1
00:00:00,740 --> 00:00:05,160
George Diller/NASA Launch Commentator: This is Atlas Launch Control, one-hour, 50-minutes into the flight of

2
00:00:05,160 --> 00:00:13,980
the TDRS-K satellite. And joining us here at the console in the Atlas Spaceflight Operations Center is

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00:00:13,980 --> 00:00:21,180
Tim Dunn, our NASA launch director for tonight's flight. And, Tim, first of all, on the surface of it,

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00:00:21,180 --> 00:00:24,030
it looks like we have a happy satellite in orbit.

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00:00:24,030 --> 00:00:26,290
Tim Dunn/NASA Launch Manager: George, thank you for having me. Yes,

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00:00:26,290 --> 00:00:32,670
indeed, we have a successful spacecraft separation. We just confirmed that by telemetry.

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00:00:32,670 --> 00:00:36,910
So, you might have overheard the LCC reacting and the Mission Directors Center. There's a lot

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00:00:36,910 --> 00:00:42,050
of happy folks out there and we've got a customer that's quite thrilled right now to have a

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00:00:42,050 --> 00:00:43,670
healthy satellite on orbit.

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00:00:43,670 --> 00:00:46,920
George Diller/NASA Launch Commentator: Take us through the countdown a little bit from when we

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00:00:46,920 --> 00:00:53,440
first picked up with our coverage tonight and some of the things that we worked through to get us to a

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00:00:53,440 --> 00:00:55,080
successful launch tonight.

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00:00:55,080 --> 00:01:01,940

Tim Dunn/NASA Launch Manager: OK, I'd be glad to, George. We picked up the count on time this afternoon.

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00:01:01,940 --> 00:01:06,930
We obviously knew we had some weather concerns that I'll go into a little bit.

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00:01:06,930 --> 00:01:13,950
Coming into the count, we had a nice clean rocket, range was very clean as well and spacecraft we

16
00:01:13,950 --> 00:01:20,080
were working no issues. So, when we were coming down through the count getting ready for cryo

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00:01:20,080 --> 00:01:26,420
tanking decision, the primary concern we had was with weather. Fortunately for us, the predicted

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00:01:26,420 --> 00:01:31,790
weather that we thought we were going to be dealing with was an encroaching thunderstorm activity and a

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00:01:31,790 --> 00:01:37,710
potential for a Phase 2 lightning advisory, which would have had an impact on tonight's launch attempt.

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00:01:37,710 --> 00:01:43,670
That front stayed well to the north, didn't have to deal with that, but in its place we had ground winds

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00:01:43,670 --> 00:01:51,800
that were right on the borderline of acceptability from a structural concern for cryo tanking of the Centaur.

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00:01:51,800 --> 00:02:01,330
So we spent a little bit of time. We needed about an extra 10 minutes compared to our nominal polling time.

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00:02:01,330 --> 00:02:07,280
I asked launch director for that. Our team was then able to analyze the additional data that came in.

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00:02:07,280 --> 00:02:12,820
Simultaneously with that we worked a launch vehicle issue on the Atlas V.

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00:02:12,820 --> 00:02:19,960
Turned out there was a haz-gas sensor, one of a few in the interstage assembly that had failed.

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00:02:19,960 --> 00:02:25,230
So we had an anomaly discussion. We were concerned about the structural impact of ground winds

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00:02:25,230 --> 00:02:30,320
that were borderline and that's why we needed just a little bit of extra time prior to go into cryogenic

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00:02:30,320 --> 00:02:36,660
tanking before we were able to complete our poll. Once we worked through that, we got into a nominal

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00:02:36,660 --> 00:02:43,570
timeline, we were headed toward T-0 at the front end of the window. We worked just a couple of

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00:02:43,570 --> 00:02:52,080
minor launch vehicle issues. During cryo tanking we had a first stage booster liquid oxygen fill-and-drain

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00:02:52,080 --> 00:02:58,420
valve that did not give us the appropriate talkback signal, though we have a contingency plan where

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00:02:58,420 --> 00:03:03,910
we're able to use pressure data to tell if that fill-and-drain valve is opening and closing and cycling

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00:03:03,910 --> 00:03:08,470
as planned. So, we were able to work through that. A little bit later in the count we had another

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00:03:08,470 --> 00:03:16,280
sensor on the vehicle, fortunately it was tripley redundant, it was a pressure sensor that had given

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00:03:16,280 --> 00:03:21,490
us a little bit of noisy data. So, we worked through that as well. During that whole time,

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00:03:21,490 --> 00:03:29,680
the TDRS-K spacecraft was being turned on, rock solid, no problems at all. On the range side,

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00:03:29,680 --> 00:03:35,870
the range had just a few minor issues that they were working. One of the camera sites temporarily went

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00:03:35,870 --> 00:03:45,280

down, came back operational. One of the winds Doppler radar profilers went down, went non-mission capable,

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00:03:45,280 --> 00:03:49,280
but the range addressed that quickly and was able to bring that back online.

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00:03:49,280 --> 00:03:56,580
And then one of their upper-level winds displays was non-operational but we had redundant capability there.

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00:03:56,580 --> 00:04:02,680
But again, the range team, being the great team that they are, was able to bring that component back as well.

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00:04:02,680 --> 00:04:10,610
So, once we got down within a half-hour of launch, we were clean green. Everything looked great and we went

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00:04:10,610 --> 00:04:12,610
right on the first opening of the window at 8:48 p.m. Eastern time and very thrilled with that.

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00:04:19,290 --> 00:04:28,400
United Launch Alliance to get to this point. And it's pretty short to the next one, isn't it?

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00:04:28,400 --> 00:04:34,070
Tim Dunn/NASA Launch Manager: Yes, it's quite short. It's going to be a quick turnaround for our team.

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00:04:34,070 --> 00:04:40,720
We're going to get a little bit of rest tonight. Come back in, start reviewing the data from this mission,

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00:04:40,720 --> 00:04:47,410
the TDRS-K mission and then get most of our team deployed out to Vandenberg Air Force Base in California

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00:04:47,410 --> 00:04:53,050
for the LDCM mission, the Landsat Data Continuity mission, which is currently scheduled on an Atlas V from

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00:04:53,050 --> 00:04:56,340
Vandenberg on the 11th of February.

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00:04:56,340 --> 00:05:03,410
George Diller/NASA Launch Commentator: Well, Tim, it's been a very intense month here and with the LDCM

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00:05:03,410 --> 00:05:10,930
coming up as well. I think we can say we've had a very successful Atlas launch campaign here in the last

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00:05:10,930 --> 00:05:17,330
month or so leading through this flight all the way up to LDCM.

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00:05:17,330 --> 00:05:23,800
I think the team I'm sure, you think must feel they've done a very admirable job to get us through

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00:05:23,800 --> 00:05:25,790
these two launches this close together.

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00:05:25,790 --> 00:05:28,060
Tim Dunn/NASA Launch Manager: Boy, yeah, I'm just thrilled with our team, George.

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00:05:28,060 --> 00:05:35,060
We have just an incredibly competent team. Just exceptional dedication that they have,

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00:05:35,060 --> 00:05:40,170
both the NASA government team working alongside our colleagues at United Launch Alliance,

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00:05:40,170 --> 00:05:45,650
we just have one of the finest launch teams assembled. And I couldn't be more proud of them.

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00:05:45,650 --> 00:05:49,470
So, George, on a personal note, I would like to make a comment about this launch.

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00:05:49,470 --> 00:05:55,800
I would like to, as launch director for TDRS-K, I'd like to make a personal dedication of this launch to a

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00:05:55,800 --> 00:06:02,420
special little girl, Delaney Graley. She's a little 14-year-old-girl. She's battling cystic fibrosis.

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00:06:02,420 --> 00:06:07,540
She's over in Orlando at Arnold Palmer hospital and I just want to say,

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00:06:07,540 --> 00:06:11,170

Delaney, this launch was for you. So, we're really thinking about you and praying for you.

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00:06:11,170 --> 00:06:14,110
George Diller/NASA Launch Commentator: Well, Tim, thanks very much.

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00:06:14,110 --> 00:06:18,430
And we look forward to seeing you and Omar Baez as well out at Vandenberg.

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00:06:18,430 --> 00:06:25,420
And we're all on a plane out of here very shortly.

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00:06:25,420 --> 00:06:27,840
Tim Dunn/NASA Launch Manager: Very shortly, looking forward to it, George.