



## ON BOARD NPP: THE 5 INSTRUMENTS

- **VIIRS** – visible imagery
- **Cris + ATMS** – weather
- **CERES** – radiation budget
- **OMPS** - ozone

1  
00:00:08,050 --> 00:00:04,020

Intro dynamic music.

2  
00:00:08,070 --> 00:00:12,080

Rob Baltrum: Ok, so we are here in the clean room at Ball Aerospace looking at the NPP spacecraft.

3  
00:00:12,100 --> 00:00:16,140

What you are looking at is the Nadir deck, essentially, the instrument

4  
00:00:16,160 --> 00:00:20,160

or the Earth-facing deck, where all the instruments and the Earth-facing antennas are located.

5  
00:00:20,180 --> 00:00:24,180

Every orbit, we collect an orbit's worth of data for about a 101

6  
00:00:24,200 --> 00:00:28,200

minutes and we fly over Svalbard, Norway. We downlink the data.

7  
00:00:28,220 --> 00:00:32,200

The large instrument here you see basically at the

8  
00:00:32,220 --> 00:00:36,250

front is the VIIRS instrument. That does the visible Infrared

9  
00:00:36,270 --> 00:00:40,290

Radiometer Suite. VIIRS is the visible instrument collecting

10  
00:00:40,310 --> 00:00:44,320

visible event data. The

11  
00:00:44,340 --> 00:00:48,360

next instrument, which is currently under a bag and being purged for cleanliness

12  
00:00:48,380 --> 00:00:52,380

reasons is the CrIS instrument. That's the Cross-track

13  
00:00:52,400 --> 00:00:56,410

Infrared Sounder.

14

00:00:56,430 --> 00:01:00,430

Just behind that is the ATMS microwave

15

00:01:00,450 --> 00:01:04,440

sounder and those two instruments are primarily the weather data-collecting

16

00:01:04,460 --> 00:01:08,470

instruments. The instrument

17

00:01:08,490 --> 00:01:12,510

just above ATMS, that's the CERES

18

00:01:12,530 --> 00:01:16,550

instrument and basically it does Earth radiation budget

19

00:01:16,570 --> 00:01:20,580

measurements, it's a continuing data measurement.

20

00:01:20,600 --> 00:01:24,620

And then the instrument that Jim is looking at right now

21

00:01:24,640 --> 00:01:28,660

now is the OMPS sensors. Two sensors, nadir sensor

22

00:01:28,680 --> 00:01:32,680

and then a limb sensor. That does ozone measurements. So, those are the 5

23

00:01:32,700 --> 00:01:36,700

instruments that make up the instrument suite on the NPP

24

00:01:36,720 --> 00:01:40,710

mission. The other side is basically looking out at deep space,

25

00:01:40,730 --> 00:01:44,720

away from the Earth. That's where all of the spacecraft components are located.

26

00:01:44,740 --> 00:01:48,770

The batteries, the electronic boxes, our altitude sensors

27

00:01:48,790 --> 00:01:52,810

are all located on that deck. The spacecraft is just a

28

00:01:52,830 --> 00:01:56,840

big host for the science instruments

29

00:01:56,860 --> 00:02:00,870

because at the end of the day the mission is get the science data.

30

00:02:08,910 --> 00:02:04,890

Energetic music.

31

00:02:16,940 --> 00:02:12,920

Music fades out.