



**CELL D**  
VERTICAL  
STACKING CELL  
AREA 85

**NOTICE**  
Safety & Security  
All personnel must wear  
hard hats and safety glasses  
at all times.

GLOBAL TOOLING SYSTEM

1  
00:00:01,980 --> 00:00:01,960  
I am here with Julie Bassler

2  
00:00:01,980 --> 00:00:04,300  
the Stages Manager for the Space Launch System Rocket

3  
00:00:04,380 --> 00:00:07,740  
and Julie, tell us a little bit more about what it is you do as Stages Manager.

4  
00:00:07,860 --> 00:00:12,540  
Hi Kristen, I am the lead of the team that is building and testing

5  
00:00:12,640 --> 00:00:15,920  
the core stage, which is two hundred and twelve feet tall.

6  
00:00:16,080 --> 00:00:18,980  
and it is the largest part of the SLS rocket.

7  
00:00:19,320 --> 00:00:22,800  
We are going to be testing our green run testing very shortly

8  
00:00:22,880 --> 00:00:26,000  
and concluding with the hot fire test very soon.

9  
00:00:26,600 --> 00:00:28,980  
Tell me more about that test and how important it is.

10  
00:00:29,560 --> 00:00:32,660  
So our Green Run Test is extremely important for us.

11  
00:00:32,760 --> 00:00:36,560  
It's our major milestone on our path to the first Artemis mission.

12  
00:00:36,820 --> 00:00:39,240  
It will help us validate our design...

13  
00:00:39,360 --> 00:00:41,240

as we are building this for the first time

14

00:00:41,300 --> 00:00:43,240

It is a brand new design

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00:00:43,360 --> 00:00:45,480

and it will ensure that we have...

16

00:00:45,600 --> 00:00:48,420

an integrated avionics and propulsion system.

17

00:00:48,540 --> 00:00:51,900

It'll be the first time that we bring the core stage fully to life.

18

00:00:52,040 --> 00:00:54,080

Wow, that sounds absolutely amazing.

19

00:00:54,220 --> 00:00:55,480

I can't wait for it.

20

00:00:55,600 --> 00:00:58,180

I'm sure the audience has heard the humming around us...

21

00:00:58,260 --> 00:01:01,000

The scene that we're in, kind of a different environment.

22

00:01:01,100 --> 00:01:04,800

Can you tell us about the Systems Integration Lab where we are right now?

23

00:01:04,900 --> 00:01:07,840

Absolutely, so the Systems Integration Lab...

24

00:01:07,960 --> 00:01:11,860

is a test platform that we use to integrate our avionics hardware...

25

00:01:11,940 --> 00:01:13,860

and also our flight software.

26

00:01:13,960 --> 00:01:15,860

So all the boxes you see here...

27

00:01:15,940 --> 00:01:18,580

and the miles of cables that you see...

28

00:01:18,640 --> 00:01:21,120

this is what the inside of the Core Stage looks like.

29

00:01:21,200 --> 00:01:23,720

So you can see it's very complex...

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00:01:23,860 --> 00:01:26,580

and what we do here is we run a lot of simulation...

31

00:01:26,680 --> 00:01:30,560

to ensure that we've validated the systems and integrated them together.

32

00:01:30,660 --> 00:01:34,200

So what parts of the Green Run testing has been done here at the SIL?

33

00:01:34,500 --> 00:01:38,520

So we actually have special software that's a version of the flight software...

34

00:01:38,620 --> 00:01:41,240

but it's really specific for our Green Run test.

35

00:01:41,360 --> 00:01:45,360

And so that testing has also been integrated into this laboratory.

36

00:01:45,540 --> 00:01:49,300

And with all these Avionics boxes to ensure that we have a successful hot fire.

37

00:01:49,460 --> 00:01:52,000

What other Core Stage work has been done at Marshall?

38

00:01:52,100 --> 00:01:54,580

So Marshall has been a significant contributor...

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00:01:54,640 --> 00:01:56,320  
to the whole SLS rocket.

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00:01:56,400 --> 00:01:58,000  
Specifically for Core Stage...

41

00:01:58,060 --> 00:02:00,780  
we've had four structural test articles done here.

42

00:02:00,900 --> 00:02:06,340  
The engine section, the intertank, the hydrogen tank, and the LOX tank "the oxygen tank".

43

00:02:06,620 --> 00:02:10,140  
We also have the thrust vector control system work...

44

00:02:10,220 --> 00:02:13,580  
going on here at Marshall which is a qualification test for us.

45

00:02:13,940 --> 00:02:15,860  
I feel like I can hear the passion coming...

46

00:02:15,980 --> 00:02:17,660  
from you about what you do.

47

00:02:17,720 --> 00:02:19,660  
What makes this job so rewarding to you?

48

00:02:19,880 --> 00:02:22,940  
So the best part of the job is working with all the people...

49

00:02:22,940 --> 00:02:24,060  
and the teamwork.

50

00:02:24,200 --> 00:02:28,880  
It's been extremely fun to watch how everybody has pulled together...

51

00:02:29,020 --> 00:02:33,400

with the same goal in mind to launch this historic Artemis Mission.

52

00:02:33,500 --> 00:02:38,400

We have more than a thousand companies across the United States that support us.

53

00:02:38,480 --> 00:02:40,400

Some of them are small mom and pop shops...

54

00:02:40,480 --> 00:02:42,400

all the way up to the big contractors...

55

00:02:42,460 --> 00:02:45,640

and each one of the individuals that have been working with us...