



1
00:00:00,000 --> 00:00:01,000

\h

2
00:00:01,880 --> 00:00:02,643

Howard: If you follow me inside, we can take a look and see what's it's like to live on the moon for seven days.

3
00:00:08,850 --> 00:00:09,550

Welcome to the airlock of the lunar lander. Right now you see a lot of foam core boxes surrounding me.

4
00:00:14,950 --> 00:00:16,953

These represent the approximate volumes of the spacesuits that the crew members will use on the moon,

5
00:00:19,680 --> 00:00:20,863

as well as the different supplies they need to recharge the spacesuits or internal components of the suits.

6
00:00:25,630 --> 00:00:27,290

When we actually do our evaluations, we have prototype suits that we bring in,

7
00:00:29,170 --> 00:00:30,573

but we don't leave them in here most of the time. We replace them with foam core boxes.

8
00:00:33,700 --> 00:00:33,730

The way the module's setup, there's a dome above and below.

9
00:00:37,870 --> 00:00:44,470

And we actually can store some things below the, below the floor through the use of this trap door.

10
00:00:48,080 --> 00:00:50,353

It looks like a lot of material, but for four crew members to be able to do spacewalks for a week, this is about th

11
00:00:55,540 --> 00:00:57,803

And as you see it's kind of crowded. There's enough room for me and maybe one other person.

12
00:00:59,610 --> 00:01:00,823

So two people will suit up at a time and go out, while the other two remain inside.

13
00:01:03,930 --> 00:01:05,940

And let's go through the tunnel to the ascent module and see where the other two are,

14

00:01:07,720 --> 00:01:12,653

and where all four of them live when nobody's outside doing a spacewalk.

15

00:01:13,330 --> 00:01:14,330

\h

16

00:01:30,190 --> 00:01:30,393

These represent our spacesuit umbilicals. We can actually attach these to some of the mockup spacesuits,

17

00:01:36,920 --> 00:01:41,853

to simulate the astronauts plugging in to the vehicle life support system.

18

00:01:49,960 --> 00:01:51,226

When engineering builds the second generation of this mockup,

19

00:01:52,760 --> 00:01:53,023

it'll be interesting to see it up on top of the lander deck.

20

00:01:56,630 --> 00:01:58,563

I know a lot of people have a hard time conceiving of the, the height of the lunar lander

21

00:02:00,630 --> 00:02:07,830

until they come in here and realize that that's how high the deck is going to be off of the lunar surface.

22

00:02:08,790 --> 00:02:09,476

Gambrell: Of course this, this is the TS3 mockup.

23

00:02:11,370 --> 00:02:12,213

Howard: Right. Looks like the core, the structure of the core hab is done.

24

00:02:15,460 --> 00:02:15,523

Gambrell: Now what we're doing with this mockup is we've created the same envelope as the TS3,

25

00:02:21,930 --> 00:02:24,996

which would be a habitable mockup on the moon.

26

00:02:25,190 --> 00:02:26,473

We provided a raised floor so you could have storage underneath the floor.

27

00:02:28,840 --> 00:02:29,080

Howard: Right.

28

00:02:29,600 --> 00:02:30,220

Gambrell: But we've also mocked up where the air tanks and the fuel tanks would be

29

00:02:34,580 --> 00:02:35,736

so you're at the correct height you can come up the ramp, park

30

00:02:37,690 --> 00:02:38,256

and there'll be a station there were you can leave your suits and things like that.

31

00:02:42,790 --> 00:02:47,256

Now the toroidal hab, the configuration that we have right now, uh,

32

00:02:47,650 --> 00:02:53,183

is over in this section as you see is kind of looks like a real nice balcony there.

33

00:02:53,560 --> 00:02:58,293

But what that is, it'll be a platform that is able to transition out.

34

00:02:59,320 --> 00:02:59,470

Then around the edges is where you'll have your support stations where you can do,

35

00:03:04,770 --> 00:03:12,103

uh, different types of experiments or have work surfaces that you can use and this also is multi-configurable.

36

00:03:12,530 --> 00:03:14,410

Howard: Right. We've been looking at several different possible reconfiguration options.

37

00:03:16,650 --> 00:03:16,780

So this is pretty close to the original concept that you guys already have.

38

00:03:21,520 --> 00:03:22,896

And then there's a major variation that turns this into more of a crew quarters kind of module.

39

00:03:26,610 --> 00:03:27,676

Gambrell: Right.

40

00:03:27,780 --> 00:03:30,560

Howard: So it would be a reconfigured building is a great thing and we might be able to mockup one of these c

41

00:03:33,200 --> 00:03:33,800

do evaluations, then come back, tear all that out and mockup a entirely different configuration,