10,209 --> 00:00:13,045
for strategic communications
here at JSC

5
00:00:13,045 --> 00:00:14,713
at the Johnson Space Center

6
00:00:14,713 --> 00:00:16,715
in the engineering
directorate, right?

7
00:00:16,715 --> 00:00:18,951
And Heather's taken --

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00:00:18,951 --> 00:00:21,020
I'm really pleased to
have her come and join me.

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00:00:21,020 --> 00:00:22,221
Thanks, Heather for coming.

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00:00:22,221 --> 00:00:23,322
>> Heather Paul: Oh, it's
my pleasure, thank you.

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00:00:23,322 --> 00:00:26,058
>> Kyle Herring: We

just saw Karen talking

12
00:00:26,058 --> 00:00:29,929
about career choices and I asked
Heather to come by and talk

13
00:00:29,929 --> 00:00:33,999
to us about her own career
choices and she got where she is

14
00:00:33,999 --> 00:00:35,468
so I'll let you start by --

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00:00:35,468 --> 00:00:39,071
just tell us a little bit
about how you got interested

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00:00:39,071 --> 00:00:40,739
in space in the first place.

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00:00:40,739 --> 00:00:41,674
>> Heather Paul: Sure.

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00:00:41,674 --> 00:00:43,275
Well, my interest
in space started

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00:00:43,275 --> 00:00:45,377
when I was actually
a very young child.

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00:00:45,377 --> 00:00:47,780
I was one of those
kids was always asking

21
00:00:47,780 --> 00:00:51,183
if I could go outside to go look
at the stars and I loved looking

22

00:00:51,183 --> 00:00:53,219
at the moon, at the
stars, trying to figure

23
00:00:53,219 --> 00:00:55,087
out where the constellations
were.

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00:00:55,087 --> 00:00:57,623
My favorite constellation is
Orion, it's the easiest one

25
00:00:57,623 --> 00:01:00,126
for me to spot in the night sky.

26
00:01:00,126 --> 00:01:04,830
And really that interest in
space began with that kind

27
00:01:04,830 --> 00:01:08,334
of astronomy interest but
then it grew as I learned more

28
00:01:08,334 --> 00:01:12,138
in my science classes about
black holes and the planets

29
00:01:12,138 --> 00:01:13,906
and my favorite thing
to draw when I was

30
00:01:13,906 --> 00:01:15,908
in art class was
the solar system.

31
00:01:15,908 --> 00:01:19,145
So while all my friends were
drawing homes and their pets,

32
00:01:19,145 --> 00:01:22,047

I was drawing the sun and all
of the planets in succession

33
00:01:22,047 --> 00:01:25,484
so it really is something that
I think I was destined to do

34
00:01:25,484 --> 00:01:27,186
to come work in the
space program

35
00:01:27,186 --> 00:01:29,688
and help us develop
technologies that we can use

36
00:01:29,688 --> 00:01:31,123
to live and work in space.

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00:01:31,123 --> 00:01:33,459
>> Kyle Herring: So you really
thought that as a young age,

38
00:01:33,459 --> 00:01:35,861
you said I really want
to work, you know,

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00:01:35,861 --> 00:01:38,164
so young people sometimes
don't --

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00:01:38,164 --> 00:01:40,399
they don't make those
decisions that early

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00:01:40,399 --> 00:01:43,969
on in their careers
but, you know,

42
00:01:43,969 --> 00:01:46,805
when you got a little older,

did you start trying to look

43
00:01:46,805 --> 00:01:52,044
at in terms of education, you
can educational background

44
00:01:52,044 --> 00:01:56,182
if you made the choices that
would lead you specifically here

45
00:01:56,182 --> 00:01:58,617
but did you make -- set
any professional goals

46
00:01:58,617 --> 00:02:01,086
for yourself even
as a young age?

47
00:02:01,086 --> 00:02:02,488
>> Heather Paul: Well, that's
an interesting question

48
00:02:02,488 --> 00:02:07,126
because I actually grew up in a
very non-engineering type family

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00:02:07,126 --> 00:02:09,795
and in fact, I could
dance before I could walk

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00:02:09,795 --> 00:02:12,665
so I have a very artistic
and creative side.

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00:02:12,665 --> 00:02:14,767
I have danced all
different forms of dance.

52
00:02:14,767 --> 00:02:16,902
I played piano and clarinet.

53
00:02:16,902 --> 00:02:19,471
I sang, I won't sing for you
today 'cause now I'm terrible

54
00:02:19,471 --> 00:02:22,841
but when I was young, I had a
wonderful voice so I really grew

55
00:02:22,841 --> 00:02:27,012
up in this very artistic family
and foundation but when I was

56
00:02:27,012 --> 00:02:31,717
at school, as much as I loved
my arts classes and, you know,

57
00:02:31,717 --> 00:02:35,821
literature, I really had
this strong affection

58
00:02:35,821 --> 00:02:37,590
for math and science.

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00:02:37,590 --> 00:02:40,459
And I really was drawn to
those subjects in such a way

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00:02:40,459 --> 00:02:43,295
that I wanted to figure out what
I could do with that knowledge

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00:02:43,295 --> 00:02:45,431
and of course then my interest
in space, I thought well,

62
00:02:45,431 --> 00:02:48,901
I have to be an astronaut and
then I started getting older

63
00:02:48,901 --> 00:02:51,237
and realized that that's pretty
competitive and I said okay,

64
00:02:51,237 --> 00:02:54,673
well I'm still going to shoot
for that goal of living in space

65
00:02:54,673 --> 00:02:58,043
but what's the next best thing
I can do; be an engineer.

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00:02:58,043 --> 00:02:59,445
And that's what I really strived

67
00:02:59,445 --> 00:03:02,615
to do throughout my education is
figure out what classes I needed

68
00:03:02,615 --> 00:03:04,984
to do to become a really
good engineer for NASA

69
00:03:04,984 --> 00:03:07,253
and maybe one day an
astronaut like Karen.

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00:03:07,253 --> 00:03:09,722
>> Kyle Herring: Right; I think
that's what a lot of people,

71
00:03:09,722 --> 00:03:12,024
you know, they strive to
be and they think I want

72
00:03:12,024 --> 00:03:13,692
to be an astronaut when
I grow up but there are

73

00:03:13,692 --> 00:03:16,929
so many different fields in --

74
00:03:16,929 --> 00:03:19,798
certainly in the aerospace
fields, specifically here

75
00:03:19,798 --> 00:03:22,134
at NASA and even more
specifically here

76
00:03:22,134 --> 00:03:23,736
at the Johnson Space Center.

77
00:03:23,736 --> 00:03:25,904
There are so many
different career fields

78
00:03:25,904 --> 00:03:29,408
that put you directly
involved in what happens

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00:03:29,408 --> 00:03:33,178
on that International
Space Station right now;

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00:03:33,178 --> 00:03:37,950
it's quite intriguing
but now talk a little bit

81
00:03:37,950 --> 00:03:40,753
about specifically how
you ended up at NASA

82
00:03:40,753 --> 00:03:42,655
and I guess your whole
career's been here?

83
00:03:42,655 --> 00:03:44,757
>> Heather Paul: Yes, yes; I've

worked here for 18 years now,

84
00:03:44,757 --> 00:03:48,394
I just celebrated last
week my 18 year anniversary

85
00:03:48,394 --> 00:03:52,097
so I'm excited to say that I am
a late teen in my NASA years.

86
00:03:52,097 --> 00:03:55,434
But I actually started
out here as a student

87
00:03:55,434 --> 00:03:57,936
so when I was majoring
in mechanical engineering

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00:03:57,936 --> 00:04:00,139
and Spanish at Auburn
University,

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00:04:00,139 --> 00:04:02,574
I was one of the lucky
few that got a job here

90
00:04:02,574 --> 00:04:05,611
as an undergraduate student
and I was able to alternate

91
00:04:05,611 --> 00:04:09,481
between going to school for a
semester and then coming to work

92
00:04:09,481 --> 00:04:13,352
at NASA and it was an amazing
way to get a better understand

93
00:04:13,352 --> 00:04:16,422
of all of the theories and all

my homework and design projects

94
00:04:16,422 --> 00:04:18,223
that I did at school,
how I could apply

95
00:04:18,223 --> 00:04:20,492
that to not just
engineering projects

96
00:04:20,492 --> 00:04:24,063
but engineering projects that
were going to fly in space.

97
00:04:24,063 --> 00:04:28,200
And so I was able to take a
stroll through life sciences

98
00:04:28,200 --> 00:04:30,102
for a while and learn
how the body is affected

99
00:04:30,102 --> 00:04:31,437
by microgravity.

100
00:04:31,437 --> 00:04:33,872
I spent a lot of my time in
our engineering directorate,

101
00:04:33,872 --> 00:04:36,208
designing space station
tools and hardware

102
00:04:36,208 --> 00:04:39,111
and evaluating spacesuit
materials.

103
00:04:39,111 --> 00:04:42,681
I was a rocket scientist
for a very, very brief time;

104
00:04:42,681 --> 00:04:45,984
realized that my
experience does not lend well

105
00:04:45,984 --> 00:04:48,520
to propulsion techniques
so I'm going to leave

106
00:04:48,520 --> 00:04:50,356
that to the experts there.

107
00:04:50,356 --> 00:04:53,092
I also was in mission operations
for a while, learning how

108
00:04:53,092 --> 00:04:56,395
to work in a place like the
flight control room here

109
00:04:56,395 --> 00:04:58,864
to help the astronauts while
they're doing their day

110
00:04:58,864 --> 00:05:00,766
to day operations.

111
00:05:00,766 --> 00:05:02,968
But my true love is
really designing hardware

112
00:05:02,968 --> 00:05:05,537
for the astronauts to use
while they're onboard the space

113
00:05:05,537 --> 00:05:07,973
station and for future
exploration.

114

00:05:07,973 --> 00:05:10,576
>> Kyle Herring: And you -- as
you mentioned, you've worked

115
00:05:10,576 --> 00:05:15,647
on a lot of different areas;
diversity in your portfolio

116
00:05:15,647 --> 00:05:19,985
or your professional portfolio,
you know, some people want

117
00:05:19,985 --> 00:05:22,721
to focus on one thing for their
whole career which is great

118
00:05:22,721 --> 00:05:25,791
and some people want to
work in different areas

119
00:05:25,791 --> 00:05:30,028
and get a diverse background and
I think that's a good example

120
00:05:30,028 --> 00:05:33,665
of that and the opportunities
are --

121
00:05:33,665 --> 00:05:36,335
could be endless in
terms of where you can go

122
00:05:36,335 --> 00:05:38,337
with the educational background

123
00:05:38,337 --> 00:05:40,372
that you have in
particular, right?

124
00:05:40,372 --> 00:05:43,442

>> Heather Paul: Absolutely; in fact, when I was a student here,

125
00:05:43,442 --> 00:05:45,544
as I mentioned, I could kind of hop around.

126
00:05:45,544 --> 00:05:48,080
Once I settled into my current role in crew

127
00:05:48,080 --> 00:05:51,683
and thermal systems division, even within our fantastic team,

128
00:05:51,683 --> 00:05:54,386
there are so many different opportunities for projects,

129
00:05:54,386 --> 00:05:56,555
whether I want to work flight hardware that's onboard the

130
00:05:56,555 --> 00:05:59,558
station now or even sometimes more exciting,

131
00:05:59,558 --> 00:06:02,227
looking at what we can do to design hardware if we go back

132
00:06:02,227 --> 00:06:05,531
to the moon, onto Mars or explore an asteroid

133
00:06:05,531 --> 00:06:08,000
and as you mentioned, the diversity and careers,

134
00:06:08,000 --> 00:06:10,102

the diversity and
opportunities is just

135
00:06:10,102 --> 00:06:12,538
as diverse, if not even more so.

136
00:06:12,538 --> 00:06:15,274
And as a mechanical engineer,
even though that's my foundation

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00:06:15,274 --> 00:06:18,944
in education, I've worked
as an aerospace engineer,

138
00:06:18,944 --> 00:06:21,613
an electrical engineer,
a chemical engineer,

139
00:06:21,613 --> 00:06:24,416
a lot of different opportunities

140
00:06:24,416 --> 00:06:27,453
with that mechanical
engineering foundation.

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00:06:27,453 --> 00:06:29,621
>> Kyle Herring: And not
only with that foundation,

142
00:06:29,621 --> 00:06:33,859
now Heather, obviously she not
only reaches out internally

143
00:06:33,859 --> 00:06:36,528
in the work that she does
but you also now, you know,

144
00:06:36,528 --> 00:06:39,231
do quite a bit of
external work as well,

145
00:06:39,231 --> 00:06:42,534
associated with getting the
word out about what we do.

146
00:06:42,534 --> 00:06:43,869
>> Heather Paul: Absolutely,

147
00:06:43,869 --> 00:06:46,138
I think that's a very important
part of my job and our job

148
00:06:46,138 --> 00:06:49,441
at NASA is to not only make
sure our astronauts are safe

149
00:06:49,441 --> 00:06:51,310
and working well
onboard the space station

150
00:06:51,310 --> 00:06:54,012
and we're designing all of these
new technologies and partnering

151
00:06:54,012 --> 00:06:57,583
with industry and
academia but making sure

152
00:06:57,583 --> 00:07:00,185
that the kids today realize
that this is something

153
00:07:00,185 --> 00:07:02,488
that they can absolutely
do and we need you.

154
00:07:02,488 --> 00:07:05,958
I like to say, Kyle, that we
at NASA are just normal people

155
00:07:05,958 --> 00:07:07,593
that get to do extraordinary
things

156
00:07:07,593 --> 00:07:08,861
and I think that's really true.

157
00:07:08,861 --> 00:07:10,863
I'm just a normal
guy who happens

158
00:07:10,863 --> 00:07:12,097
to have a really cool job.

159
00:07:12,097 --> 00:07:13,265
>> Kyle Herring:
Yeah, that's great.

160
00:07:13,265 --> 00:07:16,935
I -- we both feel the
same way obviously.

161
00:07:16,935 --> 00:07:18,237
What's next for you?

162
00:07:18,237 --> 00:07:21,473
I mean you've already in 18
years, have done so much.

163
00:07:21,473 --> 00:07:26,311
Do you have any other
goal or anything new

164
00:07:26,311 --> 00:07:28,380
that you're headed toward?

165
00:07:28,380 --> 00:07:30,282
>> Heather Paul:
Certainly, you know,

166
00:07:30,282 --> 00:07:32,985
of course my ultimate dream
is to become an astronaut;

167
00:07:32,985 --> 00:07:36,088
we'll see if that happens
one day but if not,

168
00:07:36,088 --> 00:07:39,057
I'm actually really happy
being a support engineer

169
00:07:39,057 --> 00:07:40,492
for our flight crew.

170
00:07:40,492 --> 00:07:41,627
And what happens next?

171
00:07:41,627 --> 00:07:43,095
You know, you never know.

172
00:07:43,095 --> 00:07:45,097
I always like to look
for new opportunities.

173
00:07:45,097 --> 00:07:47,499
I love working in the
engineering directorate here

174
00:07:47,499 --> 00:07:50,536
and in my specific division,
we've got a fantastic team

175
00:07:50,536 --> 00:07:53,138
of people that are doing
such a great project,

176
00:07:53,138 --> 00:07:55,507

it's always really
interesting but, you know,

177
00:07:55,507 --> 00:07:58,577
there's opportunities all
around the center and, you know,

178
00:07:58,577 --> 00:08:01,179
I'll -- stay tuned, maybe I'll
come back on and let you know.

179
00:08:01,179 --> 00:08:02,347
>> Kyle Herring: Oh,
we'll look forward

180
00:08:02,347 --> 00:08:06,251
to that her favorite
constellation is Orion,

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00:08:06,251 --> 00:08:08,487
of course we're building
an Orion spacecraft to go

182
00:08:08,487 --> 00:08:12,224
to deep space one day and the
commercial crew program is there

183
00:08:12,224 --> 00:08:15,260
to follow on the shuttle
with a new crew vehicle

184
00:08:15,260 --> 00:08:17,996
to deliver astronauts to the
International Space Station

185
00:08:17,996 --> 00:08:21,099
so along with a lot of
other engineering activities

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00:08:21,099 --> 00:08:23,101

that are going on around
JSC and not only here

187
00:08:23,101 --> 00:08:27,339
but at other agencies or other
centers around the agency

188
00:08:27,339 --> 00:08:31,777
as well; so as you can tell
from Heather, she's one of a lot

189
00:08:31,777 --> 00:08:35,647
of people that support
what goes on not only here

190
00:08:35,647 --> 00:08:38,517
at the Johnson Space Center
but at NASA in general

191
00:08:38,517 --> 00:08:41,954
and we really appreciate you
coming by and talking to us.

192
00:08:41,954 --> 00:08:42,988
>> Heather Paul:
Yeah, my pleasure;

193
00:08:42,988 --> 00:08:44,923
any chance that I
can get out and talk

194
00:08:44,923 --> 00:08:46,692
about the wonderful
work that we do here

195
00:08:46,692 --> 00:08:49,261
and more importantly,
the wonderful people.

196
00:08:49,261 --> 00:08:52,030

It's just such a great
family and such a great team

197
00:08:52,030 --> 00:08:54,700
and it's my honor
absolutely to work here.

198
00:08:54,700 --> 00:08:55,801
>> Kyle Herring: It really is.

199
00:08:55,801 --> 00:08:58,236
It's a great bunch of
people to work with

200
00:08:58,236 --> 00:09:00,405
and all the flight
controllers here,