
CAM 12
ANTARES
107 15:36:55.589

1
00:00:01,367 --> 00:00:02,701
>> Amiko Kauderer: NASA
is poised and ready

2
00:00:02,701 --> 00:00:06,972
for its test launch of the
Orbital Sciences Antares rocket

3
00:00:06,972 --> 00:00:11,043
from the Wallops Flight
Facility in Virginia

4
00:00:11,043 --> 00:00:12,511
that will set the stage

5
00:00:12,511 --> 00:00:14,580
for sending a new
commercial cargo ship

6
00:00:14,580 --> 00:00:16,949
to the International
Space Station.

7
00:00:16,949 --> 00:00:19,285
We spoke with Bruce Manners,

8
00:00:19,285 --> 00:00:22,421
who is the Orbital
Sciences Project Executive.

9
00:00:22,421 --> 00:00:25,491
He is there at the
Wallops Flight Facility

10
00:00:25,491 --> 00:00:27,760
to support the test launch.

11
00:00:27,760 --> 00:00:29,028
Hi, Bruce.

12
00:00:29,028 --> 00:00:30,596
Thank you for taking time
out to talk with me today.

13
00:00:30,596 --> 00:00:31,263
>> Bruce Manners: Hello.

14
00:00:31,263 --> 00:00:32,364
Well, not a problem.

15
00:00:32,364 --> 00:00:34,266
I'm looking forward
to talking to you.

16
00:00:34,266 --> 00:00:35,835
>> Amiko Kauderer: The
test rocket has rolled

17
00:00:35,835 --> 00:00:39,905
out to the launch pad on April
6, and it's now poised for --

18
00:00:39,905 --> 00:00:42,508
at the NASA's Wallops
Flight Facility,

19
00:00:42,508 --> 00:00:45,411
there on the Virginia's Eastern
Shore, where you are now.

20
00:00:45,411 --> 00:00:49,048
Let's talk about Antares
and this test flight.

21
00:00:49,048 --> 00:00:50,082
>> Bruce Manners: Sure.

22
00:00:50,082 --> 00:00:51,817

The Antares is of
course a new rocket,

23
00:00:51,817 --> 00:00:54,086
being developed by
Orbital Sciences.

24
00:00:54,086 --> 00:00:56,889
It's a two-stage rocket.

25
00:00:56,889 --> 00:01:01,727
The first stage is powered
by two Aerojet AJ26 engines.

26
00:01:01,727 --> 00:01:04,597
That's a LOX-kerosene
fuel mixture,

27
00:01:04,597 --> 00:01:09,735
and the second stage is a
solid built by ATK Castor 30.

28
00:01:09,735 --> 00:01:12,638
So, it will, it will launch
from the Eastern Shore,

29
00:01:12,638 --> 00:01:14,573
there at Wallops,
off the MARS pad,

30
00:01:14,573 --> 00:01:18,511
and place in orbit
a Cygnus simulator.

31
00:01:18,511 --> 00:01:20,179
The Cygnus will be
the spacecraft

32
00:01:20,179 --> 00:01:21,847
that Orbital will

ultimately launch and take

33
00:01:21,847 --> 00:01:24,750
to the space station,
carrying NASA cargo.

34
00:01:24,750 --> 00:01:28,154
And the simulator that we put
on here really is intended

35
00:01:28,154 --> 00:01:33,392
to mimic the mass
properties of the --

36
00:01:33,392 --> 00:01:34,660
[inaudible] like a test payload,

37
00:01:34,660 --> 00:01:37,196
so that before we put the
valuable Cygnus spacecraft

38
00:01:37,196 --> 00:01:39,732
on the thing, we wanted
a real mass simulator,

39
00:01:39,732 --> 00:01:42,168
so that this mission
could really test out all

40
00:01:42,168 --> 00:01:43,536
of the phases that
you're going to see

41
00:01:43,536 --> 00:01:48,140
with a cargo demonstration
services mission.

42
00:01:48,140 --> 00:01:51,277
Now, we -- the rocket's going
to follow the same trajectory;

43
00:01:51,277 --> 00:01:52,778
this -- it will --
mission profile --

44
00:01:52,778 --> 00:01:54,613
everything will mimic
exactly what they'll do later

45
00:01:54,613 --> 00:01:56,682
on with the demonstration
mission and then, ultimately,

46
00:01:56,682 --> 00:01:58,384
under their CRS contract.

47
00:01:58,384 --> 00:02:01,754
So, this was an early
risk reduction effort,

48
00:02:01,754 --> 00:02:03,556
so we could try to
retire the risk.

49
00:02:03,556 --> 00:02:06,225
Whenever you go up, field a new
rocket, there's always risks

50
00:02:06,225 --> 00:02:07,560
on the first few missions

51
00:02:07,560 --> 00:02:09,728
that you haven't really
quite captured all --

52
00:02:09,728 --> 00:02:11,597
everything exactly right, so
this gives us an opportunity

53

00:02:11,597 --> 00:02:13,432
to test it out and wring
out the system a little bit,

54
00:02:13,432 --> 00:02:17,403
before we start flying it to
the International Space Station.

55
00:02:17,403 --> 00:02:19,872
>> Amiko Kauderer: It -- I
know, I've seen in some places,

56
00:02:19,872 --> 00:02:22,041
it's described as a medium
class launch vehicle.

57
00:02:22,041 --> 00:02:24,276
What does that mean, exactly?

58
00:02:24,276 --> 00:02:26,478
>> Bruce Manners: Well, there's
several different classes

59
00:02:26,478 --> 00:02:27,513
of launch vehicle.

60
00:02:27,513 --> 00:02:28,781
There's the Atlas,
which tends to take

61
00:02:28,781 --> 00:02:32,384
up the heavier payloads --
the Deltas, and then this,

62
00:02:32,384 --> 00:02:33,852
a little smaller class.

63
00:02:33,852 --> 00:02:36,722
It just takes up -- little
less capable as far as payload,

64
00:02:36,722 --> 00:02:40,526
but it actually fits really
well with sort of a medium

65
00:02:40,526 --> 00:02:45,064
to commercial satellite
payload capabilities.

66
00:02:45,064 --> 00:02:47,566
I don't know the -- have
those figures offhand exactly,

67
00:02:47,566 --> 00:02:53,672
but it's just a little smaller
vehicle than, say, the Atlas V,

68
00:02:53,672 --> 00:02:56,208
so they -- intended to
carry smaller satellites,

69
00:02:56,208 --> 00:02:58,377
or in this case, the Cygnus
spacecraft that'll take

70
00:02:58,377 --> 00:03:00,179
up cargo to the space station.

71
00:03:00,179 --> 00:03:03,415
>> Amiko Kauderer: And, can
you tell me, how far can it go?

72
00:03:03,415 --> 00:03:04,750
>> Bruce Manners: It's going

73
00:03:04,750 --> 00:03:08,187
to put the Cygnus spacecraft
right into low earth orbit.

74

00:03:08,187 --> 00:03:09,588
It's going to be a
mission payload --

75
00:03:09,588 --> 00:03:12,391
or mission trajectory -- that
mimics exactly what they'll do

76
00:03:12,391 --> 00:03:14,226
with the International
Space Station missions.

77
00:03:14,226 --> 00:03:18,030
It will put the payload into
orbit -- the Cygnus simulator --

78
00:03:18,030 --> 00:03:20,366
that -- we're really
considering the mission over,

79
00:03:20,366 --> 00:03:22,835
from a payload delivery
perspective,

80
00:03:22,835 --> 00:03:24,536
at payload separation.

81
00:03:24,536 --> 00:03:27,373
But it will put the
simulator into orbit,

82
00:03:27,373 --> 00:03:31,377
and it'll actually stay in orbit
for up to a week or as much

83
00:03:31,377 --> 00:03:33,045
as a month, depending
on exactly how --

84
00:03:33,045 --> 00:03:34,413

where it puts it into
the orbit, so it --

85
00:03:34,413 --> 00:03:36,081
it'll put it the whole way.

86
00:03:36,081 --> 00:03:37,349
>> Amiko Kauderer:
So, the test flight

87
00:03:37,349 --> 00:03:39,151
of Antares rocket is
scheduled to take place

88
00:03:39,151 --> 00:03:40,919
at 4:00 p.m. Central time.

89
00:03:40,919 --> 00:03:44,356
What do we as spectators,
or folks here

90
00:03:44,356 --> 00:03:45,391
on the ground, expect to see?

91
00:03:45,391 --> 00:03:46,825
Can you describe
its flight path?

92
00:03:46,825 --> 00:03:48,694
Will anyone on the
ground be able to see it?

93
00:03:48,694 --> 00:03:50,229
>> Bruce Manners:
You're going to be able

94
00:03:50,229 --> 00:03:51,664
to see this pretty
much from anywhere

95
00:03:51,664 --> 00:03:52,931
on the Eastern Seaboard,

96
00:03:52,931 --> 00:03:55,167
and I know that Orbital
Science has posted some things

97
00:03:55,167 --> 00:03:56,468
on their webpage, so that --

98
00:03:56,468 --> 00:03:59,071
give folks the opportunity
to try to figure out exactly

99
00:03:59,071 --> 00:04:02,074
where they might want to be
and what directions they want

100
00:04:02,074 --> 00:04:05,778
to go look at, but they -- if
you're that lucky enough to be

101
00:04:05,778 --> 00:04:08,480
at Wallops, you're going to see
the rocket ignite on the pad,

102
00:04:08,480 --> 00:04:11,116
and take off, and start
running downstream.

103
00:04:11,116 --> 00:04:15,587
We're going to be able to get
photos and videos of the --

104
00:04:15,587 --> 00:04:18,157
as it's leaving the area here,
and then eventually, of course,

105
00:04:18,157 --> 00:04:20,759

it goes into orbit, [inaudible]
to see it when it's up there,

106
00:04:20,759 --> 00:04:22,461
but I think it's going
to put off a great show,

107
00:04:22,461 --> 00:04:25,431
and folks are going to be able
to see it from even places

108
00:04:25,431 --> 00:04:27,166
like Washington, DC,
where you don't really get

109
00:04:27,166 --> 00:04:28,467
to see a rocket very often.

110
00:04:28,467 --> 00:04:30,636
So, if you go to the
Orbital Science webpage --

111
00:04:30,636 --> 00:04:31,870
I think NASA has
some, as well --

112
00:04:31,870 --> 00:04:33,372
there's a bunch of
imagery that's out there

113
00:04:33,372 --> 00:04:35,240
that teaches you, tells
you where to look.

114
00:04:35,240 --> 00:04:38,010
I've even seen some
Google Map images, where,

115
00:04:38,010 --> 00:04:39,812
if you're standing in

Washington, DC at --

116
00:04:39,812 --> 00:04:42,781
on the mall, it tells you
what direction to look

117
00:04:42,781 --> 00:04:44,883
and where you'll
see it in the sky.

118
00:04:44,883 --> 00:04:46,018
>> Amiko Kauderer: Real
quick, you mentioned also

119
00:04:46,018 --> 00:04:49,254
that this is the risk
reduction test flight,

120
00:04:49,254 --> 00:04:52,458
so how many missions are
scheduled under this contract?

121
00:04:52,458 --> 00:04:54,560
There's the test
flight, and then what?

122
00:04:54,560 --> 00:04:57,029
>> Bruce Manners: Well, under
the initial agreement we have

123
00:04:57,029 --> 00:04:58,664
that I've been working
under, the COTS,

124
00:04:58,664 --> 00:05:00,265
[inaudible] is actually
a Space Act Agreement,

125
00:05:00,265 --> 00:05:03,102
which is a little different

as a contract mechanism

126
00:05:03,102 --> 00:05:04,403
than an official contract,

127
00:05:04,403 --> 00:05:06,205
because it's really a
partnership agreement.

128
00:05:06,205 --> 00:05:09,074
We have just the two launches
under that: There's this one,

129
00:05:09,074 --> 00:05:13,078
the test launch, and then we
will have a full demonstration

130
00:05:13,078 --> 00:05:15,981
mission, which, if all goes well
with the test launch tomorrow,

131
00:05:15,981 --> 00:05:18,717
then we're hoping as
early as June or July,

132
00:05:18,717 --> 00:05:21,420
or this summer anyways, we will
have the demonstration mission

133
00:05:21,420 --> 00:05:23,155
that'll go to the
International Space Station.

134
00:05:23,155 --> 00:05:26,325
And then, under the
Orbital Sciences and NASA,

135
00:05:26,325 --> 00:05:29,061
the Space Station Program have
what's called the Commercial

136
00:05:29,061 --> 00:05:31,797
Resupply Services,
or CRS contract,

137
00:05:31,797 --> 00:05:35,701
and under that contract, Orbital
has eight missions assigned

138
00:05:35,701 --> 00:05:39,138
to them, where they will take
up real cargo, real payloads

139
00:05:39,138 --> 00:05:40,572
to the International
Space Station --

140
00:05:40,572 --> 00:05:43,242
it will be food and
water, new experiments,

141
00:05:43,242 --> 00:05:46,078
and then once that's all up on
orbit, they'll unpack that all

142
00:05:46,078 --> 00:05:48,180
for the -- by the astronauts,
and they'll put back

143
00:05:48,180 --> 00:05:51,083
into the spacecraft,
actually, trash.

144
00:05:51,083 --> 00:05:54,486
It's going to be more or less a
trash vehicle that they'll pack

145
00:05:54,486 --> 00:05:56,188
up with all the stuff that
they've gotten in orbit

146
00:05:56,188 --> 00:05:57,923
that they don't need anymore,
and they don't want anymore,

147
00:05:57,923 --> 00:05:58,891
and there's no use for it.

148
00:05:58,891 --> 00:06:00,292
They'll pack it into
the spacecraft,

149
00:06:00,292 --> 00:06:01,860
and the spacecraft
will take it away