
TONIGHT'S
SKY
February
2018

1
00:00:07,580 --> 00:00:09,560
Your guide to constellations,

2
00:00:09,560 --> 00:00:14,360
deep-sky objects, planets, and events:

3
00:00:14,360 --> 00:00:24,760
Tonight's Sky, highlights of the February sky.

4
00:00:35,700 --> 00:00:39,980
The winter night sky, filled with brilliant stars,

5
00:00:39,980 --> 00:00:47,180
presents one of the best celestial views.

6
00:00:50,580 --> 00:00:54,240
Orion, the Great Hunter of Greek mythology,

7
00:00:54,240 --> 00:00:59,620
dominates the winter sky.

8
00:00:59,620 --> 00:01:04,040
This constellation is among the easiest to recognize.

9
00:01:04,040 --> 00:01:10,340
It is full of young stars, dying stars, and many nebulae.

10
00:01:10,340 --> 00:01:13,420
Betelgeuse, one of Orion’s “shoulders,”

11
00:01:13,420 --> 00:01:15,880
is a red supergiant star about

12
00:01:15,880 --> 00:01:20,140
650 times bigger than the Sun.

13
00:01:20,140 --> 00:01:23,180

It shines with the brightness of tens of

14
00:01:23,180 --> 00:01:27,120
thousands of Suns.

15
00:01:27,120 --> 00:01:30,140
Betelgeuse is near the end of its life.

16
00:01:30,140 --> 00:01:33,600
With the fuel at the star’s core practically depleted,

17
00:01:33,600 --> 00:01:36,500
the core has contracted and heated,

18
00:01:36,500 --> 00:01:44,560
causing the outer gaseous layers of the star to swell.

19
00:01:44,560 --> 00:01:49,420
Rigel, one of Orion’s “knees,” is a triple-star system

20
00:01:49,420 --> 00:01:51,740
made up of two smaller stars

21
00:01:51,740 --> 00:01:54,760
orbiting a blue supergiant.

22
00:01:54,760 --> 00:01:59,980
Rigel’s blue supergiant star has a short lifespan.

23
00:01:59,980 --> 00:02:04,240
Blue supergiant stars are much hotter than our Sun

24
00:02:04,240 --> 00:02:08,240
and use up their fuel quickly.

25
00:02:08,240 --> 00:02:12,280
Orion’s Belt is easy to spot.

26
00:02:12,280 --> 00:02:17,440
It is made up of three stars, Alnitak, Alnilam,

27
00:02:17,440 --> 00:02:20,360
and Mintaka.

28
00:02:20,360 --> 00:02:22,680
From the left side of Orion’s Belt,

29
00:02:22,680 --> 00:02:26,600
look down to the Great Orion Nebula.

30
00:02:26,600 --> 00:02:29,460
Although barely visible to the naked eye,

31
00:02:29,460 --> 00:02:33,480
it is the brightest diffuse gas cloud in the night sky.

32
00:02:33,480 --> 00:02:36,980
(“Nebula” is Latin for “cloud.”)

33
00:02:36,980 --> 00:02:40,080
A small telescope unveils the details and

34
00:02:40,080 --> 00:02:48,160
grandeur of the nebula.

35
00:02:48,160 --> 00:02:52,480
Embedded inside the Orion Nebula is the Trapezium,

36
00:02:52,480 --> 00:02:56,060
a group of hot young stars so brilliant

37
00:02:56,060 --> 00:03:02,800
they cause the surrounding gas to glow.

38
00:03:16,640 --> 00:03:20,960

Canis Major, the Great Dog, is the faithful companion

39
00:03:20,960 --> 00:03:26,800
who follows in Orion’s footsteps.

40
00:03:26,800 --> 00:03:30,560
Canis Major is dominated by the most brilliant star

41
00:03:30,560 --> 00:03:33,900
in the night sky, Sirius.

42
00:03:33,900 --> 00:03:37,560
Sirius is actually a double system, containing a

43
00:03:37,560 --> 00:03:42,480
bright star and a much smaller and fainter companion.

44
00:03:42,480 --> 00:03:46,500
It is a mere 8.6 light-years away.

45
00:03:46,500 --> 00:03:49,940
Scanning with binoculars just below Sirius

46
00:03:49,940 --> 00:03:54,920
will reveal a lovely cluster of stars called M41.

47
00:03:54,920 --> 00:03:57,620
It contains about 100 stars,

48
00:03:57,620 --> 00:04:00,640
including several red giants.

49
00:04:00,640 --> 00:04:05,180
Stars in clusters like M41 were born together

50
00:04:05,180 --> 00:04:14,060
and are all about the same age.

51
00:04:22,740 --> 00:04:25,760
Jupiter rises shortly after midnight,

52
00:04:25,760 --> 00:04:33,880
soon followed by Mars.

53
00:04:38,220 --> 00:04:42,440
A small telescope will reveal the cloud bands of Jupiter,

54
00:04:42,440 --> 00:04:44,440
and the reddish hue of Mars.

55
00:04:57,240 --> 00:05:01,240
On February 15, the Moon passes across the upper

56
00:05:01,240 --> 00:05:06,960
part of the solar disk, producing a partial solar eclipse.

57
00:05:06,960 --> 00:05:10,940
The eclipse will be visible only from southern South America

58
00:05:10,940 --> 00:05:16,860
and parts of Antarctica.