

A satellite view of Earth from space, showing the Americas and surrounding oceans. The text "NPP & The Earth System" is overlaid on the image.

NPP & The Earth System

1  
00:00:02,550 --> 00:00:06,540  
Music.

2  
00:00:06,560 --> 00:00:10,580  
Narrator: Earth Science; we should look

3  
00:00:10,600 --> 00:00:14,610  
at it as Earth System Science. There are a lot of

4  
00:00:14,630 --> 00:00:18,640  
interconnecting systems that all require measurements to

5  
00:00:18,660 --> 00:00:22,670  
try to understand. So, if you are looking at the sea surface temperature;

6  
00:00:22,690 --> 00:00:26,700  
how does that relate to the amount of moisture in the atmosphere, which

7  
00:00:26,720 --> 00:00:30,720  
then changes the weather, which then changes land use, which then changes

8  
00:00:30,740 --> 00:00:34,740  
the amount of dust. So, these are all connected things that we are trying to understand.

9  
00:00:34,760 --> 00:00:38,760  
So, by making all of these individual measurements, that helps us

10  
00:00:38,780 --> 00:00:42,760  
get a sense of what the whole picture is.

11  
00:00:42,780 --> 00:00:46,800  
NPP is going to make

12  
00:00:46,820 --> 00:00:50,840  
a whole suite of observations. It observes the entire globe once a day.

13  
00:00:50,860 --> 00:00:54,880

It has five instruments on it and it spans the entire

14

00:00:54,900 --> 00:00:58,930

spectrum of observations required for

15

00:00:58,950 --> 00:01:02,950

short-term weather forecasting, as well as observing

16

00:01:02,970 --> 00:01:06,970

environmental events such as forest fires or volcanic eruptions,

17

00:01:06,990 --> 00:01:11,010

as well as putting together long-term data records.

18

00:01:11,030 --> 00:01:15,040

NPP is a continuation

19

00:01:15,060 --> 00:01:19,050

of the existing Earth-orbiting satellites. For weather prediction

20

00:01:19,070 --> 00:01:23,100

and for climate monitoring purposes, you need to have continuous

21

00:01:23,120 --> 00:01:27,140

observations. These are all multi decades

22

00:01:27,160 --> 00:01:31,180

of data sets and we want to just keep on adding to that so we can

23

00:01:31,200 --> 00:01:35,200

answer: Is the sea surface changing? Is it getting warmer or

24

00:01:35,220 --> 00:01:39,220

colder? Is it getting dustier? Is the size of the ozone hole getting

25

00:01:39,240 --> 00:01:43,240

larger or smaller? So, there is a whole series of "what is happening"

26

00:01:43,260 --> 00:01:47,250

observing questions, which can then be used in models

27

00:01:47,270 --> 00:01:51,260

so we can answer: Is the climate changing?

28

00:01:51,280 --> 00:01:55,320

The purpose of NPP is;

29

00:01:55,340 --> 00:01:59,370

essentially it's the prototype of the next generation weather satellite.

30

00:01:59,390 --> 00:02:03,410

It's the nation's first attempt to really combine weather

31

00:02:03,430 --> 00:02:07,450

monitoring and climate observing in the same platform.

32

00:02:19,500 --> 00:02:11,480

Music.