



Spaceto**Ground**

1
00:00:03,016 --> 00:00:05,236
WELCOME TO SPACE TO
GROUND, I'M ISIDRO REYNA.

2
00:00:05,596 --> 00:00:07,796
THIS WEEK, SCIENCE
AND COMMERCIALIZATION

3
00:00:07,836 --> 00:00:10,256
OF THE INTERNATIONAL
SPACE STATION.

4
00:00:10,826 --> 00:00:13,756
FUTURE LONG-DURATION MISSIONS
FACE SIGNIFICANT CHALLENGES

5
00:00:13,756 --> 00:00:14,866
MAINTAINING CREW HEALTH.

6
00:00:15,396 --> 00:00:18,096
A CRITICAL AREA IS
SUPPLYING ADEQUATE NUTRITION,

7
00:00:18,096 --> 00:00:20,816
AS CERTAIN VITAMINS AND
NUTRIENTS IN SUPPLIED FOODS,

8
00:00:20,816 --> 00:00:23,066
HAVE BEEN SHOWN TO
DEGRADE EXTENSIVELY DURING

9
00:00:23,066 --> 00:00:23,946
EXTENDED STORAGE.

10
00:00:24,666 --> 00:00:27,456
THIS WEEK, THE CREW WORKED ON
THE BIONUTRIENTS EXPERIMENT.

11
00:00:27,586 --> 00:00:30,156

BIONUTRIENTS DEMONSTRATES A TECHNOLOGY

12

00:00:30,286 --> 00:00:31,966

THAT ENABLES ON-DEMAND
PRODUCTION

13

00:00:31,966 --> 00:00:34,826

OF HUMAN NUTRIENTS DURING
LONG-DURATION SPACE MISSIONS.

14

00:00:34,826 --> 00:00:38,066

THE PROCESS USES ENGINEERED
MICROBES, LIKE YEAST,

15

00:00:38,206 --> 00:00:40,136

TO GENERATE POTENTIAL
SUPPLEMENTS FOR FOOD

16

00:00:40,136 --> 00:00:42,366

THAT MAY LOSE THESE
NUTRIENTS OVER TIME.

17

00:00:42,956 --> 00:00:45,916

SAMPLES ARE FROZEN FOR EVENTUAL
RETURN TO EARTH FOR ANALYSIS.

18

00:00:46,636 --> 00:00:49,786

THIS APPROACH MAY ALSO BENEFIT
ON-DEMAND PRODUCTION OF VITAMINS

19

00:00:49,946 --> 00:00:52,546

AND OTHER BIOMOLECULES
IN REMOTE AREAS ON EARTH.

20

00:00:53,826 --> 00:00:56,136

NASA IS OPENING THE
INTERNATIONAL SPACE STATION

21

00:00:56,286 --> 00:00:57,416

FOR COMMERCIAL BUSINESS

22

00:00:57,676 --> 00:01:00,076

TO ACCELERATE A COMMERCIAL
ECONOMY IN SPACE.

23

00:01:01,106 --> 00:01:03,976

NASA WILL CONTINUE RESEARCH
AND TESTING IN LOW-EARTH ORBIT

24

00:01:04,176 --> 00:01:07,356

TO INFORM ITS LUNAR EXPLORATION
PLANS, WHILE ALSO WORKING

25

00:01:07,356 --> 00:01:10,496

WITH THE PRIVATE SECTOR TO TEST
TECHNOLOGIES, TRAIN ASTRONAUTS

26

00:01:10,496 --> 00:01:12,456

AND STRENGTHEN THE
BURGEONING SPACE ECONOMY.

27

00:01:12,976 --> 00:01:14,506

PROVIDING EXPANDED OPPORTUNITIES

28

00:01:14,506 --> 00:01:16,796

AT THE INTERNATIONAL SPACE
STATION TO MANUFACTURE,

29

00:01:16,926 --> 00:01:19,136

MARKET AND PROMOTE
COMMERCIAL PRODUCTS

30

00:01:19,186 --> 00:01:20,956

AND SERVICES WILL HELP CATALYZE

31

00:01:20,956 --> 00:01:23,716

AND EXPAND SPACE EXPLORATION
MARKETS FOR MANY BUSINESSES.

32

00:01:24,286 --> 00:01:27,196

NASA ALSO IS ENABLING PRIVATE
ASTRONAUT MISSIONS OF UP

33

00:01:27,196 --> 00:01:30,536

TO 30 DAYS ON THE INTERNATIONAL
SPACE STATION TO PERFORM DUTIES

34

00:01:30,536 --> 00:01:32,136

THAT FALL INTO THE
APPROVED COMMERCIAL

35

00:01:32,266 --> 00:01:34,776

AND MARKETING ACTIVITIES
OUTLINED IN THE DIRECTIVE,

36

00:01:35,156 --> 00:01:38,256

WITH THE FIRST MISSION
AS EARLY AS 2020.

37

00:01:38,256 --> 00:01:40,536

IN THE LONG-TERM, NASA'S
GOAL IS TO BECOME ONE

38

00:01:40,536 --> 00:01:43,626

OF MANY CUSTOMERS PURCHASING
SERVICES FROM INDEPENDENT,

39

00:01:43,846 --> 00:01:46,366

COMMERCIAL AND FREE-FLYING
HABITABLE DESTINATIONS

40

00:01:46,366 --> 00:01:47,166

IN LOW-EARTH ORBIT.

41

00:01:47,796 --> 00:01:50,736

HEAD TO NASA.GOV WHERE YOU
CAN LEARN EVERYTHING THERE IS

42

00:01:50,786 --> 00:01:51,736
TO KNOW ABOUT COMMERCIAL

43

00:01:51,736 --> 00:01:53,496
AND MARKETING ACTIVITIES
ABOARD THE SPACE STATION -

44

00:01:54,006 --> 00:01:56,026
AND IF YOU HAVE AN ACTIVITY
YOU'D LIKE TO SUGGEST

45

00:01:56,026 --> 00:01:58,026
AS A U.S. ENTITY, YOU
CAN FIND OUT WHERE

46

00:01:58,026 --> 00:01:58,836
TO SEND THOSE PROPOSALS.