
27

1
00:00:05,349 --> 00:00:03,429
three crew members who will be on board

2
00:00:07,430 --> 00:00:05,359
the international space station for the

3
00:00:09,270 --> 00:00:07,440
final flight of the space shuttle will

4
00:00:12,310 --> 00:00:09,280
also be on orbit to celebrate the

5
00:00:14,470 --> 00:00:12,320
shuttle's 30th birthday and the 50th

6
00:00:15,350 --> 00:00:14,480
anniversary of the first human space

7
00:00:18,070 --> 00:00:15,360
flight

8
00:00:23,189 --> 00:00:18,080
their soyuz spacecraft is named in honor

9
00:00:26,950 --> 00:00:24,470
that

10
00:00:29,589 --> 00:00:26,960
vehicle

11
00:00:31,750 --> 00:00:29,599
will be named after someone

12
00:00:34,549 --> 00:00:31,760
and as soon as we learned

13
00:00:37,350 --> 00:00:34,559

that this will be the case especially

14
00:00:41,430 --> 00:00:37,360
uh yuri gagarin's name will be used to

15
00:00:45,110 --> 00:00:41,440
name sou spacecraft

16
00:00:49,350 --> 00:00:47,990
first flight of euro gagarin just opened

17
00:00:51,110 --> 00:00:49,360
the space

18
00:00:52,389 --> 00:00:51,120
era and

19
00:00:55,270 --> 00:00:52,399
shuttle

20
00:00:57,430 --> 00:00:55,280
flight was also a

21
00:00:58,470 --> 00:00:57,440
significant

22
00:01:00,630 --> 00:00:58,480
events

23
00:01:02,549 --> 00:01:00,640
at that time it's going to be great to

24
00:01:04,869 --> 00:01:02,559
be on board when

25
00:01:06,310 --> 00:01:04,879
basically everybody thinks about the

26
00:01:09,350 --> 00:01:06,320
fact that

27
00:01:12,469 --> 00:01:09,360
50 years ago yuri gagarin made his first

28
00:01:13,990 --> 00:01:12,479
flight and now we think that living and

29
00:01:16,870 --> 00:01:14,000
working in space

30
00:01:18,550 --> 00:01:16,880
is part of everyday life

31
00:01:20,310 --> 00:01:18,560
in 50 years since then we've made some

32
00:01:22,149 --> 00:01:20,320
pretty big steps and we've done some

33
00:01:24,310 --> 00:01:22,159
amazing things and i think we've pretty

34
00:01:26,469 --> 00:01:24,320
much cemented that we're not a you know

35
00:01:29,429 --> 00:01:26,479
one planet species if we choose not to

36
00:01:31,350 --> 00:01:29,439
be uh one planet species anymore

37
00:01:33,830 --> 00:01:31,360
but there are even more incredible

38
00:01:35,429 --> 00:01:33,840

things looking looking there waiting for

39
00:01:37,590 --> 00:01:35,439
us and and i'm

40
00:01:38,550 --> 00:01:37,600
you know it i feel

41
00:01:41,429 --> 00:01:38,560
i feel

42
00:01:44,310 --> 00:01:41,439
good and happy to be part of this and

43
00:01:48,389 --> 00:01:44,320
and it's it's it's i feel satisfied it's

44
00:01:51,429 --> 00:01:50,069
it will have to show

45
00:01:52,830 --> 00:01:51,439
great work

46
00:01:56,789 --> 00:01:52,840
great

47
00:02:00,789 --> 00:01:59,030
show that the time which has elapsed

48
00:02:01,910 --> 00:02:00,799
since the very first flight of yuri

49
00:02:05,270 --> 00:02:01,920
gagarin

50
00:02:06,950 --> 00:02:05,280
and uh alan shepard hasn't gone

51
00:02:10,229 --> 00:02:06,960
in vain but we've learned something in

52
00:02:12,150 --> 00:02:10,239
space to keep learning things this crew

53
00:02:13,430 --> 00:02:12,160
has a full agenda of scientific

54
00:02:15,110 --> 00:02:13,440
experiments

55
00:02:17,350 --> 00:02:15,120
i have a i have a table here that

56
00:02:19,110 --> 00:02:17,360
actually shows the the list of all the

57
00:02:21,110 --> 00:02:19,120
experiments that are going to be planned

58
00:02:24,070 --> 00:02:21,120
for my missions i counted them there are

59
00:02:25,990 --> 00:02:24,080
more than 60 in various discipline you

60
00:02:27,990 --> 00:02:26,000
know human research fluid physics

61
00:02:30,470 --> 00:02:28,000
material science you know radiation

62
00:02:32,949 --> 00:02:30,480
monitor biology education earth

63
00:02:35,830 --> 00:02:32,959

observation technology facility

64
00:02:37,030 --> 00:02:35,840
operation i mean it's a very complex

65
00:02:39,830 --> 00:02:37,040
operation

66
00:02:41,509 --> 00:02:39,840
and as is true with real estate location

67
00:02:43,670 --> 00:02:41,519
is all important

68
00:02:46,390 --> 00:02:43,680
astronauts can do things in space they

69
00:02:48,710 --> 00:02:46,400
can't do on earth including service test

70
00:02:50,470 --> 00:02:48,720
subjects for research on the human body

71
00:02:52,150 --> 00:02:50,480
that could lead to better medical care

72
00:02:55,030 --> 00:02:52,160
for people on earth

73
00:02:57,350 --> 00:02:55,040
by floating around in microgravity we

74
00:03:00,149 --> 00:02:57,360
don't actually put stress on our bones

75
00:03:03,350 --> 00:03:00,159
and we lose bone mass at a very high

76
00:03:05,670 --> 00:03:03,360
rate much higher than your average

77
00:03:08,390 --> 00:03:05,680
70 year old woman with osteoporosis and

78
00:03:09,990 --> 00:03:08,400
that means in just a few months

79
00:03:12,790 --> 00:03:10,000
we can understand

80
00:03:15,670 --> 00:03:12,800
what happens to bones when they start to

81
00:03:17,589 --> 00:03:15,680
quote unquote dissolve and how do they

82
00:03:19,430 --> 00:03:17,599
rebuild themselves and how can we

83
00:03:21,350 --> 00:03:19,440
prevent that from happening

84
00:03:23,869 --> 00:03:21,360
the station's science capability will

85
00:03:26,710 --> 00:03:23,879
get a big boost when shuttle mission

86
00:03:29,910 --> 00:03:26,720
sts-134 delivers the alpha magnetic

87
00:03:31,430 --> 00:03:29,920
spectrometer a fifteen thousand pound

88
00:03:34,070 --> 00:03:31,440

two billion

89
00:03:35,990 --> 00:03:34,080
multinational cosmic particle detector

90
00:03:38,630 --> 00:03:36,000
that will reside on the top of the space

91
00:03:40,070 --> 00:03:38,640
station's truss to look for antimatter

92
00:03:42,470 --> 00:03:40,080
and dark matter

93
00:03:44,869 --> 00:03:42,480
its powerful magnet will attract passing

94
00:03:47,670 --> 00:03:44,879
cosmic particles toward five types of

95
00:03:49,430 --> 00:03:47,680
detectors three hundred thousand data

96
00:03:51,350 --> 00:03:49,440
channels will provide information to

97
00:03:53,509 --> 00:03:51,360
scientists who hope to get a better

98
00:03:54,789 --> 00:03:53,519
understanding of the origins of the

99
00:03:55,750 --> 00:03:54,799
universe

100
00:03:58,309 --> 00:03:55,760
it's

101
00:04:00,309 --> 00:03:58,319
you know many orders of magnitude more

102
00:04:02,149 --> 00:04:00,319
sensitive than anything we've ever you

103
00:04:04,630 --> 00:04:02,159
know put into space to do this so it's

104
00:04:06,789 --> 00:04:04,640
really you know we're the scientists are

105
00:04:08,229 --> 00:04:06,799
very excited we're all very excited that

106
00:04:10,550 --> 00:04:08,239
you know we have an opportunity here to

107
00:04:12,550 --> 00:04:10,560
really make some amazing discoveries

108
00:04:15,670 --> 00:04:12,560
endeavors crew will also deliver spare

109
00:04:17,670 --> 00:04:15,680
parts and conduct four spacewalks a few

110
00:04:19,830 --> 00:04:17,680
weeks later when candrate of nespoli and

111
00:04:21,909 --> 00:04:19,840
coleman depart for earth bharasenka

112
00:04:24,710 --> 00:04:21,919
takes over as commander of expedition

113
00:04:27,350 --> 00:04:24,720

28. the crew will grow with the early

114
00:04:29,909 --> 00:04:27,360
june arrival of a new soyuz with former

115
00:04:32,310 --> 00:04:29,919
station commander sergey volkov veteran

116
00:04:34,629 --> 00:04:32,320
space shuttle astronaut mike fossum and

117
00:04:35,909 --> 00:04:34,639
first-time flyer satoshi furukawa of

118
00:04:37,510 --> 00:04:35,919
japan

119
00:04:39,749 --> 00:04:37,520
that group will greet the crew of

120
00:04:42,230 --> 00:04:39,759
shuttle atlantis when it delivers more

121
00:04:44,950 --> 00:04:42,240
supplies and spare parts and supports a

122
00:04:46,950 --> 00:04:44,960
spacewalk by garen and fossum to move

123
00:04:49,350 --> 00:04:46,960
the cooling system pump module that

124
00:04:51,110 --> 00:04:49,360
failed last year into the payload bay

125
00:04:53,749 --> 00:04:51,120
for return to earth

126
00:04:55,590 --> 00:04:53,759
and then they will wave goodbye as the

127
00:04:56,390 --> 00:04:55,600
last space shuttle to ever visit the

128
00:05:01,749 --> 00:04:56,400
station

129
00:05:08,150 --> 00:05:03,990
perhaps in the future we will have

130
00:05:13,270 --> 00:05:10,629
the shuttle will remain in history as

131
00:05:15,350 --> 00:05:13,280
one of the most successful vehicles in

132
00:05:16,870 --> 00:05:15,360
the history of the cosmonautics

133
00:05:18,550 --> 00:05:16,880
whether it's deploying the hubble space

134
00:05:20,390 --> 00:05:18,560
telescope repairing the hubble space

135
00:05:21,749 --> 00:05:20,400
telescope building the space station all

136
00:05:23,430 --> 00:05:21,759
the satellites that launched all the

137
00:05:25,110 --> 00:05:23,440
satellites that were covered you know

138
00:05:26,790 --> 00:05:25,120

all the other the scientific experiments

139
00:05:29,350 --> 00:05:26,800
that were conducted on board you know i

140
00:05:30,629 --> 00:05:29,360
think it you know i am really proud to

141
00:05:36,469 --> 00:05:30,639
have flown on the space shuttle and to

142
00:05:40,550 --> 00:05:38,710
but i do believe that the future lies

143
00:05:44,710 --> 00:05:40,560
with such systems as the space shuttle

144
00:05:51,110 --> 00:05:47,909
10 years may pass maybe even 20

145
00:05:53,990 --> 00:05:51,120
and our technologies will allow us

146
00:05:56,950 --> 00:05:54,000
to create such spacecraft

147
00:05:58,950 --> 00:05:56,960
in a short amount of time and

148
00:06:01,029 --> 00:05:58,960
much cheaper

149
00:06:02,950 --> 00:06:01,039
during the summer the crew will execute

150
00:06:05,350 --> 00:06:02,960
a spacewalk from the russian segment of

151
00:06:07,350 --> 00:06:05,360
the station continue preparations for

152
00:06:09,909 --> 00:06:07,360
the arrival of a commercial cargo ship

153
00:06:11,990 --> 00:06:09,919
later in the year and work their agenda

154
00:06:14,150 --> 00:06:12,000
of laboratory research

155
00:06:16,469 --> 00:06:14,160
garen plans to spend some of his time on

156
00:06:18,309 --> 00:06:16,479
a global effort to share an astronaut's

157
00:06:20,870 --> 00:06:18,319
perspective on the earth with the people

158
00:06:23,110 --> 00:06:20,880
on the surface to inspire work on

159
00:06:25,110 --> 00:06:23,120
problems we face and to let them know

160
00:06:27,670 --> 00:06:25,120
about the work being done inside

161
00:06:29,670 --> 00:06:27,680
humankind's orbiting laboratory

162
00:06:32,150 --> 00:06:29,680
that effort exists on the internet at

163
00:06:34,070 --> 00:06:32,160

the address fragileoasis.org

164
00:06:36,150 --> 00:06:34,080
the other aspect of the site is to just

165
00:06:38,390 --> 00:06:36,160
allow people to experience this with us

166
00:06:39,749 --> 00:06:38,400
vicariously through our videos through

167
00:06:41,590 --> 00:06:39,759
our pictures through our blogs we've got

168
00:06:43,830 --> 00:06:41,600
a number of astronauts that'll be

169
00:06:46,710 --> 00:06:43,840
blogging on on the site and to be able

170
00:06:48,870 --> 00:06:46,720
to basically have everybody along not as