



1
00:00:17,710 --> 00:00:15,110
this is mission control houston we are

2
00:00:21,349 --> 00:00:17,720
now receiving live video of the soyuz

3
00:00:24,150 --> 00:00:21,359
tma-03m spacecraft it is descending

4
00:00:27,029 --> 00:00:24,160
elegantly under its shoot

5
00:00:28,790 --> 00:00:27,039
everything is on track the weather down

6
00:00:30,790 --> 00:00:28,800
at the landing site

7
00:00:33,830 --> 00:00:30,800
mostly sunny skies temperatures in the

8
00:00:36,549 --> 00:00:33,840
low 80s light winds out of the north now

9
00:00:39,190 --> 00:00:36,559
descending into a cloud bank

10
00:00:41,430 --> 00:00:39,200
at the time that the final

11
00:00:43,750 --> 00:00:41,440
series of helicopters left karaganda

12
00:00:46,389 --> 00:00:43,760
about two hours ago to begin

13
00:00:48,229 --> 00:00:46,399

moving toward the landing site

14

00:00:50,470 --> 00:00:48,239

there was some light rain in the

15

00:00:53,029 --> 00:00:50,480

karaganda area but that's well to the

16

00:00:54,790 --> 00:00:53,039

northeast of the landing site

17

00:00:56,470 --> 00:00:54,800

you can see that the weather at the

18

00:00:58,549 --> 00:00:56,480

landing site or in the close proximity

19

00:01:00,150 --> 00:00:58,559

of the landing site is good

20

00:01:01,349 --> 00:01:00,160

landing is scheduled just 10 minutes

21

00:01:03,510 --> 00:01:01,359

from now

22

00:01:05,270 --> 00:01:03,520

we now of course are watching live video

23

00:01:07,429 --> 00:01:05,280

courtesy of roscosmos the russian

24

00:01:09,590 --> 00:01:07,439

federal space agency of the final

25

00:01:11,030 --> 00:01:09,600

minutes of the descent of the soyuz

26

00:01:13,429 --> 00:01:11,040

tma-3

27

00:01:34,870 --> 00:01:13,439

03m spacecraft

28

00:01:39,350 --> 00:01:37,350

station houston on one no response

29

00:01:41,510 --> 00:01:39,360

required we know you don't have k.u just

30

00:01:43,109 --> 00:01:41,520

wanted to give you an update 29 s is

31

00:02:05,990 --> 00:01:43,119

under shoot now and we're watching them

32

00:02:12,150 --> 00:02:08,710

drifting down to its landing site

33

00:02:17,750 --> 00:02:12,160

alec kononenko don pettit andre kuipers

34

00:02:17,760 --> 00:02:21,750

time to touch down about nine minutes

35

00:02:26,710 --> 00:02:24,949

a dozen russian mi8 helicopters with

36

00:02:27,750 --> 00:02:26,720

russian search and recovery force

37

00:02:30,630 --> 00:02:27,760

personnel

38

00:02:32,869 --> 00:02:30,640

rsc inergia technical specialists

39

00:02:35,110 --> 00:02:32,879

nasa support personnel and european

40

00:02:37,430 --> 00:02:35,120

space agency support personnel

41

00:02:39,430 --> 00:02:37,440

now flying in that racetrack pattern

42

00:02:41,030 --> 00:02:39,440

that we talked about earlier around the

43

00:02:43,830 --> 00:02:41,040

prime landing site

44

00:02:45,830 --> 00:02:43,840

so far so good it looks like the soyuz

45

00:03:48,949 --> 00:02:45,840

vehicle is headed for an on target

46

00:03:54,470 --> 00:03:52,149

everything continuing to look uh

47

00:03:56,390 --> 00:03:54,480

in great shape with the soyuz vehicle uh

48

00:03:58,710 --> 00:03:56,400

once again you're watching its descent

49

00:04:01,030 --> 00:03:58,720

under its main parachute toward its

50

00:04:03,670 --> 00:04:01,040

landing target to just to the southeast

51
00:04:07,670 --> 00:04:03,680
of the town of jezkasgan in southeast

52
00:04:11,750 --> 00:04:09,750
the undocking of the soyuz from the

53
00:04:14,229 --> 00:04:11,760
international space station's rassvet

54
00:04:17,349 --> 00:04:14,239
module occurred on time just before 11

55
00:04:19,189 --> 00:04:17,359
48 pm central time on saturday night

56
00:04:21,270 --> 00:04:19,199
the soyuz

57
00:04:23,350 --> 00:04:21,280
conducted two separation burns to move

58
00:04:24,469 --> 00:04:23,360
to a distance of 12 kilometers away from

59
00:04:28,390 --> 00:04:24,479
the station

60
00:04:29,909 --> 00:04:28,400
at which point uh at 2 19 a.m just under

61
00:04:31,990 --> 00:04:29,919
an hour ago

62
00:04:34,550 --> 00:04:32,000
the soyuz engines fired for four minutes

63
00:04:37,189 --> 00:04:34,560

and 15 seconds and a deorbit burn a

64

00:04:38,629 --> 00:04:37,199

deceleration retrograde maneuver to

65

00:04:41,430 --> 00:04:38,639

begin the trip back home into the

66

00:04:43,909 --> 00:04:41,440

earth's atmosphere the three sections of

67

00:04:47,110 --> 00:04:43,919

the soyuz vehicle separated uh perfectly

68

00:04:49,189 --> 00:04:47,120

at 2 47 am central time followed by the

69

00:04:50,790 --> 00:04:49,199

deployment of the shoots 15 minutes

70

00:04:52,150 --> 00:04:50,800

later

71

00:04:53,430 --> 00:04:52,160

setting the stage for what you're

72

00:04:55,670 --> 00:04:53,440

watching

73

00:04:58,710 --> 00:04:55,680

as of the soyuz descends under mostly

74

00:05:00,870 --> 00:04:58,720

clear skies to a landing site

75

00:05:03,430 --> 00:05:00,880

in a very desolate area of southeast

76

00:05:05,510 --> 00:05:03,440

kazakhstan

77

00:05:08,469 --> 00:05:05,520

search and recovery forces are flying

78

00:05:11,189 --> 00:05:08,479

overhead accompanied by two antonoff

79

00:05:13,670 --> 00:05:11,199

fixed-wing aircraft that are relaying

80

00:05:15,670 --> 00:05:13,680

data and telemetry from the soyuz

81

00:05:17,029 --> 00:05:15,680

spacecraft back to the flight control

82

00:07:01,430 --> 00:05:17,039

team at the russian mission control

83

00:07:06,710 --> 00:07:03,430

on a sunday afternoon in southeast

84

00:07:09,510 --> 00:07:06,720

kazakhstan the view of the soyuz tma-03m

85

00:07:11,670 --> 00:07:09,520

spacecraft continuing to drift gently

86

00:07:13,270 --> 00:07:11,680

back toward earth

87

00:07:14,870 --> 00:07:13,280

now just four minutes away from its

88

00:07:17,830 --> 00:07:14,880

scheduled touchdown

89

00:07:19,670 --> 00:07:17,840

its main shoot having been deployed on

90

00:07:21,749 --> 00:07:19,680

time a few minutes ago

91

00:07:24,150 --> 00:07:21,759

all of the soyuz system is in good shape

92

00:07:26,230 --> 00:07:24,160

we are not hearing uh communications at

93

00:07:29,189 --> 00:07:26,240

the moment from the crew but the search

94

00:07:31,110 --> 00:07:29,199

and recovery forces uh will be uh in

95

00:07:34,150 --> 00:07:31,120

contact with the crew

96

00:07:35,990 --> 00:07:34,160

momentarily and are continuing to relay

97

00:07:37,350 --> 00:07:36,000

updates to the russian flight control

98

00:07:50,390 --> 00:07:37,360

team of the russian mission control

99

00:08:40,709 --> 00:08:11,589

foreign

100

00:08:44,550 --> 00:08:43,029

continuing uh to receive stunning views

101
00:08:49,750 --> 00:08:44,560
of the

102
00:08:52,949 --> 00:08:49,760
soyuz tma-03m and the expedition 31 crew

103
00:08:55,829 --> 00:08:52,959
alec kononenko don pettit andre kuipers

104
00:08:58,150 --> 00:08:55,839
as they gently descend

105
00:09:01,269 --> 00:08:58,160
this last couple of minutes or so back

106
00:09:03,190 --> 00:09:01,279
to their landing site

107
00:09:05,269 --> 00:09:03,200
search and recovery personnel are all in

108
00:09:07,269 --> 00:09:05,279
place hovering around the prime landing

109
00:09:09,670 --> 00:09:07,279
site flying in a circular pattern just

110
00:09:11,590 --> 00:09:09,680
waiting for that capsule to touch down

111
00:09:13,110 --> 00:09:11,600
at which point the russian mi8

112
00:09:18,230 --> 00:09:13,120
helicopters will begin to land in

113
00:09:18,240 --> 00:09:46,150

proceed in two minutes

114

00:09:46,160 --> 00:10:00,870

okay

115

00:10:04,230 --> 00:10:02,230

we're about a minute and a half away

116

00:10:08,470 --> 00:10:04,240

from touchdown

117

00:10:12,389 --> 00:10:10,470

radio beacon signals from the soyuz

118

00:10:14,710 --> 00:10:12,399

being picked up by the antonoff fixed

119

00:10:16,710 --> 00:10:14,720

wing aircraft

120

00:10:18,790 --> 00:10:16,720

we haven't had any voice communication

121

00:10:22,389 --> 00:10:18,800

from the crew recently but

122

00:10:24,630 --> 00:10:22,399

all reports prior to that

123

00:10:27,750 --> 00:10:24,640

showed an excellent descent everything

124

00:10:52,870 --> 00:10:27,760

nominal all soyuz vehicle functions in

125

00:10:57,110 --> 00:10:55,430

should be approaching touchdown

126

00:10:59,509 --> 00:10:57,120

with any luck at all we may be able to

127

00:11:23,350 --> 00:10:59,519

see the soft landing engines fire just a

128

00:11:28,630 --> 00:11:25,430

and you can see one of those uh search

129

00:11:31,110 --> 00:11:28,640

and recovery helicopters once again that

130

00:11:35,590 --> 00:11:31,120

helicopter part of a dozen such russian

131

00:11:41,670 --> 00:11:37,190

touchdown

132

00:11:43,670 --> 00:11:41,680

3 14 and 48 seconds am central time

133

00:11:46,470 --> 00:11:43,680

you saw the soft landing engines fire

134

00:11:48,389 --> 00:11:46,480

just a split second before the soyuz hit

135

00:11:50,629 --> 00:11:48,399

the ground southeast of jessica has gone

136

00:11:53,190 --> 00:11:50,639

a bull's-eye touchdown

137

00:11:56,629 --> 00:11:53,200

landing once again at 3 14 and 48

138

00:12:00,230 --> 00:11:56,639

seconds central time 14 and 48 seconds

139

00:12:03,110 --> 00:12:00,240

p.m at the landing site in kazakhstan

140

00:12:06,870 --> 00:12:03,120

the expedition 31 crew oleg kononenko