



1  
00:00:07,110 --> 00:00:04,230  
nasa's stratospheric observatory for

2  
00:00:09,270 --> 00:00:07,120  
infrared astronomy or sophia completed

3  
00:00:12,150 --> 00:00:09,280  
its first science flight on wednesday

4  
00:00:14,310 --> 00:00:12,160  
december 1st demonstrating the airborne

5  
00:00:16,390 --> 00:00:14,320  
observatory's ability to make

6  
00:00:19,109 --> 00:00:16,400  
observations not possible from

7  
00:00:21,510 --> 00:00:19,119  
ground-based telescopes the flight was

8  
00:00:23,750 --> 00:00:21,520  
the first of six planned over the coming

9  
00:00:51,270 --> 00:00:23,760  
months during the observatory's short

10  
00:00:51,280 --> 00:01:03,590  
so

11  
00:01:03,600 --> 00:01:32,550  
nothing across

12  
00:01:35,670 --> 00:01:33,830  
and this is the region we're talking

13  
00:01:36,950 --> 00:01:35,680

about the pah

14

00:01:38,710 --> 00:01:36,960

observations we're going to take are

15

00:01:40,149 --> 00:01:38,720

here of the the photoionizing

16

00:01:42,149 --> 00:01:40,159

observations are here and we're going to

17

00:01:44,310 --> 00:01:42,159

look at them a variety of wavelengths

18

00:01:45,830 --> 00:01:44,320

and then model those the emission we get

19

00:01:47,990 --> 00:01:45,840

from the variety of wavelengths is

20

00:01:49,590 --> 00:01:48,000

probably going to be this source

21

00:01:51,270 --> 00:01:49,600

well unless of course the nature of

22

00:01:56,469 --> 00:01:51,280

flight plans are that you can't it's not

23

00:02:00,550 --> 00:01:58,310

because it's coming along for the ride

24

00:02:02,469 --> 00:02:00,560

but the the dominating thing is

25

00:02:04,789 --> 00:02:02,479

let's get the let's get as deep as we

26  
00:02:07,270 --> 00:02:04,799  
can at the longer wavelengths so that's

27  
00:02:09,510 --> 00:02:07,280  
by this mission has a spectral energy

28  
00:02:11,510 --> 00:02:09,520  
which is very flat but once it got hit

29  
00:02:56,790 --> 00:02:11,520  
by the impactor then you you see all

30  
00:03:25,750 --> 00:02:57,670  
two

31  
00:03:25,760 --> 00:03:37,910  
this one

32  
00:03:37,920 --> 00:04:43,110  
so

33  
00:04:47,270 --> 00:04:45,590  
this milestone represents the completion

34  
00:04:49,030 --> 00:04:47,280  
of a significant amount of work that's

35  
00:04:50,870 --> 00:04:49,040  
been done really over a period of a

36  
00:04:53,510 --> 00:04:50,880  
decade with wind tunnel testing

37  
00:04:54,629 --> 00:04:53,520  
structural analysis and the flight test

38  
00:04:57,350 --> 00:04:54,639

that was done

39

00:04:59,510 --> 00:04:57,360

on the airplane more recently and we

40

00:05:01,830 --> 00:04:59,520

basically demonstrated that the airplane

41

00:05:03,670 --> 00:05:01,840

flies just like a standard 747 and it's

42

00:05:05,670 --> 00:05:03,680

now ready to go started science mission

43

00:05:08,310 --> 00:05:05,680

we'll be looking at nearby objects in

44

00:05:10,629 --> 00:05:08,320

our own solar system like comets and

45

00:05:13,909 --> 00:05:10,639

other planets like jupiter to better

46

00:05:15,430 --> 00:05:13,919

understand the development of earth

47

00:05:17,670 --> 00:05:15,440

and we'll be looking at star forming

48

00:05:19,510 --> 00:05:17,680

regions in our galaxy to better

49

00:05:21,350 --> 00:05:19,520

understand the fundamental building

50

00:05:22,629 --> 00:05:21,360

blocks of life itself

51

00:05:25,189 --> 00:05:22,639

sofia

52

00:05:26,230 --> 00:05:25,199

provides this great collaboration

53

00:05:29,990 --> 00:05:26,240

between

54

00:05:33,110 --> 00:05:30,000

nasa and the german space agency dlr

55

00:05:36,550 --> 00:05:33,120

where both agencies got together

56

00:05:37,749 --> 00:05:36,560

and nasa provided the platform this

57

00:05:41,430 --> 00:05:37,759

aircraft

58

00:05:44,070 --> 00:05:41,440

boeing 747 and the german space agency

59

00:05:47,029 --> 00:05:44,080

provided this two and a half meter

60

00:05:49,670 --> 00:05:47,039

telescope the combination of which is