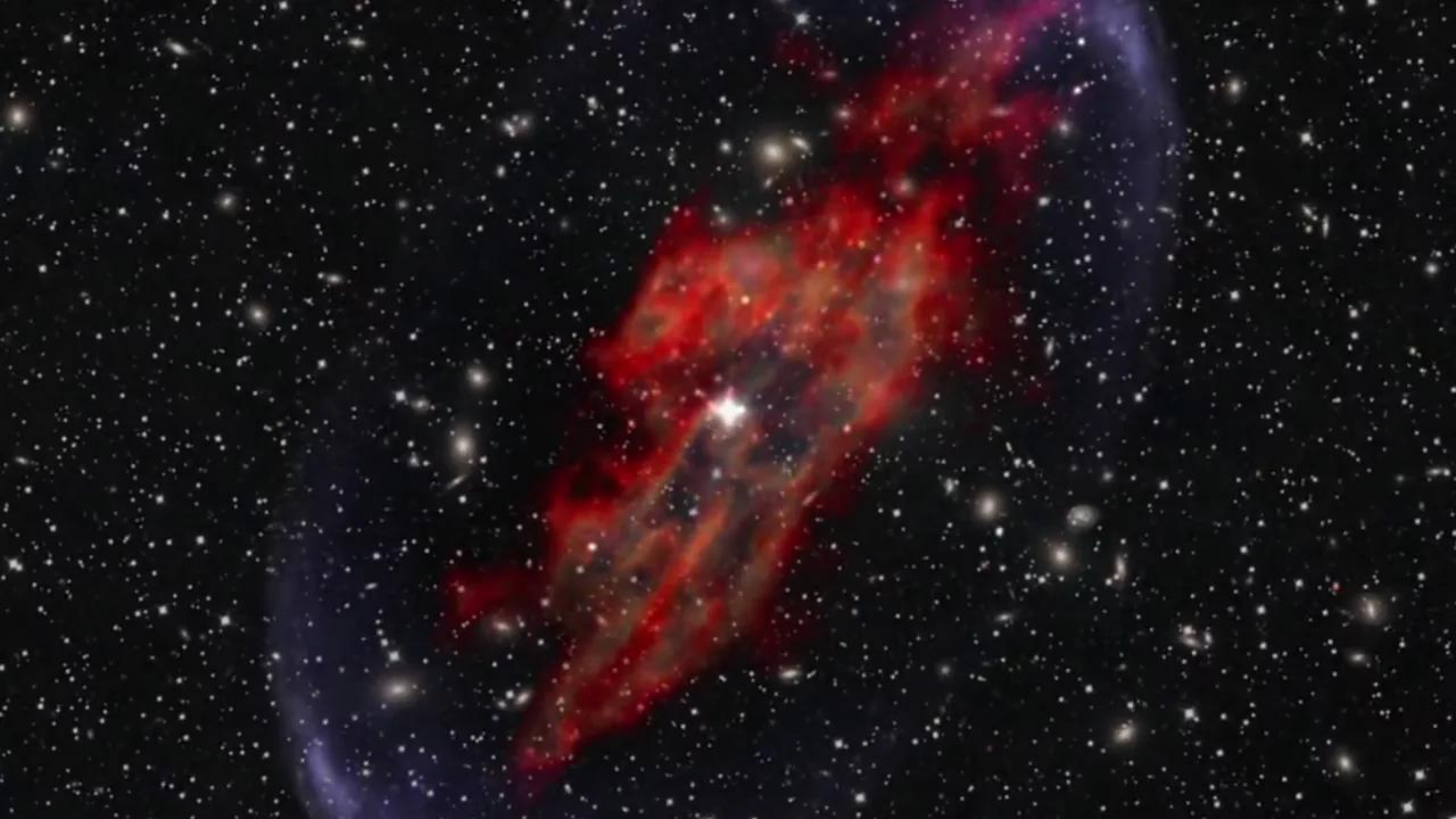

1
00:00:12,220 --> 00:00:04,100
Music

2
00:00:12,240 --> 00:00:16,240
Phil Plait: Gamma rays are the highest energy form of light.

3
00:00:16,260 --> 00:00:20,330
Dave Thompson: There's the light we see with our eyes, but their lots of other types of light. Gamma

4
00:00:20,350 --> 00:00:24,390
rays are the most energetic form of light, the most powerful.

5
00:00:24,410 --> 00:00:28,460
Valerie Connaughton: Gamma rays are the part of what we call the electromagnetic spectrum

6
00:00:28,480 --> 00:00:32,510
which starts in radio, at very long wavelengths, goes through optical,

7
00:00:32,530 --> 00:00:36,570
then through x-rays, and then gamma rays are the very highest energy form

8
00:00:36,590 --> 00:00:40,620
of that type of radiation. Neil Gehrels: The reason that it's important to look at the

9
00:00:40,640 --> 00:00:44,670
high-energy gamma rays is that many objects, the most violent

10
00:00:44,690 --> 00:00:48,700
and some of the most interesting objects in the universe emit most of their light

11
00:00:48,720 --> 00:00:52,760
in this high-energy gamma ray part. Phil Plait: And the only thing that can generate gamma rays

12
00:00:52,780 --> 00:00:56,780
are incredibly violent events, incredibly energetic events. And we're talking

13
00:00:56,800 --> 00:01:00,890

stars exploding and neutron stars with really strong magnetic

14
00:01:00,910 --> 00:01:04,970
fields and really exotic and strange objects like that. Isabelle Grenier: It's

15
00:01:04,990 --> 00:01:09,040
like a Christmas tree it's shining, and it's flaring and their are eruptions

16
00:01:09,060 --> 00:01:13,110
every day. Peter Michelson: Gamma-ray bursts being an example of something that, for a

17
00:01:13,130 --> 00:01:17,160
brief instant of time outshines the entire rest of the universe.

18
00:01:17,180 --> 00:01:21,210
Chip Meegan: These are the biggest explosions in the universe.

19
00:01:21,230 --> 00:01:25,250
Music