1
00:00:07,569 --> 00:00:11,070
This Week at NASA…

2
00:00:11,070 --> 00:00:20,480
3-2-1. We have ignition and liftoff of the
Delta II rocket and WISE. With that, the Delta

3
00:00:20,480 --> 00:00:26,090
2 rocket carrying NASA's Wide-field Infrared
Survey Explorer made its way off the launch

4
00:00:26,090 --> 00:00:31,980
pad at California's Vandenberg Air Force
Base. Using its extremely sensitive infrared

5
00:00:31,980 --> 00:00:37,480
cameras, WISE will spend nine months mapping
the sky in search of the nearest and coolest

6
00:00:37,480 --> 00:00:43,430
stars, clues to the origins of stellar and
planetary systems, and the universe's most

7
00:00:43,430 --> 00:00:49,840
luminous galaxies. Amy Mainzer is WISE's
deputy project scientist. In addition to the

8
00:00:49,840 --> 00:00:53,059
finding some of the most distant objects in
the universe, it's also going to find some

9
00:00:53,059 --> 00:00:58,600
of those closest to our own home, in our own
solar system, and that is the asteroids. WISE

10
00:00:58,600 --> 00:01:04,220
will orbit the Earth about 15 times a day,
mapping the sky one-and-a-half times during

11

00:01:04,220 --> 00:01:06,320
its planned nine month mission.

12
00:01:06,320 --> 00:01:13,090
You’re clear up to 30 degrees bank. NASA's
Stratospheric Observatory for Infrared Astronomy,

13
00:01:13,090 --> 00:01:19,820
or SOFIA aircraft, took to the skies above
California's Mojave Desert on its first flight

14
00:01:19,820 --> 00:01:26,670
since January 2008. The modified 747 carrying
a German-built telescope for infrared astronomy

15
00:01:26,670 --> 00:01:32,250
research flew about 4-and-a-half hours during
a functional check flight in restricted airspace

16
00:01:32,250 --> 00:01:37,670
near Edwards Air Force Base and the Dryden
Flight Research Center. The flight evaluated

17
00:01:37,670 --> 00:01:44,320
the aircraft's performance, handling characteristics
and flight systems at altitudes up to 35,000

18
00:01:44,320 --> 00:01:49,640
feet, and included a check-out of aircraft
systems, including engine, flight controls

19
00:01:49,640 --> 00:01:55,031
and communication. Two additional flights
are scheduled for later in the month to evaluate

20
00:01:55,031 --> 00:02:00,880
the doors covering the observatory’s telescope
cavity. SOFIA will first fly with 10 percent

21
00:02:00,880 --> 00:02:06,730

of its telescope’s cavity door open, and
then later with 100 percent of the telescope

22
00:02:06,730 --> 00:02:07,730
revealed.

23
00:02:07,730 --> 00:02:19,519
3-2-1 How do you make a helicopter safer?
(crash sounds) You crash it. Researchers at

24
00:02:19,519 --> 00:02:24,440
the Langley Research Center recently dropped
an old helicopter from a height of 35 feet

25
00:02:24,440 --> 00:02:30,160
to see whether an expandable honeycomb cushion
attached to its belly could ease the destructive

26
00:02:30,160 --> 00:02:36,220
force of a crash. NASA aerospace engineer
Karen Jackson oversaw the test. “One of

27
00:02:36,220 --> 00:02:41,260
the concepts is to look at exterior deployed
systems like either air bags, or this concept

28
00:02:41,260 --> 00:02:46,389
we’ve tested today, as a way of providing
energy attenuation without adding a lot of

29
00:02:46,389 --> 00:02:51,989
weight.” The test conditions imitated what
would be a relatively severe helicopter crash.

30
00:02:51,989 --> 00:02:58,340
On impact, the helicopter's skids bent outward,
but the cushion, called a deployable energy

31
00:02:58,340 --> 00:03:03,359
absorber, kept the rotorcraft's bottom from

touching the ground. Four crash-test dummies,

32
00:03:03,359 --> 00:03:08,890
along for the ride, appeared only a little
worse for wear. Researchers must analyze the

33
00:03:08,890 --> 00:03:13,700
test results before they can be sure the deployable
energy absorber worked as designed.

34
00:03:13,700 --> 00:03:20,060
“It’s an honor for me to be here.” That
was NASA Administrator Charlie Bolden as guest

35
00:03:20,060 --> 00:03:25,880
speaker at a luncheon with members of Women
In Aerospace. WIA is an organization dedicated

36
00:03:25,880 --> 00:03:30,891
to expanding women's opportunities for leadership,
increasing their visibility in the aerospace

37
00:03:30,891 --> 00:03:35,900
community, and facilitating discussion of
issues important to women. “In the area

38
00:03:35,900 --> 00:03:41,640
of science, technology, and aerospace, we
also have more diversity at top levels than

39
00:03:41,640 --> 00:03:47,450
in the past. A few examples, of course at
NASA, I’m proud to have Lori Garver as my

40
00:03:47,450 --> 00:03:53,199
Deputy Administrator.“ WIA organizes numerous
events featuring speakers from government,

41
00:03:53,199 --> 00:03:57,160
industry, education and the scientific community.

42
00:03:57,160 --> 00:04:03,769
There it is! The Marshall Space Flight Center
officially ushered in its holiday season with

43
00:04:03,769 --> 00:04:09,040
a special tree lighting ceremony. Dozens of
team members braved chilly temperatures outside

44
00:04:09,040 --> 00:04:14,669
Building 4200 to watch Center Director Robert
Lightfoot flip the switch for the annual event.

45
00:04:14,669 --> 00:04:20,100
The crowd, which included children from Marshall's
Child Development Center, sang carols, enjoyed

46
00:04:20,100 --> 00:04:25,160
hot cocoa and sweets – and rubbed elbows
with St. Nick himself.