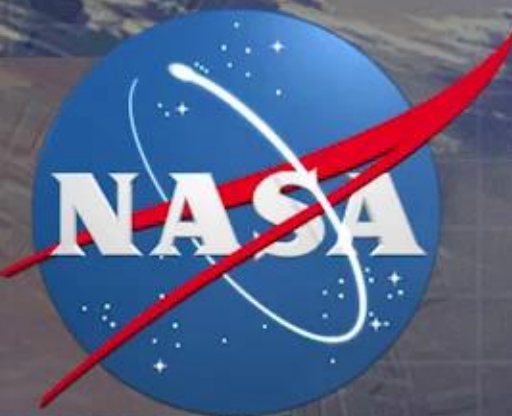


NASA's Human Research Program

Cross-cutting Computational Modeling Project - CCMP
Informing Risks to Astronaut Health and Performance



1
00:00:06,039 --> 00:00:07,106
>> I'M ALEX SCHEPELMANN,

2
00:00:07,107 --> 00:00:07,940
AND I'M A ROBOTICS

3
00:00:07,941 --> 00:00:08,540
AND COMPUTATIONAL

4
00:00:08,541 --> 00:00:09,441
MODELING ENGINEER

5
00:00:09,442 --> 00:00:10,576
WORKING WITH THE CROSS-CUTTING

6
00:00:10,577 --> 00:00:11,944
COMPUTATIONAL MODELING PROJECT

7
00:00:11,945 --> 00:00:13,847
AT NASA GLENN RESEARCH CENTER.

8
00:00:13,947 --> 00:00:14,847
AS NASA MOVES FORWARD

9
00:00:14,848 --> 00:00:15,981
WITH ITS ARTEMIS PROGRAM

10
00:00:15,982 --> 00:00:17,449
TO RETURN HUMANS TO THE MOON

11
00:00:17,450 --> 00:00:18,550
AND ESTABLISH A SUSTAINABLE

12
00:00:18,551 --> 00:00:19,585
PRESENCE THERE,

13
00:00:19,586 --> 00:00:20,753

SCIENTISTS AND ENGINEERS

- 14
00:00:20,754 --> 00:00:21,987
AT GLENN RESEARCH CENTER
- 15
00:00:21,988 --> 00:00:23,222
ARE USING SOPHISTICATED,
- 16
00:00:23,223 --> 00:00:24,123
COMPUTATIONAL MODELING
- 17
00:00:24,124 --> 00:00:25,224
TECHNIQUES TO UNDERSTAND
- 18
00:00:25,225 --> 00:00:27,159
RISKS TO ASTRONAUT HEALTH.
- 19
00:00:27,160 --> 00:00:28,527
OUR SOFTWARE MODELS USE MACHINE
- 20
00:00:28,528 --> 00:00:29,928
LEARNING AND DIGITAL SIMULATION
- 21
00:00:29,929 --> 00:00:30,896
TECHNIQUES TO HELP NASA
- 22
00:00:30,897 --> 00:00:32,064
DECIDE WHICH MEDICATIONS
- 23
00:00:32,065 --> 00:00:32,998
AND MEDICAL EQUIPMENT
- 24
00:00:32,999 --> 00:00:34,500
ARE MOST LIKELY TO BE NEEDED
- 25
00:00:34,501 --> 00:00:35,267
SHOULD AN ASTRONAUT

26
00:00:35,268 --> 00:00:36,335
BECOME ILL OR INJURED

27
00:00:36,336 --> 00:00:37,870
DURING A MISSION.

28
00:00:37,871 --> 00:00:39,505
OTHER MODELS DEVELOPED BY CCMP

29
00:00:39,506 --> 00:00:41,106
HELP WITH MISSION PLANNING.

30
00:00:41,107 --> 00:00:42,241
FOR EXAMPLE, ONE OF OUR

31
00:00:42,242 --> 00:00:43,375
SIMULATIONS DETERMINES

32
00:00:43,376 --> 00:00:44,343
HOW MUCH DRINKING WATER

33
00:00:44,344 --> 00:00:45,177
IS NEEDED TO KEEP THE RISK

34
00:00:45,178 --> 00:00:46,311
OF ASTRONAUTS DEVELOPING

35
00:00:46,312 --> 00:00:47,046
RENAL STONES

36
00:00:47,047 --> 00:00:48,514
TO A REASONABLE LEVEL.

37
00:00:48,515 --> 00:00:49,548
THE COMPUTATIONAL MODELS

38
00:00:49,549 --> 00:00:50,416

WE DEVELOP WILL HELP

39

00:00:50,417 --> 00:00:51,717

NASA SAFEGUARD ASTRONAUTS