



1
00:00:10,549 --> 00:00:03,379
go for main engine start six five four

2
00:00:13,280 --> 00:00:10,559
three two one and zero and liftoff of

3
00:00:15,829 --> 00:00:13,290
space shuttle Atlantis we should be

4
00:00:20,450 --> 00:00:15,839
crest of its historic achievements in

5
00:00:20,460 --> 00:00:23,930
Roger roll

6
00:00:23,940 --> 00:00:27,060
Houston is now controlling

7
00:00:30,430 --> 00:00:28,769
the roll maneuver is completed

8
00:00:34,990 --> 00:00:30,440
Atlantis's and ahead

9
00:00:45,520 --> 00:00:35,000
on course for a 51.6 degree 136 by 36

10
00:00:48,700 --> 00:00:47,470
and the three main engines on Atlantis

11
00:00:50,889 --> 00:00:48,710
have now been throttled down to

12
00:00:53,080 --> 00:00:50,899
seventy-two percent of rated thrust as

13
00:00:55,389 --> 00:00:53,090

the orbiter prepares to pass through the

14

00:01:04,320 --> 00:00:55,399

area of maximum dynamic pressure on a

15

00:01:26,760 --> 00:01:06,480

engines now beginning to throttle back

16

00:01:29,010 --> 00:01:26,770

up all three engines looking really good

17

00:01:31,170 --> 00:01:29,020

back at full throttle now it lifts off

18

00:01:33,180 --> 00:01:31,180

the fully fueled Shuttle boosters and

19

00:01:36,510 --> 00:01:33,190

external tank wait four and a half

20

00:01:40,320 --> 00:01:36,520

million pounds it now has burned half of

21

00:01:42,180 --> 00:01:40,330

that liftoff weight and propellant one

22

00:01:44,250 --> 00:01:42,190

minute 30 seconds into the flight all

23

00:01:46,620 --> 00:01:44,260

three auxiliary power units that provide

24

00:01:48,590 --> 00:01:46,630

hydraulic power to the orbiters systems

25

00:01:51,210 --> 00:01:48,600

in good shape as are the fuel cells

26

00:01:53,700 --> 00:01:51,220

providing electricity to all of the

27

00:01:56,100 --> 00:01:53,710

systems onboard atlantis is already 19

28

00:01:59,000 --> 00:01:56,110

miles an altitude down rates from the

29

00:02:04,620 --> 00:01:59,010

Kennedy Space Center 20 miles traveling

30

00:02:06,600 --> 00:02:04,630

2,500 miles per hour coming up on

31

00:02:08,520 --> 00:02:06,610

staging the point at which the twin

32

00:02:21,980 --> 00:02:08,530

solid rocket boosters burn out and

33

00:02:28,340 --> 00:02:26,480

booster separation confirmed the onboard

34

00:02:29,990 --> 00:02:28,350

guidance system has done its job of

35

00:02:32,000 --> 00:02:30,000

setup settling out any of the