
Pablo Abad-Manterola
Graduate Student
Caltech

1
00:00:09,470 --> 00:00:07,789
we have the axial Rover this is a new

2
00:00:11,629 --> 00:00:09,480
over concept that we've been studying

3
00:00:14,839 --> 00:00:11,639
and collaboration with Caltech to try to

4
00:00:16,550 --> 00:00:14,849
provide mobility for very challenging

5
00:00:18,320 --> 00:00:16,560
high-risk strains the best way to think

6
00:00:19,670 --> 00:00:18,330
about this Rovers think of a yo-yo by

7
00:00:21,560 --> 00:00:19,680
reading on in reading its own tether

8
00:00:24,200 --> 00:00:21,570
that it carries with it it's able to

9
00:00:25,970 --> 00:00:24,210
lower itself over any type of terrains

10
00:00:27,410 --> 00:00:25,980
actually in fact it doesn't need any

11
00:00:29,029 --> 00:00:27,420
terrain this can be lowered from a

12
00:00:30,439 --> 00:00:29,039
balloon that presents a lot of unique

13
00:00:31,490 --> 00:00:30,449

and interesting challenges that no one's

14
00:00:32,870 --> 00:00:31,500
really ever thought of before in terms

15
00:00:34,729 --> 00:00:32,880
of the type of tether to use the

16
00:00:36,650 --> 00:00:34,739
material how to like reduce abrasions

17
00:00:38,330 --> 00:00:36,660
and how to get over rocks without

18
00:00:39,530 --> 00:00:38,340
getting the tether tangled this robot

19
00:00:40,940 --> 00:00:39,540
has met and exceeded all of my

20
00:00:43,760 --> 00:00:40,950
expectations this in terms of the way

21
00:00:45,830 --> 00:00:43,770
that it performs going down 93 slopes

22
00:00:47,270 --> 00:00:45,840
traversing to flat ground and getting

23
00:00:49,639 --> 00:00:47,280
over rocks and all that kind of stuff

24
00:00:51,560 --> 00:00:49,649
it's been great right now it's really

25
00:00:52,819 --> 00:00:51,570
risky for astronauts or robots for

26
00:00:54,439 --> 00:00:52,829
example like the spirit an opportunity

27
00:00:56,569 --> 00:00:54,449
to go into craters the ground is too

28
00:00:57,860 --> 00:00:56,579
loose and the slopes are too steep so

29
00:00:58,849 --> 00:00:57,870
it's too risky for those robots to get

30
00:01:00,920 --> 00:00:58,859
into those craters and perform any

31
00:01:02,029 --> 00:01:00,930
interesting science so this robot would

32
00:01:03,380 --> 00:01:02,039
be very useful for those types of

33
00:01:05,030 --> 00:01:03,390
scenarios where you can really dive into

34
00:01:06,440 --> 00:01:05,040
those craters pick up some samples and

35
00:01:07,310 --> 00:01:06,450
really analyze them and tell us