



1
00:00:37,040 --> 00:00:34,190
this is our Canadian payload specialists

2
00:00:40,850 --> 00:00:37,050
Roberto a bonder she represents the

3
00:00:47,000 --> 00:00:40,860
Canadian Space Agency and she has seated

4
00:00:49,700 --> 00:00:47,010
next to our off more bald who is our

5
00:00:52,310 --> 00:00:49,710
representative from the European Space

6
00:00:56,270 --> 00:00:52,320
Agency norm thagard is one of our

7
00:00:59,420 --> 00:00:56,280
mission specialists and this is our

8
00:01:01,820 --> 00:00:59,430
commander Ron gravy seated next to

9
00:01:07,910 --> 00:01:01,830
another mission specialist David humors

10
00:01:10,370 --> 00:01:07,920
and our final two members this morning

11
00:01:22,450 --> 00:01:10,380
or a bill Reedy and our pilot Steve

12
00:01:30,190 --> 00:01:25,510
first shown here is our commander Ronald

13
00:01:33,130 --> 00:01:30,200

gravy he will be preparing for his third

14

00:01:35,770 --> 00:01:33,140

flight in space this morning next to

15

00:01:38,560 --> 00:01:35,780

gravy is one of our payload specialists

16

00:01:43,030 --> 00:01:38,570

from the European Space Agency Oh mer

17

00:01:47,680 --> 00:01:43,040

bold he is a citizen of the country of

18

00:01:50,109 --> 00:01:47,690

Germany and he will be making his second

19

00:01:53,020 --> 00:01:50,119

flight into space this morning a mission

20

00:01:54,940 --> 00:01:53,030

specialists norm thagard is preparing to

21

00:01:59,820 --> 00:01:54,950

make his fourth flight into space today

22

00:02:03,100 --> 00:01:59,830

and our Canadian payload specialists

23

00:02:06,520 --> 00:02:03,110

Roberta a bonder she'll be the only

24

00:02:08,440 --> 00:02:06,530

female on board this morning she'll be

25

00:02:10,029 --> 00:02:08,450

making her first trip into space but

26
00:02:11,650 --> 00:02:10,039
this will be the second for a Canadian

27
00:02:15,580 --> 00:02:11,660
payload specialist to fly aboard the

28
00:02:17,680 --> 00:02:15,590
shuttle a fit check of the suits is

29
00:02:19,380 --> 00:02:17,690
important to make sure that the crews

30
00:02:24,210 --> 00:02:19,390
are not only comfortable but that the

31
00:02:28,479 --> 00:02:24,220
seals around the helmets are adequate

32
00:02:33,940 --> 00:02:28,489
and our mission specialist day of Hill

33
00:02:37,690 --> 00:02:33,950
Mertz who was somewhat of a last-minute

34
00:02:39,400 --> 00:02:37,700
addition he is actually not was not

35
00:02:42,300 --> 00:02:39,410
assigned to the original crew he is

36
00:02:44,680 --> 00:02:42,310
replacing the late Sonny Carter who was

37
00:02:48,880 --> 00:02:44,690
killed in an accidental plane crash

38
00:02:50,199 --> 00:02:48,890

about a year ago David helmets will be

39

00:02:56,860 --> 00:02:50,209

making his fourth flight into space

40

00:03:01,720 --> 00:02:56,870

today and our mission specialist bill

41

00:03:10,690 --> 00:03:01,730

reading making his first flight into

42

00:03:17,360 --> 00:03:14,899

this is shuttle launch control and we

43

00:03:18,920 --> 00:03:17,370

have our flight crew our seven-member

44

00:03:22,610 --> 00:03:18,930

crew who are making their way down the

45

00:03:25,819 --> 00:03:22,620

third floor level of the operations and

46

00:03:30,440 --> 00:03:25,829

check-out building making their way to

47

00:03:31,789 --> 00:03:30,450

the elevator standing by for the other

48

00:03:37,220 --> 00:03:31,799

two crew members to come around the

49

00:03:43,940 --> 00:03:37,230

corner so they can all ride down the

50

00:03:47,509 --> 00:03:43,950

elevator together and here they come our

51
00:03:51,319 --> 00:03:47,519
seven-member launch team launch crew led

52
00:03:57,710 --> 00:03:51,329
by commander Ron gravy and pilot Steve

53
00:04:00,589 --> 00:03:57,720
Oswald mission specialist Maggard david

54
00:04:06,710 --> 00:04:00,599
homers and two payload specialists both

55
00:04:08,599 --> 00:04:06,720
maribo and Roberta Bondar this is

56
00:04:31,680 --> 00:04:08,609
shuttle launch control at t-minus one

57
00:04:39,550 --> 00:04:34,480
and we are at t-minus five minutes and

58
00:04:40,960 --> 00:04:39,560
holding yes there you go to see top ed

59
00:04:43,690 --> 00:04:40,970
let's pick up the clock on your mark

60
00:04:45,250 --> 00:04:43,700
place a sword program command wilco and

61
00:04:47,260 --> 00:04:45,260
we will be transferring to orbiter

62
00:04:50,940 --> 00:04:47,270
internal power this time discovery is

63
00:04:54,730 --> 00:04:50,950

now running off its onboard fuel cells

64
00:04:56,980 --> 00:04:54,740
and the gaseous oxygen vent hood and arm

65
00:05:03,130 --> 00:04:56,990
is now slowly being retracted away from

66
00:05:05,470 --> 00:05:03,140
the top of the external tank t-minus 45

67
00:05:11,920 --> 00:05:05,480
seconds coming up on a go for

68
00:05:19,230 --> 00:05:11,930
autosequence start and where they go for

69
00:05:19,240 --> 00:05:24,129
warning

70
00:05:35,619 --> 00:05:33,820
15 12 10 9 8 7 we have a go for main

71
00:05:40,149 --> 00:05:35,629
engine start we have three main engines

72
00:05:42,820 --> 00:05:40,159
up and running three two one zero and

73
00:05:44,529 --> 00:05:42,830
liftoff liftoff of the space shuttle

74
00:05:49,749 --> 00:05:44,539
discovery and the first international

75
00:05:51,999 --> 00:05:49,759
microgravity laboratory Houston is now

76
00:05:55,360 --> 00:05:52,009
controlling discovery Andrew crew are

77
00:06:01,530 --> 00:05:55,370
rolling on course Rama Rajan roll

78
00:06:05,220 --> 00:06:03,630
role maneuvers complete placing

79
00:06:13,260 --> 00:06:05,230
discovery and crew heads down on the

80
00:06:14,910 --> 00:06:13,270
proper heading and gives it 100% engines

81
00:06:17,130 --> 00:06:14,920
throttling back now to seventy percent

82
00:06:18,870 --> 00:06:17,140
to help maintain optimum aerodynamic

83
00:06:22,170 --> 00:06:18,880
addition to the discovery accelerates

84
00:06:30,000 --> 00:06:22,180
through the dense lower altitudes all

85
00:06:31,740 --> 00:06:30,010
systems performing well engine started

86
00:06:33,300 --> 00:06:31,750
down and performing well with good

87
00:06:41,270 --> 00:06:33,310
hydraulics good electrical systems

88
00:06:49,010 --> 00:06:43,280

for engine startling backup three

89

00:06:53,020 --> 00:06:49,020

engines now at 1104 discovery Houston

90

00:07:00,290 --> 00:06:57,020

Carla discovery now traveling at over

91

00:07:02,540 --> 00:07:00,300

1,000 miles per hour altitude 65,000

92

00:07:05,360 --> 00:07:02,550

feet downrange distance 8 nautical miles

93

00:07:08,210 --> 00:07:05,370

all systems performing well time 1

94

00:07:10,400 --> 00:07:08,220

minute 33 seconds next mile students

95

00:07:13,370 --> 00:07:10,410

climb to orbit will be solid rocket

96

00:07:23,180 --> 00:07:13,380

booster burnout and subsequent staging

97

00:07:24,890 --> 00:07:23,190

at about two minutes six seconds and we

98

00:07:26,480 --> 00:07:24,900

have separation discovery now flying

99

00:07:29,210 --> 00:07:26,490

free of the Boosters and under the power

100

00:07:32,659 --> 00:07:29,220

of its own main propulsion system second

101
00:07:34,730 --> 00:07:32,669
stage guidance now in control discovery

102
00:07:37,490 --> 00:07:34,740
now traveling over 2800 miles per hour

103
00:07:40,640 --> 00:07:37,500
altitude 178,000 feet downrange distance

104
00:07:48,710 --> 00:07:40,650
36 nautical miles discovery Houston

105
00:07:50,270 --> 00:07:48,720
performance nominal first stage first

106
00:07:53,000 --> 00:07:50,280
stage performance the main engines and

107
00:07:54,380 --> 00:07:53,010
boosters was good altitude now two

108
00:07:58,909 --> 00:07:54,390
hundred thousand feet downrange distance

109
00:08:13,679 --> 00:07:58,919
47 nautical miles all systems performing

110
00:08:22,659 --> 00:08:18,909
discovery Houston press to Mecco partner

111
00:08:24,489 --> 00:08:22,669
custom echo discovery now has enough

112
00:08:26,019 --> 00:08:24,499
momentum to make a normal insertion to

113
00:08:28,389 --> 00:08:26,029

orbit with only two engines should one

114

00:08:31,059 --> 00:08:28,399

fail three engines continuing to burn a

115

00:08:33,670 --> 00:08:31,069

while at 104 percent all systems

116

00:08:42,749 --> 00:08:33,680

performing well downrange distance now

117

00:08:54,069 --> 00:08:42,759

306 nautical miles discovery Houston

118

00:08:56,530 --> 00:08:54,079

single-engine Zaragoza 104 104 discovery

119

00:08:58,780 --> 00:08:56,540

Houston we see a nominal Miko noms one

120

00:09:44,310 --> 00:08:58,790

required and you're go for the EP photo

121

00:09:50,370 --> 00:09:47,930

this is Mission Control Houston

122

00:09:52,920 --> 00:09:50,380

activities in the activation procedures

123

00:09:56,940 --> 00:09:52,930

with the space lab module continued go

124

00:10:04,620 --> 00:09:56,950

very smoothly the crew it has completed

125

00:10:08,520 --> 00:10:04,630

almost 14 of the 16 step the effect

126
00:10:10,320 --> 00:10:08,530
complete that was effective a lot so far

127
00:10:11,970 --> 00:10:10,330
the activation procedure everything has

128
00:10:14,550 --> 00:10:11,980
gone very smoothly there are no major

129
00:10:16,830 --> 00:10:14,560
problems that are being worked either

130
00:10:24,390 --> 00:10:16,840
with discovery or with the space lab

131
00:10:26,340 --> 00:10:24,400
module itself controllers here in

132
00:10:28,470 --> 00:10:26,350
Houston are in the process of watching

133
00:10:30,930 --> 00:10:28,480
over the shoulder of mission specialist

134
00:11:43,870 --> 00:10:30,940
norm thagard as he activates the

135
00:11:50,050 --> 00:11:47,760
this is base I of operations Huntsville

136
00:11:52,690 --> 00:11:50,060
showing activities which are currently

137
00:11:57,210 --> 00:11:52,700
underway with the bio rack experiment

138
00:12:00,250 --> 00:11:57,220

facility and that facility of course

139

00:12:05,490 --> 00:12:00,260

reports 17 different experiments during

140

00:12:09,280 --> 00:12:05,500

the IML one mission and at the moment

141

00:12:11,710 --> 00:12:09,290

some activity under way on the

142

00:12:21,100 --> 00:12:11,720

experiment known as proto for short a

143

00:12:25,750 --> 00:12:21,110

Danish experiment she said still go

144

00:12:28,210 --> 00:12:25,760

ahead okay Robin write these down let me

145

00:12:45,790 --> 00:12:28,220

give you the time you better be people

146

00:12:59,829 --> 00:12:48,340

author has been at the parents basis

147

00:13:02,110 --> 00:12:59,839

that soon as much good stand by just a

148

00:13:04,120 --> 00:13:02,120

minute Ron let's see what the

149

00:13:11,050 --> 00:13:04,130

investigators want to do we'll be right

150

00:13:16,170 --> 00:13:11,060

back with you ebioscience team from the

151
00:13:19,269 --> 00:13:16,180
european space agency monitoring the

152
00:13:22,930 --> 00:13:19,279
frog egg experiment here in our science

153
00:13:26,860 --> 00:13:22,940
operations area on by iraq there's some

154
00:13:28,990 --> 00:13:26,870
17 experiments 14 of which have been

155
00:16:50,360 --> 00:13:29,000
contributed by the european space agency

156
00:16:55,610 --> 00:16:52,910
this particular experiment series uses

157
00:16:59,450 --> 00:16:55,620
equipment especially designed are

158
00:17:01,880 --> 00:16:59,460
modified for Space Lab look at me look

159
00:17:29,019 --> 00:17:01,890
like the black day prison pretty good on

160
00:17:36,560 --> 00:17:34,119
the principal investigators

161
00:19:14,350 --> 00:17:36,570
co-investigators are watching with

162
00:19:21,320 --> 00:19:16,880
this is baseline mission operations in

163
00:19:26,920 --> 00:19:21,330

huntsville payload specialist both leer

164

00:19:31,670 --> 00:19:26,930

boe and mission specialists Dave humors

165

00:19:34,070 --> 00:19:31,680

have set up the sled experiment it is

166

00:19:36,800 --> 00:19:34,080

one of several space physiology

167

00:20:40,159 --> 00:19:36,810

experiments to be conducted during this

168

00:20:44,940 --> 00:20:42,539

there are three groups of experiments

169

00:20:47,279 --> 00:20:44,950

that make up cpf or critical point

170

00:20:49,860 --> 00:20:47,289

facility the one supplied by the United

171

00:20:56,419 --> 00:20:49,870

States neither by Holland and a third by

172

00:21:02,460 --> 00:20:56,429

France okay so this is sooo exciting

173

00:21:06,060 --> 00:21:02,470

activity 3 at the present time the crew

174

00:21:09,060 --> 00:21:06,070

in the space lab module are setting up

175

00:23:29,539 --> 00:21:09,070

the tri glycine sulfates crystal growth

176
00:23:35,930 --> 00:23:33,830
the gas bridge that holds canisters is

177
00:23:40,549 --> 00:23:35,940
capable of holding 12 canisters at a

178
00:23:42,470 --> 00:23:40,559
time okay we see that bill thank you in

179
00:23:44,840 --> 00:23:42,480
these three tubes on the mid-deck of

180
00:23:47,200 --> 00:23:44,850
discovery each tube is about two inches

181
00:23:49,700 --> 00:23:47,210
on in diameter and 15 inches long

182
00:23:52,789 --> 00:23:49,710
they're filled with different size glass

183
00:23:55,729 --> 00:23:52,799
beads one has beads a quarter millimeter

184
00:23:58,190 --> 00:23:55,739
in diameter in it the other one has

185
00:24:01,369 --> 00:23:58,200
beads one millimeter in diameter in it

186
00:24:04,220 --> 00:24:01,379
and the third one has beads two

187
00:24:06,200 --> 00:24:04,230
millimeters in diameter inside the blue

188
00:24:09,320 --> 00:24:06,210

liquid that is moving through is simply

189

00:24:11,180 --> 00:24:09,330

blue colored water to study the action

190

00:24:13,489 --> 00:24:11,190

of that liquid the capillary action as

191

00:24:56,110 --> 00:24:13,499

it moves through the porous medium of

192

00:25:02,510 --> 00:25:00,320

number two and we're getting a good

193

00:25:05,060 --> 00:25:02,520

extreme close-up view in this case of

194

00:25:10,600 --> 00:25:05,070

the imax 70 millimeter motion picture

195

00:30:56,509 --> 00:25:10,610

camera as pilot Steve Oswald in used to

196

00:31:00,589 --> 00:30:58,879

set conserving consumables that the

197

00:31:06,820 --> 00:31:00,599

folks on the ground are now officially

198

00:31:13,549 --> 00:31:11,060

mission the orbit opportunities

199

00:31:15,919 --> 00:31:13,559

available you help us with this by

200

00:31:18,259 --> 00:31:15,929

powering down a CRT per the execute

201
00:31:20,019 --> 00:31:18,269
package and turning off any other non

202
00:31:22,249 --> 00:31:20,029
necessary equipment that you can find

203
00:31:24,349 --> 00:31:22,259
commander on Granby and pilot Steve

204
00:31:26,269 --> 00:31:24,359
Oswald are in the process of helping

205
00:31:28,969 --> 00:31:26,279
controllers do some troubleshooting with

206
00:31:31,729 --> 00:31:28,979
the waste collection system a little bit

207
00:31:33,440 --> 00:31:31,739
earlier this afternoon controllers

208
00:31:37,039 --> 00:31:33,450
notice that that system was not

209
00:31:39,769 --> 00:31:37,049
depressurizing as it should so they're

210
00:31:44,719 --> 00:31:39,779
watching over the shoulder of commander

211
00:32:09,100 --> 00:31:44,729
gravy and Steve Oswald as they as they

212
00:32:15,680 --> 00:32:12,710
the late captain family L cutter or

213
00:32:20,030 --> 00:32:15,690

Sonny as we all knew him was a member of

214

00:32:23,020 --> 00:32:20,040

our crew until his tragic death the gold

215

00:32:25,490 --> 00:32:23,030

star shining brightly in our crew patch

216

00:32:28,660 --> 00:32:25,500

represents the way that we will always

217

00:32:31,490 --> 00:32:28,670

remember Sonny a radiant bigger

218

00:32:36,650 --> 00:32:31,500

illuminating everyone who met him with

219

00:32:39,490 --> 00:32:36,660

his warped charm and loved his multitude

220

00:32:50,690 --> 00:32:39,500

of balance and comparable joyful life

221

00:32:55,820 --> 00:32:53,180

Sonny shared with us the unique

222

00:32:59,690 --> 00:32:55,830

experience of glimpsing the splendor of

223

00:33:02,480 --> 00:32:59,700

Earth from space and for precious few

224

00:33:05,960 --> 00:33:02,490

days the exhilaration of being liberated

225

00:33:08,060 --> 00:33:05,970

from the bondage of gravity no one ever

226

00:33:11,630 --> 00:33:08,070

returned from a flight with greater

227

00:33:13,790 --> 00:33:11,640

sense of awe and Wonder than Sonny he

228

00:33:16,580 --> 00:33:13,800

was defended that was vital for our

229

00:33:19,190 --> 00:33:16,590

country and for the generations which

230

00:33:23,210 --> 00:33:19,200

will follow us to maintain a man

231

00:33:25,670 --> 00:33:23,220

presence in space and no one ever worked

232

00:33:29,440 --> 00:33:25,680

harder to make the flight a success than

233

00:33:32,210 --> 00:33:29,450

Sonny after he was assigned to IML one

234

00:33:33,890 --> 00:33:32,220

we can only hope that you would have

235

00:33:47,389 --> 00:33:33,900

been proud of the way that we have

236

00:33:55,289 --> 00:33:49,499

thanks for what I has take this moment

237

00:33:57,570 --> 00:33:55,299

to remember Sonny run all of us who knew

238

00:37:06,750 --> 00:33:57,580

Sonny echo your sentiments and thank you

239

00:37:16,680 --> 00:37:08,710

discovery Houston we're with you on

240

00:37:22,630 --> 00:37:16,690

teachers West okay we appreciate that

241

00:37:26,020 --> 00:37:22,640

will give you some forward RCS burn time

242

00:37:28,210 --> 00:37:26,030

dump time of 50 seconds and be advised

243

00:37:30,280 --> 00:37:28,220

the secondary actuator check in

244

00:39:22,790 --> 00:37:30,290

hydraulic fluid thermal conditioning are

245

00:39:28,170 --> 00:39:25,950

this is Mission Control wipe dynamics

246

00:39:30,440 --> 00:39:28,180

officer reports at 90 degrees or halfway

247

00:39:35,160 --> 00:39:30,450

around the hitting alignment cone

248

00:39:39,270 --> 00:39:35,170

discovery is nominal energy moving at

249

00:39:56,210 --> 00:39:39,280

about 2 311 miles per hour about 16,000

250

00:40:02,510 --> 00:40:00,109

discovery mission confirm discovery is

251
00:40:04,880 --> 00:40:02,520
now using information from the microwave

252
00:40:07,040 --> 00:40:04,890
landing system discovery Houston you're

253
00:40:36,880 --> 00:40:07,050
on glide slope on centerline surface

254
00:40:44,890 --> 00:40:42,310
let's do it is 3,400 feet and the

255
00:40:50,350 --> 00:40:44,900
equivalent airspeed is about 3,300 miles

256
00:41:07,920 --> 00:40:50,360
per hour coming around via final coming

257
00:41:07,930 --> 00:41:17,690
landing gear is locked in place

258
00:41:17,700 --> 00:41:27,800
Thank You touchdown

259
00:41:36,510 --> 00:41:32,540
now let's gear touchdown as SDS solution

260
00:42:16,560 --> 00:41:36,520
mission is TS 32 Royals out on runway 22

261
00:42:22,570 --> 00:42:20,530
recovery will stop Roger discovery and

262
00:42:24,670 --> 00:42:22,580
welcome back your mission has given us a

263
00:42:26,260 --> 00:42:24,680

preview of space station operations and

264

00:42:28,420 --> 00:42:26,270

a look at the international cooperation

265

00:42:33,010 --> 00:42:28,430

that will be a part of future space

266

00:42:46,500 --> 00:42:33,020

exploration it's a nice job run thanks

267

00:42:50,760 --> 00:42:48,360

this is Mission Control in crew

268

00:42:53,370 --> 00:42:50,770

transport vehicle has the crew all on

269

00:42:56,580 --> 00:42:53,380

board now all seven members of the STS

270

00:42:59,850 --> 00:42:56,590

42 crew and that is preparing to pull

271

00:43:04,560 --> 00:42:59,860

away and we'll take the crew on over to

272

00:43:07,500 --> 00:43:04,570

the Dryden crew quarter facility we will

273

00:43:09,930 --> 00:43:07,510

be expecting to hand over discovery to

274

00:43:18,470 --> 00:43:09,940

the ground operations managers within

275

00:43:23,150 --> 00:43:20,840

this is Mission Control the SGS 42

276

00:43:25,340 --> 00:43:23,160

flight control team has handed over the

277

00:43:26,599 --> 00:43:25,350

care and maintenance of the space

278

00:43:28,520 --> 00:43:26,609

shuttle Discovery to the ground

279

00:44:06,099 --> 00:43:28,530

operations managers at the Dryden

280

00:44:13,299 --> 00:44:08,079

please stand by for the president of the

281

00:44:17,259 --> 00:44:13,309

United States Colonel gravy can you hear

282

00:44:28,630 --> 00:44:17,269

me yes ms president we hear you a lot of

283

00:44:32,410 --> 00:44:28,640

queer what happened to good you guys

284

00:44:34,450 --> 00:44:32,420

hear me up there all right we hear you a

285

00:44:43,180 --> 00:44:34,460

lot clearer about the president laughing

286

00:44:45,220 --> 00:44:43,190

clear let me just say to Commander gravy

287

00:44:47,880 --> 00:44:45,230

and all the rest you all were I'm here

288

00:44:50,650 --> 00:44:47,890

with a lot of the young astronauts and

289

00:44:53,170 --> 00:44:50,660

some of the older astronauts as a matter

290

00:44:54,940 --> 00:44:53,180

of fact for the for the crews here in

291

00:44:56,499 --> 00:44:54,950

the White House complex and we just

292

00:44:58,989 --> 00:44:56,509

called up to wish you well the Vice

293

00:45:02,259 --> 00:44:58,999

President is with me Admiral truly is

294

00:45:04,089 --> 00:45:02,269

with me and we just want to get from you

295

00:45:05,739 --> 00:45:04,099

all how it's doing down there a lot of

296

00:45:08,470 --> 00:45:05,749

these kids want to get going and get out

297

00:45:10,749 --> 00:45:08,480

to Mars and you got any advice first of

298

00:45:15,910 --> 00:45:10,759

all for these young guys here young kids

299

00:45:17,650 --> 00:45:15,920

boys and girls well that the president

300

00:45:19,539 --> 00:45:17,660

playing a young astronauts they want to

301

00:45:21,789 --> 00:45:19,549

pursue a career as an out drop they

302

00:45:23,470 --> 00:45:21,799

ought to be emphasizing magnet science

303

00:45:27,039 --> 00:45:23,480

and their studies and just doing as well

304

00:45:28,630 --> 00:45:27,049

as the camp it's a long hard road to get

305

00:45:30,579 --> 00:45:28,640

there and does it makes a little look

306

00:45:33,880 --> 00:45:30,589

along the way as well but that's

307

00:45:35,460 --> 00:45:33,890

certainly worth the effort we've been

308

00:45:37,660 --> 00:45:35,470

talking a little bit about the

309

00:45:39,489 --> 00:45:37,670

contribution that these for journeys

310

00:45:42,729 --> 00:45:39,499

make to science can you tell us a little

311

00:45:45,849 --> 00:45:42,739

bit about the in layman's terms please

312

00:45:49,809 --> 00:45:45,859

about the experiments as you all are

313

00:45:52,329 --> 00:45:49,819

conducting so I want to turn that over

314

00:45:56,910 --> 00:45:52,339

to contact these are pelota matters all

315

00:45:59,109 --> 00:45:56,920

right promise president taking the

316

00:46:02,589 --> 00:45:59,119

experiment orbit is an excellent way to

317

00:46:04,120 --> 00:46:02,599

do experiments in summer as a trance and

318

00:46:06,789 --> 00:46:04,130

it makes her this whole journey well

319

00:46:08,940 --> 00:46:06,799

worthwhile the two principal things that

320

00:46:13,150 --> 00:46:08,950

are areas that come to mind our

321

00:46:16,930 --> 00:46:13,160

physiology both the plant and animal and

322

00:46:17,680 --> 00:46:16,940

crystal growing and our other material

323

00:46:21,040 --> 00:46:17,690

science

324

00:46:23,380 --> 00:46:21,050

and we have some 55 experiments I think

325

00:46:26,830 --> 00:46:23,390

in the IML compliment most of those are

326

00:46:28,810 --> 00:46:26,840

working even as we speak and it is our

327

00:46:30,910 --> 00:46:28,820

plan to do some more TV some more

328

00:46:33,880 --> 00:46:30,920

explanation later on about support

329

00:46:35,620 --> 00:46:33,890

details of that science well that is

330

00:46:37,180 --> 00:46:35,630

very interesting now if you guys have a

331

00:46:38,290 --> 00:46:37,190

couple more minutes we don't want to

332

00:46:40,780 --> 00:46:38,300

detract you from all this

333

00:46:42,760 --> 00:46:40,790

experimentation but it might be fun if

334

00:46:44,350 --> 00:46:42,770

one of these young astronauts or maybe a

335

00:46:47,650 --> 00:46:44,360

couple would like to here comes from a

336

00:46:49,810 --> 00:46:47,660

man in fact this guy just gave a great

337

00:46:53,140 --> 00:46:49,820

speech here what tell them your name and

338

00:46:55,450 --> 00:46:53,150

see if you got a question for the end

339

00:47:01,300 --> 00:46:55,460

there's a question what's it like in

340

00:47:04,210 --> 00:47:01,310

zero gravity yes as we understood with

341

00:47:06,070 --> 00:47:04,220

what yes sir I said the question he

342

00:47:08,760 --> 00:47:06,080

wants it like fear of gravity I'll turn

343

00:47:11,620 --> 00:47:08,770

it over to Dority who's on top left

344

00:47:14,710 --> 00:47:11,630

that's great just going around

345

00:47:17,200 --> 00:47:14,720

everything but the oil things it just

346

00:47:19,570 --> 00:47:17,210

makes a whole lot easier besides we'll

347

00:47:23,170 --> 00:47:19,580

put your pants on both legs at same time

348

00:47:25,570 --> 00:47:23,180

it's easy to translate back and forth

349

00:47:27,010 --> 00:47:25,580

that makes it a whole lot easier to do a

350

00:47:33,700 --> 00:47:27,020

lot of the science because any

351

00:47:45,950 --> 00:47:33,710

particular orientation you choose sports

352

00:47:51,740 --> 00:47:49,339

it makes it all very clear thank you any

353

00:47:58,010 --> 00:47:51,750

other you come on you come up in s1 is a

354

00:48:01,490 --> 00:47:58,020

rare opportunity far away I wanted to

355

00:48:03,140 --> 00:48:01,500

know how are you I want to know what was

356

00:48:07,730 --> 00:48:03,150

your favorite of stem and you've taken

357

00:48:09,859 --> 00:48:07,740

up so far oh no it sounds like a good

358

00:48:14,560 --> 00:48:09,869

question for Steve Oswald a pilot to

359

00:48:22,190 --> 00:48:20,420

actually I guess I'm a true the bus will

360

00:48:25,760 --> 00:48:22,200

work at the expense all right but we've

361

00:48:27,050 --> 00:48:25,770

got to be I have to get my board I've

362

00:48:31,640 --> 00:48:27,060

been having a great pathway for those

363

00:48:34,130 --> 00:48:31,650

buoys the other day project and we're

364

00:48:36,380 --> 00:48:34,140

taking pictures right now for our movie

365

00:48:47,660 --> 00:48:36,390

that will be coming out here swear the

366

00:48:51,880 --> 00:48:47,670

year dude kappa reform acts like this so

367

00:48:54,680 --> 00:48:51,890

that see how big it is asking about

368

00:48:58,130 --> 00:48:54,690

what's great about your GU of his camera

369

00:49:01,790 --> 00:48:58,140

on earth probably weighs about Oh 110

370

00:49:05,089 --> 00:49:01,800

120 pounds even a big boost like ours as

371

00:49:11,740 --> 00:49:05,099

trouble after that but you can see could

372

00:49:16,160 --> 00:49:14,390

camera pumping lasers punches report on

373

00:49:31,220 --> 00:49:16,170

who's manipulating it right now you can

374

00:49:40,460 --> 00:49:36,020

that's great you have one ty Walker

375

00:49:46,430 --> 00:49:40,470

pepper which one do you like better

376

00:49:48,380 --> 00:49:46,440

being in space or being on earth well I

377

00:49:50,270 --> 00:49:48,390

can't reduce our Canadian payload

378

00:49:57,140 --> 00:49:50,280

specialist Roberta Potter who will be

379

00:49:58,790 --> 00:49:57,150

blood dance in our living both in space

380

00:50:00,740 --> 00:49:58,800

and on the earth really makes you

381

00:50:02,420 --> 00:50:00,750

appreciate all the good for that of

382

00:50:04,910 --> 00:50:02,430

those I think right now we're enjoying

383

00:50:06,770 --> 00:50:04,920

very much the limited opportunity we've

384

00:50:08,510 --> 00:50:06,780

had so far being up here we've certainly

385

00:50:11,150 --> 00:50:08,520

enjoyed looking back at the earth during

386

00:50:13,430 --> 00:50:11,160

our brief moments when or not an Arab

387

00:50:16,310 --> 00:50:13,440

working the sciences and we're really

388

00:50:17,510 --> 00:50:16,320

looking forward to a return to Earth to

389

00:50:19,370 --> 00:50:17,520

bring back all the scientific

390

00:50:20,750 --> 00:50:19,380

information and all the enthusiasm and

391

00:50:23,150 --> 00:50:20,760

experience that we've gained in this

392

00:50:24,710 --> 00:50:23,160

slide so far is it far about to think

393

00:50:26,330 --> 00:50:24,720

right now we're just enjoying where we

394

00:50:27,890 --> 00:50:26,340

are and we're going to be enjoying what

395

00:50:29,330 --> 00:50:27,900

we're going to be when we come back and

396

00:50:31,160 --> 00:50:29,340

I think it's just great to have had this

397

00:50:34,849 --> 00:50:31,170

opportunity to be fine right with this

398

00:50:36,680 --> 00:50:34,859

great crew dr. Bondar this is not a

399

00:50:38,660 --> 00:50:36,690

young astronaut this is the president

400

00:50:43,340 --> 00:50:38,670

speaking now but I just want to say how

401
00:50:46,790 --> 00:50:43,350
how pleased we are that you representing

402
00:50:49,160 --> 00:50:46,800
Canada are apart a fundamental part of

403
00:50:51,770 --> 00:50:49,170
this I think it's a wonderful thing and

404
00:50:53,630 --> 00:50:51,780
I think in a wonderful way it shows the

405
00:50:56,240 --> 00:50:53,640
strength of ties between our two great

406
00:50:58,160 --> 00:50:56,250
countries so I understand the Prime

407
00:50:59,540 --> 00:50:58,170
Minister my friend Brian Mulrooney call

408
00:51:03,950 --> 00:50:59,550
did he actually get through the other

409
00:51:05,630 --> 00:51:03,960
day that was right about the time we are

410
00:51:07,670 --> 00:51:05,640
having our briefing I just done their

411
00:51:09,890 --> 00:51:07,680
lunchtime and said I had a lovely

412
00:51:16,250 --> 00:51:09,900
telegram from him and he wishes all well

413
00:51:17,599 --> 00:51:16,260

and good speed well keep up the good

414

00:51:19,490 --> 00:51:17,609

work now we got if you got time for one

415

00:51:24,070 --> 00:51:19,500

more question we got a real eager one

416

00:51:26,780 --> 00:51:24,080

right here front of the line here weekly

417

00:51:31,549 --> 00:51:26,790

see if you can get so they can I wonder

418

00:51:41,959 --> 00:51:36,199

I think the question is how do we feel

419

00:51:44,749 --> 00:51:41,969

in space yeah well at space takes a

420

00:51:46,189 --> 00:51:44,759

little bit of time to get used to it you

421

00:51:48,229 --> 00:51:46,199

first get up you might feel just

422

00:51:49,849 --> 00:51:48,239

slightest bit queasy yourself but by

423

00:51:51,349 --> 00:51:49,859

about today this is our third day in

424

00:51:52,939 --> 00:51:51,359

space for beginning to it that's pretty

425

00:51:55,400 --> 00:51:52,949

well I think you can see we all feel

426
00:51:57,529 --> 00:51:55,410
pretty comfortable up there so after you

427
00:51:59,630 --> 00:51:57,539
get over the initial adjustment you can

428
00:52:03,439 --> 00:51:59,640
look at space quite well and do things

429
00:52:06,170 --> 00:52:03,449
that you do on earth I'm around some of

430
00:52:08,769 --> 00:52:06,180
the older s flew in some of the older

431
00:52:10,549 --> 00:52:08,779
astronauts are actually in space now and

432
00:52:12,589 --> 00:52:10,559
anything that can give you the

433
00:52:14,269 --> 00:52:12,599
enthusiasm that a kid has got to be a

434
00:52:27,920 --> 00:52:14,279
great experience and I feel like I'm

435
00:52:31,489 --> 00:52:27,930
about 12 well we go we go what planets

436
00:52:38,089 --> 00:52:31,499
have you saved what planet see you a

437
00:52:45,059 --> 00:52:41,190
so of course we got the world's greatest

438
00:52:48,690 --> 00:52:45,069

view of our world that on some of our

439

00:52:52,140 --> 00:52:48,700

night passes we could see a solder at

440

00:52:55,410 --> 00:52:52,150

jupiter at mars and venus really

441

00:53:00,329 --> 00:52:55,420

spectacular up here hope we could go to

442

00:53:02,249 --> 00:53:00,339

bars here why these days we're going to

443

00:53:04,620 --> 00:53:02,259

keep trying to get this program geared

444

00:53:07,319 --> 00:53:04,630

up to do just that and maybe just maybe

445

00:53:10,170 --> 00:53:07,329

Colonel one of these kids here today

446

00:53:12,059 --> 00:53:10,180

will be a part of that or maybe later

447

00:53:14,160 --> 00:53:12,069

but Bob that one them will be a part of

448

00:53:17,099 --> 00:53:14,170

that mission but listen I'm told we

449

00:53:19,109 --> 00:53:17,109

gotta we gotta run on but I got a lot of

450

00:53:20,640 --> 00:53:19,119

eager questioners but unfortunately I

451
00:53:22,950 --> 00:53:20,650
guess we don't have the time but we

452
00:53:24,980 --> 00:53:22,960
certainly want to wish you well your

453
00:53:27,900 --> 00:53:24,990
fellow astronauts are standing here

454
00:53:30,359 --> 00:53:27,910
quietly in the shadows and I know that

455
00:53:32,130 --> 00:53:30,369
they are wishing you well the successful

456
00:53:34,319 --> 00:53:32,140
conclusion of this productive journey

457
00:53:37,650 --> 00:53:34,329
and you have our blessings and our

458
00:53:39,269 --> 00:53:37,660
support and keep up the fine work you're

459
00:53:41,609 --> 00:53:39,279
on the cutting edge and you're setting a

460
00:53:43,099 --> 00:53:41,619
great example for the rest of our

461
00:53:45,180 --> 00:53:43,109
countries the rest of the world

462
00:53:50,400 --> 00:53:45,190
congratulations and thanks for taking

463
00:53:51,809 --> 00:53:50,410

the time out Thank You president we

464

00:53:54,479 --> 00:53:51,819

certainly want to thank you protecting

465

00:54:16,040 --> 00:53:54,489

the time so I wish all the young

466

00:54:20,390 --> 00:54:18,210

all the worldwide television audience

467

00:54:23,310 --> 00:54:20,400

for today's game is estimated at around

468

00:54:25,680 --> 00:54:23,320

750 million people but without the

469

00:54:27,150 --> 00:54:25,690

audience out of this world joining us

470

00:54:30,030 --> 00:54:27,160

now live from the space shuttle

471

00:54:33,720 --> 00:54:30,040

discovery in orbit some 163 nautical

472

00:54:35,670 --> 00:54:33,730

miles or 3300 football fields above the

473

00:54:37,410 --> 00:54:35,680

Indian Ocean on the opposite side of the

474

00:54:39,420 --> 00:54:37,420

planet from Minneapolis our shuttle

475

00:54:42,329 --> 00:54:39,430

commander Ron Gravy he is the gentleman

476
00:54:45,180 --> 00:54:42,339
in the in the red skin hat I want to

477
00:54:46,349 --> 00:54:45,190
step in our eggs pilot Steve Oswald's

478
00:54:48,690 --> 00:54:46,359
welcome to the Super Bowl today

479
00:54:52,620 --> 00:54:48,700
gentlemen tell us we see a lot going on

480
00:54:54,510 --> 00:54:52,630
there what are we looking at for exit

481
00:54:56,250 --> 00:54:54,520
area real happy to be with you or what

482
00:54:57,960 --> 00:54:56,260
you're looking at here is the space lab

483
00:55:00,690 --> 00:54:57,970
module that we have in the payload day

484
00:55:02,370 --> 00:55:00,700
of these shuttle discovery and let me

485
00:55:04,770 --> 00:55:02,380
call are some of our payload crew

486
00:55:06,240 --> 00:55:04,780
members on Taggart and Roberta Bondar up

487
00:55:10,079 --> 00:55:06,250
boards that give you a little idea of

488
00:55:11,820 --> 00:55:10,089

what's going on well Greg and Terry this

489

00:55:14,310 --> 00:55:11,830

is the spacelab mission if that beat

490

00:55:16,320 --> 00:55:14,320

science so we've been performing one of

491

00:55:21,660 --> 00:55:16,330

our vestibular experiments it will break

492

00:55:22,950 --> 00:55:21,670

awake that join Ron I guess well kill me

493

00:55:24,630 --> 00:55:22,960

duelen let's get your thoughts on

494

00:55:29,609 --> 00:55:24,640

today's game since we've taken you away

495

00:55:30,930 --> 00:55:29,619

from your work temporarily I actually

496

00:55:32,430 --> 00:55:30,940

think we were kind of hoping that

497

00:55:34,500 --> 00:55:32,440

Houston was going to be in today's again

498

00:55:35,670 --> 00:55:34,510

but it looks like you've got a couple of

499

00:55:37,589 --> 00:55:35,680

great teams that are going to go at it

500

00:55:38,730 --> 00:55:37,599

we're just sorry that we don't have a

501
00:55:41,099 --> 00:55:38,740
way of receiving the game up here

502
00:55:44,099 --> 00:55:41,109
besides that NASA's keeping us a little

503
00:55:45,690 --> 00:55:44,109
busy today I've got to ask you this high

504
00:55:50,370 --> 00:55:45,700
in the world are you going to keep tabs

505
00:55:51,810 --> 00:55:50,380
on the game find out who's winning sorry

506
00:55:56,940 --> 00:55:51,820
thank you it'll keep us pretty well

507
00:55:59,280 --> 00:55:56,950
informed and you hope so anyway yeah how

508
00:56:03,120 --> 00:55:59,290
is how would a coin toss work in zero

509
00:56:04,890 --> 00:56:03,130
gravity with representing problem always

510
00:56:06,420 --> 00:56:04,900
thought about that we hope to that so we

511
00:56:08,160 --> 00:56:06,430
have a little demonstration here but I

512
00:56:09,930 --> 00:56:08,170
give the client to Roberto ponder here

513
00:56:11,250 --> 00:56:09,940

she's our Canadian payload specialist

514

00:56:12,780 --> 00:56:11,260

she knows a little more about Canadian

515

00:56:14,070 --> 00:56:12,790

football in American football but

516

00:56:26,240 --> 00:56:14,080

nonetheless she's interested in we'll

517

00:56:37,290 --> 00:56:32,010

I don't so we should call him back look

518

00:56:39,210 --> 00:56:37,300

like his headdress giant breca as you

519

00:56:41,010 --> 00:56:39,220

can see in zero-g the point never comes

520

00:56:43,460 --> 00:56:41,020

down so we'll just have to defer the

521

00:56:45,990 --> 00:56:43,470

coin toss with official pregame ceremony

522

00:56:48,060 --> 00:56:46,000

well we hope they'll keep you advised on

523

00:56:49,349 --> 00:56:48,070

what's happening we sure appreciate you

524

00:56:52,109 --> 00:56:49,359

having taken time out of your busy

525

00:57:04,490 --> 00:56:52,119

schedule we wish you a terrific mission

526

00:57:04,500 --> 00:57:18,510

when we come back our final thoughts

527

00:57:28,329 --> 00:57:22,020

it's very scholarly foster mother's

528

00:57:33,569 --> 00:57:28,339

grave sorry Bob this is discovered

529

00:57:38,740 --> 00:57:33,579

another one ready speaking disk of a

530

00:57:41,380 --> 00:57:38,750

pollutant speaking the document car dr.

531

00:57:46,349 --> 00:57:41,390

rheese anywhere and myself will speak in

532

00:57:50,200 --> 00:57:46,359

which order now dr. go vodka her

533

00:57:52,900 --> 00:57:50,210

discovery yes canoga exclusive sing

534

00:57:59,829 --> 00:57:52,910

commando ongoing gravenstein accrue for

535

00:58:02,020 --> 00:57:59,839

the SDS 42 a time as I president the

536

00:58:04,390 --> 00:58:02,030

smurfs their old levels of falmouth

537

00:58:05,940 --> 00:58:04,400

bleedin little bizarre form for stones

538

00:58:10,240 --> 00:58:05,950

the oven bigger and power for Stein

539

00:58:14,220 --> 00:58:10,250

farahani provide assistance kulemin and

540

00:58:18,430 --> 00:58:14,230

for greg has food to happen to us both

541

00:58:21,279 --> 00:58:18,440

gin dunks jamia goes into else adults

542

00:58:24,160 --> 00:58:21,289

astronauts tell david from this sign is

543

00:58:26,769 --> 00:58:24,170

awesome seeds mission to ship is honest

544

00:58:29,140 --> 00:58:26,779

very I'm legacy before making for

545

00:58:37,000 --> 00:58:29,150

football and harm him not administered

546

00:58:38,890 --> 00:58:37,010

with a bill that dear lets the water the

547

00:58:41,680 --> 00:58:38,900

air collision variable make them one

548

00:58:44,440 --> 00:58:41,690

former one in vector form does this is

549

00:58:46,779 --> 00:58:44,450

god honest truth there well gets in

550

00:58:50,799 --> 00:58:46,789

there shall be delivered him atlantis no

551
00:58:54,430 --> 00:58:50,809
job and then in the plant amino to visit

552
00:58:56,079 --> 00:58:54,440
franchise vegan is not really given

553
00:58:59,380 --> 00:58:56,089
theater in them and design now I'm a

554
00:59:01,510 --> 00:58:59,390
plant has been their moms eat I was our

555
00:59:04,210 --> 00:59:01,520
item in noted on his removal

556
00:59:07,809 --> 00:59:04,220
mecklenburg-vorpommern of evil and fight

557
00:59:10,710 --> 00:59:07,819
that we were dead before their bodies my

558
00:59:14,319 --> 00:59:10,720
study i'm tired unified set up on ice

559
00:59:17,680 --> 00:59:14,329
climbers equivalent is large i wish to l

560
00:59:20,730 --> 00:59:17,690
minus dis undone i nevah coalinga dime a

561
00:59:27,099 --> 00:59:20,740
dozen 13 but the elton velcom botanical

562
00:59:38,390 --> 00:59:32,059
hello yeah sort of does if you devote

563
00:59:41,420 --> 00:59:38,400

our time ich werde another mouse button

564

00:59:43,910 --> 00:59:41,430

on defector the bright side is bitten by

565

00:59:49,990 --> 00:59:43,920

the agony jihad of the saturday evening

566

00:59:55,970 --> 00:59:53,329

I'll never really go to Venice German or

567

01:00:01,309 --> 00:59:55,980

private novelty sadly mr. John in my

568

01:00:04,160 --> 01:00:01,319

spirit said to be written in junk tell

569

01:00:05,799 --> 01:00:04,170

me about this jacob want a you know

570

01:00:12,829 --> 01:00:05,809

clean Sean and Yvette on the phone

571

01:00:15,829 --> 01:00:12,839

convert this year the Apollo Gustavia

572

01:00:19,430 --> 01:00:15,839

was autologous Deadwood at the bust 4

573

01:00:22,640 --> 01:00:19,440

before deven I don't know in 2007 humid

574

01:00:24,920 --> 01:00:22,650

either I was only found and cruel man IM

575

01:00:28,370 --> 01:00:24,930

fer a farm and disaster would have a

576

01:00:31,099 --> 01:00:28,380

spin in the mirror lighted mormon

577

01:00:34,940 --> 01:00:31,109

begins from zip not invent horrible so

578

01:00:37,160 --> 01:00:34,950

commander own gravy from bid man behind

579

01:00:39,529 --> 01:00:37,170

and try their big nine and our backs but

580

01:00:41,900 --> 01:00:39,539

not Dave him as they also shown to get

581

01:00:44,059 --> 01:00:41,910

mad inventor would've ate with as if

582

01:00:48,940 --> 01:00:44,069

that really shared the art basel size of

583

01:00:53,089 --> 01:00:48,950

a good distal revision is so little

584

01:00:57,799 --> 01:00:53,099

speaking your document is finished now

585

01:01:02,680 --> 01:00:57,809

doctor is another we speak the color is

586

01:01:05,599 --> 01:01:02,690

the design save it is visible speaking a

587

01:01:09,079 --> 01:01:05,609

commander the flow meters into an

588

01:01:11,180 --> 01:01:09,089

occupied estoy expression when they made

589

01:01:17,059 --> 01:01:11,190

a bit we stood by the best when she came

590

01:01:21,500 --> 01:01:17,069

free with your clean residences are

591

01:01:25,309 --> 01:01:21,510

another good touch dr. Nabarro on a

592

01:01:29,690 --> 01:01:25,319

paper is issued the social events they

593

01:01:33,289 --> 01:01:29,700

simply dispose of a bit of them mere boy

594

01:01:35,870 --> 01:01:33,299

informal via hub yard for a void young

595

01:01:39,920 --> 01:01:35,880

for my bday analogous multi-system else

596

01:01:41,540 --> 01:01:39,930

motivate Tsonga Venda the object by you

597

01:01:44,090 --> 01:01:41,550

the enclosed entirely of albeit

598

01:01:46,660 --> 01:01:44,100

narrating when they must be jesting

599

01:01:49,970 --> 01:01:46,670

English plays midfield invite me early

600

01:01:54,140 --> 01:01:49,980

but say about me before and again this

601
01:02:00,380 --> 01:01:54,150
Hill people seemed long to heal fairmont

602
01:02:02,720 --> 01:02:00,390
ave possibly starboard see God division

603
01:02:06,890 --> 01:02:02,730
and damen these visits but I LaGuardia

604
01:02:09,590 --> 01:02:06,900
City mafia Securities Division something

605
01:02:12,940 --> 01:02:09,600
there Oh spoiler on get on Jesus maldita

606
01:02:16,100 --> 01:02:12,950
we are fairly late lamented easy Schmidt

607
01:02:19,190 --> 01:02:16,110
domestic intrusive de Servian in desoto

608
01:02:22,850 --> 01:02:19,200
medium vegetable our than I wasn't in

609
01:02:25,730 --> 01:02:22,860
the city of display good hiker seller he

610
01:02:27,550 --> 01:02:25,740
has sustained always matter I and dr for

611
01:02:30,740 --> 01:02:27,560
the partnership and I don't have I

612
01:02:34,460 --> 01:02:30,750
reckon that they don't order in for what

613
01:02:37,070 --> 01:02:34,470

dainik door what if there's only got

614

01:02:39,110 --> 01:02:37,080

diminished as their demise make their

615

01:02:43,820 --> 01:02:39,120

that their said would I gave me they're

616

01:02:46,370 --> 01:02:43,830

bringing them availability if you're

617

01:02:48,020 --> 01:02:46,380

really an experiment in also Indigo's

618

01:02:50,270 --> 01:02:48,030

articles are very busy daily

619

01:02:52,760 --> 01:02:50,280

international partnerships and bigger

620

01:02:54,920 --> 01:02:52,770

than any other colleague but if it

621

01:02:59,510 --> 01:02:54,930

wasn't for generations the voltage

622

01:03:03,590 --> 01:02:59,520

monster dome a yearly on say in AVR

623

01:03:05,960 --> 01:03:03,600

burberry nexus 5 eternal both India

624

01:03:08,990 --> 01:03:05,970

English unit untwisting strategy out

625

01:03:11,180 --> 01:03:09,000

their defensive end of the process he

626

01:03:14,270 --> 01:03:11,190

moogly child are so an international

627

01:03:16,610 --> 01:03:14,280

Suzanne da Vinci insatiable of the year

628

01:03:23,210 --> 01:03:16,620

ability to some sleep although some of

629

01:03:28,850 --> 01:03:23,220

David's elusive is Jared is not really

630

01:03:31,760 --> 01:03:28,860

an option to save up to minus the under

631

01:03:35,090 --> 01:03:31,770

eye condition final colima dyskinesia

632

01:03:39,380 --> 01:03:35,100

Bolivia lake was enormous inviting me

633

01:03:41,960 --> 01:03:39,390

wouldn't Romans but the FBI foreign men

634

01:03:46,250 --> 01:03:41,970

dollars Damon be a common I can be

635

01:03:50,000 --> 01:03:46,260

irrelevant as if our d suppose I don't

636

01:03:52,010 --> 01:03:50,010

see how tightly stazione a violent mob

637

01:03:52,650 --> 01:03:52,020

ships going to them all being demobbed

638

01:03:54,809 --> 01:03:52,660

ship here

639

01:03:58,680 --> 01:03:54,819

when this is big and one for your

640

01:04:01,440 --> 01:03:58,690

betrayal does is still valid the best so

641

01:04:04,079 --> 01:04:01,450

far my this vineyard suzama now my own

642

01:04:06,599 --> 01:04:04,089

people name of the Edit solution from

643

01:04:09,029 --> 01:04:06,609

the government event on sat on the

644

01:04:11,970 --> 01:04:09,039

government in behind oh I'm are nebulas

645

01:04:14,579 --> 01:04:11,980

efficient remedy again mr. allen suh

646

01:04:16,410 --> 01:04:14,589

zaman they're doing didn't fit for men

647

01:04:18,359 --> 01:04:16,420

are being on the friday is the

648

01:04:22,970 --> 01:04:18,369

punishment item does your forebears

649

01:04:25,680 --> 01:04:22,980

almost diplomas ominous to do penance

650

01:04:27,990 --> 01:04:25,690

remember it by they would cook include

651
01:04:34,730 --> 01:04:28,000
accommodation between the vintage up to

652
01:04:41,819 --> 01:04:39,000
which is a little speaking again dr. is

653
01:04:45,270 --> 01:04:41,829
a new girl has finished now i am

654
01:04:51,900 --> 01:04:45,280
speaking migrating to comment on rape

655
01:04:54,180 --> 01:04:51,910
and 2 3gs 42 thank you very much as the

656
01:04:56,010 --> 01:04:54,190
loot on we appreciate that this is an

657
01:04:58,710 --> 01:04:56,020
international flight and international

658
01:05:04,559 --> 01:04:58,720
crew and though we're very privileged to

659
01:05:07,769 --> 01:05:04,569
be a part of it disk arrays european to

660
01:05:15,059 --> 01:05:07,779
find it sharing space how do you feel

661
01:05:17,490 --> 01:05:15,069
about this well I think days is a unique

662
01:05:19,349 --> 01:05:17,500
place to do scientific experiments for

663
01:05:22,470 --> 01:05:19,359

various reasons there's weightlessness

664

01:05:26,250 --> 01:05:22,480

for today long period of time there's no

665

01:05:28,380 --> 01:05:26,260

atmosphere and we also are the global

666

01:05:31,920 --> 01:05:28,390

views that's that we can study our own

667

01:05:33,920 --> 01:05:31,930

home planet and therefore I think

668

01:05:39,380 --> 01:05:33,930

there's a tremendous potential for

669

01:05:42,870 --> 01:05:39,390

scientific experiments we wish to reach

670

01:05:53,480 --> 01:05:42,880

the turn of the century how do you see

671

01:06:00,020 --> 01:05:56,620

oh the turn of the century I think them

672

01:06:04,190 --> 01:06:00,030

from my personal point of view that it

673

01:06:07,730 --> 01:06:04,200

is clear that we should work together on

674

01:06:10,850 --> 01:06:07,740

the global scale and I'm a very

675

01:06:14,030 --> 01:06:10,860

privileged man that I have already an

676

01:06:17,900 --> 01:06:14,040

opportunity now adore flying orbit with

677

01:06:21,410 --> 01:06:17,910

the finest that's an odd sort of united

678

01:06:24,230 --> 01:06:21,420

states of america and i think we from a

679

01:06:29,270 --> 01:06:24,240

European point of view can learn a lot

680

01:06:32,480 --> 01:06:29,280

from them and I feel personally that we

681

01:06:38,570 --> 01:06:32,490

should intensify the corporation because

682

01:06:41,800 --> 01:06:38,580

we can learn a lot and if the air for

683

01:06:46,160 --> 01:06:41,810

our potential then I think we can

684

01:06:49,790 --> 01:06:46,170

accomplish a lot disc of rarely see mr.

685

01:06:53,870 --> 01:06:49,800

Hassan speaking again I yet finished it

686

01:06:57,980 --> 01:06:53,880

is time to conclude our best wishes of

687

01:07:01,160 --> 01:06:57,990

successful 38-42 mission to the whole

688

01:07:04,700 --> 01:07:01,170

truth Thank You commander Robin and good

689

01:07:16,240 --> 01:07:04,710

time thank you very much metal about

690

01:07:33,490 --> 01:07:18,230

discovery Houston that concludes the

691

01:07:37,300 --> 01:07:35,320

discovery Houston we've got a good

692

01:07:42,040 --> 01:07:37,310

downlink video of you are you ready for

693

01:07:45,430 --> 01:07:42,050

your call from Canada discovery is ready

694

01:07:48,340 --> 01:07:45,440

for the call canada toronto houston

695

01:07:54,570 --> 01:07:48,350

please go ahead with your call discovery

696

01:07:59,260 --> 01:07:57,190

serato this is discovery commander of

697

01:08:02,650 --> 01:07:59,270

gravy freaking hero voice qualities wild

698

01:08:04,630 --> 01:08:02,660

clip good evening commander gravy this

699

01:08:07,150 --> 01:08:04,640

is jay ingram at the Ontario Science

700

01:08:09,970 --> 01:08:07,160

Centre in Toronto Prime Minister Brian

701
01:08:11,320 --> 01:08:09,980
Mulrooney is standing by in Ottawa and

702
01:08:13,930 --> 01:08:11,330
the Minister for science William

703
01:08:16,390 --> 01:08:13,940
Winegard is with me right beside me here

704
01:08:18,190 --> 01:08:16,400
in Toronto congratulations to you and

705
01:08:23,019 --> 01:08:18,200
all your crew and a very successful

706
01:08:25,300 --> 01:08:23,029
flight so far for example have the

707
01:08:28,420 --> 01:08:25,310
entire crew of I always they don't like

708
01:08:29,829 --> 01:08:28,430
to thank you we have 23 fortunate so far

709
01:08:32,470 --> 01:08:29,839
the flight to talk very well we're very

710
01:08:34,030 --> 01:08:32,480
pleased with that at this point I would

711
01:08:41,380 --> 01:08:34,040
like to turn things over to and

712
01:08:44,380 --> 01:08:41,390
introduce that dr. Roberto panther hello

713
01:08:45,970 --> 01:08:44,390

dr. von der to start things off the

714

01:08:48,309 --> 01:08:45,980

right honourable Brian Mulrooney the

715

01:08:52,620 --> 01:08:48,319

Prime Minister is waiting in Ottawa and

716

01:08:57,730 --> 01:08:55,690

good evening Roberta and the

717

01:09:02,530 --> 01:08:57,740

congratulations on becoming Canada's

718

01:09:05,340 --> 01:09:02,540

second space traveler as you know this

719

01:09:09,070 --> 01:09:05,350

is a year of celebration in Canada our

720

01:09:11,200 --> 01:09:09,080

125th birthday and your flight has

721

01:09:13,749 --> 01:09:11,210

captured the imagination of all of your

722

01:09:16,059 --> 01:09:13,759

fellow Canadians probably in a way that

723

01:09:18,099 --> 01:09:16,069

you couldn't have imagined and the

724

01:09:20,440 --> 01:09:18,109

success of this international mission

725

01:09:22,930 --> 01:09:20,450

has demonstrated to the world that

726

01:09:25,240 --> 01:09:22,940

anything can be achieved with dedication

727

01:09:26,950 --> 01:09:25,250

and cooperation and I'm delighted to

728

01:09:29,740 --> 01:09:26,960

have this opportunity to congratulate

729

01:09:36,749 --> 01:09:29,750

you on what you and your colleagues have

730

01:09:42,789 --> 01:09:40,329

it's been a DNR and perfect to be on

731

01:09:44,499 --> 01:09:42,799

board this particular missed we've had a

732

01:09:45,950 --> 01:09:44,509

great deal of science accomplished so

733

01:09:48,930 --> 01:09:45,960

far

734

01:09:52,110 --> 01:09:48,940

my days we hope that we do a little bit

735

01:09:54,090 --> 01:09:52,120

more we've enjoyed things with each

736

01:09:55,530 --> 01:09:54,100

other and working with each other and

737

01:09:57,690 --> 01:09:55,540

learning new things about the world

738

01:10:00,990 --> 01:09:57,700

about how we work and how we view

739

01:10:02,040 --> 01:10:01,000

science and it's just fantastic except I

740

01:10:05,460 --> 01:10:02,050

just can't wait to get back and

741

01:10:07,920 --> 01:10:05,470

psychoactive all about it revert I spoke

742

01:10:09,570 --> 01:10:07,930

earlier today with Ken money who told me

743

01:10:12,120 --> 01:10:09,580

that you would spend a little time just

744

01:10:14,100 --> 01:10:12,130

studying countries as they went by and I

745

01:10:16,620 --> 01:10:14,110

understand that you caught a glimpse of

746

01:10:20,850 --> 01:10:16,630

Canada during your mission what struck

747

01:10:22,560 --> 01:10:20,860

you most during the site so it's a lot

748

01:10:24,570 --> 01:10:22,570

of time today I had a tooth on a

749

01:10:26,700 --> 01:10:24,580

cassette tape my father actually have a

750

01:10:29,190 --> 01:10:26,710

recording of all I thought the courts

751
01:10:32,160 --> 01:10:29,200
are they working up your Volterra and

752
01:10:33,810 --> 01:10:32,170
I'll just have to sort out yes we're

753
01:10:36,300 --> 01:10:33,820
going right over Terra and it was just

754
01:10:37,620 --> 01:10:36,310
fantastic hello it's winter time we're

755
01:10:40,200 --> 01:10:37,630
going over the northern part of terror

756
01:10:42,930 --> 01:10:40,210
we met sounds the Northwest Territories

757
01:10:45,270 --> 01:10:42,940
down the costs are into Quebec and

758
01:10:46,710 --> 01:10:45,280
Ontario and you could certainly go back

759
01:10:49,200 --> 01:10:46,720
and you can recognize all the land

760
01:10:51,810 --> 01:10:49,210
features there's abdifatah regulars

761
01:10:53,610 --> 01:10:51,820
november q continent and i'm not saying

762
01:10:55,260 --> 01:10:53,620
that's all for people who think that a

763
01:10:56,610 --> 01:10:55,270

country when it's winter time is not

764

01:10:58,530 --> 01:10:56,620

exciting let me tell you it's

765

01:11:00,960 --> 01:10:58,540

exceptionally exciting doesn't start

766

01:11:03,930 --> 01:11:00,970

very very clear and I just can't it

767

01:11:05,670 --> 01:11:03,940

every ticket ever sit down and walk

768

01:11:07,890 --> 01:11:05,680

across every mile of this beautiful

769

01:11:12,120 --> 01:11:07,900

country because it is lookin so exciting

770

01:11:15,120 --> 01:11:12,130

an appearance is beautiful Roberta

771

01:11:19,110 --> 01:11:15,130

resident espoused Epidaurus a true Eska

772

01:11:21,990 --> 01:11:19,120

Davina aspartate register on the Ravi so

773

01:11:33,680 --> 01:11:22,000

tere pas Scoob narazie ok enfermo de

774

01:11:36,870 --> 01:11:33,690

salir a bathtub you're all in the past

775

01:11:40,440 --> 01:11:36,880

so if you relate that's a bit of a

776

01:11:42,870 --> 01:11:40,450

modular you girl up the

777

01:11:50,439 --> 01:11:42,880

precipitous daunted wherever telugu with

778

01:11:57,919 --> 01:11:54,859

chanticleer support all of a person as a

779

01:12:00,680 --> 01:11:57,929

service fee to secure a telepath you're

780

01:12:05,000 --> 01:12:00,690

all drew latasha the temple soleta

781

01:12:07,520 --> 01:12:05,010

counts episode professor for gradually

782

01:12:09,830 --> 01:12:07,530

they not consider the next shows the

783

01:12:11,870 --> 01:12:09,840

neurofilament filler that the salad

784

01:12:33,279 --> 01:12:11,880

buffet and seven ensures they should

785

01:12:37,430 --> 01:12:33,289

return to the south detection apologetic

786

01:12:39,200 --> 01:12:37,440

terrible service the Canadians across

787

01:12:40,819 --> 01:12:39,210

the country have been following your

788

01:12:43,700 --> 01:12:40,829

mission with great interest in pride I

789

01:12:49,160 --> 01:12:43,710

wonder if you have a special message for

790

01:12:51,919 --> 01:12:49,170

them tonight the country has much to be

791

01:12:55,009 --> 01:12:51,929

proud of in terms of things we've

792

01:12:58,790 --> 01:12:55,019

accomplished for country especially in

793

01:13:01,009 --> 01:12:58,800

the field of science very hard to be a

794

01:13:02,629 --> 01:13:01,019

Canadian as part of this truth and I

795

01:13:04,160 --> 01:13:02,639

think it all Canadians should be very

796

01:13:06,740 --> 01:13:04,170

pleased with the things that we do

797

01:13:08,660 --> 01:13:06,750

different thanks for all the things we

798

01:13:11,330 --> 01:13:08,670

do and the wonderful things we share in

799

01:13:13,700 --> 01:13:11,340

our concert ever said i think our

800

01:13:15,379 --> 01:13:13,710

country has great potential and i think

801

01:13:17,390 --> 01:13:15,389

it's up to each one of us pretty sure

802

01:13:20,479 --> 01:13:17,400

that we achieve our potential respective

803

01:13:21,859 --> 01:13:20,489

young people roberta all Canadians are

804

01:13:23,660 --> 01:13:21,869

proud of you and what you've achieved

805

01:13:27,109 --> 01:13:23,670

and I'd like to congratulate your other

806

01:13:28,970 --> 01:13:27,119

crew members as well on this splendid

807

01:13:31,520 --> 01:13:28,980

achievement and on behalf of all

808

01:13:37,779 --> 01:13:31,530

Canadians wish you all a very safe

809

01:13:40,370 --> 01:13:37,789

journey home god bless you all very much

810

01:13:41,600 --> 01:13:40,380

this crime and drop it off at the entire

811

01:13:45,740 --> 01:13:41,610

cruise thank you very much of those

812

01:13:47,209 --> 01:13:45,750

wishes dr. Bondar this is jay Ingram

813

01:13:50,600 --> 01:13:47,219

back in Toronto again thank you very

814

01:13:52,459 --> 01:13:50,610

much mr. Mulrooney I have with me the

815

01:13:54,740 --> 01:13:52,469

Honorable William Winegard the Minister

816

01:13:58,520 --> 01:13:54,750

for science I think he'd like to take

817

01:14:02,120 --> 01:13:58,530

over and talk to you now well Roberta at

818

01:14:03,530 --> 01:14:02,130

it doesn't seem possible that when you

819

01:14:06,230 --> 01:14:03,540

graduated from the

820

01:14:08,300 --> 01:14:06,240

university of Guelph at all these years

821

01:14:10,970 --> 01:14:08,310

later we would be have the opportunity

822

01:14:17,030 --> 01:14:10,980

to talk like this it is quite thrilling

823

01:14:20,150 --> 01:14:17,040

for us I have 700 700 people in the

824

01:14:22,880 --> 01:14:20,160

Ontario Science Centre 200 of whom are

825

01:14:26,020 --> 01:14:22,890

children many girl guides they have

826

01:14:33,590 --> 01:14:26,030

asked me to ask you one special question

827

01:14:36,140 --> 01:14:33,600

what's it like up there so it's very

828

01:14:37,550 --> 01:14:36,150

very exciting it's all it's really

829

01:14:40,250 --> 01:14:37,560

something to be able to just float

830

01:14:42,380 --> 01:14:40,260

around and just around the discourse at

831

01:14:45,040 --> 01:14:42,390

night i'm not worried about you / oh you

832

01:14:47,060 --> 01:14:45,050

better have some good buddies are

833

01:14:49,490 --> 01:14:47,070

commanded baby here to grab you back

834

01:14:51,230 --> 01:14:49,500

down to earth event up here in space but

835

01:14:53,900 --> 01:14:51,240

the most exciting part of it if you

836

01:14:57,020 --> 01:14:53,910

start working besides it's be able to

837

01:14:59,030 --> 01:14:57,030

have some perspective on where we are in

838

01:15:02,090 --> 01:14:59,040

the world today and to be able to look

839

01:15:05,510 --> 01:15:02,100

death it's not a beautiful planet sir

840

01:15:08,000 --> 01:15:05,520

the crisp beautiful clear brilliant blue

841

01:15:10,190 --> 01:15:08,010

atmosphere that we see and we said all

842

01:15:11,840 --> 01:15:10,200

the time we have been in the sunlight on

843

01:15:13,400 --> 01:15:11,850

the orbiters today's we've never hurry

844

01:15:16,580 --> 01:15:13,410

up that night for a while we haven't had

845

01:15:18,380 --> 01:15:16,590

a dog defi- over yet that it has been

846

01:15:19,490 --> 01:15:18,390

absolutely incredible looking down and

847

01:15:21,890 --> 01:15:19,500

seeing all the countries without

848

01:15:24,500 --> 01:15:21,900

boundaries everything granted it to one

849

01:15:26,420 --> 01:15:24,510

and you don't really care to people on

850

01:15:28,850 --> 01:15:26,430

earth sometimes you can see the results

851
01:15:30,770 --> 01:15:28,860
of the words the people of that but for

852
01:15:33,050 --> 01:15:30,780
the most part you get an incredible

853
01:15:35,960 --> 01:15:33,060
feeling that the whole world is such a

854
01:15:37,640 --> 01:15:35,970
unique place and is all one and we

855
01:15:40,520 --> 01:15:37,650
should try to preserve it that way I

856
01:15:44,990 --> 01:15:40,530
really feel very strongly that we are

857
01:15:48,320 --> 01:15:45,000
sir men are one planet some of the

858
01:15:53,120 --> 01:15:48,330
children have also have an interest in

859
01:15:55,010 --> 01:15:53,130
the canadian IM x MX a motion picture

860
01:15:57,170 --> 01:15:55,020
camera they want it off it still

861
01:16:04,490 --> 01:15:57,180
functioning well on its ninth journey

862
01:16:06,650 --> 01:16:04,500
into space its functioning very well

863
01:16:08,600 --> 01:16:06,660

we've had a lot of fun like you survived

864

01:16:10,460 --> 01:16:08,610

back to the look of it doing here a

865

01:16:13,970 --> 01:16:10,470

commander grade you just wanted come

866

01:16:15,470 --> 01:16:13,980

over today also canada this boy looks

867

01:16:17,120 --> 01:16:15,480

like now i notice of course it was there

868

01:16:23,180 --> 01:16:17,130

listed like this

869

01:16:25,459 --> 01:16:23,190

but its pace it's also by itself so

870

01:16:28,250 --> 01:16:25,469

we're trying to get footage of here are

871

01:16:29,959 --> 01:16:28,260

not what it's like to live out here the

872

01:16:31,550 --> 01:16:29,969

kind of sites that we need to do in

873

01:16:33,649 --> 01:16:31,560

order to be able to understand what it's

874

01:16:35,209 --> 01:16:33,659

like to be interfaced and to help us

875

01:16:37,580 --> 01:16:35,219

solve some of those mysteries that we've

876

01:16:39,140 --> 01:16:37,590

discovered actually what we discovered

877

01:16:41,720 --> 01:16:39,150

an inside there are a lot more mysteries

878

01:16:44,660 --> 01:16:41,730

that have to be looked into and

879

01:16:47,030 --> 01:16:44,670

questions raised and tops and

880

01:16:49,430 --> 01:16:47,040

experiments to solve in the future years

881

01:16:51,470 --> 01:16:49,440

ahead I think that does be our next

882

01:16:53,750 --> 01:16:51,480

stomach it's going to be most exciting

883

01:16:55,939 --> 01:16:53,760

to build the food this report to I hope

884

01:16:57,860 --> 01:16:55,949

they understand when durability see more

885

01:17:00,160 --> 01:16:57,870

clearly the kinds of things able to do

886

01:17:02,840 --> 01:17:00,170

in the last few days I've cleared space

887

01:17:05,350 --> 01:17:02,850

thank you i might one last word for me

888

01:17:07,669 --> 01:17:05,360

Roberta i must say that your

889

01:17:16,700 --> 01:17:07,679

somersaulting on sunday was what's more

890

01:17:22,330 --> 01:17:16,710

interesting than the game attended

891

01:17:27,919 --> 01:17:25,570

this is jay ingram again dr. Bondar

892

01:17:30,649 --> 01:17:27,929

thanks very much for taking the time to

893

01:17:33,649 --> 01:17:30,659

talk to us and thank you also commander

894

01:17:35,810 --> 01:17:33,659

gravy for setting setting time aside for

895

01:17:38,180 --> 01:17:35,820

us to be able to talk to you both from

896

01:17:40,250 --> 01:17:38,190

toronto here william Weingarten myself

897

01:17:58,100 --> 01:17:40,260

and for the prime minister mr. Mulrooney

898

01:18:02,330 --> 01:18:00,020

discovery Houston we have good down

899

01:18:10,450 --> 01:18:02,340

leaked video from the lab you ready for

900

01:18:16,100 --> 01:18:13,310

our discovery stand by where I'm the

901
01:18:19,550 --> 01:18:16,110
marshal press ENTER Marshall your go

902
01:18:21,350 --> 01:18:19,560
with your call discovery this is the

903
01:18:26,320 --> 01:18:21,360
Marshall press center we're ready to

904
01:18:34,100 --> 01:18:32,240
clear and we're ready to begin good

905
01:18:35,930 --> 01:18:34,110
morning I have a question for dr.

906
01:18:37,790 --> 01:18:35,940
blonder we don't have too many Canadians

907
01:18:39,560 --> 01:18:37,800
in space so I'd like to start off with

908
01:18:41,780 --> 01:18:39,570
her it's my comma list from broadcast

909
01:18:44,270 --> 01:18:41,790
news Canada dr. Banda I wonder if you

910
01:18:46,190 --> 01:18:44,280
could describe those three hours sitting

911
01:18:47,900 --> 01:18:46,200
in the shuttle waiting to take off last

912
01:18:49,430 --> 01:18:47,910
Wednesday what was it like what were you

913
01:19:01,210 --> 01:18:49,440

thinking about and then could you

914

01:19:01,220 --> 01:19:07,090

with my colleagues we were ready to grab

915

01:19:13,730 --> 01:19:10,820

it with the cab down and when we

916

01:19:15,950 --> 01:19:13,740

actually got to the point of liftoff it

917

01:19:17,870 --> 01:19:15,960

was just absolutely wonderful to be on

918

01:19:24,290 --> 01:19:17,880

the mid-deck hearing aid focusing

919

01:19:27,410 --> 01:19:24,300

marvelous fabulous Canadian Broadcasting

920

01:19:28,370 --> 01:19:27,420

Corporation for Roberta bonder Roberta

921

01:19:30,530 --> 01:19:28,380

we know how much you were looking

922

01:19:32,360 --> 01:19:30,540

forward to looking down at the planet

923

01:19:34,820 --> 01:19:32,370

and out to the Stars can you share with

924

01:19:42,820 --> 01:19:34,830

us just what your thoughts and feelings

925

01:19:47,330 --> 01:19:45,710

it's very very difficult to describe and

926

01:19:49,250 --> 01:19:47,340

I think that's what everybody says my

927

01:19:50,990 --> 01:19:49,260

impression of the planet Earth is

928

01:19:53,450 --> 01:19:51,000

there's certainly the title of blue

929

01:19:56,600 --> 01:19:53,460

planet is a good one because the crisp

930

01:19:59,330 --> 01:19:56,610

sunny bright jewel that we have we could

931

01:20:00,590 --> 01:19:59,340

see the limit ears when I first got to

932

01:20:05,630 --> 01:20:00,600

the window is one of the first things I

933

01:20:07,940 --> 01:20:05,640

wanted to do and it was a very very

934

01:20:10,670 --> 01:20:07,950

exciting for me to be able to look down

935

01:20:12,830 --> 01:20:10,680

and plan first came over Kara it was a

936

01:20:15,110 --> 01:20:12,840

biggest role imaginable with rua know

937

01:20:17,360 --> 01:20:15,120

whether it has to be it was absolutely

938

01:20:19,190 --> 01:20:17,370

beautiful and spectacular night I'm

939

01:20:20,780 --> 01:20:19,200

coming back to earth with a feeling that

940

01:20:25,760 --> 01:20:20,790

there is absolutely nothing boring there

941

01:20:28,670 --> 01:20:25,770

is no boring place anywhere planet Joe

942

01:20:34,220 --> 01:20:28,680

anaconda to canada in case tohon José

943

01:20:36,380 --> 01:20:34,230

Paulo dr. Banda dr. van de Ville is a

944

01:20:39,980 --> 01:20:36,390

chicks omelette recipe fact Rebecca

945

01:20:44,030 --> 01:20:39,990

Buffett actual ma s kersey veritable mo

946

01:21:03,380 --> 01:20:44,040

EDC the feld is experienced ott prepare

947

01:21:05,840 --> 01:21:03,390

HIPAA do sauce your cheek under kevin

948

01:21:07,520 --> 01:21:05,850

visit from cfb see radio in saint john

949

01:21:37,100 --> 01:21:07,530

new brunswick what's been the most

950

01:21:48,660 --> 01:21:45,300

so if the staff said typically filled so

951
01:21:51,660 --> 01:21:48,670
high they played the certificate Donna's

952
01:21:58,370 --> 01:21:51,670
bouncing the court date is to be exact

953
01:22:04,560 --> 01:21:58,380
amount kill her oh very adamas pass a

954
01:22:10,710 --> 01:22:04,570
you know spoke with the tom bianchi see

955
01:22:12,990 --> 01:22:10,720
you at their cooking at them ok again

956
01:22:14,880 --> 01:22:13,000
it's kevin visit from cfb see radio in

957
01:22:17,790 --> 01:22:14,890
saint john new brunswick dr. Bondar if

958
01:22:31,010 --> 01:22:17,800
you could tell us what's been the most

959
01:22:35,550 --> 01:22:34,170
everybody has a lot of experience in

960
01:22:37,680 --> 01:22:35,560
spaceflight and they've been able to

961
01:22:40,440 --> 01:22:37,690
help me a lot but for me the most

962
01:22:42,360 --> 01:22:40,450
difficult thing has to learn how to

963
01:22:44,970 --> 01:22:42,370

secure yourselves i think it took a

964

01:22:46,620 --> 01:22:44,980

couple of days for me to be able to get

965

01:22:49,020 --> 01:22:46,630

the hang of going between these space

966

01:22:51,060 --> 01:22:49,030

lab and the mid-deck through the tunnel

967

01:22:53,729 --> 01:22:51,070

without becoming a totally disoriented

968

01:22:56,370 --> 01:22:53,739

it's kind of a beautiful feeling to come

969

01:22:57,690 --> 01:22:56,380

up from the mid back into the space lab

970

01:22:59,790 --> 01:22:57,700

and you think you're in that direction

971

01:23:01,800 --> 01:22:59,800

you pop up into the space lab and speak

972

01:23:08,220 --> 01:23:01,810

though you're upside down with reference

973

01:23:09,600 --> 01:23:08,230

to verticals that we learned on Stephen

974

01:23:12,930 --> 01:23:09,610

Straus from The Globe and Mail newspaper

975

01:23:15,000 --> 01:23:12,940

in Toronto this is for dr. Bondar I know

976

01:23:17,610 --> 01:23:15,010

you're working on a book with your

977

01:23:21,450 --> 01:23:17,620

sister about the the science of the IML

978

01:23:25,110 --> 01:23:21,460

mission what will you put in the book

979

01:23:32,720 --> 01:23:25,120

now or emphasize having actually flown

980

01:23:39,000 --> 01:23:36,479

the rigorous dose and a very edori on

981

01:23:41,610 --> 01:23:39,010

tape about some of the the absence of

982

01:23:43,740 --> 01:23:41,620

doing science space some of the things

983

01:23:45,630 --> 01:23:43,750

that we need to not only tell her the

984

01:23:48,740 --> 01:23:45,640

young people who are hopeful will read

985

01:23:51,410 --> 01:23:48,750

the book but also outside of food

986

01:23:53,630 --> 01:23:51,420

want to put on experiments safelite I

987

01:23:55,760 --> 01:23:53,640

also would like to put a little bit more

988

01:23:57,680 --> 01:23:55,770

about really living up here because it

989

01:24:00,140 --> 01:23:57,690

is part we've had a good time together

990

01:24:02,840 --> 01:24:00,150

and a lot of our little tricks that you

991

01:24:05,360 --> 01:24:02,850

learned up here and a lot of experience

992

01:24:07,520 --> 01:24:05,370

that you gave mother's terms of time to

993

01:24:11,810 --> 01:24:07,530

make this a wonderful time at which to

994

01:24:13,340 --> 01:24:11,820

live for dr. von der eaves savory a

995

01:24:14,540 --> 01:24:13,350

Canadian Broadcasting Corporation the

996

01:24:15,740 --> 01:24:14,550

question that you were asked in French

997

01:24:18,200 --> 01:24:15,750

dr. Banda you had said it was the

998

01:24:24,470 --> 01:24:18,210

biggest open book exam of your life how

999

01:24:26,420 --> 01:24:24,480

has that played out well it was not an

1000

01:24:29,990 --> 01:24:26,430

underestimation let me tell you when you

1001

01:24:31,550 --> 01:24:30,000

first start up for me here in the space

1002

01:24:33,530 --> 01:24:31,560

lab we first started up the courage to

1003

01:24:35,600 --> 01:24:33,540

expand that few work with sweaty palms

1004

01:24:37,580 --> 01:24:35,610

because you know how much work decided

1005

01:24:39,830 --> 01:24:37,590

to put into putting experiments together

1006

01:24:41,630 --> 01:24:39,840

we only hope that the data that they're

1007

01:24:44,210 --> 01:24:41,640

going to get back from this space

1008

01:24:45,890 --> 01:24:44,220

mission will be reflective of all are

1009

01:24:49,220 --> 01:24:45,900

carrying an effort that we put in up

1010

01:24:50,990 --> 01:24:49,230

here sir terms of all the other exam I

1011

01:24:55,280 --> 01:24:51,000

love them when we get back with all we

1012

01:24:58,160 --> 01:24:55,290

all get our phrase my question will be

1013

01:25:02,240 --> 01:24:58,170

directed to dr. Bondar my name is rheal

1014

01:25:05,150 --> 01:25:02,250

de mudar Raju kannada Roberta Mousavi

1015

01:25:08,290 --> 01:25:05,160

that skips a repetir is experience of

1016

01:25:34,959 --> 01:25:08,300

tear found on tourism the saucer pass

1017

01:25:40,760 --> 01:25:38,000

Roberta Bonjour who's a very petty

1018

01:25:43,729 --> 01:25:40,770

pondered dues haces experienced on

1019

01:25:54,399 --> 01:25:43,739

Spacelab e co Marshalls Space Center s

1020

01:26:01,340 --> 01:25:58,850

possible Madonna stars that the critical

1021

01:26:05,229 --> 01:26:01,350

skills absorb is extending our solid

1022

01:26:08,030 --> 01:26:05,239

Empire to the urgent Oh forgive her

1023

01:26:10,629 --> 01:26:08,040

whistle you need a book to the time for

1024

01:26:16,640 --> 01:26:10,639

thirties experience Dallas paths I could

1025

01:26:20,030 --> 01:26:16,650

simplify a battle my name is Klaus water

1026

01:26:22,399 --> 01:26:20,040

I'm asking welcome it for zdf German TV

1027

01:26:25,310 --> 01:26:22,409

if I first would like to ask you in

1028

01:26:27,500 --> 01:26:25,320

English and switched to German after

1029

01:26:29,680 --> 01:26:27,510

your first space flight you spoke of the

1030

01:26:32,810 --> 01:26:29,690

vulnerability of the planet earth now

1031

01:26:35,390 --> 01:26:32,820

well back into space what do you think

1032

01:26:38,030 --> 01:26:35,400

how can we on earth get profit out of

1033

01:26:42,260 --> 01:26:38,040

the space and the conditions you found

1034

01:26:44,300 --> 01:26:42,270

there you owe me based on four foot nom

1035

01:26:45,860 --> 01:26:44,310

with me about convenience of the air

1036

01:26:52,800 --> 01:26:45,870

today in that so pumped i'm also not

1037

01:27:02,940 --> 01:26:59,030

I think that it says no question that

1038

01:27:07,320 --> 01:27:02,950

space God from my perspective has a lot

1039

01:27:10,080 --> 01:27:07,330

of potential first of all we use pays as

1040

01:27:13,670 --> 01:27:10,090

a unique laboratory and do experiments

1041

01:27:16,980 --> 01:27:13,680

in all different scientific areas

1042

01:27:19,020 --> 01:27:16,990

there's observation the designs life

1043

01:27:23,040 --> 01:27:19,030

sciences and born and all the knowledge

1044

01:27:25,910 --> 01:27:23,050

came there will help do a make life on

1045

01:27:31,290 --> 01:27:25,920

Earth better in addition spaceflight

1046

01:27:34,730 --> 01:27:31,300

requires that they hijacked approaches

1047

01:27:38,070 --> 01:27:34,740

that reason technology is stimulated and

1048

01:27:40,590 --> 01:27:38,080

clapping example of this kind is the

1049

01:27:43,200 --> 01:27:40,600

Apollo program I think Jerry stimulated

1050

01:27:45,840 --> 01:27:43,210

tremendously the development of the

1051

01:27:51,720 --> 01:27:45,850

integrated dick words because only very

1052

01:27:55,380 --> 01:27:51,730

powerful but night and very reliable

1053

01:27:58,320 --> 01:27:55,390

computers a lot them the Americans to

1054

01:28:00,240 --> 01:27:58,330

fly to the moon in addition there's also

1055

01:28:02,670 --> 01:28:00,250

philosophical dimension it's for the

1056

01:28:05,550 --> 01:28:02,680

first time in human history that we have

1057

01:28:08,720 --> 01:28:05,560

the means an end to leave the planet and

1058

01:28:11,430 --> 01:28:08,730

I think that will change our views and

1059

01:28:15,240 --> 01:28:11,440

therefore there's no question in my mind

1060

01:28:17,070 --> 01:28:15,250

that space life is of course and it

1061

01:28:22,710 --> 01:28:17,080

would be a tremendous mistake not to do

1062

01:28:24,690 --> 01:28:22,720

it this is Daria Robinson of the

1063

01:28:27,210 --> 01:28:24,700

European Space Agency I have questions

1064

01:28:29,550 --> 01:28:27,220

out from our press watching you directly

1065

01:28:31,650 --> 01:28:29,560

from Europe the first one from Pete's

1066

01:28:35,340 --> 01:28:31,660

moldos Dutch space rider of Baja

1067

01:28:37,470 --> 01:28:35,350

television wolf almost ten years ago you

1068

01:28:38,910 --> 01:28:37,480

made your first base flight is there a

1069

01:28:42,180 --> 01:28:38,920

distinct difference between your

1070

01:28:44,460 --> 01:28:42,190

personal experience then and now from a

1071

01:28:49,950 --> 01:28:44,470

psychological and physiological point of

1072

01:28:53,700 --> 01:28:49,960

view now that is the space I was eight

1073

01:28:59,520 --> 01:28:53,710

years ago I think I made years older

1074

01:29:07,330 --> 01:29:03,310

vitra Sherman Dutch space editor paso

1075

01:29:10,299 --> 01:29:07,340

nice fancy coupon what to Tehran gravy

1076

01:29:13,089 --> 01:29:10,309

what has been the most exciting and

1077

01:29:22,629 --> 01:29:13,099

unexpected event during this IML mission

1078

01:29:24,310 --> 01:29:22,639

so far the most exciting of them blank

1079

01:29:26,589 --> 01:29:24,320

space what I think really has to be the

1080

01:29:28,479 --> 01:29:26,599

SFA's the first date man and it's you're

1081

01:29:31,029 --> 01:29:28,489

really at the focal point of the

1082

01:29:32,500 --> 01:29:31,039

unleashing of a lot of power and that is

1083

01:29:33,580 --> 01:29:32,510

what happens that's that that's so got

1084

01:29:38,259 --> 01:29:33,590

to be the most exciting thing that

1085

01:29:41,830 --> 01:29:38,269

you're going to experience television

1086

01:29:43,870 --> 01:29:41,840

again with me about do you think that in

1087

01:29:46,659 --> 01:29:43,880

your opinion should space exploration

1088

01:29:48,609 --> 01:29:46,669

continuing national programs or do you

1089

01:29:51,699 --> 01:29:48,619

see any chance to get more cooperation

1090

01:29:57,790 --> 01:29:51,709

instead of more competition even through

1091

01:30:01,629 --> 01:29:57,800

the cost will be reduced my mind is very

1092

01:30:03,850 --> 01:30:01,639

i'm in favor of corporation and i think

1093

01:30:08,799 --> 01:30:03,860

the others life decide we are on right

1094

01:30:11,290 --> 01:30:08,809

now is a classic example for cooperative

1095

01:30:14,229 --> 01:30:11,300

program because we have an international

1096

01:30:16,929 --> 01:30:14,239

crew we have experiments from many

1097

01:30:21,580 --> 01:30:16,939

different nations and i think that that

1098

01:30:24,669 --> 01:30:21,590

is the way to do it 1010 deutsch

1099

01:30:26,739 --> 01:30:24,679

invention in zone bedroom politic most

1100

01:30:28,479 --> 01:30:26,749

murphy debate on politically for

1101
01:30:36,969 --> 01:30:28,489
shoulders veterans in deutschland of the

1102
01:30:41,169 --> 01:30:36,979
unit vigabatrin ja ja ja politically Nia

1103
01:30:43,839 --> 01:30:41,179
the divers will draw in restore

1104
01:30:48,729 --> 01:30:43,849
international epithelium unbearable

1105
01:30:50,709 --> 01:30:48,739
cabin another question for Earth from

1106
01:30:53,799 --> 01:30:50,719
health who passed from home fat info

1107
01:30:56,169 --> 01:30:53,809
Dean's after your second experience in

1108
01:30:57,819 --> 01:30:56,179
space what advice do you give to future

1109
01:31:09,359 --> 01:30:57,829
colleagues who will be exposed on

1110
01:31:14,279 --> 01:31:12,299
well I think I'm not really in the

1111
01:31:18,569 --> 01:31:14,289
position to give good advice because

1112
01:31:20,939 --> 01:31:18,579
then if i'm lucky i will spend 18 days

1113
01:31:25,169 --> 01:31:20,949

in orbit which is not a very long period

1114

01:31:32,850 --> 01:31:25,179

of time I think the best people to give

1115

01:31:34,619 --> 01:31:32,860

advice I've washed with bas bahu is Eden

1116

01:31:40,429 --> 01:31:34,629

gets the worst winter sheet in King's

1117

01:31:43,949 --> 01:31:40,439

apps to give an ostomy soon the

1118

01:31:46,939 --> 01:31:43,959

absorptivity resolving the upgrade my

1119

01:31:50,279 --> 01:31:46,949

subscribers are bachatazo mizoram

1120

01:31:56,069 --> 01:31:50,289

subscribe our intranet Rivera Tina

1121

01:31:57,959 --> 01:31:56,079

deprive this is brian recruiter with the

1122

01:32:00,419 --> 01:31:57,969

CBS television affiliate in huntsville

1123

01:32:01,979 --> 01:32:00,429

alabama this is for any of the crew

1124

01:32:04,109 --> 01:32:01,989

members who have been experiencing the

1125

01:32:05,790 --> 01:32:04,119

sickness and the rotating chair did you

1126
01:32:08,369 --> 01:32:05,800
have that problem when you attempt at

1127
01:32:10,020 --> 01:32:08,379
the rotating chair on earth and why do

1128
01:32:19,480 --> 01:32:10,030
you suppose you are experiencing the

1129
01:32:27,320 --> 01:32:22,700
okay well somehow I managed to get this

1130
01:32:29,930 --> 01:32:27,330
one's the the rotating chair can be a

1131
01:32:31,880 --> 01:32:29,940
challenge at times but I think in

1132
01:32:34,460 --> 01:32:31,890
general we've been able to to get

1133
01:32:36,260 --> 01:32:34,470
through most of it a lot of folks

1134
01:32:37,790 --> 01:32:36,270
probably about two-thirds of folks are a

1135
01:32:40,100 --> 01:32:37,800
little bit queasy on the first couple of

1136
01:32:42,590 --> 01:32:40,110
days anytime you're doing any unique

1137
01:32:44,420 --> 01:32:42,600
motion it tends to exacerbate it the

1138
01:32:46,430 --> 01:32:44,430

chair induces motions so as you might

1139

01:32:50,210 --> 01:32:46,440

understand it also exacerbates an

1140

01:32:51,860 --> 01:32:50,220

equation as you're having I'm Kerry

1141

01:32:53,450 --> 01:32:51,870

Martin from the NBC affiliate here in

1142

01:32:55,010 --> 01:32:53,460

Huntsville Alabama Lieutenant Colonel

1143

01:33:00,490 --> 01:32:55,020

David Hill murs i read that you've

1144

01:33:05,000 --> 01:33:00,500

become fairly relaxed in this nauseating

1145

01:33:06,530 --> 01:33:05,010

motion experience experiment what is

1146

01:33:09,310 --> 01:33:06,540

your mindset going into some of these

1147

01:33:11,780 --> 01:33:09,320

experience experiments are you

1148

01:33:13,520 --> 01:33:11,790

personally and genuinely interested or

1149

01:33:15,380 --> 01:33:13,530

is it more like a giant playground where

1150

01:33:17,840 --> 01:33:15,390

you get play with the toys and do you

1151

01:33:36,810 --> 01:33:17,850

leave the interpretation for the doctors

1152

01:33:41,649 --> 01:33:39,040

okay I'm not sure I heard all the

1153

01:33:43,930 --> 01:33:41,659

questions there's something about me

1154

01:33:48,029 --> 01:33:43,940

being relaxed going to the experiments I