

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

2
00:00:06,740 --> 00:00:15,330
your guide to constellations deep-sky

3
00:00:09,980 --> 00:00:18,609
objects planets and events tonight's sky

4
00:00:15,330 --> 00:00:37,280
highlights of the December sky

5
00:00:18,609 --> 00:00:40,768
[Music]

6
00:00:37,280 --> 00:00:43,140
look for Saturn low in the southwestern

7
00:00:40,768 --> 00:00:53,049
sky at dusk early in the month

8
00:00:43,140 --> 00:00:56,120
[Music]

9
00:00:53,049 --> 00:00:58,640
it's iconic rings are clearly visible

10
00:00:56,119 --> 00:01:01,159
with backyard telescopes in early

11
00:00:58,640 --> 00:01:03,500
December but by the middle of the month

12
00:01:01,159 --> 00:01:04,890
the planet slips into the glare of the

13
00:01:03,500 --> 00:01:10,069
Sun

14
00:01:04,890 --> 00:01:10,069
[Music]

15
00:01:12,540 --> 00:01:19,590
[Music]

16
00:01:16,530 --> 00:01:27,780
Marrs glints red in the southwestern sky

17
00:01:19,590 --> 00:01:31,829
against the stars of Sagittarius modest

18
00:01:27,780 --> 00:01:44,819
telescopes readily reveal its ochre disk

19
00:01:31,829 --> 00:01:44,819
[Music]

20
00:01:45,790 --> 00:01:51,469
two prominent constellations in the

21
00:01:48,620 --> 00:01:55,689
December night sky represent notable

22
00:01:51,469 --> 00:01:55,689
individuals of ancient Greek mythology

23
00:01:58,989 --> 00:02:10,209
the great hero Perseus holds the head of

24
00:02:03,049 --> 00:02:15,020
Medusa the Gorgon located in Perseus is

25
00:02:10,209 --> 00:02:18,020
m34 an open star cluster about 1,400

26
00:02:15,020 --> 00:02:20,840
light-years away from us open star

27
00:02:18,020 --> 00:02:23,450
clusters are groups of young stars that

28
00:02:20,840 --> 00:02:29,689
all formed at the same time within a

29

00:02:23,449 --> 00:02:32,389
large cloud of dust and gas look for it

30
00:02:29,689 --> 00:02:33,990
with the naked eye or with binoculars in

31
00:02:32,389 --> 00:02:52,349
a dark sky

32
00:02:33,990 --> 00:02:55,530
[Music]

33
00:02:52,349 --> 00:02:58,560
Queen Cassiopeia was punished for her

34
00:02:55,530 --> 00:03:00,949
conceit and vanity by being tied to her

35
00:02:58,560 --> 00:03:00,949
throne

36
00:03:00,979 --> 00:03:08,519
[Music]

37
00:03:04,759 --> 00:03:13,229
Cassiopeia z-- M or W shape makes this

38
00:03:08,520 --> 00:03:16,110
constellation easy to identify ADA

39
00:03:13,229 --> 00:03:19,619
Cassiopeia is a wonderful and colorful

40
00:03:16,110 --> 00:03:22,739
double star use binoculars or a small

41
00:03:19,620 --> 00:03:29,700
telescope to discern its gold and blue

42
00:03:22,739 --> 00:03:33,060
hues m103

43
00:03:29,699 --> 00:03:35,969

in Cassiopeia is a fine open star

44

00:03:33,060 --> 00:03:41,370

cluster with a prominent red star near

45

00:03:35,969 --> 00:03:49,590

the center it's fan shape is evident in

46

00:03:41,370 --> 00:03:53,180

binoculars lying between Cassiopeia and

47

00:03:49,590 --> 00:03:56,789

Perseus is the lovely double cluster

48

00:03:53,180 --> 00:04:00,330

this pair of open star clusters is easy

49

00:03:56,789 --> 00:04:03,199

to see with binoculars the double

50

00:04:00,330 --> 00:04:06,569

cluster resembles a handful of diamonds

51

00:04:03,199 --> 00:04:09,169

scattered on black velvet with a ruby in

52

00:04:06,568 --> 00:04:09,169

between

53

00:04:10,259 --> 00:04:17,728

[Music]

54

00:04:24,750 --> 00:04:30,670

look for Venus blazing in the eastern

55

00:04:27,939 --> 00:04:33,399

sky before the chilly December sunrise

56

00:04:30,670 --> 00:04:36,129

in the middle of the month

57

00:04:33,399 --> 00:04:39,370

diminutive mercury joins Venus in the

58
00:04:36,129 --> 00:04:48,430
morning sky popping briefly above the

59
00:04:39,370 --> 00:04:51,189
eastern horizon before the Sun a modest

60
00:04:48,430 --> 00:04:54,220
telescope will show both discs in their

61
00:04:51,189 --> 00:04:56,699
moon like phases as we see only part of

62
00:04:54,220 --> 00:05:08,830
their sunlit sides

63
00:04:56,699 --> 00:05:12,229
[Music]

64
00:05:08,829 --> 00:05:16,069
the mid-december night-sky hosts the

65
00:05:12,230 --> 00:05:19,129
lovely Geminid meteor shower the shower

66
00:05:16,069 --> 00:05:23,569
peaks on the night of December 13th to

67
00:05:19,129 --> 00:05:30,920
14th under a dark sky you could see as

68
00:05:23,569 --> 00:05:35,110
many as 60 colorful meteors per hour the

69
00:05:30,920 --> 00:05:37,430
night sky is always a celestial showcase

70
00:05:35,110 --> 00:05:38,420
explore its wonders from your own

71
00:05:37,430 --> 00:05:57,819
backyard

72

00:05:38,420 --> 00:05:59,879

[Music]

73

00:05:57,819 --> 00:05:59,879

you