# TONIGHT'S SKY

## August 2017

1
00:00:07,160 --> 00:00:10,680
Your guide to constellations, deep-sky objects,

2
00:00:10,680 --> 00:00:15,240
planets, and events,

3
00:00:15,240 --> 00:00:23,940
Tonight's Sky, highlights of the August Sky

4
00:00:36,420 --> 00:00:40,860
Soon after sunset, look to the west to find Jupiter,

5
00:00:40,860 --> 00:00:49,600
king of planets.

6
00:00:49,600 --> 00:00:52,880
Use a telescope to glimpse its cloud bands

7
00:00:52,880 --> 00:00:59,500
and some of its moons.

8
00:01:02,600 --> 00:01:05,040
Saturn spends these August evenings

9
00:01:05,040 --> 00:01:11,400
perched in the southern sky.

10
00:01:18,900 --> 00:01:26,420
Catch sight of its famous rings through a telescope.

11
00:01:36,700 --> 00:01:39,180
Stargazing on a hot August night

12
00:01:39,180 --> 00:01:46,540
reveals a multitude of wonders.

13
00:01:46,540 --> 00:01:52,120

Lyra, the Small Harp, lies high in the late evening sky.

14
00:01:52,120 --> 00:01:55,120
Its main star is the great Vega,

15
00:01:55,120 --> 00:01:57,840
one of the brightest in the sky.

16
00:01:57,840 --> 00:02:01,520
Look for Lyra by locating Vega and then

17
00:02:01,520 --> 00:02:04,460
the parallelogram of stars nearby.

18
00:02:04,460 --> 00:02:08,000
Epsilon Lyrae, the bright star near Vega,

19
00:02:08,000 --> 00:02:12,060
is actually a wonderful quadruple-star system,

20
00:02:12,060 --> 00:02:18,860
known as the Double-Double.

21
00:02:18,860 --> 00:02:21,120
In the parallelogram of Lyra

22
00:02:21,120 --> 00:02:24,300
lies the dramatic Ring Nebula.

23
00:02:24,300 --> 00:02:27,820
It is an expanding shell of glowing gas

24
00:02:27,820 --> 00:02:34,860
expelled by the dying star at its center.

25
00:02:41,780 --> 00:02:45,640
The great constellation Cygnus, the Swan,

26
00:02:45,640 --> 00:02:48,420
flies high through the August night.

27
00:02:48,420 --> 00:02:51,520
Using bright Vega as your guide star,

28
00:02:51,520 --> 00:02:54,620
look for the cross just to the east.

29
00:02:54,620 --> 00:02:59,400
Cygnus is also known as the Northern Cross.

30
00:02:59,400 --> 00:03:02,380
Albireo, at the head of the Swan,

31
00:03:02,380 --> 00:03:06,040
is a showpiece for small telescopes.

32
00:03:06,040 --> 00:03:09,740
This spectacular pair of stars features contrasting

33
00:03:09,740 --> 00:03:14,160
colors of sapphire and golden topaz.

34
00:03:14,160 --> 00:03:19,140
Deneb, the Swan’s tail, is a supergiant star.

35
00:03:19,140 --> 00:03:21,240
If Deneb replaced the Sun

36
00:03:21,240 --> 00:03:23,680
in the center of our solar system,

37
00:03:23,680 --> 00:03:27,260
it would engulf Mercury and Venus.

38
00:03:27,260 --> 00:03:30,700

On a clear night, hazy patches of nebulae

39
00:03:30,700 --> 00:03:33,500
can be seen by casually panning across

40
00:03:33,500 --> 00:03:39,180
the Cygnus area with binoculars.

41
00:03:39,180 --> 00:03:42,520
The most prominent is the North America Nebula,

42
00:03:42,520 --> 00:03:46,620
an area of gas and dust illuminated by the nearby,

43
00:03:46,620 --> 00:03:54,760
brilliant star Deneb.

44
00:03:54,760 --> 00:03:59,260
Cygnus also hosts several clusters of stars.

45
00:03:59,260 --> 00:04:04,820
The easiest to find are M29 and M39.

46
00:04:04,820 --> 00:04:09,920
M29 is found near the center of the Northern Cross.

47
00:04:09,920 --> 00:04:11,960
When viewed in a small telescope,

48
00:04:11,960 --> 00:04:15,620
it resembles a small square.

49
00:04:15,620 --> 00:04:17,480
Best seen in binoculars,

50
00:04:17,480 --> 00:04:22,620
M39 is a loosely bound cluster of about 30 stars,

51
00:04:22,620 --> 00:04:28,080
just to the north of Deneb.

52
00:04:29,740 --> 00:04:33,660
Just south of Cygnus lies the small constellation

53
00:04:33,660 --> 00:04:37,920
Vulpecula, the Little Fox, first charted by

54
00:04:37,940 --> 00:04:46,680
Polish astronomer Johannes Hevelius in the 17th cent.

55
00:04:46,680 --> 00:04:49,720
Vulpecula hosts the Dumbbell Nebula,

56
00:04:49,720 --> 00:04:53,740
which can be seen as a faint smudge in binoculars.

57
00:04:53,740 --> 00:05:01,460
A small telescope reveals its double-lobed shape.

58
00:05:28,060 --> 00:05:23,320
ancient Greeks as the great bird of Zeus.

59
00:05:28,060 --> 00:05:31,460
Altair, the brightest star in Aquila,

60
00:05:31,460 --> 00:05:39,760
is only 16 light-years from Earth.

61
00:05:47,620 --> 00:05:52,120
The bright stars of the summer night sky, Vega, Altair,

62
00:05:52,120 --> 00:05:57,860
and Deneb, make up the Summer Triangle.

63
00:05:57,860 --> 00:06:00,740

Use binoculars to look for the Coathanger,

64
00:06:00,740 --> 00:06:08,180
located halfway between Altair and Albireo.

65
00:06:14,260 --> 00:06:16,920
This remarkable little group of stars

66
00:06:16,920 --> 00:06:25,040
forms a familiar pattern from our point of view.

67
00:06:34,120 --> 00:06:37,320
The appearance of Venus in the east announces that

68
00:06:37,320 --> 00:06:39,320
dawn is approaching.

69
00:06:48,580 --> 00:06:50,740
Before the sky grows bright, catch a

70
00:06:50,740 --> 00:06:58,000
glimpse of Venus through a telescope.

71
00:07:05,280 --> 00:07:08,620
Skywatchers in eastern Europe, Africa,

72
00:07:08,620 --> 00:07:12,560
Asia, and Australia will have the chance to see a

73
00:07:12,580 --> 00:07:16,240
partial lunar eclipse on August 7th and 8th,

74
00:07:16,240 --> 00:07:18,700
depending on their location.

75
00:07:18,700 --> 00:07:22,280
The Moon will darken slightly as it passes through

76
00:07:22,280 --> 00:07:28,140
the edge of Earth’s shadow.

77
00:07:30,840 --> 00:07:34,600
The Perseid meteor shower is an always anticipated

78
00:07:34,600 --> 00:07:41,320
feature of the August night sky.

79
00:07:43,860 --> 00:07:46,700
Look for meteors during the early morning hours

80
00:07:46,700 --> 00:07:53,460
of August 12th and 13th.

81
00:07:53,460 --> 00:07:57,240
Unfortunately, abundant moonlight will likely limit the

82
00:07:57,240 --> 00:08:00,620
show this year, allowing skywatchers to see

83
00:08:00,620 --> 00:08:06,300
only the brightest meteors.

84
00:08:07,660 --> 00:08:12,300
On August 21st, a total solar eclipse will wow

85
00:08:12,300 --> 00:08:15,900
millions of skywatchers across the United States

86
00:08:15,900 --> 00:08:23,060
along a path stretching from Oregon to South Carolina.

87
00:08:23,069 --> 00:08:26,800
A partial solar eclipse will also be visible throughout

88
00:08:26,800 --> 00:08:30,780

the continental U.S., Canada, Mexico,

89
00:08:30,780 --> 00:08:34,800
and Central America.