



1
00:00:04,980 --> 00:00:01,699

[Music]

2
00:00:07,200 --> 00:00:04,990

what's up for June Jupiter's up all

3
00:00:09,629 --> 00:00:07,210

night while Mercury and Mars decide to

4
00:00:12,959 --> 00:00:09,639

get close and the moon reveals its

5
00:00:14,759 --> 00:00:12,969

tilted orbit Jupiter is at its biggest

6
00:00:17,190 --> 00:00:14,769

and brightest this month rising at dusk

7
00:00:18,720 --> 00:00:17,200

and remaining visible all night the

8
00:00:20,550 --> 00:00:18,730

solar system's largest planet is a

9
00:00:22,560 --> 00:00:20,560

brilliant jewel to the naked eye but it

10
00:00:24,330 --> 00:00:22,570

looks fantastic through binoculars or a

11
00:00:26,400 --> 00:00:24,340

small telescope which will allow you to

12
00:00:28,200 --> 00:00:26,410

spot the four largest moons and maybe

13
00:00:30,330 --> 00:00:28,210

even glimpse a hint of the banded clouds

14

00:00:31,800 --> 00:00:30,340

that encircle the planet and if this

15

00:00:34,260 --> 00:00:31,810

leaves you yearning for a closer look

16

00:00:36,000 --> 00:00:34,270

these gorgeous views from NASA's Juno

17

00:00:38,250 --> 00:00:36,010

spacecraft which is currently orbiting

18

00:00:41,430 --> 00:00:38,260

Jupiter make the planet feel almost

19

00:00:43,680 --> 00:00:41,440

close enough to touch in mid-june Mars

20

00:00:46,380 --> 00:00:43,690

and Mercury appear ultra close together

21

00:00:49,560 --> 00:00:46,390

immediately after sunset for two days on

22

00:00:51,450 --> 00:00:49,570

June 17th and 18th you'll need a pretty

23

00:00:52,920 --> 00:00:51,460

clear view of the western horizon to

24

00:00:54,690 --> 00:00:52,930

catch them as the pair will be only a

25

00:00:56,520 --> 00:00:54,700

few degrees above it on the farther

26

00:00:58,080 --> 00:00:56,530

north you are the lower they'll be but

27

00:01:00,240 --> 00:00:58,090

it should be spectacular if you can

28

00:01:02,970 --> 00:01:00,250

manage it in the middle of the month

29

00:01:05,009 --> 00:01:02,980

from about June 14th to the 19th look

30

00:01:06,690 --> 00:01:05,019

for the moon to form a beautiful line up

31

00:01:08,850 --> 00:01:06,700

in the sky with Jupiter and Saturn that

32

00:01:11,040 --> 00:01:08,860

changes each night as the moon moves in

33

00:01:13,050 --> 00:01:11,050

its orbit around Earth while you're out

34

00:01:14,460 --> 00:01:13,060

marveling at this trio there's a really

35

00:01:16,050 --> 00:01:14,470

neat astronomy observation you can

36

00:01:17,670 --> 00:01:16,060

attempt yourself just by paying

37

00:01:20,130 --> 00:01:17,680

attention to the moon's movement from

38

00:01:22,440 --> 00:01:20,140

night to night okay imagine a line

39

00:01:25,050 --> 00:01:22,450

passing through Jupiter and Saturn like

40

00:01:26,430 --> 00:01:25,060

so this more or less represents the

41

00:01:29,100 --> 00:01:26,440

plane in which earth and the other

42

00:01:30,960 --> 00:01:29,110

planets orbit the Sun think of it as a

43

00:01:33,270 --> 00:01:30,970

big disk and you're looking out to the

44

00:01:34,710 --> 00:01:33,280

edge of the disk from within it look

45

00:01:37,080 --> 00:01:34,720

closely and you can see that the moon

46

00:01:38,640 --> 00:01:37,090

doesn't move along the same line from

47

00:01:40,890 --> 00:01:38,650

night to night it moves along its own

48

00:01:43,170 --> 00:01:40,900

path crossing the Jupiter Saturn line as

49

00:01:45,750 --> 00:01:43,180

it moves between the two giant planets

50

00:01:48,210 --> 00:01:45,760

on the 18th this separate path shows

51
00:01:49,950 --> 00:01:48,220
that the moon's orbit is slightly tilted

52
00:01:53,100 --> 00:01:49,960
with respect to Earth's orbit around the

53
00:01:55,550 --> 00:01:53,110
Sun this tilt in the moon's orbit is why

54
00:01:58,530 --> 00:01:55,560
an eclipse is kind of a special event

55
00:02:01,140 --> 00:01:58,540
eclipses occur when the moon passes into

56
00:02:03,539 --> 00:02:01,150
Earth's shadow or when Earth passes into

57
00:02:05,190 --> 00:02:03,549
the moon's shadow with the moon orbiting

58
00:02:06,810 --> 00:02:05,200
Earth every month you might think there

59
00:02:08,519 --> 00:02:06,820
would be a lunar and solar eclipse every

60
00:02:11,129 --> 00:02:08,529
month as well with the Sun Moon and

61
00:02:12,989 --> 00:02:11,139
Earth forming a nice straight line but

62
00:02:13,590 --> 00:02:12,999
instead it's tilted orbit means the moon

63
00:02:15,870 --> 00:02:13,600

misses

64

00:02:17,730 --> 00:02:15,880

this lineup most months crossing Earth's

65

00:02:19,770 --> 00:02:17,740

orbital plane at the right time for a

66

00:02:22,530 --> 00:02:19,780

lineup with the Sun only a couple of

67

00:02:24,750 --> 00:02:22,540

times a year there's still a lot to

68

00:02:26,460 --> 00:02:24,760

learn about the moon and science is one

69

00:02:29,190 --> 00:02:26,470

of the reasons NASA has plans for both

70

00:02:32,250 --> 00:02:29,200

robots and humans to continue exploring

71

00:02:37,860 --> 00:02:32,260

it into the future here are the phases

72

00:02:39,240 --> 00:02:37,870

of the Moon for June you can catch up on

73

00:02:42,000 --> 00:02:39,250

all of NASA's current and future

74

00:02:43,260 --> 00:02:42,010

missions at nasa.gov I'm Preston dykes