

1
00:00:01,899 --> 00:00:09,019
[Music]

2
00:00:05,960 --> 00:00:15,298
your guide to constellations deep-sky

3
00:00:09,019 --> 00:00:19,570
objects planets and events tonight's sky

4
00:00:15,298 --> 00:00:35,090
highlights of the December sky

5
00:00:19,570 --> 00:00:37,490
[Music]

6
00:00:35,090 --> 00:00:40,490
two prominent constellations in the

7
00:00:37,490 --> 00:00:44,590
December night sky represent notable

8
00:00:40,490 --> 00:00:44,590
individuals of ancient Greek mythology

9
00:00:48,840 --> 00:00:57,830
the great hero Perseus holds the head of

10
00:00:52,530 --> 00:01:03,120
Medusa the Gorgon located in Perseus is

11
00:00:57,829 --> 00:01:12,090
m34 an open star cluster about 1,400

12
00:01:03,119 --> 00:01:14,759
light-years away from us open star

13
00:01:12,090 --> 00:01:17,670
clusters are groups of young stars that

14
00:01:14,760 --> 00:01:22,380
all formed at the same time within a

15
00:01:17,670 --> 00:01:25,079
large cloud of dust and gas look for it

16
00:01:22,379 --> 00:01:26,209
with the naked eye or with binoculars in

17
00:01:25,079 --> 00:01:39,378
a dark sky

18
00:01:26,209 --> 00:01:39,378
[Music]

19
00:01:40,959 --> 00:01:47,379
Queen Cassiopeia was punished for her

20
00:01:44,228 --> 00:01:49,799
conceit and vanity by being tied to her

21
00:01:47,379 --> 00:01:49,798
throne

22
00:01:50,370 --> 00:01:57,850
[Music]

23
00:01:54,000 --> 00:02:03,039
Cassiopeia M or W shape makes this

24
00:01:57,849 --> 00:02:06,009
constellation easy to identify ADA

25
00:02:03,040 --> 00:02:09,099
Cassiopeia is a wonderful and colorful

26
00:02:06,009 --> 00:02:12,610
double star used binoculars or a small

27
00:02:09,099 --> 00:02:17,739
telescope to discern its gold and blue

28
00:02:12,610 --> 00:02:21,220
hues m103

29

00:02:17,739 --> 00:02:24,250
in Cassiopeia is a fine open star

30
00:02:21,219 --> 00:02:25,830
cluster with a prominent red star near

31
00:02:24,250 --> 00:02:29,269
the center

32
00:02:25,830 --> 00:02:29,269
[Music]

33
00:02:31,180 --> 00:02:36,540
it's fan shape is evident in binoculars

34
00:02:37,650 --> 00:02:45,129
lying between Cassiopeia and Perseus is

35
00:02:41,560 --> 00:02:48,098
the lovely double cluster this pair of

36
00:02:45,128 --> 00:02:51,938
open star clusters is easy to see with

37
00:02:48,098 --> 00:02:55,238
binoculars the double cluster resembles

38
00:02:51,938 --> 00:03:00,030
a handful of diamonds scattered on black

39
00:02:55,239 --> 00:03:00,030
velvet with a ruby in between

40
00:03:01,009 --> 00:03:05,310
[Music]

41
00:03:08,250 --> 00:03:14,218
[Music]

42
00:03:10,878 --> 00:03:17,009
Mars and Jupiter ascend into the

43
00:03:14,218 --> 00:03:17,479

southeastern sky well before the Sun

44

00:03:17,009 --> 00:03:26,109

appears

45

00:03:17,479 --> 00:03:29,259

[Music]

46

00:03:26,110 --> 00:03:40,840

aim a telescope at the planets to get a

47

00:03:29,259 --> 00:03:43,870

better look at their features late in

48

00:03:40,840 --> 00:03:47,849

the month dim mercury Peaks above the

49

00:03:43,870 --> 00:03:47,849

horizon just before dawn

50

00:03:49,629 --> 00:03:53,879

[Music]

51

00:03:56,580 --> 00:04:02,190

if you have a telescope that's powerful

52

00:03:59,129 --> 00:04:05,900

enough you might be able to identify the

53

00:04:02,189 --> 00:04:05,900

small planets phase

54

00:04:10,259 --> 00:04:19,358

[Music]

55

00:04:16,029 --> 00:04:23,138

the mid-december night-sky hosts the

56

00:04:19,358 --> 00:04:26,829

lovely Geminid meteor shower the shower

57

00:04:23,139 --> 00:04:32,168

peaks on the night of December 13th to

58
00:04:26,829 --> 00:04:36,959
the 14th under a dark sky you could see

59
00:04:32,168 --> 00:04:40,810
as many as 60 colorful meteors per hour

60
00:04:36,959 --> 00:04:42,959
the night sky is always a celestial

61
00:04:40,810 --> 00:04:42,959
showcase

62
00:04:44,040 --> 00:04:48,750
explore its wonders from your own

63
00:04:46,629 --> 00:04:48,750
backyard

64
00:04:49,470 --> 00:04:53,779
[Music]

65
00:04:56,709 --> 00:05:07,889
[Music]

66
00:05:05,829 --> 00:05:07,889
you