



1  
00:00:52,480 --> 00:00:59,510  
do

2  
00:00:59,520 --> 00:01:21,990  
normal

3  
00:01:26,469 --> 00:01:24,230  
and we're off

4  
00:01:30,069 --> 00:01:26,479  
ariane 5

5  
00:01:33,030 --> 00:01:30,079  
powering out into the night sky here at

6  
00:01:35,749 --> 00:01:33,040  
the guyanes space center

7  
00:01:41,270 --> 00:01:35,759  
that streak of gold

8  
00:01:46,550 --> 00:01:43,990  
just catching the sound of that now here

9  
00:01:47,910 --> 00:01:46,560  
15 kilometers from the pad as she flies

10  
00:01:51,350 --> 00:01:47,920  
over

11  
00:01:54,870 --> 00:01:51,360  
and atv george lemaître is on its way

12  
00:01:58,950 --> 00:01:54,880  
destination our human outpost in space

13  
00:02:02,469 --> 00:02:00,630

people in the viewing stations will have

14

00:02:05,510 --> 00:02:02,479

felt the ground shake i've sent

15

00:02:07,670 --> 00:02:05,520

charlotte out to go and watch the launch

16

00:02:10,070 --> 00:02:07,680

in real life rather than on the screens

17

00:02:12,790 --> 00:02:10,080

here so we'll wait to hear how she

18

00:02:14,630 --> 00:02:12,800

experienced it

19

00:02:15,430 --> 00:02:14,640

right now the boosters are doing all the

20

00:02:18,229 --> 00:02:15,440

work

21

00:02:21,750 --> 00:02:18,239

they're literally pushing us away from

22

00:02:25,750 --> 00:02:21,760

the earth's gravity

23

00:02:28,309 --> 00:02:25,760

that's what keeps us stuck to our planet

24

00:02:30,229 --> 00:02:28,319

makes it very difficult to leave as well

25

00:02:32,390 --> 00:02:30,239

and we may get lucky and see those

26

00:02:34,630 --> 00:02:32,400

boosters falling away

27

00:02:37,589 --> 00:02:34,640

there with the naked eye

28

00:02:39,830 --> 00:02:37,599

each one is burning two tons of

29

00:02:42,229 --> 00:02:39,840

propellant that's an awful lot of

30

00:02:44,390 --> 00:02:42,239

propellant per second

31

00:02:47,509 --> 00:02:44,400

two tons per second just to give you an

32

00:02:50,390 --> 00:02:47,519

idea if you filled your car

33

00:02:58,630 --> 00:02:50,400

once a week that's just about the amount

34

00:03:03,670 --> 00:03:00,710

and we did see them separating their

35

00:03:05,190 --> 00:03:03,680

superb site the boosters falling away

36

00:03:07,430 --> 00:03:05,200

and this

37

00:03:11,509 --> 00:03:07,440

ah there we go the two dots on either

38

00:03:16,470 --> 00:03:13,830

is the vulcan engine that you can see

39

00:03:18,710 --> 00:03:16,480

and those boosters falling back down

40

00:03:19,910 --> 00:03:18,720

we're shedding weight we don't need them

41

00:03:20,949 --> 00:03:19,920

anymore

42

00:03:24,789 --> 00:03:20,959

we're

43

00:03:27,030 --> 00:03:24,799

losing each stage of the vehicle

44

00:03:28,630 --> 00:03:27,040

once it's burnt up its fuel

45

00:03:30,550 --> 00:03:28,640

because of course the lighter we are the

46

00:03:32,309 --> 00:03:30,560

faster we go

47

00:03:34,789 --> 00:03:32,319

right now we've lost about three