

1  
00:00:01,899 --> 00:00:06,380  
[Music]

2  
00:00:06,589 --> 00:00:15,179  
your guide to constellations deep-sky

3  
00:00:09,830 --> 00:00:18,149  
objects planets and events tonight's sky

4  
00:00:15,179 --> 00:00:35,469  
highlights of the February sky

5  
00:00:18,149 --> 00:00:38,468  
[Music]

6  
00:00:35,469 --> 00:00:41,469  
the winter night sky filled with

7  
00:00:38,469 --> 00:00:44,730  
brilliant stars presents one of the best

8  
00:00:41,469 --> 00:00:44,730  
celestial views

9  
00:00:50,189 --> 00:00:59,978  
Orion the great hunter of Greek

10  
00:00:53,320 --> 00:01:02,829  
mythology dominates the winter sky this

11  
00:00:59,978 --> 00:01:05,829  
constellation is among the easiest to

12  
00:01:02,829 --> 00:01:11,109  
recognize it is full of young stars

13  
00:01:05,829 --> 00:01:14,189  
dying stars and many nebulae Betelgeuse

14  
00:01:11,109 --> 00:01:18,489  
one of Orion's shoulders is a red

15  
00:01:14,189 --> 00:01:21,310  
supergiant star about 650 times bigger

16  
00:01:18,489 --> 00:01:26,280  
than the Sun it shines with the

17  
00:01:21,310 --> 00:01:26,280  
brightness of tens of thousands of Suns

18  
00:01:26,819 --> 00:01:31,899  
Betelgeuse is near the end of its life

19  
00:01:29,429 --> 00:01:34,478  
with the fuel at the Stars core

20  
00:01:31,899 --> 00:01:37,269  
practically depleted the core has

21  
00:01:34,478 --> 00:01:40,539  
contracted and heated causing the outer

22  
00:01:37,269 --> 00:01:44,399  
gaseous layers of the star to swell

23  
00:01:40,540 --> 00:01:48,219  
[Music]

24  
00:01:44,399 --> 00:01:51,399  
Rigel one of Orion's knees is a triple

25  
00:01:48,219 --> 00:01:55,989  
star system made up of two smaller stars

26  
00:01:51,399 --> 00:01:59,399  
orbiting a blue supergiant Rigel z' blue

27  
00:01:55,989 --> 00:02:02,770  
supergiant star has a short lifespan

28  
00:01:59,399 --> 00:02:05,319  
blue supergiant stars are much hotter

29

00:02:02,769 --> 00:02:12,009  
than our Sun and use up their fuel

30  
00:02:05,319 --> 00:02:14,848  
quickly Orion's belt is easy to spot it

31  
00:02:12,009 --> 00:02:21,310  
is made up of three stars Alnitak

32  
00:02:14,848 --> 00:02:24,189  
Alnilam and Mintaka from the left side

33  
00:02:21,310 --> 00:02:26,128  
of Orion's belt look down to the great

34  
00:02:24,189 --> 00:02:28,959  
Orion Nebula

35  
00:02:26,128 --> 00:02:32,169  
although barely visible to the naked eye

36  
00:02:28,959 --> 00:02:33,920  
it is the brightest diffuse gas cloud in

37  
00:02:32,169 --> 00:02:37,429  
the night sky

38  
00:02:33,919 --> 00:02:39,889  
bula is Latin for cloud a small

39  
00:02:37,430 --> 00:02:42,140  
telescope unveils the details and

40  
00:02:39,889 --> 00:02:47,739  
grandeur of the nebula

41  
00:02:42,139 --> 00:02:47,739  
[Music]

42  
00:02:47,909 --> 00:02:55,120  
embedded inside the Orion Nebula is the

43  
00:02:51,430 --> 00:02:57,819

trapezium a group of hot young stars so

44

00:02:55,120 --> 00:03:00,480

brilliant they cause the surrounding gas

45

00:02:57,819 --> 00:03:00,479

to glow

46

00:03:00,979 --> 00:03:05,319

[Music]

47

00:03:08,250 --> 00:03:11,598

[Music]

48

00:03:16,409 --> 00:03:21,810

Canis Major the great dog is the

49

00:03:19,800 --> 00:03:27,870

faithful companion who follows in

50

00:03:21,810 --> 00:03:30,659

Orion's footsteps Canis Major is

51

00:03:27,870 --> 00:03:35,219

dominated by the most brilliant star in

52

00:03:30,659 --> 00:03:38,430

the night sky Sirius Sirius is actually

53

00:03:35,219 --> 00:03:41,819

a double system containing a bright star

54

00:03:38,430 --> 00:03:46,280

and a much smaller and fainter companion

55

00:03:41,819 --> 00:03:49,049

it is a mere 8.6 light-years away

56

00:03:46,280 --> 00:03:51,900

scanning with binoculars just below

57

00:03:49,050 --> 00:03:56,340

Sirius will reveal a lovely cluster of

58  
00:03:51,900 --> 00:04:01,050  
stars called m41 it contains about 100

59  
00:03:56,340 --> 00:04:04,500  
stars including several red giants stars

60  
00:04:01,050 --> 00:04:09,110  
and clusters like m41 were born together

61  
00:04:04,500 --> 00:04:09,110  
and are all about the same age

62  
00:04:10,259 --> 00:04:17,728  
[Music]

63  
00:04:22,399 --> 00:04:27,699  
jupiter rises shortly after midnight

64  
00:04:25,250 --> 00:04:37,430  
soon followed by mars

65  
00:04:27,699 --> 00:04:37,430  
[Music]

66  
00:04:38,000 --> 00:04:43,850  
a small telescope will reveal the cloud

67  
00:04:41,029 --> 00:04:46,329  
bands of Jupiter and the reddish hue of

68  
00:04:43,850 --> 00:04:46,330  
Mars

69  
00:04:49,459 --> 00:04:53,778  
[Music]

70  
00:04:55,720 --> 00:05:02,560  
On February 15th the moon passes across

71  
00:05:00,560 --> 00:05:06,100  
the upper part of the solar disk

72  
00:05:02,560 --> 00:05:09,290  
producing a partial solar eclipse

73  
00:05:06,100 --> 00:05:11,870  
the eclipse will be visible only from

74  
00:05:09,290 --> 00:05:19,010  
southern South America and parts of

75  
00:05:11,870 --> 00:05:21,759  
Antarctica the night sky is always a

76  
00:05:19,009 --> 00:05:21,759  
celestial showcase

77  
00:05:23,259 --> 00:05:27,319  
explore its wonders from your own

78  
00:05:25,790 --> 00:05:32,329  
backyard

79  
00:05:27,319 --> 00:05:32,329  
[Music]

80  
00:05:38,129 --> 00:05:42,350  
[Music]

81  
00:05:45,629 --> 00:05:47,689  
you