Week before and after January 14

1
00:00:08,270 --> 00:00:05,150
what's up for January Mars the red

2
00:00:10,040 --> 00:00:08,280
planet Mars is at its closest and

3
00:00:12,650 --> 00:00:10,050
brightest for the year this month it

4
00:00:14,720 --> 00:00:12,660
will rise at sunset and set it dawn and

5
00:00:17,180 --> 00:00:14,730
it's a welcome sight after being absent

6
00:00:19,970 --> 00:00:17,190
from our early evening skies for a year

7
00:00:22,400 --> 00:00:19,980
hello and welcome I'm Jane Houston Jones

8
00:00:25,099 --> 00:00:22,410
at NASA's Jet Propulsion Laboratory in

9
00:00:27,230 --> 00:00:25,109
Pasadena California it takes one year

10
00:00:29,779 --> 00:00:27,240
for earth to make one complete orbit of

11
00:00:31,580 --> 00:00:29,789
the Sun Mars is farther from the Sun

12
00:00:33,950 --> 00:00:31,590
than Earth is and it orbits a little

13
00:00:37,250 --> 00:00:33,960

slower Mars goes around the Sun in

14
00:00:38,750 --> 00:00:37,260
little less than two earth years Mars

15
00:00:41,360 --> 00:00:38,760
opposition's occur when the Earth passes

16
00:00:43,280 --> 00:00:41,370
between the Sun and Mars this is also

17
00:00:46,010 --> 00:00:43,290
when Mars is closest to Earth in its

18
00:00:48,500 --> 00:00:46,020
orbit but because Mars has an elliptical

19
00:00:51,740 --> 00:00:48,510
orbit opposition occurs every two years

20
00:00:55,040 --> 00:00:51,750
and two months the next Mars opposition

21
00:00:57,260 --> 00:00:55,050
is on January 29th if you step outside

22
00:00:59,090 --> 00:00:57,270
and look to the east after sunset this

23
00:01:02,150 --> 00:00:59,100
month you'll see a bright orange star

24
00:01:03,619 --> 00:01:02,160
like object rising that's Mars and it's

25
00:01:06,410 --> 00:01:03,629
brighter than anything else in the

26
00:01:08,630 --> 00:01:06,420
eastern sky through a moderate sized

27
00:01:10,609 --> 00:01:08,640
telescope Mars will look sort of peachy

28
00:01:12,820 --> 00:01:10,619
colored and you can make out some of the

29
00:01:15,530 --> 00:01:12,830
darker grey features like syrtis major

30
00:01:17,749 --> 00:01:15,540
the north polar cap is the easiest

31
00:01:20,240 --> 00:01:17,759
feature to see when you look at the

32
00:01:22,490 --> 00:01:20,250
north polar cap in early January and

33
00:01:25,010 --> 00:01:22,500
again on February 18th you'll see the

34
00:01:27,410 --> 00:01:25,020
location of the Phoenix lander it's to

35
00:01:30,109 --> 00:01:27,420
the south of the polar cap on the week

36
00:01:31,910 --> 00:01:30,119
before and after January 14th you'll see

37
00:01:34,460 --> 00:01:31,920
the sight of Mars where the rover spirit

38
00:01:36,410 --> 00:01:34,470

is located and you'll see the location

39
00:01:40,249 --> 00:01:36,420
of opportunity the other rover around

40
00:01:42,380 --> 00:01:40,259
February 3rd the same viewing areas will

41
00:01:45,530 --> 00:01:42,390
rotate around for you to see every 40

42
00:01:48,039 --> 00:01:45,540
days from now until December after that

43
00:01:50,480 --> 00:01:48,049
Mars vanishes in the evening Twilight

44
00:01:52,429 --> 00:01:50,490
even with a telescope you won't be able

45
00:01:54,410 --> 00:01:52,439
to actually see the Rovers or Phoenix

46
00:01:56,179 --> 00:01:54,420
but it's really cool to know they are up

47
00:01:57,899 --> 00:01:56,189
there and that you can see the side of

48
00:01:59,520 --> 00:01:57,909
Mars where they're located

49
00:02:01,740 --> 00:01:59,530
besides the rubbers there are several

50
00:02:04,620 --> 00:02:01,750
spacecraft orbiting Mars and in late

51
00:02:06,420 --> 00:02:04,630
2011 the Mars Science Laboratory will

52
00:02:09,990 --> 00:02:06,430
launch on a mission to determine the

53
00:02:13,350 --> 00:02:10,000
planet's habitability Mars has inspired

54
00:02:15,390 --> 00:02:13,360
humankind for centuries even though it's

55
00:02:17,040 --> 00:02:15,400
going to be visible all year long it

56
00:02:19,410 --> 00:02:17,050
will look biggest and brightest this

57
00:02:21,300 --> 00:02:19,420
month and into February so that's the

58
00:02:23,970 --> 00:02:21,310
best time for you to view the red planet

59
00:02:25,860 --> 00:02:23,980
this year you can easily spot two other

60
00:02:27,990 --> 00:02:25,870
planets in the night sky this month

61
00:02:30,660 --> 00:02:28,000
Jupiter sets in the West just after

62
00:02:32,729 --> 00:02:30,670
sunset by the end of January and Saturn

63
00:02:35,339 --> 00:02:32,739

now rises in the east by late evening

64
00:02:37,380 --> 00:02:35,349
in fact if you stay up until midnight at

65
00:02:39,479 --> 00:02:37,390
month end you can see both Mars and

66
00:02:41,759 --> 00:02:39,489
Saturn with the beautiful constellation

67
00:02:45,300 --> 00:02:41,769
Leo the Lion stretched out between red

68
00:02:50,039 --> 00:02:45,310
Mars and golden Saturn you can learn all

69
00:02:50,850 --> 00:02:50,049
about NASA's missions at WWDC gov that's