
NASA

1
00:00:00,490 --> 00:00:05,450
NASA is investigating key questions about hurricanes from the skies.

2
00:00:05,470 --> 00:00:10,200
This August, an unmanned aircraft is flying over East Pacific hurricanes.

3
00:00:10,220 --> 00:00:16,290
The new East Pacific Origins and Characteristics of Hurricanes, or EPOCH, mission will fly over developing tro

4
00:00:16,310 --> 00:00:20,380
to investigate how they progress and intensify.

5
00:00:20,400 --> 00:00:24,530
Three instruments aboard the Global Hawk aircraft

6
00:00:24,550 --> 00:00:30,210
will map out 3-D patterns of temperature, pressure, humidity, precipitation, and wind speed.

7
00:00:30,230 --> 00:00:35,700
These measurements will help scientists better understand the processes that control storm intensity

8
00:00:35,720 --> 00:00:40,220
in cyclones around the world.

9
00:00:40,240 --> 00:00:45,760
Scientists also use models and other observations to investigate hurricane behavior.

10
00:00:45,780 --> 00:00:51,260
Satellites such as NASA’s Global Precipitation Measurement Mission, or GPM, and computer models

11
00:00:51,280 --> 00:00:55,430
can analyze key stages of storm intensification.

12
00:00:55,450 --> 00:01:02,300
In September 2016, GPM captured Hurricane Matthew’s development from a Category 1 to Category 5 hurrica

13
00:01:02,320 --> 00:01:07,500

Extreme rainfall was seen in several stages of the storm,

14
00:01:07,520 --> 00:01:13,210
causing significant flooding and landslides as Matthew passed Cuba, Haiti, and the Dominican Republic.

15
00:01:13,230 --> 00:01:18,250
Winds within the simulated storm reached 160 mph.

16
00:01:18,270 --> 00:01:23,260
GPM also observed the storm as the inner eyewall was replaced by a larger eyewall,

17
00:01:23,280 --> 00:01:28,750
causing Matthew to decrease in intensity before grazing the Eastern Florida Coast.

18
00:01:28,770 --> 00:01:34,470
Significant flooding was seen when Matthew made landfall in South Carolina.