

• **Spica**
+0.9 Apparent Magnitude

• **Saturn**
+0.1 Apparent Magnitude



1
00:00:09,830 --> 00:00:07,990
saturn close-up presented by science at

2
00:00:11,910 --> 00:00:09,840
nasa

3
00:00:13,990 --> 00:00:11,920
the solar system is a beautiful place

4
00:00:16,870 --> 00:00:14,000
filled with wonders that nasa space

5
00:00:18,710 --> 00:00:16,880
probes are only beginning to discover

6
00:00:20,310 --> 00:00:18,720
there's a tendency though for people to

7
00:00:23,670 --> 00:00:20,320
become indifferent

8
00:00:26,150 --> 00:00:23,680
every year hubble cassini messenger and

9
00:00:27,830 --> 00:00:26,160
other spacecraft beam back gigabytes of

10
00:00:30,230 --> 00:00:27,840
jaw-dropping images

11
00:00:32,630 --> 00:00:30,240
after a while you just don't have any

12
00:00:35,430 --> 00:00:32,640
more gasps left in you

13
00:00:37,510 --> 00:00:35,440

well maybe just one more

14

00:00:39,830 --> 00:00:37,520

inhale deeply because at the end of

15

00:00:41,030 --> 00:00:39,840

april saturn will put on a breathtaking

16

00:00:43,510 --> 00:00:41,040

display

17

00:00:46,150 --> 00:00:43,520

no space probe is required to see it

18

00:00:48,150 --> 00:00:46,160

just set up a telescope in your backyard

19

00:00:50,470 --> 00:00:48,160

even a small department store scope will

20

00:00:52,470 --> 00:00:50,480

do and point the optics toward the

21

00:00:54,549 --> 00:00:52,480

constellation virgo

22

00:00:56,069 --> 00:00:54,559

saturn is there not far from the bright

23

00:00:58,950 --> 00:00:56,079

star spica

24

00:01:01,189 --> 00:00:58,960

on april 28th saturn makes its closest

25

00:01:04,390 --> 00:01:01,199

approach to earth appearing bigger and

26
00:01:06,070 --> 00:01:04,400
brighter than at any other time in 2013.

27
00:01:08,149 --> 00:01:06,080
astronomers call this event an

28
00:01:10,950 --> 00:01:08,159
opposition because saturn will be

29
00:01:14,310 --> 00:01:10,960
opposite the sun in the skies of earth

30
00:01:17,109 --> 00:01:14,320
the golden planet rises at sunset soars

31
00:01:19,350 --> 00:01:17,119
almost overhead at midnight and stays up

32
00:01:21,109 --> 00:01:19,360
all night long

33
00:01:23,109 --> 00:01:21,119
observers who see saturn for the first

34
00:01:26,390 --> 00:01:23,119
time through the eyepiece of a telescope

35
00:01:29,510 --> 00:01:26,400
often gasp the view is hubble-esque but

36
00:01:31,749 --> 00:01:29,520
the experience is much more personal

37
00:01:33,749 --> 00:01:31,759
you're seeing saturn with your own eyes

38
00:01:36,550 --> 00:01:33,759

a celestial wonder right out of the

39

00:01:38,789 --> 00:01:36,560

pages of an astronomy magazine the sight

40

00:01:42,310 --> 00:01:38,799

of that cloudy sphere suspended in the

41

00:01:43,830 --> 00:01:42,320

middle of crisp thin icy rings is almost

42

00:01:46,069 --> 00:01:43,840

unreal

43

00:01:47,670 --> 00:01:46,079

to the naked eye saturn at opposition is

44

00:01:49,270 --> 00:01:47,680

about twice as bright as a first

45

00:01:52,149 --> 00:01:49,280

magnitude star

46

00:01:54,149 --> 00:01:52,159

this makes it relatively easy to find

47

00:01:56,950 --> 00:01:54,159

novices should start looking on april

48

00:01:58,870 --> 00:01:56,960

25th when the full moon passes saturn

49

00:02:01,270 --> 00:01:58,880

only a few degrees away

50

00:02:03,429 --> 00:02:01,280

for that one night the moon will act as

51
00:02:05,350 --> 00:02:03,439
a beacon guiding observers straight to

52
00:02:07,109 --> 00:02:05,360
the ringed planet

53
00:02:09,990 --> 00:02:07,119
once you know where saturn is you can

54
00:02:12,550 --> 00:02:10,000
find it again on subsequent nights

55
00:02:14,710 --> 00:02:12,560
look again on april 28th that's when

56
00:02:17,510 --> 00:02:14,720
saturn will be closest to earth about

57
00:02:19,830 --> 00:02:17,520
1.3 billion kilometers away

58
00:02:22,070 --> 00:02:19,840
if clouds intervene don't worry there

59
00:02:24,070 --> 00:02:22,080
are many more opportunities to look

60
00:02:27,430 --> 00:02:24,080
saturn will remain a golden jewel in the

61
00:02:29,830 --> 00:02:27,440
midnight sky for weeks to come

62
00:02:32,390 --> 00:02:29,840
meanwhile nasa's cassini spacecraft is

63
00:02:35,030 --> 00:02:32,400

circling saturn exploring the planet and

64

00:02:36,710 --> 00:02:35,040

its environment at point-blank range

65

00:02:39,990 --> 00:02:36,720

since it reached the saturn system in

66

00:02:42,869 --> 00:02:40,000

2004 cassini has found a moon with tiger

67

00:02:44,710 --> 00:02:42,879

stripes spewing geysers of salty water

68

00:02:47,589 --> 00:02:44,720

an electrical storm big enough to

69

00:02:50,470 --> 00:02:47,599

swallow earth methane lakes and rain on

70

00:02:52,390 --> 00:02:50,480

titan braids spokes and other strange

71

00:02:54,470 --> 00:02:52,400

ripples in saturn's rings

72

00:02:56,949 --> 00:02:54,480

a hexagonal cloud system surrounding

73

00:03:00,869 --> 00:02:56,959

saturn's north pole a satellite that

74

00:03:03,830 --> 00:03:00,879

looks like a sponge and so much more

75

00:03:05,910 --> 00:03:03,840

save the indifference for another planet

