
PLANETARY LAKE LANDER
ARES
HLP
BRIDGING PLANETS
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1
00:00:12,629 --> 00:00:10,070
a year after its launch on a glacial

2
00:00:14,709 --> 00:00:12,639
lake in chile nasa's prototype planetary

3
00:00:16,630 --> 00:00:14,719
lakelander is taken back to california

4
00:00:18,550 --> 00:00:16,640
for an upgrade

5
00:00:20,470 --> 00:00:18,560
the robotics team at the nasa ames

6
00:00:22,230 --> 00:00:20,480
research center are adding hardware and

7
00:00:24,070 --> 00:00:22,240
software that will allow the lakelander

8
00:00:25,189 --> 00:00:24,080
to examine its environment without human

9
00:00:27,269 --> 00:00:25,199
direction

10
00:00:28,950 --> 00:00:27,279
doctors liam pedersen and trey smith

11
00:00:31,589 --> 00:00:28,960
describe the new equipment and how it

12
00:00:33,030 --> 00:00:31,599
changes the way the lakelander operates

13
00:00:34,389 --> 00:00:33,040

we've made a lot of changes to the

14
00:00:36,229 --> 00:00:34,399
system this year

15
00:00:38,310 --> 00:00:36,239
we have a computer on board to process

16
00:00:40,549 --> 00:00:38,320
the data secondly we have new power

17
00:00:42,709 --> 00:00:40,559
systems to run this computer we have a

18
00:00:44,950 --> 00:00:42,719
wind turbine to run it when it's windy

19
00:00:46,470 --> 00:00:44,960
but dark and more solar panels to run up

20
00:00:47,590 --> 00:00:46,480
when the sun's out but there isn't that

21
00:00:49,510 --> 00:00:47,600
much wind

22
00:00:51,510 --> 00:00:49,520
we have heating systems inside to keep

23
00:00:53,189 --> 00:00:51,520
the electronics warm and we have cooling

24
00:00:56,069 --> 00:00:53,199
systems to cool them down when it gets

25
00:00:58,709 --> 00:00:56,079
too hot we have a new camera three new

26
00:01:00,389 --> 00:00:58,719
satellite communication systems so we're

27
00:01:02,310 --> 00:01:00,399
adding a bunch of electronics to the

28
00:01:05,030 --> 00:01:02,320
probe we're basically giving her a new

29
00:01:07,030 --> 00:01:05,040
brain and the idea is that we'll be able

30
00:01:09,429 --> 00:01:07,040
to react to things that we see in the

31
00:01:11,510 --> 00:01:09,439
water the probe has very limited power

32
00:01:13,350 --> 00:01:11,520
and she can't afford to send back all of

33
00:01:15,350 --> 00:01:13,360
the data she collects when we see an

34
00:01:17,190 --> 00:01:15,360
interesting event we'll react by

35
00:01:21,350 --> 00:01:17,200
collecting more data and sending more

36
00:01:25,109 --> 00:01:23,270
for more information on these topics go