1
00:00:04,789 --> 00:00:02,550
[Music]

2
00:00:06,950 --> 00:00:04,799
what's up for august grab your

3
00:00:09,669 --> 00:00:06,960
binoculars for planet viewing the

4
00:00:11,749 --> 00:00:09,679
outlook for the perseids and flying with

5
00:00:13,749 --> 00:00:11,759
cygnus the swan

6
00:00:15,749 --> 00:00:13,759
the morning planet parade we've been

7
00:00:17,830 --> 00:00:15,759
enjoying the past few months comes to an

8
00:00:19,750 --> 00:00:17,840
end in august with venus and saturn

9
00:00:20,950 --> 00:00:19,760
making their exits on opposite sides of

10
00:00:22,950 --> 00:00:20,960
the sky

11
00:00:25,109 --> 00:00:22,960
but that still leaves mars and jupiter

12
00:00:27,109 --> 00:00:25,119
high overhead to enjoy

13
00:00:28,870 --> 00:00:27,119

in fact august begins with a close

14
00:00:31,830 --> 00:00:28,880
conjunction of the red planet and

15
00:00:33,670 --> 00:00:31,840
distant ice giant planet uranus

16
00:00:35,670 --> 00:00:33,680
uranus can be difficult to find without

17
00:00:37,270 --> 00:00:35,680
a self-guided telescope but it's an easy

18
00:00:38,389 --> 00:00:37,280
object for binoculars if you know where

19
00:00:40,709 --> 00:00:38,399
to look

20
00:00:43,430 --> 00:00:40,719
and on the first you'll find the tiny

21
00:00:45,750 --> 00:00:43,440
bluish disk of uranus just northwest of

22
00:00:47,190 --> 00:00:45,760
mars in the morning sky they'll easily

23
00:00:48,630 --> 00:00:47,200
fit in the same field of view through

24
00:00:50,470 --> 00:00:48,640
binoculars

25
00:00:52,310 --> 00:00:50,480
moving on to the morning of the 15th

26
00:00:53,750 --> 00:00:52,320
you'll find the moon only a finger's

27
00:00:55,510 --> 00:00:53,760
width from jupiter

28
00:00:57,270 --> 00:00:55,520
like mars and uranus they'll make a

29
00:00:58,950 --> 00:00:57,280
great pairing through binoculars and

30
00:01:01,029 --> 00:00:58,960
you'll also likely catch a glimpse of

31
00:01:03,029 --> 00:01:01,039
jupiter's four largest moons

32
00:01:05,429 --> 00:01:03,039
the moon then works its way eastward to

33
00:01:06,789 --> 00:01:05,439
join mars on august 19th

34
00:01:08,789 --> 00:01:06,799
this is another nice pairing for

35
00:01:11,030 --> 00:01:08,799
binoculars plus you'll find the pair

36
00:01:12,390 --> 00:01:11,040
super close to the pleiades you may even

37
00:01:13,750 --> 00:01:12,400
be able to fit them all into the same

38
00:01:16,230 --> 00:01:13,760

view

39
00:01:18,070 --> 00:01:16,240
moving to the evening sky saturn is

40
00:01:20,310 --> 00:01:18,080
transitioning from a late night and

41
00:01:21,270 --> 00:01:20,320
early morning object to an all night

42
00:01:23,590 --> 00:01:21,280
sight

43
00:01:25,749 --> 00:01:23,600
it's rising as night falls in august

44
00:01:27,990 --> 00:01:25,759
look low in the east around 9 00 pm to

45
00:01:28,950 --> 00:01:28,000
find it as a steady yellowish point of

46
00:01:30,950 --> 00:01:28,960
light

47
00:01:32,469 --> 00:01:30,960
you'll find that the ring planet rises a

48
00:01:33,590 --> 00:01:32,479
bit earlier each night over the course

49
00:01:35,350 --> 00:01:33,600
of the month

50
00:01:37,270 --> 00:01:35,360
saturn's at opposition this month

51
00:01:39,190 --> 00:01:37,280
meaning it's directly on the opposite

52
00:01:40,550 --> 00:01:39,200
side of earth from the sun

53
00:01:42,389 --> 00:01:40,560
it's around this time when the ringed

54
00:01:43,510 --> 00:01:42,399
planet appears its biggest and brightest

55
00:01:44,950 --> 00:01:43,520
for the year

56
00:01:47,429 --> 00:01:44,960
by the end of the month you'll start to

57
00:01:48,789 --> 00:01:47,439
notice jupiter rising around 9 pm to

58
00:01:50,310 --> 00:01:48,799
join saturn

59
00:01:52,469 --> 00:01:50,320
this means jupiter will be pulling

60
00:01:54,310 --> 00:01:52,479
double duty as an early evening object

61
00:01:57,510 --> 00:01:54,320
appearing in the eastern sky and an

62
00:01:59,749 --> 00:01:57,520
early morning one appearing in the west

63
00:02:02,069 --> 00:01:59,759

the perseid meteors are an annual event

64
00:02:04,069 --> 00:02:02,079
many of us skywatchers look forward to

65
00:02:05,990 --> 00:02:04,079
as they often produce lots of shooting

66
00:02:07,670 --> 00:02:06,000
stars for us to enjoy

67
00:02:09,830 --> 00:02:07,680
unfortunately this year all but the

68
00:02:11,670 --> 00:02:09,840
brightest perseids will be washed out by

69
00:02:12,869 --> 00:02:11,680
a full moon on the peak night of august

70
00:02:14,790 --> 00:02:12,879
12th

71
00:02:16,229 --> 00:02:14,800
so this is probably not the year to make

72
00:02:18,550 --> 00:02:16,239
a special trip in order to see the

73
00:02:20,309 --> 00:02:18,560
perseids but if you find yourself

74
00:02:22,150 --> 00:02:20,319
outside between midnight and dawn on

75
00:02:24,309 --> 00:02:22,160
august 13th don't forget to look up

76
00:02:25,830 --> 00:02:24,319
anyway because you never know you might

77
00:02:27,350 --> 00:02:25,840
just catch one of the bright perseid

78
00:02:28,390 --> 00:02:27,360
meteors that defies the glare of the

79
00:02:30,309 --> 00:02:28,400
moon

80
00:02:32,390 --> 00:02:30,319
and don't forget the occasional early

81
00:02:35,270 --> 00:02:32,400
perseid can streak across the sky as

82
00:02:37,910 --> 00:02:35,280
much as a week beforehand

83
00:02:40,630 --> 00:02:37,920
you'll find the constellation cygnus the

84
00:02:42,390 --> 00:02:40,640
swan flying high in the eastern sky

85
00:02:45,030 --> 00:02:42,400
after dark in august

86
00:02:47,190 --> 00:02:45,040
cygnus has an overall shape like a t or

87
00:02:49,589 --> 00:02:47,200
cross and contains a star pattern

88
00:02:51,990 --> 00:02:49,599

sometimes called the northern cross

89
00:02:54,869 --> 00:02:52,000
cygnus is anchored by its brightest star

90
00:02:56,630 --> 00:02:54,879
deneb which represents the swan's tail

91
00:02:58,550 --> 00:02:56,640
deneb is the northernmost of the three

92
00:03:01,030 --> 00:02:58,560
stars in the summer triangle and it's

93
00:03:02,949 --> 00:03:01,040
visible even in bright city skies

94
00:03:05,030 --> 00:03:02,959
on the other end of cygnus from deneb is

95
00:03:06,949 --> 00:03:05,040
double star alberio which is a

96
00:03:09,030 --> 00:03:06,959
stargazing favorite as it shows

97
00:03:11,030 --> 00:03:09,040
beautiful blue and gold colors even

98
00:03:13,190 --> 00:03:11,040
through the most modest telescope

99
00:03:15,030 --> 00:03:13,200
now cygnus lies right along the plane of

100
00:03:17,589 --> 00:03:15,040
the milky way so it's dense with

101
00:03:19,350 --> 00:03:17,599
glittering stars and dark dust clouds

102
00:03:21,030 --> 00:03:19,360
with lots of interest for telescope

103
00:03:23,750 --> 00:03:21,040
observers and astrophotographers to

104
00:03:25,509 --> 00:03:23,760
enjoy including the north america nebula

105
00:03:27,110 --> 00:03:25,519
the veil nebula and the blinking

106
00:03:29,430 --> 00:03:27,120
planetary nebula

107
00:03:32,390 --> 00:03:29,440
it also includes the open star clusters

108
00:03:33,910 --> 00:03:32,400
m29 and m39 which are visible with

109
00:03:35,750 --> 00:03:33,920
binoculars

110
00:03:37,830 --> 00:03:35,760
however you're observing the sky where

111
00:03:40,390 --> 00:03:37,840
you live august is a great time to

112
00:03:43,030 --> 00:03:40,400
discover the constellation cygnus the

113
00:03:46,070 --> 00:03:43,040

graceful swan soaring across the dusty

114
00:03:47,509 --> 00:03:46,080
lanes of the milky way

115
00:03:50,630 --> 00:03:47,519
here are the phases of the moon for

116
00:03:54,470 --> 00:03:52,390
stay up to date with all of nasa's

117
00:03:57,190 --> 00:03:54,480
missions to explore the solar system and

118
00:03:58,710 --> 00:03:57,200
beyond at nasa.gov

119
00:04:00,630 --> 00:03:58,720
i'm preston dykes from nasa's jet

120
00:04:02,230 --> 00:04:00,640
propulsion laboratory and that's what's