MAVEN

Goddard Space Flight Center

Mars Atmosphere & Volatile EvolutioN

1
00:00:00,010 --> 00:00:04,680
[music]

2
00:00:04,700 --> 00:00:11,020
The overarching theme of the last decade or so of exploration of Mars is, what happened to the water?

3
00:00:11,040 --> 00:00:17,140
There's evidence of water flowing on Mars at one point in time, perhaps even oceans on Mars.

4
00:00:17,160 --> 00:00:23,310
The current atmosphere as it is today is much thinner and cannot support that kind of water on the surface, so

5
00:00:23,330 --> 00:00:28,280
MAVEN is going after, what is the current state of the upper atmosphere, how did it change,

6
00:00:28,300 --> 00:00:35,580
why did it change, and how did that impact the surface?

7
00:00:35,600 --> 00:00:42,180
George Diller: "Five, four, three, two, one. Main engines start, ignition,

8
00:00:42,200 --> 00:00:51,780
and liftoff of the Atlas V with MAVEN, looking for clues about the evolution of Mars through its atmosphere."

9
00:00:51,800 --> 00:00:58,980
MAVEN is a mission that is a first of its kind for the Goddard Space Flight Center, that is, a mission going to Ma

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00:00:59,000 --> 00:01:05,320
that is managed by the Goddard Space Flight Center on behalf of the Principal Investigator at the University of

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00:01:05,340 --> 00:01:10,720
With it we provide the project management, which encompasses a whole range of disciplines:

12
00:01:10,740 --> 00:01:16,060
safety of mission assurance, the mission systems engineering, mission design, disciplined engineers,

13
00:01:16,080 --> 00:01:20,980

and the financial side of this, the tracking, the schedule, the budget. So that's all part of it.

14
00:01:21,000 --> 00:01:25,470
We're also delivering two of the instruments for the MAVEN mission, one being the magnetometers,

15
00:01:25,490 --> 00:01:28,980
there's actually redundant magnetometers, there's two on this mission,

16
00:01:29,000 --> 00:01:36,280
and there's a mass spectrometer, again, steeped in heritage of past developments from this particular group at

17
00:01:36,300 --> 00:01:41,180
In fact they have a similar mass spectrometer on board the Curiosity rover at Mars right now.

18
00:01:41,200 --> 00:01:45,280
So this is two elements of Goddard, both from a project management standpoint

19
00:01:45,300 --> 00:01:50,210
and instrument delivery that are such an integral part of the MAVEN mission.

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00:01:50,230 --> 00:01:55,580
Ultimately, I'm excited about the science that we hope to deliver for the world community and the Mars scientis

21
00:01:55,600 --> 00:02:03,210
It's going to unlock a piece of the puzzle that we have not been able to do with current rovers or other orbiters t

22
00:02:03,230 --> 00:02:06,430
This is another important piece that the scientists have been very interested

23
00:02:06,450 --> 00:02:10,980
for many years in what's happening all the way up through the upper atmosphere.