



1  
00:00:09,830 --> 00:00:07,349  
a wonderful night in april presented by

2  
00:00:11,350 --> 00:00:09,840  
science at nasa

3  
00:00:13,190 --> 00:00:11,360  
as winter turns to spring in the

4  
00:00:16,470 --> 00:00:13,200  
northern hemisphere the nights are

5  
00:00:18,230 --> 00:00:16,480  
becoming shorter and much cozier rising

6  
00:00:19,830 --> 00:00:18,240  
temperatures make shirt sleeve astronomy

7  
00:00:21,510 --> 00:00:19,840  
possible again

8  
00:00:23,349 --> 00:00:21,520  
if you must choose one night to spend

9  
00:00:25,670 --> 00:00:23,359  
under the beckoning stars this month

10  
00:00:27,670 --> 00:00:25,680  
make it april 21st

11  
00:00:29,509 --> 00:00:27,680  
it should be a wonderful night says bill

12  
00:00:30,630 --> 00:00:29,519  
cook of nasa's meteoroid environment

13  
00:00:32,709 --> 00:00:30,640

office

14

00:00:35,030 --> 00:00:32,719

the annual lyrid meteor shower will peak

15

00:00:36,870 --> 00:00:35,040

under the dark skies of a new moon

16

00:00:38,229 --> 00:00:36,880

conditions should be ideal for meteor

17

00:00:40,869 --> 00:00:38,239

watching

18

00:00:42,950 --> 00:00:40,879

lyrid meteors come from comet thatcher

19

00:00:44,549 --> 00:00:42,960

every year in late april earth passes

20

00:00:46,229 --> 00:00:44,559

through a stream of debris from the old

21

00:00:48,549 --> 00:00:46,239

comet which has been bringing lyrid

22

00:00:49,830 --> 00:00:48,559

meteors to our planet for at least 2 600

23

00:00:51,750 --> 00:00:49,840

years

24

00:00:54,630 --> 00:00:51,760

specks of thatcher's dust hit the top of

25

00:00:56,830 --> 00:00:54,640

the atmosphere at 110 000 miles per hour

26

00:00:59,189 --> 00:00:56,840

and disintegrate in a slow flurry of

27

00:01:00,950 --> 00:00:59,199

meteors typical lyrids are about as

28

00:01:03,349 --> 00:01:00,960

bright as the stars of the big dippers

29

00:01:05,189 --> 00:01:03,359

says cook so they're good for beginners

30

00:01:07,910 --> 00:01:05,199

and it's not unusual to see one or two

31

00:01:10,310 --> 00:01:07,920

fireballs when the shower peaks

32

00:01:12,870 --> 00:01:10,320

most years the shower max is out at 15

33

00:01:14,950 --> 00:01:12,880

or 20 meteors per hour occasionally

34

00:01:16,870 --> 00:01:14,960

however rates increase sharply when

35

00:01:18,630 --> 00:01:16,880

earth glides through an unusually dense

36

00:01:21,510 --> 00:01:18,640

clump of debris

37

00:01:24,070 --> 00:01:21,520

in 1982 for instance astronomers counted

38

00:01:25,749 --> 00:01:24,080

as many as 90 lyrids per hour

39

00:01:27,990 --> 00:01:25,759

an even more impressive outburst was

40

00:01:29,350 --> 00:01:28,000

documented in 1803 by a journalist in

41

00:01:31,749 --> 00:01:29,360

virginia

42

00:01:33,670 --> 00:01:31,759

the outburst alarmed many and astonished

43

00:01:35,350 --> 00:01:33,680

every person that beheld it

44

00:01:37,190 --> 00:01:35,360

from one until three in the morning

45

00:01:39,030 --> 00:01:37,200

those starry meteors seem to fall from

46

00:01:40,630 --> 00:01:39,040

every point in the heavens in such

47

00:01:42,630 --> 00:01:40,640

numbers as to resemble a shower of

48

00:01:44,469 --> 00:01:42,640

skyrockets

49

00:01:46,230 --> 00:01:44,479

a good time to look for lyrids is during

50

00:01:47,990 --> 00:01:46,240

the hours after midnight when the

51  
00:01:49,510 --> 00:01:48,000  
shower's radiant is rising toward its

52  
00:01:51,670 --> 00:01:49,520  
zenith

53  
00:01:53,190 --> 00:01:51,680  
coincidentally this year's shower peaks

54  
00:01:55,429 --> 00:01:53,200  
during the same week that saturn is

55  
00:01:57,109 --> 00:01:55,439  
having a close encounter with earth

56  
00:01:59,109 --> 00:01:57,119  
if you begin your meteor watch around

57  
00:02:01,190 --> 00:01:59,119  
midnight you'll see the ringed planet

58  
00:02:02,709 --> 00:02:01,200  
shining almost directly overhead about

59  
00:02:04,630 --> 00:02:02,719  
two times brighter than a first

60  
00:02:06,709 --> 00:02:04,640  
magnitude star

61  
00:02:08,949 --> 00:02:06,719  
got a telescope now would be a great

62  
00:02:10,869 --> 00:02:08,959  
time to use it even small department

63  
00:02:14,070 --> 00:02:10,879

store models at low magnification

64

00:02:15,990 --> 00:02:14,080

provide a nice view of saturn's rings

65

00:02:17,270 --> 00:02:16,000

nasa's cassini spacecraft is orbiting

66

00:02:19,110 --> 00:02:17,280

saturn now

67

00:02:21,030 --> 00:02:19,120

studying the planet's strange moons and

68

00:02:22,390 --> 00:02:21,040

snapping breathtaking photos of the ring

69

00:02:23,750 --> 00:02:22,400

plane

70

00:02:26,150 --> 00:02:23,760

no telescope on earth can match

71

00:02:27,750 --> 00:02:26,160

cassini's proximity to the ringed planet

72

00:02:30,710 --> 00:02:27,760

but many observers say the view from

73

00:02:32,309 --> 00:02:30,720

your own backyard is uniquely satisfying

74

00:02:34,070 --> 00:02:32,319

and there's more

75

00:02:37,030 --> 00:02:34,080

when you're finished looking at saturn

76

00:02:39,110 --> 00:02:37,040

you can turn your optics towards mars

77

00:02:41,430 --> 00:02:39,120

the red planet is also up at midnight on

78

00:02:42,869 --> 00:02:41,440

april 21st and it's even brighter than

79

00:02:45,030 --> 00:02:42,879

saturn

80

00:02:47,110 --> 00:02:45,040

backyard telescopes reveal a tiny burnt

81

00:02:49,670 --> 00:02:47,120

orange globe with a white cap of polar

82

00:02:51,750 --> 00:02:49,680

ice reflecting enough sunlight to see 81

83

00:02:53,990 --> 00:02:51,760

million miles away

84

00:02:56,070 --> 00:02:54,000

nasa's newest rover curiosity is enroute

85

00:02:58,070 --> 00:02:56,080

to mars now on a mission to hunt for

86

00:03:00,390 --> 00:02:58,080

signs of ancient life

87

00:03:02,630 --> 00:03:00,400

you can tell your friends you saw mars

88

00:03:05,750 --> 00:03:02,640

even before curiosity did

89

00:03:07,430 --> 00:03:05,760

april 21st has a lot to offer

90

00:03:08,309 --> 00:03:07,440

for more news about wonders in the night