



1
00:01:16,960 --> 00:01:15,490
good morning Columbia we of course we're

2
00:01:19,150 --> 00:01:16,970
playing the flight of the bumblebee and

3
00:01:22,270 --> 00:01:19,160
we thought it would be appropriate with

4
00:01:26,380 --> 00:01:22,280
all the pollination that Leonid has been

5
00:01:28,420 --> 00:01:26,390
doing over the past 14 days and of

6
00:01:31,060 --> 00:01:28,430
course yesterday when we saw the sprint

7
00:01:33,640 --> 00:01:31,070
free flyer in the payload Bay it

8
00:01:36,610 --> 00:01:33,650
reminded us of a bumblebee buzzing

9
00:01:40,600 --> 00:01:36,620
around above it so we thought that was a

10
00:01:41,710 --> 00:01:40,610
good selection good morning a good

11
00:01:43,780 --> 00:01:41,720
morning mark

12
00:01:47,610 --> 00:01:43,790
thank you very much this very important

13
00:01:50,920 --> 00:01:47,620

day for queue experiment they I will the

14

00:01:55,090 --> 00:01:50,930

finish the Cobra to Ukraine experimental

15

00:01:57,280 --> 00:01:55,100

work Columbia and we think you've done a

16

00:02:01,650 --> 00:01:57,290

great job so far Leonid keep it up one

17

00:02:02,890 --> 00:02:01,660

more day thank you very much Anja to

18

00:02:16,650 --> 00:02:02,900

Columbia

19

00:02:23,320 --> 00:02:20,770

now we are proud of you each one of us

20

00:02:25,990 --> 00:02:23,330

in India is proud of us proud of person

21

00:02:29,170 --> 00:02:26,000

like you who has done such a pioneering

22

00:02:32,320 --> 00:02:29,180

work and particularly the women and

23

00:02:35,260 --> 00:02:32,330

youth of India a greater pride in seeing

24

00:02:44,530 --> 00:02:35,270

what you have done in the space my

25

00:02:47,229 --> 00:02:44,540

hearty congratulations you know when I

26

00:02:50,580 --> 00:02:47,239

think of you I think what a long journey

27

00:02:54,160 --> 00:02:50,590

you have covered from Colonel to space

28

00:02:56,880 --> 00:02:54,170

long distance and therefore when I talk

29

00:02:59,910 --> 00:02:56,890

to you I feel I'm talking to a person

30

00:03:06,850 --> 00:02:59,920

with representing India in the space now

31

00:03:13,910 --> 00:03:09,500

thank you so very much

32

00:03:16,390 --> 00:03:13,920

those are they code words you know

33

00:03:21,080 --> 00:03:16,400

calplan I do not know if you remember

34

00:03:24,050 --> 00:03:21,090

they saying one of our poets was very

35

00:03:27,319 --> 00:03:24,060

well known in the subcontinent Iqbal he

36

00:03:31,009 --> 00:03:27,329

said this seat ROC Agha jaha our behave

37

00:03:43,210 --> 00:03:31,019

their world beyond star and now you have

38

00:03:51,589 --> 00:03:46,550

look at it what you are saying does

39

00:03:56,050 --> 00:03:51,599

because the neutral it's a dome of a

40

00:03:59,119 --> 00:03:56,060

dark sky and stars everywhere the earth

41

00:04:02,990 --> 00:03:59,129

lifetime covered with thunderstorms here

42

00:04:06,199 --> 00:04:03,000

a girl with some small phase of

43

00:04:11,479 --> 00:04:06,209

lightning every once in a while city

44

00:04:15,680 --> 00:04:11,489

lights the clouds it is very much like a

45

00:04:18,560 --> 00:04:15,690

storybook the crew that I'm working with

46

00:04:23,379 --> 00:04:18,570

out here all of us work so well together

47

00:04:27,730 --> 00:04:23,389

and it's such an honor to be able to

48

00:04:31,279 --> 00:04:27,740

this very special mission with us

49

00:04:33,379 --> 00:04:31,289

it was a wonderful feeling that your

50

00:04:36,860 --> 00:04:33,389

journey is expanded the frontiers of

51
00:04:39,920 --> 00:04:36,870
science and technology also at the same

52
00:04:42,560 --> 00:04:39,930
time you are built another new and very

53
00:04:57,110 --> 00:04:42,570
formidable and a strong bridge between

54
00:04:59,089 --> 00:04:57,120
India and America and in our bit Kalpana

55
00:05:01,850 --> 00:04:59,099
how do you feel without weight

56
00:05:05,740 --> 00:05:01,860
weightlessness is it very difficult

57
00:05:14,320 --> 00:05:11,080
as you can tell right now via sweet a

58
00:05:17,200 --> 00:05:14,330
bird I think I just moving all over I

59
00:05:22,150 --> 00:05:17,210
will start just moving things out of my

60
00:05:23,530 --> 00:05:22,160
way with my legs actually it's that very

61
00:05:28,330 --> 00:05:23,540
difficult at all

62
00:05:30,810 --> 00:05:28,340
you get very used to it very fast so to

63
00:05:34,510 --> 00:05:30,820

go from one thing to another

64

00:05:37,030 --> 00:05:34,520

well this end up telling yourself take

65

00:05:39,790 --> 00:05:37,040

it easy don't try to do very fast

66

00:05:43,960 --> 00:05:39,800

because otherwise you are just tumbling

67

00:05:47,050 --> 00:05:43,970

all over so zactly is the way to go

68

00:05:49,440 --> 00:05:47,060

must be very interesting to sit with

69

00:05:51,010 --> 00:05:49,450

colleagues and friends in the same

70

00:05:53,400 --> 00:05:51,020

weightlessness

71

00:06:10,260 --> 00:05:53,410

it is a very interesting experience and

72

00:06:16,180 --> 00:06:13,420

cultures together and it's just a lot of

73

00:06:19,930 --> 00:06:16,190

fun it was fun while we came together

74

00:06:22,840 --> 00:06:19,940

and now it's face to I don't know if

75

00:06:25,600 --> 00:06:22,850

from your satellite you can see some

76

00:06:28,600 --> 00:06:25,610

other Indian satellites also which are

77

00:06:40,330 --> 00:06:28,610

also in the space projecting Indian

78

00:06:43,300 --> 00:06:40,340

television program to every home yes but

79

00:06:45,670 --> 00:06:43,310

you know we are also our scientists and

80

00:06:48,460 --> 00:06:45,680

our technologies are sharing the same

81

00:07:08,310 --> 00:06:48,470

experience of space they have not gone

82

00:07:15,430 --> 00:07:12,969

following news out here and I want to

83

00:07:17,860 --> 00:07:15,440

extract the promise from you that when

84

00:07:18,980 --> 00:07:17,870

you come back to the earth please come

85

00:07:21,020 --> 00:07:18,990

to India

86

00:07:31,970 --> 00:07:21,030

with all your friends in the satellite

87

00:07:34,490 --> 00:07:31,980

and also your the whole family you will

88

00:07:37,280 --> 00:07:34,500

be most welcome guests of the Indian

89

00:07:39,200 --> 00:07:37,290

people and the government they all take

90

00:07:41,450 --> 00:07:39,210

so much pride in you and excited about

91

00:07:43,790 --> 00:07:41,460

you that when you come and meet them

92

00:07:55,640 --> 00:07:43,800

they'll be extremely delighted and you

93

00:07:59,960 --> 00:07:55,650

must come just take a second I'd like to

94

00:08:02,480 --> 00:07:59,970

introduce my crew members to you first

95

00:08:07,040 --> 00:08:02,490

of all I'm going to break the pallet at

96

00:08:09,470 --> 00:08:07,050

word his name is Steve Ricky and Steve

97

00:08:13,310 --> 00:08:09,480

and I tripped together with the class

98

00:08:16,340 --> 00:08:13,320

that I can it thank you very much but

99

00:08:19,190 --> 00:08:16,350

also kindly to convey my invitation to

100

00:08:25,660 --> 00:08:19,200

your fellow travelers but in space with

101

00:08:31,370 --> 00:08:28,670

please and to tell them that there is a

102

00:08:40,640 --> 00:08:31,380

very warm and hearty invitation to all

103

00:08:42,560 --> 00:08:40,650

of you and you know Kalpana the you come

104

00:08:46,010 --> 00:08:42,570

regionally your family came from Colonel

105

00:08:48,950 --> 00:08:46,020

and it was in that area where a famous

106

00:09:00,710 --> 00:08:48,960

poet Kalidas was there wrote that famous

107

00:09:01,340 --> 00:09:00,720

song about swim of this man and you are

108

00:09:10,730 --> 00:09:01,350

dead

109

00:09:18,110 --> 00:09:15,200

and thank you very much once again my

110

00:09:20,780 --> 00:09:18,120

feeling of thanks to you all that you

111

00:09:26,630 --> 00:09:20,790

are performed you have made all of us

112

00:09:29,300 --> 00:09:26,640

proud of you thank you sir thank you

113

00:09:32,690 --> 00:09:29,310

very much thank you for calling us

114

00:09:33,380 --> 00:09:32,700

doctor orbiter if you would just take a

115

00:09:35,630 --> 00:09:33,390

second

116

00:09:39,079 --> 00:09:35,640

the couple of days ago we took the view

117

00:09:42,560 --> 00:09:39,089

of him always from the orbiter and I

118

00:09:44,420 --> 00:09:42,570

would downlink it to you for a minute or

119

00:09:52,699 --> 00:09:44,430

so and we can be talking while that's

120

00:09:55,639 --> 00:09:52,709

happening thank you surprised uh all the

121

00:09:59,540 --> 00:09:55,649

people from Italy we took this view a

122

00:10:02,780 --> 00:09:59,550

few days ago I hope that maybe by chance

123

00:10:05,600 --> 00:10:02,790

and the Koala came we'd be flying over

124

00:10:09,130 --> 00:10:05,610

some regions that folks to us and we

125

00:10:12,800 --> 00:10:09,140

love it but the view of Somalia's is so

126

00:10:19,190 --> 00:10:12,810

magnificent that it really locks to all

127

00:10:25,960 --> 00:10:19,200

of us as you can see on this video thank

128

00:10:31,970 --> 00:10:29,330

Kevin good morning for us think good

129

00:10:34,940 --> 00:10:31,980

afternoon or good evening for you it's

130

00:10:37,390 --> 00:10:34,950

amazing that we are on day seventy six

131

00:10:40,730 --> 00:10:37,400

of our 91 day stay in this chamber and

132

00:10:43,910 --> 00:10:40,740

you're on day 14 or 15 out of one more

133

00:10:46,100 --> 00:10:43,920

day to go and we feel that the end of

134

00:10:48,200 --> 00:10:46,110

this test is right around the corner

135

00:10:50,030 --> 00:10:48,210

we're wondering it's strange to see that

136

00:10:52,370 --> 00:10:50,040

we may have the same feelings on

137

00:10:54,560 --> 00:10:52,380

different duration flights well now to

138

00:10:57,020 --> 00:10:54,570

your right we're just about ready to

139

00:10:59,960 --> 00:10:57,030

finish our mission we only have one day

140

00:11:03,410 --> 00:10:59,970

left but it sure has flown by I hope

141

00:11:05,810 --> 00:11:03,420

yours has done the same if you're doing

142

00:11:07,700 --> 00:11:05,820

some good work and you've done some good

143

00:11:11,630 --> 00:11:07,710

science good research for a good fall

144

00:11:13,910 --> 00:11:11,640

cause things tend to go very quickly I

145

00:11:15,890 --> 00:11:13,920

just want to say hi to yourself and the

146

00:11:18,500 --> 00:11:15,900

Vicki we miss her and all the food that

147

00:11:21,800 --> 00:11:18,510

she supports with and also the John and

148

00:11:25,790 --> 00:11:21,810

Laura and if I could I want to show you

149

00:11:27,890 --> 00:11:25,800

one thing now I was there when you went

150

00:11:30,890 --> 00:11:27,900

into the chamber and we took chatted a

151

00:11:33,680 --> 00:11:30,900

couple of times over email and I you

152

00:11:36,230 --> 00:11:33,690

folks it came up with a possible problem

153

00:11:38,750 --> 00:11:36,240

with iodine in the water and as you know

154

00:11:41,570 --> 00:11:38,760

there was a last-minute addition to our

155

00:11:42,980 --> 00:11:41,580

flight and thanks to your research that

156

00:11:44,870 --> 00:11:42,990

you're doing and then the folks on the

157

00:11:46,340 --> 00:11:44,880

ground find a solution we have that

158

00:12:03,040 --> 00:11:46,350

incorporated right here and let me show

159

00:12:08,890 --> 00:12:06,550

as your filtration system that takes out

160

00:12:12,160 --> 00:12:08,900

our I indict a water we also have the

161

00:12:14,830 --> 00:12:12,170

filter and as you can see it just sucks

162

00:12:17,560 --> 00:12:14,840

in quite nicely between our cabinet on

163

00:12:19,870 --> 00:12:17,570

the Mar and the galley so it really

164

00:12:22,180 --> 00:12:19,880

hasn't been a an inconvenience at all

165

00:12:24,760 --> 00:12:22,190

the water comes out a little bit slower

166

00:12:26,950 --> 00:12:24,770

but hopefully in long-term health

167

00:12:28,660 --> 00:12:26,960

benefits especially on the shuttle and

168

00:12:33,730 --> 00:12:28,670

the International Space Station will all

169

00:12:36,070 --> 00:12:33,740

benefit from it certainly can sympathize

170

00:12:37,510 --> 00:12:36,080

with you on that one Kevin and the hard

171

00:12:39,970 --> 00:12:37,520

way you have in your hand is one that I

172

00:12:42,400 --> 00:12:39,980

had slated for STS 89 but I guess we'll

173

00:12:43,960 --> 00:12:42,410

get another one for Terry for that we'd

174

00:12:45,130 --> 00:12:43,970

like to hand it on to John now I think

175

00:12:50,880 --> 00:12:45,140

he has a couple of other questions for

176
00:12:53,260 --> 00:12:50,890
you morning yeah I'm glad to see that

177
00:12:55,690 --> 00:12:53,270
something that one of our former test

178
00:12:59,170 --> 00:12:55,700
directors worked on work great in the

179
00:13:01,750 --> 00:12:59,180
payload Bay and more was IDI was a

180
00:13:05,410 --> 00:13:01,760
Nigel's test director for his 15 days

181
00:13:07,540 --> 00:13:05,420
with the wheat plants and he was also

182
00:13:09,730 --> 00:13:07,550
one of the key guys working on the

183
00:13:11,230 --> 00:13:09,740
sprint cam I was wondering what your

184
00:13:16,060 --> 00:13:11,240
thoughts were on his performance in the

185
00:13:20,350 --> 00:13:16,070
CVA well we were real happy to get a

186
00:13:23,440 --> 00:13:20,360
second chance for do a spacewalk and to

187
00:13:25,660 --> 00:13:23,450
fly the sprint and Steve did the flying

188
00:13:28,210 --> 00:13:25,670

of a sprint and if you saw any pictures

189

00:13:30,940 --> 00:13:28,220

of it it just handled like a dream it

190

00:13:33,460 --> 00:13:30,950

actually handled handling qualities

191

00:13:36,070 --> 00:13:33,470

better than the simulator and the

192

00:13:38,560 --> 00:13:36,080

virtual reality lab it really has

193

00:13:43,060 --> 00:13:38,570

tremendous potential the video was a

194

00:13:44,740 --> 00:13:43,070

little bit intermittent but we knew that

195

00:13:47,500 --> 00:13:44,750

going into the test because the antennas

196

00:13:49,810 --> 00:13:47,510

aren't optimized at this time but I

197

00:13:51,730 --> 00:13:49,820

think for future shuttle missions and

198

00:13:56,050 --> 00:13:51,740

definitely on the international space

199

00:13:57,490 --> 00:13:56,060

station that technology really has great

200

00:14:01,390 --> 00:13:57,500

potential and this is a homegrown

201

00:14:04,000 --> 00:14:01,400

Johnson Space Center project it was done

202

00:14:07,180 --> 00:14:04,010

a very tight budget and the guys really