
AGENCY
HONOR
AWARDS
AGENCY
HONOR

1
00:00:06,630 --> 00:00:04,870
good afternoon

2
00:00:08,790 --> 00:00:06,640
my name is dennis woodfort ii from

3
00:00:10,870 --> 00:00:08,800
goddard space flight center and i'm your

4
00:00:13,270 --> 00:00:10,880
masters of ceremony for today

5
00:00:15,190 --> 00:00:13,280
i would like to welcome you to the 2013

6
00:00:16,950 --> 00:00:15,200
agency honor awards

7
00:00:18,950 --> 00:00:16,960
this annual awards ceremony is an

8
00:00:21,670 --> 00:00:18,960
opportunity for us to come together to

9
00:00:23,670 --> 00:00:21,680
honor nasa's best of the best

10
00:00:25,590 --> 00:00:23,680
before we begin please rise for the

11
00:00:27,349 --> 00:00:25,600
presentation of the colors

12
00:00:29,429 --> 00:00:27,359
by the military district of washington's

13
00:00:31,109 --> 00:00:29,439

joint armed forces color guard

14
00:00:32,870 --> 00:00:31,119
and please remain standing during the

15
00:00:47,110 --> 00:00:32,880
performance of the national anthem by

16
00:00:47,120 --> 00:01:09,100
uh

17
00:01:24,830 --> 00:01:10,789
[Music]

18
00:01:27,429 --> 00:01:26,469
oh say

19
00:01:28,310 --> 00:01:27,439
can

20
00:01:30,390 --> 00:01:28,320
you

21
00:01:36,230 --> 00:01:30,400
see

22
00:01:41,590 --> 00:01:37,550
what's so

23
00:01:46,789 --> 00:01:41,600
proudly we

24
00:01:52,149 --> 00:01:46,799
at the twilight's last gleaming

25
00:01:53,870 --> 00:01:52,159
who's brought stripes and bright stars

26
00:01:57,270 --> 00:01:53,880
through the

27
00:01:58,510 --> 00:01:57,280
perilous fight

28
00:02:00,749 --> 00:01:58,520
or the

29
00:02:02,469 --> 00:02:00,759
ramparts we

30
00:02:04,460 --> 00:02:02,479
watched

31
00:02:06,830 --> 00:02:04,470
were so gallantly

32
00:02:10,550 --> 00:02:06,840
[Music]

33
00:02:12,869 --> 00:02:10,560
streaming and the rocket's

34
00:02:15,430 --> 00:02:12,879
red glare

35
00:02:17,830 --> 00:02:15,440
the bombs bursting

36
00:02:23,350 --> 00:02:17,840
in air

37
00:02:28,550 --> 00:02:23,360
gave proof through the night

38
00:02:30,229 --> 00:02:28,560

that our flag was still there

39
00:02:34,550 --> 00:02:30,239
oh say

40
00:02:40,600 --> 00:02:34,560
does that star-spangled

41
00:02:40,610 --> 00:02:45,750
[Music]

42
00:02:45,760 --> 00:02:48,869
free

43
00:02:53,270 --> 00:02:50,710
and

44
00:02:56,150 --> 00:02:53,280
the home

45
00:03:01,910 --> 00:02:56,160
of the

46
00:03:01,920 --> 00:03:10,309
right older

47
00:03:10,319 --> 00:03:17,990
ready

48
00:03:18,000 --> 00:03:20,710
pot

49
00:03:33,670 --> 00:03:22,070
hot

50
00:03:33,680 --> 00:03:40,630
please be seated

51
00:03:44,149 --> 00:03:42,309
i would like to extend our appreciation

52
00:03:46,070 --> 00:03:44,159
to the military district of washington's

53
00:03:47,830 --> 00:03:46,080
color joint armed forces color guard and

54
00:03:49,670 --> 00:03:47,840
to amiga jones for outstanding

55
00:03:57,429 --> 00:03:49,680
performance let's give them a big round

56
00:04:01,270 --> 00:03:59,270
at this time i would like to invite our

57
00:04:09,030 --> 00:04:01,280
deputy administrator miss lori garver to

58
00:04:15,589 --> 00:04:10,630
thank you

59
00:04:18,390 --> 00:04:15,599
great to be here for our 2013

60
00:04:21,110 --> 00:04:18,400
headquarters honor awards we are we're

61
00:04:23,590 --> 00:04:21,120
here to thank all of you and to show our

62
00:04:26,070 --> 00:04:23,600
appreciation for the amazing work that

63
00:04:28,550 --> 00:04:26,080

you have done carrying out what has been

64
00:04:29,590 --> 00:04:28,560
a tremendous year of accomplishment

65
00:04:32,790 --> 00:04:29,600
really

66
00:04:34,870 --> 00:04:32,800
unmatched as we go about delivering on

67
00:04:37,030 --> 00:04:34,880
the promise that we have

68
00:04:39,909 --> 00:04:37,040
made with the american public the

69
00:04:42,469 --> 00:04:39,919
incredible achievements across all of

70
00:04:44,870 --> 00:04:42,479
our activities from human space flight

71
00:04:47,510 --> 00:04:44,880
the international space station uh to

72
00:04:50,710 --> 00:04:47,520
our aeronautics programs our earth and

73
00:04:53,189 --> 00:04:50,720
space science programs and our ability

74
00:04:55,350 --> 00:04:53,199
to help communicate and educate the

75
00:04:57,030 --> 00:04:55,360
public about all that we're doing so

76
00:04:59,590 --> 00:04:57,040
we're here to

77
00:05:01,670 --> 00:04:59,600
show our appreciation and also for some

78
00:05:04,150 --> 00:05:01,680
inspiration and i can think of no better

79
00:05:07,110 --> 00:05:04,160
way to start than that video and that

80
00:05:08,950 --> 00:05:07,120
amazing rendition from miss jones and

81
00:05:11,749 --> 00:05:08,960
now for our

82
00:05:14,390 --> 00:05:11,759
keynote speaker who is

83
00:05:16,390 --> 00:05:14,400
someone who is part of the nasa family

84
00:05:19,590 --> 00:05:16,400
and it's my privilege to introduce so dr

85
00:05:21,430 --> 00:05:19,600
charles alachi is the director of jpl he

86
00:05:24,150 --> 00:05:21,440
has been the director of the jet

87
00:05:26,390 --> 00:05:24,160
propulsion lab for 12 years

88
00:05:28,230 --> 00:05:26,400

as far as i can tell the very longest

89
00:05:29,990 --> 00:05:28,240
serving of our

90
00:05:31,430 --> 00:05:30,000
leaders of our

91
00:05:33,590 --> 00:05:31,440
facilities since i know you're not

92
00:05:36,390 --> 00:05:33,600
officially a center

93
00:05:38,469 --> 00:05:36,400
the accomplishments of you and of jpl

94
00:05:42,070 --> 00:05:38,479
during your tenure are

95
00:05:44,070 --> 00:05:42,080
unmatched you play a role in so much

96
00:05:45,749 --> 00:05:44,080
of what we do

97
00:05:47,670 --> 00:05:45,759
we are celebrating about to celebrate

98
00:05:50,390 --> 00:05:47,680
the year's anniversary of the curiosity

99
00:05:52,710 --> 00:05:50,400
landing and i know that people have

100
00:05:54,070 --> 00:05:52,720
seen that as one of the pinnacle events

101
00:05:58,469 --> 00:05:54,080
of the agency

102
00:06:01,510 --> 00:05:58,479
certainly over the last number of years

103
00:06:04,550 --> 00:06:01,520
charles is a true leader at jpl granted

104
00:06:07,430 --> 00:06:04,560
he has a little more license not being a

105
00:06:09,909 --> 00:06:07,440
center and a federal workplace than the

106
00:06:11,749 --> 00:06:09,919
rest of us and i know we look with envy

107
00:06:14,230 --> 00:06:11,759
at their ability to

108
00:06:16,629 --> 00:06:14,240
innovate in many areas especially in

109
00:06:18,469 --> 00:06:16,639
public outreach but we take credit for

110
00:06:20,469 --> 00:06:18,479
it all i have

111
00:06:23,189 --> 00:06:20,479
i'm sure you do not need

112
00:06:26,550 --> 00:06:23,199
um to be reminded that we do you bring

113
00:06:27,990 --> 00:06:26,560

an energy to this job that uh after 12

114
00:06:31,350 --> 00:06:28,000
years i find

115
00:06:33,189 --> 00:06:31,360
just incredible uh your ability to

116
00:06:36,390 --> 00:06:33,199
communicate within your own workforce

117
00:06:38,790 --> 00:06:36,400
but beyond and out innovating the rest

118
00:06:39,909 --> 00:06:38,800
of the world in technology and science

119
00:06:41,350 --> 00:06:39,919
earth and

120
00:06:43,510 --> 00:06:41,360
space science

121
00:06:45,430 --> 00:06:43,520
as well as in education and public

122
00:06:49,029 --> 00:06:45,440
outreach is something that we owe you a

123
00:06:51,430 --> 00:06:49,039
great debt of gratitude for you have a

124
00:06:54,870 --> 00:06:51,440
professional career prior to your time

125
00:06:55,749 --> 00:06:54,880
uh in this job primarily at jpl for 43

126
00:06:56,950 --> 00:06:55,759
years

127
00:07:00,469 --> 00:06:56,960
and

128
00:07:02,710 --> 00:07:00,479
it is really a testament to all of you

129
00:07:05,350 --> 00:07:02,720
you selected him as our keynote speaker

130
00:07:07,350 --> 00:07:05,360
today and i can't wait to hear what you

131
00:07:16,309 --> 00:07:07,360
have to say please help me welcome dr

132
00:07:20,790 --> 00:07:18,870
thank you lori and i'm glad she said the

133
00:07:22,710 --> 00:07:20,800
longest serving director not the oldest

134
00:07:23,510 --> 00:07:22,720
serving director so i really appreciate

135
00:07:24,790 --> 00:07:23,520
that

136
00:07:27,029 --> 00:07:24,800
uh first i want to tell you i'm

137
00:07:29,350 --> 00:07:27,039
extremely honored to be part of the

138
00:07:31,029 --> 00:07:29,360

event here you know seeing the people

139
00:07:33,510 --> 00:07:31,039
that we work with all the time and the

140
00:07:35,909 --> 00:07:33,520
accomplishment you have done

141
00:07:38,390 --> 00:07:35,919
as was mentioned in the last summer we

142
00:07:41,589 --> 00:07:38,400
all showed the world what amazing things

143
00:07:43,990 --> 00:07:41,599
our agency can do by landing a mars a

144
00:07:46,469 --> 00:07:44,000
car-sized rover on mars and that was

145
00:07:48,469 --> 00:07:46,479
just one example of what our agency you

146
00:07:51,270 --> 00:07:48,479
know does

147
00:07:53,510 --> 00:07:51,280
and it was not only about the science

148
00:07:55,270 --> 00:07:53,520
and the engineering but it also was

149
00:07:57,189 --> 00:07:55,280
about the human spirit

150
00:07:59,430 --> 00:07:57,199
you know of how do we work as a team and

151
00:08:01,749 --> 00:07:59,440
what our country can accomplish you know

152
00:08:04,070 --> 00:08:01,759
when we put our mind to it and and we

153
00:08:06,390 --> 00:08:04,080
work as a team and i have to tell you we

154
00:08:08,150 --> 00:08:06,400
have inspired literally all you have

155
00:08:09,589 --> 00:08:08,160
inspired tens of millions of people

156
00:08:12,230 --> 00:08:09,599
around the world

157
00:08:13,909 --> 00:08:12,240
and i tell you if even that the landing

158
00:08:15,430 --> 00:08:13,919
was the most exciting thing you know

159
00:08:17,430 --> 00:08:15,440
charlie and i were sitting next to each

160
00:08:19,110 --> 00:08:17,440
other but what i found particularly

161
00:08:20,869 --> 00:08:19,120
rewarding is after

162
00:08:23,270 --> 00:08:20,879
you know all the emails

163
00:08:25,110 --> 00:08:23,280

that i got from people i never heard of

164
00:08:28,629 --> 00:08:25,120
you know before and every email had the

165
00:08:30,950 --> 00:08:28,639
word inspired uplifted proud odd

166
00:08:33,909 --> 00:08:30,960
brings the best of us so

167
00:08:36,230 --> 00:08:33,919
so it is in a way

168
00:08:37,190 --> 00:08:36,240
each and every one of you in one way or

169
00:08:39,110 --> 00:08:37,200
another

170
00:08:41,269 --> 00:08:39,120
have helped make this mission successful

171
00:08:42,949 --> 00:08:41,279
and this event happened so you all

172
00:08:45,350 --> 00:08:42,959
touched it in one way or another either

173
00:08:47,509 --> 00:08:45,360
by cheering for it or by actually

174
00:08:49,670 --> 00:08:47,519
funding it if you're at headquarter or

175
00:08:51,509 --> 00:08:49,680
by participating like with our friends

176
00:08:53,430 --> 00:08:51,519
at langley who are really critical for

177
00:08:55,670 --> 00:08:53,440
us to really make a successful entry

178
00:08:58,870 --> 00:08:55,680
descent you know and landing you know on

179
00:09:00,790 --> 00:08:58,880
mars so what i'm going to start by is to

180
00:09:02,710 --> 00:09:00,800
pump you up a little bit

181
00:09:03,750 --> 00:09:02,720
i'm going to show a video which i've

182
00:09:06,949 --> 00:09:03,760
seen

183
00:09:08,550 --> 00:09:06,959
500 times 600 times already and every

184
00:09:11,350 --> 00:09:08,560
time i see it i can tell you my

185
00:09:13,350 --> 00:09:11,360
heartbeat goes up by 50 percent and even

186
00:09:15,430 --> 00:09:13,360
my cardiologist is getting worried about

187
00:09:17,030 --> 00:09:15,440
me watching this this video but i

188
00:09:17,829 --> 00:09:17,040

thought it's something which really show

189
00:09:20,070 --> 00:09:17,839
you

190
00:09:22,040 --> 00:09:20,080
what our agency does so if we can start

191
00:09:31,270 --> 00:09:22,050
with the video

192
00:09:37,190 --> 00:09:33,269
[Music]

193
00:09:39,350 --> 00:09:37,200
that great things take

194
00:09:41,670 --> 00:09:39,360
many people working together to make

195
00:09:43,990 --> 00:09:41,680
them happen is one of the fantastic

196
00:09:45,750 --> 00:09:44,000
things of human existence

197
00:09:47,269 --> 00:09:45,760
not only we've driven the rover we've

198
00:09:49,110 --> 00:09:47,279
moved its arm put it all through its

199
00:09:51,110 --> 00:09:49,120
paces but it's been in a thermal vacuum

200
00:09:53,269 --> 00:09:51,120
chamber and kept very cold

201
00:09:55,670 --> 00:09:53,279
parts of it have been a centrifuge

202
00:09:58,790 --> 00:09:55,680
we've done drop tests pull tests drive

203
00:10:00,470 --> 00:09:58,800
tests load tests stress tests

204
00:10:02,550 --> 00:10:00,480
just an amazing amount of testing this

205
00:10:04,150 --> 00:10:02,560
vehicle has gone through we've tried

206
00:10:06,310 --> 00:10:04,160
every way of operating at the vehicle

207
00:10:08,790 --> 00:10:06,320
using the software literally thousands

208
00:10:09,990 --> 00:10:08,800
and thousands of hours of software

209
00:10:12,870 --> 00:10:10,000
testing

210
00:10:15,509 --> 00:10:12,880
it's been just a an amazing several

211
00:10:17,430 --> 00:10:15,519
years really of constant testing and

212
00:10:18,949 --> 00:10:17,440
development finding problems fixing

213
00:10:20,069 --> 00:10:18,959

those problems and going on to the next

214
00:10:23,430 --> 00:10:20,079
problem

215
00:10:28,389 --> 00:10:26,710
lc this is the ld on channel one lc you

216
00:10:30,550 --> 00:10:28,399
have permission to launch

217
00:10:32,230 --> 00:10:30,560
roger we're sitting with the count

218
00:10:33,110 --> 00:10:32,240
t-minus 10

219
00:10:37,910 --> 00:10:33,120
9

220
00:10:39,910 --> 00:10:38,949
three

221
00:10:40,949 --> 00:10:39,920
two

222
00:10:44,870 --> 00:10:40,959
one

223
00:10:48,550 --> 00:10:44,880
main engine start zero and liftoff of

224
00:10:51,030 --> 00:10:48,560
the atlas 5 with curiosity seeking clues

225
00:10:56,710 --> 00:10:51,040
to the planetary puzzle about life on

226
00:10:59,829 --> 00:10:58,310
am i confident that she's going to go

227
00:11:01,350 --> 00:10:59,839
and she's going to be successful

228
00:11:07,590 --> 00:11:01,360
absolutely

229
00:11:07,600 --> 00:11:14,310
things are looking good

230
00:11:17,990 --> 00:11:16,230
entry interface

231
00:11:19,509 --> 00:11:18,000
at this time it'll begin pressurizing

232
00:11:21,590 --> 00:11:19,519
the propulsion system to increase the

233
00:11:22,630 --> 00:11:21,600
thrust of the system uh we'll use that

234
00:11:30,230 --> 00:11:22,640
for all the maneuvering in the

235
00:11:37,269 --> 00:11:32,069
we're standing by for guidance start

236
00:11:42,389 --> 00:11:39,750
we are beginning to feel the atmosphere

237
00:11:44,230 --> 00:11:42,399
as we go in here

238
00:11:46,310 --> 00:11:44,240

vehicles just reported via tones that it

239
00:11:47,910 --> 00:11:46,320
has started guided entry

240
00:11:50,710 --> 00:11:47,920
at this time the vehicle is beginning to

241
00:11:53,750 --> 00:11:50,720
steer its way to the target

242
00:11:56,470 --> 00:11:53,760
we have seen peak deceleration

243
00:11:59,350 --> 00:11:56,480
that is starting first bank reversal we

244
00:12:01,590 --> 00:11:59,360
should have parachute deploy around 1.7

245
00:12:03,690 --> 00:12:01,600
the parachute is deployed

246
00:12:06,629 --> 00:12:03,700
we are decelerating

247
00:12:07,910 --> 00:12:06,639
[Applause]

248
00:12:09,430 --> 00:12:07,920
has separated where we found the ground

249
00:12:12,629 --> 00:12:09,440
expands standing by for bachelor

250
00:12:15,990 --> 00:12:14,310
we are empowered white we're an altitude

251
00:12:17,509 --> 00:12:16,000
of one kilometer descending standing by

252
00:12:26,629 --> 00:12:17,519
for skype

253
00:12:26,639 --> 00:12:34,570
touchdown

254
00:12:34,580 --> 00:12:44,430
[Music]

255
00:12:46,620 --> 00:12:46,420
[Applause]

256
00:12:47,750 --> 00:12:46,630
[Music]

257
00:12:50,310 --> 00:12:47,760
[Applause]

258
00:12:52,389 --> 00:12:50,320
what a fantastic demonstration of what

259
00:12:53,750 --> 00:12:52,399
our nation and our agency

260
00:12:55,750 --> 00:12:53,760
can do

261
00:12:58,069 --> 00:12:55,760
i could only think of the words of teddy

262
00:13:00,069 --> 00:12:58,079
roosevelt as i was sitting there

263
00:13:02,470 --> 00:13:00,079

it is far better to their mighty things

264
00:13:04,470 --> 00:13:02,480
even though we might fail

265
00:13:06,870 --> 00:13:04,480
than to stay in the twilight that knows

266
00:13:10,150 --> 00:13:06,880
neither victory nor defeat

267
00:13:12,629 --> 00:13:10,160
and the team brought us victory

268
00:13:14,389 --> 00:13:12,639
today right now the wheels of curiosity

269
00:13:16,949 --> 00:13:14,399
have begun to blaze the trail for human

270
00:13:18,069 --> 00:13:16,959
footprints on mars this is an amazing

271
00:13:20,870 --> 00:13:18,079
achievement

272
00:13:22,949 --> 00:13:20,880
well today on mars history was made on

273
00:13:24,629 --> 00:13:22,959
earth the successful landing of

274
00:13:27,110 --> 00:13:24,639
curiosity

275
00:13:29,430 --> 00:13:27,120
marks what is really an unprecedented

276
00:13:32,550 --> 00:13:29,440
technological tour de force it will

277
00:13:35,110 --> 00:13:32,560
stand as an american point of pride far

278
00:13:37,430 --> 00:13:35,120
into the future we've got a long mission

279
00:13:39,110 --> 00:13:37,440
ahead of us and and because of that and

280
00:13:40,870 --> 00:13:39,120
the capabilities are over we have this

281
00:13:43,350 --> 00:13:40,880
possibility for just monumental science

282
00:13:44,949 --> 00:13:43,360
accomplishment

283
00:13:46,870 --> 00:13:44,959
within two months the team found an

284
00:13:48,949 --> 00:13:46,880
ancient riverbed evidence of flowing

285
00:13:51,430 --> 00:13:48,959
water we have found a habitable

286
00:13:53,829 --> 00:13:51,440
environment that is so benign and

287
00:13:55,910 --> 00:13:53,839
supportive of life that probably if this

288
00:13:57,350 --> 00:13:55,920

water was around and you had been on the

289
00:14:01,470 --> 00:13:57,360
planet you would have been able to drink

290
00:14:01,480 --> 00:14:04,629
[Music]

291
00:14:10,470 --> 00:14:07,350
and i would say this agency make history

292
00:14:12,710 --> 00:14:10,480
every day and each one of you is part of

293
00:14:15,030 --> 00:14:12,720
that history that's being made i mean be

294
00:14:17,430 --> 00:14:15,040
it uh sometime i'm amazed when i think

295
00:14:19,910 --> 00:14:17,440
we've had human in space for 13 years

296
00:14:22,310 --> 00:14:19,920
continuous you know or 14 years by now

297
00:14:24,150 --> 00:14:22,320
you know on the space station by january

298
00:14:26,310 --> 00:14:24,160
we could say that our nation have been

299
00:14:27,350 --> 00:14:26,320
present on the surface of mars for a

300
00:14:28,870 --> 00:14:27,360
decade

301
00:14:30,550 --> 00:14:28,880
i mean that is amazing when you think

302
00:14:32,629 --> 00:14:30,560
about what you have actually

303
00:14:34,310 --> 00:14:32,639
accomplished so i thought what i would

304
00:14:35,990 --> 00:14:34,320
do is you know i can't do anything

305
00:14:38,069 --> 00:14:36,000
without showing some slides i guess

306
00:14:39,990 --> 00:14:38,079
that's part of my dna

307
00:14:41,590 --> 00:14:40,000
so i thought considering that mars is

308
00:14:43,990 --> 00:14:41,600
one of the major objectives of our

309
00:14:45,990 --> 00:14:44,000
agency to send a human to mars and

310
00:14:47,509 --> 00:14:46,000
knowing that many of you are very expert

311
00:14:49,030 --> 00:14:47,519
about mars but there are lots of young

312
00:14:51,430 --> 00:14:49,040
people and some of your family i thought

313
00:14:53,670 --> 00:14:51,440

i'd say a few words about mars and why

314
00:14:56,310 --> 00:14:53,680
it is an important place to be a goal

315
00:14:58,790 --> 00:14:56,320
for our nation you know to head toward

316
00:14:59,670 --> 00:14:58,800
now mars is some extent very similar to

317
00:15:02,310 --> 00:14:59,680
earth

318
00:15:04,150 --> 00:15:02,320
uh if you look at the land mass on mars

319
00:15:06,150 --> 00:15:04,160
it's the same as the land mass on earth

320
00:15:08,069 --> 00:15:06,160
if we take the oceans away you know

321
00:15:09,910 --> 00:15:08,079
three quarter is ocean and one quarter

322
00:15:11,189 --> 00:15:09,920
is land so the land mass on mars is

323
00:15:14,710 --> 00:15:11,199
about the same as you so it's a big

324
00:15:16,629 --> 00:15:14,720
place it has polar caps like our planet

325
00:15:18,870 --> 00:15:16,639
it has an atmosphere much thinner than

326
00:15:21,590 --> 00:15:18,880
our atmosphere but it has an atmosphere

327
00:15:23,509 --> 00:15:21,600
you know on it it's much colder

328
00:15:26,069 --> 00:15:23,519
the day is the same as the day here on

329
00:15:27,670 --> 00:15:26,079
earth it takes two years on mars or the

330
00:15:29,269 --> 00:15:27,680
year on mars is about two years on earth

331
00:15:31,829 --> 00:15:29,279
so it's not very different and it's one

332
00:15:33,430 --> 00:15:31,839
of the closest you know planets to us

333
00:15:35,189 --> 00:15:33,440
and let me show you a little bit more

334
00:15:36,550 --> 00:15:35,199
getting closer to mars white looks so

335
00:15:38,550 --> 00:15:36,560
much like earth if we go on the next

336
00:15:39,269 --> 00:15:38,560
slide

337
00:15:43,509 --> 00:15:39,279
if

338
00:15:45,030 --> 00:15:43,519

them is the grand canyon that we have in

339
00:15:46,389 --> 00:15:45,040
arizona and the other one is a grand

340
00:15:48,550 --> 00:15:46,399
canyon on mars

341
00:15:50,470 --> 00:15:48,560
so they look very similar so that said

342
00:15:52,470 --> 00:15:50,480
that the geologic activity are somewhat

343
00:15:55,110 --> 00:15:52,480
very similar between mars you know and

344
00:15:56,870 --> 00:15:55,120
earth if we go on the next slide

345
00:15:58,389 --> 00:15:56,880
if you look more in detail if you are on

346
00:16:00,389 --> 00:15:58,399
the surface in arizona and you look

347
00:16:02,710 --> 00:16:00,399
toward the grand canyon and see those

348
00:16:04,710 --> 00:16:02,720
layered rocks on the right hand side is

349
00:16:06,870 --> 00:16:04,720
a picture taken from opportunity in this

350
00:16:09,110 --> 00:16:06,880
case of a crater on mars and you see the

351
00:16:11,269 --> 00:16:09,120
same layering also that you see on mars

352
00:16:13,189 --> 00:16:11,279
so that says that the evolution of the

353
00:16:16,150 --> 00:16:13,199
geologies the deposits which have been

354
00:16:17,189 --> 00:16:16,160
put over millions of years also are very

355
00:16:19,430 --> 00:16:17,199
similar

356
00:16:22,069 --> 00:16:19,440
if we go on the next slide

357
00:16:23,670 --> 00:16:22,079
earth has volcanoes mars has volcanoes

358
00:16:25,829 --> 00:16:23,680
on the left hand side is the volcano in

359
00:16:27,910 --> 00:16:25,839
northern california on the right hand

360
00:16:30,150 --> 00:16:27,920
side is mount olympus on mars which is

361
00:16:32,629 --> 00:16:30,160
the largest structure in the solar

362
00:16:34,949 --> 00:16:32,639
system it's higher than mount everest so

363
00:16:36,790 --> 00:16:34,959

that clearly says that when that volcano

364
00:16:39,430 --> 00:16:36,800
formed there was a lot of volcanic

365
00:16:41,990 --> 00:16:39,440
activity happening on mars now today

366
00:16:43,590 --> 00:16:42,000
it's dead i mean it's not active so

367
00:16:45,189 --> 00:16:43,600
something happened and stopped that

368
00:16:46,949 --> 00:16:45,199
activity on mars and that's one of the

369
00:16:49,670 --> 00:16:46,959
things we're trying to understand but

370
00:16:51,590 --> 00:16:49,680
clearly at some past time it was very

371
00:16:53,430 --> 00:16:51,600
similar to earth volcanic activity was

372
00:16:55,749 --> 00:16:53,440
happening we found from spirit and

373
00:16:57,509 --> 00:16:55,759
opportunity and now from curiosity that

374
00:16:59,910 --> 00:16:57,519
actually there were oceans on mars

375
00:17:02,870 --> 00:16:59,920
similar to the ocean on earth so the key

376
00:17:04,789 --> 00:17:02,880
question is if mars is very similar to

377
00:17:07,110 --> 00:17:04,799
earth it has volcanoes it has canyon

378
00:17:09,350 --> 00:17:07,120
geologic phenomena are similar it had

379
00:17:11,829 --> 00:17:09,360
oceans in the past could have life

380
00:17:14,309 --> 00:17:11,839
started on it and if it did

381
00:17:15,669 --> 00:17:14,319
what happened to it what changed during

382
00:17:17,429 --> 00:17:15,679
that time and that's one of the key

383
00:17:19,510 --> 00:17:17,439
objective that we have in our

384
00:17:21,110 --> 00:17:19,520
exploration you know of that planet so

385
00:17:22,870 --> 00:17:21,120
if we go on the next slide

386
00:17:24,390 --> 00:17:22,880
and that's usually a test i give to my

387
00:17:26,470 --> 00:17:24,400
students at cal tech tell them guess

388
00:17:29,190 --> 00:17:26,480

which one is mars and which one is death

389
00:17:31,590 --> 00:17:29,200
valley you know or owens valley in

390
00:17:33,590 --> 00:17:31,600
california it's hard to tell

391
00:17:35,669 --> 00:17:33,600
so the point is that all these phenomena

392
00:17:38,070 --> 00:17:35,679
are very similar so the day one would be

393
00:17:40,230 --> 00:17:38,080
sending the first astronaut when she

394
00:17:42,150 --> 00:17:40,240
lands on mars she's going to look at it

395
00:17:43,590 --> 00:17:42,160
and it's going to look very familiar not

396
00:17:44,950 --> 00:17:43,600
familiar like if you are from the east

397
00:17:48,310 --> 00:17:44,960
coast but familiar if you are from

398
00:17:49,830 --> 00:17:48,320
arizona or nevada or or california

399
00:17:52,630 --> 00:17:49,840
on it so it really would be a very

400
00:17:56,470 --> 00:17:52,640
familiar place for us to expand our our

401
00:17:57,830 --> 00:17:56,480
uh humankind so for you on the next one

402
00:17:59,590 --> 00:17:57,840
and now let me tell you about some of

403
00:18:02,710 --> 00:17:59,600
the results which came from the rover

404
00:18:04,150 --> 00:18:02,720
that we have from uh from uh from uh

405
00:18:05,990 --> 00:18:04,160
curiosity

406
00:18:07,190 --> 00:18:06,000
these are very close picture taken of

407
00:18:10,070 --> 00:18:07,200
what we call

408
00:18:12,549 --> 00:18:10,080
uh sedimentary rocks or conglomerate if

409
00:18:14,549 --> 00:18:12,559
you are a geologist the one on the right

410
00:18:17,110 --> 00:18:14,559
is from earth here and you see these

411
00:18:18,710 --> 00:18:17,120
pebbles you know which are by kind of

412
00:18:20,710 --> 00:18:18,720
stuck together because they were formed

413
00:18:23,110 --> 00:18:20,720

at the bottom of a river and the river

414
00:18:24,470 --> 00:18:23,120
kind of around the rocks a little bit as

415
00:18:26,230 --> 00:18:24,480
they tumbled through the river so if you

416
00:18:27,669 --> 00:18:26,240
look in the creek you only see mostly

417
00:18:30,230 --> 00:18:27,679
rounded rocks

418
00:18:32,070 --> 00:18:30,240
on the left is a picture taken on mars

419
00:18:34,310 --> 00:18:32,080
which also indicate that actually the

420
00:18:36,150 --> 00:18:34,320
rock was formed in a similar way so

421
00:18:38,230 --> 00:18:36,160
actually we believe that this area where

422
00:18:40,390 --> 00:18:38,240
we landed was exactly where the river

423
00:18:42,470 --> 00:18:40,400
was flowing in the past and now it dried

424
00:18:44,630 --> 00:18:42,480
up and we are seeing the remnants in the

425
00:18:46,310 --> 00:18:44,640
rocks of it but more exciting if we go

426
00:18:47,830 --> 00:18:46,320
on the next slide

427
00:18:50,070 --> 00:18:47,840
we actually drilled

428
00:18:51,990 --> 00:18:50,080
through the surface of mars now

429
00:18:55,669 --> 00:18:52,000
everybody was concerned that the surface

430
00:18:57,190 --> 00:18:55,679
of mars is all red that mean it's rusted

431
00:18:58,710 --> 00:18:57,200
and therefore it's oxidized and

432
00:19:00,870 --> 00:18:58,720
therefore that's not very good for

433
00:19:03,590 --> 00:19:00,880
organic material well that's why you

434
00:19:05,430 --> 00:19:03,600
take antioxidant you know so oxidation

435
00:19:07,990 --> 00:19:05,440
is not very good so we were worried how

436
00:19:09,669 --> 00:19:08,000
how deep that oxidation went

437
00:19:11,669 --> 00:19:09,679
well fortunate or not as we start

438
00:19:13,750 --> 00:19:11,679

drilling literally within a fraction of

439
00:19:15,990 --> 00:19:13,760
an inch we start seeing that the gray

440
00:19:17,590 --> 00:19:16,000
dust coming out which is an indication

441
00:19:19,990 --> 00:19:17,600
that just below the surface things are

442
00:19:21,190 --> 00:19:20,000
not oxidized well the next step we take

443
00:19:23,190 --> 00:19:21,200
that sample and we put them in

444
00:19:25,510 --> 00:19:23,200
instrument built at goddard and did the

445
00:19:26,630 --> 00:19:25,520
analysis of that thing and i can tell

446
00:19:27,830 --> 00:19:26,640
you that

447
00:19:33,510 --> 00:19:27,840
every

448
00:19:34,390 --> 00:19:33,520
which is in your body actually exists on

449
00:19:36,070 --> 00:19:34,400
mars

450
00:19:37,990 --> 00:19:36,080
we have carbon you have nitrogen you

451
00:19:40,950 --> 00:19:38,000
have phosphate everything which forms

452
00:19:43,190 --> 00:19:40,960
our dna you find it on mars now i want

453
00:19:45,430 --> 00:19:43,200
to emphasize we have not found life

454
00:19:47,669 --> 00:19:45,440
but all the ingredients for life that

455
00:19:49,350 --> 00:19:47,679
are on earth you find them on mars so

456
00:19:51,029 --> 00:19:49,360
that clearly begs immediately the

457
00:19:52,710 --> 00:19:51,039
question you know if you had all the

458
00:19:54,549 --> 00:19:52,720
ingredients if you had water if the

459
00:19:56,549 --> 00:19:54,559
environment is very similar

460
00:19:58,470 --> 00:19:56,559
could have life evolved on mars and

461
00:20:01,110 --> 00:19:58,480
that's our goal that we're trying to

462
00:20:03,029 --> 00:20:01,120
accomplish in our program so let me go

463
00:20:04,549 --> 00:20:03,039

to the next slide

464
00:20:06,710 --> 00:20:04,559
and this is the area where we just

465
00:20:08,950 --> 00:20:06,720
finished you know exploring and i can

466
00:20:11,190 --> 00:20:08,960
tell you starting a week ago we are on a

467
00:20:13,029 --> 00:20:11,200
track now towards the hills where we are

468
00:20:14,870 --> 00:20:13,039
seeing layers you know of different

469
00:20:16,710 --> 00:20:14,880
strata and our intent over the next

470
00:20:18,630 --> 00:20:16,720
couple of years to climb over those

471
00:20:20,710 --> 00:20:18,640
hills and basically measure the

472
00:20:22,950 --> 00:20:20,720
composition at each different layer so

473
00:20:25,029 --> 00:20:22,960
that will tell us the history of what

474
00:20:26,390 --> 00:20:25,039
actually happened on mars over the last

475
00:20:27,909 --> 00:20:26,400
few billion years

476
00:20:30,149 --> 00:20:27,919
for you on the next slide so now let me

477
00:20:31,590 --> 00:20:30,159
talk about the engineering challenges

478
00:20:33,510 --> 00:20:31,600
clearly one of the most challenging

479
00:20:35,270 --> 00:20:33,520
thing is the entry descent and landing

480
00:20:37,590 --> 00:20:35,280
you know when when you land on another

481
00:20:40,390 --> 00:20:37,600
planet and here is in my mind the

482
00:20:42,470 --> 00:20:40,400
perfect team effort between jpl langley

483
00:20:45,110 --> 00:20:42,480
ames and a number of centers where we

484
00:20:46,870 --> 00:20:45,120
came up with these ingenious ways of how

485
00:20:49,190 --> 00:20:46,880
you land on another planet so on the

486
00:20:51,190 --> 00:20:49,200
left hand side is how we landed spirit

487
00:20:54,070 --> 00:20:51,200
and opportunity just come down and you

488
00:20:56,070 --> 00:20:54,080

inflate airbags you know wow that looks

489
00:20:57,590 --> 00:20:56,080
kind of crazy a little bit but that

490
00:21:00,310 --> 00:20:57,600
turned out engineering-wise that's the

491
00:21:02,070 --> 00:21:00,320
most elegant way of doing it but then

492
00:21:04,230 --> 00:21:02,080
when we move to curiosity because it's

493
00:21:06,230 --> 00:21:04,240
much bigger you know we couldn't use the

494
00:21:07,830 --> 00:21:06,240
airbags so here the engineers you know

495
00:21:10,870 --> 00:21:07,840
across nasa come up with this other

496
00:21:13,190 --> 00:21:10,880
crazy idea which is to do a skycrane

497
00:21:14,870 --> 00:21:13,200
and as you can as you know here at

498
00:21:16,950 --> 00:21:14,880
nasa's the crazier's idea is more

499
00:21:18,070 --> 00:21:16,960
attractive you know we fight about it

500
00:21:20,149 --> 00:21:18,080
because that's what we are in the

501
00:21:22,310 --> 00:21:20,159
business of pushing the limit and like

502
00:21:24,390 --> 00:21:22,320
one employees told me i mean the reason

503
00:21:26,070 --> 00:21:24,400
they like working at nasa as they get in

504
00:21:27,750 --> 00:21:26,080
the morning with their colleagues and

505
00:21:30,149 --> 00:21:27,760
they think about what's impossible and

506
00:21:31,909 --> 00:21:30,159
they go and do it that's what nasa is

507
00:21:33,909 --> 00:21:31,919
all about that's what all of you are you

508
00:21:36,390 --> 00:21:33,919
know all about and i'm sure people

509
00:21:38,149 --> 00:21:36,400
thought nasa we are crazy by when we say

510
00:21:39,750 --> 00:21:38,159
we're going to have humans in earth's

511
00:21:42,149 --> 00:21:39,760
orbit for a decade they said you guys

512
00:21:43,669 --> 00:21:42,159
are crazy well we have done it i'm sure

513
00:21:45,669 --> 00:21:43,679

people are the same saying the same

514
00:21:46,789 --> 00:21:45,679
thing on the asteroid mission saying oh

515
00:21:48,390 --> 00:21:46,799
you mean you are going to bring an

516
00:21:50,710 --> 00:21:48,400
asteroid you know and put it in orbit

517
00:21:53,190 --> 00:21:50,720
around around the moon well that's what

518
00:21:55,510 --> 00:21:53,200
nasa is about we think it can be done

519
00:21:58,310 --> 00:21:55,520
you know that's the kind of uh challenge

520
00:21:59,270 --> 00:21:58,320
that our agency was created to actually

521
00:22:00,710 --> 00:21:59,280
do

522
00:22:02,630 --> 00:22:00,720
so let me go to the next slide so that

523
00:22:04,789 --> 00:22:02,640
was one of the key challenges

524
00:22:06,950 --> 00:22:04,799
uh last one let me illustrate to you a

525
00:22:09,190 --> 00:22:06,960
little bit the kind of things that seem

526
00:22:11,270 --> 00:22:09,200
to be impossible but actually we all

527
00:22:14,470 --> 00:22:11,280
collectively go and do them

528
00:22:16,710 --> 00:22:14,480
after curiosity traveled 450 million

529
00:22:19,510 --> 00:22:16,720
kilometers to get to mars we landed

530
00:22:20,710 --> 00:22:19,520
within two kilometers on the surface

531
00:22:22,950 --> 00:22:20,720
if we go on the next slide that will

532
00:22:25,110 --> 00:22:22,960
give you an illustration what that mean

533
00:22:27,430 --> 00:22:25,120
that is the same as if you hit the golf

534
00:22:29,830 --> 00:22:27,440
ball you know from california towards

535
00:22:32,149 --> 00:22:29,840
sand andrews in england and the gulf

536
00:22:33,909 --> 00:22:32,159
wall has to come straight in the cup

537
00:22:35,909 --> 00:22:33,919
and just to make it a little challenging

538
00:22:37,110 --> 00:22:35,919

for the golfers the cup is moving at

539
00:22:39,029 --> 00:22:37,120
high speed

540
00:22:41,270 --> 00:22:39,039
and you still have to get it in the cup

541
00:22:42,870 --> 00:22:41,280
so this is a kind of problem or

542
00:22:44,789 --> 00:22:42,880
challenge that seemed to be impossible

543
00:22:46,789 --> 00:22:44,799
but we at nasa you know take that

544
00:22:49,430 --> 00:22:46,799
challenge and actually go you know and

545
00:22:53,270 --> 00:22:51,430
now before i go on the next slide i want

546
00:22:55,669 --> 00:22:53,280
to tell you a story which kind of show

547
00:22:57,510 --> 00:22:55,679
you about we nasa still are part of the

548
00:22:59,669 --> 00:22:57,520
renaissance that have started three four

549
00:23:01,350 --> 00:22:59,679
hundred years ago and it's a story about

550
00:23:04,230 --> 00:23:01,360
leonardo da vinci

551
00:23:06,789 --> 00:23:04,240
about three years ago i was invited by

552
00:23:08,549 --> 00:23:06,799
an italian you know reporter to go and

553
00:23:10,549 --> 00:23:08,559
visit the

554
00:23:12,870 --> 00:23:10,559
royal library in turin

555
00:23:15,430 --> 00:23:12,880
and that's where the codex of flight the

556
00:23:18,470 --> 00:23:15,440
actual notes of leonardo da vinci about

557
00:23:20,470 --> 00:23:18,480
birds how they fly and so on actually it

558
00:23:21,990 --> 00:23:20,480
was was put in the vault there and

559
00:23:24,950 --> 00:23:22,000
that's what led to a lot of the theory

560
00:23:26,789 --> 00:23:24,960
in aeronautics and flight and so on

561
00:23:28,470 --> 00:23:26,799
so i go there and of course the guards

562
00:23:30,870 --> 00:23:28,480
take me down you know to the vault and

563
00:23:32,470 --> 00:23:30,880

they pull out the leonardo book and they

564
00:23:33,909 --> 00:23:32,480
started looking through it and i was

565
00:23:36,390 --> 00:23:33,919
blown away

566
00:23:37,590 --> 00:23:36,400
and let's show you the next slide

567
00:23:39,110 --> 00:23:37,600
on the left is the drawings that

568
00:23:41,190 --> 00:23:39,120
leonardo had

569
00:23:44,390 --> 00:23:41,200
and on the right is curiosity how we're

570
00:23:46,390 --> 00:23:44,400
landing it for you on the next slide

571
00:23:48,630 --> 00:23:46,400
on the left is a sketch that leonardo

572
00:23:50,870 --> 00:23:48,640
had about how if you fly how you come

573
00:23:53,190 --> 00:23:50,880
and land and drove and on the right is

574
00:23:55,669 --> 00:23:53,200
the lander that we have on curiosity i

575
00:23:58,310 --> 00:23:55,679
mean you can see you know so we are if

576
00:24:00,630 --> 00:23:58,320
leonardo was alive today he would love

577
00:24:02,470 --> 00:24:00,640
to be at nasa you know and do this kind

578
00:24:04,630 --> 00:24:02,480
of kind of thing

579
00:24:06,950 --> 00:24:04,640
so let me go to the next slide

580
00:24:09,830 --> 00:24:06,960
now these things seem easy

581
00:24:11,830 --> 00:24:09,840
but i can tell you they are very tough

582
00:24:14,390 --> 00:24:11,840
we do have challenges we do have

583
00:24:15,909 --> 00:24:14,400
problems so on the case of curiosity

584
00:24:17,990 --> 00:24:15,919
when we were testing the parachute the

585
00:24:20,390 --> 00:24:18,000
first time we tested at ames that the

586
00:24:22,950 --> 00:24:20,400
picture at your left it went in pieces

587
00:24:24,549 --> 00:24:22,960
so we said oh you know four letter words

588
00:24:27,029 --> 00:24:24,559

what do i do now

589
00:24:29,029 --> 00:24:27,039
you know but of course very calmly the

590
00:24:30,549 --> 00:24:29,039
engineers sit down after they

591
00:24:32,149 --> 00:24:30,559
you know calm down a little bit they sit

592
00:24:34,070 --> 00:24:32,159
down and start filling it out so then we

593
00:24:36,230 --> 00:24:34,080
got the one on the right or it didn't

594
00:24:38,710 --> 00:24:36,240
break but it wouldn't open you know

595
00:24:40,070 --> 00:24:38,720
completely so okay now what do we do now

596
00:24:42,149 --> 00:24:40,080
but then they sat down brought a bunch

597
00:24:44,470 --> 00:24:42,159
of young smart people and they actually

598
00:24:46,149 --> 00:24:44,480
at the end find the solution to do it so

599
00:24:48,630 --> 00:24:46,159
these are the kind of things that we do

600
00:24:49,510 --> 00:24:48,640
every day but people don't hear about

601
00:24:51,269 --> 00:24:49,520
them

602
00:24:53,750 --> 00:24:51,279
because you know we take that as part of

603
00:24:56,630 --> 00:24:53,760
our job you know as things never work

604
00:24:58,470 --> 00:24:56,640
the first time but we face a challenge

605
00:25:01,190 --> 00:24:58,480
and we learn from some time our setbacks

606
00:25:03,269 --> 00:25:01,200
and our mistakes and move on and and

607
00:25:05,909 --> 00:25:03,279
improve what we are doing

608
00:25:08,630 --> 00:25:05,919
so let me finish with the next slide

609
00:25:10,390 --> 00:25:08,640
for me that's an iconic slide that

610
00:25:12,549 --> 00:25:10,400
one of my preferred one the picture on

611
00:25:14,310 --> 00:25:12,559
the left i'm sure you recognize that the

612
00:25:16,789 --> 00:25:14,320
footprint of neil armstrong on the

613
00:25:17,830 --> 00:25:16,799

surface i remember exactly when that

614
00:25:18,950 --> 00:25:17,840
happened

615
00:25:21,190 --> 00:25:18,960
what day

616
00:25:23,430 --> 00:25:21,200
who was with me in the room what tv i

617
00:25:25,750 --> 00:25:23,440
was watching that was when i was still

618
00:25:27,590 --> 00:25:25,760
first my first year in graduate school i

619
00:25:29,909 --> 00:25:27,600
was sitting in the lobby of our student

620
00:25:32,070 --> 00:25:29,919
house was a bunch of friend of mine and

621
00:25:34,390 --> 00:25:32,080
i remember each and every one of them of

622
00:25:36,470 --> 00:25:34,400
what happened on that day and when i saw

623
00:25:37,510 --> 00:25:36,480
that footprint i said i want to be part

624
00:25:39,110 --> 00:25:37,520
of that

625
00:25:40,870 --> 00:25:39,120
and i never looked back

626
00:25:43,190 --> 00:25:40,880
so what i'm hoping is the picture on the

627
00:25:45,350 --> 00:25:43,200
right is our footprint collective

628
00:25:47,830 --> 00:25:45,360
footprints through the rover you know on

629
00:25:50,470 --> 00:25:47,840
mars and i hope the present generation

630
00:25:52,710 --> 00:25:50,480
will look at that picture and say i want

631
00:25:54,390 --> 00:25:52,720
to be part of that and i'm going to do

632
00:25:57,029 --> 00:25:54,400
what's in the next slide

633
00:25:59,830 --> 00:25:57,039
and that's to have humans on mars in our

634
00:26:02,789 --> 00:25:59,840
lifetime and that quote for me is

635
00:26:04,870 --> 00:26:02,799
example exactly what nasa is about we do

636
00:26:07,029 --> 00:26:04,880
not go where the past may lead but we

637
00:26:08,870 --> 00:26:07,039
want instead where there is no pass and

638
00:26:10,410 --> 00:26:08,880

leave a trail thank you very much you

639
00:26:22,630 --> 00:26:10,420
all have left a great trail

640
00:26:25,830 --> 00:26:24,390
well thank you dr alachi uh for

641
00:26:27,990 --> 00:26:25,840
illustrating how thrilling and

642
00:26:29,269 --> 00:26:28,000
inspirational interplanetary space

643
00:26:31,430 --> 00:26:29,279
flight can be

644
00:26:33,029 --> 00:26:31,440
we're truly fortunate to have you here

645
00:26:35,110 --> 00:26:33,039
today with us thank you

646
00:26:36,710 --> 00:26:35,120
miss carver mr bolden will you please

647
00:26:54,549 --> 00:26:36,720
join us on stage for the presentation of

648
00:26:57,190 --> 00:26:55,510
all right

649
00:26:59,909 --> 00:26:57,200
we will now begin with a presentation of

650
00:27:01,590 --> 00:26:59,919
the headquarters agency honor awards

651
00:27:03,510 --> 00:27:01,600
the first category is the group

652
00:27:05,510 --> 00:27:03,520
achievement award

653
00:27:07,269 --> 00:27:05,520
this award recognizes a group of

654
00:27:08,950 --> 00:27:07,279
government and or non-government

655
00:27:10,950 --> 00:27:08,960
personnel for an outstanding

656
00:27:13,269 --> 00:27:10,960
accomplishment through the coordination

657
00:27:14,470 --> 00:27:13,279
of many individual efforts

658
00:27:17,029 --> 00:27:14,480
which have been contributed

659
00:27:23,510 --> 00:27:17,039
substantially to the nasa's mission

660
00:27:30,310 --> 00:27:27,350
the 2012 virtual executive summit team

661
00:27:32,950 --> 00:27:30,320
for ingenuity in the creation of nasa's

662
00:27:35,830 --> 00:27:32,960
first virtual executive summit and

663
00:27:38,710 --> 00:27:35,840

development of a groundbreaking virtual

664
00:27:41,669 --> 00:27:38,720
learning capability within nasa

665
00:27:43,160 --> 00:27:41,679
erica bovard will accept this award for

666
00:27:59,269 --> 00:27:43,170
the group

667
00:28:03,510 --> 00:28:01,350
angry birds space

668
00:28:05,590 --> 00:28:03,520
for outstanding talent and contributions

669
00:28:08,389 --> 00:28:05,600
and inspiring huge audiences regarding

670
00:28:10,950 --> 00:28:08,399
space exploration and nasa's programs to

671
00:28:13,590 --> 00:28:10,960
the creation of angry bird space

672
00:28:15,320 --> 00:28:13,600
bertram r ulrich will accept this award

673
00:28:31,110 --> 00:28:15,330
for the group

674
00:28:35,430 --> 00:28:33,510
data at rest encryption team for

675
00:28:37,190 --> 00:28:35,440
outstanding achievement by the data at

676
00:28:39,350 --> 00:28:37,200
rest encryption project team in

677
00:28:41,669 --> 00:28:39,360
encrypting nasa's computer systems to

678
00:28:45,029 --> 00:28:41,679
protect sensitive data and increase

679
00:28:47,600 --> 00:28:45,039
nasa's security profile jackie r gill

680
00:29:03,350 --> 00:28:47,610
will accept this award for the group

681
00:29:07,350 --> 00:29:05,510
a team representative for the f-22 life

682
00:29:09,190 --> 00:29:07,360
support system independent analysis team

683
00:29:11,029 --> 00:29:09,200
could not be with us today the team is

684
00:29:14,149 --> 00:29:11,039
being honored for outstanding technical

685
00:29:15,430 --> 00:29:14,159
expertise and dedicated support to nasa

686
00:29:17,669 --> 00:29:15,440
engineering and safety center's

687
00:29:19,750 --> 00:29:17,679
investigation of the f-22 life support

688
00:29:22,389 --> 00:29:19,760

system

689
00:29:23,909 --> 00:29:22,399
mission stem website working group

690
00:29:26,310 --> 00:29:23,919
for exceptional group achievement in the

691
00:29:28,389 --> 00:29:26,320
collaborative design development and

692
00:29:31,510 --> 00:29:28,399
deployment of a new civil rights

693
00:29:34,310 --> 00:29:31,520
compliance website mission stem for nasa

694
00:29:36,680 --> 00:29:34,320
grant recipients sharon j wagner will

695
00:29:46,950 --> 00:29:36,690
accept this award for the group

696
00:29:51,669 --> 00:29:49,350
msl launch and landing nasa management

697
00:29:54,230 --> 00:29:51,679
and support for exceptional management

698
00:29:56,070 --> 00:29:54,240
and execution of the global events for

699
00:29:58,630 --> 00:29:56,080
mars science laboratory launch and

700
00:30:01,650 --> 00:29:58,640
curiosity landing kristen j erickson

701
00:30:16,950 --> 00:30:01,660
will accept this award for the group

702
00:30:20,870 --> 00:30:19,430
nasa acquisition forecast team

703
00:30:22,710 --> 00:30:20,880
for outstanding performance in

704
00:30:26,230 --> 00:30:22,720
redesigning the nasa acquisition

705
00:30:29,020 --> 00:30:26,240
forecast website in 2012 david b grove

706
00:30:43,750 --> 00:30:29,030
will accept this award for the group

707
00:30:48,549 --> 00:30:46,870
nasa headquarters breach response team

708
00:30:50,710 --> 00:30:48,559
for outstanding support to the entire

709
00:30:53,029 --> 00:30:50,720
nasa community in responding to the

710
00:30:55,029 --> 00:30:53,039
major breach of personally identifiable

711
00:30:58,549 --> 00:30:55,039
information that occurred in october

712
00:31:00,720 --> 00:30:58,559
2012. marion c meisner will accept this

713
00:31:17,750 --> 00:31:00,730

award for the group

714
00:31:21,510 --> 00:31:19,750
nasa's social media team for mars

715
00:31:23,750 --> 00:31:21,520
curiosity landing

716
00:31:25,669 --> 00:31:23,760
for unprecedented exceptional teamwork

717
00:31:28,230 --> 00:31:25,679
across seven nasa field centers to

718
00:31:30,310 --> 00:31:28,240
educate and inform the public about the

719
00:31:32,710 --> 00:31:30,320
mars curiosity rover through an

720
00:31:34,549 --> 00:31:32,720
interactive nasa social event

721
00:31:35,960 --> 00:31:34,559
jason townsend will accept this award

722
00:31:54,070 --> 00:31:35,970
for the group

723
00:31:58,310 --> 00:31:56,230
open innovation program

724
00:32:00,630 --> 00:31:58,320
for introducing and demonstrating the

725
00:32:02,389 --> 00:32:00,640
value of non-monetized mass

726
00:32:04,549 --> 00:32:02,399
collaborations within the federal

727
00:32:07,190 --> 00:32:04,559
government as a way to accelerate the

728
00:32:09,110 --> 00:32:07,200
development of new technology nicholas g

729
00:32:26,230 --> 00:32:09,120
scotland will accept this award for the

730
00:32:30,630 --> 00:32:28,230
sentinel mission partnership nasa

731
00:32:32,710 --> 00:32:30,640
development team for the development of

732
00:32:35,590 --> 00:32:32,720
the partnership between nasa and the

733
00:32:37,669 --> 00:32:35,600
b612 foundation for the sentinel mission

734
00:32:39,310 --> 00:32:37,679
michelle m gates will accept this award

735
00:32:56,470 --> 00:32:39,320
for the group

736
00:33:01,750 --> 00:32:59,590
smd oct cross directorate collaboration

737
00:33:03,750 --> 00:33:01,760
team for setting the standard for

738
00:33:06,789 --> 00:33:03,760

cross-directorate collaboration

739
00:33:08,470 --> 00:33:06,799
leveraging agency resources and reducing

740
00:33:10,549 --> 00:33:08,480
duplication of effort in developing

741
00:33:13,430 --> 00:33:10,559
mission critical technology

742
00:33:14,950 --> 00:33:13,440
jaya bhashpi will accept this award for

743
00:33:34,149 --> 00:33:14,960
the group

744
00:33:38,789 --> 00:33:36,149
space shuttle orbiter's final ferry

745
00:33:41,509 --> 00:33:38,799
offload team for securing a fitting end

746
00:33:43,190 --> 00:33:41,519
to the nasa space shuttle program by

747
00:33:45,110 --> 00:33:43,200
safely delivering the orbiters for

748
00:33:47,830 --> 00:33:45,120
permanent display including low-level

749
00:33:50,470 --> 00:33:47,840
flyovers seen by millions of people

750
00:34:09,190 --> 00:33:50,480
dorothy s rasco will accept this award

751
00:34:13,909 --> 00:34:11,750
van allen probe's project team

752
00:34:16,550 --> 00:34:13,919
for exceptional dedication skill

753
00:34:18,869 --> 00:34:16,560
teamwork and perseverance in developing

754
00:34:21,430 --> 00:34:18,879
and delivering the van allen probes for

755
00:34:24,230 --> 00:34:21,440
its long-awaited science mission on time

756
00:34:26,560 --> 00:34:24,240
and under budget richard fitzgerald will

757
00:34:44,389 --> 00:34:26,570
accept this award for the group

758
00:34:49,349 --> 00:34:47,270
web application security program team

759
00:34:51,669 --> 00:34:49,359
for significantly improving the agency's

760
00:34:53,430 --> 00:34:51,679
i.t security posture through effective

761
00:34:55,990 --> 00:34:53,440
management identification and

762
00:34:58,150 --> 00:34:56,000
coordination of remediation of the web

763
00:35:00,230 --> 00:34:58,160

application vulnerabilities

764
00:35:01,840 --> 00:35:00,240
howard g white will accept this award

765
00:35:17,349 --> 00:35:01,850
for the group

766
00:35:21,270 --> 00:35:19,589
our next category is the early career

767
00:35:23,670 --> 00:35:21,280
achievement medal

768
00:35:25,510 --> 00:35:23,680
this medal is awarded for unusual and

769
00:35:28,150 --> 00:35:25,520
significant performance during the first

770
00:35:30,630 --> 00:35:28,160
10 years of an individual's early career

771
00:35:32,950 --> 00:35:30,640
in support of the agency

772
00:35:35,109 --> 00:35:32,960
performance is characterized by unusual

773
00:35:37,109 --> 00:35:35,119
initiative or a creative achievement

774
00:35:38,950 --> 00:35:37,119
that clearly demonstrates a significant

775
00:35:40,630 --> 00:35:38,960
contribution in the individual's

776
00:35:43,910 --> 00:35:40,640
discipline area that directly

777
00:35:46,790 --> 00:35:43,920
contributes to nasa's mission and goals

778
00:35:56,870 --> 00:35:46,800
today we honor one in this category

779
00:36:00,230 --> 00:35:58,150
for outstanding leadership and

780
00:36:01,829 --> 00:36:00,240
contributions in improving the

781
00:36:05,589 --> 00:36:01,839
establishment of the agency's budget

782
00:36:13,109 --> 00:36:05,599
phasing plans for fy 2013 in cooperation

783
00:36:17,430 --> 00:36:15,270
our next category the exceptional

784
00:36:19,270 --> 00:36:17,440
technology achievement medal

785
00:36:21,270 --> 00:36:19,280
this medal is awarded for exceptional

786
00:36:23,270 --> 00:36:21,280
technology contributions

787
00:36:25,030 --> 00:36:23,280
advancing future research capabilities

788
00:36:26,870 --> 00:36:25,040

or commercial applications that

789
00:36:28,950 --> 00:36:26,880
significantly contribute towards the

790
00:36:30,790 --> 00:36:28,960
achievement of nasa's mission today we

791
00:36:33,109 --> 00:36:30,800
honor one in this category

792
00:36:35,109 --> 00:36:33,119
etheraj venkatapathi

793
00:36:37,030 --> 00:36:35,119
for exceptional success in developing

794
00:36:39,190 --> 00:36:37,040
thermal protection systems and entry

795
00:36:41,040 --> 00:36:39,200
technologies for planetary entry

796
00:36:54,550 --> 00:36:41,050
vehicles

797
00:36:58,950 --> 00:36:56,630
our next category is the exceptional

798
00:37:00,470 --> 00:36:58,960
public achievement medal

799
00:37:01,990 --> 00:37:00,480
this medal is awarded to any

800
00:37:04,150 --> 00:37:02,000
non-government employee for a

801
00:37:06,230 --> 00:37:04,160
significant specific achievement or

802
00:37:09,430 --> 00:37:06,240
substantial improvement in operations

803
00:37:11,829 --> 00:37:09,440
efficiency service financial savings

804
00:37:14,630 --> 00:37:11,839
science or technology which contributes

805
00:37:16,470 --> 00:37:14,640
to the mission of nasa today we honor

806
00:37:18,069 --> 00:37:16,480
three in this category

807
00:37:19,990 --> 00:37:18,079
nathan barnes

808
00:37:22,470 --> 00:37:20,000
for exceptional achievement

809
00:37:25,030 --> 00:37:22,480
in advancing solar cell technology

810
00:37:44,150 --> 00:37:25,040
to a mission capable state

811
00:37:48,470 --> 00:37:46,069
june lockhart who could not be with us

812
00:37:50,310 --> 00:37:48,480
today is being honored for outstanding

813
00:37:51,990 --> 00:37:50,320

talent and inspiring the public about

814
00:37:54,470 --> 00:37:52,000
space exploration and her many

815
00:37:56,470 --> 00:37:54,480
interactions with nasa

816
00:37:58,470 --> 00:37:56,480
bill pradee who could not be with us

817
00:38:00,630 --> 00:37:58,480
today is being honored for outstanding

818
00:38:02,790 --> 00:38:00,640
individual creativity and inspiring the

819
00:38:04,550 --> 00:38:02,800
greater public about nasa and the

820
00:38:07,589 --> 00:38:04,560
international space station through

821
00:38:09,990 --> 00:38:07,599
television's the big bang theory

822
00:38:11,910 --> 00:38:10,000
our next category is the exceptional

823
00:38:13,910 --> 00:38:11,920
achievement medal

824
00:38:15,990 --> 00:38:13,920
this medal is awarded to any government

825
00:38:18,150 --> 00:38:16,000
employee for a significant specific

826
00:38:20,950 --> 00:38:18,160
achievement or substantial improvement

827
00:38:24,470 --> 00:38:20,960
in operations efficiency service

828
00:38:26,790 --> 00:38:24,480
financial savings science or technology

829
00:38:29,750 --> 00:38:26,800
which contributes to the mission of nasa

830
00:38:33,349 --> 00:38:29,760
today we honor nine in this category

831
00:38:35,750 --> 00:38:33,359
kathleen a gallagher

832
00:38:38,910 --> 00:38:35,760
for exceptional achievement in advancing

833
00:38:54,710 --> 00:38:38,920
nasa's baseline performance review

834
00:38:58,790 --> 00:38:56,790
david b jarrett

835
00:39:01,589 --> 00:38:58,800
for exceptional contributions to the

836
00:39:04,310 --> 00:39:01,599
success of the ldcm mission by guiding

837
00:39:06,950 --> 00:39:04,320
it through the agency mission process

838
00:39:09,680 --> 00:39:06,960

tailoring it as required for the best

839
00:39:17,910 --> 00:39:09,690
value to the government

840
00:39:19,910 --> 00:39:17,920
[Applause]

841
00:39:22,069 --> 00:39:19,920
jonathan m crazel

842
00:39:23,750 --> 00:39:22,079
for exceptional leadership and constant

843
00:39:28,200 --> 00:39:23,760
vigilance of the space shuttle

844
00:39:28,210 --> 00:39:40,710
[Applause]

845
00:39:44,630 --> 00:39:43,030
eric j lindstrom for outstanding

846
00:39:46,550 --> 00:39:44,640
intellectual and organizational

847
00:39:48,950 --> 00:39:46,560
leadership in the oceanographic

848
00:39:52,280 --> 00:39:48,960
community to develop the framework for

849
00:40:04,950 --> 00:39:52,290
sustained ocean observing

850
00:40:09,990 --> 00:40:07,670
christine mcmahon bogner for outstanding

851
00:40:12,480 --> 00:40:10,000
work with the committee on earth

852
00:40:28,310 --> 00:40:12,490
observing satellites

853
00:40:31,990 --> 00:40:30,470
claudia m meyer

854
00:40:34,550 --> 00:40:32,000
for exceptional achievement in

855
00:40:36,950 --> 00:40:34,560
formulating and executing the nasa space

856
00:40:38,950 --> 00:40:36,960
technology research grants program and

857
00:40:40,860 --> 00:40:38,960
developing the next generation of space

858
00:40:52,310 --> 00:40:40,870
technologists

859
00:40:55,670 --> 00:40:54,069
potts who could not be with us today is

860
00:40:57,990 --> 00:40:55,680
being honored for exceptional

861
00:41:01,190 --> 00:40:58,000
achievement in leading mars odyssey

862
00:41:03,349 --> 00:41:01,200
flight team in the design execution of

863
00:41:05,270 --> 00:41:03,359

data relay of the curiosity landings

864
00:41:06,550 --> 00:41:05,280
including real-time confirmation of a

865
00:41:09,270 --> 00:41:06,560
success

866
00:41:11,270 --> 00:41:09,280
tebisa t tepfer who cannot be with us

867
00:41:13,829 --> 00:41:11,280
today is being honored for distinguished

868
00:41:15,750 --> 00:41:13,839
performance in advocating and revamping

869
00:41:18,630 --> 00:41:15,760
the office of small business programs

870
00:41:21,589 --> 00:41:18,640
collateral products in 2012.

871
00:41:23,349 --> 00:41:21,599
bertram r ulrich

872
00:41:25,510 --> 00:41:23,359
for outstanding initiative in

873
00:41:27,670 --> 00:41:25,520
collaborating with the film television

874
00:41:30,500 --> 00:41:27,680
and entertainment communities to share

875
00:41:43,030 --> 00:41:30,510
nasa's story with the greater public

876
00:41:46,790 --> 00:41:45,109
our next category is the exceptional

877
00:41:48,470 --> 00:41:46,800
service medal

878
00:41:50,790 --> 00:41:48,480
this medal is awarded

879
00:41:52,309 --> 00:41:50,800
to a government employee for sustained

880
00:41:54,470 --> 00:41:52,319
performance that embodies multiple

881
00:41:57,829 --> 00:41:54,480
contributions which contribute to nasa's

882
00:42:01,349 --> 00:41:57,839
projects programs or initiatives today

883
00:42:05,510 --> 00:42:03,510
glenn a delgado

884
00:42:07,270 --> 00:42:05,520
for exceptional service as the nasa's

885
00:42:08,930 --> 00:42:07,280
associate administrator for small

886
00:42:25,670 --> 00:42:08,940
business programs

887
00:42:29,349 --> 00:42:27,589
rhoda s hornstein

888
00:42:31,510 --> 00:42:29,359

for outstanding and sustained leadership

889
00:42:33,430 --> 00:42:31,520
in labor management relations enabling

890
00:42:35,270 --> 00:42:33,440
the nasa mission through the fair

891
00:42:36,840 --> 00:42:35,280
equitable and respectful treatment of

892
00:42:50,550 --> 00:42:36,850
employees

893
00:42:54,950 --> 00:42:52,550
robert n jacobs who cannot be with us

894
00:42:57,430 --> 00:42:54,960
today is being honored for continued

895
00:42:59,510 --> 00:42:57,440
innovation and dedication in the use of

896
00:43:01,910 --> 00:42:59,520
emerging technologies to better tell

897
00:43:03,670 --> 00:43:01,920
nasa's compelling story of exploration

898
00:43:05,510 --> 00:43:03,680
and discovery

899
00:43:07,510 --> 00:43:05,520
meredith m mckay

900
00:43:09,349 --> 00:43:07,520
who cannot be with us here today

901
00:43:11,270 --> 00:43:09,359
is being honored for outstanding

902
00:43:13,990 --> 00:43:11,280
contributions to nasa's international

903
00:43:19,510 --> 00:43:14,000
space cooperation with russia russia and

904
00:43:19,520 --> 00:43:24,490
the husband and wife team we saw them

905
00:43:29,829 --> 00:43:27,910
[Laughter]

906
00:43:31,829 --> 00:43:29,839
our next category is the outstanding

907
00:43:33,910 --> 00:43:31,839
leadership medal

908
00:43:35,670 --> 00:43:33,920
this medal is awarded for notable

909
00:43:37,589 --> 00:43:35,680
leadership accomplishments that have

910
00:43:38,550 --> 00:43:37,599
significantly influenced the nasa

911
00:43:43,109 --> 00:43:38,560
mission

912
00:43:44,550 --> 00:43:43,119
exceptionally high impact leadership

913
00:43:46,630 --> 00:43:44,560

achievements should demonstrate the

914
00:43:49,349 --> 00:43:46,640
individual's effectiveness in advancing

915
00:43:52,150 --> 00:43:49,359
the agency's goals and image in the

916
00:43:54,230 --> 00:43:52,160
present and future terms today we honor

917
00:43:56,870 --> 00:43:54,240
three in this category

918
00:43:59,670 --> 00:43:56,880
gregory d blaney

919
00:44:01,750 --> 00:43:59,680
for outstanding leadership of the nasa

920
00:44:02,820 --> 00:44:01,760
independent verification and validation

921
00:44:18,470 --> 00:44:02,830
program

922
00:44:22,950 --> 00:44:21,190
erica bovard

923
00:44:25,109 --> 00:44:22,960
for exceptional service in the

924
00:44:27,170 --> 00:44:25,119
development of the agency's current and

925
00:44:41,349 --> 00:44:27,180
future leaders

926
00:44:46,390 --> 00:44:43,910
george r settis for distinguished

927
00:44:48,550 --> 00:44:46,400
service to the nation and nasa as the

928
00:44:50,420 --> 00:44:48,560
chairman of the space asset protection

929
00:45:04,950 --> 00:44:50,430
program

930
00:45:08,309 --> 00:45:06,150
good job

931
00:45:10,150 --> 00:45:08,319
ladies and gentlemen each year nasa

932
00:45:12,230 --> 00:45:10,160
recognizes individuals who have made a

933
00:45:13,430 --> 00:45:12,240
profound impact to nasa's mission

934
00:45:14,950 --> 00:45:13,440
success

935
00:45:17,510 --> 00:45:14,960
these individuals have been selected to

936
00:45:19,670 --> 00:45:17,520
receive one of two prestigious awards

937
00:45:21,829 --> 00:45:19,680
before we proceed with recognizing

938
00:45:25,430 --> 00:45:21,839

today's honorees mr bolden would like to

939
00:45:28,790 --> 00:45:27,030
it's not that i would like to they told

940
00:45:31,190 --> 00:45:28,800
me to

941
00:45:34,309 --> 00:45:31,200
but i do like to

942
00:45:36,069 --> 00:45:34,319
i do like to as a matter of fact and uh

943
00:45:37,510 --> 00:45:36,079
thanks very much for your incredible job

944
00:45:39,270 --> 00:45:37,520
as the mc

945
00:45:40,069 --> 00:45:39,280
that's uh that's really good

946
00:45:42,309 --> 00:45:40,079
um

947
00:45:44,950 --> 00:45:42,319
let me congratulate all of the awardees

948
00:45:47,670 --> 00:45:44,960
so far you represent the very best of

949
00:45:49,349 --> 00:45:47,680
the best and i'm grateful for all that

950
00:45:51,349 --> 00:45:49,359
you bring both professionally and

951
00:45:53,910 --> 00:45:51,359
personally to your jobs

952
00:45:55,670 --> 00:45:53,920
as laurie has said every employee who

953
00:45:57,589 --> 00:45:55,680
wears a nasa badge

954
00:46:00,550 --> 00:45:57,599
and even some who don't

955
00:46:02,390 --> 00:46:00,560
are vital to our success

956
00:46:03,510 --> 00:46:02,400
whether you are a scientist

957
00:46:06,390 --> 00:46:03,520
technician

958
00:46:08,470 --> 00:46:06,400
an astronaut a communicator a manager or

959
00:46:11,109 --> 00:46:08,480
provide other mission support

960
00:46:13,349 --> 00:46:11,119
we couldn't do the amazing things we do

961
00:46:14,470 --> 00:46:13,359
and a lot of them about which dr alachi

962
00:46:18,150 --> 00:46:14,480
talked earlier

963
00:46:20,390 --> 00:46:18,160

without each and every one of you

964
00:46:22,630 --> 00:46:20,400
but there are a few all-stars on every

965
00:46:24,550 --> 00:46:22,640
team and today we have the opportunity

966
00:46:26,390 --> 00:46:24,560
to show them our thanks

967
00:46:28,870 --> 00:46:26,400
the next group of honorees represents

968
00:46:30,390 --> 00:46:28,880
the highest awards nasa gives

969
00:46:31,750 --> 00:46:30,400
to government and non-government

970
00:46:33,829 --> 00:46:31,760
individuals

971
00:46:36,390 --> 00:46:33,839
first the distinguished service medal is

972
00:46:38,150 --> 00:46:36,400
nasa's highest form of recognition for a

973
00:46:40,630 --> 00:46:38,160
government employee

974
00:46:42,790 --> 00:46:40,640
it is awarded to the employees who by

975
00:46:43,670 --> 00:46:42,800
their distinguished service ability or

976
00:46:45,829 --> 00:46:43,680
vision

977
00:46:48,150 --> 00:46:45,839
have personally contributed to nasa's

978
00:46:49,270 --> 00:46:48,160
advancement of the united states

979
00:46:51,030 --> 00:46:49,280
interests

980
00:46:54,150 --> 00:46:51,040
the individuals achievement or

981
00:46:55,910 --> 00:46:54,160
contribution must demonstrate a level of

982
00:46:59,829 --> 00:46:55,920
excellence that has made a profound or

983
00:47:02,630 --> 00:46:59,839
indelible impact on nasa mission success

984
00:47:04,870 --> 00:47:02,640
finally the distinguished public service

985
00:47:07,430 --> 00:47:04,880
medal is nasa's highest form of

986
00:47:09,670 --> 00:47:07,440
recognition that is awarded to any

987
00:47:12,150 --> 00:47:09,680
non-government individual or to an

988
00:47:14,230 --> 00:47:12,160

individual who has not who was not a

989
00:47:16,069 --> 00:47:14,240
government employee when the service

990
00:47:18,150 --> 00:47:16,079
wasn't was performed

991
00:47:20,870 --> 00:47:18,160
this award honors those whose

992
00:47:22,950 --> 00:47:20,880
distinguished service ability or vision

993
00:47:25,829 --> 00:47:22,960
has personally contributed to nasa's

994
00:47:27,270 --> 00:47:25,839
advancement of united states interests

995
00:47:29,190 --> 00:47:27,280
the individual's achievement or

996
00:47:31,430 --> 00:47:29,200
contribution must demonstrate a level of

997
00:47:33,589 --> 00:47:31,440
excellence that has made a profound or

998
00:47:35,030 --> 00:47:33,599
indelible impact on nasa's mission

999
00:47:37,270 --> 00:47:35,040
success

1000
00:47:38,710 --> 00:47:37,280
the men and women you are about to meet

1001
00:47:41,670 --> 00:47:38,720
have gone way

1002
00:47:44,309 --> 00:47:41,680
way above and beyond the call of duty to

1003
00:47:46,150 --> 00:47:44,319
advance america's civil space program

1004
00:47:48,470 --> 00:47:46,160
they are not only brilliant leaders in

1005
00:47:50,710 --> 00:47:48,480
their fields they are committed to the

1006
00:47:53,030 --> 00:47:50,720
high standards and values that make nasa

1007
00:47:55,589 --> 00:47:53,040
the world's leading space agency

1008
00:47:57,910 --> 00:47:55,599
now my job is to rejoin lori for the

1009
00:48:12,230 --> 00:47:57,920
presentation of these medals in in

1010
00:48:16,470 --> 00:48:14,309
thank you mr bolden and now for the

1011
00:48:19,750 --> 00:48:16,480
presentation of the distinguished public

1012
00:48:21,430 --> 00:48:19,760
service medal today we honor 11 in this

1013
00:48:23,589 --> 00:48:21,440

category

1014
00:48:25,670 --> 00:48:23,599
george charles adams

1015
00:48:28,309 --> 00:48:25,680
for outstanding contributions to the

1016
00:48:30,549 --> 00:48:28,319
space launch system program enabling

1017
00:48:34,000 --> 00:48:30,559
significant technical advancements in

1018
00:48:48,150 --> 00:48:34,010
the vehicle development at reduced costs

1019
00:48:52,630 --> 00:48:50,390
deborah barnhart for outstanding

1020
00:48:54,790 --> 00:48:52,640
leadership contribution and dedication

1021
00:48:57,349 --> 00:48:54,800
towards informing the general public of

1022
00:49:00,069 --> 00:48:57,359
nasa's programs and activities through

1023
00:49:02,200 --> 00:49:00,079
the direction of the ussrc

1024
00:49:13,270 --> 00:49:02,210
and space camp

1025
00:49:17,270 --> 00:49:15,030
g cordier

1026
00:49:19,670 --> 00:49:17,280
for exceptional service and significant

1027
00:49:21,990 --> 00:49:19,680
contributions to nasa's science data

1028
00:49:24,690 --> 00:49:22,000
capture and distribution systems for

1029
00:49:39,670 --> 00:49:24,700
over four decades

1030
00:49:45,109 --> 00:49:42,950
gary l enochs for exceptional leadership

1031
00:49:46,710 --> 00:49:45,119
teamwork dedication and extensive

1032
00:49:48,390 --> 00:49:46,720
collaboration in response to the

1033
00:49:50,549 --> 00:49:48,400
marshall space flight center's

1034
00:49:52,600 --> 00:49:50,559
transportation transformation and

1035
00:50:03,030 --> 00:49:52,610
realignment activities

1036
00:50:06,390 --> 00:50:04,790
holland ford

1037
00:50:08,470 --> 00:50:06,400
for leadership in the development of

1038
00:50:10,549 --> 00:50:08,480

three generations of outstanding hubble

1039
00:50:13,589 --> 00:50:10,559
telescope instruments and the leadership

1040
00:50:14,820 --> 00:50:13,599
role played in restoring hst's spherical

1041
00:50:28,230 --> 00:50:14,830
aberration

1042
00:50:32,790 --> 00:50:30,630
johnny l golden

1043
00:50:34,950 --> 00:50:32,800
for distinguished service and leadership

1044
00:50:36,630 --> 00:50:34,960
in international cooperation and

1045
00:50:39,750 --> 00:50:36,640
advancements in the international space

1046
00:50:42,240 --> 00:50:39,760
station's materials processes and space

1047
00:50:53,349 --> 00:50:42,250
environmental effects

1048
00:50:55,829 --> 00:50:54,790
christopher j

1049
00:50:57,990 --> 00:50:55,839
keller

1050
00:51:00,150 --> 00:50:58,000
for exceptional public service to nasa

1051
00:51:01,990 --> 00:51:00,160
and kennedy space center an outstanding

1052
00:51:04,390 --> 00:51:02,000
dedication to the ground systems

1053
00:51:06,750 --> 00:51:04,400
development and operations program and

1054
00:51:17,349 --> 00:51:06,760
previous nasa programs

1055
00:51:22,230 --> 00:51:20,150
thomas b mccord for exceptional and

1056
00:51:24,470 --> 00:51:22,240
sustained scientific achievements in

1057
00:51:27,750 --> 00:51:24,480
understanding the origin and evolution

1058
00:51:29,670 --> 00:51:27,760
of planetary bodies including the moon

1059
00:51:33,020 --> 00:51:29,680
mars vesta

1060
00:51:41,349 --> 00:51:33,030
ceres titan and europa

1061
00:51:43,670 --> 00:51:41,359
[Applause]

1062
00:51:45,990 --> 00:51:43,680
allen k reuter who cannot be with us

1063
00:51:47,829 --> 00:51:46,000

today is being honored for distinguished

1064
00:51:50,069 --> 00:51:47,839
career service in providing critical

1065
00:51:51,510 --> 00:51:50,079
support to nasa's human space flight

1066
00:51:53,030 --> 00:51:51,520
efforts

1067
00:51:54,870 --> 00:51:53,040
theodore l

1068
00:51:56,710 --> 00:51:54,880
schaffner

1069
00:51:58,950 --> 00:51:56,720
for exemplary leadership

1070
00:52:00,630 --> 00:51:58,960
technical expertise and dedication in

1071
00:52:03,109 --> 00:52:00,640
support of the highest standards of

1072
00:52:05,800 --> 00:52:03,119
safety and mission assurance performance

1073
00:52:16,390 --> 00:52:05,810
for nasa's manned space flight programs

1074
00:52:21,670 --> 00:52:19,430
gwen shotwell for outstanding leadership

1075
00:52:24,390 --> 00:52:21,680
of the spacex team that developed and

1076
00:52:26,630 --> 00:52:24,400
executed commercial spacecraft services

1077
00:52:29,740 --> 00:52:26,640
which successfully supplied and returned

1078
00:52:42,390 --> 00:52:29,750
critical cargo for the iss

1079
00:52:46,470 --> 00:52:43,910
our final presentation is the

1080
00:52:49,349 --> 00:52:46,480
distinguished service medal today we

1081
00:52:50,870 --> 00:52:49,359
honor 22 in this category

1082
00:52:52,230 --> 00:52:50,880
austin b

1083
00:52:54,549 --> 00:52:52,240
baggett

1084
00:52:57,030 --> 00:52:54,559
for visionary leadership in reshaping

1085
00:53:00,230 --> 00:52:57,040
and expanding jpl programs conveying the

1086
00:53:17,670 --> 00:53:00,240
experience of nasa space exploration to

1087
00:53:21,750 --> 00:53:19,430
for your lifelong leadership and

1088
00:53:23,990 --> 00:53:21,760

intellectual contribution to nasa's

1089
00:53:26,230 --> 00:53:24,000
monitoring of the atmospheric ozone in

1090
00:53:28,160 --> 00:53:26,240
the establishment of a long-term zone

1091
00:53:37,510 --> 00:53:28,170
climate record

1092
00:53:40,150 --> 00:53:37,520
[Applause]

1093
00:53:41,670 --> 00:53:40,160
stephen f cash

1094
00:53:43,430 --> 00:53:41,680
for distinguished performance and

1095
00:53:45,030 --> 00:53:43,440
technical leadership during the

1096
00:53:47,430 --> 00:53:45,040
successful completion of the space

1097
00:53:49,260 --> 00:53:47,440
shuttle program at nasa's marshall space

1098
00:53:59,670 --> 00:53:49,270
flight center

1099
00:54:01,589 --> 00:53:59,680
[Applause]

1100
00:54:03,750 --> 00:54:01,599
james p connolly who could not be with

1101
00:54:05,750 --> 00:54:03,760
us today is being honored for

1102
00:54:07,990 --> 00:54:05,760
exceptional engineering accomplishments

1103
00:54:09,589 --> 00:54:08,000
skills and inspiring leadership that

1104
00:54:11,589 --> 00:54:09,599
have made a profound and indelible

1105
00:54:13,109 --> 00:54:11,599
contribution to nasa's life sciences

1106
00:54:15,589 --> 00:54:13,119
missions

1107
00:54:17,430 --> 00:54:15,599
annette c detmer who cannot be with us

1108
00:54:19,510 --> 00:54:17,440
today is being honored for distinguished

1109
00:54:22,309 --> 00:54:19,520
service in managing the kennedy space

1110
00:54:24,950 --> 00:54:22,319
center exchange operation

1111
00:54:27,589 --> 00:54:24,960
richard a ferrer

1112
00:54:29,670 --> 00:54:27,599
for distinguished service to nasa for

1113
00:54:30,860 --> 00:54:29,680

advancing atmospheric aerosol remote

1114
00:54:46,790 --> 00:54:30,870
sensing

1115
00:54:50,950 --> 00:54:48,710
neil t frink

1116
00:54:52,630 --> 00:54:50,960
for meritorious achievement of applied

1117
00:54:54,390 --> 00:54:52,640
aerodynamics through notable

1118
00:54:56,870 --> 00:54:54,400
contributions in the development

1119
00:54:59,700 --> 00:54:56,880
application and evaluation of

1120
00:55:11,829 --> 00:54:59,710
aerodynamic concepts and methods

1121
00:55:14,870 --> 00:55:13,430
samuel goulkas

1122
00:55:16,710 --> 00:55:14,880
for distinguished service in the

1123
00:55:18,950 --> 00:55:16,720
development and application of

1124
00:55:20,950 --> 00:55:18,960
sub-millimeter instruments for past

1125
00:55:22,870 --> 00:55:20,960
present and future space missions

1126
00:55:23,990 --> 00:55:22,880
including kobe

1127
00:55:26,530 --> 00:55:24,000
rosetta

1128
00:55:36,870 --> 00:55:26,540
juno and juice

1129
00:55:41,510 --> 00:55:39,109
daniel w hartman

1130
00:55:42,950 --> 00:55:41,520
for exceptional dedication and techno

1131
00:55:44,470 --> 00:55:42,960
technical leadership of the

1132
00:55:46,670 --> 00:55:44,480
international space station mission

1133
00:55:58,870 --> 00:55:46,680
management team

1134
00:56:02,870 --> 00:56:00,789
wayne r johnson who could not be with us

1135
00:56:05,109 --> 00:56:02,880
today is being honored for pioneering

1136
00:56:06,789 --> 00:56:05,119
contributions in rotorcraft research

1137
00:56:09,030 --> 00:56:06,799
bringing the power of physics-based and

1138
00:56:10,789 --> 00:56:09,040

comprehensive analysis to the design of

1139
00:56:12,710 --> 00:56:10,799
rotorcraft

1140
00:56:14,549 --> 00:56:12,720
norman g loeb

1141
00:56:16,470 --> 00:56:14,559
for distinguished service in the

1142
00:56:19,109 --> 00:56:16,480
continued pursuit of observations and

1143
00:56:20,360 --> 00:56:19,119
understanding of the earth's radiation

1144
00:56:36,470 --> 00:56:20,370
budget

1145
00:56:41,109 --> 00:56:38,950
catherine l luters

1146
00:56:42,950 --> 00:56:41,119
for exceptional vision and leadership in

1147
00:56:45,430 --> 00:56:42,960
the development and execution of

1148
00:56:47,589 --> 00:56:45,440
commercial resupply services enabling

1149
00:56:49,780 --> 00:56:47,599
domestic resupply to the international

1150
00:57:02,230 --> 00:56:49,790
space station

1151
00:57:06,950 --> 00:57:04,470
john t madura who could not be with us

1152
00:57:08,710 --> 00:57:06,960
today is being honored for extraordinary

1153
00:57:11,030 --> 00:57:08,720
leadership in establishing and

1154
00:57:13,430 --> 00:57:11,040
maintaining 20 years of interagency

1155
00:57:15,270 --> 00:57:13,440
cooperation for more effective efficient

1156
00:57:16,549 --> 00:57:15,280
weather support to america's space

1157
00:57:17,430 --> 00:57:16,559
programs

1158
00:57:18,150 --> 00:57:17,440
david

1159
00:57:20,150 --> 00:57:18,160
j

1160
00:57:22,150 --> 00:57:20,160
magnus

1161
00:57:25,190 --> 00:57:22,160
for a long and successful career

1162
00:57:26,789 --> 00:57:25,200
enabling nasa's missions as a spacecraft

1163
00:57:29,349 --> 00:57:26,799

dynamicist

1164
00:57:31,140 --> 00:57:29,359
attitude control specialist and

1165
00:57:42,470 --> 00:57:31,150
satellite doctor

1166
00:57:46,150 --> 00:57:44,470
james d mccusin

1167
00:57:48,630 --> 00:57:46,160
for exceptional achievement in

1168
00:57:50,789 --> 00:57:48,640
developing and successfully launching

1169
00:57:53,630 --> 00:57:50,799
and operating the most missions to the

1170
00:58:08,950 --> 00:57:53,640
planet mars in nasa's history

1171
00:58:12,950 --> 00:58:11,109
carl b pilcher

1172
00:58:15,030 --> 00:58:12,960
for distinguished leadership and vision

1173
00:58:17,510 --> 00:58:15,040
in developing an interdisciplinary

1174
00:58:19,390 --> 00:58:17,520
astrobiology community to support nasa

1175
00:58:36,710 --> 00:58:19,400
missions

1176
00:58:41,510 --> 00:58:39,430
richard j silcox for sustained

1177
00:58:44,720 --> 00:58:41,520
excellence and outstanding contributions

1178
00:59:00,470 --> 00:58:44,730
to the agency's acoustics programs

1179
00:59:05,109 --> 00:59:02,870
james f spann

1180
00:59:07,589 --> 00:59:05,119
for sustained exemplary service and

1181
00:59:09,510 --> 00:59:07,599
leadership over almost 30 years

1182
00:59:11,750 --> 00:59:09,520
contributing to nasa's scientific

1183
00:59:14,140 --> 00:59:11,760
understanding of the earth and the

1184
00:59:27,030 --> 00:59:14,150
universe in which we live

1185
00:59:30,870 --> 00:59:28,470
gene swank

1186
00:59:32,600 --> 00:59:30,880
for outstanding contributions to nasa

1187
00:59:57,589 --> 00:59:32,610
science

1188
01:00:00,789 --> 00:59:59,750

peter c tysinger who could not be with

1189
01:00:02,549 --> 01:00:00,799
us today

1190
01:00:05,190 --> 01:00:02,559
is being honored for distinguished and

1191
01:00:06,870 --> 01:00:05,200
dedicated service to the nasa mission in

1192
01:00:08,630 --> 01:00:06,880
the exceptional project management of

1193
01:00:10,630 --> 01:00:08,640
roving missions on mars and

1194
01:00:12,789 --> 01:00:10,640
institutional technical leadership at

1195
01:00:16,069 --> 01:00:12,799
jpl

1196
01:00:18,789 --> 01:00:16,079
frederick r van wert

1197
01:00:21,349 --> 01:00:18,799
for outstanding administrative resources

1198
01:00:23,349 --> 01:00:21,359
and operations management contributions

1199
01:00:26,420 --> 01:00:23,359
facilitating the success of numerous

1200
01:00:38,150 --> 01:00:26,430
nasa teams and missions

1201
01:00:42,630 --> 01:00:40,549
bruce woodgate

1202
01:00:45,900 --> 01:00:42,640
for exceptional career achievements and

1203
01:01:01,829 --> 01:00:45,910
distinguished service to nasa

1204
01:01:05,349 --> 01:01:03,589
let's give all of our honorees another

1205
01:01:15,990 --> 01:01:05,359
round of applause for the outstanding

1206
01:01:19,910 --> 01:01:17,829
before we conclude the ceremony i would

1207
01:01:23,349 --> 01:01:19,920
like to extend our special appreciation

1208
01:01:25,190 --> 01:01:23,359
to mr bolden and ms garver dr alachi the

1209
01:01:28,069 --> 01:01:25,200
military district of washington's joint

1210
01:01:29,510 --> 01:01:28,079
armed forces color guard omega jones and

1211
01:01:31,430 --> 01:01:29,520
the ceremony volunteers for their

1212
01:01:33,270 --> 01:01:31,440
contributions in making today's ceremony

1213
01:01:35,190 --> 01:01:33,280

a success

1214
01:01:36,710 --> 01:01:35,200
the nasa agency honor awards program

1215
01:01:39,109 --> 01:01:36,720
would not have been possible without the

1216
01:01:41,750 --> 01:01:39,119
dedication and contributions of the

1217
01:01:44,630 --> 01:01:41,760
incentive awards board nasa expert

1218
01:01:46,150 --> 01:01:44,640
panels center review boards and the nasa

1219
01:01:47,670 --> 01:01:46,160
awards community

1220
01:01:50,309 --> 01:01:47,680
we would also like to recognize the

1221
01:01:52,789 --> 01:01:50,319
outstanding efforts of the nssc for

1222
01:01:54,309 --> 01:01:52,799
orchestrating today's ceremony

1223
01:01:56,309 --> 01:01:54,319
to the honorees we thank you for

1224
01:01:57,990 --> 01:01:56,319
participating in today's event and we

1225
01:01:59,030 --> 01:01:58,000
wish you much continued success in the

1226
01:02:00,309 --> 01:01:59,040
future

1227
01:02:02,470 --> 01:02:00,319
i hope everyone has enjoyed this

1228
01:02:05,160 --> 01:02:02,480
ceremony as much as i have thank you for