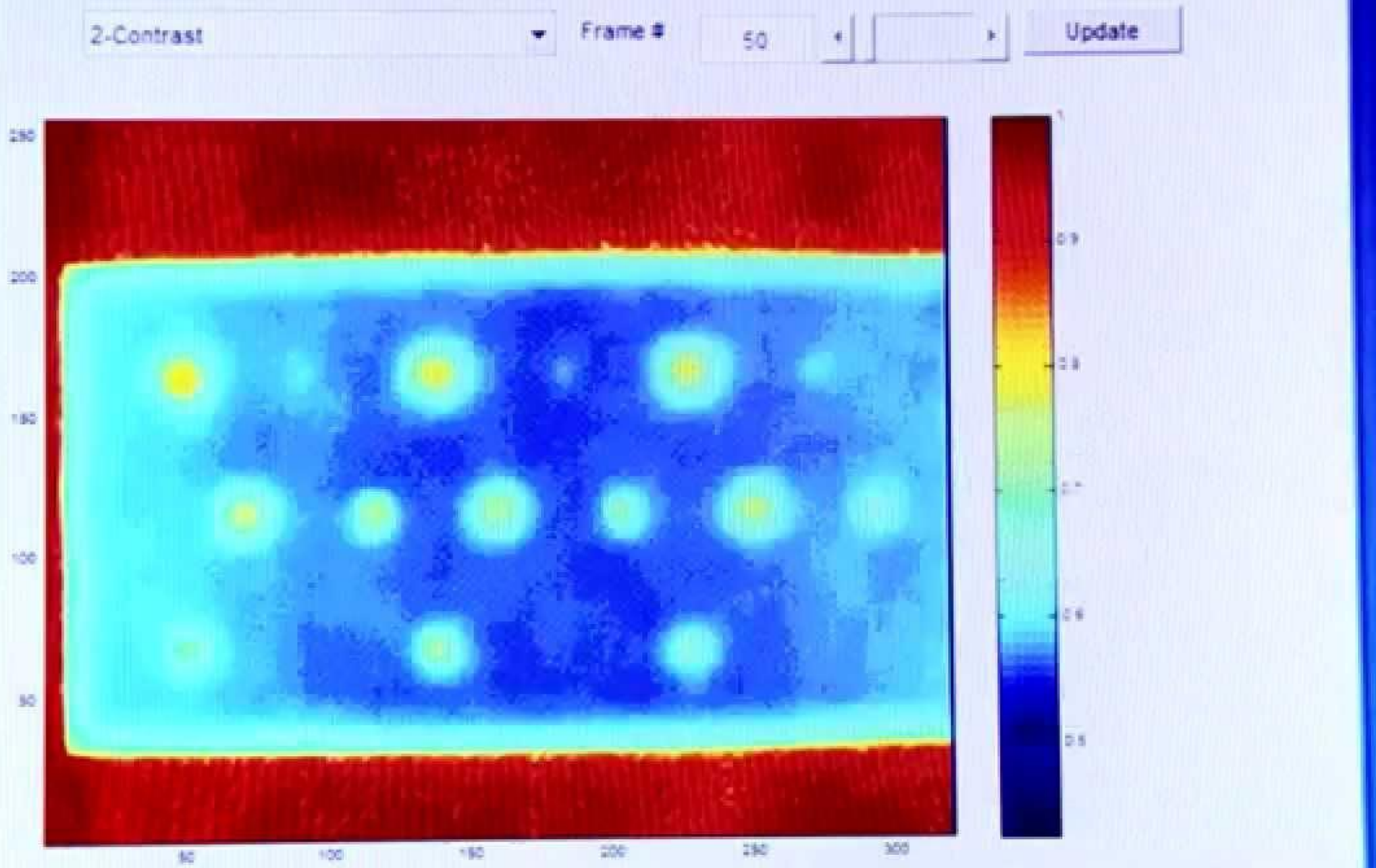
2-Contrast
Frame #
50
Update
250
200
150
100
50
100
150
200
250
300
0.9
0.8
0.6
0.5

1
00:00:00,450 --> 00:00:03,169
\{Music\} For more than fifty years scientists and engineers

2
00:00:03,169 --> 00:00:07,140
at NASA's Johnson space Center, have pioneered breakthroughs in medicine,

3
00:00:07,140 --> 00:00:10,590
computing, thermal materials, and systems engineering.

4
00:00:10,590 --> 00:00:15,260
NASA technologies are innovative solutions that solve complex problems.

5
00:00:15,260 --> 00:00:18,210
NASA patented core technologies are
available through

6
00:00:18,210 --> 00:00:21,500
license agreement and co-development
partnerships.

7
00:00:21,500 --> 00:00:24,950
These effective entrepreneurial collaborations can create
innovative new products,

8
00:00:24,950 --> 00:00:27,000
and opportunities for your business.

9
00:00:29,860 --> 00:00:31,940
Flash Infrared Thermography

10
00:00:31,940 --> 00:00:37,410
is an NDE non-destructive evaluation method and can typically be used

11
00:00:37,410 --> 00:00:40,520
in the inspection of composites,

12
00:00:40,520 --> 00:00:44,510
non-metallic, or detection of void-like

flaws

13
00:00:44,510 --> 00:00:46,000
and delaminations.

14
00:00:47,000 --> 00:00:50,000
With flash thermography, where we use a flash...

15
00:00:50,300 --> 00:00:53,690
of photographic light on to the
part

16
00:00:53,690 --> 00:00:57,670
and then you take a video using an
infrared camera.

17
00:00:58,500 --> 00:01:00,930
The software that NASA has developed

18
00:01:00,930 --> 00:01:04,729
method is called Infrared Contrast.

19
00:01:04,729 --> 00:01:08,940
It's a post processing software that essentially analyzes the data

20
00:01:08,940 --> 00:01:13,000
by converting it into a contrast data.

21
00:01:13,500 --> 00:01:16,150
And you can measure that

22
00:01:16,150 --> 00:01:20,250
indication in terms of come normalized contrast and

23
00:01:20,250 --> 00:01:22,500
parameters based on normalized contrast so...

24
00:01:22,500 --> 00:01:27,360

so this way now you have quantifiable measurable signal response -

25
00:01:27,360 --> 00:01:32,000
that then correlates to the size of the flaw.

26
00:01:32,000 --> 00:01:34,229
And so you have a
signal amplitude

27
00:01:34,229 --> 00:01:37,909
that can be measured with very accurately. And you also have

28
00:01:37,909 --> 00:01:41,850
the peak of that amplitude time measured very accurately.

29
00:01:41,850 --> 00:01:43,840
and both of these relate to the

30
00:01:43,840 --> 00:01:46,700
the size and the flaw as well as the depth of the flaw.

31
00:01:48,000 --> 00:01:50,500
But if you are looking for detecting flaws

32
00:01:50,500 --> 00:01:53,960
in a composite structure this method will

33
00:01:53,960 --> 00:01:57,690
allow you to detect those flaws accurately...

34
00:01:57,690 --> 00:02:01,000
and reliably - and also in an efficient manner.

35
00:02:02,200 --> 00:02:06,320
\{Narrator\} Flash Infrared Thermography using NASA's patented IR contrast

36
00:02:06,320 --> 00:02:09,000
method technology is available for use through a license

37
00:02:09,000 --> 00:02:13,630
agreement through NASA. IR contrast method technology can analyze and evaluate

38
00:02:13,630 --> 00:02:17,360
composite materials used increasingly
in the manufacturing of turbine blades...

39
00:02:17,360 --> 00:02:18,400
pressure vessels...

40
00:02:18,400 --> 00:02:20,000
fuselages...

41
00:02:20,000 --> 00:02:20,950
airfoils...

42
00:02:20,950 --> 00:02:23,500
and can be applied to a wide range of
industries.

43
00:02:23,500 --> 00:02:27,670
To find out more about NASA developed  IR contrast method technology,