1
00:00:05,030 --> 00:00:02,110
[Music]

2
00:00:06,650 --> 00:00:05,040
what's up for December you're evening

3
00:00:09,049 --> 00:00:06,660
Planet highlights including The

4
00:00:10,910 --> 00:00:09,059
Disappearance of Mars and the

5
00:00:13,490 --> 00:00:10,920
constellation Pegasus

6
00:00:16,010 --> 00:00:13,500
the month begins and ends with the moon

7
00:00:18,050 --> 00:00:16,020
visiting the giant planets on December

8
00:00:19,910 --> 00:00:18,060
1st find the moon just a couple of

9
00:00:22,310 --> 00:00:19,920
finger widths apart from Jupiter in the

10
00:00:24,590 --> 00:00:22,320
evening Sky then from the 25th through

11
00:00:26,870 --> 00:00:24,600
the 31st look to the Southwest following

12
00:00:29,330 --> 00:00:26,880
Sunset to see an increasingly full moon

13
00:00:31,970 --> 00:00:29,340

slipped past Saturn and then again past

14
00:00:34,010 --> 00:00:31,980
Jupiter viewers with a clear view to the

15
00:00:36,170 --> 00:00:34,020
Horizon will be able to search for Venus

16
00:00:39,470 --> 00:00:36,180
and Mercury in the fading glow of sunset

17
00:00:41,810 --> 00:00:39,480
just a few degrees above the skyline

18
00:00:43,490 --> 00:00:41,820
December 7th brings one of those magical

19
00:00:46,069 --> 00:00:43,500
moments when the sky changes

20
00:00:48,170 --> 00:00:46,079
dramatically before your very eyes it's

21
00:00:50,810 --> 00:00:48,180
called a lunar occultation as the moon

22
00:00:53,270 --> 00:00:50,820
passes in front of or occults the red

23
00:00:55,430 --> 00:00:53,280
planet Mars the spectacle will be

24
00:00:57,889 --> 00:00:55,440
visible in parts of North America Europe

25
00:01:00,110 --> 00:00:57,899
and Northern Africa viewers in the

26
00:01:03,110 --> 00:01:00,120
Southeast U.S and on the East Coast will

27
00:01:05,270 --> 00:01:03,120
see the moon just graze past Mars

28
00:01:07,370 --> 00:01:05,280
for viewers in the U.S Mars disappears

29
00:01:09,469 --> 00:01:07,380
behind the moon sometime between about 6

30
00:01:11,570 --> 00:01:09,479
30 and 9 pm depending on your location

31
00:01:14,030 --> 00:01:11,580
so check your favorite Sky watching app

32
00:01:15,530 --> 00:01:14,040
to find out the time for your area now

33
00:01:18,050 --> 00:01:15,540
the moon passes in front of planets in

34
00:01:20,330 --> 00:01:18,060
the night sky several times per year in

35
00:01:22,249 --> 00:01:20,340
fact it generally occults Mars itself at

36
00:01:24,289 --> 00:01:22,259
least a couple of times per year but

37
00:01:26,090 --> 00:01:24,299
each occultation is visible from only a

38
00:01:28,070 --> 00:01:26,100

small portion of Earth's surface so it's

39
00:01:30,170 --> 00:01:28,080
not super common for any particular spot

40
00:01:32,030 --> 00:01:30,180
on earth to see them frequently of

41
00:01:33,830 --> 00:01:32,040
course the moon passes in front of stars

42
00:01:36,410 --> 00:01:33,840
all the time if you're watching through

43
00:01:38,330 --> 00:01:36,420
binoculars they just blink right out but

44
00:01:40,789 --> 00:01:38,340
planets are not just points of light

45
00:01:43,130 --> 00:01:40,799
like stars they appear as circular

46
00:01:45,469 --> 00:01:43,140
little discs so planets actually take

47
00:01:48,050 --> 00:01:45,479
several seconds to disappear and later

48
00:01:50,030 --> 00:01:48,060
re-emerge so if you're in the viewing

49
00:01:51,950 --> 00:01:50,040
Zone enjoy this relatively rare

50
00:01:55,310 --> 00:01:51,960
opportunity to watch a bright Planet

51
00:01:57,649 --> 00:01:55,320
being occulted by the moon

52
00:01:59,510 --> 00:01:57,659
looking high in the southwest sky on

53
00:02:01,310 --> 00:01:59,520
December evenings you can find a

54
00:02:03,310 --> 00:02:01,320
constellation named for one of the more

55
00:02:07,190 --> 00:02:03,320
Fantastical beasts of ancient mythology

56
00:02:09,529 --> 00:02:07,200
that's Pegasus the winged horse in Greek

57
00:02:12,229 --> 00:02:09,539
myth Pegasus rode into adventures with

58
00:02:14,570 --> 00:02:12,239
the hero baleraphon and later carried

59
00:02:16,490 --> 00:02:14,580
the Thunderbolts of Zeus himself who

60
00:02:19,369 --> 00:02:16,500
rewarded him by placing him Among the

61
00:02:22,070 --> 00:02:19,379
Stars Pegasus is one of the largest of

62
00:02:23,930 --> 00:02:22,080
the 88 constellations its most prominent

63
00:02:26,630 --> 00:02:23,940

feature and the key to finding it in the

64
00:02:29,809 --> 00:02:26,640
sky is this asterism or pattern of stars

65
00:02:31,670 --> 00:02:29,819
called the Great Square these four stars

66
00:02:33,770 --> 00:02:31,680
of roughly equal brightness form the

67
00:02:35,869 --> 00:02:33,780
central part of the horse's body

68
00:02:38,510 --> 00:02:35,879
this December it's easy to locate

69
00:02:40,070 --> 00:02:38,520
Pegasus thanks to brilliant Jupiter face

70
00:02:42,290 --> 00:02:40,080
Southward to find the giant planet

71
00:02:44,330 --> 00:02:42,300
halfway up the sky with the great Square

72
00:02:46,910 --> 00:02:44,340
beginning about 15 degrees to the north

73
00:02:49,009 --> 00:02:46,920
of it Pegasus is a useful constellation

74
00:02:50,750 --> 00:02:49,019
for stargazers as it's a good starting

75
00:02:52,910 --> 00:02:50,760
place for finding your way to other

76
00:02:54,589 --> 00:02:52,920
features in the night sky the

77
00:02:56,990 --> 00:02:54,599
constellation itself contains a number

78
00:02:59,750 --> 00:02:57,000
of dazzling deep Sky objects including

79
00:03:02,690 --> 00:02:59,760
globular cluster M15 and the Tangled

80
00:03:05,330 --> 00:03:02,700
galaxies of Stefan's Quintet

81
00:03:07,309 --> 00:03:05,340
with this year drawing to a close here's

82
00:03:09,350 --> 00:03:07,319
hoping you seek out the winged stallion

83
00:03:12,710 --> 00:03:09,360
Pegasus as you Ponder what new

84
00:03:14,449 --> 00:03:12,720
adventures await in the next year

85
00:03:16,910 --> 00:03:14,459
here are the phases of the moon for

86
00:03:18,710 --> 00:03:16,920
December

87
00:03:20,390 --> 00:03:18,720
stay up to date with all of NASA's

88
00:03:23,210 --> 00:03:20,400

missions to explore the solar system and

89
00:03:25,190 --> 00:03:23,220
Beyond at nasa.gov

90
00:03:26,930 --> 00:03:25,200
I'm Preston dykes with NASA's jet