



1
00:00:00,000 --> 00:00:02,000
Music.

2
00:00:02,000 --> 00:00:04,000
Don Yeomans: There's great interest in Comet ISON for a couple of reasons.

3
00:00:04,000 --> 00:00:09,000
First of all it's coming from the very edge of our solar system

4
00:00:09,000 --> 00:00:15,000
so it still retains the primordial ices from which it formed four and a half billion years ago.

5
00:00:15,000 --> 00:00:21,000
It's been traveling from the outer edge of the solar system for about five and a half million years

6
00:00:21,000 --> 00:00:26,000
to reach us in the inner solar system, and its going to make an extremely close approach to the sun

7
00:00:26,000 --> 00:00:34,000
and hence could become very bright and possibly a very easy naked-eye object in early December.

8
00:00:34,000 --> 00:00:41,000
There's three possibilities when this comet rounds the sun on Thanksgiving Day 2013.

9
00:00:41,000 --> 00:00:49,000
It could be tough enough to survive the passage of the sun and be a fairly bright naked-eye object

10
00:00:49,000 --> 00:00:53,000
in the early morning sky in the first week of December.

11
00:00:53,000 --> 00:00:59,000
Or, the sun could actually pull it apart. The tidal forces could actually pull this comet apart

12
00:00:59,000 --> 00:01:05,000
and so it has several chunks rounding the sun and putting on a great show again in early December.

13
00:01:05,000 --> 00:01:13,000

Or, if the comet's very weak, it could break up into a cloud of dust and be a complete bust in December.

14

00:01:13,000 --> 00:01:19,000

Well, Comet ISON shouldn't be feared. It should be appreciated for the opportunities it's going to present.

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00:01:19,000 --> 00:01:23,000

It's going to round the sun on Thanksgiving Day

16

00:01:23,000 --> 00:01:28,000

and there's going to be a small army of amateur and professional astronomers on the Earth,

17

00:01:28,000 --> 00:01:33,000

and spacecraft are going to be observing this object near the sun.

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00:01:33,000 --> 00:01:36,000

So we're going to find out a great deal about what this comet is made of

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00:01:36,000 --> 00:01:40,000

and hence were going to find out a great deal about what the solar system was like