

Zodiacal Light

Milky Way

1
00:00:10,220 --> 00:00:07,400
what's up 4 sep tember red star meets

2
00:00:12,740 --> 00:00:10,230
red planet and the zodiacal light points

3
00:00:14,629 --> 00:00:12,750
towards Jupiter hello and welcome I'm

4
00:00:15,919 --> 00:00:14,639
Jane Houston Jones from NASA's Jet

5
00:00:19,220 --> 00:00:15,929
Propulsion Laboratory in Pasadena

6
00:00:21,410 --> 00:00:19,230
California as Mars moves towards its

7
00:00:23,750 --> 00:00:21,420
encounter with comet siding spring next

8
00:00:26,839 --> 00:00:23,760
month the red planet passes several

9
00:00:29,419 --> 00:00:26,849
bright stars on September 12th Mars is

10
00:00:31,429 --> 00:00:29,429
halfway between Saturn and Antares the

11
00:00:34,370 --> 00:00:31,439
brilliant red giant star in the

12
00:00:37,069 --> 00:00:34,380
constellation scorpius compared the red

13
00:00:40,490 --> 00:00:37,079

hues of Mars and antaris with your own

14

00:00:42,709 --> 00:00:40,500

eyes by September 27th the to appear

15

00:00:45,830 --> 00:00:42,719

about three degrees apart low in the

16

00:00:47,779 --> 00:00:45,840

Southwest sky after sunset like last

17

00:00:49,910 --> 00:00:47,789

month the moon skips through the sky

18

00:00:53,060 --> 00:00:49,920

appearing to the lower right of Saturn

19

00:00:55,490 --> 00:00:53,070

on the 27th between Mars and Saturn on

20

00:00:58,099 --> 00:00:55,500

the twenty-eighth and above Mars on the

21

00:01:01,099 --> 00:00:58,109

29th forming a straight line with

22

00:01:04,280 --> 00:01:01,109

Antares meanwhile in the morning sky

23

00:01:06,910 --> 00:01:04,290

Jupiter Rises higher use the moon to

24

00:01:10,160 --> 00:01:06,920

find it on the morning of September 20th

25

00:01:12,560 --> 00:01:10,170

you can also use Jupiter to look for a

26
00:01:15,590 --> 00:01:12,570
huge pyramid of light appearing one to

27
00:01:18,230 --> 00:01:15,600
two hours before sunrise the pyramid

28
00:01:19,999 --> 00:01:18,240
called the zodiacal light is sometimes

29
00:01:23,030 --> 00:01:20,009
confused with the Milky Way and

30
00:01:25,219 --> 00:01:23,040
sometimes called the false dawn it can

31
00:01:28,190 --> 00:01:25,229
even look like faint city lights if

32
00:01:29,929 --> 00:01:28,200
you're driving east before sunrise the

33
00:01:33,080 --> 00:01:29,939
zodiacal light is best seen from

34
00:01:35,539 --> 00:01:33,090
mid-september to early October it's the

35
00:01:37,789 --> 00:01:35,549
reflection of sunlight off cosmic dust

36
00:01:40,100 --> 00:01:37,799
particles the debris from Comet and

37
00:01:42,319 --> 00:01:40,110
asteroid collisions in our solar system

38
00:01:44,929 --> 00:01:42,329

some of these dust particles enter

39

00:01:47,450 --> 00:01:44,939

Earth's atmosphere as sporadic or random

40

00:01:49,940 --> 00:01:47,460

meteors but most of the dust particles

41

00:01:52,760 --> 00:01:49,950

producing the zodiacal light settle into

42

00:01:55,039 --> 00:01:52,770

a lens or pancake shaped tapering cone

43

00:01:57,260 --> 00:01:55,049

of light fattest near the Sun and

44

00:02:00,170 --> 00:01:57,270

extending all the way out to Jupiter's

45

00:02:02,719 --> 00:02:00,180

orbit most of the material is located

46

00:02:05,240 --> 00:02:02,729

near the plane of the solar system the

47

00:02:08,389 --> 00:02:05,250

ecliptic the flat disk were the planets

48

00:02:10,669 --> 00:02:08,399

orbit the zodiacal light is seen along

49

00:02:13,200 --> 00:02:10,679

the narrow pathway of this flat plane

50

00:02:15,690 --> 00:02:13,210

when you look at the eastern horizon

51

00:02:20,190 --> 00:02:15,700

before dawn and autumn the ecliptic is

52

00:02:22,650 --> 00:02:20,200

nearly vertical in the sky you can learn

53

00:02:25,260 --> 00:02:22,660

about how NASA studies interstellar and

54

00:02:29,850 --> 00:02:25,270

solar system dust particles and all of