



1
00:00:33,979 --> 00:00:31,009
nestled in the remote valleys of

2
00:00:37,090 --> 00:00:33,989
California's Mojave Desert is a complex

3
00:00:40,490 --> 00:00:37,100
of deep space communications antennas

4
00:00:42,439 --> 00:00:40,500
without these graceful giants NASA would

5
00:00:44,389 --> 00:00:42,449
not be able to command and receive

6
00:00:47,439 --> 00:00:44,399
information from satellites or

7
00:00:50,840 --> 00:00:47,449
investigate distant stars and galaxies

8
00:00:52,939 --> 00:00:50,850
the complex called Goldstone has been

9
00:00:56,750 --> 00:00:52,949
NASA's switchboard to the universe for

10
00:00:59,060 --> 00:00:56,760
over three decades actually it is one of

11
00:01:01,219 --> 00:00:59,070
three stations located at equal

12
00:01:03,679 --> 00:01:01,229
distances around the globe linked

13
00:01:07,100 --> 00:01:03,689

together to provide continuous contact

14

00:01:09,980 --> 00:01:07,110

with spacecraft the largest of all

15

00:01:13,490 --> 00:01:09,990

dishes measuring 70 meters across has

16

00:01:15,980 --> 00:01:13,500

been in service for 25 years it's large

17

00:01:18,109 --> 00:01:15,990

ear help scientists collect data from

18

00:01:21,710 --> 00:01:18,119

missions like Magellan currently mapping

19

00:01:23,660 --> 00:01:21,720

the surface of Venus faint signals from

20

00:01:25,670 --> 00:01:23,670

Magellan Travel millions of miles

21

00:01:28,969 --> 00:01:25,680

through space and a receipt by the

22

00:01:31,310 --> 00:01:28,979

antenna signals that are then amplified

23

00:01:33,440 --> 00:01:31,320

processed and transferred to the

24

00:01:39,980 --> 00:01:33,450

spaceflight operations facility at

25

00:01:42,050 --> 00:01:39,990

NASA's Jet Propulsion Laboratory this is

26
00:01:47,030 --> 00:01:42,060
the clearinghouse for all incoming and

27
00:01:49,100 --> 00:01:47,040
outgoing information ultimately millions

28
00:01:51,890 --> 00:01:49,110
of picture elements are assembled from

29
00:01:54,500 --> 00:01:51,900
spacecraft data and transformed into

30
00:01:59,480 --> 00:01:54,510
unprecedented views of the Venusian

31
00:02:06,120 --> 00:02:02,429
not all of gold stones dishes are

32
00:02:09,120 --> 00:02:06,130
pointed at spacecraft as early as 1962

33
00:02:11,160 --> 00:02:09,130
the 26 meter site used radar signals to

34
00:02:14,370 --> 00:02:11,170
detect surface features on the planet

35
00:02:17,190 --> 00:02:14,380
Venus a high-tech antenna was recently

36
00:02:19,380 --> 00:02:17,200
added to test new hardware including

37
00:02:25,110 --> 00:02:19,390
equipment that will someday help search

38
00:02:26,880 --> 00:02:25,120

for life elsewhere in space Goldstone is

39

00:02:30,509 --> 00:02:26,890

one of the country's oldest and most

40

00:02:34,050 --> 00:02:30,519

valuable resources tracking first began

41

00:02:36,270 --> 00:02:34,060

in 1958 with pioneer 3 & 4 which

42

00:02:38,370 --> 00:02:36,280

measured a second radiation belt around

43

00:02:42,300 --> 00:02:38,380

the earth and helped us chart a course

44

00:02:46,170 --> 00:02:42,310

to the moon antennas tracked the ranger

45

00:02:48,780 --> 00:02:46,180

lunar probes and by 1966 surveyor

46

00:02:53,690 --> 00:02:48,790

spacecraft beam back pictures of the

47

00:03:07,230 --> 00:02:58,620

bring me down to a nap Goldstone and

48

00:03:09,410 --> 00:03:07,240

brothers live TV the first milk tracking

49

00:03:12,000 --> 00:03:09,420

continued as early Mariner spacecraft

50

00:03:14,530 --> 00:03:12,010

visited some of our closest planetary

51

00:03:18,520 --> 00:03:14,540

neighbors

52

00:03:20,380 --> 00:03:18,530

in 1977 a pair of voyagers began a

53

00:03:23,770 --> 00:03:20,390

mission that would send back images of

54

00:03:26,080 --> 00:03:23,780

worlds we had never seen before planets

55

00:03:29,589 --> 00:03:26,090

with complex ring systems and their

56

00:03:32,050 --> 00:03:29,599

tortured icy moons Goldstone still

57

00:03:34,509 --> 00:03:32,060

receives faint signals from the voyagers

58

00:03:39,900 --> 00:03:34,519

as they head toward the unknown reaches