



Glenn Orton



1  
00:00:09,430 --> 00:00:07,829  
christmas sky show presented by science

2  
00:00:11,990 --> 00:00:09,440  
at nasa

3  
00:00:14,870 --> 00:00:12,000  
just when you thought christmas was over

4  
00:00:17,029 --> 00:00:14,880  
at the end of the day on december 25th a

5  
00:00:18,710 --> 00:00:17,039  
pair of holiday lights will pop out of

6  
00:00:20,630 --> 00:00:18,720  
the deepening twilight

7  
00:00:22,630 --> 00:00:20,640  
jupiter and the moon are having a

8  
00:00:25,109 --> 00:00:22,640  
christmas conjunction

9  
00:00:27,109 --> 00:00:25,119  
it's a global apparition visible from

10  
00:00:28,310 --> 00:00:27,119  
all time zones and both sides of the

11  
00:00:30,710 --> 00:00:28,320  
equator

12  
00:00:33,030 --> 00:00:30,720  
everyone can see the show even city

13  
00:00:35,430 --> 00:00:33,040

dwellers who often miss astronomical

14

00:00:38,069 --> 00:00:35,440

events because of light pollution

15

00:00:40,389 --> 00:00:38,079

separated by less than two degrees the

16

00:00:41,590 --> 00:00:40,399

bright pair will beam right through city

17

00:00:43,430 --> 00:00:41,600

lights

18

00:00:45,830 --> 00:00:43,440

for anyone who gets a telescope for

19

00:00:47,670 --> 00:00:45,840

christmas the timing is perfect

20

00:00:50,470 --> 00:00:47,680

jupiter and the moon are among the most

21

00:00:52,389 --> 00:00:50,480

satisfying targets for backyard optics

22

00:00:55,029 --> 00:00:52,399

a quick sweep of the telescope from

23

00:00:57,990 --> 00:00:55,039

jupiter to the moon and back again will

24

00:01:00,869 --> 00:00:58,000

reveal jupiter's storms and cloud belts

25

00:01:03,029 --> 00:01:00,879

the moon's mountains and impact craters

26

00:01:05,750 --> 00:01:03,039

and of course the four galilean

27

00:01:08,550 --> 00:01:05,760

satellites circling the giant planet

28

00:01:10,870 --> 00:01:08,560

like a miniature solar system

29

00:01:12,469 --> 00:01:10,880

jupiter's trademark great red spot will

30

00:01:14,550 --> 00:01:12,479

also be on display

31

00:01:16,550 --> 00:01:14,560

and it is worth a look

32

00:01:19,350 --> 00:01:16,560

astronomers recently announced that the

33

00:01:22,390 --> 00:01:19,360

enormous swirling storm twice as wide as

34

00:01:24,789 --> 00:01:22,400

the planet earth is spinning up

35

00:01:27,109 --> 00:01:24,799

actually explains planetary scientist

36

00:01:30,550 --> 00:01:27,119

glenn orton of nasa's jet propulsion

37

00:01:32,710 --> 00:01:30,560

laboratory the red spot is shrinking

38

00:01:34,789 --> 00:01:32,720

he likens it to the iconic picture of a

39

00:01:36,310 --> 00:01:34,799

figure skater pulling her arms in to

40

00:01:38,830 --> 00:01:36,320

spin faster

41

00:01:41,670 --> 00:01:38,840

as the size contracts the spin rate

42

00:01:43,670 --> 00:01:41,680

increases john rogers head of the

43

00:01:45,109 --> 00:01:43,680

british astronomical association's

44

00:01:46,789 --> 00:01:45,119

jupiter section

45

00:01:49,429 --> 00:01:46,799

noticed the phenomenon in recent

46

00:01:50,710 --> 00:01:49,439

pictures of jupiter snapped by amateur

47

00:01:53,030 --> 00:01:50,720

astronomers

48

00:01:54,789 --> 00:01:53,040

he was able to track a black cloud as it

49

00:01:56,870 --> 00:01:54,799

swirled three times around the red

50

00:01:58,789 --> 00:01:56,880

spot's central vortex

51  
00:02:01,190 --> 00:01:58,799  
the circulating streak completed the

52  
00:02:03,270 --> 00:02:01,200  
circuit in only four days shorter than

53  
00:02:06,230 --> 00:02:03,280  
the four and a half days rogers measured

54  
00:02:08,229 --> 00:02:06,240  
in 2006 using the same method

55  
00:02:09,990 --> 00:02:08,239  
looking back in time the trend of

56  
00:02:12,309 --> 00:02:10,000  
decreasing rotation period has been

57  
00:02:15,830 --> 00:02:12,319  
consistent at least since voyager

58  
00:02:18,309 --> 00:02:15,840  
visited jupiter in 1979 says rogers

59  
00:02:19,350 --> 00:02:18,319  
as the spot shrinks it also changes

60  
00:02:21,270 --> 00:02:19,360  
shape

61  
00:02:24,630 --> 00:02:21,280  
decades ago the red spot looked like a

62  
00:02:27,030 --> 00:02:24,640  
sausage now it's more circular

63  
00:02:28,869 --> 00:02:27,040

what happens next is hard to say

64

00:02:30,470 --> 00:02:28,879

perhaps the red spot will continue to

65

00:02:32,390 --> 00:02:30,480

shrink and eventually disappear

66

00:02:34,630 --> 00:02:32,400

speculates rogers

67

00:02:37,830 --> 00:02:34,640

or perhaps it will be rejuvenated if

68

00:02:40,150 --> 00:02:37,840

some new storm arises to reinforce it

69

00:02:41,910 --> 00:02:40,160

one thing is certain christmas night is

70

00:02:43,430 --> 00:02:41,920

a good time to look

71

00:02:45,430 --> 00:02:43,440

the red spot will be transiting

72

00:02:47,750 --> 00:02:45,440

jupiter's middle for observers across

73

00:02:50,869 --> 00:02:47,760

north america and will be perfectly

74

00:02:53,030 --> 00:02:50,879

positioned for telescopic observations

75

00:02:53,990 --> 00:02:53,040

but you don't need a telescope to enjoy

76

00:02:56,710 --> 00:02:54,000

the show

77

00:02:58,070 --> 00:02:56,720

step outside at sunset on december 25th

78

00:03:00,470 --> 00:02:58,080

and look east

79

00:03:03,350 --> 00:03:00,480

after all christmas isn't really over

80

00:03:05,509 --> 00:03:03,360

until you've seen the holiday lights