



SCREEN  
2

1  
00:00:05,299 --> 00:00:09,299  
Hi Amy.

2  
00:00:09,299 --> 00:00:10,299  
Hi I'm Laurie.

3  
00:00:10,299 --> 00:00:11,299  
Nice to meet you.

4  
00:00:11,299 --> 00:00:12,299  
And I'm Kraig.

5  
00:00:12,299 --> 00:00:13,299  
Nice to meet you.

6  
00:00:13,299 --> 00:00:14,299  
All right, so why don't you tell me about  
what it is you do here?

7  
00:00:14,299 --> 00:00:15,299  
I work for the Flight Analogs Project and  
this is HERA, The Human Exploration Research

8  
00:00:15,299 --> 00:00:16,299  
Analog.

9  
00:00:16,299 --> 00:00:18,359  
[Music]  
This facility is basically is to support HRP

10  
00:00:18,359 --> 00:00:22,449  
research to Human Research Program and what  
we're doing is we're addressing different

11  
00:00:22,449 --> 00:00:26,289  
risks and gaps for long-duration spaceflight  
for our Journey to Mars for example.

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00:00:26,289 --> 00:00:32,009

And we have several elements when HRP program behavioral performance, human health counter

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00:00:32,009 --> 00:00:37,890

measures, space human factors and habitability and exploration medical and those types of

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00:00:37,890 --> 00:00:43,710

groups of individuals or programs come in here to demonstrate or try out their research

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00:00:43,710 --> 00:00:45,790

objectives in this facility.

16

00:00:45,790 --> 00:00:49,250

The first level of the HERA contains the hygiene module.

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00:00:49,250 --> 00:00:53,100

Right now we're not at a point to where we're regulating water usage.

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00:00:53,100 --> 00:00:57,940

However that will something I guarantee will be looked at in the future.

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00:00:57,940 --> 00:00:59,199

Because obviously we don't have an unlimited supply of water.

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00:00:59,199 --> 00:01:04,010

So we do have the ability to meter and turn off if the researchers so desire.

21

00:01:04,010 --> 00:01:08,659

And then from there we have a flight simulator station where they simulate activities that

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00:01:08,659 --> 00:01:11,600

they'd be doing on their way to an asteroid.

23

00:01:11,600 --> 00:01:16,140

Then we have a medical workstation to address medical sims or an actual emergency, address

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00:01:16,140 --> 00:01:21,710

first minor first aid issues We have an airlock which we actually use for stowage and we actually

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00:01:21,710 --> 00:01:25,970

have it made a makeshift blood draw station in there as well as a location where they

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00:01:25,970 --> 00:01:28,360

conduct private family, medical and psychological conferences.

27

00:01:28,360 --> 00:01:30,220

This is awesome but what is next?

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00:01:30,220 --> 00:01:35,280

So let's go upstairs and what we will show you the living quarters where the crew of

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00:01:35,280 --> 00:01:39,610

four will stay during their mission to the "asteroid" at this point in time.

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00:01:39,610 --> 00:01:43,740

So on level two we basically have the crew living quarters which contains four sleeping

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00:01:43,740 --> 00:01:47,320

for the crew members to sleep in, along with an exercise hardware suite.

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00:01:47,320 --> 00:01:51,660

We want you to stay fit and active and engaged.

33

00:01:51,660 --> 00:01:54,430

Well that makes sense,  
You're not (groan) moving around much.

34

00:01:54,430 --> 00:01:55,850

I like this little picture of the beach, like,  
that's going to make you feel like you're

35

00:01:55,850 --> 00:01:56,850

outside.

36

00:01:56,850 --> 00:01:57,850

There are nine video surveillance cameras  
inside the module.

37

00:01:57,850 --> 00:02:03,950

I was noticing them all  
they are all around.

38

00:02:03,950 --> 00:02:05,690

They are all around.

39

00:02:05,690 --> 00:02:08,300

So there's one in the airlock.

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00:02:08,300 --> 00:02:10,910

Four downstairs on the lower level.

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00:02:10,910 --> 00:02:12,209

Four up here.

42

00:02:12,209 --> 00:02:16,550

None in the hygiene module or in your living  
quarters.

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00:02:16,550 --> 00:02:17,550

That's appropriate.

44

00:02:17,550 --> 00:02:21,110

[music]

We are in the Human Exploration Research Analog

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00:02:21,110 --> 00:02:25,590

basically a habitat for four people to live  
in isolation simulating a long distance space

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00:02:25,590 --> 00:02:27,750

flight like a Journey to Mars.

47

00:02:27,750 --> 00:02:31,510

So we actually develop a timeline for the  
crew member that integrates all the PI, principle

48

00:02:31,510 --> 00:02:35,670

investigator's science for the research  
they are trying to gather, as well as integrating

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00:02:35,670 --> 00:02:41,290

payload activities, and mission realism activities,  
so it mimics an ISS timeline almost exactly.

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00:02:41,290 --> 00:02:45,641

They go to bed, they have pre sleep time,  
they have a post sleep time, they have their

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00:02:45,641 --> 00:02:50,810

food, their food is provided, space like,  
you know pre-ready to eat, pre hydrated meals

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00:02:50,810 --> 00:02:52,470

that they have to prepare.

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00:02:52,470 --> 00:02:56,620

They have exercise you know scheduled everyday  
just like a real crew member would.

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00:02:56,620 --> 00:03:00,860

We do a comm delay based on the mission scenario

appropriately a phase it in, starting with

55  
00:03:00,860 --> 00:03:06,240  
maybe a 5 minute one way comm delay up to  
a ten minute one way comm delay with mission

56  
00:03:06,240 --> 00:03:08,060  
control support personnel.

57  
00:03:08,060 --> 00:03:11,640  
We observed them 24/7 just like you be if  
you were on a real mission.

58  
00:03:11,640 --> 00:03:15,110  
So they are looking at the psychological effects  
of isolation and confinement.

59  
00:03:15,110 --> 00:03:16,210  
They are looking at the habitability.

60  
00:03:16,210 --> 00:03:18,310  
What do they need inside the module?

61  
00:03:18,310 --> 00:03:20,560  
They're looking at the medical equipment that  
may be needed.

62  
00:03:20,560 --> 00:03:23,980  
They're looking at any time of physiological  
countermeasure that may need to be introduced

63  
00:03:23,980 --> 00:03:28,270  
to keep the crew healthy and psychologically  
sound so when they arrive at their destination

64  
00:03:28,270 --> 00:03:29,880  
they're able to perform the task at hand.

65  
00:03:29,880 --> 00:03:30,880

Right!