

Fastest Time

GREENFIELD HS 1 0 : 7 : 11

Current Races

UNIV OF PR 00 : 51

Crater
and Ejer

IS ROVER
CHALLENGE



1
00:00:05,430 --> 00:00:03,350
it's a beautiful brisk spring morning

2
00:00:07,749 --> 00:00:05,440
here in north alabama when a young man's

3
00:00:10,390 --> 00:00:07,759
engineer turns to thoughts of roving

4
00:00:12,230 --> 00:00:10,400
across the surface of another world

5
00:00:14,070 --> 00:00:12,240
welcome to nasa's human exploration

6
00:00:15,270 --> 00:00:14,080
rover challenge

7
00:00:16,550 --> 00:00:15,280
you can hear them rattling towards us

8
00:00:19,029 --> 00:00:16,560
there you go you see them just bouncing

9
00:00:22,390 --> 00:00:19,039
over a variety of obstacles coming right

10
00:00:24,150 --> 00:00:22,400
by our broadcast center here

11
00:00:25,830 --> 00:00:24,160
absolutely and they may not be able to

12
00:00:27,589 --> 00:00:25,840
take this curve as fast as we have in

13
00:00:29,109 --> 00:00:27,599

years past

14

00:00:32,470 --> 00:00:29,119

calling a lunatic kirk but they still

15

00:00:35,590 --> 00:00:33,910

moving now the back stretch down where

16

00:00:37,830 --> 00:00:35,600

you see quite a few of the rockets that

17

00:00:39,590 --> 00:00:37,840

were designed uh kind of our heritage

18

00:00:41,670 --> 00:00:39,600

area with the rockets that were designed

19

00:00:43,990 --> 00:00:41,680

uh here in huntsville at the

20

00:00:45,350 --> 00:00:44,000

the marshall space flight center

21

00:00:46,709 --> 00:00:45,360

absolutely and leaving this part after

22

00:00:47,910 --> 00:00:46,719

they've gone through the first couple

23

00:00:50,229 --> 00:00:47,920

obstacles they'll roll around to the

24

00:00:51,750 --> 00:00:50,239

back end on the straight stretch

25

00:00:53,670 --> 00:00:51,760

hand turn

26

00:00:56,069 --> 00:00:53,680

and not even 20 seconds wait i'm sorry

27

00:00:58,229 --> 00:00:56,079

yes not even 45 seconds into the race

28

00:01:00,630 --> 00:00:58,239

now heading down in between our uh down

29

00:01:03,029 --> 00:01:00,640

our our heritage row here of our rockets

30

00:01:04,390 --> 00:01:03,039

from years past trying to get up enough

31

00:01:06,550 --> 00:01:04,400

speed before they make that hard right

32

00:01:07,670 --> 00:01:06,560

hand turn and heading up the martian

33

00:01:09,350 --> 00:01:07,680

let's see if that's going to slow them

34

00:01:11,109 --> 00:01:09,360

down just a little bit oh they weren't

35

00:01:13,750 --> 00:01:11,119

quite able to get fast enough to head

36

00:01:15,190 --> 00:01:13,760

over it in one fast bit but they know

37

00:01:16,630 --> 00:01:15,200

they can hit reverse and try it again

38

00:01:17,749 --> 00:01:16,640

chris absolutely i think they've learned

39

00:01:18,870 --> 00:01:17,759

from the previous team i heard two

40

00:01:20,789 --> 00:01:18,880

things one you could hear the crowd

41

00:01:21,910 --> 00:01:20,799

response uh everybody who's following

42

00:01:23,190 --> 00:01:21,920

along they're very excited to see them

43

00:01:24,710 --> 00:01:23,200

get over that first what we call the

44

00:01:26,710 --> 00:01:24,720

martian butte the first of our martian

45

00:01:28,789 --> 00:01:26,720

themed obstacle and you can tell they've

46

00:01:31,190 --> 00:01:28,799

backed up considerably far in order to

47

00:01:32,870 --> 00:01:31,200

get a better run and go

48

00:01:35,270 --> 00:01:32,880

that's tough

49

00:01:37,030 --> 00:01:35,280

not quite once again you see the

50

00:01:39,190 --> 00:01:37,040

they got that very long chain running

51
00:01:41,749 --> 00:01:39,200
from the back driver to the front and

52
00:01:43,350 --> 00:01:41,759
vice versa of course uh

53
00:01:45,429 --> 00:01:43,360
we're hoping that that's that could be

54
00:01:47,190 --> 00:01:45,439
we've seen uh chains

55
00:01:49,109 --> 00:01:47,200
break as well as sometimes just come off

56
00:01:50,469 --> 00:01:49,119
so they have to do some quick repairs

57
00:01:51,749 --> 00:01:50,479
there in the course they may back all

58
00:01:53,270 --> 00:01:51,759
the way up to their previous options

59
00:01:54,789 --> 00:01:53,280
that's a smart move once again this is

60
00:01:55,990 --> 00:01:54,799
this is not necessarily a penalty this

61
00:01:56,789 --> 00:01:56,000
is just the time

62
00:01:58,630 --> 00:01:56,799
uh

63
00:02:00,310 --> 00:01:58,640

it causes a time crunch coming up now as

64

00:02:01,590 --> 00:02:00,320

we're slowly approaching the two minute

65

00:02:07,030 --> 00:02:01,600

let's see if they're able to get enough

66

00:02:11,350 --> 00:02:09,109

and so we're they're just struggling

67

00:02:13,270 --> 00:02:11,360

trying to push their way up the hill

68

00:02:14,710 --> 00:02:13,280

see once again when you sacrifice these

69

00:02:16,390 --> 00:02:14,720

are all sacrifices you have to make for

70

00:02:19,190 --> 00:02:16,400

the for that's the sturdiness of the

71

00:02:20,390 --> 00:02:19,200

rover as it comes across the course is

72

00:02:22,070 --> 00:02:20,400

not having those tires and just being

73

00:02:23,990 --> 00:02:22,080

able to speed through it a four-wheel

74

00:02:25,350 --> 00:02:24,000

bicycle basically yes absolutely it's

75

00:02:26,790 --> 00:02:25,360

humid-powered

76

00:02:28,630 --> 00:02:26,800

the kids that you've seen there's uh

77

00:02:30,229 --> 00:02:28,640

basically what you consider the the gear

78

00:02:31,990 --> 00:02:30,239

and the the pedals that you would find

79

00:02:32,710 --> 00:02:32,000

on a normal typical bicycle but they've

80

00:02:35,110 --> 00:02:32,720

been

81

00:02:37,030 --> 00:02:35,120

added and fabricated and including

82

00:02:38,470 --> 00:02:37,040

different kinds of gear ratio so

83

00:02:40,070 --> 00:02:38,480

these teams are trying to figure out

84

00:02:41,350 --> 00:02:40,080

what's the best design and you're going

85

00:02:42,869 --> 00:02:41,360

to see lots of different designs and the

86

00:02:44,790 --> 00:02:42,879

ones we've seen so far this morning it's

87

00:02:46,710 --> 00:02:44,800

male female and they're both sitting

88

00:02:47,990 --> 00:02:46,720

facing the same direction

89

00:02:50,150 --> 00:02:48,000

we've got some rovers that will come

90

00:02:52,390 --> 00:02:50,160

where the student team rover drivers are

91

00:02:54,630 --> 00:02:52,400

back to back one face in the front one

92

00:02:56,790 --> 00:02:54,640

facing the back uh so it just depends on

93

00:02:58,149 --> 00:02:56,800

what they think is the best uh the best

94

00:02:59,830 --> 00:02:58,159

design and a lot of them are really

95

00:03:01,350 --> 00:02:59,840

funny i've seen them kind of a zero g

96

00:03:03,030 --> 00:03:01,360

style where the feet and legs are kind

97

00:03:05,190 --> 00:03:03,040

of up high right like you would if

98

00:03:06,630 --> 00:03:05,200

you're sitting in a cog chair

99

00:03:07,990 --> 00:03:06,640

perhaps allowing that but that also

100

00:03:09,270 --> 00:03:08,000

allows for the center of gravity to be

101
00:03:10,390 --> 00:03:09,280
lowered absolutely there's something to

102
00:03:12,070 --> 00:03:10,400
be said about center of gravity

103
00:03:14,070 --> 00:03:12,080
especially consider the steep incline on

104
00:03:15,990 --> 00:03:14,080
some of these obstacles as well as

105
00:03:18,309 --> 00:03:16,000
trying to build up enough speed momentum

106
00:03:20,470 --> 00:03:18,319
around these curves to tackle the

107
00:03:22,229 --> 00:03:20,480
obstacle at the end of that curve

108
00:03:23,589 --> 00:03:22,239
so they've stopped for a moment uh so

109
00:03:25,990 --> 00:03:23,599
far no penalty because it hasn't been a

110
00:03:27,750 --> 00:03:26,000
touch but our lead our front driver

111
00:03:31,589 --> 00:03:27,760
excuse me did take his feet off the

112
00:03:33,750 --> 00:03:32,710
now back

113
00:03:41,030 --> 00:03:33,760

on

114

00:03:43,030 --> 00:03:41,040

again this is a uh

115

00:03:45,670 --> 00:03:43,040

it's borders right on the idea of an

116

00:03:46,710 --> 00:03:45,680

athletic event uh it's difficult uh know

117

00:03:48,710 --> 00:03:46,720

myself

118

00:03:52,789 --> 00:03:48,720

i would enjoy doing this but uh there's

119

00:03:56,149 --> 00:03:54,789

and we're off and running

120

00:03:57,910 --> 00:03:56,159

in our racer that's team number nine

121

00:03:59,589 --> 00:03:57,920

from macau puerto rico one of several

122

00:04:00,789 --> 00:03:59,599

teams from puerto rico joining us here

123

00:04:03,429 --> 00:04:00,799

and so one thing i always found

124

00:04:05,270 --> 00:04:03,439

interesting as we see them come across

125

00:04:07,589 --> 00:04:05,280

the first obstacle underneath the space

126

00:04:10,229 --> 00:04:07,599

shuttle pathfinder exhibit is that they

127

00:04:12,149 --> 00:04:10,239

actually have a heat race at puerto rico

128

00:04:13,270 --> 00:04:12,159

they have a basic qualifying race

129

00:04:14,309 --> 00:04:13,280

there's a lot of teams in puerto rico

130

00:04:15,910 --> 00:04:14,319

like to get together and want to

131

00:04:17,749 --> 00:04:15,920

participate and so they

132

00:04:19,030 --> 00:04:17,759

any team can come here if they want to

133

00:04:20,069 --> 00:04:19,040

register and pay their own bill but

134

00:04:21,430 --> 00:04:20,079

puerto rico gets together with the

135

00:04:24,310 --> 00:04:21,440

university system and they have a

136

00:04:25,830 --> 00:04:24,320

competition for the top winners of that

137

00:04:27,670 --> 00:04:25,840

different heat will actually be funded

138

00:04:29,350 --> 00:04:27,680

and get to come here as we see rover

139

00:04:30,469 --> 00:04:29,360

team from puerto rico coming along this

140

00:04:32,870 --> 00:04:30,479

right here

141

00:04:35,670 --> 00:04:32,880

male female driver front back facing the

142

00:04:36,390 --> 00:04:35,680

same direction and that looks like a

143

00:04:59,189 --> 00:04:36,400

a

144

00:05:00,550 --> 00:04:59,199

did get stuck so

145

00:05:02,310 --> 00:05:00,560

they've both been working out all year

146

00:05:03,749 --> 00:05:02,320

getting ready for this last year doing

147

00:05:05,270 --> 00:05:03,759

cardio but this year they realized they

148

00:05:06,310 --> 00:05:05,280

needed strength so they've been lifting

149

00:05:07,830 --> 00:05:06,320

weights

150

00:05:09,350 --> 00:05:07,840

and they you can hear them yeah we're

151
00:05:10,950 --> 00:05:09,360
all excited about this

152
00:05:12,550 --> 00:05:10,960
i'm sorry

153
00:05:14,870 --> 00:05:12,560
and we've got our broadcast feed here so

154
00:05:15,909 --> 00:05:14,880
we've got uh zach correct yes joining us

155
00:05:17,670 --> 00:05:15,919
here in the broadcast booth for the

156
00:05:19,350 --> 00:05:17,680
middle tennessee state

157
00:05:21,350 --> 00:05:19,360
university team you guys brought two

158
00:05:23,430 --> 00:05:21,360
rubber teams this year as well this year

159
00:05:25,350 --> 00:05:23,440
is just one this is the fabrication of

160
00:05:26,469 --> 00:05:25,360
eight wheels is very time consuming so

161
00:05:28,870 --> 00:05:26,479
we decided

162
00:05:30,150 --> 00:05:28,880
to take four instead

163
00:05:31,189 --> 00:05:30,160

so who are some of the people you'd like

164

00:05:32,790 --> 00:05:31,199

to thank who've helped make this

165

00:05:34,950 --> 00:05:32,800

possible for you being here i definitely

166

00:05:38,629 --> 00:05:34,960

like to thank lane motor museum they

167

00:05:41,270 --> 00:05:38,639

help us out by generating to our

168

00:05:43,189 --> 00:05:41,280

funding the space grant some of us they

169

00:05:45,110 --> 00:05:43,199

support us we uh the space grant from

170

00:05:46,790 --> 00:05:45,120

nasa i also like to thank fast and all

171

00:05:49,270 --> 00:05:46,800

because they provide a lot of the

172

00:05:51,990 --> 00:05:49,280

fasteners for free and that helps us

173

00:05:53,510 --> 00:05:52,000

immensely because that's what a rover

174

00:05:55,990 --> 00:05:53,520

it's made of fasteners

175

00:05:58,950 --> 00:05:56,000

so what about your faculty what kind of

176

00:06:01,590 --> 00:05:58,960

dollar doctor fruitistan he helps

177

00:06:03,590 --> 00:06:01,600

he both motivate motivates us and he

178

00:06:04,550 --> 00:06:03,600

helps court funding i'm sorry it's hard

179

00:06:09,189 --> 00:06:04,560

to

180

00:06:10,710 --> 00:06:09,199

captain thomas kinney he was a principal

181

00:06:12,390 --> 00:06:10,720

designer for these wheels and of course

182

00:06:14,629 --> 00:06:12,400

the whole team kelly maynard she didn't

183

00:06:15,830 --> 00:06:14,639

know how to machine before this and she

184

00:06:17,430 --> 00:06:15,840

ended up being

185

00:06:18,790 --> 00:06:17,440

one of the best machiners in the program

186

00:06:21,510 --> 00:06:18,800

because of her involvement with the

187

00:06:22,790 --> 00:06:21,520

wheels they will be we'll be at the pitt

188

00:06:24,070 --> 00:06:22,800

area they'll be broadcasting that live

189

00:06:26,550 --> 00:06:24,080

at 10 a.m you can go online and kind of

190

00:06:28,309 --> 00:06:26,560

get a behind-the-scenes sneak peek of

191

00:06:30,629 --> 00:06:28,319

what's going on in all the pit area

192

00:06:32,070 --> 00:06:30,639

which is kind of like a game day pregame

193

00:06:33,909 --> 00:06:32,080

environment we got

194

00:06:35,909 --> 00:06:33,919

there are people out there with their

195

00:06:37,590 --> 00:06:35,919

tents and all their trailers out there

196

00:06:39,189 --> 00:06:37,600

and it's a it's really a great

197

00:06:40,710 --> 00:06:39,199

opportunity and a great environment so

198

00:06:42,230 --> 00:06:40,720

we're excited to get a chance to

199

00:06:44,870 --> 00:06:42,240

broadcast that

200

00:06:46,870 --> 00:06:44,880

uh 10 a.m on our nasa marshall facebook

201
00:06:48,950 --> 00:06:46,880
page that's the nasa marshall

202
00:06:50,629 --> 00:06:48,960
facebook page you can follow that watch

203
00:06:52,309 --> 00:06:50,639
that 10 a.m plus you can just follow us

204
00:06:53,749 --> 00:06:52,319
on our twitter account at rover

205
00:06:55,189 --> 00:06:53,759
challenge as we get ready to have our

206
00:06:56,390 --> 00:06:55,199
next team

207
00:06:58,150 --> 00:06:56,400
is getting ready to come up to the start

208
00:06:59,830 --> 00:06:58,160
finish line

209
00:07:01,830 --> 00:06:59,840
while we have the international team

210
00:07:05,350 --> 00:07:01,840
from germany college division on the

211
00:07:07,990 --> 00:07:05,360
course right now and as a teaser chris

212
00:07:09,589 --> 00:07:08,000
i know in years past we've gotten some

213
00:07:12,629 --> 00:07:09,599

of the engineers from nasa who helped

214

00:07:14,870 --> 00:07:12,639

the students in the pitt area to join us

215

00:07:17,029 --> 00:07:14,880

on camera and this is a chance

216

00:07:18,550 --> 00:07:17,039

for the viewers at home to see that that

217

00:07:21,270 --> 00:07:18,560

actual pit area

218

00:07:22,870 --> 00:07:21,280

i've been able to dive into that

219

00:07:24,629 --> 00:07:22,880

in that area

220

00:07:27,110 --> 00:07:24,639

in the pits

221

00:07:29,990 --> 00:07:27,120

and so it's a great insight into what

222

00:07:31,510 --> 00:07:30,000

happens as the teams prepare to go into

223

00:07:33,909 --> 00:07:31,520

the race and then when they encounter

224

00:07:35,589 --> 00:07:33,919

issues you saw the the puerto rican team

225

00:07:37,990 --> 00:07:35,599

carrying the front axle separate from

226

00:07:39,670 --> 00:07:38,000

the chassis uh on the way back so

227

00:07:42,710 --> 00:07:39,680

they're going to be one of the first

228

00:07:45,830 --> 00:07:42,720

customers of the re-fabrication

229

00:07:47,749 --> 00:07:45,840

group that's in the pits and

230

00:07:50,869 --> 00:07:47,759

nasa engineers that have that expertise

231

00:07:52,390 --> 00:07:50,879

in fabrication and metallurgy they'll be

232

00:07:54,469 --> 00:07:52,400

they'll be key in helping those teams

233

00:07:56,790 --> 00:07:54,479

get back on the course absolutely this

234

00:07:59,589 --> 00:07:56,800

is the prime example of why this is a

235

00:08:02,070 --> 00:07:59,599

real world working experience these kids

236

00:08:03,909 --> 00:08:02,080

i'm telling the pit area is all is full

237

00:08:06,629 --> 00:08:03,919

of all sorts of sounds of

238

00:08:08,710 --> 00:08:06,639

metal grinding and and being welded and

239

00:08:10,710 --> 00:08:08,720

it's uh it's definitely a

240

00:08:12,390 --> 00:08:10,720

a working environment down there and

241

00:08:13,830 --> 00:08:12,400

kids are in fact we've got the new

242

00:08:15,749 --> 00:08:13,840

trailer down there which really a lot of

243

00:08:18,230 --> 00:08:15,759

our volunteers are helping these kids