
NASA HD
Mars Science Laboratory
Spacecraft separating and heading to Mars

1
00:00:07,249 --> 00:00:04,400
what's up for December a mission recap

2
00:00:09,169 --> 00:00:07,259
and lots of planets to view hello and

3
00:00:11,030 --> 00:00:09,179
welcome I'm Jane Houston Jones at NASA's

4
00:00:15,230 --> 00:00:11,040
Jet Propulsion Laboratory in Pasadena

5
00:00:17,029 --> 00:00:15,240
California NASA's Juno spacecraft which

6
00:00:19,010 --> 00:00:17,039
launched in August will arrive at

7
00:00:22,010 --> 00:00:19,020
Jupiter in 2016

8
00:00:24,050 --> 00:00:22,020
Juno will map the giant planets magnetic

9
00:00:27,349 --> 00:00:24,060
field and help us better understand the

10
00:00:29,630 --> 00:00:27,359
strange material scientists think

11
00:00:31,389 --> 00:00:29,640
Jupiter's magnetic field is generated by

12
00:00:34,520 --> 00:00:31,399
an ocean of liquid metallic hydrogen

13
00:00:37,010 --> 00:00:34,530

hidden within the planet metallic

14
00:00:38,900 --> 00:00:37,020
hydrogen is hydrogen gas compressed so

15
00:00:42,110 --> 00:00:38,910
much by gravity that it becomes an

16
00:00:44,150 --> 00:00:42,120
electrically conductive liquid NASA's

17
00:00:46,069 --> 00:00:44,160
twin grail spacecraft launched on a

18
00:00:48,830 --> 00:00:46,079
three-month journey to the moon in

19
00:00:51,529 --> 00:00:48,840
September grey of a will enter lunar

20
00:00:54,290 --> 00:00:51,539
orbit on New Year's Eve and Grail B will

21
00:00:56,360 --> 00:00:54,300
follow the next day then they'll spend

22
00:00:58,700 --> 00:00:56,370
about two months reshaping and merging

23
00:01:00,410 --> 00:00:58,710
their orbits until one spacecraft is

24
00:01:03,500 --> 00:01:00,420
following the other in the same low

25
00:01:07,070 --> 00:01:03,510
altitude near circular near polar orbit

26
00:01:09,080 --> 00:01:07,080
and they begin formation flying NASA's

27
00:01:12,080 --> 00:01:09,090
Dawn mission is using its ion propulsion

28
00:01:14,899 --> 00:01:12,090
system to lower its orbital altitude a

29
00:01:18,550 --> 00:01:14,909
new framing camera image is dominated by

30
00:01:21,649 --> 00:01:18,560
bright raid craters of different sizes

31
00:01:24,469 --> 00:01:21,659
and NASA's Mars Science Laboratory and

32
00:01:26,660 --> 00:01:24,479
its rover named curiosity are on their

33
00:01:29,310 --> 00:01:26,670
way to Mars after a successful launch in

34
00:01:34,030 --> 00:01:31,720
through a small telescope you may be

35
00:01:35,770 --> 00:01:34,040
able to see some markings on Mars but

36
00:01:38,830 --> 00:01:35,780
this year and next just aren't good for

37
00:01:41,800 --> 00:01:38,840
Mars viewing Venus climbs higher in the

38
00:01:44,140 --> 00:01:41,810

southwest sky after sunset Jupiter

39
00:01:47,500 --> 00:01:44,150
continues to shine all night long

40
00:01:49,510 --> 00:01:47,510
while Mars rises in the late evening you

41
00:01:54,460 --> 00:01:49,520
can even catch Saturn a few hours before

42
00:01:57,250 --> 00:01:54,470
dawn and mercury just at dawn there's an

43
00:02:00,010 --> 00:01:57,260
eclipse this month - on December 10th

44
00:02:02,380 --> 00:02:00,020
observers in Asia Australia and on the

45
00:02:05,590 --> 00:02:02,390
Pacific coast of the US will get to see

46
00:02:07,780 --> 00:02:05,600
a total lunar eclipse from the west

47
00:02:11,560 --> 00:02:07,790
coast the Eclipse is visible from 606

48
00:02:15,100 --> 00:02:11,570
until 647 a.m. just before the moon sets

49
00:02:18,370 --> 00:02:15,110
at 7:17 you can learn about the planets

50
00:02:20,970 --> 00:02:18,380
at solarsystem.nasa.gov and you can

51
00:02:24,700 --> 00:02:20,980
learn about all of NASA's missions at