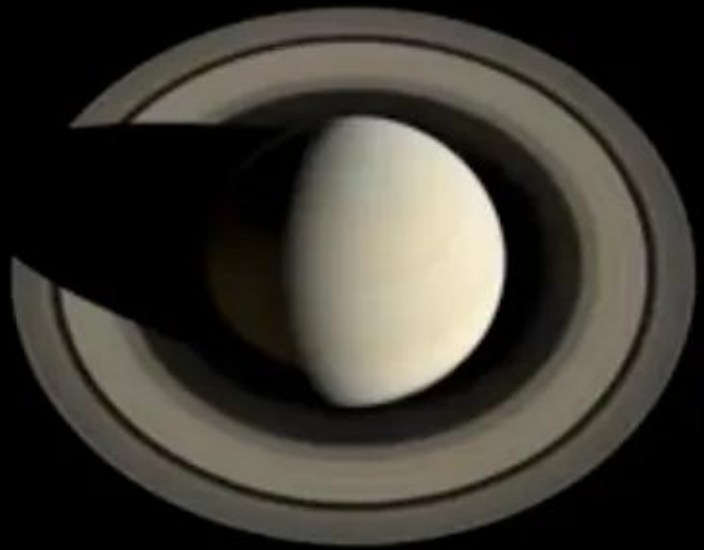


XI
X
IX
LÖWE

1
00:00:04,470 --> 00:00:02,790
[Music]

2
00:00:07,430 --> 00:00:04,480
what's up for april

3
00:00:09,509 --> 00:00:07,440
morning planets a sunset arch and

4
00:00:12,070 --> 00:00:09,519
finding leo the lion

5
00:00:14,870 --> 00:00:12,080
the morning sky on april 6th finds

6
00:00:16,550 --> 00:00:14,880
jupiter and saturn forming a lovely trio

7
00:00:18,630 --> 00:00:16,560
with the crescent moon

8
00:00:21,189 --> 00:00:18,640
look for them low in the southeast in

9
00:00:24,230 --> 00:00:21,199
the hour before sunrise

10
00:00:26,310 --> 00:00:24,240
april 22nd is earth day an annual

11
00:00:28,630 --> 00:00:26,320
opportunity to collectively appreciate

12
00:00:30,310 --> 00:00:28,640
the wonder and beauty of our home planet

13
00:00:32,069 --> 00:00:30,320

so it seems appropriate to feature an

14
00:00:33,750 --> 00:00:32,079
earth-related site you can see

15
00:00:36,310 --> 00:00:33,760
any time of the year when you have clear

16
00:00:37,270 --> 00:00:36,320
skies it's a twilight phenomenon that

17
00:00:40,470 --> 00:00:37,280
you might have noticed

18
00:00:42,389 --> 00:00:40,480
just after sunset if you can pull your

19
00:00:43,990 --> 00:00:42,399
gaze away from the sunset in the west

20
00:00:46,950 --> 00:00:44,000
and spin yourself around to

21
00:00:49,590 --> 00:00:46,960
face east you'll often notice a band of

22
00:00:51,430 --> 00:00:49,600
pink or orange colored sky with a darker

23
00:00:53,670 --> 00:00:51,440
bluish band underneath

24
00:00:55,830 --> 00:00:53,680
these bands move upward over the minutes

25
00:00:58,229 --> 00:00:55,840
following sunset to form an arch across

26
00:00:58,869 --> 00:00:58,239
the sky that slowly fades as night sets

27
00:01:04,869 --> 00:00:58,879
in

28
00:01:05,509 --> 00:01:04,879
above it the rosy hued band is known as

29
00:01:08,469 --> 00:01:05,519
the belt

30
00:01:10,710 --> 00:01:08,479
of venus we observe this site for a

31
00:01:12,230 --> 00:01:10,720
short time after sunset when the sun is

32
00:01:13,830 --> 00:01:12,240
just below the horizon

33
00:01:15,270 --> 00:01:13,840
but some of its light rays are still

34
00:01:16,630 --> 00:01:15,280
making their way through the atmosphere

35
00:01:18,630 --> 00:01:16,640
before nightfall

36
00:01:20,469 --> 00:01:18,640
the redder or longer wavelengths of

37
00:01:21,990 --> 00:01:20,479
sunlight are able to travel the longest

38
00:01:24,230 --> 00:01:22,000

distance through the atmosphere

39
00:01:26,070 --> 00:01:24,240
and at the point opposite to the sunset

40
00:01:28,469 --> 00:01:26,080
this reddish light is scattered off the

41
00:01:30,710 --> 00:01:28,479
atmosphere and back toward your eyes

42
00:01:33,270 --> 00:01:30,720
the belt of venus is named not for the

43
00:01:34,950 --> 00:01:33,280
planet but for the mythical goddess

44
00:01:38,149 --> 00:01:34,960
together with earth's shadow these

45
00:01:40,469 --> 00:01:38,159
sights form the anti-twilight arch

46
00:01:42,630 --> 00:01:40,479
this arch rises like a curtain on the

47
00:01:44,310 --> 00:01:42,640
night slowly fading as earth's shadow

48
00:01:46,069 --> 00:01:44,320
eventually fills the sky

49
00:01:48,550 --> 00:01:46,079
allowing us to gaze outward into the

50
00:01:50,149 --> 00:01:48,560
stars you can see this sight in morning

51
00:01:52,310 --> 00:01:50,159
twilight as well by looking in the

52
00:01:54,630 --> 00:01:52,320
direction opposite the rising sun

53
00:01:55,670 --> 00:01:54,640
that is toward the west as the sky

54
00:01:57,830 --> 00:01:55,680
begins to lighten

55
00:01:59,429 --> 00:01:57,840
earth's shadow becomes noticeable with

56
00:02:01,190 --> 00:01:59,439
the belt of venus above it

57
00:02:04,789 --> 00:02:01,200
and these bands slowly sink to the

58
00:02:09,190 --> 00:02:07,670
april is a great time to look for leo

59
00:02:12,470 --> 00:02:09,200
that is the constellation

60
00:02:14,309 --> 00:02:12,480
leo leo is the latin word for lion

61
00:02:16,229 --> 00:02:14,319
and this well-known grouping of stars is

62
00:02:19,110 --> 00:02:16,239
named for a super-powered lion

63
00:02:20,790 --> 00:02:19,120

vanquished by the mythical hero hercules

64
00:02:22,630 --> 00:02:20,800
it's a pretty easy constellation to

65
00:02:24,949 --> 00:02:22,640
locate because it sort of looks like a

66
00:02:26,869 --> 00:02:24,959
lion reclining in the sky and has this

67
00:02:29,750 --> 00:02:26,879
recognizable curving shape called the

68
00:02:31,990 --> 00:02:29,760
sickle that represents the lion's head

69
00:02:33,589 --> 00:02:32,000
in april you can find leo high overhead

70
00:02:34,949 --> 00:02:33,599
in the south in the first few hours

71
00:02:36,470 --> 00:02:34,959
after sunset

72
00:02:38,390 --> 00:02:36,480
in addition to the sickle shape of the

73
00:02:41,030 --> 00:02:38,400
lion's head look for the lion's

74
00:02:42,630 --> 00:02:41,040
heart the brilliant bluish-white star

75
00:02:44,229 --> 00:02:42,640
regulus which is one of the brightest

76
00:02:46,229 --> 00:02:44,239
stars in the sky

77
00:02:48,309 --> 00:02:46,239
astronomers think most stars have a

78
00:02:50,630 --> 00:02:48,319
family of planets orbiting them

79
00:02:52,869 --> 00:02:50,640
and these two bright stars in leo named

80
00:02:55,350 --> 00:02:52,879
algiba which is actually a double star

81
00:02:57,110 --> 00:02:55,360
and raceless each have a confirmed

82
00:02:58,149 --> 00:02:57,120
planet larger than jupiter orbiting

83
00:03:00,149 --> 00:02:58,159
around them

84
00:03:02,149 --> 00:03:00,159
so step out after dark in april to look

85
00:03:02,630 --> 00:03:02,159
for leo with its sickle-shaped lion's

86
00:03:05,750 --> 00:03:02,640
mane

87
00:03:07,270 --> 00:03:05,760
and blazing bluish heart

88
00:03:09,750 --> 00:03:07,280

here are the phases of the moon for

89
00:03:13,190 --> 00:03:11,350
you can catch up on all of nasa's

90
00:03:15,270 --> 00:03:13,200
missions to explore the solar system and

91
00:03:16,869 --> 00:03:15,280
beyond at nasa.gov

92
00:03:18,949 --> 00:03:16,879
i'm preston dykes from nasa's jet