



1
00:00:04,309 --> 00:00:02,629

[Music]

2
00:00:07,749 --> 00:00:04,319

what's up for july

3
00:00:09,509 --> 00:00:07,759

the evening star beckons and in search

4
00:00:12,310 --> 00:00:09,519

of the milky way

5
00:00:14,629 --> 00:00:12,320

sunsets in july come with an added bonus

6
00:00:16,470 --> 00:00:14,639

a brilliant gem low in the western sky

7
00:00:17,990 --> 00:00:16,480

calling to us to come and explore its

8
00:00:20,870 --> 00:00:18,000

many mysteries

9
00:00:22,310 --> 00:00:20,880

this is the planet venus it's our cosmic

10
00:00:24,310 --> 00:00:22,320

next door neighbor that is

11
00:00:25,750 --> 00:00:24,320

the planet with the closest orbit to the

12
00:00:27,750 --> 00:00:25,760

orbit of earth

13
00:00:29,589 --> 00:00:27,760

it's often thought of as earth's sister

14

00:00:29,990 --> 00:00:29,599

planet given that it's also a rocky

15

00:00:32,709 --> 00:00:30,000

world

16

00:00:34,630 --> 00:00:32,719

of the same size though venus developed

17

00:00:36,549 --> 00:00:34,640

into a hellishly hot world

18

00:00:38,150 --> 00:00:36,559

where earth became the cool blue planet

19

00:00:39,830 --> 00:00:38,160

we know and love

20

00:00:42,229 --> 00:00:39,840

venus is sometimes referred to as the

21

00:00:43,750 --> 00:00:42,239

morning star or the evening star

22

00:00:45,510 --> 00:00:43,760

depending on whether it's visible around

23

00:00:47,190 --> 00:00:45,520

sunrise or sunset

24

00:00:49,190 --> 00:00:47,200

this month it's the latter as you'll

25

00:00:50,869 --> 00:00:49,200

find venus appearing low in the west in

26

00:00:53,830 --> 00:00:50,879

the half hour after sunset

27

00:00:55,910 --> 00:00:53,840

together with a faint planet mars in

28

00:00:57,430 --> 00:00:55,920

fact you can watch each evening as venus

29

00:00:59,430 --> 00:00:57,440

and mars get closer

30

00:01:01,670 --> 00:00:59,440

culminating with a close conjunction on

31

00:01:02,709 --> 00:01:01,680

july 12th when they'll be only a fingers

32

00:01:04,630 --> 00:01:02,719

width apart

33

00:01:06,630 --> 00:01:04,640

look for them together with a slim

34

00:01:09,590 --> 00:01:06,640

crescent moon that's only 10

35

00:01:11,270 --> 00:01:09,600

illuminated in june nasa announced that

36

00:01:13,830 --> 00:01:11,280

two new space missions would be heading

37

00:01:15,830 --> 00:01:13,840

to venus beginning later in the decade

38

00:01:17,749 --> 00:01:15,840

veritas and davinci plus will

39

00:01:18,630 --> 00:01:17,759

investigate the planet's surface and

40

00:01:21,109 --> 00:01:18,640

atmosphere

41

00:01:21,910 --> 00:01:21,119

returning incredible images maps and

42

00:01:23,910 --> 00:01:21,920

other data

43

00:01:25,910 --> 00:01:23,920

likely rewriting our understanding of

44

00:01:26,950 --> 00:01:25,920

how earth's sister planet became so

45

00:01:28,550 --> 00:01:26,960

inhospitable

46

00:01:30,870 --> 00:01:28,560

along with how it might still be active

47

00:01:31,749 --> 00:01:30,880

today they'll be joined by the european

48

00:01:33,429 --> 00:01:31,759

spacecraft

49

00:01:35,270 --> 00:01:33,439

envision for what's sure to be an

50

00:01:37,510 --> 00:01:35,280

exciting new chapter in solar system

51

00:01:39,670 --> 00:01:37,520

exploration

52

00:01:41,590 --> 00:01:39,680

july is one of the best times of year to

53

00:01:43,429 --> 00:01:41,600

enjoy the magical sight that is the

54

00:01:45,910 --> 00:01:43,439

milky way

55

00:01:47,030 --> 00:01:45,920

this is our view of our spiral galaxy

56

00:01:50,149 --> 00:01:47,040

scene edge on

57

00:01:51,749 --> 00:01:50,159

from within now some part of the milky

58

00:01:53,910 --> 00:01:51,759

way is visible in the night sky

59

00:01:55,190 --> 00:01:53,920

any time of year but the galaxy's bright

60

00:01:57,990 --> 00:01:55,200

complex core

61

00:01:59,830 --> 00:01:58,000

is only observable during certain months

62

00:02:01,429 --> 00:01:59,840

earlier in the season you have to wait

63

00:02:03,670 --> 00:02:01,439

until the wee hours of the morning for

64

00:02:05,830 --> 00:02:03,680

the core to rise in the sky

65

00:02:07,510 --> 00:02:05,840

but in june and july the core has

66

00:02:08,550 --> 00:02:07,520

already risen by the time it's fully

67

00:02:10,309 --> 00:02:08,560

dark and can be seen

68

00:02:11,670 --> 00:02:10,319

fairly well until around 2 am when it

69

00:02:14,070 --> 00:02:11,680

starts to set

70

00:02:15,350 --> 00:02:14,080

now the milky way is faint and to see it

71

00:02:16,790 --> 00:02:15,360

you'll need to find your way out to

72

00:02:19,030 --> 00:02:16,800

fairly dark skies

73

00:02:20,790 --> 00:02:19,040

but as long as you're below about 55

74

00:02:22,150 --> 00:02:20,800

degrees north latitude you should be

75

00:02:24,390 --> 00:02:22,160

able to observe the milky way

76

00:02:26,309 --> 00:02:24,400

core southern hemisphere observers have

77

00:02:28,070 --> 00:02:26,319

it even better as the core appears much

78

00:02:30,470 --> 00:02:28,080

higher overhead there

79

00:02:32,630 --> 00:02:30,480

one super important tip is to avoid the

80

00:02:34,949 --> 00:02:32,640

full moon and the days close to it

81

00:02:36,710 --> 00:02:34,959

since a bright moon overwhelms the faint

82

00:02:38,630 --> 00:02:36,720

glow of the milky way

83

00:02:40,790 --> 00:02:38,640

the three or four nights around the new

84

00:02:42,229 --> 00:02:40,800

moon are best but the week before and

85

00:02:44,070 --> 00:02:42,239

after is also okay

86

00:02:46,070 --> 00:02:44,080

you just have to note when the moon will

87

00:02:48,470 --> 00:02:46,080

be rising or setting

88

00:02:50,710 --> 00:02:48,480

there are a variety of great apps and

89

00:02:52,550 --> 00:02:50,720

websites to help you find dark skies and

90

00:02:54,790 --> 00:02:52,560

figure out when and where to look

91

00:02:56,309 --> 00:02:54,800

so here's hoping you get out there and

92

00:02:58,550 --> 00:02:56,319

experience one of the most

93

00:03:00,790 --> 00:02:58,560

fantastic sights the night sky has to

94

00:03:04,630 --> 00:03:00,800

offer

95

00:03:06,470 --> 00:03:04,640

here are the phases of the moon for july

96

00:03:08,470 --> 00:03:06,480

you can catch up on all of nasa's

97

00:03:09,110 --> 00:03:08,480

missions to explore the solar system and

98

00:03:12,309 --> 00:03:09,120

beyond

99

00:03:14,309 --> 00:03:12,319

at nasa.gov i'm preston dykes from