
806
NASA

1
00:00:02,639 --> 00:00:09,840
foreign

2
00:00:09,850 --> 00:00:41,030
[Music]

3
00:01:15,890 --> 00:00:45,500
and your title is uh NASA research pilot

4
00:01:21,050 --> 00:01:17,900
foreign

5
00:01:23,090 --> 00:01:21,060
[Music]

6
00:01:24,649 --> 00:01:23,100
East Coast snowstorms as they progress

7
00:01:26,929 --> 00:01:24,659
over the land masses they form

8
00:01:29,270 --> 00:01:26,939
differently than say a Pacific snowstorm

9
00:01:31,370 --> 00:01:29,280
and so the impacts campaign is looking

10
00:01:33,230 --> 00:01:31,380
to see what differences there are with

11
00:01:36,109 --> 00:01:33,240
the formation as well as the dissipation

12
00:01:38,749 --> 00:01:36,119
of these these types of storms so from

13
00:01:40,490 --> 00:01:38,759

the pilot perspective usually about

14
00:01:42,410 --> 00:01:40,500
three to four hours before we're going

15
00:01:45,469 --> 00:01:42,420
to be climbing into the spacesuit we're

16
00:01:47,929 --> 00:01:45,479
looking at all the weather Airfield

17
00:01:50,450 --> 00:01:47,939
conditions talking to the science teams

18
00:01:53,749 --> 00:01:50,460
and deciding okay is everything going to

19
00:01:55,609 --> 00:01:53,759
go as expected in the atmosphere in the

20
00:01:57,770 --> 00:01:55,619
meantime the instrument teams are what

21
00:02:00,830 --> 00:01:57,780
we call in a Hands-On time where they're

22
00:02:02,389 --> 00:02:00,840
allowed to go to their instrument on the

23
00:02:04,370 --> 00:02:02,399
aircraft and do any pre-flight

24
00:02:06,709 --> 00:02:04,380
activities that they need to do in

25
00:02:08,870 --> 00:02:06,719
preparation all right so this is the

26
00:02:09,790 --> 00:02:08,880
lightning instrument package the lip

27
00:02:14,210 --> 00:02:09,800
instrument

28
00:02:16,070 --> 00:02:14,220
out of the Marshall space flight center

29
00:02:17,809 --> 00:02:16,080
and we're flying it here with the

30
00:02:19,250 --> 00:02:17,819
impacts campaign to measure the

31
00:02:21,110 --> 00:02:19,260
electrification of these winter

32
00:02:23,150 --> 00:02:21,120
thunderstorms that don't typically

33
00:02:24,770 --> 00:02:23,160
produce a lot of lightning you're trying

34
00:02:27,170 --> 00:02:24,780
to understand how storms that are

35
00:02:30,589 --> 00:02:27,180
completely Frozen can produce electric

36
00:02:33,369 --> 00:02:30,599
fields and become charged uh so here we

37
00:02:36,410 --> 00:02:33,379
have uh kazir compact scanning

38
00:02:38,869 --> 00:02:36,420

submillimeter Imaging radiometer and

39
00:02:41,509 --> 00:02:38,879
we're collecting was it data for ice

40
00:02:44,630 --> 00:02:41,519
clouds and getting a profile data so

41
00:02:46,490 --> 00:02:44,640
this is Amper ampr it stands for the

42
00:02:49,490 --> 00:02:46,500
advanced microwave precipitation

43
00:02:53,930 --> 00:02:49,500
radiometer and what Amper is looking for

44
00:02:57,229 --> 00:02:53,940
is the really deep down tiny scale like

45
00:02:59,630 --> 00:02:57,239
on the individual scale of snow crystals

46
00:03:01,729 --> 00:02:59,640
and Rain droplets and Cloud droplets

47
00:03:03,350 --> 00:03:01,739
because what happens at the finest scale

48
00:03:05,210 --> 00:03:03,360
like whether or not an Ice Crystal is

49
00:03:11,450 --> 00:03:05,220
forming or melting can have broader

50
00:03:11,460 --> 00:03:21,490
[Music]

51
00:03:53,620 --> 00:03:24,380
thank you

52
00:04:22,810 --> 00:03:53,630
foreign

53
00:04:35,030 --> 00:04:24,850
thank you

54
00:04:36,650 --> 00:04:35,040
[Music]

55
00:04:39,290 --> 00:04:36,660
the mobile pilot who's going to be

56
00:04:42,290 --> 00:04:39,300
driving the Chase car and be your extra

57
00:04:44,749 --> 00:04:42,300
set of eyes ears and everything outside

58
00:04:47,450 --> 00:04:44,759
the airplane is out pre-flighting the

59
00:04:49,310 --> 00:04:47,460
cockpit we call it a pilot integration

60
00:04:51,290 --> 00:04:49,320
because the pilot is very little

61
00:04:54,230 --> 00:04:51,300
involvement in it it's a really short

62
00:04:56,320 --> 00:04:54,240
takeoff roll between 400 and about 1200

63
00:04:58,210 --> 00:04:56,330

feet typically depending on the weight

64
00:05:00,890 --> 00:04:58,220
[Music]

65
00:05:02,749 --> 00:05:00,900
and as soon as we take off we point the

66
00:05:05,870 --> 00:05:02,759
nose straight up we climb up real

67
00:05:08,570 --> 00:05:05,880
rapidly and once we get way up into the

68
00:05:16,190 --> 00:05:08,580
high thin air things start to slow down

69
00:05:16,200 --> 00:05:23,270
[Music]

70
00:05:26,689 --> 00:05:25,070
so the data we're collecting here with

71
00:05:29,210 --> 00:05:26,699
the impacts campaign is going to

72
00:05:30,950 --> 00:05:29,220
directly feed into newer and updated

73
00:05:32,930 --> 00:05:30,960
models so that we have better storm

74
00:05:34,260 --> 00:05:32,940
predictions in the future

75
00:05:37,070 --> 00:05:34,270
[Music]

76
00:05:38,870 --> 00:05:37,080
[Applause]

77
00:05:41,210 --> 00:05:38,880
after the flight and the aircraft is

78
00:05:43,010 --> 00:05:41,220
back in the hangar the ground crew

79
00:05:44,689 --> 00:05:43,020
assists the science team to download

80
00:05:46,490 --> 00:05:44,699
their data from their instruments so

81
00:05:48,790 --> 00:05:46,500
that they can take it back and process

82
00:05:51,290 --> 00:05:48,800
it

83
00:05:53,870 --> 00:05:51,300
from a project management perspective

84
00:05:55,610 --> 00:05:53,880
the impacts campaign has allowed us to

85
00:05:57,890 --> 00:05:55,620
continue to demonstrate that we can

86
00:05:59,810 --> 00:05:57,900
deploy the er2 to any location to